K-ELECTRIC LIMITED INTEGRATED INVESTMENT PLAN FY24 - FY30

Table of Contents

DISCLAI	MER	4
SECTION	N I - EXECUTIVE SUMMARY	5
1.	INTRODUCTION	5
2.	PURPOSE AND GOAL OF INVESTMENT PLAN	
3∙	PERIOD OF INVESTMENT PLAN	7
SECTION	NII - THE COMPANY'S – BASELINE	8
1.	GENERAL INFORMATION	8
2.	EXISTING OPERATION SYSTEM OF KE	
3.	HIGHLIGHTS OF INVESTMENT MADE IN CURRENT MYT (FY17-FY23)	
3.1.	Transmission Investments – (FY17 - FY23)	
3.2.	Distribution Investments FY17 – FY23	
4.	FINANCIAL POSITION	17
5.	POWER DEMAND AND SUPPLY (DAILY LOAD DEMAND & SEASONAL LOAD PROFILE)	19
6.	KE'S TRANSMISSION NETWORK	20
7•	KE'S DISTRIBUTION NETWORK	20
<i>7</i> .1.	Loading Position details of KE's Power Transformers & 11 kV Feeders	21
<i>7</i> .2.	Types of conductors used for distribution of power and their capacity	22
8.	FINANCIAL MANAGEMENT	24
9.	HUMAN RESOURCE	24
10.	PROJECT RELATED PROCESSES	25
10.1.	Transmission projects	25
10.2.	Distribution projects	. 25
10.3.	Internal controls over the company's business processes	. 25
10.4.	Closure of Financial Books	. 26
11.	HR Strength	26
12.	IT-MIS	
13.	COMMERCIAL STATISTICS	
14.	INTERNAL CONTROL	29
15.	INTERNAL AUDIT	
16.	LEGAL AND CONTRACTUAL FRAMEWORK	
17.	GOVERNANCE AND DESCRIPTION OF THE RELATIONSHIPS AMONG THE GOVERNMENTS	
18.	PRESENTATION AND ANALYSIS OF THE MAIN ISSUES FACING THE COMPANY	
SECTION	N III FORECASTS FOR NEXT SEVEN YEARS	32
1.	FORECAST FOR ENERGY & DEMAND	
2.	GENERATION FORECAST AND POWER ACQUISITION PROGRAM	
3⋅	OTHER CHALLENGES INCLUDING TECHNOLOGICAL ADVANCES	34
4.	ANALYSIS AND EFFORTS	35
SECTION	N IV - NEXT SEVEN YEARS GOALS AND OBJECTIVES	36
1.	TRANSMISSION'S NEXT SEVEN YEAR GOALS AND OBJECTIVES:	36
1.1.	Rationale for Setting Goals and Objectives for Proposed Transmission Investments	37
1.2.	Rationale for Planning Criteria for Proposed Transmission Investments	37
2.	DISTRIBUTION'S NEXT SEVEN YEAR GOALS AND OBJECTIVES:	38
SECTION	NV - PROJECTS AND PROGRAMS	44
1.	PLAN FOR EXPANSION AND REHABILITATION OF TRANSMISSION SYSTEM	44
1.1.	Grid Stations	44
1.2.	Transmission Lines	45
1.3.	Capacitors	46
1.4.	Load Flow & Short Circuit Studies	46
2.	PLAN FOR EXPANSION AND REHABILITATION OF DISTRIBUTION SYSTEM	47
2.1.	Expansion and Rehabilitation	47

2.2.		
	nsition Plan	
2.3.		lan
	52	
3.	OTHER FUNCTIONAL IMPROVEMENT PLANS	
3.1.	Commercial Improvement Plan	52
3.2.	-	
3.3.		
3.4.	•	
3.5.	_	
SECTIO	N VI - COSTS AND FINANCING PLAN	57
1.	CAPITAL EXPENDITURE AND ADDITIONAL OPERATING COSTS FOR EXPANSION AND	
	BILITATION OF TRANSMISSION SYSTEM:	57
1.1.	Summary of Capital Expenditure Costs	
1.2.	Growth Projects (Transmission)	
1.3.	Interconnection	
1.4.	NTDC Interconnection Transmission Line - KKI and Dhabeji	
1.5.	System Improvement / Reliability	
1.6.	Reactive Power Management and Loss Reduction Projects (Transmission)	
1.7.	Summary of Planned Additions	
1.8.	Metering Mechanism	
1.9.	Validation by Consultant	
2.	TRANSMISSION - EXPANSION AND REHABILITATION	
2.1.		
2.2.		
3.	CAPITAL EXPENDITURE AND ADDITIONAL OPERATING COSTS FOR EXPANSION AND	
	BILITATION OF DISTRIBUTION SYSTEM	70
3.1.	Summary of Planned Additions and related benefits for control period $FY24 - 30$.	71
3.2.		
4.	DISTRIBUTION SYSTEM- EXPANSION AND REHABILITATION	72
4.1.	KE scope of work	73
4.2.	Consumer Funded scope of work	93
5.	SUMMARY OF ANNUAL RECURRING COSTS FOR TRANSMISSION & DISTRIBUTION	96
6.	CAPITAL EXPENDITURE AND ADDITIONAL OPERATING COSTS FOR OTHER FUNCTION	NAL
IMPRO	OVEMENT PLANS	96
7•	FINANCING PLAN:	
8.	PROPOSED INVESTMENT PLAN REVISION MECHANISM	101
SECTIO	N VII - BENEFITS AND FINANCIAL ANALYSIS	104
SECTIO.		
1.	EXPANSION AND REHABILITATION OF TRANSMISSION AND DISTRIBUTION SYSTEM	
1.1.	Transmission Segment	
1.2.	Distribution Segment	105
SECTIO	N VIII - FINANCIAL PROJECTIONS FOR FY24 TO FY30	108
SECTIO	N IX - IMPLEMENTATION, MONITORING PLAN AND REPORTING	109
1.	IMPLEMENTATION & MONITORING OF INVESTMENT PLAN	109
2.	LINKAGE WITH PERFORMANCE STANDARDS	
		00
	N X - ENVIRONMENTAL AND SOCIAL ASSESSMENT AND MITIGATION	
PLANS.		110
SECTIO	N XI - KE'S REQUEST	111
	-	
	Y AUTHORIZED REPRESENTATIVES	
LIST OF	ANNEXURES	114
CI OSSA	ARY	115
OLUSSA	LLL	ттэ

Disclaimer

The projections and forecasts contained in this investment plan are only intended for NEPRA for the purposes of evaluating and determining KE's Investment Plan for Transmission & Distribution segment. The plan contained in this investment plan is based on expectations, estimates and projections at the time of filing of the same that could differ from actual results or events owing to business and operational risks and change in scope and circumstances.

The information contained in this plan is not intended as a solicitation or recommendation of investments. Under no circumstances should this information be relied on or treated as legal or other professional advice. Although KE has taken the greatest possible care in compiling this information, it assumes no responsibilities for any reliance for investment decisions placed thereon.

Section I - Executive Summary

1. Introduction

K-Electric Limited (KE) was incorporated in 1913. KE is the only vertically integrated utility (VIU) in Pakistan and is responsible for end-to-end planning and execution of Generation, Transmission, Distribution and Supply of power to its consumers within its service area which includes Karachi, Gharo in Sindh and Hub, Uthal, Vinder and Bela in Balochistan region. The Company was privatized in November 2005.

2. Purpose and Goal of Investment Plan

This document explains the Investment plan of KE for its Transmission and Distribution functions for the control period FY24 to FY30, along with its planned additions to capacity as well as targeted KPIs in both the segments. This investment plan will serve as a basis for Tariff of Transmission and Distribution for the next control period.

Brief introductions of KE's functions are given below:

Generation

KE's Generation segment comprises of six thermal based power plants with an aggregated installed capacity of 2,817 MW including KE's 900 MW BQPS III RLNG power plant. In addition to its own generation fleet, to meet the power demand in its service area, KE also has arrangement of power purchase with IPPs and National Grid. Here it is important to note that unlike state-owned entities, KE performs the function of planning and capacity procurement on its own and enters into long-term PPAs / EPAs bilaterally, without any sovereign support.

Further, KE's procurement plan for the next control period (FY17 to FY23) is separately being submitted to NEPRA for approval.

Transmission

This investment plan is being proposed to cater the growing demand, upkeep and improve focus on safety, reliability, power quality, technical loss minimization alongside enhancing technology intervention to improve operational efficiency and sustainability.

KE was granted Transmission license (TL/02/2010) on June 11, 2010. Under this license, KE is the Transmission Network Operator and System Operator for its Service area. Accordingly, KE owns and manages its own transmission network and also performs the functions of System Operator for its service area through its Load Despatch Centre (LDC).

KE's Transmission network comprises of 220 kV, 132 kV and 66 kV Grid stations and Transmission lines to connect the same. As of June 2022, KE's transmission network comprised of 71 grid stations, 179 power transformers having transmission capacity of 6,803 MVAs, and 1,354 km of 220 kV, 132 kV and 66 kV Transmission lines.

Going forward, KE's planned additions in the Transmission segment are focused on capacity enhancement and further improving network reliability and stability through addition of new grid stations, which also include grid at 500 kV level for off-take of additional supply from the National Grid, along with addition of power transformers which would increase capability to serve the growing power demand in its service area.

The Transmission Investment Plan of **PKR 280,915 million** for seven year period FY 2024 to FY 2030 (projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 and is proposed to be adjusted through an indexation mechanism included in **Section VI (8)** is primarily divided into five categories: (i) Growth

Projects, (ii) Interconnection for off take from NTDC (iii) Interconnection for off take from IPPs (iv) System Improvement / Reliability; and (v) Reactive Power Management and Loss Reduction Projects which are discussed in detail in the subsequent sections.

Distribution

KE's Distribution network comprises of 11 kV and below 11 kV network, which as of June 2022 comprised of 2,001 11kV feeders, 29,971 distribution transformers (PMTs/Sub-stations) having distribution capacity of 8,685 MVAs, and 10,520 km of 11 kV network and 18,936 kms of LT Network.

In line with KE's vision, KE's is committed to supply smooth, reliable, and safe electricity in an efficient and sustainable manner to its consumers. Past performance of KE and improvements recorded over the previous years substantiate above statement to a larger extent. However, KE realizes that there is still a long way to go to be at par with the progressive Distribution companies operating globally. Considering the aged asset base of Distribution network and associated technical complexities, KE realizes that instead of conventional approach focused on temporary fixes, a strategic and data driven approach can guarantee a sustainable performance with long lasting results enabling KE to be the utility of choice.

Drawing inspiration from the above thought process, KE has proposed a Distribution Network Improvement Plan (NIP). NIP focuses on safety, outage reduction, limiting spread of outages, power quality, loss reduction and technology interventions like Hand Held Devices (HHU) & SCADA/ ADMS to record data first hand and improve customer journey and operational efficiency based on the visibility that technology brings. During the last 2-3 years, due to advent of technology initiatives like AMI/MDMS and GIS as well as outage reporting mechanism, data visibility has increased to a level where investment decisions are now based on granular data analytics.

The subject plan is not just limited to capital investments for the rehabilitation of aged network, it also addresses the challenges arising out of skill level of field force, current work practices and processes to ensure sustainability. The plan also suggests a change in approach towards the current maintenance regime, from mostly preventive/reactive in nature to periodic and condition-based maintenance. Once a minimum repository of at least two years is available from multiple technology platforms, predictive maintenance will replace the conventional approach by using machine learning and artificial intelligence.

For the purpose of sustainability, a comprehensive change management plan is being worked out jointly with an international consultant. Initially one of the clusters will be selected and ring fenced for implementation of the subject plan. Based on the learnings and results, the same will be rolled out across Distribution network in a phase wise strategy. In fact, KE has already started working on change management initiatives which includes but is not limited to enhancement of skill level in a measurable manner utilizing DNA (Distribution Network Academy), building an effective asset maintenance process utilizing SAP platform and reviewing existing processes to eliminate/ minimize non-value adding activities ensuring maximum efficiencies.

The above plan takes into account the wholistic view of the company's strategy for creating value for its customers by undertaking SMART investments across the value chain. Thereby enabling the company to plan and undertake investments in a timely fashion to yield the maximum benefit to its consumers.

Based on the above, KE plans to invest **PKR 184,650 million** during the control period FY 2024 to FY 2030 (projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 and is proposed to be adjusted through an indexation mechanism included **in Section VI (8)**). The investment plan is divided into five categories:

(i) Growth, (ii) Loss Reduction, (iii) Maintenance, (iv) Safety and (v) Technology. This amount does not include investment in dedicated distribution system that will be fully funded by the consumers. Please refer discussion in **Section VI (2) below**.

Further, KE plans to invest **PKR 18,514 million** (projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 and is proposed to be adjusted through an indexation mechanism included in **Section VI (8)**) for expanding and improving the IT infrastructure, Data Governance, Cyber security, Innovation and People management. This proposed investment plan has been divided into three categories: (i) IT (ii) Cyber Security (iii) Others.

3. Period of Investment Plan

The period covered by this investment plan is 7 years from FY 2024 to FY 2030. The projections and forecasts contained in this plan are being submitted to NEPRA for the purposes of evaluation and approval and form a basis for Tariff determination for Transmission and Distribution segments. The major sections of this plan covers costs to be incurred, and benefit analysis in relation to projects to be undertaken by KE such as System Improvement / Reliability, Reactive Power Management, Loss Reduction, Maintenance, Growth Projects, Interconnection Arrangements, Safety, technology, etc.

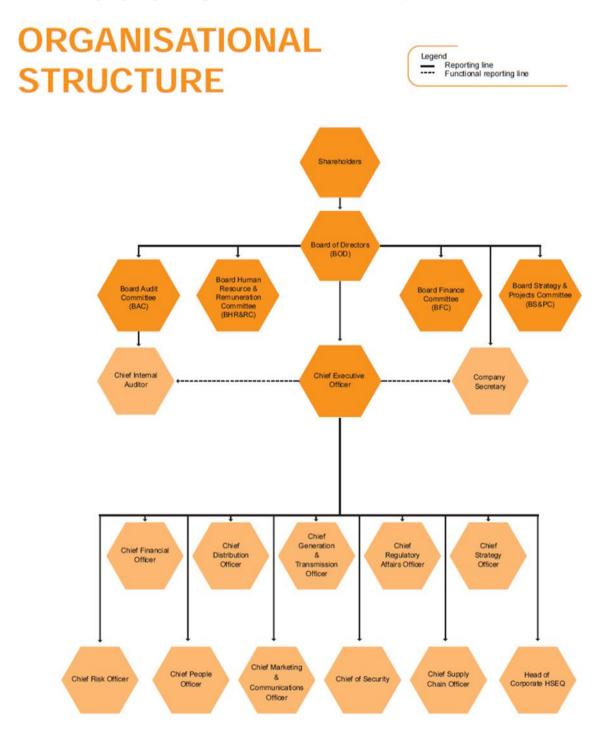
Keeping in view macro-economic factors as well as changing dynamics and planning requirements including but not limited to change in Demand / Supply position, change in growth assumptions, change in power procurement plan and projects etc, KE has proposed an Investment Plan revision mechanism including Annual Investment Update as well as a Complete Investment Review after every two years to cater the changes required in the Investment plan. This has been discussed in detail in **Section VI (8).**

Section II - The Company's - Baseline

1. General Information

The Karachi Electric Supply Company (KESC) was formed in 1913 to meet the power needs of a small port town "Karachi". KESC was privatized in 2005 and was rebranded as K-Electric Limited subsequently in 2014. KE is a public limited company listed on the Pakistan Stock Exchange (PSX).

The following organogram explains the Governance hierarchy of KE.



2. Existing Operation System of KE

The company is currently serving a consumer base of 3.4 million. The commercial side of these operations include the sale of electricity to domestic, commercial, industrial and various other categories of consumers. The company operates its distribution and supply system through 30 Integrated Business Centers (IBC) providing services while a dedicated Public Sector Consumers office attends to Governmental offices & departments.

The role of IBCs includes functions of meter reading, billing, collections, customer service and support. Further, IBCs are also responsible to curtail power theft in the city through investment in the infrastructure while improving recovery of outstanding dues.

The historical statistical information relating to purchases and sales of electricity, SAIFI & SAIDI and T&D losses is presented below:

KIIP 1 – Losses & KPIs

Description	FY17	FY18	FY19	FY20	FY21	FY22			
Description	Units in Gwh								
Units Sent Out (KE own Generation & Power Purchase)	16,580	17,419	17,697	17,787	19,487	19,802			

Description	FY17	FY18	FY19	FY20	FY21	FY22				
Description	Percentage									
Transmission Loss	1.5%	0.9%	1.2%	1.1%	1.1%	0.8%				
Distribution Loss	20.5%	19.7%	18.1%	18.8%	16.6%	14.6%				
T&D Loss	21.7%	20.4%	19.1%	19.7%	17.5%	15.3%				

Description	FY17	FY18	FY19	FY20	FY21	FY22
Distribution - SAIFI (Faults)	Note	32.80	29.00	27.60	28.10	27.40
Distribution - SAIDI (Faults) – hours	Note	41.30	49.20	44.30	42.70	34.60
Transmission - SAIFI (Faults) ¹	8.59	8.07	10.07	6.12	4.58	2.46
Transmission - SAIDI (Faults) – hours¹	12.1	11.55	16.56	11.77	6.93	2.73

Note: With respect to reliability, KE has made consistent efforts for capturing and recording of its outages, shifting from the manual log sheets and excel based data to system-based governance for technical reporting. KE informed the Authority regarding such efforts while submitting Annual Distribution Performance Report for the Fiscal Year 18-19. In the same report, KE reinstated the reported reliability numbers for the previous year (i.e., FY17-18) based on the enhanced data visibility, where SAIFI was calculated to be 32.82 and SAIDI 41.3 hours. Numbers prior to FY18 are not available in comparable form. Taking these reinstated numbers as base provides a better representation of KE's reliability performance, which has improved from 32.82 in FY17-18 to 27.40 in FY21-22 in SAIFI, and from 41.3 hours in FY17-18 to 34.6 hours in FY21-22 in SAIDI. This represents 16% improvement in both SAIFI and SAIDI hours from FY17-18 till the completion of FY21-22.

There are 15,521 employees working in KE (including OSP) as on FY 2021-22. The number of employees in the last 6 years is as follows:

¹ For formula please refer **section 3.1.6**

KIIP 2 - Staffing Details

Description	FY17	FY18	FY19	FY20	FY21	FY22
Staff – KE's own employees	10,822	10,406	10,331	10,665	10,274	9,959
OSP	6,564	5,984	5,669	5,870	5,835	5,562
Total	17,386	16,390	16,000	16,535	16,109	15,521

3. Highlights of Investment made in Current MYT (FY17-FY23)

Details of investments made in Transmission & Distribution during current control period, including projected investments for FY 2023 are given below, along with benefits achieved.

3.1. Transmission Investments – (FY17 - FY23)

Since the start of the current tariff control period (i.e. FY17) and up to June 2022, KE has invested **PKR 94,485 million**² in the Transmission business, focusing on capacity enhancement and improved network reliability, enabling KE to reduce transmission constraints and serve the incremental power demand.

Further, during the period July 2016 to June 2022, 7 new grid stations have been added, along with addition of 42 power transformers and 6 auto transformers resulting in capacity addition of over 1,703 MVAs in power transformation and 1,500 MVAs in auto transformers. In addition, over 105 km of new EHT lines have been added along with rehabilitation of 206 km of existing lines. This has consequently improved performance standards considerably as explained in detail in section 3.1.6 below.

Going forward, KE plans to continue and further accelerate investments in Transmission infrastructure upgrade through capacity enhancement as well as to set up new interconnection points with the National Grid for increased reliability and off-take of additional power from the National Grid. Details of KE's transmission performance have been discussed in the subsequent sections.

A summary of the actual investments carried out till FY22 including the forecasted investment for FY23 is given below:

KIIP 3 - Historic Investment Details - Transmission

	PKR million												
Description	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ³	Total					
Transmission projects	3,990	21,904	15,620	11,846	4,970	7,387	9,297	75,014					
NTDC Interconnection lines (NTDC Part)	-	-	-	-	-	-	241	241					
Transmission (BQPS III Allied projects)	-	-	-	2,159	5,884	2,483	4,186	14,712					
HVUB project	-	-	-	-	-	31	-	31					
500 kV Grids	-	-	-	9.2	36	1,338	7,473	8,856					
Other Transmission CAPEX	1,792	3,247	1,627	4,591	2,013	3,558	1,110	17,937					

² Gross amount

 $^{^3}$ Forecasted

	PKR million												
Description	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ³	Total					
Total Transmission (Gross)	5,781	25,151	17,247	18,606	12,903	14,797	22,307	116,791					
Less Deferred Revenue (consumer funded)	(337)	(319)	-	(3)	(1,111)	-	(3,201)	(4,971)					
Total Transmission (Net)	5,444	24,832	17,247	18,603	11,792	14,797	19,106	111,820					

Above table shows investments carried out till June 2022 and forecasted investments for FY 2023. Amounts of FY 2023 will be requested to be actualized for the purpose of Tariff workings.

3.1.1. Grid Stations

In the current control period, KE has added 7 new grid stations as of June 2022. Moreover, going forward, KE has planned addition of another 1 new grid station to be added till FY 2023. Accordingly, with planned additions, total number of grid stations by FY 2023 is expected to be 72.

KIIP 4 - Historic Statistics - Transmission

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ⁴
220 kV	7	7	7	9	10	10	10	11
132 kV & 66 kV	57	57	57	59	60	61	61	61
Total	64	64	64	68	70	71	71	72

3.1.2. Transmission Capacity

Through addition of 42 new power transformers along with rehabilitation of existing ones, KE has enhanced its Transmission capacity by 1,703 MVAs as of June 2022.

Further, KE plans to add another 174 MVAs to its transmission capacity by FY 2023, thus resulting in total addition of 1,877 MVAs for the tariff control period, enabling KE to further strengthen the reliability of KE's transmission network and ability to serve the increasing power demand.

KIIP 5 - Historic Statistics - Transmission

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ⁵
Power Transformers (MVAs)	5,100	5,165	5,519	6,078	6,352	6,536	6,803	6,977

3.1.3. Transmission Lines

Since the start of the tariff control period and until June 2022, KE has added 105 km of transmission lines, and plans to add another 100 km over the remaining tariff control period.

⁴ Forecasted

⁵ Forecasted

KIIP 6 - Historic Statistics - Transmission

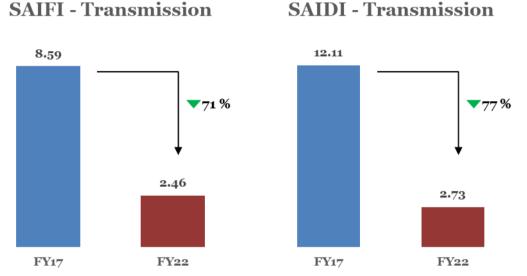
Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ⁶
220 kV	338	338	338	335	365	365	364	462
132 kV & 66 kV	911	915	916	948	954	986	990	992
Total	1,249	1,253	1,254	1,283	1,319	1,351	1,354	1,454

3.1.4. Power Transformers Loading

With the addition of new power transformer and balancing amongst existing ones through system improvement plans (SIP) the loading profile of power transformer in KE fleet will remain under technical limits.

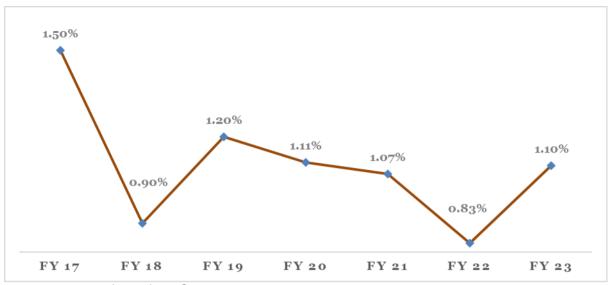
3.1.5. Benefits of Investments made during the current MYT

During the control period till June 2022, KE has taken significant steps to upkeep and improve the reliability of the system. The investment resulted in improvement of SAIFI and SAIDI of the transmission system by 71% and 77%, respectively.



In addition to above, owing to investments made in transmission network since the start of the control period, transmission loss of the system has been reduced significantly since FY 2017 which can be seen from the graph below:

⁶ Forecasted



*Note: FY 2023 is projected

It is important to note that year on year number can also vary due to specific circumstances prevalent at that point in time and may not be representative of normal operating conditions, which were also observed in FY22 as well, where yearly transmission loss number was exceptionally low, accordingly, FY23 projections have been based on projected technical loss of the system.

Further, the improvement since FY17 till FY22 is mainly attributable to following below mentioned projects and activities carried out to ensure reliability and stability of KE Transmission network.

- Grid Capacity Enhancement Projects
- Reconductoring of Transmission Lines
- Installation of RTV/ Composite insulators
- GIS Overhauling Project
- TP1000 Project
- Implementation of Tripping Schemes
- Bird Fall Protection Project
- Rehabilitation of HVUB Transmission Lines
- Replacement of obsolete equipment including current/potential transformers, circuit breakers and relays
- Enhancement of SCADA Functionality
- Safety Initiative and Improvement Programs

3.1.6. KE's Performance for the control period FY17 – FY23 (Transmission)

KE's KPI wise performance for the control period FY17 – FY23 is summarized in table given below:

KIIP 7 - Historic KPIs - Transmission

KPI	Definition	Calculation	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ⁷
System Reliability	SAIFI	SAIFI= No of interruptions during one year / No of consumers (consumers = interconnection points with Grid consumers and count of 11 kV feeders)	8.59	8.07	10.07	6.12	4.58	2.46	3.52
	SAIDI	SAIDI= \(\sum \) Duration of interruptions / No of consumers hrs (consumers = interconnection points with Grid consumers and count of 11 kV feeders)	12.1	11.55	16.56	11.77	6.93	2.73	4.83
Transmission Loss	The technical losses	FY T. Loss= 1 - \(\sum \) Units available for distribution / Total Sent-out	1.50%	0.90%	1.20%	1.11%	1.07%	0.83%	1.1%

Note: The projected KPIs of FY23 are estimated based on past performance trend and maintenance plan.

3.2. Distribution Investments FY17 – FY23

Since the start of the tariff control period and up to June 2022, KE has invested **PKR 104,078**⁸ **million** in the distribution business, focusing on capacity enhancement and improved network reliability. In this regard, significant progress with regard to the installation of feeders and addition and rehabilitation of 11 kV Network has been made, enabling KE to reduce distribution constraints and serve the incremental power demand.

During the period July 2016 to June 2022, 2,088 MW of new connections have been added, along with addition of 477 11kV feeders and addition of 1,273 11kV Network (Km) resulting in capacity addition of over 2,383 MVAs. Going forward, KE plans to continue and further accelerate the investments in Distribution infrastructure upgrade through capacity enhancement. Details of KE's distribution performance have been discussed in the subsequent sections.

A summary of the actual investments carried out till FY22 including the forecasted investment for FY23 is given below:

⁸ Based on Gross Distribution CAPEX

⁷ Forecasted

KIIP 8 - Historic Investment Details - Distribution

								PKR Mn
Description	FY17	FY18	FY19	FY20	FY21	FY22	FY239	Total
Loss reduction	4,578	3,187	4,052	5,108	5,646	6,075	4,395	33,040
Growth	4,124	3,332	5,567	4,617	4,614	7,195	9,730	39,178
Maintenance	3,534	5,392	5,571	3,841	6,009	5,946	4,694	34,986
Rain Emergency	-	-	-	-	937	547	2,364	3,848
Safety	156	105	441	3,143	3,605	3,170	1,302	11,922
Smart network	62	441	496	787	846	957	837	4,425
Total	12,453	12,456	16,127	17,495	21,657	23,889	23,320	127,399
Deferred Revenue	(3,322)	(2,561)	(3,653)	(3,605)	(3,965)	(5,288)	(17,050)	(39,444)
Net CAPEX	9,131	9,895	12,474	13,890	17,692	18,601	6,270	87,955

Above table shows investments carried out till June 2022 and forecasted investments for FY 2023. Amounts of FY 2023 will be requested to be actualized for the purpose of Tariff workings.

3.2.1. 11kV Feeders

Since the start of the control period and up till June 2022, KE has added 477 11kV feeders to the Distribution network.

Further, KE targets addition of another 83 feeders, taking the total to 560 for the tariff control period. In addition to laying of new feeders, 11kV feeders optimization is also driven through efficient planning and load balancing which reduces the need of laying additional feeders to serve the same MW to the consumers. In addition, KE also uses feeder links to balance an underloaded feeder with an overloaded one to optimize the network without incurring additional cost. Year wise number of feeders are tabulated below for reference:

KIIP 9 - Historic Statistics - Distribution

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Total Addition
Actual/Forecast – No.	1,524	1,653	1,729	1,807	1,890	1,937	2,001	2,084	560

3.2.2. HT Network

During the control period till June 2022, KE has added **1,273 km** of 11kV network and plans to add another 241 km over the remaining tariff control period.

KIIP 10 - Historic Statistics - Distribution

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ¹¹	Total Addition
Actual / Forecast (km)	9,247	9,363	9,549	9,876	10,204	10,283	10,520	10,761	1,514

⁹ Forecasted

 $^{^{10}}$ Forecasted

¹¹ Forecasted

3.2.3. New Connections Load (MW)

Since the start of the tariff control period and up to June 2022, KE has energized 2,088 MW of new connection catering to load enhancement for above 80KW consumer segment. Further, going forward in FY23, KE expects to add 655 MW taking it to a total of 2,743 MW under the current control period.

KIIP 11 - Historic Statistics - Distribution

Description	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ¹²	Total Addition
Additions (MW)	225	309	297	305	360	592	655	2,743

Here KE would like to highlight that in addition to above 80 KW consumer segment, new connection energization has also been done for below 80 KW segment and for Kunda conversion, however, as the same do not represent new load additions to the system the MW of these connections energized have not been included in the above table.

3.2.4. Addition in Capacity

KE has strived to address the increasing load requirement by adding capacity in the distribution infrastructure by adding 6,940 PMTs / Substations in KE's network translating into capacity addition of 2,383 MVA (As of FY22). These additions of capacity have been through System Improvement Plans catering to overloaded transformers and improved network reliability.

KIIP 12 - Historic Statistics - Distribution

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ¹³
No. of PMTs / Substations	23,031	25,667	27,388	28,183	28,842	29,702	29,971	30,806
Distribution Capacity (MVA)	6,302	7,230	7,464	7,702	7,916	8,153	8,685	8,908

3.2.5. Loading of 11kV lines

KIIP 13 - Historic Statistics - Distribution

Description	FY17	FY18	FY19	FY20	FY21	FY22	FY23 ¹⁴
11 kV	0.36%	0.06%	0.55%	0.11%	0.10%	0.25%	0.15%

^{*}Overloading based on loading above 100%

With continued investments in the network, KE has significantly reduced percentage of overloaded feeders (above 100%) from 0.36% in FY17 to 0.25% in FY22 (reduction of **0.11%**), which is expected to be reduced to **0.15%** by FY23.

3.2.6. Benefits of Investments made during the current MYT

In the Current MYT, KE invested to cater for planned and unplanned growth of consumers. With strong commitment to providing metering connections to every consumer, KE's customer growth witnessed a rapid increase of 1.2 million consumers by FY22 and expects to have an active consumer base of 3.7 million by FY23. This significant growth results at a

13 Forecasted

¹² Forecasted

¹⁴ Forecasted

CAGR of 7.7% which signifies converging consumers to metered connections and actively discouraging illegal means of energy usage.

This also translates into the T&D loss reduction of KE by actively pursuing Aerial Bundle Cable over bare conductor, consequently, reducing direct theft opportunities complimented by rapid meter theft detection through round-the-clock governance initiatives. The T&D loss reduction journey and the customer growth of KE is presented below for the current MYT:

KIIP 14 - Historic Statistics - Distribution

Description	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY2315
Customer Base (MNs)	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.7
T&D Loss	22.2%	21.7%	20.4%	19.1%	19.7%	17.5%	15.3%	14.7%

On the technical front, KE has made several improvements in terms of infrastructure and adding capacity of 2,383 MVA since FY16. On the reliability front, KE has made consistent efforts to improve capturing and recording of its outages, shifting from the manual log sheets and excel based data to system-based governance for technical reporting. KE informed the Authority regarding such efforts while submitting Annual Distribution Performance Report for the Fiscal Year 18-19. In the same report, KE reinstated the reported reliability numbers for the previous year (i.e., FY17-18) based on the enhanced data visibility, where SAIFI was calculated to be 32.82 and SAIDI 41.3 hours. Taking these reinstated numbers as base provides a better representation of KE's reliability performance, which has improved from 32.82 in FY17-18 to 27.40 in FY21-22 in SAIFI, and from 41.3 hours in FY17-18 to 34.6 hours in FY21-22 in SAIDI. This represents 16% improvement in both SAIFI and SAIDI hours from FY17-18 till the completion of FY21-22.

KIIP 15 - Historic KPIs - Distribution

Description	FY18	FY19	FY20	FY21	FY22	FY23 ¹⁶
SAIFI (Faults)	32.8	29.0	27.6	28.1	27.4	29.5
SAIDI (Faults) – hours	41.3	49.2	44.3	42.7	34.6	37.3

Important to note that as KE has already invested higher than investment considered in the current tariff and no additional investment has been allowed for the Current control period (FY17 – FY23), therefore, KE had to curtail investments in improvement and preventive maintenance projects and hence increase in SAIFI /SAIDI is expected in FY23.

4. Financial Position

Overall Financial Performance (Profit/Loss)

The company's profitability over the past 6 years, i.e. from FY17 to FY22, has been summarized as follows:

¹⁵ Forecasted

¹⁶ Forecasted

KIIP 16 - Historic Financial Performance

Description	FY17	FY18	FY19	FY20	FY21	FY22		
	(Rs in million)							
Profit / (loss) after Tax for the year	10,419	12,312	17,274	(2,959)	11,998	8,524		

Ratios analysis

A brief ratio analysis of the Company of the past six years as presented in the annual report for FY22 of the Company is presented below:

KIIP 17 – Historic Financial Performance

Profitability Ratios	FY17	FY18	FY19	FY20	FY21	FY22			
Promability Ratios	(In Percentage %)								
Net Profit / (Loss) Margin	5.7%	5.7%	6.0%	-1.0%	3.7%	1.6%			
EBITDA Margin	14.0%	14.9%	10.8%	12.7%	14.1%	8.0%			
PBT Margin	4.7%	6.3%	3.1%	0.1%	4.7%	1.1%			
Return on Equity including Surplus	5.7%	5.9%	8.1%	-1.4%	5.4%	3.4%			
Return on Capital Employed	4.6%	4.9%	5.6%	-0.8%	3.1%	1.8%			
Return on Assets	2.6%	2.6%	2.9%	-0.4%	1.4%	0.8%			
Return on PPE	4.4%	4.4%	5.3%	-0.8%	2.8%	1.7%			

KIIP 18 - Historic Financial Performance

Liquidity Datios	FY17	FY18	FY19	FY20	FY21	FY22			
Liquidity Ratios	(In Times)								
Current Ratio	1.00	0.95	0.92	0.89	0.81	0.91			
Quick / Acid test ratio	0.94	0.90	0.88	0.86	0.77	0.88			
Cash to current liability	0.01	0.01	0.01	0.01	0.005	0.005			
Cash flow from operations to revenue	0.15	0.09	(0.06)	0.08	0.13	(0.05)			
Cash flow to capital expenditures	(1.17)	(0.43)	0.47	(0.44)	(0.55)	0.52			
Cash flow coverage ratio	0.56	0.27	(0.13)	0.14	0.23	(0.09)			

KIIP 19 - Historic Financial Performance

Leverage Ratios	FY17	FY18	FY19	FY20	FY21	FY22		
Leverage Ratios	(In Times)							
Long term Debt to Equity Ratio (Including revaluation surplus)	0.14	0.13	0.21	0.28	0.26	0.41		
Long term Debt to Equity Ratio (Excluding revaluation surplus)	0.17	0.17	0.28	0.35	0.32	0.49		
Interest Cover Ratio	3.41	5.24	2.41	1.02	2.38	1.37		
Average Cost of Debt	0.09	0.07	0.11	0.16	0.09	0.10		
Financial leverage ratio (local and foreign lenders)	0.27	0.35	0.60	0.74	0.82	1.13		
Debt Service Coverage Ratio ¹⁷	3.38	2.60	1.80	1.10	1.45	1.19		

KE claims Tariff Differential Subsidies (TDS) from the Government in relation to the electricity provided to its consumers based on GoP's uniform tariff policy and targeted

¹⁷ This ratio is computed by dividing Net Income as adjusted for non cash items (excluding provision for doubtful trade debts) by debt service

subsidies / packages announced by GoP from time to time. The TDS accrued during the last six years as per the audited financial statements is presented below:

KIIP 20 - Pending Subsidy Claims

Description	FY17	FY18	FY19	FY20	FY21	FY22
	(Rs in million)					
Tariff Differential Subsidy for the year as per Profit and loss account ¹⁸	15,286	32,970	97,444	94,929	70,042	172,687

As evident from the above table, KE faces significant cashflow constraints on account of the delay in receipt of TDS from Government as fuel and other costs have to be paid timely and the gap has to be bridged through working capital As at December 31, 2022, net receivables from Government entities (after setting-off payable to Government entities) amounted to **PKR** 77 billion. This has been further discussed in **Section II (19)**

KIIP 21 – Repair and maintenance expenses of K-Electric for the last six years

			PKR in	million		
Description	FY17	FY18	FY19	FY20	FY21	FY22
Repairs & Maintenance and Stores & Spares Consumption	2,137	2,497	2,629	2,458	2,362	2,521

5. Power Demand and Supply (Daily Load Demand & Seasonal Load Profile)

Load Profile:

Demand trend shows an increase during hot / summer months and decrease during peak monsoon / winter months. The gap between demand and supply is mainly due to AT&C based policy load shed which KE follows as per the regime and is in line with country wide practice of other DISCOs. The load factor of KE for the year ranges from 55~60% and load profile is shown below:

KIIP 22 - Seasonal Load Profile

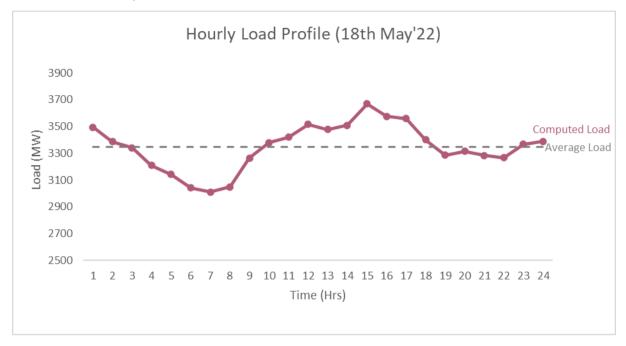


¹⁸ This amount includes unbilled revenue for the period based on accrual which materialize in next period. Further, this also includes accrual for unrecovered cost and additional write off amount included in last quarterly tariff variation as per mechanism of current MYT, which is determined in subsequent periods. Write off claims of KE are yet to be determined by NEPRA

Hourly Load Profile of Peak Demand Day

The graph depicts the hourly demand trend of a peak demand:

KIIP 23 - Hourly Load Profile



6. KE's Transmission Network

KE's Transmission segment owns, operates, and maintains transmission network of 220kV, 132kV and 66kV. As of June 2022, following are the details of existing transmission network of KE at 220kV, 132kV and 66kV:

- 10 Nos. of 220kV Grid stations
- 58 Nos. of 132kV Grid stations
- 3 Nos. of 66kV Grid stations
- Transformation capacity: 6,803 MVA (Power Transformers) and 4,600 MVA (Auto Transformers)
- 364km of 220kV Transmission lines
- 838km of 132kV Transmission lines
- 153km of 66kV Transmission lines

Details attached as Annexure A (List of Grid stations) & Annexure B (List of Transmission Transformers), List of Transmission lines (Annexure C), Details of Circuits and amp (Annexure D)

7. KE's Distribution Network

KE is divided in two regions, ten clusters & 30 IBC's. The Integrated Business Centers (IBCs) are divided according to the geography & dynamics of the particular areas. These IBC's are grouped together to form a cluster and these clusters together form region. The central & South part of Karachi form one region whereas North, East & West part of Karachi form another region. KE ensures prudent utility practice for its planning and operations. Extension is done in accordance with technical limits alongside catering expected future load growth.

7.1. Loading Position details of KE's Power Transformers & 11 kV Feeders

K-Electric distribution network comprise of 2,001 11kV feeders, 29,971 distribution transformers (PMTs/Sub-stations) having distribution capacity of 8,685 MVAs, and 10,520 km of 11 kV network as of FY22.

KE started GIS mapping of its network for better visibility and the entire HV network has been surveyed and updated in GIS. At present LV network GIS survey and validation is in progress. Related equipment, loading and length wise details are mentioned in Annexures.

Loading position of Transmission transformers (**Annexure E**), Loading position of 11 kV feeders along with their length & GIS details (**Annexure F**, **G & G1**)

In KE's transmission system, following core allied equipment are present:

- Circuit Breaker
- Lightning Arrestors
- Current Transformer
- Voltage Transformer
- Relay
- Bays
- Corona Ring
- RTV/ Composite Insulators
- SDH systems (ABB, HUAWEI)
- PLCs (SIEMENS, ABB)
- 48VDC chargers and Banks
- Line traps, couplings and LMUs.
- PABX systems.
- NMS servers.
- VHF wireless devices and repeaters.
- Microwave wireless devices
- Fiber optic cables
- OPGW and accessories
- Servers Machines from Oracle
- Security Firewalls (Cisco, Force point)
- Network Switches (Cisco, TP Links)
- Workstations HP
- Large Screen Display (BARCO)
- SCADA Application Sinuat Spectrum 4.7 and SW modules.
- UPS and battery System (Emerson)
- RTUs from Siemens, GE & Hitachi
- Marshalling System from Hitachi & GE
- GPS Time synch System from Meinberg
- Network Switches from Siemens, Ruggedcom and ABB
- Power Transducers
- DC Inverters
- Signal Isolators and Splitters
- HMIs from Siemens, HITACHI & SEL
- BCU's from Siemens.

7.2. Types of conductors used for distribution of power and their capacity

Following types of overhead and underground conductors are being used in KE's Distribution network.

7.2.1. Overhead Network

HT Overhead Conductors (11 KV)

- Bare ACSR Conductor (Dog)
- Bare Copper Conductor (3/O)
- XLPE Covered Conductor (Tiger Conductor)
- HT ABC 185 mm Sq

LT Overhead Conductors (0.42 KV)

- Bare ACSR Conductor (Dog)
- Bare Copper Conductor (3/O)
- LT ABC 3x95+1x70+1x25 mm Sq (XLPE Insulated Arial Bundled Cable)

7.2.2. Underground Network

HT Underground Cable (11 KV)

- 300 mm Sq HT Underground Armored Cable
- 400 mm Sq HT Underground Armored Cable

LT Underground Cables (0.42 KV)

- Copper Four Core, PVC Insulated Armored Cable
- Aluminum Four Core, XLPE Insulated Armored Cable

7.2.3. Ampacity of Conductors

Conductor Type	HT/LT	OH/UG	Ampacity
Bare ACSR Conductor (Dog)	HT	ОН	257
Bare Copper Conductor (3/O)	HT	ОН	320
XLPE Covered Conductor (Tiger Conductor)	HT	ОН	313
HT ABC – 185 mm Sq	HT	ОН	325
Bare ACSR Conductor (Dog)	LT	ОН	257
Bare Copper Conductor (3/O)	LT	ОН	300
LT ABC – 3x95+1x70+1x25 mm Sq (XLPE Insulated Arial Bundled Cable)	LT	ОН	210
300 mm Sq HT Underground Armored Cable	HT	UG	304
400 mm Sq HT Underground Armored Cable	HT	UG	346
CABLE COPPER L.T. 4 CORE 16 MM2 (ARM)	LT	UG	69
CABLE COPPER L.T. 4 CORE 35 MM2 (ARM)	LT	UG	108
CABLE; CU L.T 4-CORE (ARM) 70MM2	LT	UG	158
CABLE COPPER L.T. 4 CORE 120 MM2	LT	UG	216
CABLE; CU L.T 4-CORE (ARM) 240MM2	LT	UG	314

7.2.4. Types of switching devices and power sources used in KE's Distribution Network

7.2.4.1. Switching Devices

KE 11 kV distribution network is spread into underground as well as Overhead system. Different types and makes of switching devices are installed in distribution network for switching and protection application as per below details:

KIIP 24 – Details of Switching Devices

Switchgear Type	Application	Location	Status	Total Installed
Oil Circuit Breakers	Indoor	Substations	Obsolete technology to be replaced overtime	7,440
Knife Switches	Outdoor	Overhead Line	Standard design	7,684
Vacuum Circuit breakers	Indoor	Substations	Standard design	8,313
3/4-way SF6 Ring Main Units	Outdoor	Stand Alone	Standard design	271
SF6 Load Break Switch	Outdoor	Overhead Line	Standard design	2,153

7.2.4.2. Distribution Transformers

KIIP 25 – Details of Distribution Transformers

Rating in KVA	PMT/Substation	CDS	DDS	Total
10	PMT	1	-	1
15	PMT	54	104	158
25	PMT	98	215	313
50	PMT	1,679	1,729	3,408
100	PMT	1,265	1,177	2,442
150	PMT	1,169	645	1,814
200	PMT	634	237	871
250	PMT	11,010	1,896	12,906
300	PMT	3	-	3
400	PMT	603	469	1,072
500	PMT/Substation	3,965	1,153	5,118
630	PMT/Substation	63	12	75
750	Substation	1,007	70	1,077
1000	Substation	609	42	651
1500	Substation	59	3	62

7.2.4.3. Other LT Equipment

KIIP 26 - Details of Other IT Equipment

Other LT Equipment	Indoor/Outdoor	Rating
LT Distribution, 8-way (without enclosure)	Indoor Substation	1250 & 1600 A
LT Distribution, 4-way (without enclosure)	Indoor Substation	800 A
LT Feeder Pillar Box (5-way)	Outdoor	400 A
LT Distribution Box (Pole Mounted)	Outdoor	400 & 800 A
Multi story bus bar	Outdoor	50 & 150 kW

8. Financial Management

Finance is a strategic function that ensures efficient financial management and control in order to mitigate the business risk and maximize value for the Customer, shareholders and the Company. The department's goals, which are aligned with the Company's strategy, broadly cover the following areas:

- Deliver the finance and commercial strategy
- Be guardians of enterprise value creation
- Balance risk and opportunity
- Demonstrate stewardship of spend by lowering absolute costs

KE uses state of the art SAP ERP to effectively manage all aspects of financial processes, including budgeting, accounting and reporting, billing & customer management etc. Management regularly conducts reviews to ensure that all financial decisions align with the overall business strategy and goals. Key management decisions are presented to the Board for their approval to ensure transparency in governance. In addition, compliance with applicable laws and regulations is ensured.

For the procurement process, KE has successfully implemented ARIBA in order to improve supplier management and supplier partnership, thus increasing transparency, visibility and reducing variability. For material management, SAP is used to effectively manage procurement, storage and consumption of materials required for uninterrupted operations. The system helps to track inventory levels, manage vendor relationships and optimize purchasing decisions in line with the internally approved procurement manual and signature mandate.

KE has a fully resourced finance and procurement functions, bifurcated in different subdepartments which collectively ensure smooth running of Finance and Procurement functions.

9. Human Resource

Human Resources is a strategic function that supports KE by aligning People Strategy with Business Objectives to help grow our people and organization. In terms of our Talent, HR facilitates Talent and Succession Planning to ensure strong health of our talent pipeline and availability of Talent for Leadership Succession. Talent Acquisition Function supports this by building an employer Brand inside and outside the organization to attract best-in-class talent. Our Total Rewards Function ensures fair and competitive pay and provides HR transactional support to our people using modern technologies with special emphasis on employee experience. HR also plays a key role in Capability Building within the organization providing multiple platforms including formal trainings, peer learning and on the job experiences. Human Resources also supports in building a high performance organization that is aligned

to KE values and ambitions. Risk Management is a key activity for HR as well to ensure people practices are legally and socially compliant and any grievances are timely addressed.

10. Project Related Processes

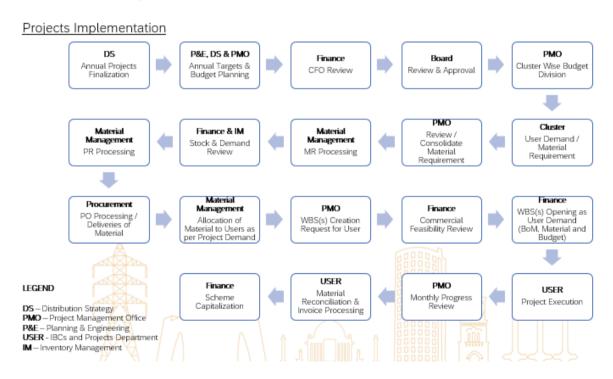
10.1. Transmission projects

For managing projects, necessary controls are implemented to ensure effective planning, execution, and reporting. KE follows transparent tendering process which starts from floating of tendering documents to the all the eligible bidders. Technical and Commercial Scorecards are used to award the Contract to ranked 1 bidder. A separate department named Project Implementation Department (PID) is in place which looks after all the Project related activities. Best practices, such as agile methodologies and regular reviews, are conducted to ensure that projects are of desired quality, on schedule and within the approved budget. Key Projects' progress is also presented to the Board to ensure alignment with the company's overall strategy and goals.

10.2. Distribution projects

The process of project design, approval and implementation for Distribution projects is explained in diagram below:

KIIP 27 – Process of Project Design, Approval and Implementation for Distribution Projects



Overall, our commitment to utilizing technology, conducting thorough reviews and implementing oversight measures ensures that KE's processes are efficient and compliant with the applicable requirements.

10.3. Internal controls over the company's business processes

At KE, effective internal controls are implemented to ensure that all financial, operational and compliance related risks are identified, measured and controlled. A well-defined framework is in place, which includes segregation of duties, regular audits, reviews and a robust risk

management system. These internal controls help ensuring the integrity of financial reporting, compliance with laws and regulations, and safeguarding of assets. In addition, the management has a strong focus on safety, which helps mitigating potential risks of incidents.

KE's system of internal controls comprises of clear governance structures, authority limits and accountabilities, well understood policies, procedures and a budgeting process. The Board meets at least quarterly to consider KE's financial performance, financial and operating budgets, business growth and developmental plans, capital expenditure proposals and other key performance indicators. The Board Audit Committee receives reports on the system of internal controls from the external and internal auditors and reviews the process for monitoring the effectiveness of internal controls.

10.4. Closure of Financial Books

The company is compliant with the Company's Act 2017, which requires the company to hold Annual General Meeting (AGM) within 120 days after the closure of financial year (i.e. 30th June). Notice for the AGM needs to be circulated at least 21 days before the meeting for which Audited Financial Statements are required to be annexed. Therefore, the company ensures that annual closure of financial books and the consequent audit procedures to comply with above timelines.

Similarly, Quarterly & Half Yearly Financials are also published within the defined timelines of 30 days and 60 days respectively.

11. HR Strength

In relation to HR management, following are the statistics relating to employees during the year FY22:

KIIP 28 - Officers Strength

	Officers	FY22
	Jr.officer to Sr.Officer	4,197
A	AM & above	2,571
	Management Trainee	30
	Total	6,798

KIIP 29 - Staff Strength

	Staff	FY22
В	NMS	3,161
	OSP	5,562
	Total	8,723

KIIP 30 - Percentage of officers trained during the year

Description	FY22
Percentage of officers trained during the year	100%

KIIP 31 - Percentage of staff trained during the year

Description	FY22
Percentage of staff trained during the year – NMS	60%

KIIP 32 - Amount budgeted and spend on trainings in a year

Description	F	Y22
	Budget	Spent
Amount budgeted and spent on trainings in a year	118 million	115 million

KIIP 33 - Status of current in-house training centers

I . A	ZM I a a maior or I a stitute
1. A	AZM Learning Institute -
Status of current in-house training centers 2. D	3 Training Rooms with 80 Participants capacity Distribution Network Academy – 7 Training Rooms with 210 Participants capacity

KIIP 34 – Management related trainings given to officers from external organization per year and other baseline conditions

Description	FY22			
	External Internal			
Management related trainings	161	36		

On an average, around 350 trainings per year are offered to employees which include business and functional domains.

12. IT-MIS

KE IT department has state-of-the-art and secure infrastructure that is hosted on international standards data centers in Karachi. The infrastructure is comprised of server farms, enterprise storages, firewalls, network routers and switches, operating systems, and databases from renowned service providers. KE has a vast network infrastructure comprising of fiber-optics wide-area-networks for 100+ locations, local area networks for 6000+ nodes, 400+ wireless access points, high speed internet connectivity and virtual private networks and video conferencing facilities for remote working.

KE IT department is supporting employees by providing them intelligent and secure workspace solutions including secure and hardened laptops, mobile phones and IP phones. Post COVID period, KE IT department had enabled the business departments with the collaborative and productive software and tools related to online-meetings, emails, office automation software and messaging mobile applications.

KE IT department is also supporting the complete technology stack for the state-of-the-art Call Center solution to provide round-the-clock calling facility to its customers. In recent years, focusing on customer centricity, KE IT department has provided multiple solutions for consumers including mobile application (KE Live), SMS facility, Chatbots, KE website,

WhatsApp for business and other social media platforms including twitter and Facebook for maximum facilitation to the customers from their choice of channel.

The most significant systems KE IT department providing to their business functions includes Enterprise Resource Planning and Billing and Invoicing systems. This ERP system is centrally connected with other business mission-critical systems including Datawarehouse solution, Meter-data-Management system, Outage Management system, Plants Management System, HR Management systems, Meter Reading System, various visualizations, charts, interactive dashboards and analytics apps for local and offline usage, Online Procurement and Supply Management System, Document Management System, and other business applications.

Data Security and Access Controls are the most important pillars of IT Security which have been implemented by the KE IT department. Robust systems and infrastructure related to IT Security such as Web-Application firewalls, SIEM, access controls and provisioning system, Antivirus/Antimalware solutions, data leakage and prevention control systems and logging and monitoring systems are also managed by IT department to safeguard the KE critical business data and prevent the attack or misuse of any system.

13. Commercial Statistics

Below are the details of units procured and billed to consumers in the last six years:

Description	FY17	FY18	FY19	FY20	FY21	FY22			
Description	Units in GWh								
Units Sent Out	16,580	17,419	17,697	17,787	19,487	19,802			
Units Billed	12,981	13,860	14,318	14,277	16,069	16,763			
T&D Losses %	21.71%	20.43%	19.09%	19.73%	17.54%	15.35%			

KE recorded a Sent-out of 19,802 GWh in FY22 out of which 16,763 GWh were billed to consumers. With targeted recovery initiatives and introduction of various recovery schemes for collections from non-paying consumers, KE's recovery ratio has improved over the current control period from 88.5% in FY 2016 to 96.7% in FY22 as evident below:

KIIP 36 - Historic Collection Details

Category	FY16	FY17	FY18	FY19	FY20	FY21	FY22
Residential, Commercial and others	83.30%	83.20%	86.80%	89.50%	91.30%	91.00%	91.90%
Industry	99.40%	99.70%	100.00%	100.30%	94.90%	100.30%	100.30%
PSC	80.80%	98.40%	89.60%	88.00%	88.20%	98.10%	110.40%
Overall Recovery Ratio (%)	88.50%	90.60%	91.00%	92.60%	92.10%	94.90%	96.70%

In FY22, KE recorded 252,328 billing related complaints, which is less than 1% of annual bills issued by KE and out of which 36,095 adjustments were made to the bills of the consumers. Furthermore, IBC's use Handheld devices (HHU's) for recording of consumptions of meters and the company has installed an ERP system of SAP-ISU for billing of its consumer base. The HHU device is not only used for recording of the reading, but also stores the pictures of the

meter, notes and other relevant information necessary for billing process. The data is then uploaded to the servers of KE which enable KE to print & invoice bills to its consumers.

14. Internal Control

The company prepares annual budgets which is approved by the Board and then is subsequently used as a monitoring tool for incurrence of various operational & capital expenditures during the year.

In addition to this, KE also follows the Financial Signature mandate approved by the BOD wherein limits have been assigned at the individual level for investment and expenditure approvals.

15. Internal Audit

KE's Internal Audit Department (IAD) is an independent function and the Chief Internal Auditor reports directly to the BAC and has direct access to the Committee. The IAD is governed by an Internal Audit (IA) charter duly approved by the Committee, which describes the purpose, authority, responsibility and reporting relationship of IAD.

All assurance activities are performed in accordance with an annual risk-based internal audit plan approved by the BAC, whereas consulting activities are based on the services requested by the management, with agreed objectives, scope and reporting.

The Committee monitors the effectiveness of the IA function through discussions with Chief Internal Auditor along with the review of matters arising from the IA reports. The Committee on the basis of IA reports reviews the adequacy of internal controls and discusses corrective actions in the light of Management responses. This review allows the Company to improve controls and compliance in areas where weaknesses are identified.

The Committee also reviews and ensures that IA function is adequately staffed with professionals who possess the requisite internal audit training and experience to perform their duties.

16. Legal and Contractual Framework

K-Electric was incorporated under the repealed Indian Companies Act, 1882 (now the Companies Act, 2017). Accordingly, all the Legal and Contractual Frameworks applicable over the Companies registered and operating in Pakistan under the Companies Act, 2017 are binding over KE. The Companies Act 2017 encompasses all the rules and regulations for businesses registered with Security Exchange Commission of Pakistan (SECP). The Ordinance provides legal protection to the businesses, with the SECP keeping a close check on financial and corporate entities to ensure the stakeholders' interest.

The important legal and regulatory documents, principal contracts, and laws under which KE operates are:

- Companies Act 2017
- Memorandum of Association
- Articles of Association
- Generation License (GL/04/2002)
- Distribution License (09/DL/2003)
- Transmission License (TL/02/2010)
- NEPRA's Rules and Regulations
- Income Tax Ordinance 2001

- Sindh Environmental Protection Act (SEPA) 2014
- Sindh Environmental Quality Standards (SEQS) 2014
- SEPA Review of IEE and EIA Regulations 2021, etc.

17. Governance and Description of the relationships among the Governments

To deliver value to its stakeholders and the general public, KE maintains bilateral communication with the government as well as Karachi's civic agencies. The Company is focused on timely dissemination of information whilst managing its connections with the public and government bodies through three sub-teams, Public Affairs & Government Relations, CEO Taskforce and Technical Liaison.

The Public Affairs & Government Relations team engages stakeholders from all the governing bodies of Pakistan to ensure mutual benefits by liaising between these external stakeholders with internal departments.

The Technical Liaison team has been allocated responsibilities that include but are not limited to planning and development of KE's infrastructure in the coverage area. By liaising with governing and civic agencies, Technical Liaison has built progressive relationships that promote advancements.

Please refer **Section II (1)** for Company's organogram.

18. Presentation and Analysis of the main issues facing the Company

The Company remains committed to its robust investment plan aimed at benefiting the consumers and Pakistan's economy at large, however, resolution of critical issues as explained in detailed below are critical for sustainable supply of power to Karachi.

• Achieving sufficient level of returns to enable KE to execute its business plan which is premised upon a sustainable tariff determination

Despite significant improvements achieved since privatization and investment **of PKR 474 billion** into the Company, KE returns have remained well below returns made by other comparable power sector entities. During the period FY10 to FY22, KE's average Return on Equity (RoE) has been around 5%, whereas returns made by other non-public sector entities in the sector range between 23% to 32% with significantly lower risk profiles as compared to KE.

While, KE Investors have demonstrated their commitment to the business and, to date, have not taken any cash out of the business, however, continued investment in the business can only be sustained if KE is allowed a cost reflective tariff that includes an appropriate allowance for recovery loss and allows a reasonable level of return including retail margin for asset light Supply business. This is in the upmost interest of consumers as in case KE is unable to invest, or make timely investment decision, there would be potential drastic consequences for the consumers in the form of increased load shed, cost for consumers as well reduction in quality, reliability and availability of electricity in Karachi and its adjoining areas. Hence, it is imperative that KE should be allowed a flexible investment plan and a tariff that balances the interest of all stakeholders and ensures continuity of investment.

• Working capital constraints due to circular debt and non-provision of local gas

Circular debt has constrained KE's liquidity. As at December 31, 2022, net receivables from Government entities (after setting-off payable to Government entities) amounted to **PKR** 77

billion. Given the delays in release of TDS and payment of energy dues by Government entities, it is a significant issue and impacts KE's ability to ensure continuity of smooth operations. Additionally, non-provision of local gas to KE burdens consumers as well as increases the quantum of Tariff Differential Subsidy as KE has to rely on expensive RLNG and Furnace oil to fulfill the demand.

• Delays/Uncertainty in Agreement and other Actions by Government

There are precedents in the past where due to uncertainty in Government policies, KE's planned projects including the 700 MW coal project could not materialize which otherwise would have resulted in cheaper power for the consumers. Similarly, despite extensive discussions of over 2 years, contractual arrangements for supply from National Grid have not been finalized. Such dependence on Government entities / departments not only adversely impacts KE and its consumers, but also negates the essence of privatization. Moreover, land allocation for renewables and timely provision of Right of Way for execution of projects remains a key challenge.

Therefore, considering the unique status of KE being a privatized vertically integrated utility and its licensed obligation as Planner for its service area, KE request supports from all stakeholders as well as provision of clear and consistent regulatory/Government frameworks that empowers KE to meet its obligations to plan and cater the demand in its service area in the larger interest of consumers.

• Extremely uncertain macro environment and related challenges

Currently, Pakistan as well as globally, unprecedented macro stability challenges are being faced. While, the world is still recovering from COVID-19 impact, the post-pandemic economic recovery has been hampered by the global fuel crisis and its impact on input costs. Inflationary crises and delays in material shipments have become a new normal and specially for Pakistan where due to import restriction, the availability of required material to ensure operations and continued investments have become a challenge. Moreover, consumers ability to pay has become a challenge globally and for country like Pakistan which is currently passing through a worst economic crises, it has become a greater challenge. This operational challenge is further exacerbated by mounting delays in the release of Tariff Differential Subsidies (TDS) claims and significantly reduced supplies of indigenous fuel resources. As consequences of both these issues go beyond KE's performance and threaten to compromise availability of affordable and reliable power for customers.

• Conclusion

While, KE Investors have demonstrated their commitment to the business and, to date, have not taken any cash out of the business, however, continued investment in the business can only be sustained if KE is allowed a cost reflective tariff that includes an appropriate allowance for recovery loss and allows a reasonable level of return including retail margin for asset light Supply business. Further, resolution of circular debt and clarity and consistency of regulatory/Government framework is critical for KE to be able to plan and execute its investment.

These are in the upmost interest of consumers as in case KE is unable to invest, or make timely investment decision, there would be potential drastic consequences for the consumers in the form of increased load shed, cost for consumers as well reduction in quality, reliability and availability of electricity in Karachi and its adjoining areas. Hence, it is imperative that KE should be empowered through regulatory policies, allowed a flexible investment plan and a tariff that balances the interest of all stakeholders and ensures continuity of investment.

Section III Forecasts for Next Seven Years

1. Forecast for Energy & Demand

This section summarizes the forecasts of energy, demand & consumers over the next 7 years:

KIIP 37 – Consumer Growth by category

Consumer	Crowth	(No i	n ooo'e	١
Consumer	Growin	uno. i	เม บบบ ร	,

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Domestic	3,078.51	3,210.60	3,332.35	3,483.03	3,623.44	3,766.27	3,911.72	4,059.60
Commercial	589.82	615.13	638.46	667.33	694.23	721.60	749.46	777.80
Industrial	26.97	28.14	29.21	30.53	31.77	33.02	34.30	35.60
Agricultural	2.51	2.62	2.72	2.84	2.96	3.07	3.19	3.31
Other	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39
TOTAL	3,698.12	3,856.81	4,003.06	4,184.06	4,352.74	4,524.33	4,699.05	4,876.69
Growth%		4.3%	3.8%	4.5%	4.0%	3.9%	3.9%	3.8%

KIIP 38 – Energy and Demand Forecasts

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	CAGR
Energy Demand After Captive & Solar disruption (GWh)	21,361	21,827	22,110	22,400	22,687	22,964	23,234	23,491	1.4%
Demand Growth (%)		2.2%	1.5%	1.5%	1.5%	1.4%	1.4%	1.3%	
Load Shed (GWh)	2,554	1,895	1,552	1,348	1,210	1,116	1,026	951	
Sent-Out (GWh)	18,807	19,932	20,558	21,052	21,478	21,848	22,208	22,539	2.62%
Sent-Out Growth %		6.0%	3.1%	2.4%	2.0%	1.7%	1.6%	1.5%	

KIIP 39 – Energy Demand (GWh)

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	CAGR
Base Demand (GWh)	21,490	22,015	22,554	23,105	23,670	24,249	24,842	25,450	2.4%
Demand after solar disruption & Captive induction	21,361	21,827	22,110	22,400	22,687	22,964	23,234	23,491	1.4%

KIIP 40 – Break up of Energy demand after solar disruption (GWh)

									(GWh)
Description	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Domestic	11,720	11,636	11,814	11,966	12,115	12,258	12,394	12,524	12,646
Commercial	2,789	2,772	2,820	2,862	2,904	2,944	2,983	3,021	3,059
Industrial	5,823	6,013	6,254	6,341	6,429	6,518	6,602	6,685	6,763

									(GWh)
Description	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Agricultural	177	177	182	186	191	195	199	204	209
Other	675	763	756	755	761	772	785	799	814
TOTAL	21,184	21,361	21,827	22,110	22,400	22,687	22,964	23,234	23,491
Growth %		0.8%	2.2%	1.3%	1.3%	1.3%	1.2%	1.2%	1.1%

Further, keeping in view the reduction in AT&C losses, KE is projecting to increase the number of load shed exempt feeders to 95% by the end of control period as follows:

KIIP 41 - Feeder and Load Shed details

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Total Feeders	2,084	2,120	2,156	2,212	2,279	2,362	2,456	2,528
Load-shed Feeders	421	343	282	241	212	177	150	126
Load-shed free Feeders	1,663	1,777	1,874	1,971	2,067	2,185	2,306	2,402
Load-shed free Feeders %	79.8%	83.8%	86.9%	89.1%	90.7%	92.5%	93.9%	95.0%

KIIP 42 - Peak Demand & Solar Disruption

Description	Legend	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	CAGR
Day Peak Demand (MW)	A	4,165	4,350	4,478	4,597	4,720	4,834	4,977	5,111	2.97%
Solar Disruption (MW)	В	250	359	473	589	716	855	1,007	1,171	-
Day Peak Demand (MW) – After Solar	C= A - B	3,915	3,991	4,005	4,008	4,004	3,979	3,970	3,940	0.09%
Night Peak Demand	D	4,010	4,168	4,290	4,404	4,522	4,631	4,768	4,896	2.89%

Demand has been forecasted based on cumulative average growth rate of historical data sets over the period of 7 years that comprises of addition to the system through new connection and organic growth. The Cumulative Average growth rate of last seven years is around 2.4% (FY14 to FY21), the same is considered for future growth. Moreover, the similar growth trend was also observed for 10 year and 15 year periods which incorporates diverse and complete economic cycles. Furthermore, with the rapid penetration of Solar (PV) becoming a recent trend and around 150 MW load of consumers already adopting for on grid solutions by the close of FY22, KE has projected the total penetration of Solar PV customers (both on-grid and off grid) in its system to be around 1464 MW by FY30 with average addition of around 150 MW of solar load each year.

Further, Industrial captive load induction of 555 MW has also been accounted for in formulation of demand which are expected to become part of KE's system keeping in view government policies.

Moreover, for purposes of planning for peak demand, an additional impact of heat wave has also been incorporated at 4.1% of demand based on historical trend witnessed during such extreme environmental conditions.

2. Generation Forecast and Power Acquisition Program

The provision of reliable, adequate, and affordable electricity is a pre-requisite for socioeconomic growth and development of any country. In this context, KE has formulated this

Plan spanning on a horizon from FY24 till FY30, aptly identifying KE's long-term power needs through addition of new power generation and power supply sources with a focus on reduction of KE's basket price keeping in view the reliability of the system through induction of renewables and indigenous power sources.

KE's aim is that the energy contribution by FY30 in KE's system (excluding supply from National Grid) should primarily be dominated by indigenous fuels and renewables. The percentage of renewables and indigenous fuel penetration in KE's network is targeted to be 24% and 54% respectively by FY30 (making total to 78%).

For detailed forecast with the generation plan please refer Power Procurement Plan enclosed as **Annexure H.**

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	CAGR
Average Demand (GWh)	21,827	22,110	22,400	22,687	22,964	23,234	23,491	1.37%
Load shed (GWh)	1,895	1,552	1,348	1,210	1,116	1,026	951	-
Sent out (GWh)	19,932	20,558	21,052	21,478	21,848	22,208	22,539	2.62%
Units Served (Sent out								

21,199

21,564

21,919

22,246

2.59%

KIIP 43 - Anticipated Reduction in Load Shedding

19,673

As also detailed in the table above, the LS has also been planned to be reduced to 4.1% of the total demand versus **12.0%** as of today. This will be achieved through various loss reduction initiatives as detailed in the investment plan.

20,778

3. Other Challenges Including Technological Advances

20,291

The country is overall experiencing unprecedented inflation levels impacting consumers buying power and forcing regular payers into defaulting of electricity bills. These changes coupled with rising power tariff due to global economic fluctuations are impacting the recovery levels for DISCOs operating in Pakistan. These externalities also give rise to power theft and fall in payment collections.

The introduction of PV Panels, commonly known as Solar panels are largely adapted by common households and businesses. The Solar panels will curtail KE's demand as the consumers would be involved in both generating and consuming the electricity. These are mostly the well-off segments of society or businesses that have the means to install such systems and negatively affect the overall sales mix of the utilities.

KE foresee below mentioned external changes which would affect the distribution network business and network performance:

• Electric Vehicles (EV)

- after Transmission

losses)

On the technological front, Pakistan is experiencing a huge influx of Electric Vehicles (EV) which will require electricity to operate. Karachi has already started experiencing an increase in demand of EVs and various researches are already underway on introduction of Electric Bikes as a cheaper replacement of petrol operated bikes.

These changes would cause uncertainty in the demand projections as there is no historical data available for these externalities.

• Flooding / Rain:

Urban flooding in Karachi has become common from past few years during Monsoon season between June and September due to concentrated spells of heavy rainfall. To cater the challenges emerging with increasing severity of weather conditions, several actions are taken by KE in this account to avoid risk of long outages in case of flooding such as raising of substation foundation, replacement of ground level substation with PMUs installed on raised foundation, replacement of LT Pillar Boxes and raising its foundation.

• Telco Network:

The digitization initiatives where the large amount of data is transferred from field devices to the control rooms, there is a reliance on mobile networks. Since the connectivity of the telco's mobile network is not consistent across the city, it poses a challenge in retrieving field data with consistency and in near real time. Foreseeing this, the upward compatible Modems which support 4G/5G communication are being considered along with the standard cybersecurity protocols to ensure secure communication between devices and communication servers.

• Theft of Electricity:

Owing to prevailing dynamics of the city, as the illegal settlers continue to reside in the peripheral parts, giving rise to unplanned growth along with illegal access to the electricity through sub-standard wires from the nearest distribution transformer, giving rise to unwarranted electricity theft and deterioration of LT wires / cables. In addition to this, majorly in high-loss pockets of the city, instances of illegal abstraction of electricity continue to increase which require additional governance from KE.

• Theft of KE Assets:

Frequent complaints are received regarding the theft of KE assets/material installed both in the indoor 11kV substations and outdoor.

• Right of Way Violations:

Right of Way (RoW) is the KE legal right to pass the underground cable and overhead conductors through a specific route. However, the local civil agencies violate the KE RoW and damage the KE property especially the underground cable during the excavation process for running the other utility services through the KE allocated RoW.

• Co-ordination with Several Govt Agencies:

The city of Karachi has a lot of unique challenges in respect of its demography, environment, local issues, and governance. The fragmented governance structure can be understood by the fact that there are more than 40 authorities which are responsible for various administrative activities in the city and KE need to engage with them for different approval processes which makes project execution more challenging.

4. Analysis and efforts

KE has devised a detailed investment plan to adhere to the demand growth in the service territory. Furthermore, the KE has also incorporated the impacts of external factors, where practical, to meet the demand and enhance the infrastructure and capacity requirements.

KE has introduced Handheld units for digitizing survey and inspection functions enabling paperless real-time survey report punching, significantly reducing time taken to punch and

process survey report in the system, also ensuring a near real-time availability of evidence on discrepant meters. Thus, this project is critical and urgent for commercial loss reduction, which will be ensured through timely processing of surveys, improved governance, MIO productivity monitoring and resultant resource optimization, system recording of evidence (theft/ faulty meter) and route management.

The most challenging part lies in the inability to predict and control the infiltration of EVs. With lack of historical data availability, the accuracy of forecasting the demand for EV, it is uncertain which would impact the reliability of power and stability of the network. The issue can get worse if the grid is already experiencing a peak demand, and in locations where the network is already experiencing congestion.

KE will continue to monitor the situation and would devise interventions to address the same with approval of the Authority.

Section IV - Next Seven Years Goals and Objectives

1. Transmission's Next Seven Year Goals and Objectives:

Based on the investment plan, KE proposes the following targets for the control period i.e., FY24 – FY30 against which KE's performance shall be measured:

KIIP 44 - Goals and Objectives Matrix - Transmission

KPI	Definition	Calculation	FY24	FY25	FY26	FY27	FY28	FY29	FY30
System	SAIFI	SAIFI= No of interruptions during one year / No of consumers ((consumers = interconnection points with Grid consumers and count of 11 kV feeders))	3.17	2.85	2.57	2.31	2.19	2.08	1.98
Reliability	SAIDI	SAIDI= \(\sum \) Duration of interruptions / No of consumers hrs ((consumers = interconnection points with Grid consumers and count of 11 kV feeders))	4.35	3.91	3.52	3.17	3.01	2.86	2.72
Transmission Loss	The technical losses	FY T. Loss= 1 - ∑ Units available for distribution / Total Sent-out	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%

Considering separate tariffs for Transmission and Distribution, separate Transmission loss trajectory has been proposed for the control period FY24 - 30.

KE's transmission loss is already at the optimum level, and the load growth and other transmission CAPEX has an indirect impact on efficiency of the network and system losses. In order to optimize the transmission loss and to have compensation for VAR requirement of network / load centers which would also help managing the power factor / quality as per the grid code / prudent utility practices, installation of additional capacitor banks at existing 132kV Grid stations alongside capacitors at new grids is planned. Accordingly, investment of PKR 3,171 million is planned for capacitor banks.

1.1. Rationale for Setting Goals and Objectives for Proposed Transmission Investments

In view of growing demand with age of transmission infrastructure, transmission requires investment that is aligned with the objectives and goals to achieve optimal utilization of system with increased reliability, security and improved customer satisfaction.

The goals & objectives are set to achieve operational excellence while adhering to regulatory standards. The setting of objectives envisaged the duty towards KE's customer and people at large.

Following points were focused while setting goals and objectives:

- Reliability: Ensuring that the transmission system is reliable and able to meet the demands of the customers.
- Efficiency: Optimizing the use of resources while reducing the losses incurred across the system through effective system management.
- Growth: Planning for future growth and expansion of the transmission system to meet the changing needs of the customers.
- Compliance: Ensuring compliance with all relevant regulations and industry standards, including environmental and safety regulations.
- Safety: Prioritizing safety in all aspects of the transmission system, including design, construction, maintenance, and operations.
- Innovation: Encouraging and implementing innovative technologies and practices to improve the efficiency, reliability, and safety of the transmission system.
- Integration: Coordinating with other departments of the power utility company, such as generation and distribution, to ensure a seamless and integrated system.
- Cybersecurity: Implementing measures to protect the transmission system from cyber threats.

1.2. Rationale for Planning Criteria for Proposed Transmission Investments

KE's vision is to ensure reliable, and safe supply of electricity in an efficient and sustainable manner to its consumers. Past performance of KE and improvements made over the previous years has significantly improved system availability and reliability.

During the last few years, a number of initiatives were taken to improve reliability and availability of power system which includes installation of new 132kV and 220KV Grid and Transmission lines, replacement of aged equipment, transition to condition-based maintenance regime, adopting modern maintenance mechanisms / tools, transition from conventional operational regime to automated environment through SCADA and other digitalization projects.

Drawing inference from the above thought process, KE has proposed Investment Plan to upkeep and improve its focus on safety, outage reduction, restricting spread of outages, power quality, technical loss minimization alongside enhancing technology intervention to improve operational efficiency and sustainability. The Investment Plan is divided into five categories: (i) Growth Projects, (ii) Interconnection for off take from NTDC (iii) Interconnection for off

take from IPPs (iv) System Improvement / Reliability; and (v) Reactive Power Management and Loss Reduction Projects which are discussed in detail in the subsequent sections.

Continuing with the above strategy to achieve operational excellence and sustainable augmentation in the network, a detailed roadmap is prepared for transmission system expansion. To validate the KE's proposed Investment Plan, consultancy services were obtained from Power Planners International (Pvt.) Ltd "PPI". The report by PPI is annexed as **Annexure I** in which the consultant identified improvement areas. Necessary recommendations from the consultant have been incorporated in the plan.

Transmission investment planning is based on the following key assumptions:

- Grid wise forecasted demand.
- Power Transformers planning is designed on load of 93%. This is done to ensure optimum
 utilization of resources and least cost for consumers, while ensuring reliability of
 transmission network.
- Auto Transformers planning is designed on load of 93% under normal condition.
- Augmentation of extended load on existing grid stations where technically possible.
- Installation of current limiting reactor at one location for managing short circuit

2. Distribution's Next Seven Year Goals and Objectives:

KIIP 45 - Goals and Objectives Matrix - Distribution

Strategic	Target	Measurement	Forecast	Seven Years Objectives FY 2024 to FY 2030									
Objectives	Measure	as of FY 22	as of FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30			
Losses – Distribution	%	14.6%	13.8%	13.5%	13.1%	12.7%	12.3%	11.9%	11.7%	11.5%			
Collections*	%	95.6%	94.33%	94.47%	94.83%	95.32%	95.84%	96.28%	96.72%	97.10%			
SAIFI – Planned	Numbers	16	14	14	16	16	16	16	16	16			
SAIFI - Unplanned	Numbers	94	102	108	105	99	89	76	68	62			
SAIDI – Planned	Hours	7	6	7	11	11	11	11	11	11			
SAIDI – Unplanned	Hours	88	99	105	102	97	88	76	69	64			

^{*}Collection targets for FY23 onward are assuming 100% recovery from PSC consumers

Collections / Ratio

KE has proposed above targets to be considered for setting of Supply Tariff keeping in view the Investments and initiatives planned. Recovery losses are genuine and legitimate cost of power supply businesses and should be taken into account while setting cost reflective tariffs.

KE believes that the most viable regulatory measure is a recovery gap allowance approach, encouraging improvement over time. In the absence of this approach, tariff is not cost reflective and may result in solvency issues for the Supply business. Further, it is imperative to note that, unlike other DISCOs, KE is not financially supported by the government, therefore, non-provision of recovery gap allowance, which is a genuine cost of business

reflected in the form of Provision for doubtful debts in the financial statements, would significantly impact its ability to meet its service obligations.

This has also been endorsed by National Electricity Policy 2021 promulgated by GoP which clearly states in subsection 5.3.2:

"So as to ensure and put in place efficient tariff structures for sufficient liquidity in the power market, the target for losses and collections shall be revisited by the Regulator, in order to align the same with the current market realities. These targets shall be reflected in the determinations of the Regulator. Moreover, timely recovery of bad debt that is prudent shall be allowed by the Regulator with the incorporation of facilitative provisions in the regulatory framework as per industry practices and procedures".

With targeted recovery initiatives and introduction of various recovery schemes for collections from non-paying consumers as listed above, KE's recovery ratio has improved over the current control period from 88.5% in FY 2016 to 96.7% in FY 2022. However, in FY 2022 certain PSC arrears and Industrial consumer arrears (stuck up due to court cases) were recovered and excluding the impact of those and keeping in view the difficult socio-economic situation impacting the propensity of domestic and commercial consumers to pay, the recovery ratio for FY 2023 is expected to close at 94.87% (reduction of c. 55% in recovery loss over FY 2016).

While other DISCOs are struggling to improve their AT&C losses, KE has made substantial improvement in this regard. However, as losses go down, every incremental percent reduction becomes significantly more capital intensive and difficult to achieve. Therefore, in view of the environment in which KE operates and the challenges that it faces, requests NEPRA to have a realistic assessment of the benchmarks to be set for KE.

In view of experience gained from implementation of initiatives during the current control period, KE has developed a comprehensive plan which addresses reduction in network losses and increase in collection efficiency through investments in technology and improvement of processes.

Based on above, requests that Recovery loss component shall be included based on amounts actually billed to consumers (including taxes paid on billing basis) and year on year recovery loss % for the next control period of FY 2024 to FY 2030.

Recovery loss % being requested above notionally assumes 100% recovery from Public Sector Consumers. Although there is significant under recovery from PSC consumers and delays in release of Tariff Differential Subsidy (TDS) by the Government, the same is not being requested as it is separately being taken up with Government entities and departments. In case, the Agreements with Government to streamline payment modalities do not materialize, KE reserves the right to request NEPRA for adequate compensation due to non-payment/delay in payments by Government entities.

Further, KE would also like to highlight that the recovery ratio % for the proposed control period as given below has been projected assuming macroeconomic factors under a stable economy.

It is important to highlight that current worsening economic situation due to drastic change in macroeconomic factors such as hyperinflation, abnormal variations in exchange rates, political instability is impacting the propensity of the consumers to pay. If the situation persists or reoccurs, or due to any force majeure events such as Covid-19 etc. beyond KE's control causes significant decline in recovery ratio, KE would request NEPRA to allow revision in recovery rates based on specific request of KE which would be duly supported by necessary evidence.

Customer Facilitation

KE is enhancing customer outreach with various initiatives like IBC on Wheels and Customer Facilitation Centre in addition to existing Customer Care Centers. The additions of customer touchpoints would enable and encourage consumers to reach out to KE customer care centers for understanding of billing systems and policies and aimed at setting up movable camps in various neighborhoods of the city; especially focusing on far flung areas and those neighborhoods where the actual IBC is at a distance. Customers approach the IoW truck & CFCs with all their billing inquiries/disputes and avail bill related information and services including duplicate copy, availing installment plans, etc.

Moreover, digital modes of interaction including use of KE Website, KE Live app and WhatsApp for business have also been introduced as other touchpoints for customer interaction and lodging of complaints. These modes are being encouraged to facilitate customers in digitally interacting with KE. Along with this, for the first time in KE's history, on-spot payment facility was also made available on-board at IBCs, IBC on Wheels, making it a one stop shop for our customers. Therefore, in areas where bank branches are limited and remote, customers were facilitated to make payments through these initiatives.

Compliance with NEPRA Performance Standards

While KE is committed to improve SAIFI/SAIDI, KE has through letter # KE/RA&GR/NEPRA/2022/632 dated September 09, 2022 and subsequent correspondences in the matter, requested for revision in SAIFI/SAIDI targets as well as revision of performance/guaranteed standards for KE as well as DISCOs to ensure consistency in reporting as well as comparative analysis. KE reiterates its request and urges NEPRA to conclude separate proceedings for alignment of all DISCOs so that DISCOs including KE can be made more accountable.

Rationale for Setting Goals and Objectives and the Planning Criteria for Proposed Distribution Investments

KE has been consistently working on improving the service standards for its consumers. Multiple initiatives taken by KE in the past have contributed positively towards improving standards of Safety and Reliability of Distribution network. Continuing with the same fervor, KE plans to further uplift its performance standards under the guidance of the Honorable Authority to be the benchmark for other DISCOs in Pakistan and abroad. Realizing that there is still a gap when compared with the global performing utilities, KE has proposed a comprehensive Network Improvement Plan (NIP) for Distribution.

The high-level rationale behind setting the goals and objectives of NIP can be well defined in the following vision statement:

"Supply Uninterrupted and Quality Electric Power to our Customers Efficiently in a Safe Environment with minimum Power Losses".

In pursuance of the above-mentioned vision, a data driven approach was adopted for identification and prioritization of improvement projects – Thanks to the Digitalization initiatives taken in the past like SAP, MDMS, OMS, etc. that enabled acquisition of data required for informed investment decisions.

The parameters and criteria used of selection and prioritization of improvement projects are elaborated under the following heads defined by the Honourable Authority:

a. The reliable dispersal of power

The biggest challenge in providing reliable power to KE's consumers has been the outages triggered by faults. To address this issue a detailed analysis of faults was conducted based on data collected from different digitalized channels mentioned in the above para. For this purpose, the assets were categorized under the heads of Overhead & Underground HT Network, Distribution Transformers, HT/ LT Switches & Protection Devices to see their respective contribution in generation and spread of faults. The above analysis became the criteria for prioritization of asset rehabilitation projects targeted for reliable dispersal of power.

The study also identified the barriers in fast restoration of faults resulting in long duration of interruption. To overcome the subject barriers, technology interventions like ADMS/ SCADA are deemed necessary to improve visibility and remote control of Network for efficient resolution of faults.

b. Meeting the technical parameters specified in the Grid Code, Distribution Performance Standards and Consumer Service Manual

KE has always strived to meet the standards and guidelines specified by the Honorable Authority for DISCOs in Pakistan to the best of their ability. The proposed NIP for the next control period is designed based on the same objective of achieving the best possible results as per NEPRA's standards/ guidelines while keeping in view the internal and external constraints including impact on consumer tariff, execution capacity of vendors/ contractors, magnitude of shutdowns required for implementation and change management required for technology interventions.

As part of the plan, following are some major areas that would be the focus of improvement initiatives:

- Rehabilitation of overhead network, substation equipment, and underground cables.
- Enhanced protection to contain the impact of faults and network operational flexibility to offer consumers with alternate supply source.
- Phase wise intervention of technology for quick localization and subsequent isolation of faults contributing towards faster restoration of power.
- Implementation of periodic / condition-based maintenance and gradually moving to predictive maintenance approach.
- Change management and Capacity Building of the Team associated with the above initiatives

Further, KE has also requested Authority for revision in mechanism of performance standards for a better comparison, please refer **Section IV (2)** above.

c. Loss reduction and improving collections

In order to better serve our consumers and in line with KE's commitment, Aerial Bundled Cables (ABC) installation was launched as part of the solution to challenges Karachi faces. ABC are overhead power lines consisting of a number of insulated wires bundled tightly together. It is a safer and more reliable way of conducting electricity.

Under this plan, KE plans a roll out of Aerial Bundled Cable (ABC) on PMTs in order to reduce commercial losses. KE has identified areas of potential loss reduction and categorized where;

- ABC was required for bare conductor High Loss PMTs in Low Loss feeders
- Rehabilitation of previously converted ABC PMTs for sustained theft prevention
- Replacement of previously converted ABC PMTs crossing useful life

This installation of ABCs on new PMTs as well as rehabilitation of already installed ABCs amounting to total investment of **PKR 31,322 million.**

For this purpose, KE will install ABCs over 1,770 new PMTs and carry out rehabilitation of 3,032 PMTs. Previously, KE has managed to complete 12,500 PMTs conversion to ABC which has been a major contributor to KE's loss reduction. Further, rehabilitation of already converted PMTs is also planned to cater for areas which are prone to high theft and non-payment and where ABCs (Aerial Bundled Conductor) installed have been damaged by installation of direct hook/kundas or have completed their useful life.

Hence, keeping in view learnings from the last experience, KE's execution strategy for ABC project going forward has been determined as follows:

- Ring fencing entire feeder i.e., to convert all PMTs within a feeder to ABC, irrespective
 of the loss category.
- Changing of service cables and individual meters, along with PMT mains to avoid theft from service cables
- Adjacent feeders also ring fenced to eliminate 'kunda' shifting

d. Improving internal controls, faster information availability and quality of data

Faster Information Availability and Quality of Data

Realizing the importance of data, KE has implemented several digitalization projects in the last few years - SAP, MDMS, GIS, OMS, just to name a few. The huge data generated from the afore-mentioned sources have provided opportunities to take deep dives for resolution of performance challenges. The phenomenal improvement recorded in Distribution network performance in past 2 years is majorly attributed to the visibility and awareness provided by these data streams.

KE is planning to implement ADMS in the next control period in one of the clusters for further visibility and control of Network required to achieve fast identification and restoration of supply in case of faults/ customer complaints. The subject technology will also provide data on technical parameters of selected Distribution equipment that would help in predicting the faults before they occur paving way to predictive maintenance instead of periodic. Once the pilot project is successful it will be rolled out in other clusters in phases.

Improving Internal Controls

Planning & Engineering (P&E) function work as the central source for all the technical data related to Distribution Network and initiating subsequent projects focused on improving safety, reliability, and quality of network. All the technical specifications of material and equipment are also centrally managed by P&E along with SOPs to be followed in Operations. Demand management and Network capacity building projects are also managed centrally at P&E.

There are several governance mechanisms that have been put in place to monitor Distribution network performance and effectiveness of the improvement projects. Weekly and Monthly performance reports of each cluster along with progress on improvement projects are shared with relevant stakeholders. Dashboards for smart meters performance are also implemented to monitor the sanctity of AMI environment.

In addition to above, regular audits are conducted in the filed by central QHSE function to ensure compliance with the performance standards and codes governing Safety and Quality.

e. Improving the competencies of the employees and their morale

KE believes that for sustainable results change in mindsets/ behaviors and robust processes are equally vital as is the investment. In order to have a focused approach KE has formed a dedicated Technical Process and Change Management function to ensure that the technical processes including Corrective and Preventive maintenance are as efficient as possible.

KE Distribution Network Academy (DNA) is state-of-the-art Technical Training Institute, which develops globally competent resources at KE Bench Marked Level of knowledge and skills for workmanship, ensuring all aspects of safety.

DNA works as a Change Agent to transform KE's Distribution through building the capacity of employees to have resilient, reliable and safer network for Karachiites.

DNA offers competency building programs for all levels of distribution to meet the futuristic needs of the network. These trainings are designed to cultivate technical, analytical, and social skills of Distribution Staff and will help them accomplish same level of capability.

Our course and curriculum is completely aligned with the advanced technologies and market trends, we offer trainings as complete package of soft and technical skills for professional and personal development of employees.

Section V - Projects and Programs

1. Plan for Expansion and Rehabilitation of Transmission System

1.1. Grid Stations

KIIP 46 – Grid Stations

No.	Description	Total No.	Total Capacity Addition	FY24	FY25	FY26	FY27	FY28	FY29	FY30
			MVA	No	No.	No.	No.	No.	No.	No.
1	New									
a	500 KV	1	1800	1						
b	220 KV	34*	1750*			1	1	1		1
c	132 KV	9	690**		1	4	1		2	1
d	66 KV									
2	Conversion		•		•				•	
a	66 to 132 KV	2	60		2					
3	Augmentation (Transfori	ners – ATR &	PTR)	•				•	
a	220 KV									
b	132 KV	1	41							1
c	66 KV									
4	Extension (Tran	sformer	- ATR & PTR)	•				•	
a	220 KV	3	750		1	1	1			
b	132 KV	4	214**	2				1		1
c	66 KV									
5	Extension (Line	Bay)								
a	220 KV	4					2	2		
b	132 KV	10			2	2	2		2	2
c	66 KV									

^{*} One 220kV interconnection Grid along with 250MVA Three Auto Trafos for evacuation of power from renewable projects at Gharo.

^{**}Three new grids and One grid augmentation consist of 200MVA which are consumer funded. Also includes 132kV KKI Grid having 250MVA Auto Trafo.

1.2. Transmission Lines

1.2.1. New Line

KIIP 47 – Transmission Lines: New Line

Sr.	Description	Total Length	FY24	FY25	FY26	FY27	FY28	FY29	FY30
No.		km	km	km	km	km	km	km	km
1	500 KV D/C	0							
2	500 KV SDT	8.856	8.856						
3	220 KV D/C	242.112	77.112		60	65	40		
4	220 KV SDT	66.08	6.08	40	10				10
5	132 KV D/C	68			32	36			
6	132 KV SDT	65.4		12.12	12		8	19	14.28
7	66 KV D/C	0							
8	66 KV SDT	0							

1.2.2. Rehabilitation/Reconductoring/Up-gradation

KIIP 48 - Transmission Lines: Rehabilitation/Reconductoring/Up-gradation

Sr.	Description	Total Length	FY24	FY25	FY26	FY27	FY28	FY29	FY30
No.		km	km	km	km	km	km	km	km
1	500 KV D/C	0							
2	500 KV SDT	0							
3	220 KV D/C	48.28				48.28			
4	220 KV SDT	0							
5	132 KV D/C	9.74			1.34	8.4			
6	132 KV SDT	164.86	О	33.56	45.72	36.59	30.59	18.4	О
7	66 KV D/C	0							
8	66 KV SDT	0							

Rehabilitation will not increase the overall length of the network, however, will help in enhancing the reliability and stability of the network.

1.2.3. Reconductoring and Rerouting

KIIP 49 – Transmission Lines: Reconductoring and Rerouting

Sr. No.	Description	Total Length	FY24	FY25	FY26	FY27	FY28	FY29	FY30	
		km	Km	km	km	km	km	km	km	
1	132 KV D/C			Ir	aludad ir	VIID 40				
2	132 KV SDT	Included in KIIP 48								

Further details of capacity additions have also been given in **Section VI** below.

1.3. Capacitors

KIIP 50 - Transmission Lines: Capacitors

Sr.	Description	Total MVAR	FY24	FY25	FY26	FY27	FY28	FY29	FY30
			MVAR						
1	11kV Fixed Capacitors	452	60	92	96	64	80	24	36

1.4. Load Flow & Short Circuit Studies

A comprehensive transmission expansion and reinforcement plan is developed post detailed analysis and internal studies of the Transmission network including new load requirements, probable evacuation / capacity constraints of existing network, new upcoming generation projects and other challenges associated with city demographics i.e RoW etc.

The plan was further reviewed / studied by the Consultant. Detailed analysis and power system studies (Load flow, short circuit, Dynamic Stability) has been carried out, as per the prudent utility practice, alongside reviewing the proposed maintenance regimes for new control period.

The criteria referenced for the network study is in line with present Grid code. Study validation was performed by consultant on spot year basis (FY25, FY27, FY30) for peak demand scenarios and with variable RE penetration.

New augmentations are proposed in lieu of these studies and site surveys where the upcoming load growth cannot be catered through the existing system. Reinforcements / extensions on existing system are also mapped to ensure optimization of CAPEX and existing infrastructure.

As a result of detailed and comprehensive working, two cases were worked out by the consultant. One case, which is the best case while other case was optimized considering the optimum use of system resources. The difference between two cases is only the time shift of certain projects required in early years to optimize the overall CAPEX requirement.

Since the load factor of KE, for the year, is around 60% and the peak demand instances are only for certain hours of the year. Also, the policy load shed is not catered under peak demand scenario meaning thereby that the network reliability and stability will not be compromised in optimized case.

The details of projects / augmentation and reinforcement required under both the cases are mentioned in the document. Also, the load flow and short circuit studies, conducted by consultant, are also given as **Annexure I**.

2. Plan for Expansion and Rehabilitation of Distribution System

2.1. Expansion and Rehabilitation

Expansion (KE)

Growth

KIIP 51 – Distribution System

Growth HT											
Deschart	Unit				Quar	itities					
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Grid to Grid feeder balancing	Feeders	4	7	2	17	-	-	10	40		
PT to PT feeder balancing	Feeders	42	42	22	22	22	12	12	174		
New MV Feeder laying	Feeders	15	16	33	42	55	65	42	268		
New MV Link for balancing	Feeders	10	10	10	10	10	10	10	70		
SIP Overloading	PMTs	-	327	327	327	327	327	327	1,962		

KIIP 52 - Rehabilitation (KE)

This Category includes the following subcategories:

- Loss Reduction
- Maintenance
- Safety
- Technology

Loss Reduction Total									
Duoinat	Unit				Qua	ntities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Commercial Loss red	uction								
LT ABC Full Scope	PMTs	443	442	443	442	-	-	-	1,770
LT ABC Rehab	PMTs	758	758	758	758	-	-	-	3,032
LT ABC I Replacement	PMTs	-	-	1,567	1,567	1,567	1,567	1,567	7,833
Faulty Meter Replace	ment								
Net Metering	Meters	180	198	218	240	264	290	319	1,709
Single Phase	Meters	143,301	157,631	173,394	190,734	209,807	230,788	253,867	1,359,522
Three Phase	Meters	27,518	30,270	33,297	36,627	40,290	44,318	48,750	261,071
Technical loss reducti	ion								
Loop Splitting	Scheme	60	60	60	60	60	60	60	420
Power Factor Improvement Plants	No.	-	25	25	25	20	-	-	95
Network Rehab	Feeders	-	190	190	190	190	187	185	1,132

KIIP 53 - Break up of Loss Reduction:

Loss Reduction HT												
Duoinat	Unit		Quantities									
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
Technical loss reduc	tion	-	-	-			-					
Loop Splitting	Scheme	60	60	60	60	60	60	60	420			
Network Rehab	Feeders	-	190	190	190	190	187	185	1,132			

Loss Reduction LT												
Duoinat	Unit		Quantities									
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
Commercial Loss red	uction											
LT ABC Full Scope PMTs 443 442 443 442 1,770												

Loss Reduction LT									
Project	Unit				Qua	ntities			
Project	Omt	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
LT ABC Rehab	PMTs	758	758	758	758	-	-	-	3,032
LT ABC I Replacement	PMTs	-	-	1,567	1,567	1,567	1,567	1,567	7,833
Faulty Meter Replace	ment								
Net Metering	Meters	180	198	218	240	264	290	319	1,709
Single Phase	Meters	143,301	157,631	173,394	190,734	209,807	230,788	253,867	1,359,522
Three Phase	Meters	27,518	30,270	33,297	36,627	40,290	44,318	48,750	261,071
Technical loss reducti	ion								
Loop Splitting	Scheme	-	-	-	-	-	-	-	-
Power Factor Improvement Plants	No.	-	25	25	25	20	-	-	95
Network Rehab	Feeders	-	-	-	-	-	-	-	-

KIIP 54 – Maintenance

Maintenance HT									
Duoinat	Unit				Qua	ntities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
HT cable replacement	Meter	-	55,000	55,000	55,000	55,000	55,000	54,000	329,000
Load Break Switch	No.	-	350	350	350	350	350	350	2,100
Protection upkeeping an	nd enhancen	nent							
CTU for incoming (Primary S/S)	No.	-	333	186	-	-	-	-	519
CTU for outgoing (Primary S/S)	No.	-	-	507	529	-	-	-	1,036
Replacement of Old/ Obsolete Relays	No.	-	370	329	-	-	-	-	699
Deteriorated OCB to VCB (Primary S/S)	No.	-	380	380	380	380	380	375	2,275

KIIP 55 – Safety

Safety Total									
Descionat	TT				Qua	ntities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Public Accident Preventi	on Program								
Dilapidated Poles Conductors	Poles	7,020	7,020	7,020	7,020	7,020	7,020	7,020	49,140
PAPP Multi Story Bus Bar (PAPP)	Busbar	2,900	2,900	2,900	2,900	2,900	2,900	2,900	20,300
PMT Shifting (PAPP)	PMT Structures	210	210	210	210	210	210	210	1,470
No Mains	PMTs	200	200	70	70	70	70	70	750
Earthing of Additional As	ssets / Insul	ators							
Earthing of Service Bracket	Bracket	2,267	2,267	2,267	-	-	-	-	6,800
Special Equipment	No.	-	-	-	-	-	-	-	-
Stay Unit Insulators	Insulators	6,800	6,800	6,800	6,800	6,800	-	-	34,000
Encroached OH to UG Cable	KM	16	16	16	16	16	16	16	112
Installation of DBs	No	607	607	607	607	607	607	607	4,250
PMU on Wheels	PMUs	15	5	5	-	-	-	-	25

KIIP 56 – Break up of Safety:

Safety HT									
n	** **				Qua	ntities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Public Accident Preventi	on Program								
Dilapidated Poles Conductors	Poles	3,220	3,220	3,220	3,220	3,220	3,220	3,220	22,540
PAPP Multi Story Bus Bar (PAPP)	Busbar	-	-	-	-	-	-	-	-
PMT Shifting (PAPP)	PMT Structures	210	210	210	210	210	210	210	1,470
No Mains	PMTs	80	80	28	28	28	28	28	300
Earthing of Additional A	ssets / Insul	ators							
Earthing of Service Bracket	Bracket	-	-	-	-	-	-	-	-
Special Equipment	No.	-	-	-	-	-	-	-	-
Stay Unit Insulators	Insulators	2720	2720	2720	2720	2720	0	0	13,600
Encroached OH to UG Cable	KM	16	16	16	16	16	16	16	112
PMU on Wheels	PMUs	15	5	5	-	-	-	-	25

Safety LT									
D.,	T.Y *4				Qua	ntities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Public Accident Preventi	on Program		-	-	-	_	-	_	-
Dilapidated Poles Conductors	Poles	3,800	3,800	3,800	3,800	3,800	3,800	3,800	26,600
PAPP Multi Story Bus Bar (PAPP)	Busbar	2,900	2,900	2,900	2,900	2,900	2,900	2,900	20,300
PMT Shifting (PAPP)	PMT Structures	-	-	-	-	-	-	-	-
No Mains	PMTs	120	120	42	42	42	42	42	450
Earthing of Additional As	ssets / Insul	ators							
Earthing of Service Bracket	Bracket	2,267	2,267	2,267	-	-	-	-	6,800
Special Equipment	No.	-	-	-	-	-	-	-	-
Stay Unit Insulators	Insulators	4,080	4,080	4,080	4,080	4,080	0	0	20,400
Encroached OH to UG Cable	KM	-	-	-	-	-	-	-	-
Installation of DBs	No	607	607	607	607	607	607	607	4,250
PMU on Wheels	PMUs	-	-	-	-	-	-	-	-

KIIP 57 – Technology

Technology Total												
Durathant	T7	Quantities										
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
AMR Coverage	Meters	6,046	5,201	5,201	5,201	5,201	5,201	5,201	37,249			
Power Quality Analyzers	No.	-	50	50	-	-	-	-	100			
Commercial Digitization - Technology HHU Devices	No	293	293	293	293	293	293	293	2,051			
Commercial Digitization - Mobility Solution (SIR Digitization)	No	107	107	107	107	107	107	107	749			
Commercial Digitization - Mobility Solution (RCDC Digitization)	No	72	63	63	63	63	63	63	450			
PQ Work Bench	No.	1	-	-	-	-	-	-	1			

KIIP 58 – Break up of Technology:

Technology HT												
Duoinat	Unit		Quantities									
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
AMR Coverage	Meters	-	-	-	-	-	-	-	-			
Power Quality Analyzers	No.	-	50	50	-	-	-	-	100			
PQ Work Bench	No.	1	-	-	-	-	-	-	1			

Technology LT												
Project	Unit	Quantities										
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
AMR Coverage	Meters	6,046	5,201	5,201	5,201	5,201	5,201	5,201	37,249			
Power Quality Analyzers	No.	-	-	-	-	-	-	-	-			
Commercial Digitization - Technology HHU Devices	No	293	293	293	293	293	293	293	2,051			
Commercial Digitization - Mobility Solution (SIR Digitization)	No	107	107	107	107	107	107	107	749			
Commercial Digitization - Mobility Solution (RCDC Digitization)	No	72	63	63	63	63	63	63	450			
PQ Work Bench	No.	-	-	-	-	-	-	-	-			

Sr.	p								
No	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
A.1		Too	ls & Plant	s (T&P)	I	I	I	I	
	LM Tools other than personal protective equipment								
	Sub Total								
	List of New Offices & building								
	Reconstruction & Revamping Dist. offices	3	3	3	3	3	3	3	21
	Sub station Reconstruction Dist.	84	91	94	94	98	105	102	668
	Customer Services Mega Center - Landhi & Korangi	1	-	-	-	-	-	-	1
	Customer Services Mega Center - Liyari & Liyari 2	1	-	-	-	-	-	-	1
	Customer Services Mega Center - Malir & Shah Faisal	-	1	-	-	-	-	-	1
	Customer Services Mega Center - Defense & Clifton	-	1	-	1	1	1	-	1
	Customer Services Mega Center - Johar 1 & Johar 2	-	-	1	-	-	-	-	1
	Customer Services Mega Center - Site & Orangi I	-	-	1	-	-	-	-	1
	New IBCs	3	3	1	2	-	-	2	11

Consumer Funded Projected scope of work

KIIP 59 - Expansion

	•				Qı	ıantities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansio	n projects to ca	ter for Ne	ew connec	tions (Ab	ove 80 K	W)			
HT Bulk/Switch Room	No.	50	51	56	59	65	69	70	420
100 KVA PMT	PMTs	111	114	123	129	144	152	155	929
1000 KVA PMT	PMTs	7	7	7	8	9	9	9	56
200 KVA PMT	PMTs	11	12	12	13	15	15	16	94
25 KVA PMT	PMTs	18	18	20	21	23	24	25	149
250 KVA PMT	PMTs	240	246	265	279	312	327	335	2,005
400 KVA PMT	PMTs	6	6	6	7	7	8	8	48
50 KVA PMT	PMTs	53	54	58	61	68	72	74	440
500 KVA PMT	PMTs	163	167	180	190	212	223	228	1,364
750 KVA PMT	PMTs	5	6	6	6	7	7	8	46
Feeder	Feeder	21	21	23	25	28	29	30	176
PMU	PMU	158	142	149	156	164	172	181	1,122
Single Phase	Meters	5,513	5,788	6,078	6,381	6,700	7,036	7,387	44,883
Sub Stations	Substations	37	38	41	43	48	50	52	309
Three Phase	Meters	6,615	6,946	7,293	7,658	8,041	8,443	8,865	53,859
Metering Project (NC Below 80 K	W)							
AMR	Meters	2,056	1,886	2,185	2,079	2,104	2,131	2,156	14,594
Net Metering	Meters	10,457	10,457	10,457	10,457	10,457	10,457	10,458	73,200
Single Phase	Meters	77,452	80,550	83,772	87,123	90,608	94,233	98,002	611,741
Three Phase	Meters	14,873	15,468	16,087	16,730	17,400	18,096	18,819	117,473

KIIP 60 - Rehabilitation

Loss Reduction Total									
Project	Unit				Quant	ities			
Project	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Kunda Conversion	Meters	50,000	50,000	50,000	50,000	50,000	50,000	50,000	350,000
Faulty Meter Replace	ment								
Net Metering	Meters	20	22	24	27	29	32	35	190
Single Phase	Meters	15,922	17,515	19,266	21,193	23,312	25,643	28,207	151,058
Three Phase	Meters	3,058	3,363	3,700	4,070	4,477	4,924	5,417	29,008

These are high level estimates for quantities relating to scope of work for dedicated consumer funded cases.

2.2. Status of Study Based Distribution System Planning Based on GIS Mapping and the Transition Plan

GIS (Geographic Information System) is used in K-Electric distribution planning to:

- 1. Visualize and analyze distribution system data: GIS provides a graphical representation of the K-Electric distribution network, which helps in visualizing, analyzing, and manipulating data in real-time.
- 2. Plan and design distribution networks: GIS helps in planning and designing of distribution networks, including the placement of substations, transformers, and power lines.

- 3. Modeling and simulation of distribution systems: GIS integrates with simulation software CYME to analyze the behavior of the distribution network under different conditions to identify potential issues, and support decision making for upgrades or changes.
- 4. Asset management: GIS used to manage and track the distribution assets such as transformers, substations, Poles, Switches, busbar, Dynamic Protective Devices, Capacitor, Breaker, EFI, Underground & Overhead circuit and other electrical components.
- 5. Improve reliability and resiliency: GIS helps in improving the reliability and resiliency of the distribution system by providing near-to-real-time data and early warning of potential problems.

Overall, GIS plays a crucial role in the study based electric distribution planning by providing a comprehensive and integrated approach to manage and optimize the distribution network.

KIIP 61 – Study of Distribution System Planning Based on GIS Mapping and the Transition Plan

Project	Unit	Quantities									
Project	Unit	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30		
HT Mapping											
Number of 11KV Feeders	Nos	2,084	2,120	2,156	2,212	2,279	2,362	2,456	2,528		
Length of new HT line mapped	Km	10,761	11,026	11,401	11,853	12,343	12,858	13,409	13,931		
LT Mapping											
Length of LT Lines mapped	Km	19,370	22,053	22,801	23,706	24,686	25,715	26,818	27,862		
Tools required											
Simulation/GIS Software Licenses	Nos	50	50	50	50	50	50	50	50		
Hardware including workstation, Tablet device, Server, Touch Screen, Drones, LIDAR devices etc	Nos	150	200	250	150	150	150	150	150		

2.3. Study Based Planning using GIS Maps with Modern Planning Tools Transition Plan

Project	Unit				Quant	tities			
Froject	Ome	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
HT Length	Km	10,761	11,026	11,401	11,853	12,343	12,858	13,409	13,931
LT Length	Km	19,370	22,053	22,801	23,706	24,686	25,715	26,818	27,862

3. Other Functional Improvement Plans

3.1. Commercial Improvement Plan

KE commercial improvement plan includes initiatives pertaining to the implementation and upkeep of AMRs (both billable and non-billable) on PMTs as check-meters & high-end consumers. The coverage of these AMRs will help us through improved accuracy and efficiency in meter readings, reducing the need for manual readings and associated costs. Further, AMRs provide near to real-time data which will identify more opportunities for energy efficiency, providing detailed data on sent outs and consumption patterns allowing for more accurate loss reporting and decision making based on factual data. AMRs are also enabling us to record events and alarms from meters allowing for visibility and tracking of discrepancies contributing to timely theft and loss identification, improving recovery and quality of billing and other cost rationalization opportunities.

For Non-AMR consumers, Handheld Units (HHU) based meter reading is implemented. HHU is used for recording meter reading along with other relevant information and is connected to utility company's system via a wireless connection through which the data is transmitted to company in real time. The devices have built-in GPS, which can help the employee to locate the correct meter and also help to validate that the employee is at the correct location and the use of handheld devices for manual meter reading can improve the accuracy and efficiency of the process by allowing the employee to quickly and easily record and transmit the meter reading data. It also helps to reduce the chance of human error, as the employee does not have to manually transcribe the meter reading onto a form or into a computer. The same Handheld units are now being used for recovery & disconnection functions and survey & inspections functions of the company.

This project involves assignment of hand-held devices to DCRC teams to ensure disconnection and reconnection is maintained real-time in system and is auto synchronized with the activity on site. It will enable digital record-keeping of recovery efforts and disconnection evidence, permitting pictorial evidence to be recorded for each disconnection with ease. Furthermore, the project will assist in ensuring strong governance and efficient workforce management through optimal utilization of resources, which as a result would significantly improve recovery from defaulters and reduce commercial losses. With digitization of surveys through HHUs, there will be digital record-keeping of site inspections for theft and faulty meter replacements by assigning handheld devices to meter inspection officers. It will also allow paperless real-time survey report punching, significantly reducing time taken to punch and process survey report in the system, also ensuring a near real-time availability of evidence on discrepant meters. The benefits will extend to elimination of the need for extensive day-to-day printing of proforma and notices, as well as prevent issues caused by misplacement of documents and repetition of work.

For details of scope of work under commercial improvement plans please refer **Section V (2)** – **Technology** above.

3.2. IT, Cyber Security & Other Improvement Plan

KE's aim is not only to be the leading power and utility organization of the country, but also as a company known for its technology infrastructure, services resilience, fostering innovation and modernization in the region. Over the past few years, KE's efforts on technology front have received formal commendation in the form of several international and global awards and accolades. KE will continue striving to achieve more with the confidence that its efforts will serve as a catalyst for change leveraging IT-enabled business transformation initiatives.

With various investments planned across its business segments, KE is poised to continue its journey of sustainable technology growth and disruptive phenomena with strategic plans in emerging technologies related to digital transformation, modernization of ERP, billing and CRM systems, cloud-enabled infrastructure and services, data governance, analytics, machine-learning, Artificial Intelligence (AI) capabilities, Internet-of-things (IoT), mobility, Operational technologies (OT) convergence with IT, Robotic Process Automation (RPA), cybersecurity and digital and social media channels.

With the successful execution of above-mentioned investment plans, KE is pledged to use an array of digital technologies to enrich Karachiite's lives, improve infrastructure, modernize consumer services, enhance accessibility, drive sustainability, and accelerate economic development.

It is worth mentioning fact that future planning of investment in IT over long term is quite difficult and prone to drastic changes since technology keeps on upgrading at rapid pace. Hence continuous market-driven assessment based on latest trends, change management,

realignment and improvement plans are integral parts of KE technology short, mid, and long terms strategy and planning.

Further to above, Cyber security is assuming increased importance in the continued operations of organization which is also aligned with cyber security compliance requirements for IT and OT, recently updated by NEPRA. Accordingly, Cyber Security investment planning covers key projects including Cyber Defense & Security operation, Identity & access management, End User & Network Defense, Threat Risk and Vulnerability Assessments and Security Awareness, Governance & Compliance.

KIIP 62 - IT, Cyber Security & Other Improvement Plan

	Description				Sco	pe			
	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
A	SAP HANA BW Implementation	75%	1%	3%	7%	8%	5%	0%	100%
В	Replacement of EOL Solution (Servers, Network)	9%	13%	14%	15%	20%	14%	15%	100%
С	IT Infrastructure Enhancement & Upgrade	16%	21%	14%	6%	11%	24%	7%	100%
D	IT Equipment & Business Specific Software	13%	12%	22%	13%	13%	13%	14%	100%
E	Cyber Defense & Security Operation	9%	11%	13%	15%	16%	17%	19%	100%
F	Risk Assessment & Compliance	9%	11%	13%	15%	16%	17%	19%	100%
G	Others Business Specific New Initiatives	35%	8%	10%	11%	11%	12%	12%	100%

3.3. Civil & Real Estate Improvement Plan

K-Electric owns several properties in various locations of Karachi to meets its operational needs. Investment planning in civil works is mainly based on rehabilitation and replacement, to maintain the existing civil structure for smooth and safe operations as well as payment of provincial and federal government taxes and duties etc.

	Decemination		Scope									
	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
A	Real Estate and Civil	6%	7%	23%	29%	31%	2%	2%	100%			

3.4. Human Resource Improvement Plan

KE is committed to the continuous improvement of its workforce comprising of both Management & Non-Management Staff through various mediums such as Physical Trainings (covering both Behavioral & Skill Requirements), E-Learns, Affiliation Programs with Leading Universities & Technical Training/ Apprenticeship Programs. Furthermore, we also have a dedicated facility named Distribution Network Academy (DNA) which is equipped with state of the art facilities such as Meter Labs, Switchgear Labs & Training Fields etc.

In addition to above, KE has also undertaken various initiatives for Improving the Work Environment such as enhancing the inclusivity of various employees in the work force through Gender Diversity & Disability Confidence initiatives and their subsequent retention and development policies. These initiatives also include initiatives for the physical well being of the employees such as provision of OPD & IPD health coverage for employees and their dependents and development of in house clinic etc. For details, please refer **Annexure J**

3.5. Communications Improvement Plan

In 2022, KE embarked on a journey to add digital touchpoints. As a future-centric organization, we remain committed to strengthening customer service through increased online access streamlining of our processes. KE's external communication improvement plan priorities as below:

- i. <u>Strengthened customer access:</u> We will continue to enhance our digital touchpoints, building on our existing digital success-story with the aim to provide round-the-clock service at customers' fingertips. At the same time, as the city grows and expands, we will explore optimized touchpoints for areas with high population densities and emerging societies to get closer to customers. Customer services for industrial customers will also be strengthened. We aspire to serve our customers in the comfort of their homes and reduce the need to travel too far to connect with us.
- ii. Augmented portfolio of digital services to ease customer interactions, accelerate turnaround times while improving transparency and digital record-keeping through innovations in the system. We will continue to explore emerging customer-facing technologies (in line with Pakistani Regulations) to strengthen our customer experience, such as chatbots etc. We will continue to work on improving utilisation and experience of existing technological solutions, with the intent to offer an optimized customer experience.
- iii. <u>Enriched customer responsiveness across all platforms</u>: Continued investment in the infrastructure maintenance and upgradation of existing digital platforms to ensure service levels. Also investing in the capacity-building of the customer-facing staff to enable them to better serve customers and address evolving customer needs.

For any company, productivity and performance is enhanced with the employees are aligned with the company's purpose and goals. KE's internal communications improvement plan keeps employees motivated and engaged with the company's growth and sustainability ambitions through:

- a. Regular information cascade through both in-person and digital townhalls and audiovisual content.
- b. Ensure the capacity building of KE employees through dissemination of policy/sectoral and global learnings.

KIIP 63 -Communications Improvement Plan

Des	scription	Scope
		1- Strengthening customer facilitation through digital enhancement & ensuring accessibility in areas which requires new connection (potential new KE customers)
		2- Deployment of Virtual Customer Service Centre
A	Improving External Communications	3- Restructuring existing Customer Services to be more accessible and inclusive for Persons with Disabilities
	with Customers	4- Technological upgrades to strengthen existing digital touchpoints: WhatsApp, IVR, Chatbot, Call-Centre, KE Live App, QMS, USSD and alignment of our solutions with the standard market/sectoral offerings.
		5- Capacity building of front-end staff around customer-centricity
		 Ensure that employees have access to a platform where they stay updated with the latest information and maximise participation/engagement on internal communication platforms
		2. Regular Leadership Forums, In-person Townhalls / Digital Webinar
В	Improving Internal	3. Information cascade / capacity building on trends / policy & sectoral developments / sustainability initiatives
	Communications with Employees	4. Update on latest policies specially with respect to communicating NEPRA's consumer related policies & disseminating them for customer guidance
		5. Deployment and cascade of safety messaging, employee engagement and learning programmes
		6. Digital Newsletters and Audio-Visual Content
С	Communications Material	Pamphlets, Newsletters, Audio-Visual Content, Flyers, Emails, Digital Posts, Presentations, Posters, Banners, Mass Awareness/ Public Service Campaigns

Section VI - Costs and Financing Plan

1. Capital Expenditure and additional Operating Costs for Expansion and Rehabilitation of Transmission System:

1.1. Summary of Capital Expenditure Costs

KE plans to invest **PKR 280,915 million** (projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 and proposed to be adjusted through an indexation mechanism included in **Section VI (8)**) for expanding and improving the performance of the transmission infrastructure during the proposed control period of FY 2024 to FY 2030.

KIIP 64 - Proposed Investment Plan - Transmission

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Growth Projects	14,965	30,661	31,899	20,082	28,732	10,357	4,054	140,751
NTDC Interconnection	22,202	3,042	4,562	-	-	-	-	29,806
IPPs- Interconnection	2,305	5,943	5,776	8,778	122	129	-	23,054
System Improvement / Reliability	6,731	8,704	8,871	20,337	12,211	11,762	15,516	84,133
Reactive Power Management & Loss Reduction	424	636	677	457	558	167	251	3,171
Total CAPEX	46,628	48,986	51,786	49,654	41,623	22,416	19,821	280,915

These proposed investments during the control period are required to be undertaken for growth and enhancement and for overhauling / rehabilitation of the existing Transmission network. These investments would enable KE to better serve the increasing electricity demand and improve the overall service levels and hence, KE requests NEPRA to allow the same in the next control period. Detailed explanation of CAPEX is given in next sections.

It is pertinent to highlight that the above mentioned investments are based on the following assumptions:

- 1. USD/ PKR Exchange Rate of PKR 206/USD (June 30, 2022)
- 2. Reference Pakistan CPI of 158.48 (Average FY 2022)
- 3. Reference US CPI of 282.03 (Average FY 2022)

The investment plan has been given on current macro-economic factors and KE has requested an indexation mechanism for changes in the investment plan based on Indexation of above factors, including indexation of foreign component of CAPEX (estimated to be 90% of the total CAPEX) with exchange rate and US CPI and local component (estimated to be 10% of the total CAPEX) with Pak CPI along with other scope changes etc. Adjustment mechanism for the same is discussed in detail in **Section VI (8)** below.

Moreover, above investment estimates are based on duties and taxes based on currently notified rules and regulations. In case of any significant change in duties / taxes structure, KE will update NEPRA and seek approval for increase in CAPEX in this regard as Specific approval under Investment plan revision mechanism explained in **Section VI (8)**.

Here KE would like to humbly highlight that the execution of proposed investment plans and related additions / improvements is linked to approval of tariff asks in this petition as a sustainable tariff that balances the interest of all stakeholders and is necessary to enable KE to raise financing required for execution of project and to remain viable as business entity to ensure continuity of operations and improvements for consumers.

Consumer funded CAPEX

Above proposed investment plan does not include expenditure expected for the consumer funded grids, which will be carried out based on consumer's request with payment. Accordingly, KE has excluded them from the investment plan and the Regulatory Asset Base for proposed Tariff workings. Therefore, for the purpose of Investment Plan, CAPEX relating to these grids & consumers inflows falling in Deferred Revenue, shall not form part of the Investment Plan.

Further, with respect to inflows from consumers in the form of Grid Sharing charges for their dedicated connection as per Grid Sharing Policy, the same is proposed to be passed through in tariff at actual and shall be actualized annually for calculation of allowed investment in the Annual Investment Update as explained in **Section VI (8)**.

KE will annually report the breakup of addition to deferred revenue each year in consumer funding received on Grid Sharing charges and received for dedicated Grids as explained in para above.

1.2. Growth Projects (Transmission)

Summary of Year wise investment planned in Growth projects is appended below:

KIIP	65 –	Growth .	Projects	(Transmission)
------	-------------	----------	-----------------	----------------

								PKR Mn
Description	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
New 220kV Grid/TL	2,948	4,913	11,792	-	2,751	4,502	1,801	28,706
New 220/132 kV Grid/TL	-	-	10,184	12,870	14,300	-	-	37,353
Augmentation	4,342	1,745	1,745	1,755	1,063	-	605	11,256
New 132 kV Grid/TL	594	9,349	8,179	5,458	10,618	5,856	1,648	41,701
HVUB	7,081	14,653	-	-	-	-	-	21,734
Total Growth Projects - KE	14,965	30,661	31,899	20,082	28,732	10,357	4,054	140,751

1.2.1. 220/132KV Grids & Transmission Lines

KE plans to achieve Transmission enhancement by 755 MVA out of which 200MVA is assumed to be consumer funded, in order to meet the growing demand through augmentation in existing grid stations and addition of new 132kV grid stations in network.

In order to improve the reliability & stability of transmission network, KE will also add 250MVA Auto Transformers through augmentation in existing grid stations, addition of 220kV grid stations and associated transmission lines which will increase KE's current 220/132KV Auto Transformers capacity to 7,000 MVAs from 5,000 MVAs and 500/220kV Auto Transformers capacity to 1,800MVAs. Additionally, one Auto transformer of 600MVA will be added at NKI.

Transmission investment planning is based on the following key assumptions:

- > Grid wise forecasted demand.
- Power Transformers planning is designed on load of 93%. This is done to ensure optimum utilization of resources and least cost for consumers, while ensuring reliability of transmission network.
- Auto Transformers planning is designed on load of 93% under normal condition.
- Augmentation of extended load on existing grid stations where technically possible.
- > Installation of current limiting reactor at one location for managing short circuit.

Based on the above-mentioned key assumptions following will be added to KE's transmission network:

- > 9 new 132 kV Grid stations with associated transmission lines and power transformers (out of which 3 no. are expected to be consumer funded grids).
- > 5 Power Transformers along with peripherals at existing grids (including 1 Power Transformer assumed to be financed by Consumer).
- > 3 new 220 kV Grid station with associated transmission lines and auto transformers
- ➤ 4 new Auto Transformers along with peripherals at existing grids
- ➤ 450KM lengthy circuits of 220kV and 132kV transmission lines.

1.2.2. Hub, Vinder, Uthal and Bela Grids and 132kV Transmission Lines

In Current MYT (FY17-23) Authority approved the investment of **PKR 7,325 million** for the addition of construction of new 132kV Transmission line of 150KM and enhancement of grids in Vinder, Uthal and Bela which includes up-gradation of 66 kV to 132 kV level. At the time of Mid Term Review Submission (MTR) (FY 2017-2023) submission, the Project scope was envisaged to be limited and it was assumed that the Rights of Way (RoW) will be provided by Government of Balochistan without any cost implication to KE. Further, the project cost was estimated based on recent projects of KE executed in pre-COVID-19 period.

Subsequently, KE also hired an independent consultant for the evaluation of scope of work and preparation of tender documents. Tendering process was initiated in FY 2021, however, bids received for the Project were exorbitant as compared to initial estimated Project Cost due to ROW issues, political instability, flooding in the area, security concerns in the area and significant increase in commodities prices post Covid 19 scenario. Moreover, the project's execution was also delayed owing to pending approval of Rights of way (ROW) from the Government of Baluchistan and other agencies due to frequent changes at the provincial government level.

KE team is rigorously following up with GOB officials for the necessary approvals and is planning to re-tender (which is under final stage) the Project to ensure maximum participation from Bidders and competitive price. Despite above challenges, KE is geared-up to complete the project to ensure improved reliability of power supply in the region and seek support from Provincial and Federal Government on the matter.

Due to significant change in Project Scope and Commodities prices, the estimated cost of the Project has increased which was informed to Authority in a separate letter dated April 20, 2022. It is pertinent to mention that project cost will be firmed up after the completion of tendering process, the result of which will be communicated to Authority accordingly. Therefore, Authority's approval of the revised Project Cost of **PKR 21,765 million** is required on interim basis which shall be adjusted based on actual bids received for the project.

1.3. Interconnection

Investment is planned for enhancing interconnection capacity of KE network with National Grids and with upcoming Generation projects. The estimated cost for these works is **PKR 52,859 million** break up of which is given in the table below:

KIIP 66 – Interconnection Projects (Transmission)

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
500 kV KKI Grid station	17,618	-	-	-	-	-	-	17,618
NTDC Interconnection TL Dhabeji & KKI	4,584	-	-	-	-	-	-	4,584
Augmentation at NKI	-	3,042	4,562	-	-	-	-	7,604
Total NTDC	22,202	3,042	4,562	-	-	-	-	29,806
Step up Grid for 600MW renewables	-	576	5,723	8,664	-	-	-	14,962
Addition of Transmission Line for 350MW renewable plants	2,257	5,266	-	-	-	-	-	7,523
Interconnection - Other Costs	48	101	53	114	122	129	-	568
Total IPPs	2,305	5,943	5,776	8,778	122	129	-	23,054
Total	24,507	8,985	10,339	8,778	122	129	-	52,859

1.3.1. 500kV KKI Grid Station

Investment for the construction of 500kV KKI Grid station is already approved by Authority in its decision dated March 1, 2022. Total approved cost is **PKR 26,428 million**, of which remaining amount of **PKR 17,618 million** is expected to be incurred in FY24 considering the contractual timelines.

This grid station is key to off-take additional power up to 800 MW from the National Grid.

It is pertinent to mention that contract award for construction of KKI Grid and Transmission Lines was delayed due to following factors which were beyond KE's control, however, KE expects that the same will be completed within NEPRA approved CAPEX of **PKR 26,428 million.**

KE was expected to receive the GoS approval for allotment of land to KKI Grid in April 2021. However, the allotment of land faced serious delays and after extensive follow ups with government departments and subsequent approval from Sindh Cabinet, the land allotment letter was finally issued to KE by Land utilization department on Dec 29, 2021. Accordingly, KE awarded the KKI Transmission Line Contract in Feb 2022 and KKI Grid award in May 2022.

Considering the above issues, the timeline for construction of 500kV KKI Grid Station has been revised with expected energization in FY24 and the remaining amount has been included

in the investment in the proposed control period, while ensuring that the total amount remains within NEPRA's approved amount.

1.4. NTDC Interconnection Transmission Line - KKI and Dhabeji

Interconnections from NTDC transmission lines were not included in KE investment plan, as initially it was envisaged that the interconnection point (from NTDC transmission lines till KE interconnection Grids) will be constructed and executed by NTDC at its own cost. However, NTDC later requested KE to construct these interconnection transmission lines which was communicated by Ministry of Energy (Power division) to the Authority and the Authority, through its letter dated October 15, 2021, clarified that KE can construct these Transmission Lines at its own and the cost for construction would be considered in KE's tariff as new investments. Following are the details of additional lines:

- ➤ 220 kV double circuit transmission line for looping In/Out of Jhimpir-2 Jhimpir/DSEZ (Gharo) single circuit at 220 kV Dhabeji grid station.
- > 500 kV double circuit transmission line for looping in/out of the planned 500 kV (K2/K3) plant to Port Qasim coal fired power plant single circuit at KKI grid station.

KE has already informed Authority in its letters dated April 20, 2022 and December 27, 2022 that the estimated cost for these lines is **PKR 4,825 million**, which will be finalized at award of Contract once tendering process is completed. Accordingly, KE requests the Authority to allow CAPEX of PKR 4,825 million on provisional basis which is to be adjusted as per the actual bids received for the project and will be requested from NEPRA as specific approval under the Investment Plan revision mechanism, as explained in **Section VI (8)**.

1.4.1. Augmentation at NKI

Along with increase in import from NTDC network, augmentation in NKI interconnection, through addition of 500kV /220kV Auto Transformer and Loop in/out of KE's 220kV Baldia-Surjani Circuit and their associated bays, is planned in FY 2026 to draw power from NTDC and from new generation projects being planned in Thar area through wheeling. The augmentation is required to enhance the capacity of interconnection for evacuation of required power while adhering to technical limits as defined in "Grid Code".

1.4.2. Step-up Grid for 600MW and addition of Transmission line for 350MW renewable power plants

Evacuation from renewable plants of 600 MW and 350 MW is also planned for which KE would have to construct the following:

- (1) Step-up grid and related transmission line of 20 km is planned at Gharo corridor for inducting additional 600 MW renewable power plants in KE system.
- (2) TL having estimated length of 20 km is planned for evacuation of power from 350 MW renewable power plants through Surjani Grid. These projects are being developed under the umbrella of Government of Sindh with support of World Bank.

1.5. System Improvement / Reliability

These projects are required to upkeep and reinforce the existing network for ensuring reliability and stability of the power system. Further, new SMART technologies have also been opted for improving efficiency and operational excellence along with the projects required for

adhering the technical limits, as per Grid Code, which includes network augmentation for maintaining N-1 contingency, system security and safety standards.

Following major activities are planned to enhance the system in next control period i.e., FY24 – 30:

Overhauling of GIS bays

Overhauling of GIS Bays is recommended by OEM after 25-30 years of operations. This predictive maintenance is imperative to maintain the running condition of the bays in compliance with the technical and safety parameters. Since the equipment is encapsulated in GIS, the delay in overhauling may cause faults such as Gas Leakages, Internal Insulation Damages & Flashovers etc. leading to prolonged outages and safety hazards.

Replacement of Old Power Transformers and allied equipment

Transformers planned for replacement are aged and have completed their useful life of 30 years and therefore, maybe prone to multiple faults and inability to operate at full capacity. Same is evident from the asset health index. This may lead to interruption and service downtime on account of faults incurred.

Replacement of relays and allied equipment

Relays are integral part of protection system which enables to arrest the faulty equipment of the network and isolate it. The response of relays is very important in timely clearance of fault. Old / aged relays have low slow response time owing to which system security is compromised. Replacement of mechanical / static relays are planned in the control period to upkeep the reliability of network equipment and protection system.

RTV coating and services/ Installation and replacement of composite insulators

Overhead Transmission lines passing near coastal belt has performance issues and frequent outages are experienced because of deposition of salt and other pollutants. To maintain the transmission significant number of outages are required for cleaning of insulators for ensuring minimum trips / downtime. RTV Coating/ Composite Insulators aim to significantly reduce these tripping and save the need for frequent cleaning of the Line Insulators.

Tower structures rehabilitation/ Transmission line allied equipment

Timely rehabilitation of towers is important from the perspective of safety and network reliability.

Underground cable replacement

All existing Oil Filled Cables (OFC) are planned to be replaced by XLPE Technology in phase wise manner over the upcoming Tariff Period. This will result in higher system reliability.

Rehabilitation of grid automation system/ Server with application for DRC

As a part of prudent practice, redundancy of critical servers is included at DRC to ensure availability of operational / planning applications, in case LDC site is not available. Also, the conversion of key 220kV and 132kV grids to HMI based control environment is planned for digitization.

Installations and replacements in telecom network

This mainly consists of upgradation of existing PLC technology (Old) to latest SDH Systems with OPGW (Fiber Optic Cable) connectivity owing to lack of readily available spares in the market required for maintenance.

Following rehabilitation and replacement works in existing network are also planned to maintain the overall transmission network, thus, enhancing remote monitoring, control, reliability, and security.

- ➤ Replacement of Auto Transformers and Power transformers
- > Rehabilitation of Transmission lines of critical 220 kV and 132 kV Transmission Lines for maintaining N-1 contingency.
- > Replacement of 132kV bays
- > Replacement of underground oil filled cables
- > Reconductoring and relocation of overhead transmission lines.
- > SCADA upgradation works
- ➤ Addition of current limiting reactors to limit short circuit levels
- ➤ Rehabilitation of existing 220kV and 132kV Transmission lines

Summary of planned CAPEX under this head is given below:

KIIP 67 – System Improvement / Reliability (Transmission)

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Short Circuit Control	-	1,373	-	-	-	-	-	1,373
SCADA & Other Automation equipment	-	-	-	-	-	3,652	6,030	9,682
Safety	132	142	197	179	-	828	2,381	3,859
N - 1 Contingency	2,440	2,501	4,848	16,734	9,326	4,546	4,786	45,180
Maintenance/ Improvement	4,160	4,689	3,826	3,424	2,885	2,736	2,319	24,039
Total	6,731	8,704	8,871	20,337	12,211	11,762	15,516	84,133

1.6. Reactive Power Management and Loss Reduction Projects (Transmission)

KE's transmission loss is already at the optimum level, and the load growth and other transmission CAPEX has an indirect impact on efficiency of the network and system losses. In order to optimize the transmission loss and to have compensation for VAR requirement of network / load centers which would also help managing the power factor / quality as per the grid code / prudent utility practices, installation of additional capacitor banks at existing 132kV Grid stations alongside capacitors at new grids is planned for which an investment of **PKR 3,171 million** is being requested. Summary of Year wise CAPEX planning is given below:

KIIP 68 – Reactive Power Management & Loss Reduction (Transmission)

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Reactive Power Management & Loss Reduction CAPEX	424	636	677	457	558	167	251	3,171

1.7. Summary of Planned Additions

As a result of above planned investments, following additions are planned for the control period i.e., FY 2024 - 2030:

KIIP 69 - Grid Stations

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Additions
500kV	-	1	1	1	1	1	1	1	1
220kV	11	11	11	12	12	13	13	14	3
132kV / 66 kV	61	61	62	66	67	67	69	70	9*
Total Grids	72	73	74	79	80	81	83	85	13

^{* 3}x 132kV Grids are consumer funded

KIIP 70 - <u>Transmission Lines (KM) - Additions</u>

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Additions
500kV	0	9	9	9	9	9	9	9	9
220kV	462	545	585	655	720	760	760	770	308
132kV/66kV	992	992	1,004	1,048	1,084	1,092	1,111	1,125	133
Total	1454	1,546	1,598	1,712	1,813	1,861	1,880	1,904	450

KIIP 71 – Transmission Lines (Rehabilitation) KM

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Rehabilitation
500kV	-	-	-	-	-	-	-	-	-
220kV	-	-	-	-	48	48	48	48	48
132kV	480	480	514	561	606	636	655	655	175
66kV	-	-	-	-	-	-	-	-	-
Total	480	480	514	561	654	684	703	703	223

Rehabilitation will not increase the overall length of the network, however, will help in enhancing the reliability and stability of the network.

KIIP 72 - Power Transformers & Auto Transformers Capacity (MVAs)

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Additions
500kV	-	-	-	-	-	-	-	-	-
220kV	-	-	-	-	-	-	-	-	-
132kV & 66 kV	6,977	7,111	7,211	7,451	7,451	7,491	7,611	7,732	755*
Power Transformer	6,977	7,111	7,211	7,451	7,451	7,491	7,611	7,732	755
500kV	-	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
220kV	5,000	5,000	5,250	5,750	6,250	6,750	6,750	7,000	2,000
132kV	100	100	100	40	40	40	40	40	(60)
66kV	-	-	-	-	-	-	-	-	-
Auto Transformer	5,100	6,900	7,150	7,590	8,090	8,590	8,590	8,840	3,740

^{*200} MVA are consumer funded

KIIP 73 - Number of Power Transformers & Auto Transformers

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Additions
500kV	-	-	-	-	-	-	-	-	-
220kV	-	-	-	-	-	-	-	-	-
132kV	182	184	185	191	191	192	195	197	15**
Power Transformers	182	184	185	191	191	192	195	197	15
500kV	-	3	3	3	3	3	3	3	3
220kV	20	20	21	23	25	2 7	2 7	28	8
132kV/66kV	2	2	2	1	1	1	1	1	(1)*
Auto Transformers	22	25	26	2 7	29	31	31	32	10

^{*} Auto transformer at Vinder grid no more required due to upgradation planned under HVUB project.

The above additions are planned in order to enhance the capacity and improve the network reliability and stability of KE's transmission segment which in turn will enable KE to reduce the transmission constraints and serve the incremental power demand within its service area. However, the above planned additions, including scope of projects and locations, are subject to change due to revisions in the scope of the proposed investment plan or NEPRA / GOP directives etc. that is detailed in the following **Section VI (8)**.

Further, the transmission targets proposed by KE for the control period FY 2024 - FY 2030 are given in the **Section IV (1)** which may be taken as a measure of KE's performance.

^{** 5} PTRs are consumer funded

1.8. Metering Mechanism

Consumers in transmission are classified in accordance with their connection to different voltage levels. Customers connected to 220kV and 132kV voltage level are classified as B5, B4 and C3 consumers, respectively, and energy supplied to them is measured through meters installed at KE end, provided that the connecting circuit is under consumers jurisdiction. Thus, transmission loss across EHT consumer connecting circuits is not part of KE's transmission loss.

Whereas for 11kV consumers (B3 consumers), metering is done at 11kV side of power transformer i.e., transformer sent-out at 11kV side is considered for calculation of transmission loss.

Description	Connection Point
Power Input – Power plants	Power plants busbar connecting to KE's Transmission Line
Power Input – Interconnection Point	Transmission Line Bay (in KE Grid) connecting to NTDC / STDC Transmission Line or 220kV side of 500/220kV Auto Transformer at NTDC grid.
Power Output 220/132kV Consumer	Transmission Line Bay (in KE Grid) connecting to Consumer's Transmission Line
Power Output 11kV Consumer/ Distribution	11kV switchgears incomers panel

Transmission loss is determined by utilizing the metered data for transmission consumers alongside net generation sent out i.e., energy metered at generation end excluding auxiliary load of generation and losses incurred across busbar, and net metering.

MWh transmission loss is calculated by subtracting the total energy passed through KE transmission network i.e., energy passed through KE 132/11kV grids and sales to B4 and B5 customers from net generation sent out less net metering import. Percentage transmission loss is then calculated by dividing the MWh transmission loss by net generation sent out less net metering import.

1.9. Validation by Consultant

KE had engaged a consultant for validation of investment plan and related additions / benefits. Accordingly, Consultant has carried out the validation of KE's proposed investment plan, including transmission losses, and its report is enclosed as **Annexure I.**

2. Transmission - Expansion and Rehabilitation

2.1. Grid Stations

KIIP 74 - Expansion and Rehabilitation: Grid Stations

									PKR Mn
Sr. No	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
1	New								
a	132 KV	7,081	24,003	8,179	5,458	10,618	5,856	1,648	62,841
b	220 KV	2,948	5,489	27,698	21,534	17,050	4,502	1,801	81,022
с	500 KV	17,618	-	-	-	-	-	-	17,618
2	Conversion*								

									PKR Mn
Sr. No	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
3	Augmentation**								
4	Extension (Transform	er)							
a	66 KV								-
b	132 KV	4,474	142	197	179	1,423	710	2,026	9,152
с	220 KV	782	1,745	1,745	1,755	-	777	777	7,581
d	500 KV	-	3,042	4,562	-	-	-	-	7,604
5	Extension (Line Bay)*	**							

^{*66}kV Grids planned to be converted to 132kV i.e. Uthal and Bela, cost of which is included in new 132kV Grid stations (named HVUB project)

2.2. Transmission Lines

i. New Line

KIIP 75 - Expansion and Rehabilitation: Transmission Lines: New Line

									PKR mn
Sr. No	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
1	132 KV Transmission Line	752	-	317	480	873	1,435	574	4,432
2	220 KV Transmission Line	4,174	5,266	1,241	2,087	835	1	-	13,602
3	500 KV Transmission Line	2,668	-	1	-	-	1	-	2,668
4	132 KV SDT								-

ii. Rehabilitation/Reconductoring/Up-gradation

KIIP 76 - Expansion and Rehabilitation: Transmission Lines:

Rehabilitation/Reconductoring/Up-gradation

Sr. No.	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
1	132 KV/220 KV Transmission Line	1,500	1,901	2,290	13,167	6,259	2,450	4,395	31,962
2	132 KV SDT								-

iii. Reconductoring and Rerouting

$\mbox{KIIP}~77$ – Expansion and Rehabilitation: Transmission Lines: Reconductoring and Rerouting

Sr. No.	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
1	132 KV D/C	Included in VIID as							
2	132 KV SDT	Included in KIIP 75							

^{**}Cost included in Extension

^{***}Cost included in Transformers extension and New Grid.

iv. Capacitor

KIIP 78 – Expansion and Rehabilitation

Transmission Lines: Capacitor

									PKR mn
Sr. No.	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
1	11kV Fixed Capacitors	424	636	677	457	558	167	251	3,171

v. Others

KIIP 79 – Expansion and Rehabilitation: Grid and Transmission Lines: Others

									PKR mn
Sr. No.	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total Cost
1	Transmission Routine	4,160	4,689	3,826	3,424	2,885	2,736	2,319	24,039
1a	GSMPO	2,050	2,586	2,363	2,423	1,894	1,625	1,312	14,253
1b	Overhead	1,016	1,200	850	487	405	441	355	4,754
1c	SCADA	611	507	342	298	411	337	445	2,951
1d	Telecom	272	277	214	185	149	177	160	1,434
1e	Underground	209	119	58	33	25	156	46	646
2	SCADA Upgradation	-	-	-	-	-	3,652	6,030	9,682
3	Others	48	2,074	1,053	1,114	1,122	129	-	5,541
за	Fire Sprinkle System	-	600	1,000	1,000	1,000	-	-	3,600
3b	Current Limiting Reactor	-	1,373	-	-	-	-	-	1,373
3c	IPPs Interconnection Metering	48	101	53	114	122	129	-	568

vi. Summary

Transmission investment plan for FY24 to FY30 has been summarized below:

KIIP 80 – Summary of Investment Plan (Transmission)

PKR mn

Category	Sub Category	Voltage	Growth	Inter- connection	Reactive Power Management and Loss Reduction	System Improvement / Reliability	Grand Total
		132kV	62,841	-	-	-	62,841
	New	220kV	66,060	14,962	-	-	81,022
Grid		500kV	-	17,618	-	-	17,618
Gria		132kV	6,011	-	-	3,140	9,152
	Extension	220kV	5,245	-	-	2,336	7,581
		500kV	-	7,604	-	-	7,604
Grid Total	-	-	140,157	40,184	-	5,4 77	185,818
		132kV	594	-	-	3,838	4,432
Transmission	New	220kV	-	9,440	-	4,162	13,602
Line		500kV	-	2,668	-	-	2,668
	Rehabilitation	132kV	-	-	-	31,962	31,962
Transmission Line Total	-	-	594	12,108	-	39,962	52,664
Capacitor Bank	Capacitor Bank	11kV	-	-	3,171	-	3,171
Capacitor Bank Total	-	-	-	-	3,171	-	3,171
Dum Total	Fire Sprinkle System	NA	-	-	-	3,600	3,600
	Current Limiting Reactor	NA	-	-	-	1,373	1,373
Others	Interconnection Metering	NA	-	568	-	-	568
	SCADA	NA	ı	-	-	9,682	9,682
	Transmission Routine	NA	-	-	-	24,039	24,039
Others Total	-	-	-	568	-	38,694	39,262
Grand Total	-	-	140,751	52,859	3,171	84,133	280,915

Profile of Transmission Projects included as Annexure Q.

3. Capital Expenditure and additional Operating Costs for Expansion and Rehabilitation of Distribution System

KE plans to invest **PKR 184,650 million** during the control period FY 2024 to FY 2030 projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 as detailed below, and is proposed to be indexed through an indexation mechanism included in **Section VI (8)**. This amount does not include investment in dedicated distribution system that will be fully funded by the consumers. Please refer discussion in *Consumer Funded CAPEX* below.

The investment plan is divided into five categories:

KIIP 81 – Summary of Investment Plan (Distribution)

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Growth	2,426	3,687	4,700	6,316	6,484	7,344	6,148	37,105
Loss Reduction	8,748	11,502	12,545	12,854	6,106	6,315	6,591	64,662
Maintenance	4,653	6,270	6,082	5,697	5,989	5,889	5,915	40,496
Safety	5,438	5,268	3,726	2,897	2,897	2,797	2,834	25,858
Technology	3,616	3,334	2,488	1,317	2,684	1,813	1,276	16,529
Total Investment	24,881	30,062	29,541	29,082	24,161	24,158	22,765	184,650

Investments proposed above are designed to enhance customers experience and also are in line with the objectives of NIP. The complete scope with associated benefits and impact on performance KPIs are presented in the following chapters. Based on the vastness of Distribution network and impact on tariff, a limited scope has been selected after prioritization based on Pareto's Principle. These investments would enable KE to better serve the customers' needs and improve the overall service levels and hence, KE requests NEPRA to allow the same under the next control period.

It is pertinent to highlight that the above-mentioned investments are based on the following assumptions:

- 4. USD/ PKR Exchange Rate of PKR 206/USD (June 30, 2022)
- 5. Reference Pakistan CPI of 158.48 (Average FY 2022)
- 6. Reference US CPI of 282.03 (Average FY 2022)

The investment plan has been given on current macro-economic factors and KE has requested an indexation mechanism for changes in the investment plan based on Indexation of above factors, including indexation of foreign component of CAPEX (estimated to be 70% of the total CAPEX) with exchange rate and US CPI and local component (estimated to be 30% of the total CAPEX) with Pak CPI along with other scope changes etc. Adjustment mechanism for the same is discussed in detail in **Section VI (8)** below.

Moreover, above investment estimates are based on duties and taxes based on currently notified rules and regulations. In case of any significant change in duties / taxes structure, KE will update NEPRA and seek approval for increase in CAPEX in this regard as Specific approval under Investment plan revision mechanism explained in **Section VI (8)**.

Here KE would like to humbly highlight that the execution of proposed investment plans and related additions / improvements is linked to approval of tariff asks in the petition to be

submitted after approval of this document as a sustainable tariff that balances the interest of all stakeholders and is necessary to enable KE to raise financing required for execution of planned project and to remain viable as business entity to ensure continuity of operations and improvements for consumers.

Consumer funded CAPEX

Above proposed investment plan does not include expenditure expected for the consumer funded CAPEX, which will be carried out based on consumer's request and related payments. Accordingly, KE has excluded them from the investment plan and the Regulatory Asset Base for proposed Tariff workings. Therefore, for the purpose of Investment Plan, CAPEX relating to these grids & consumers inflows falling in Deferred Revenue, shall not form part of the Investment Plan.

Further, with respect to inflows from consumers in the form of Grid Sharing charges for their dedicated connection as per Grid Sharing Policy, the same is proposed to be passed through in tariff at actual and shall be actualized annually for calculation of allowed investment in the Annual Investment Update as explained in **Section VI (8)**. Estimated amount of inflows is around PKR 10 billion however it will be subject to actualization as explained above.

KE will annually report the breakup of addition to deferred revenue each year in consumer funding received on Grid Sharing charges and received for dedicated Grids as explained in para above.

Break up of investments

As shown in above table, investment plan has been bifurcated into growth, loss reduction, maintenance, safety and technology which are discussed in detail in the subsequent sections.

3.1. Summary of Planned Additions and related benefits for control period FY24 – 30

In view of this Investment plan, KE plans to enhance the infrastructure by adding Feeders and PMTs to cater to consumer and demand growth. The following additions will be made in the next Control period:

KIIP 82	- Summary	of D	istribut	ion Eaui	ipment
----------------	-----------	------	----------	----------	--------

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30
11 KV Feeders – No.	2,120	2,156	2,212	2,279	2,362	2,456	2,528
Distribution Transformers – No.	31,579	32,577	33,628	34,725	35,912	37,147	38,412
Distribution Capacity – MVA	9,159	9,499	9,855	10,231	10,629	11,046	11,470

With additions of these feeders and PMTs, KE envisages to increase the total MVA capacity available within the Distribution segment, KE plans to add 444 Feeders inclusive of Dedicated consumer funded and common system which reflect the growth and load management initiatives. This growth of feeders translates into an increase of 7,606 distribution transformers over the 7-year control period covering a total of 3,251 MW. These feeder additions would directly reduce the overloaded feeder counts from 0.15% to 0.08% despite increasing the total count, resulting in better quality of supply and contributing to reduction of outages.

As a result, the addition in High Tension length of network in kilometres will be increased by 3,170 KM which will take it from 10,761 km to 13,931 km. The year-on-year increase in HT network length will be as follows:

KIIP 83 - Network Length (HT)

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Network Length (HT) -km	10,761	11,026	11,401	11,853	12,343	12,858	13,409	13,931

KE will be adding 2,561 MVA in capacity terms through addition of 7,606 distribution transformers resulting in decrease of overloaded Distribution transformers. This capacity addition would allow KE to serve the incoming load through New Connections and organic growth of existing consumer base.

The above additions are planned in order to enhance the capacity and improve the network reliability and stability of KE's distribution segment which in turn will enable KE to reduce the network constraints and serve the incremental power demand within its service area. However, the above planned additions, including scope of projects and locations, are subject to change due to revisions in the scope of the proposed investment plan or NEPRA / GOP directives etc. for which KE has proposed an Investment Plan Revision Mechanism explained in **Section VI (8)**.

Further, the distribution targets proposed by KE for the control period FY24 - FY30 are given in the subsequent section.

3.2. Validation by Consultant

KE had engaged a consultant for validation of investment plan and related additions / benefits, including benchmarking with industry practices. Accordingly, Consultant has validated the KE's proposed investment plan, and its report will be submitted in due course.

4. Distribution System-Expansion and Rehabilitation

KIIP 84 - Distribution System- Expansion and Rehabilitation

KE scope of work									
Project Nature	PKR Mn								
	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total	
Growth	2,426	3,687	4,700	6,316	6,484	7,344	6,148	37,105	
Loss Reduction	8,748	11,502	12,545	12,854	6,106	6,315	6,591	64,662	
Maintenance	4,653	6,270	6,082	5,697	5,989	5,889	5,915	40,496	
Safety	5,438	5,268	3,726	2,897	2,897	2,797	2,834	25,858	
Technology	3,616	3,334	2,488	1,317	2,684	1,813	1,276	16,529	
Total	24,881	30,062	29,541	29,082	24,161	24,158	22,765	184,650	

	Consumer Funded scope of work									
Duois et Noture								PKR Mn		
Project Nature	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Growth	10,321	10,367	11,090	11,677	12,690	13,333	13,857	83,335		
Loss Reduction	934	937	963	992	1,023	1,057	1,094	7,000		
Maintenance	613	613	613	613	613	613	613	4,293		
Grand Total	11,868	11,917	12,666	13,282	14,327	15,004	15,565	94,628		

	Total KE and Consumer Funded scope of work											
Duois et Mature								PKR Mn				
Project Nature	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total				
Growth	12,747	14,054	15,789	17,993	19,174	20,677	20,006	120,439				
Loss Reduction	9,682	12,439	13,508	13,847	7,130	7,372	7,685	71,662				
Maintenance	5,266	6,884	6,696	6,310	6,603	6,503	6,529	44,789				
Safety	5,438	5,268	3,726	2,897	2,897	2,797	2,834	25,858				
Technology	3,616	3,334	2,488	1,317	2,684	1,813	1,276	16,529				
Total	36,749	41,979	42,207	42,364	38,488	39,162	38,330	279,278				

4.1. KE scope of work

4.1.1. Expansion

Growth serves as a backbone in the expansion of KE's Distribution Network. KE aims to fulfill electricity demand projections of Karachi from FY-24 to FY-30 through optimum utilization of existing network equipment i.e., grid station, power transformers, MV feeders and distribution transformers along with induction of new electricity infrastructure keeping in view of the spatial limitations of the city due to its increasing population.

KE serves additional growth through two types of investments i.e., Investments incurred by KE for common system or Dedicated Consumer Funded. This expansion in KE network is required to enhance existing capacity to cater for organic growth and entertain more consumers in line with NEPRA's CSM. KE plans an investment of **PKR 37,105 million** for common system, while significant portion is also expected based on Dedicated consumer funded investment.

Investments planned by KE as well as dedicated consumer funded will help in addition of **3,251 MW** of load in KE's network and growth of **1.2 million** customers in the 7-year control period which will help to serve the growing demand and customer base.

The breakup of investments under growth initiatives is given in below:

To cater projected addition of sanctioned load of **2,543 MW** from FY-24 to FY-30, KE Distribution will be adding common distribution infrastructure comprising of new link formations among existing MV feeders along with induction of new MV feeders, distribution transformers and carrying out MV feeder shifting among existing and new grid stations and power transformers (PT) for load balancing.

Summary of Investment by KE for common system is given in the table below:

KIIP 85 – Distribution System - Expansion and Rehabilitation - Growth

Growth								
Project								PKR Mn
rroject	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansion projects to cater for New connections (Above 80 KW)	526	417	440	462	482	500	511	3,337
Metering Project (NC Below 80 KW)	147	120	121	124	121	123	125	880
Grid to Grid feeder balancing	214	377	109	944	-	-	582	2,227
PT to PT feeder balancing	190	191	101	102	103	57	58	802
New MV Feeder laying	1,135	1,219	2,550	3,292	4,373	5,243	3,437	21,251
New MV Link for balancing	214	215	218	220	223	226	228	1,544
SIP Overloading	-	1,149	1,160	1,172	1,182	1,195	1,207	7,065
Growth Total	2,426	3,687	4,700	6,316	6,484	7,344	6,148	37,105

Growth HT								
Description of								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansion projects to cater for New connections (Above 80 KW)	411	326	345	362	379	394	402	2,619
Grid to Grid feeder balancing	214	377	109	945			582	2,227
PT to PT feeder balancing	190	191	102	102	103	57	57	802
New MV Feeder laying	1,135	1,219	2,550	3,292	4,373	5,244	3,438	21,251
New MV Link for balancing	214	215	218	220	223	226	228	1,544
SIP Overloading		871	881	891	900	910	921	5,374
Growth HT Total	2,164	3,199	4,205	5,812	5,978	6,831	5,628	33,817

Growth LT										
D								PKR Mn		
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Network expansion projects to cater for New connections (Above 80 KW)	115	90	95	99	103	107	109	718		

Growth LT	Growth LT										
Descionat								PKR Mn			
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
Metering Project (NC Below 80 KW)	147	120	121	124	121	123	125	881			
SIP Overloading		278	279	281	282	284	286	1,690			
Growth LT Total	262	488	495	504	506	514	520	3,289			

These new planned assets will serve projected demand on common network ensuring optimum utilization of existing assets, timely availability of requisite operational system along with quality, reliability of power supply to meet regulatory obligations.

Dedicated Consumer Funded:

Dedicated Distribution Network includes all facilities clearly and solely dedicated to the supply of electricity to a single or a group of consumers as required in NEPRA CSM.

Load growth projection from FY 24- FY 30 of **708MW** is expected to be facilitated through Dedicated Distribution Network.

It is projected based on load forecast to have 176 Dedicated Feeders to be installed **against 48 grids** in the period of FY24 - FY30.

In addition to feeders, KE installs numerous categories of infrastructure to facilitate customer load demand, that is primarily financed by customers. These new connections are linked with growth initiatives and represent industrial, domestic, commercial, agricultural and government growth in electricity.

Demand growth

Details of growth in demand covering details of load to be added is given in **Section III** & in **Section VI (4.1)**.

4.1.2. Loss Reduction

Loss reduction is one of the major KPIs of KE and hence, the key area of focus for improvement for KE. For this reason, KE plans to invest **PKR 64,662 million** on loss reduction over the control period of 7 years, while some investments are expected to be done under Dedicated Consumer funded.

KIIP 86 - Distribution System - Expansion and Rehabilitation - Loss Reduction

Loss Reduction	Loss Reduction											
Duningt								PKR Mn				
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total				
Commercial Loss reduction								45,740				
LT ABC Full Scope	2,807	2,825	2,865	2,892	-	-	-	11,389				
LT ABC Rehab	3,946	3,996	4,044	4,093	-	-	-	16,079				
LT ABC Replacement	-	-	752	761	771	780	790	3,854				
Faulty Meter Replacement												
Net Metering	12	14	15	17	18	20	22	118				

Single Phase	983	1,071	1,185	1,312	1,450	1,605	1,777	9,383
Three Phase	515	561	621	688	760	841	931	4,917
Technical loss reduction								18,922
Loop Splitting	485	490	495	500	506	511	517	3,505
Power Factor Improvement Plants	-	36	36	36	29	-	-	138
Network Rehab	-	2,509	2,531	2,555	2,573	2,557	2,553	15,279
Loss Reduction Total	8,748	11,502	12,545	12,854	6,106	6,315	6,591	64,662

Loss Reduction HT								
Donalast								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Commercial Loss reduction								2,807
LT ABC Full Scope	220	223	227	229	-	-	-	899
LT ABC Rehab	376	382	387	393	-	-	-	1,538
LT ABC Replacement	-	-	72	73	74	75	76	370
Technical loss reduction								14,493
Loop Splitting	485	490	495	500	506	511	517	3,505
Network Rehab	-	1,806	1,821	1,838	1,850	1,838	1,835	10,988
Loss Reduction HT Total	1,079	2,900	3,001	3,032	2,429	2,423	2,427	17,292

Loss Reduction LT								
Descionat								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Commercial Loss reduction								42,933
LT ABC Full Scope	2,588	2,602	2,638	2,663	-	-	-	10,490
LT ABC Rehab	3,570	3,614	3,657	3,701	-	-	-	14,541
LT ABC Replacement	-	-	680	688	697	705	714	3,484
Faulty Meter Replacement								
Net Metering	12	14	15	17	18	20	22	118
Single Phase	983	1,071	1,185	1,312	1,450	1,605	1,777	9,383
Three Phase	515	561	621	688	760	841	931	4,917
Technical loss reduction								4,428
Power Factor Improvement Plants	-	36	36	36	29	-	-	138
Network Rehab	-	703	710	717	723	719	718	4,290
Loss Reduction LT Total	7,669	8,602	9,543	9,823	3,677	3,891	4,164	47,362

4.1.2.1. Aerial Bundled Cables (ABCs)

Under this plan, KE plans a roll out of Aerial Bundled Cable (ABC) on PMTs in order to reduce commercial losses. KE has identified areas of potential loss reduction and categorized where;

- ABC was required for bare conductor High Loss PMTs in Low Loss feeders
- Rehabilitation of previously converted ABC PMTs for sustained theft prevention

• Replacement of previously converted ABC PMTs crossing useful life

This installation of ABCs on new PMTs as well as rehabilitation of already installed ABCs amounting to total investment of **PKR 31,322 million.**

For this purpose, KE will install ABCs over 1,770 new PMTs and carry out rehabilitation of 3,032 PMTs. Previously, KE has managed to complete 12,500 PMTs conversion to ABC which has been a major contributor to KE's loss reduction. Further, rehabilitation of already converted PMTs is also planned to cater for areas which are prone to high theft and non-payment and where ABCs (Aerial Bundled Conductor) installed have been damaged by installation of direct hook/kundas or have completed their useful life.

Hence, keeping in view learnings from the last experience, KE's execution strategy for ABC project going forward has been determined as follows:

- Ring fencing entire feeder i.e., to convert all PMTs within a feeder to ABC, irrespective of the loss category.
- Changing of service cables and individual meters, along with PMT mains to avoid theft from service cables
- Adjacent feeders also ring fenced to eliminate 'kunda' shifting

4.1.2.2. Faulty Meter Replacement

As per prevailing CSM, KE is required to replace the faulty meter unless the meter fault is due to fault of customers. Accordingly, the total FMR investment by KE is projected to be at **PKR 14,418 million:**

KIIP 87 - Distribution System - Expansion and Rehabilitation - FMR

								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
FMR	1,510	1,646	1,821	2,016	2,227	2,466	2,731	14,418

4.1.2.3. Technical Loss Reduction

KE identified improvement areas in distribution network and have planned different initiatives as per CAPEX plan for the reduction of energy losses due to technical reasons. Below initiatives pertaining to overhead and underground network will contribute to technical loss reduction.

KIIP 88 – Distribution System - Expansion and Rehabilitation – Technical Loss Reduction

								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Loop Splitting	485	490	495	500	506	511	517	3,505
PFIP Installation	-	36	36	36	29	-	-	138
Network Rehabilitation	-	2,509	2,531	2,555	2,573	2,557	2,553	15,279
Total	485	3,036	3,063	3,092	3,108	3,068	3,070	18,922

4.1.2.4. Loop Splitting

Network augmentation will be one of the key initiatives under technical loss reduction exercise to optimize technical energy loss in Distribution network. Our simulation software CYMDST will be used as primary tool to validate the technical loss reduction initiative which includes right sizing of distribution transformers & overhead / underground conductors and placement of transformers on load center keeping in view the area dynamics.

Network augmentation will also focus on reduction of I²R losses through load balancing within the network assets, reducing lengthy lines to maintain voltages drop within prescribed limits and to create operational flexibility in the interconnected ring network.

Through this exercise at MV level, feeder loading is balanced by transformer shifting from overloaded feeders to adjacent underloaded feeders considering both peak & average loading of network assets; thereby optimizing the asset utilization and reducing technical loss due to overloading.

Load balancing at LV level will be done by shifting LT circuits from heavily loaded distribution transformers to lightly loaded adjacent transformers thus reducing I²R losses on LV network and load losses on Transformers. In addition to load shifting, load balancing will be done among all three phases so that undue stress on any single phase maybe reduced which ultimately optimize technical losses. Additionally wire broken faults will also be reduced by performing the balancing activities.

4.1.2.5. Power Factor Improvement Plants (PFIP)

Value of power factor depicts how effectively electricity is being utilized in a power network. In recent years nature of load has changed drastically, and different electrical equipment are running inherently at low power factor thus consequently causing a low power factor at the utility end resulting in increase of power losses. In FY22, 43 locations were identified using AMR data where power factor was deteriorating below the threshold of 0.9. Based on the analytics, PFIPs were installed on selected locations. Post installation analysis showed power factor improvement from 0.64 up to 0.85 on average basis and voltage improvement profile was improved by 7.7%; while distribution transformer capacity was enhanced by 19% on those locations.

KE has planned initiative of placing the Power Factor Improvement Plants (PFIPs) in the distribution network with the objective of improving the power factor, reducing the technical losses as well as improving the voltage profile and capacity of distribution transformers.

To achieve the required benefits from PFIPs placement, it is important to find the optimal locations of the PFIPs in the distribution network. KE wide installed AMRs provide a visibility of running power factor & kVAR requirement at each distribution transformer. KE plans to install PF improvement plants in LT Substations where power factor is low with high kVAR demand. Since power factor is inversely proportional to the current drawn in power system, improvement in power factor will also support reduction in I²R losses of OH lines, underground cables and distribution transformers.

Subject to space availability, KE plans to deploy power factor improvement plants in around 100 substations in LT distribution network to reduce the technical losses and improve overall efficiency of the system.

4.1.2.6. Network Rehabilitation

There are additional technical energy losses in the network which mostly cannot be evaluated through simulation studies performed at MV & LV lines and transformers. For instance, high contact resistance paths due to asset deterioration, improper or deteriorated joints, and

possible loose connection in both overhead and underground systems also contribute to technical energy losses in addition to losses incurred due to normal flow of current.

Sustainable and effective rehabilitation initiatives have been planned on overhead and underground network to address these issues. Rehabilitation activities will be targeted to reduce power losses by improving connection quality especially ensuring bolt tightness at correct torque values, improving joints quality by replacing deteriorated joint thus reducing current leakages, replacement of deteriorated connection leads, replacement of damaged insulator causing leakages and improving high contact resistance paths especially in old OCBs present in the network. Further, efforts will be made through continuous training of the ground staff to sustain the achieved results.

Loss Reduction Targets:

The Loss reduction initiatives of the next control period would harness an improvement in distribution loss of 2.3% taking it from a projected 13.8% (FY23) to 11.5% (FY30) in 7 years. This improvement will be derived from two major areas of improvement being commercial loss reduction and technical loss reduction as mentioned before in the Investment Plan. The year wise improvement of distribution loss will be as follows:

KIIP 89 - Distribution System - Expansion and Rehabilitation - Distribution Loss Targets

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Distribution Loss	13.8%	13.5%	13.1%	12.7%	12.3%	11.9%	11.7%	11.5%

Here KE would like to highlight that due to Solar PV penetration adverse impact on consumer mix, the losses are expected to increase by 0.8%. To off-set this impact and to ensure reduction in commercial losses, loss reduction plan of 2.1% has been targeted through comprehensive ABC regimes through which KE targets to convert the rest of High Loss PMTs pockets in Low Loss areas to be converted to ABC, rehabilitation of deteriorated ABC cables due to blatant theft and replacement of ABC cables after completing useful life period for better performance. These investments will be complemented with strict governance regimes to be implemented to restrict the deterioration of ABC cables and attain the targeted performance of administrative losses.

Further, KE undertook detailed evaluation of technical energy losses in the distribution network with the aim to prioritize actions for technical loss reduction by identifying areas & equipment that most contribute to technical losses. KE conducted evaluation of its Technical Loss based on international practices and has submitted the same to consultant for validation which is expected to be completed by mid Feb'22. KE will apprise the Authority in this regard. In combination with rehabilitation activities targeted initiatives are planned on selected feeders having high technical losses to achieve KE wide technical loss reduction of around 1% by 2030.

Further, in case of force majeure events beyond KE's control, for example Covid-19 that occurred during the current MYT, which adversely impacts KE's ability to achieve above proposed distribution loss targets, KE would request NEPRA to allow revision in the same based on specific request of KE which would be duly supported by necessary evidence.

Metering Mechanism

The distribution segment starts from network flowing from Grid Stations at 11 KV feeders to distribution transformers (PMTs / Sub stations) whereby transitioning the network from 11KV to 220/400 volts network.

The 11KV network is termed as High-Tension network whereas post transformer network is Low Tension network delivering 220/400 voltage. Consumers are connected to these networks through service cables & meters are installed at their premises to record their consumption and billing is done as per their meter reading.

4.1.3. Maintenance

For overhauling and maintenance of the existing distribution network, KE plans an investment of **PKR 40,496 million.**

Maintenance plan includes corrective maintenance and network rehabilitation which are as follow:

KIIP 90 - Distribution System - Expansion and Rehabilitation - Maintenance

Maintenance								
Describe et								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Corrective Maintenance	2,298	2,238	2,135	1,956	2,390	2,240	2,180	15,437
CM	2,298	2,238	2,135	1,956	1,676	1,525	1,416	13,243
CM Periodic Maintenance	-	-	-	-	714	715	764	2,194
TSW	1,216	1,171	1,175	1,162	1,135	1,152	1,099	8,110
Deteriorated HT cable replacement	-	781	789	797	806	815	809	4,797
Load Break Switch	-	126	128	129	131	133	135	781
Protection upkeeping and enhancement	-	184	171	29	-	-	-	384
CTU for incoming (Primary S/S)	-	60	34	-	-	-	-	94
CTU for outgoing (Primary S/S)	-	-	28	29	-	-	-	57
Replacement of Old/ Obsolete Relays	-	124	110	-	-	-	-	234
System Improvement Plan	566	560	560	559	558	558	558	3,919
PSC	171	171	171	171	171	171	171	1,198
SIP - Consumer Funded	0	0	0	О	0	0	0	0
SIP – Others	394	389	389	388	387	387	386	2,721
Deteriorated OCB to VCB (Primary S/S)	-	606	614	622	628	637	637	3,743
Civil	574	605	511	442	340	355	498	3,326
Civil	450	471	365	442	340	355	498	2,922
Customer Services	123	135	146	-	-	-	-	404
Maintenance Total	4,653	6,270	6,082	5,697	5,989	5,889	5,915	40,496

Maintenance HT								
Duoinat								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Corrective Maintenance	1,391	1,354	1,292	1,184	1,447	1,356	1,319	9,342
CM	1,391	1,354	1,292	1,184	1,014	923	857	8,015
CM Periodic Maintenance	-	-	-	-	432	433	463	1,328
TSW	1,216	1,171	1,175	1,162	1,135	1,152	1,099	8,110
HT cable replacement	-	781	789	797	806	815	809	4,797
Load Break Switch	-	126	128	129	130	132	135	780
Protection upkeeping and enhancement	-	184	171	29	-	-	-	384
CTU for incoming (Primary S/S)	-	60	34	-	-	-	-	94
CTU for outgoing (Primary S/S)	-	-	28	29	-	-	-	57
Replacement of Old/ Obsolete Relays	-	124	110	-	-	-	-	234
System Improvement Plan	231	228	228	228	227	227	227	1,596
PSC	10	10	10	10	10	10	10	70
SIP – Others	222	219	218	218	217	217	217	1,528
Deteriorated OCB to VCB (Primary S/S)	-	606	614	622	628	637	637	3,743
Civil	444	469	392	341	259	269	382	2,557
Civil	351	367	281	341	259	269	382	2,250
Customer Services	94	102	111	-	-	-	-	307
Maintenance HT Total	3,282	4,917	4,786	4,490	4,631	4,585	4,605	31,296

Maintenance LT								
Project								PKR Mn
	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Corrective Maintenance	907	883	843	772	944	884	861	6,094
CM	907	883	843	772	662	602	559	5,228
CM Periodic Maintenance	-	-	-	-	282	282	302	866
System Improvement Plan	334	332	332	332	331	331	331	2,323
PSC	162	162	162	162	162	162	162	1,131
SIP – Others	173	170	170	170	170	169	169	1,192
Civil	129	136	119	101	81	86	116	769
Civil	100	104	84	101	81	86	116	672
Customer Services	30	32	35	-	-	-	-	97
Maintenance LT Total	1,371	1,354	1,296	1,207	1,358	1,304	1,310	9,200

4.1.3.1. Corrective Maintenance

The network improvement plan consisting of multiple initiatives has been optimized to bring improvement in reliability and quality with prioritized and sequential journey of 7 years, by covering major segment of these assets. To ensure continuity of supply during this period until planned initiatives take their course by 2030 and also keeping aged and obsolete infrastructure including Oil Circuit Breakers, Knife Switches, aged underground cables etc.

not covered in NIP, a budget of **PKR 15,437 million** has been carefully allocated for next control period with consideration of improvements as a result of investment plan for KE distribution network.

4.1.3.2. Network Rehabilitation

Investments in NIP are also planned whereby, considering the current loads at the PMT level and the future load growth, enhancement and rehabilitation of the common distribution network at LT level shall be carried out to avoid overloading of the network. These activities benefit in improving the reliability indices on a preemptive basis. Other planned activities include:

- Adding layers of redundancy in the system, installation of Ring Main Units (RMU) and Vacuum Circuit Breaker (VCB)
- · Replacement of deteriorated HT cables
- Installation / replacement of load switch breakers
- Additions of 11kV feeders

In addition to above as discussed, Network Improvement Plan (NIP) is planned that is one of the key initiatives of KE for next control period that guarantees long-term Sustainable Reliability & Operational efficiency, and will provide the following benefits:

- Enhanced visibility provided by MDMS, OMS, SCADA and ADMS
- SAP-PM driven Periodic/ Preventive maintenance
- · Effective asset lifecycle management
- Centralized monitoring of asset loading
- Ringfencing at cluster level
- Longevity of assets' useful life
- Capacity building as per futuristic needs
- Predict faults and failure of assets, predictive maintenance, theft identification
- Holistic rehabilitation of aged assets

4.1.3.3. Load Break Switch & System Improvement Plans

Replacement of Knife Switches with SF6 type Load Break Switch (LBS) is also considered for on-line operation and quick restoration of supply. Since a major portion of KE's system is underground (directly buried) and identification of fault requires more time along with approvals from civic agencies, KE plans installation / replacement of Load Breaker Switches (LBSs), which require dividing feeders into loops.

KIIP 91 – Distribution System - Expansion and Rehabilitation – Load Break Switch & System Improvement Plans

]	PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Load Break Switch	-	126	128	129	131	133	135	781
System Improvement Plan Schemes	565	560	560	559	558	558	557	3,919
Total	565	686	688	688	689	691	692	4,700

4.1.3.4. Protection Regime

Protection framework is focused on enabling distribution protection layers on 11kV outgoing loops to localize the faults as near as the fault point and minimize the number of consumers affected during an outage, thus improving SAIFI of the distribution system. This plan also includes replacement of obsoleted protection relays with new relays on outgoing loops of 11kV Primary substations. One reason of underperformance of self-powered relays is activation of sleep mode due to feeders running on low load. New design scheme considers use of auxiliary power (through Capacitor Unit) on selected underperforming self-powered relays so that protection relays' performance will get independent of the feeder loading.

KIIP 92 - Distribution System - Expansion and Rehabilitation - Protection Regime

]	PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Protection Upkeeping & Enhancement	-	184	171	29	-	-	-	384

4.1.3.5. <u>Distribution Primary & Secondary Substations</u>

Other major contributor to network faults is substation equipment. Replacement of most deteriorated OCBs with VCBs of only primary sub stations is being considered which would assist in fault reduction, asset up-keep and timely restoration of supply. The protection is activated at the first terminating point of each feeder by replacing existing switches with new VCBs having relays with enhanced facility of broken conductor feature to ensure public safety. Without OCBs replacement with VCB panels, it will not be possible to establish protection regime to limit spread of outages.

KIIP 93 – Distribution System - Expansion and Rehabilitation –Distribution Primary & Secondary Substations

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Deteriorated OCB to VCB of primary S/S	-	606	614	622	628	637	637	3,743

4.1.3.6. Underground Cable Network

Underground system is another area where outages are observed. Root cause of such faults is due to cable pickaxe by civic agencies, aged and deteriorated underground cables therefore replacement of selected deteriorated HT cables is proposed to mitigate main and linking cable faults. This initiative will help in reducing TAT for fault resolution as underground faults take most of the time in locating and clearing the faults due to right of way issues.

KIIP 94 – Distribution System - Expansion and Rehabilitation – Underground Cable Network

								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Deteriorated HT Cable Replacement	-	781	789	797	806	815	809	4,797

4.1.3.7. Transformer & Switchgear Workshop

Despite above mentioned investment, there will still be many aged Distribution transformers and outdated switchgears that require regular maintenance and refurbishment (if necessary)

through TSW. In order to ensure continuity of service, KE plans to invest **PKR 8,110 million** to improve TSW capability.

TSW is also geared up to play vital role for sustainable and reliable network performance through Asset Maintenance covering complete lifecycle of major Distribution Equipment.

4.1.3.8. Civil

Under civil, the planned investment majorly pertains to the reconstruction of old and damaged substations.

4.1.4. Safety

Workplace and public safety under the jurisdiction of KE's network is of paramount importance and in order to reinforce safety standards, under the revised investment plan, KE has enhanced the scope of its Safety and Protection projects to ensure safe and reliable supply of power to its consumers. Here, it is important to highlight that those necessary revisions and additional investments have been proposed in Safety & Protection projects, in view of the ground realities and learnings from 2019 Monsoon.

Monsoon rains hit Karachi from July to September, and there has been no major variation in the timeline of the Karachi monsoon season over the past 25 years. According to data collected by the Pakistan Meteorological Department, Karachi's average annual rainfall ranges from 10 to 150 mm. The erratic amount of rainfall on an annual basis result in urban flooding which is particularly perilous for vulnerable infrastructure. This has considerably increased in FY23 where the complete average rainfall of Karachi has been met only in July 2022.

For external factors beyond KE's control, including encroachment / illegal use of KE's network, KE is in continuous engagement with relevant stakeholders and is also pursuing the matter of encroachment / illegal use of KE's network in the Honorable courts of Pakistan.

KE is committed to supplying electric power to the consumers in a safe manner and plans an investment of **PKR 25,858 million** over the proposed control period FY24 – FY30 in this regard with following projects:

KIIP 95 - Distribution System - Expansion and Rehabilitation - Safety

Safety											
Duciast								PKR Mn			
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
Public Accident Prevention Programs											
Dilapidated Poles & Conductors	831	843	855	867	878	891	904	6,069			
Multi Storey Bus Bar (PAPP)	254	252	253	254	254	256	257	1,780			
PMT Shifting (PAPP)	281	281	284	287	289	292	294	2,008			
No Mains	2,454	2,488	881	891	901	912	923	9,450			
Earthing of Additional Assets / Insulators	1,021	1,027	1,073	326	299	169	174	4,089			
Earthing of Service Bracket	710	712	721					2,142			
Special Equipment	64	64	96	64	32	32	32	384			
Stay Unit Insulators	136	136	136	136	136			679			
Tools	111	116	121	126	131	137	142	884			
Encroached OH to UG	192	193	195	198	200	202	204	1,385			

Installation of DBs	71	73	74	74	75	76	77	521
PMU on Wheels	333	111	111	-	-	-	-	555
Safety Total	5,438	5,268	3,726	2,897	2,897	2,797	2,834	25,858

Safety HT										
Don't and								PKR Mn		
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Public Accident Prevention Programs										
Dilapidated Poles & Conductors	579	587	596	604	611	620	629	4,227		
PMT Shifting (PAPP)	205	206	208	210	212	214	216	1,470		
No Mains	1,223	1,241	440	445	450	455	461	4,715		
Earthing of Additional Assets / Insulators	260	265	302	274	248	169	174	1,692		
Special Equipment	64	64	96	64	32	32	32	384		
Stay Unit Insulators	84	84	85	85	85			423		
Tools	111	116	121	126	131	137	142	884		
Encroached OH to UG	192	193	195	198	200	202	204	1,385		
PMU on Wheels	333	111	111	-	-	-	-	555		
Safety HT Total	2,807	2,617	1,866	1,745	1,735	1,674	1,699	14,143		

Safety LT										
Donatasak								PKR Mn		
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Public Accident Prevention Programs										
Dilapidated Poles & Conductors	251	255	259	263	267	271	275	1,842		
Multi Storey Bus Bar (PAPP)	254	252	253	254	255	256	257	1,781		
PMT Shifting (PAPP)	76	76	76	77	77	78	78	538		
No Mains	1,231	1,247	441	446	451	457	462	4,735		
Earthing of Service Bracket	711	712	721	-	-	-	-	2,144		
Stay Unit Insulators	51	51	51	51	51	-	-	255		
Earthing of Additional Assets / Insulators	762	763	772	51	51	-	-	2,399		
Installation of DBs	71	73	74	74	76	76	77	521		
Safety LT Total	2,645	2,666	1,875	1,165	1,177	1,138	1,149	11,815		

4.1.4.1. Public Accident Prevention Plan (PAPP)

KE, in order to enhance safety, shall carry out the Public Accident Prevention Plan (PAPP) under which entire 3 sub-projects will be executed: a) Replacement of Dilapidated Poles, b) Replacement of hazardous MSBB and c) Shifting of PMTs details of which are given below:

4.1.4.2. Replacement of Dilapidated Poles – Under Public Accident & Prevention Plan (PAPP)

Due to aging factors steel poles have become quite rusty, dilapidated, and hazardous itself and may cause a safety incident if not properly mitigated. It is essential to replace such hazardous poles to mitigate the risk thus significantly enhancing the overall safety of the network.

Since it is an incessant process, to replace necessary LT / HT Poles, an additional investment of **PKR 6,069 million** has been envisaged, under a dedicated head. KE network comprises

around 245k+ Poles, and with these necessary investments around 7,000 poles (which is 3% of Count) are envisaged to be replaced every year.

4.1.4.3. <u>Replacement Hazardous MSBB – Under Public Accident & Prevention Plan (PAPP)</u>

Installation of Static Meters along with Bus-Bar arrangement is known as MSBBs (Multi-Storey Busbars). It is being installed for building having multi-storeys or apartments in Karachi. The bus-bar allows multi users to be fed from common point.

In Karachi most of the old structured buildings, where meters are installed in multi-storey manners can become deteriorated and dilapidated, therefore replacement with proper busbar arrangement is required to mitigate the hazard timely. The aging and pilferage of bus-bars doors causes serious hazard of open electrical connection for residence and KE staff (Meter Reader and Lineman) as well.

For installation / replacement of the MSBBs on the distribution network, KE has planned additional CAPEX of **PKR 1,780 million** under which 2,900 Unit MSBB per year will be replaced against a count of around 100k MSBB in KE system (which is around 3% of count per year).

4.1.4.4. Shifting of PMTs – Under Public Accident & Prevention Plan (PAPP)

Timely shifting of CDS PMTs from hazardous dilapidated structure to healthy structure will ultimately prevent the public accidents and enhance the reliability of network. Around 210 PMTs per year have been targeted against a count of around 20k CDS PMTs in KE system (which is around 1% of count per year).

For such shifting of PMTs, KE has planned CAPEX of PKR 2,008 million.

4.1.4.5. Electrification of Hazardous / No Mains areas

Karachi is unique in its demography, development trends and socio-economic outlook than rest of the country. About 64%¹⁹ of the population of reside in informal settlements on only around 23%% of the city's residential land that mainly make up the high loss areas while around 36% of the population live in "planned" settlements on 77%²⁰ of the city's residential land. Despite its small share of the occupied land, informal sector meets over 50% of the city's housing needs.

The population residing in unplanned settlements obtain access to electricity through illegal means (carrying nonstandard electrical wires from nearest PMTs) which makes the unwarranted system prone to accidents and safety hazards.

Therefore, it is important to eliminate the chances of any accident through the illegal abstraction of electricity and to provide safe and reliable power to consumers. Further, the use of substandard material by locals due to no mains also results in deterioration to the existing KE system.

In this regard, KE is continuously working on electrifying no mains areas through various schemes which are designed for consumers in far flung areas where power is being used through illegal infrastructure.

To further accelerate the installation of necessary distribution infrastructure in such potentially hazardous areas, KE plans an investment of **PKR 9,450 million**.

¹⁹ <u>UN-Habitat helps Pakistan to lower greenhouse gas emissions in slums | UN-Habitat (unhabitat.org)</u>

 $^{^{20}}$ A. Hasan, "Pakistan: the causes and repercussions of the housing crisis" – Working Paper

4.1.4.6. Earthing of Additional Assets / Insulators / Tools

As part of its Safety and Protection projects, KE shall continue to monitor and maintain the earthing / grounding of all its metallic infrastructure that is connected to ground, to ensure safe and reliable supply of electricity to consumers.

The potential benefits of the project include:

- Protection against unfortunate incidents
- Avoid risk of fire due to leakage current through unwanted path; and
- Avoid electric shock to persons who may be in contact with the network poles
- Earthing of Service Bracket will enable KE to ensure safe and reliable supply of electricity up to consumers premises.

Further, Stay Unit insulators have been planned to mitigate the leakage current on upper part of pole brackets. This is due to the fact that stay wire is conductive in nature and is directly connected with the pole bracket, which can become a probable path of conduction in case of wire broken.

Also, to ensure safe work practices and improve workmanship in installation of network assets, Special equipment and tools are to be employed as per requirement.

For aforesaid Bracket Earthing an additional investment of PKR 4,091 million.

4.1.4.7. Encroached OH to UG

According to world population review²¹, Karachi is the largest and most populous metropolitan city in Pakistan and the capital of Sindh province. Karachi's rapid growth and massive migration mean nearly 5 million people, or 50% of the population, in 2000 lived in slums, a number that is believed to have grown.

Karachi is growing at a rate of around 5% per year, in large part due to rural to urban migration in the area and the 45,000 migrant workers who come to Karachi every month from around Pakistan.

This results in New Construction & Horizontal as well as Vertical Growth. Considering the expansions, it is difficult for KE to create awareness amongst the citizens about safe construction parameters, which is the basic duty of civic authorities and not KE.

As per NEPRA Safety Code, KE has to maintain safe clearance distance from Overhead Lines to consumer premises. This can only be maintained through converting Overhead HT to Underground Cables.

Around 16,000 meters encroached Overhead is planned to be converted into Underground Cable, and for aforesaid execution, **PKR 1,385 million** has been envisaged.

4.1.4.8. <u>Installation of Distribution Boxes (DB)</u>

At present, Pole Mounted Transformer's allied protection and distribution equipment is divided into multiple individual boxes made of MS steel enclosures. This causes complexity in design, operations and issues relating to environmental conditions causing corrosion which eventually affects reliability and longevity.

In order to address this issue a proof of concept for unifying all these segments including circuit breakers and energy meter into one Polymer box to bring simplification in design and also rule out corrosion issues. Development for Proof of concept is underway. All new pole

²¹ World Population Review https://worldpopulationreview.com

mounted transformers envisioned to be added in the next control period will be replaced with one unified box instead of multiple boxes. Accordingly, an investment of **PKR 521 million** is planned for this purpose

4.1.4.9. **PMU on wheels**

KE had envisaged a plan for reconstruction of 668 substations across the next MYT control period, for this purpose a trolley with PMU provision has been designed to provide temporary supply during reconstruction phase of Substation. For this purpose, an investment of **PKR 555 million** has been budgeted.

4.1.5. Technology

As part of its investment plan, KE plans an investment of **PKR 16,529 million** to digitize its existing distribution network that would help in better monitoring of consumption of power by its consumers.

KIIP 96 - Distribution System - Expansion and Rehabilitation - Technology

Technology								
n								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
AMR Coverage	767	654	657	660	662	666	669	4,736
Power Quality Analyzers	-	65	65	-	-	-	-	129
Customer Services Digitization	84	124	171	-	39	24	82	523
Commercial Digitization	44	43	43	43	43	43	43	301
Smart Network Technology	2,709	2,449	1,553	614	1,940	1,081	481	10,828
ADMS	1,956	1,490	736	367	672	323	303	5,847
MDMS	279	787	392	-	304	363	-	2,125
Hardware Upgrades including related Software	171	-	199	26	706	228	-	1,330
CYME, R&D, Mobility and others	303	172	226	221	258	167	179	1,526
PQ Work Bench	13	-	-	-	-	-	-	13
Technology Total	3,616	3,334	2,488	1,317	2,684	1,813	1,276	16,529

Technology HT	Technology HT										
ъ .								PKR Mn			
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
Customer Services Digitization	17	25	34	-	8	5	16	105			
Smart Network Technology	2,709	2,449	1,553	614	1,940	1,081	481	10,828			
ADMS	1,956	1,490	736	367	672	323	303	5,847			
MDMS	279	787	392	-	304	363	-	2,125			
Hardware Upgrades including related Software	171	-	199	26	706	228	-	1,330			
CYME, R&D, Mobility and others	303	172	226	221	258	167	179	1,526			
Power Quality Analyzers	-	65	65	-	-	-	-	130			
PQ Work Bench	13	-	-	-	-	-	-	13			
Technology HT Total	2,739	2,539	1,652	614	1,948	1,086	498	11,076			

Technology LT											
Project								PKR Mn			
	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total			
AMR Coverage	767	654	657	660	662	666	669	4,736			
Customer Services Digitization	67	99	137	-	31	19	66	418			
Commercial Digitization	44	43	43	43	43	43	43	301			
Technology LT Total	878	796	837	703	736	728	778	5,456			

4.1.5.1. Automated Meter Reading Coverage

KE plans an extensive coverage of installing Automated Meter Readers (AMRs) across all PMTs and high-end consumers. Installation of AMRs at PMT level has resulted in greater visibility on outages, which warrants greater investments to improve network reliability and resilience. In addition, the installation of AMRs at the PMT level and moving towards having a robust AMI infrastructure, would also result in improvements in reporting of reliability indices and with planned initiatives, KE expects to achieve substantial improvement in reliability indices by the end of the tariff control period. The total investment pertinent to AMR installation is **PKR 4,736 million.**

4.1.5.2. Customer Services Digitization

KE also plans digitization of customer services by incurring a CAPEX of **PKR 523 million** that include projects covering the following areas:

- Billing
- Payment of bills through KE live app / online banking
- Online registration of complaints
- Customer call centre service (IBCs)
- Requesting for a new connection / disconnection

4.1.5.3. Commercial Digitization

Commercial Technology projects amounting to **PKR 301 million** planned for the next control period along with their relevant CAPEX and their objectives is given below:

KIIP 97 - Distribution System - Expansion and Rehabilitation - Commercial Digitization

								PKR Mn
Project Name	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
RCDC Digitization	7	6	6	6	6	6	6	41
SIR Digitization	10	10	10	10	10	10	10	70
HHU Devices Replacement	27	27	27	27	27	27	27	190
Total	44	43	43	43	43	43	43	301

4.1.5.4. SIR/FMR Digitization

Currently, survey details are being recorded on site manually on paper which are then punched into SAP by IBC Staff. Digitization enables digital record-keeping of site inspections for theft and faulty meter replacements by assigning handheld devices to meter inspection officers (MIO).

This digitization also includes New Connection surveys as New Connection (NC) survey teams will also be equipped with hand-held devices to record site inspection surveys in real time replacing the printed survey forms improving overall New Connection process.

Digitization of this process will allow paperless real-time survey report punching, significantly reducing time taken to punch and process survey report in the system, also ensuring a near real-time availability of evidence on discrepant meters. The benefits will extend to elimination of the need for extensive day-to-day printing of proforma and notices, as well as prevent issues caused by misplacement of documents and repetition of work. NC digitization will result in improved revenue generation through a quicker and more efficient process, indicating the pressing necessity of this project.

Thus, this project is critical and urgent for commercial loss reduction, which will be ensured through timely processing of surveys, improved governance, MIO productivity monitoring and resultant resource optimization, system recording of evidence (theft/ faulty meter) and route management. Accordingly, KE plans to carry out an investment of **PKR 70 million** on SIR/FMR Digitization.

4.1.5.5. Mobile Meter Reading Devices

The hand-held units (HHU) are critical in the process of meter reading process and provision of new hand-held devices to Meter Readers is needed in place of stolen, damaged, and faulty devices (460 devices replaced in the last 2 years). This is critical for ensuring operational business continuity is maintained and meter reading process remains reliable and accurate through use of Handheld units. Hence, KE will invest **PKR 190 million** on new hand-held units.

4.1.5.6. Disconnection / Reconnection (DCRC) HHU

KE plans an investment of **PKR 41 million** on DCRC HHUs. This project involves assignment of hand-held devices to DCRC teams to ensure disconnection and reconnection is maintained real-time in system (SAP) and is auto synchronized with the activity on site. It will enable digital record-keeping of recovery efforts and disconnection evidence, permitting pictorial evidence to be recorded for each disconnection with ease. Furthermore, the project will assist in ensuring strong governance and efficient workforce management through optimal utilization of resources, which as a result would significantly improve recovery from defaulters and reduce commercial losses.

4.1.5.7. Power Quality Analyzers

KE is committed to strengthen bond with its valued customers by maintaining the reliability and quality of power supply. To gain confidence of key industrial customers regarding their concern about power quality, KE engaged Siemens Germany to diagnose the source of disturbance in the interconnected system and to advise mitigation solutions at both KE & customer end aiming to improve the overall performance.

Measurement based power quality campaign included thirty (30) key industrial customers from all market segments including Automotive, Oil Refinery, Steel, Pharmaceutical, Health Care, Textile, Chemical, Cable manufacturing and Water supply to ensure true representation of entire industrial population.

Based on diagnostics performed by Siemens Germany certain recommendations at KE and customer ends are suggested. At KE end initiatives such as installation of Power Quality analyzers for permanent power monitoring and restructuring of feeders at Grid end to create "Clean Busbar" concept for key industrial customers are recommended. At customer end mostly issues related to nuisance tripping were observed due to missing stable power supply for control systems and coordination-based protection settings were found missing.

Power Quality improvement is estimated at **PKR 129 million** to enhance the distribution transformer capacity as shown in table below:

KIIP 98 - Distribution System - Expansion and Rehabilitation - PQ Analyzer

								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Power Quality Analyzer	-	64	65	-	-	-	-	129

4.1.5.8. Advanced Distribution Management System (ADMS)

KE envisions the deployment of an Advanced Distribution Management System (ADMS) to support distribution management and availability of network optimization tools. ADMS comprises of three modules including SCADA, Outage Management System, and Distribution Management System. This system will enable quick identification and localization of faults reducing the time spent on the field. The system also offers the provision for automated isolation and restoration of network in case of faults however, to enable this functionality the relevant switches should be motorized. It will also pave way in proactive operations, switching management, crew management, work order lifecycle management, conservation through voltage reduction, peak demand management, etc. In this regard, a pilot is being planned and based on the success of pilot project, additional investment request would be submitted to NEPRA for approval with detailed feasibility analysis.

The larger ADMS road map includes integration of different IT and OT systems as part of our technology landscape. ADMS will serve as a single point of information for distribution operations and will be integrated with different systems that will add insights for the engineers running the operations. Following are the major integrations that will be carried out with ADMS implementation:

- Genesys IVR & SAP CRM Automatic assignment of calls to respective ADMS user(s)
- SAP PM
- Mobility Solution
- Geographical Information System (GIS) Provide geospatial view of network to ADMS for effective distribution management. It's extremely important for ADMS systems to be fully aligned with the enterprise GIS system. Not only should the enterprise GIS provide the most up-to-date information on location but also about equipment maintenance, construction activities and in/out of service information
- MDMS facilitating distribution planning by eliciting energy profiles from AMI
- SAP ERP, IS-U retrieving consumer data for calculation of outage impacts

Following are the major components that need to be added or augmented for utilization of ADMS:

i. SCADA Devices and backend system

SCADA field devices will provide operations department the real-time information of outage events with location of fault, electrical parameters for proactive operations (condition monitoring) and enhances the investment in network protection by significantly reducing the resolution time of load drop, load zero and other outage events. In the next control period, KE plans to deploy the SCADA devices on 200 feeders (on selected assets) in the ring-fenced cluster. Once this pilot is successfully deployed, this will be rolled out following a phase wise approach to the rest of the network.

ii. ADMS OMS

OMS will serve as single platform for distribution operations management. It integrates the complaint management process, crew management, events logging with their status, shutdown management and visualizes the data from field devices on a single geospatial network to all operations' stakeholders.

iii. OT Infrastructure (GIS and ADMS)

A high-available enterprise infrastructure designed to provide the fail-proof functioning of advanced and business-critical systems with a minimal amount of downtime. The landscape is to be supported with redundant load balancers and replication hosts.

iv. ADMS (DMS)

ADMS converges the data from different systems and field devices and suggests the best configuration of network, compensation measures for system efficiency, helps in contingency planning and provides insights for better planning of energy demand. However, these functionalities will be available for the feeders with SCADA devices.

v. Hardware Upgrade

Through Hardware upgrade:

- Database performance will be enhanced
- Daily batch jobs time consumption will be reduced
- Integrated systems will be responding faster
- Reduction in utilization of System resources
- Efficient performance of server

The total Smart Network investment plan is presented below:

KIIP 99 - Distribution System - Expansion and Rehabilitation - Hardware Upgrade

								PKR Mn
Major Head	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
ADMS	1,956	1,490	736	367	672	323	303	5,847
MDMS	279	787	392	-	304	363	-	2,125
Hardware Upgrades including related Software	171	-	199	26	706	228	-	1,330
CYME, R&D, Mobility and others	303	172	226	221	258	167	179	1,526
Grand Total	2,709	2,449	1,553	614	1,940	1,081	481	10,828

Sr.	Description							P	KR Mn
no	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
A.1	Tools & Plants (T&P)								
	LM Tools other than personal protective equipment	111	116	121	126	131	137	142	884
	List of New Offices & building								

Sr.	Description							P	KR Mn
no	Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
	Reconstruction & Revamping Dist offices	92	98	105	111	119	126	134	785
	Sub station Reconstruction Dist	86	95	98	101	106	107	112	705
	Customer Services Mega Center - Landhi & Korangi	56	О	0	-	-	-	-	56
	Customer Services Mega Center - Liyari & Liyari 2	56	0	0	-	-	-	-	56
	Customer Services Mega Center - Malir & Shah Faisal	0	62	0	-	-	-	-	62
	Customer Services Mega Center - Defense & Clifton	0	62	0	-	-	-	-	62
	Customer Services Mega Center - Johar 1 & Johar 2	О	0	67	-	-	-	-	67
	Customer Services Mega Center - Site & Orangi I	О	0	67	-	-	-	-	67
	Expansion of Customer Care Center Areas (Baldia, Bin Qasim, Uthal etc.)	11	11	11	-	-	-	-	34
	New IBCs	182	182	61	121	-	-	121	667

Above mentioned table's amount is already included in Civil project in Maintenance table under the Rehabilitation scope of work other than tools which is part of Safety table **Section 5.1.3** above.

4.2. Consumer Funded scope of work

4.2.1. Expansion

KIIP 100 – Distribution System (Consumer Funded) - Expansion

Growth								
Developet								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansion projects to cater for New connections (Above 80 KW)	7,938	7,972	8,568	9,092	10,016	10,565	10,991	65,143
HT Bulk/Switch Room	785	809	897	954	1,062	1,138	1,166	6,812
100 KVA PMT	349	362	394	419	470	501	515	3,011
1000 KVA PMT	94	94	95	109	124	124	125	765
200 KVA PMT	48	53	53	59	68	69	75	425
25 KVA PMT	19	19	22	23	26	27	28	164
250 KVA PMT	1,082	1,125	1,225	1,304	1,474	1,565	1,621	9,396
400 KVA PMT	30	31	31	36	36	42	42	248
50 KVA PMT	75	78	84	89	100	106	110	643
500 KVA PMT	1,186	1,228	1,338	1,428	1,611	1,714	1,774	10,279
750 KVA PMT	60	67	67	71	80	80	92	517
Feeder	959	982	1,087	1,171	1,351	1,414	1,478	8,441
PMU	2,323	2,096	2,206	2,326	2,452	2,586	2,727	16,714
Single Phase	71	73	77	82	87	92	98	581
Sub Stations	292	303	329	347	390	409	428	2,496
Three Phase	169	176	187	198	209	222	235	1,396
Village Electrification	397	476	476	476	476	476	476	3,254
Metering Project (NC Below 80 KW)	2,383	2,395	2,522	2,585	2,674	2,768	2,866	18,192

Growth								
D								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
AMR	342	315	368	353	360	368	376	2,483
Net Metering	668	672	675	678	682	686	689	4,750
Single Phase	993	1,016	1,067	1,121	1,178	1,238	1,301	7,915
Three Phase	379	392	411	432	453	476	499	3,043
Growth Total	10,321	10,367	11,090	11,677	12,690	13,333	13,857	83,335

Growth HT	1							
Project								PKR Mn
110,000	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansion projects to cater for New connections (Above 80 KW)	5,888	5,900	6,366	6,768	7,495	7,911	8,228	48,555
HT Bulk/Switch Room	785	809	897	954	1,061	1,138	1,166	6,809
100 KVA PMT	303	315	343	365	410	437	450	2,623
1000 KVA PMT	79	80	80	92	105	105	106	648
200 KVA PMT	35	39	40	44	51	52	56	316
25 KVA PMT	19	19	21	22	25	26	27	158
250 KVA PMT	770	804	878	936	1,060	1,127	1,170	6,745
400 KVA PMT	23	24	24	28	28	32	33	192
50 KVA PMT	63	65	70	74	83	89	92	537
500 KVA PMT	692	719	785	839	948	1,010	1,048	6,041
750 KVA PMT	51	57	57	61	68	68	79	440
Feeder	959	982	1,087	1,171	1,351	1,414	1,478	8,441
PMU	1,674	1,507	1,582	1,664	1,750	1,841	1,937	11,956
Sub Stations	247	256	279	294	331	347	363	2,118
Village Electrification	187	224	224	224	224	224	224	1,530
Growth HT Total	5,888	5,900	6,366	6,768	7,495	7,911	8,228	48,555

Growth LT								
Project								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Network expansion projects to cater for New connections (Above 80 KW)	2,051	2,072	2,202	2,324	2,521	2,655	2,763	16,587
HT Bulk/Switch Room	0	0	О	0	0	0	О	3
100 KVA PMT	46	47	51	54	60	64	65	388
1000 KVA PMT	14	14	15	17	19	19	19	117
200 KVA PMT	12	14	14	15	17	18	19	108
25 KVA PMT	1	1	1	1	1	1	1	6
250 KVA PMT	311	321	348	368	414	437	451	2,650
400 KVA PMT	7	7	7	8	8	9	9	55
50 KVA PMT	13	13	14	15	16	17	18	106
500 KVA PMT	494	509	553	589	663	704	727	4,238
750 KVA PMT	9	10	10	11	12	12	14	77

Growth LT								
Developet								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
PMU	649	589	624	661	702	744	790	4,758
Single Phase	71	73	77	82	87	92	98	581
Sub Stations	45	46	50	53	59	62	64	378
Three Phase	169	176	187	198	209	222	235	1,396
Village Electrification	210	252	252	252	252	252	252	1,725
Metering Project (NC Below 80 KW)	2,383	2,395	2,522	2,585	2,674	2,768	2,866	18,192
AMR	342	315	368	353	360	368	376	2,483
Net Metering	668	672	675	678	682	686	689	4,750
Single Phase	993	1,016	1,067	1,121	1,178	1,238	1,301	7,915
Three Phase	379	392	411	432	453	476	499	3,043
Growth LT Total	4,433	4,467	4,724	4,908	5,195	5,422	5,629	34,779

4.2.2. Rehabilitation

KIIP 101 – Distribution System (Consumer Funded) - Rehabilitation

Loss Reduction										
Description								PKR Mn		
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total		
Kunda Conversion	778	765	773	781	789	798	807	5,491		
Faulty Meter Replacement	155	172	190	211	234	259	287	1,509		
Net Metering	1	1	2	2	2	2	2	12		
Single Phase	101	112	124	137	152	169	187	982		
Three Phase	53	59	65	72	80	88	98	515		
Loss Reduction Total	934	937	963	992	1,023	1,057	1,094	7,000		

All Consumer funded scope of Loss Reduction pertains to LT

Maintenance									
n : .								PKR Mn	
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total	
System Improvement Plan	613	613	613	613	613	613	613	4,293	
SIP - Consumer Funded	613	613	613	613	613	613	613	4,293	
Maintenance Total	613	613	613	613	613	613	613	4,293	

Maintenance HT									
D								PKR Mn	
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total	
System Improvement Plan	433	433	433	433	433	433	433	3,031	
SIP - Consumer Funded	433	433	433	433	433	433	433	3,031	
Maintenance HT Total	433	433	433	433	433	433	433	3,031	

Maintenance LT								
Duciant								PKR Mn
Project	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
System Improvement Plan	180	180	180	180	180	180	180	1,262
SIP - Consumer Funded	180	180	180	180	180	180	180	1,262
Maintenance LT Total	180	180	180	180	180	180	180	1,262

5. Summary of Annual Recurring Costs for Transmission & Distribution

Major O&M component includes costs related to salaries, employee benefits, third party services, inter departmental energy consumption, stores & spares, repair & maintenance, travelling and other expenses that are essential for a smooth operation of the transmission network, to ensure reliability of power supply to the distribution network.

The company currently foresees that the future O&M will follow the existing trend of past years and will be covered through the inflationary adjustment of Revenue component of O&M along with growth in units as proposed under new tariff. However, keeping in view significant growth KE requests for adjustment of CPI without any X factor in the proposed tariff.

The O&M expenses (net) for FY 2022 amounted to **Rs. 5,326 million**, translating into **Rs. 0.2689** / **kWh** based on units sent out for the year for Transmission Business. Similarly for the distribution business, O&M expenses (net) for FY 2022 amounted to **Rs. 21,756 million** comprising of **Rs. 17,849** & **Rs. 3,907 million** for Distribution & Supply segment respectively, translating into **Rs. 1.0648** / **kWh** & **Rs. 0.2330** / **kWh** respectively based on units billed. Details of items covered under O&M have been annexed as **Annexure L & M** for Transmission & Distribution respectively.

6. Capital Expenditure and Additional Operating Costs for Other Functional Improvement Plans

IT & Other Improvement Plan

KE plans to invest **PKR 18,514 million** (this amount is at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of 158.48 (average) as of FY 22, and is proposed to be adjusted based on indexation mechanism given in **Section VI (8)** for expanding and improving the customer satisfaction, Robust infrastructure, Data Governance & Strategy, Cyber security, Innovation and People management. This proposed investment plan has been divided into three categories: (i) IT (ii) Cyber Security (iii) Others.

A summary of year wise proposed investment plan is given in the table below:

KIIP 102 – Other Functional Improvement Plans – IT & Other Improvement Plan

	IT & Other								PKR Mn
In	nprovement Plan	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
A	IT	3,103	1,809	1,967	1,558	2,033	2,087	1,499	14,056
С	Cyber Security	250	300	340	390	430	450	495	2,655
Е	Others	244	285	276	275	273	295	156	1,803
	Total	3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514

Investments proposed above during the next control period are required to be undertaken for existing IT infrastructure sustainability, future growth and enhancement of allied security & governance solutions, modernization of existing IT landscape and renovation/upkeep of civil structures to ensure continuity of business operations.

6.1.1. IT – ERP & Infrastructure

Summary of Year wise investment planned in IT projects is appended below:

KIIP 103 - Other Functional Improvement Plans - IT - ERP & Infrastructure

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
SAP HANA BW Implementation	1,385	21	62	124	155	93	-	1,838
Replacement of EOL Solution (Servers, Network)	470	676	695	745	1,033	734	745	5,097
IT Infrastructure Enhancement & Upgrade	494	656	427	190	334	738	220	3,058
IT Equipment & Business Specific Software	407	374	682	387	401	401	414	3,065
Others Business Specific New Initiatives	347	82	102	113	111	122	121	998
Total IT	3,103	1,809	1,967	1,558	2,033	2,087	1,499	14,056

With various investments planned across its business segments, KE is poised to continue its journey of sustainable technology growth and disruptive phenomena of Industry 4.0 revolution with strategic plans in emerging technologies related to digital transformation, cloud-enabled infrastructure and services, data governance, analytics, machine-learning, Artificial Intelligence (AI) capabilities, Internet-of-things (IoT), mobility, Operational technologies (OT) convergence with IT, cybersecurity and digital and social media channels.

With the successful execution of above-mentioned investment plans, KE is pledged to use an array of digital technologies to enrich lives of people of Karachi, improve infrastructure, modernize consumer services, enhance accessibility, drive sustainability, and accelerate economic development.

It is worth mentioning the fact that future planning of investment in IT over long term is quite difficult and prone to drastic changes since technology keeps on upgrading at rapid pace. Hence, continuous market-driven assessment based on latest trends, change in management, realignment and improvement plans are integral parts of KE technology's short, mid, and long terms strategy and planning. Accordingly, KE will keep re-visiting the plan as per the Investment plan revision mechanism.

6.1.2. Cyber Security

Summary of Year wise investment planned in Cyber Security projects is appended below:

KIIP 104 - Other Functional Improvement Plans - Cyber Security

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Defense & Security	100	120	136	156	172	180	198	1,062
Risk Assessment & Compliance	151	180	204	235	258	270	297	1,593
Total Cyber Security	250	300	340	390	430	450	495	2,655

Cyber Security is considered amongst the top risks faced by enterprises today. According to Allianz annual report for 2022, Cyber Risk is the Number one (1) risk being faced by organizations today. Cyber Security for critical infrastructure such as Power Utilities is assuming key importance in the continued operation and supply of power to consumers. Various studies have shown how weak cyber security could lead to outages in power supply. Accordingly, KE has planned different projects to enhance cyber security to ensure continuity of service to consumers.

Recently, NEPRA, the power regulator of Pakistan has also updated its cyber security compliance requirements for IT and OT. Hence, Cyber security is gaining increased importance in the continued operations of organization. Accordingly, Cyber Security investment planning covers following key projects;

- > Cyber Defense & Security operation
- > Identity & access management
- ➤ End User & Network Defense
- > Threat Risk and Vulnerability Assessments
- > Application Security
- > Incidental Management
- > Security Awareness, Governance & Compliance

Keeping in view NEPRA's recent regulations on IT & OT, KE would like to highlight that KE is scrutinizing IT & OT systems for Generation, Transmission, Distribution and Supply segments. In case if any need is identified for additional investment in IT & OT systems on the conclusion of the assessments, KE would submit request for NEPRA's approval, as specific request under the Investment Plan revision mechanism to carry out the requisite investment along with the detailed analysis. Upon approval of the Authority, same will be executed and made part of tariff accordingly.

6.1.3. Others

KE owns several properties in various locations of Karachi to meets its operational needs. Investment planning in civil works is mainly based on rehabilitation and replacement, to maintain the existing civil structure for smooth and safe operations as well as payment of provincial and federal government taxes and duties etc.

Summary of Year wise investment planned in Real Estate & Civil is appended below:

KIIP 105 - Other Functional Improvement Plans - Other

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total	
Real Estate & Civil	244	285	276	275	273	295	156	1,803	

7. Financing Plan:

In view of the investment plan presented above, KE plans to engage with relevant stakeholders including lenders to execute the aforementioned business plan under the next control period 2024 - 2030.

Considering significant amount of CAPEX involved and capacity constraints in the local market as such Projects involve extensive imports of materials from abroad, therefore, as per practice of State Bank of Pakistan (SBP), would also require arrangement of foreign loans with the objective of matching foreign outflows with foreign inflows.

Accordingly, KE would need to reach out to both local and foreign financial markets including loans backed by Export Credit Agency (ECAs) for example Sinosure, Hermes and Foreign Development Finance Institutions such as Asian Development Bank, FMO etc. in order to fund the overall CAPEX amount.

Furthermore, as detailed in **Section VI (8)** of this document, KE requests to actualize the mix of foreign and local borrowing while determining the allowed cost of borrowing in the proposed tariff.

Following financing plan is proposed for the control period FY 2024 - 2030 for NEPRA's consideration:

KIIP 106 – Loan parameters:

			Distribu	ıtion			Transm	ission	
Category	Legend	ECA backed Loans	Foreign DFIs	Local Loans	Total	ECA backed Loans	Foreign DFIs	Local Loans	Total
Reference KIBOR / LIBOR	A	2.29%	2.29%	15.16%		2.29%	2.29%	15.16%	
Spread (incl. Transaction Cost) Subject to adjustment	В	4.00%	4.50%	2.50%		4.00%	4.50%	2.50%	
for transition to SOFR as explained below									
TT - 1. '									
Hedging cost		604					604		
Reference KIBOR	С	15.16%	15.16%	-		15.16%	15.16%	-	
Less: Reference LIBOR	D	2.29%	2.29%	-		2.29%	2.29%	-	
Add: Hedging spread	Е	2.50%	2.50%	-		2.50%	2.50%	-	
Hedging Cost (including hedging spread)	F = C - D + E	15.37%	15.37%	-		15.37%	15.37%	-	
Total Cost	G = A + B + F	21.66%	22.16%	17.66%		21.66%	22.16%	17.66%	
Weightage *	Н	-	60.00%	40.00 %		45.00%	45.00%	10.00%	
Weighted average cost	I = G x H	-	13.30%	7.06%	20.36%	9.75%	9.97%	1.77%	21.49%
Premium		One time cost – based on actual with capping of 7% on Debt service	N/A	N/A		One time cost – based on actual with capping of 7% on Debt service	N/A	N/A	
Tax impact		based on actual to be claimed quarterly	based on actual to be claimed quarterly	N/A		based on actual to be claimed quarterly	– based on actual to be claimed quarterly	N/A	

*Note: The above weightages are based on a forecasted proportion of outstanding Foreign & Local Borrowing. However, the Actual weightages of Foreign ECA backed loans, Foreign DFI loans and / local loans may vary based on availability of foreign / local financing, for which KE requests the Authority to allow actualization in Annual Investment Update as explained in **Section VI (8).**

As shown in table above, KE requests the Authority to allow a spread of 4.00% on ECA backed loans and 4.5% for borrowing from foreign DFIs (Weighted Average 4.25% based on estimated mix) under foreign borrowing and 2.50% on local borrowing for the control period based on loan profile.

It is important to note that above spreads are based on past agreements considering stable ratings. However, recent degradation in credit rating of the country by Fitch from 'B-' to 'CCC+' on October 21, 2022 and by Moody's from 'B3' to 'Caa1' on October 06, 2022, the two leading credit agencies, is most likely to adversely impact the pricing assumed going forward and limit access to Foreign financing and capital markets, if next control period continues to see similar range of sovereign rating.

Therefore, in case the Country's credit rating is 'B with a negative outlook' or remains downgraded from 'tier B', at the time of negotiation and execution of new financing agreements, then KE will request NEPRA to allow the additional price on actual basis for those loans. In this regard, KE will file a separate specific request for adjustment of cost of debt and related tariff components in this regard.

Further, apart from above mentioned spreads of foreign loans, foreign borrowing also involves payment of Premium in case of ECA backed loans and incidence of tax on payments in case of both ECA backed and Foreign DFI loans. KE request the Authority to allow (i) Premium based on actual, with capping of 7% on Debt servicing as currently allowed to other power sector entities, and (ii) Tax payments on premium and interest, based on actual as allowed to other power sector entities with similar loan agreements. KE will submit a request for pass through of premium and tax as a one-time / separate cost, based on documentary evidence.

With respect to financing fees / transaction cost, which are allowed to other projects as a separate cost, KE has included the impact of same in loan spreads over the loan tenure, consistent with how it was allowed in the current MYT.

Further, hedging cost for foreign loans is being requested at KIBOR – LIBOR + Hedging spread of 2.5% This includes 1% cost for hedging principal amounts and 1.5% for hedging of spread.

Based on above, reference RoRBCoD has been calculated. This is proposed to be subject to quarterly indexation for KIBOR / LIBOR, annual adjustment for Foreign ECA, Foreign DFI and local loan proportion and separate allowance for premium and tax amounts on foreign loans premium and interest, based on actual payment and capping as discussed above.

Implementation of Secured Overnight Financing Rate (SOFR)

The above mentioned spreads are based on LIBOR and accordingly LIBOR will be used as a reference for the tariff petition for calculating foreign cost of borrowing. However, considering Secured Overnight Financing Rate (SOFR) will supersede LIBOR as a new interest rate benchmark post June 2023 i.e., start of the next term, LIBOR will be replaced by SOFR and accordingly, change in spreads on shifting to SOFR from LIBOR will be requested as a one-time adjustment based on changes in the current loan agreements with the Lenders. Consequently, allowed spreads on foreign loans along with associated impact on reference tariff shall be updated and then SOFR will be used as reference for indexation for subsequent periods.

8. Proposed Investment Plan Revision Mechanism

Similar to the current MYT, under the upcoming control period (FY24 – FY30), tariff components i.e., RoRB – Cost of Debt, RoRB – Cost of equity, depreciation and amortization of deferred revenue will be calculated for the control period of 7 years i.e., FY24 – 30, based on projected investment plan, and current macro-economic factors including exchange rates, KIBOR, LIBOR and estimated mix of foreign and local borrowings.

These amounts will be required to be indexed for changes macroeconomic factors such as exchange rates, KIBOR and LIBOR / SOFR, Pak / US CPI. Further, these amounts will also

have to be revised in the event of any changes in scope owing to NEPRA / GoP directives, unforeseen situations. Accordingly, KE has proposed a mechanism for periodic revision in the investment plan, and adjustment of the tariff components accordingly.

In this regard, KE proposes the following Investment Plan Revision Mechanism:

Annual Investment Update – Annual investment update shall be carried out to account for changes in USD to PKR rates & US / Pak CPI, KIBOR, and LIBOR / SOFR, Foreign / local loan ratio, Indexation on RoRBCoE, along with downward adjustment on account of any amounts not invested and carry forward of investments to next years. While doing Annual Investment update, investments for remaining years of control period shall also be indexed to prevalent macro-economic factors including Exchange rate, USCPI and Pak CPI.

Complete Investment Review (CIR) – At the end of 2 years, a Complete Investment review shall be carried out, where investment plan for remaining control period will be analyzed and updated keeping in view macro-economic factors as well as changing dynamics and planning requirements including but not limited to change in demand growth assumptions, changes in technology, Government policies including Import/ LC ban and change in power procurement plan and projects, and considering any underspent amount from previous years delayed due to factors beyond KE's control which should not lapse and carried forward. This cycle will be repeated after every two years.

Considering multiple external factors impact demand, KE has proposed actualization of sent outs for tariff workings, inline with Other DISCOs.

Specific Approval by NEPRA on request of KE for any change in scope

In case of any change in scope of planning requiring additional investments based on NEPRA / GoP directives, or significant change in commodity prices etc. any time during the control period, KE will seek NEPRA's approval for investments to be carried out before the next Complete Investment Review (CIR) for inclusion in the investment plan and the impact shall be included in the next Annual Investment Update. In case, the additional investments are required to be done after the Complete Investment Review, those shall be included in the CIR request.

Timing of Adjustments

Sample timings for year 1 and 2 are given for Honorable Authority's consideration and once approved the same be repeated for every 2 years.

Activity	Filing	Approval	Recovery of impact
Yearly investment update for year 1	End of Q1 of Year 2	End of Q2 of Year 2	- Impact to be allowed in Q3 and Q4 of year 2
Yearly investment update for year 2	End of Q1 of Year 3	End of Q2 of Year 3	- Impact to be allowed in Q3 and Q4 of year 3
Complete investment review after year 1 and 2	End of Q2 of Year 3	End of Q3 of Year 3	 Any remaining impact of year 1 and 2 to be recovered in Q4 of year 3 Investment plan and tariff components revised for year 3 to 7 Impact of revision till Q1 to Q3 of year 3 to be recovered in Q4 of year 3

Based on above mechanism, RoRBCoD, RoRBRoE, Depreciation and Amortization of Deferred revenue base components of the proposed tariff shall be adjusted.

For illustration of investment plan revision mechanism please refer **Annexure K & N** for Transmission and Distribution businesses respectively.

Keeping in view KE's existing transmission and distribution network infrastructure and changing dynamics of power sector including implementation of CTBCM model, KE has proposed a comprehensive investment plan for capacity enhancement and improvement of existing network's reliability and stability, under different categories as detailed in **Section VI**. However, in case allowed investments by NEPRA for the proposed control period i.e., FY24 – FY30 are required to be made in a different category, considering change in dynamics and scope to protect long-term interests of the consumers, KE requests the Authority to consider investments on a combined basis.

Section VII - Benefits and Financial Analysis

1. Expansion and Rehabilitation of Transmission and Distribution System

1.1. Transmission Segment

1.1.1. Growth Projects

KE plans to achieve Transmission enhancement by 755 MVA out of which 200MVA is assumed to be consumer funded, in order to meet the growing demand through augmentation in existing grid stations and addition of new 132kV grid stations in network.

In order to improve the reliability & stability of transmission network, KE will also add 250MVA Auto Transformers through augmentation in existing grid stations, addition of 220kV grid stations and associated transmission lines which will increase KE's current 220/132KV Auto Transformers capacity to 7,000 MVAs from 5,000 MVAs and 500/ 220kV Auto Transformers capacity to 1,800MVAs. Additionally, one Auto transformer of 600MVA will be added at NKL.

Above mentioned Growth Projects investment will enable KE to meet the growing Demand of consumers within the allowed loading limits.

1.1.2. Interconnection Projects

Following tangible benefits will accrue to KE under this category:

- Import of additional power from National Grid through energization of KKI Grid and its interconnection lines
- > Evacuation of over 400 MW power through wheeling from Thar Coal based and Hydel Power plants through addition of 600 MVA ATR at NKI
- ➤ Evacuation of 600 MW and 350 MW from renewable plants is also planned for which KE would have to construct the following:
 - i. Step-up grid and related transmission line of 20 km is planned at Gharo corridor for inducting additional 600 MW renewable power plants in KE system.
 - ii. TL having estimated length of 20 km is planned for evacuation of power from 350 MW renewable power plants through Surjani Grid. These projects are being developed under the umbrella of Government of Sindh with support of World Bank.

1.1.3. System Improvement / Reliability

These projects are required to upkeep and reinforce the existing network for ensuring reliability and stability of the power system. Further, new SMART technologies have also been opted for improving efficiency and operational excellence along with the projects required for adhering the technical limits, as per Grid Code, which includes network augmentation for maintaining N-1 contingency, system security and safety standards.

Following major activities are planned to enhance the system in this control period i.e., FY 2024 – 2030:

- Overhauling of GIS bays
- > Replacement of Old Power Transformers and allied equipment
- > Replacement of relays and allied equipment
- > RTV coating and services/ Installation and replacement of composite insulators
- > Tower structures rehabilitation/ Transmission line allied equipment

- Underground cable replacement
- ➤ Rehabilitation of grid automation system/ Server with application for DRC

1.1.4. Reactive Power Management and Loss Reduction Projects

Installation of additional capacitor banks at existing 132kV Grid stations alongside capacitors at new grids is will provide following Benefits:

- compensation for VAR requirement of network / load centers which would also help managing the power factor / quality as per the grid code / prudent utility practices and;
- optimization of transmission losses
- ➤ Installations and replacements in telecom network

1.1.5. Other benefits

In addition to the above benefits, the proposed investment plan will also assist in improvement in the following areas:

- Improvement in SAIFI & SAIDI by 44%
- Maintaining Transmission loss at 1.3%
- Increase in capacity by 755 MVAs

For details, please refer **Section IV (1)** above.

1.2. Distribution Segment

The improvement plans are already underway with some out of the box recovery initiatives which include Robo-calls program to proactively target forgetful customers as reminder for payment, introducing multiple ePay gateways to ease collections, acquired solution for Website & App, QR Code, Point Of Sale (POS) Machines and Real Time Payment Solution (RTPS) especially for corporate clients.

More initiatives include onboarding e-Payment partners, Digital Banking Partners & incentivizing customers to promote digital payment through Cashback offers, vouchers, rewards points for enhancing and easing payments of electricity bills. Introduction of consumer loyalty program to motivate and incentivize regular bill payments for irregular payers and defaulters.

KE is also introducing Handheld units for Survey and inspection teams as it will enable paperless real-time survey report punching, significantly reducing time taken to punch and process survey report in the system, also ensuring a near real-time availability of evidence on discrepant meters. The benefits will extend to elimination of the need for extensive day-to-day printing of proforma and notices, as well as prevent issues caused by misplacement of documents and repetition of work.

KE has recently introduced KE Live app which helps consumers in viewing and paying bills, consumption patterns over last few months and energy saving advice. It also ensures maintenance and updating of refined consumer data base.

KIIP 107 – Tangible Benefits (Energy Forecast)

									(GWh)
Description	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Domestic	11,720	11,636	11,814	11,966	12,115	12,258	12,394	12,524	12,646
Commercial	2,789	2,772	2,820	2,862	2,904	2,944	2,983	3,021	3,059
Industrial	5,823	6,013	6,254	6,341	6,429	6,518	6,602	6,685	6,763
Agricultural	177	177	182	186	191	195	199	204	209
Other	675	763	756	755	761	772	785	799	814
TOTAL	21,184	21,361	21,827	22,110	22,400	22,687	22,964	23,234	23,491
Growth %		0.8%	2.2%	1.3%	1.3%	1.3%	1.2%	1.2%	1.1%

Consumer Growth (No. in ooo's)

						Consume	diowin (i	10. III 000 S
Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Domestic	3,078.51	3,210.60	3,332.35	3,483.03	3,623.44	3,766.27	3,911.72	4,059.60
Commercial	589.82	615.13	638.46	667.33	694.23	721.60	749.46	777.80
Industrial	26.97	28.14	29.21	30.53	31.77	33.02	34.30	35.60
Agricultural	2.51	2.62	2.72	2.84	2.96	3.07	3.19	3.31
Other	0.30	0.31	0.32	0.34	0.35	0.36	0.38	0.39
TOTAL	3,698.12	3,856.81	4,003.06	4,184.06	4,352.74	4,524.33	4,699.05	4,876.69
Growth%		4.3%	3.8%	4.5%	4.0%	3.9%	3.9%	3.8%

Additional Sales - GWh

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Domestic	571	387	320	276	223	208	180
Commercial	147	98	80	69	58	55	50
Industrial	226	89	93	93	86	84	78
Agricultural	10	7	6	6	5	5	5
Other	27	16	17	17	17	17	18
TOTAL	981	598	516	461	390	369	331

Energy Saved through Loss Reduction - GWh

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Units Saved	54	108	180	226	247	280	315

1.2.1. Other benefits

In addition to the above benefits, the proposed investment plan will also assist in improvement in the following areas:

- Improvement in SAIFI & SAIDI by 33% & 29% respectively
- Improving Distribution loss by 17%
- Increase in capacity by **3,251 MW**
- Increase in number of consumers by **1.2 million**
- Improvement in recovery ratio by 50% points.

For details, please refer **Section IV (2)** above.

1.2.2. Financial Analysis and Sensitivity Analysis

Will be included in the Distribution Consultant Report to be provided by the mid of Feb'23.

Section VIII - Financial Projections for FY24 to FY30

For Projected Profit or Loss, Balance Sheet and Cash Flow Statement for the next control period, please refer $\bf Annexure~O~\&~P$ for Transmission and Distribution businesses respectively.

Section IX - Implementation, Monitoring Plan and Reporting

1. Implementation & monitoring of investment plan

KE has a rigorous process to collect and analyze information in relation to the projects being undertaken to compare how well this investment plan is being implemented against expected targets since it is necessary to achieve the KPIs mentioned in **Section IV**. KE has prepared this robust investment plan to improve network reliability and quality of supply to further improve the trajectory as submitted here, timely execution of which is dependent upon a sustainable tariff to be allowed by the Authority as per the petitions to be submitted for Transmission and Distribution business segments.

KE will continuously monitor the progress against the submitted investment plan and the consequent impact on the KPIs of the same. For this, the Company will implement a quarterly/annual MIS reporting for monitoring the physical and financial progress of the planned investments as given above.

2. Linkage with Performance Standards

Performance targets for Transmission & Distribution have been given in **Section IV (1)** & **Section IV (2)** respectively.

Section X - Environmental and Social Assessment and Mitigation Plans

Environment and Social Assessment and Mitigation Plans

- Preparation of robust framework is underway, expected to be completed by 2024 which will set targets and progress will be tracked around these targets to ensure commitment to sustainability. And this will be reported in the sustainability report annually.
- Ensure that companies progress is on track to optimize fuel mix through reducing reliance on imported fuel and increase its renewable energy footprint.
- Ensure ESG and environmental standards are followed in the largescale deployment of power projects.
- Ensure that company's progress is on track to optimize fuel mix, reduce reliance on imported fuels and improve share of renewables in generation mix.
- Initiating Green Building Infrastructure to obtain LEED Certification and Green Building Accreditation on KE offices.
- Advocate for climate2equal,
- Align KE's business practices with the UN SDGs and sustainable business practices.
- Disseminate and create advocacy on circular economy, repurpose and reuse material for suitable purposes, such as paper for recycling, computers for school labs, servers for SMEs etc.
- Promoting SDGs among Stakeholders, Employees, Customers and Community for better capacity building.
- Focus on Employees Health & Wellbeing
- Collaborate with external partners on Digital Inclusion.

Expected Outcomes:

- Targets for reduction in the GHG emissions
- Sustainable way of business
- Drive culture of recycling in the company
- Targets for diversity & women empowerment within in the company
- Overall Skill Development & Economic uplift due to the above

Serving clean and green energy to its customers is one of the upmost priority of KE in order to protect the environment and reduce emissions.

In addition to the above, KE also involves external organizations and consultants to evaluate any large scale projects (for e.g construction of new grid stations) independently, from the perspective of minimizing the harmful impact of the same on the environment and also to ensure the compliance of Environment Laws enforced in Pakistan.

Section XI - KE's Request

Based on above submission, KE would like to request the Authority to approve separate investment plans of Transmission and Distribution as summarized below:

Transmission

Investment Plan of next seven years as explained above and summarized in below table:

KIIP 108 – Investment Plan for Next Seven Years (Transmission)

Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total	
Growth Projects	14,965	30,661	31,899	20,082	28,732	10,357	4,054	140,751	
NTDC Interconnection	22,202	3,042	4,562	-	-	-	-	29,806	
IPPs- Interconnection	2,305	5,943	5,776	8,778	122	129	-	23,054	
System Improvement / Reliability	6,731	8,704	8,871	20,337	12,211	11,762	15,516	84,133	
Reactive Power Management & Loss Reduction	424	636	677	457	558	167	251	3,171	
Total CAPEX	46,628	48,986	51,786	49,654	41,623	22,416	19,821	280,915	

Investment plan is requested to be approved along with proposed investment plan revision mechanism as given in **Section VI (8).**

Distribution & Support Functions

Investment Plan of next seven years as explained above and summarized in below table:

KIIP 109 – Investment Plan for Next Seven Years (Distribution & Support)

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
Growth	2,426	3,687	4,700	6,316	6,484	7,344	6,148	37,105
Loss Reduction	8,748	11,502	12,545	12,854	6,106	6,315	6,591	64,662
Maintenance	4,653	6,270	6,082	5,697	5,989	5,889	5,915	40,496
Safety	5,438	5,268	3,726	2,897	2,897	2,797	2,834	25,858
Technology	3,616	3,334	2,488	1,317	2,684	1,813	1,276	16,529
Total Investment	24,881	30,062	29,541	29,082	24,161	24,158	22,765	184,650

								PKR Mn
Description	FY24	FY25	FY26	FY27	FY28	FY29	FY30	Total
IT - ERP and Infrastructure	3,103	1,809	1,967	1,558	2,033	2,087	1,499	14,056
Cyber Security	250	300	340	390	430	450	495	2,655
Real estate & Civil works	244	285	276	275	273	295	156	1,803
Total Capex	3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514

Investment plan is requested to be approved along with proposed investment plan revision mechanism as given in Section VI (8).

List of Annexures

Annexure	Description
A	List of Grid Stations
В	List of Transmission Transformers
С	List of Transmission Lines
D	List of Circuits and AMPS
Е	Transmission Transformers Loading Profile
F	Feeder Loading - 11kV
G	Feeder Count - 11kV
G1	GIS details
Н	Power Procurement Plan
I	Transmission Consultant Report
J	Human Resource details
K	Transmission Indexation Mechanism
L	O&M Annexure - Transmission
M	O&M Annexure – Distribution
N	Distribution Indexation Mechanism
О	Financials – Transmission
P	Financials – Distribution
Q	Transmission Project Profile

Glossary

Acronym	Definition
ABC	Aerial Bundled Cables
ADMS	Advanced Distribution Management System
AGM	Annual General Meeting
AMI	Advanced Metering Infrastructure
ATR	Auto Transformers
AI	Artificial Intelligence
AMR	Automated Meter Reader
AT&C	Aggregate, Technical & Commercial
BAC	Board of Audit Committee
BFC	Board Finance Committee
BHR&RC	Board Human Resource & Remuneration Committee
BOD	Board of Directors
BS&PC	Board Strategy & Projects Committee
CAPEX	Capital Expenditure
CDS	Common Distribution System
CIR	Complete Investment Review
CEO	Chief Executive Officer
CFCs	Consumer Facilitation Centers
CM	Corrective Maintenance
CPPA - G	Central Power Purchasing Agency – Guarantee
CPI	Consumer Price Index
CRM	Customer Relationship Management
CSM	Customer Service Manual
CTBCM	Competitive Trading Bilateral Contract Market
CTUs	Capacitor-Tripping Unit
CXOs	Chief Experience Officers
CYMDST	Distribution System Analysis Package (CYMW Software)
CYME	Software Name
DBs	Distribution Boxes
DCRC	Disconnection / Reconnection
DDS	Dedicated Distribution System
DISCOs	Distribution Companies
DNA	Distribution Network Academy
DRC	Disaster Recovery Centre
EBITDA	Earning Before Interest, Taxes, Depreciation & Amortization
ECA	Export Credit Agency
EHT	Extra High-Tension Lines
EV	Electric Vehicles
FIR	First Information Report
FMO	Dutch Entrepreneurial Development Bank

Acronym	Definition
FMR	Faulty Meter Replacement
GIS	Geographical Information System
GOP	Government of Pakistan
GOB	Government of Balochistan
GOS	Government of Sindh
GPS	Global Positioning System
GSMPO	Grid System Maintenance, Protection & Operation
GWh	Giga Watt hours
HMI	Human-Machine Interface
HHU	Handheld Unit
HT	High Tension
HV	High Voltage
HVUB	Hub, Vinder, Uthal & Bela
I-MYT	Integrated Multi Year Tariff
I ² R	I Squared R Losses
IBC	Integrated Business Centre
ICE	Intercontinental Exchange
ІоТ	Internet of Things
IPPs	Independent Power Producers
IRR	Internal Rate of Return
IT	Information Technology
IVR	Interactive Voice Response
KE	K – Electric Limited
KESC	Karachi Electric Supply Company
KIBOR	Karachi Interbank Offered Rate
KKI	KANUPP-K-Electric Interconnection
KM	Kilometers
KPI	Key Performance Indicators
kV	Kilovolt
kVAR	Kilovolt Ampere Reactive
LBS	Load Break Switch
LDC	Load Dispatch Center
LIBOR	London Interbank Offered Rate
LILO	Loop in Loop out
LT	Low Tension
LV	Low voltage
MDMS	Meter Data Management System
METAVERSE	Meta And Universe (Software)
MIO	Meter Inspection Officer
MIS	Management Information System
MSBB	Multi Storey Bus Bar

Acronym	Definition
MTR	Mid Term Review
MV	Mega Volt
MVA	Megavolt Amperes
MVAR	Megavolt Ampere of reactive power.
MW	Mega Watt
MYT	Multi Year Tariff
NBP	National Bank of Pakistan
NC	New Connection
NEPRA	National Electric Power Regulatory Authority
NIP	Network Improvement Plan
NKI	NTDC Karachi Interconnection
NMS	Non-Management Staff
NTDC	National Transmission & Despatch Company
O&M	Operating & Maintenance
OCBs	Oil Circuit Breaker
OEM	Original Equipment Manufacturer
OFC	Oil Filled Cables
ОН	Overhead
OMS	Operation Management System
OSP	Outsourced Service Provider
OT	Operational Technologies
OPGW	Optical Ground Wire
PAPP	Public Accident & Prevention Plan
PBS	Pakistan Bureau of Statistics
PFIP	Power Factor Improvement Plant
PMTs/DT	Pole Mounted Transformers / Distribution Transformers
PID	Project Implementation Department
PMUs	Pad Mounted Units
P&E	Planning and Engineering
PLC	Power Line Carrier
PPI	Power Planners International Private Limited
PQ	Power Quality
PSX	Pakistan Stock Exchange
PT	Power Transformer
PTR	Power Transformer
RAB	Regulatory Asset Base
RCDC	Reconnection / Disconnection
RLNG	Re-gasified Liquified Natural Gas
RMU	Ring Main Unit
ROE	Return on Equity
RoRB	Return on Regulatory Asset Base
RoRBCOD	Return on Regulatory Asset Base – Cost of Debt
RoRBCOE	Return on Regulatory Asset Base – Cost of Equity

Acronym	Definition
RoW	Rights of Way
RPA	Robotic Process Automation
RTV	Room Temperature Vulcanized
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SAP BW	SAP Business Warehouse
SAP ERP IS-U	SAP Enterprise Resource Planning IS-U
SBP	State Bank of Pakistan
SCADA	Supervisory Control and Data Acquisition
SECP	Securities and Exchange Commission of Pakistan
SIEM	Security Information and Event Management
SIP	System Improvement Plan
SIR	Site Inspection Report
SOFR	Secured Overnight Financing Rate
SDH	Synchronous Digital Hierarchy
STDC	Sindh Transmission and Despatch Company
TDS	Tariff Differential Subsidies
T&D	Transmission & Distribution
TAT	Turn Around Time
TDS	Tariff Differential Subsidies
TL	Transmission Losses
ToU	Time of Use
TSW	Transformer & Switchgear Workshop
UG	Underground Cables
VAR	Volt-Amps Reactive
VIU	Vertically Integrated Unit
VCB	Vacuum Circuit Breaker
XLPE	Cross linked polyethylene cable

K-Electric Limited Integrated Investment Plan FY24-FY30 Details of Grid Stations

Annexure A

Ma	Grid	Voltage	Commissioning	Present Tot	al Capacity	Classification
No.	Griu	level	Date	Power Trafo	Auto Trafo	Classification
		kV	Dute	(MVA)	(MVA)	
1	SITE	132	Dec-55	239		AIS
	LANDHI	132	May-65	240		AIS
3	QUEENS ROAD	132	Aug-65	160		GIS
	MALIR	132	May-67	120	40	AIS
	DHABEJI	132	Sep-68	80		AIS
6	GHARO	132	Mar-70	46		AIS
7	KORANGI TOWN	132	May-70	160		GIS
8	VALIKA	132	Sep-70	120		GIS
9	GULSHAN	132	Jul-71	160		AIS
10	FEDERAL B	132	Oct-78	159		AIS
11	HUB CHOWKI	132	May-79	120		AIS
12	WEST WHARF	132	Jun-80	80		GIS
13	GADAP	66	Jul-80	33		AIS
	GIZRI	132	Feb-81	119		AIS
	VINDER	132	Mar-81	23	60	AIS
16	UTHAL	66	Mar-81	23		AIS
	BELA	66	Mar-81	23		AIS
18	NORTH NAZIMABD	132	May-82	119		AIS
19	PORT QASIM	132	May-82	120		AIS
20	BALOCH COLONY	132	Oct-82	118		AIS
21	AIRPORT	132	Oct-82	120		AIS
22	PIPRI EAST	132	Year -78	49		AIS
23	PIPRI WEST	220	Mar-83	70	750	GIS
24	KDA SCHEME 33	220	Dec-83	159	750	GIS
25	NORTH KARACHI	132	Feb-84	159		AIS
26	KORANGI WEST	132	Feb-84	40		AIS
27	BALDIA	220	Sep-85	153	750	GIS
28	CAA	132	Dec-91	100		AIS
29	LIAQUATABAD	132	Aug-92	120		AIS
30	ORANGI TOWN	132	Oct-92	159		AIS
31	CIVIC CENTER	132	Oct-92	120		AIS
32	CLIFTON	132	Nov-93	120		GIS
	DEFENCE	132	Apr-93	120		AIS
	JACOBLINE	132	Nov-93	120		GIS
	KEPZ	132	Dec-94	106		AIS
36	LYARI	132	26-Nov-95	70		AIS
37	GARDEN EAST	132	16-Jun-97	110		GIS
38	BOC	132	25-Aug-97	80		AIS
	ICI	220	25-Apr-98	0		AIS
	RECP	132	18-May-98	73		AIS
	KORANGI CREEK ROAD	220	20-Jun-98	0	500	GIS
	HAROON ABAD	132	21-Dec-98	120		AIS
	ELENDER ROAD NEW	132	13-Jun-99	120		AIS
	LALAZAR GRID	220	15-May-00	0	500	GIS
	GULISTAN E JOHAR	132	17-May-00	120		AIS
	QAYYUM ABAD	132	04-Jun-00	120		GIS
	KORANGI EAST	132	28-Sep-00	103		AIS
	SURJANI TOWN	132	15-Dec-02	160		AIS
	MAURIPUR (New)	220	21-May-07	120	500	GIS
	OLD TOWN (132 kV)	132	19-Apr-08	120		GIS
	FEDERAL A	132	Nov-o8	40		AIS
	KORANGI SOUTH	132	Dec-o8	120		HIS
	PRL	132	Mar-09	120		HIS
54	GULSHAN-E-MAYMAR	132	Mar-09	160		HIS

K-Electric Limited Integrated Investment Plan FY24-FY30 Details of Grid Stations

Annexure A

No.	Grid	Voltage	Commissioning	Present Tot	Classification	
NO.		level	Date	Power Trafo	Auto Trafo	Classification
		kV		(MVA)	(MVA)	
55	CREEK CITY	132	Apr-09	120		AIS
56	AIRPORT 2 (East)	132	May-09	80		HIS
57	MEMON GOTH	132	Jul-09	80		HIS
58	AZIZABAD	132	Sep-09	80		HIS
59	JAIL ROAD	132	Jul-10	80		HIS
60	KESC HOSPITAL	132	Jan-11	110		HIS
61	DHA - 1	132	Feb-12	80		AIS
62	Mobile Grid at KDA	132	Jun-13	20		GIS
63	Mobile Grid at Gharo	132	Dec-13	20		GIS
64	AGHA KHAN GRID	132	Mar-15	80		GIS
65	SHADMAN	132	Dec-18	80		GIS
66	SURJANI (NEW)	220	Feb-19	0	250	GIS
67	OLD GOLIMAR	132	Mar-19	80		GIS
68	GULSHAN (NEW)	220	Apr-19	0	500	GIS
69	LABOUR SQUARE	132	Nov-19	80		GIS
70	New Port Qasim (NPQ)	220	Mar-20	0	0	GIS
71	Mehmoodabad	132	Mar-21	80		GIS
			Total	6,803.0	4,600	

S. No.	Name of Grid Station	Transformer Type	Transformer Name	Voltage Level (kV)	Capacity (MVA)
1	AIRPORT	Power	MVA 1	132/12	40
2	AIRPORT	Power	MVA 2	132/12	40
3	AIRPORT	Power	MVA 3	132/12	40
4	AIRPORT-2	Power	MVA 1	132/12	40
5	AIRPORT-2	Power	MVA 2	132/12	40
6	AGHA KHAN GRID	Power	MVA 1	132/11	20
7	AGHA KHAN GRID	Power	MVA 2	132/11	20
8	AGHA KHAN GRID	Power	MVA 3	132/12	40
9	AZIZABAD	Power	MVA 1	132/12	40
10	AZIZABAD	Power	MVA 2	132/12	40
11	BALDIA	Power	MVA 1	132/12	40
12	BALDIA	Power	MVA 2	132/11	33
13	BALDIA	Power	MVA 3	132/12	40
14	BALDIA	Power	MVA 4	132/12	40
15	BALOCH COLONY	Power	MVA 1	132/12	40
16	BALOCH COLONY	Power	MVA 2	132/11	39
17	BALOCH COLONY	Power	MVA 3	132/11	39
18	BOC	Power	MVA 1	132/12	40
19	BOC	Power	MVA 2	132/12	40
20	CIVIC CENTER	Power	MVA 1	132/12	40
21	CIVIC CENTER	Power	MVA 2	132/12	40
22	CIVIC CENTER	Power	MVA 3	132/12	40
23	CLIFTON	Power	MVA 1	132/12	40
24	CLIFTON	Power	MVA 2	132/12	40
25	CLIFTON	Power	MVA 3	132/12	40
26	CAA	Power	MVA 1	132/11	30
27	CAA	Power	MVA 2	132/11	30
28	CAA	Power	MVA 3	132/12	40
29	CREEK CITY	Power	MVA 1	132/12	40
30	CREEK CITY	Power	MVA 2	132/12	40
31	CREEK CITY	Power	MVA 3	132/12	40
32	DEFENCE	Power	MVA 1	132/12	40
33	DEFENCE	Power	MVA 2	132/12	40
34	DEFENCE	Power	MVA 3	132/12	40
35	DHA-1	Power	MVA 1	132/12	40
36	DHA-1	Power	MVA 2	132/12	40
37	DHABEJI	Power	MVA 1	132/12	40
38	DHABEJI	Power	MVA 2	132/12	40
39	ELENDER RD NEW	Power	MVA 1	132/12	40
40	ELENDER RD NEW	Power	MVA 2	132/12	40
41	ELENDER RD NEW	Power	MVA 3	132/12	40
42	FEDERAL A	Power	MVA	132/12	40

S. No.	Name of Grid Station	Transformer Type	Transformer Name	Voltage Level (kV)	Capacity (MVA)
43	FEDERAL B	Power	MVA 1	132/12	40
44	FEDERAL B	Power	MVA 2	132/11	39
45	FEDERAL B	Power	MVA 3	132/12	40
46	FEDERAL B	Power	MVA 4	132/12	40
47	GULSHAN	Power	MVA 2	132/11	40
48	GULSHAN	Power	MVA 2	132/12	40
49	GULSHAN	Power	MVA 3	132/12	40
50	GULSHAN	Power	MVA 4	132/12	40
51	GULSHAN-E-MAYMA	Power	MVA 1	132/12	40
52	GULSHAN-E-MAYMA	Power	MVA 2	132/12	40
53	GULSHAN-E-MAYMA	Power	MVA 3	132/12	40
54	GULSHAN-E-MAYMA	Power	MVA 4	132/12	40
55	GULISTAN E JOHAR	Power	MVA 1	132/12	40
56	GULISTAN E JOHAR	Power	MVA 2	132/12	40
57	GULISTAN E JOHAR	Power	MVA 3	132/12	40
58	GARDEN EAST	Power	MVA 1	132/12	40
59	GARDEN EAST	Power	MVA 2	132/12	40
60	GARDEN EAST	Power	MVA 3	132/11	30
61	GHARO	Power	MVA1	132/11.4	26
62	GHARO	Power	MVA2	132/11	20
63	GIZRI	Power	MVA 1	132/11	39
64	GIZRI	Power	MVA 2	132/12	40
65	GIZRI	Power	MVA 3	132/12	40
66	HUB CHOWKI	Power	MVA 1	132/12	40
67	HUB CHOWKI	Power	MVA 2	132/12	40
68	HUB CHOWKI	Power	MVA 3	132/12	40
69	HAROON ABAD	Power	MVA 1	132/12	40
70	HAROON ABAD	Power	MVA 2	132/12	40
71	HAROON ABAD	Power	MVA 3	132/11	40
72	JACOBLINE	Power	MVA 1	132/11	40
73	JACOBLINE	Power	MVA 2	132/12	40
74	JACOBLINE	Power	MVA 3	132/12	40
75	JAIL ROAD	Power	MVA 1	132/12	40
76	JAIL ROAD	Power	MVA 2	132/12	40
77	KEPZ	Power	MVA 1	132/12	40
78	KEPZ	Power	MVA 2	132/11.4	26
79	KEPZ	Power	MVA 3	132/12	40
80	KESC HOSPITAL	Power	MVA 1	132/11	30
81	KESC HOSPITAL	Power	MVA 2	132/11	40
82	KESC HOSPITAL	Power	MVA 3	132/12	40
83	KORANGI TOWN	Power	MVA 1	132/12	40
84	KORANGI TOWN	Power	MVA 2	132/12	40

S. No.	Name of Grid Station	Transformer Type	Transformer Name	Voltage Level (kV)	Capacity (MVA)
85	KORANGI TOWN	Power	MVA 3	132/12	40
86	KORANGI TOWN	Power	MVA 4	132/12	40
87	KORANGI EAST	Power	MVA 1	132/11	33
88	KORANGI EAST	Power	MVA 2	132/11	30
89	KORANGI EAST	Power	MVA 3	132/12	40
90	KDA	Power	MVA 1	132/11	39
91	KDA	Power	MVA 2	132/12	40
92	KDA	Power	MVA 3	132/12	40
93	KDA	Power	MVA 4	132/12	40
94	KORANGI WEST	Power	MVA 1	132/12	40
95	QAYYUMABAD	Power	MVA 2	132/12	40
96	QAYYUMABAD	Power	MVA 3	132/12	40
97	QAYYUMABAD	Power	MVA 4	132/12	40
98	KORANGI SOUTH	Power	MVA 1	132/12	40
99	KORANGI SOUTH	Power	MVA 2	132/12	40
100	KORANGI SOUTH	Power	MVA 3	132/12	40
101	LIAQUATABAD	Power	MVA 1	132/12	40
102	LIAQUATABAD	Power	MVA 2	132/11	40
103	LIAQUATABAD	Power	MVA 3	132/12	40
104	LYARI	Power	MVA 1	132/12	40
105	LYARI	Power	MVA 2	132/11	30
106	LANDHI	Power	MVA 1	132/11	40
107	LANDHI	Power	MVA 2	132/12	40
108	LANDHI	Power	MVA 3	132/12	40
109	LANDHI	Power	MVA 4	132/12	40
110	LANDHI (NEW)	Power	MVA 5	132/12	40
111	LANDHI (NEW)	Power	MVA 6	132/12	40
112	LABOUR SQUARE	Power	MVA 1	132/12	40
113	LABOUR SQUARE	Power	MVA 2	132/12	40
114	MALIR	Power	MVA 1	132/12	40
115	MALIR	Power	MVA 2	132/12	40
116	MALIR	Power	MVA 3	132/12	40
117	MAURIPUR (New)	Power	MVA 1	132 /12	40
118	MAURIPUR (New)	Power	MVA 2	132/12	40
119	MAURIPUR (New)	Power	MVA 3	132/12	40
120	MEHMOODABAD	Power	MVA 1	132/12	40
121	MEHMOODABAD	Power	MVA 2	132/12	40
122	MEMON GOTH	Power	MVA 1	132/12	40
123	MEMON GOTH	Power	MVA 2	132/12	40
124	NORTH NAZIMABAD	Power	MVA 1	132/12	40
125	NORTH NAZIMABAD	Power	MVA 2	132/11	39
126	NORTH NAZIMABAD	Power	MVA 3	132/12	40

S. No.	Name of Grid Station	Transformer Type	Transformer Name	Voltage Level (kV)	Capacity (MVA)
127	NORTH KARACHI	Power	MVA 1	132/12	40
128	NORTH KARACHI	Power	MVA 2	132/11	39
129	NORTH KARACHI	Power	MVA 3	132/12	40
130	NORTH KARACHI	Power	MVA 4	132/12	40
131	OLD GOLIMAR	Power	MVA 1	132/12	40
132	OLD GOLIMAR	Power	MVA 2	132/12	40
133	OLD TOWN	Power	MVA 1	132/12	40
134	OLD TOWN	Power	MVA 2	132/12	40
135	OLD TOWN	Power	MVA 3	132/12	40
136	ORANGI TOWN	Power	MVA 1	132/11	40
137	ORANGI TOWN	Power	MVA 2	132/11	39
138	ORANGI TOWN	Power	MVA 3	132/12	40
139	ORANGI TOWN	Power	MVA 4	132/12	40
140	PORT QASIM	Power	MVA 1	132/11	40
141	PORT QASIM	Power	MVA 2	132/12	40
142	PORT QASIM	Power	MVA 3	132/12	40
143	PIPRI EAST	Power	MVA 1	132/11.4	26
144	PIPRI EAST	Power	MVA 2	132/11.5	23
145	PIPRI WEST	Power	MVA 3	132/12	40
146	PIPRI WEST	Power	MVA 4	132/11	30
147	PRL	Power	MVA 1	132/12	40
148	PRL	Power	MVA 2	132/12	40
149	PRL	Power	MVA 3	132/12	40
150	QUEENS ROAD	Power	MVA 1	132/12	40
151	QUEENS ROAD	Power	MVA 2	132/12	40
152	QUEENS ROAD	Power	MVA 3	132/12	40
153	QUEENS ROAD	Power	MVA 4	132/12	40
154	RECP	Power	MVA 1	132/12	40
155	RECP	Power	MVA 2	132/11	33
156	SHADMAN	Power	MVA 1	132/12	40
157	SHADMAN	Power	MVA 2	132/12	40
158	SITE	Power	MVA 1	132/12	40
159	SITE	Power	MVA 2	132/11	39
160	SITE	Power	MVA 3	132/12	40
161	SITE	Power	MVA 4	132/12	40
162	SITE	Power	MVA 5	132/12	40
163	SITE	Power	MVA 6	132/12	40
164	SURJANI TOWN	Power	MVA 1	132/11	40
165	SURJANI TOWN	Power	MVA 2	132/12	40
166	SURJANI TOWN	Power	MVA 3	132/12	40
167	SURJANI TOWN	Power	MVA 4	132/12	40
168	VALIKA	Power	MVA 1	132/12	40

S. No.	Name of Grid Station	Transformer Type	Transformer Name	Voltage Level (kV)	Capacity (MVA)
169	VALIKA	Power	MVA 2	132/12	40
170	VALIKA	Power	MVA 3	132/11	40
171	VINDER	Power	MVA	132/11	23
172	WEST WHARF	Power	MVA 1	132/12	40
173	WEST WHARF	Power	MVA 2	132/12	40
174	Mobile grid	Power	MVA	132/11	20
175	Mobile grid	Power	MVA	132/11	20
176	BELA	Power	MVA	66/11	23
177	GADAP	Power	MVA 1	66/11	10
178	GADAP	Power	MVA 2	66/11	23
179	UTHAL	Power	MVA	66/11	23
180	BALDIA	Auto	MVA 1	220/132	250
181	BALDIA	Auto	MVA 2	220/132	250
182	KDA	Auto	MVA 1	220/132	250
183	KDA	Auto	MVA 2	220/132	250
184	KDA	Auto	MVA 3	220/132	250
185	KORANGICREEK RD	Auto	MVA	220/132	250
186	PIPRI WEST	Auto	MVA 1	220/132	250
187	PIPRI WEST	Auto	MVA 2	220/132	250
188	PIPRI WEST	Auto	MVA 3	220/132	250
189	LALAZAR GRID	Auto	MVA 1	220/132	250
190	LALAZAR GRID	Auto	MVA 2	220/132	250
191	MAURIPUR (New)	Auto	MVA 1	220/132	250
192	MAURIPUR (New)	Auto	MVA 2	220/132	250
193	SURJANI (New)	Auto	MVA 1	220/132	250
194	KORANGICREEK RD	Auto	MVA 2	220/132	250
195	BALDIA	Auto	MVA 3	220/132	250
196	GULSHAN	Auto	MVA 1	220/132	250
197	GULSHAN	Auto	MVA 2	220/132	250
198	VINDER	Auto	MVA	132/66	60
199	MALIR	Auto	MVA	132/66	40

K-Electric Limited Integrated Investment Plan FY24-FY30 Transmission Circuits Loading Profile for FY22

Annexure C

S.no.	o. Station - 1 Station - 2		ССТ	Voltage Level	Percentage (%)
1	Airport	Gul Ahmed	1	132	18%
2	Airport	Gul Ahmed	2	132	21%
3	Airport 2	Korangi South		132	52%
4	Airport 2	Korangi East		132	31%
5	Baldia	NKI		220	49%
6	BALDIA	Surjani		220	18%
7	Baldia	Valika	1	132	46%
8	Baldia	Tapal		132	22%
9	Baldia	Hub Chowki		132	19%
10	Baldia	SGT	2	132	44%
11	Baldia	SGT	1	132	53%
12	Baldia	KANUPP	1	132	5%
13	Baldia	K2/K3	2	132	6%
14	Baloch	GIZRI/K.West/K.Town		132	0%
15	Baloch	Korangi Town	1	132	39%
16	BOC	FPCL		132	33%
17	BOC	Pipri west		132	32%
18	Civic Center	Liaquatabad		132	32%
19	Civic Center	AKÛH		132	24%
20	Defence	DCL-Creek City		132	29%
21	DHA 1	Creek City		132	29%
22	Federal B	Federal A/ Valika		132	37%
	Federal B	KDA		132	69%
<u>-5</u> 24	Garden	Jacobline	1	132	34%
25	Gharo	Gharo Solar		132	20%
26	Gharo	RECP		132	18%
27	Defence	Gizri		132	32%
28	Gizri	Jacobline	1	132	42%
29	Gizri	Clifton	<u> </u>	132	26%
30	Gizri	K.West-Baloch-K.Town		132	82%
31	Gulshan	Civic Center		132	42%
32	Gulshan	AKUH		132	36%
33	Gulshan	Azizabad		132	70%
	Gulshan	KDA		132	48%
35	Haroonabad	Old Golimar		132	24%
	Haroonabad	Labour Square		132	28%
37	Haroonabad	Liaquatabad		132	0%
	Hospital	Gulshan		132	31%
39	Hub Chowki	Tapal		132	39%
<u> </u>	Hub Chowki	Vinder		132	28%
41	Vinder	Uthal		66	41%
42	Uthal	Bela		66	25%
	Jacobline	Baloch Colony		132	18%
	Jail Road	Gulshan	1	132	18%
	Jail Road	Gulshan	2	132	18%
	Johar	Landhi		132	47%
	KCR	BQPS-2	1	220	73%
47 48	KCR	BQPS-2	2	220	73% 71%

K-Electric Limited Integrated Investment Plan FY24-FY30 Transmission Circuits Loading Profile for FY22

Annexure C

S.no.	Station - 1 Station - 2		ССТ	Voltage Level	Percentage (%)	
49	KCR	CCP	1	220	22%	
50	KCR	CCP	2	220	23%	
51	KDA	Gul e Maymar		132	78%	
52	KDA	Johar,Hospital		132	61%	
53	KDA	NKI		220	17%	
54	KDA	Surjani		220	24%	
55	KEPZ	Landhi		132	52%	
56	KEPZ	Pipri West		132	75%	
57	Korangi South	Airport 2		132	52%	
58	Korangi South	Qayyumabad		132	49%	
59	Korangi Town	Gul Ahmed		132	76%	
60	Defence	Korangi West		132	18%	
61	Korangi West	PRL		132	30%	
62	Lalazar	KCR	1	220	29%	
63	Lalazar	KCR	2	220	29%	
64	Landhi	Gul Ahmed		132	47%	
65	Landhi	CAA		132	62%	
66	Landhi	K.South		132	58%	
67	Landhi	KTPS		132	35%	
68	Liaquatabad	Azizabad		132	40%	
69	Lyari	Mauirpur		132	57%	
70	Malir	Johar		132	20%	
71	Malir	Gadap		66	41%	
72	Malir	CAA		132	46%	
73	Mauirpur	Baldia	1	220	41%	
74	Mauirpur	Baldia	2	220	45%	
75	Memon Goth	Malir		132	55%	
76	Memon Goth	KDA		132	74%	
77	North Karachi	Valika	1	132	24%	
78	North Karachi	Valika	2	132	29%	
79	North Nazimabad	Valika		132	30%	
80	North Nazimabad	Haroonabad		132	45%	
81	Orangi	Valika-javedan		132	27%	
82	Orangi	Baldia		132	66%	
83	Pipri West	RECP		132	26%	
84	Pipri West	Landhi		132	72%	
85	Pipri West	Korangi Town		132	68%	
86	Pipri West	Pipri East (Steel 1)	1	132	44%	
87	Pipri West	Pipri East (Steel 2)	2	132	42%	
88	Pipri West	New Port Qasim	1	220	17%	
89	Pipri West	New Port Qasim	2	220	17%	
90	Pipri West	Bin Qasim	1	220	33%	
91	Pipri West	Bin Qasim	2	220	33%	
92	Pipri West	Bin Qasim	3	220	18%	
93	ICI	Pipri West		220	18%	
94	ICI	Bin qasim		220	18%	
95	Port Qasim	Pipri West		132	60%	
96	Port Qasim	Landhi		132	62%	

K-Electric Limited Integrated Investment Plan FY24-FY30 Transmission Circuits Loading Profile for FY22

Annexure C

S.no.	Station - 1	Station - 2	ССТ	Voltage Level	Percentage (%)
97	PRL	KTPS		132	44%
98	Qayyumabad	DHA-1			36%
99	Qayyumabad	Korangi East		132 132	55%
100	Qayyumabad	KTPS	2	132	0%
101	Queens Road	Gizri		132	60%
102	Queens Road	Clifton		132	64%
103	Queens Road	Old Town		132	15%
104	Queens Road	Elender Road	1	132	21%
105	Queens Road	Elender Road	2	132	26%
106	Site	SGT-2	2	132	53%
107	Site	Haroonabad		132	27%
108	Surjani	Gulshan-e-Maymaar		132	42%
	Surjani	Valika		132	62%
110	Valika	Federal B		132	46%
111	Valika	Orangi		132	20%
112	Valika	Shadman		132	13%
113	West Wharf	Oldtown		132	23%
114	West Wharf	Lyari		132	36%
115	Dhabeji	FPCL		132	48%
116	Korangi south	KTPS		132	20%
117	Creek city	DCL- Defence		132	27%
118	Baloch	Jacobline		132	19%
119	Site	SGT	1	132	52%
120	Valika	Baldia		132	46%
121	Lalazar	Mauirpur	1	220	18%
122	Lalazar	Mauirpur	2	220	18%
123	Liaqutabad	Shadman		132	35%
124	Dhabeji	Oursun		132	30%
	Mauripur	Old Golimar	1	132	47%
126	Azizabad	Liaquatabad		132	39%
127	Gulshan	KDA	1	220	37%
128	Gulshan	KDA	2	220	37%
129	Mauripur	Labour Square		132	51%
130	Gizri	Jacobline	2	132	37%
131	Mehmoodabad	Qayyumabad	1	132	10%
132	Mehmoodabad	Qayyumabad	2	132	10%
133	Valika	Baldia	2	132	47%
134	Queensroad	Old Town	2	132	13%
135	KDA	New Port Qasim	1	220	17%
	KDA	New Port Qasim	2	220	17%

Underground Transmission Circuits

Type	Capacity
2500 mm ² CU XLPE	1269 A, 1389 A, 1769 A
1600 mm² CU OFC	1250 A
1600 mm ² CU XLPE	1250 A
1400 mm ² CU XLPE	1375 A
1200 mm ² CU XLPE	970 A, 1007 A, 1010 A, 1055 A, 1058 A, 1317 A
800 mm ² CU XLPE	795 A
800 mm ² CU OFC	450 A
500 mm ² CU XLPE	617 A

Overhead Transmission Circuits

Туре	Capacity
185mm2 Cu / 350 mcm Cu	585 A
240mm2 Cu	700 A
650mcm Al	710 A
300mm2 Cu	800 A
2x300mm2 Cu	1600 A
500mm2 AAAC	926 A
400mm2 Cu	960 A
2x400mm2 Cu	1920 A
4X500mm2Al	3840 A
STACIR/AW-230/45 275.51 mm2	1227 A
2XSTACIR/AW-435/85 519.1 mm ²	3690 A

S.no.	Grid Station	Trafo.	Capacity no.	Peak Load
		No.		% (rated)
1	AIRPORT	1	31.5/40 MVA 1	49
	AIRPORT	2	31.5/40 MVA 2	42
	AIRPORT	3	31.5/40 MVA 3	64
2	AIRPORT - 2	4	31.5/40 MVA 1	99
	AIRPORT - 2	5	31.5/40 MVA 2	74
3	AGHA KHAN	6	20 MVA 1	О
	AGHA KHAN	7	20 MVA 2	23
	AGHA KHAN	8	31.5/40 MVA 3	78
4	AZIZABAD	9	31.5/40 MVA 1	83
	AZIZABAD	10	31.5/40 MVA 2	85
5	BALDIA	11	40 MVA 1	98
	BALDIA	12	30/33 MVA 2	77
	BALDIA	13	31.5 / 40 MVA 3	76
	BALDIA	14	31.5 / 40 MVA 4	88
6	BALOCH COLONY	15	31.5/40 MVA 1	60
	BALOCH COLONY	16	30/39 MVA 2	62
	BALOCH COLONY	17	30/39 MVA 3	50
7	BELA	18	20/23 MVA	77
8	BOC	19	31.5/40 MVA 1	47
	BOC	20	31.5/40 MVA 2	47
9	CIVIC CENTER	21	31.5/40 MVA 1	63
	CIVIC CENTER	22	31.5/40 MVA 2	82
	CIVIC CENTER	23	31.5/40 MVA 3	63
10	CLIFTON	24	31.5 / 40 MVA 1	90
	CLIFTON	25	31.5/40 MVA 2	67
	CLIFTON	26	31.5/40 MVA 3	54
11	CAA	27	30 MVA 1	14
	CAA	28	30 MVA 2	20
	CAA	29	31.5/40 MVA 3	63
12	CREEK CITY	30	31.5/40 MVA 1	15
	CREEK CITY	31	31.5/40 MVA 2	10
	CREEK CITY	32	31.5/40 MVA 3	6
13	DEFENCE	33	31.5/40 MVA 1	67
	DEFENCE	34	31.5/40 MVA 2	80
	DEFENCE	35	31.5/40 MVA 3	67
14	DHA-1	36	31.5/40 MVA 1	28
	DHA-1	37	31.5/40 MVA 2	8
15	DHABEJI	38	31.5/40 MVA 1	51
	DHABEJI	39	31.5/40 MVA 2	53
16	ELANDER ROAD	40	31.5/ 40 MVA 1	96
	ELANDER ROAD	41	31.5/ 40 MVA 2	85
	ELANDER ROAD	42	31.5/ 40 MVA 3	65
17	FEDERAL A	43	31.5/40 MVA	84
18	FEDERAL B	44	31.5/40 MVA 1	95
	FEDERAL B	45	30/39 MVA 2	86
	FEDERAL B	46	31.5/40 MVA 3	87
	FEDERAL B	47	31.5/40 MVA 4	78

S.no.	Grid Station	Trafo.	Capacity no.	Peak Load
	3114 3114131	No.		% (rated)
19	GULSHAN	48	31.5/40 MVA 1	84
	GULSHAN	49	31.5/40 MVA 2	83
	GULSHAN	50	31.5/40 MVA 3	54
	GULSHAN	51	31.5/40 MVA 4	80
20	GULSHAN-E-MAYMAR	52	31.5/40 MVA 1	87
	GULSHAN-E-MAYMAR	53	31.5/40 MVA 2	70
	GULSHAN-E-MAYMAR	54	31.5/40 MVA 3	62
	GULSHAN-E-MAYMAR	55	31.5/40 MVA 4	48
21	GULSITAN-E-JAUHAR	56	31.5/40 MVA 1	68
	GULISTAN-E-JAUHAR	57	31.5/40 MVA 2	79
	GULISTAN-E-JAUHAR	58	31.5/40 MVA 3	82
22	GARDEN EAST	59	31.5/40 MVA 1	59
	GARDEN EAST	60	31.5/40 MVA 2	53
	GARDEN EAST	61	30 MVA 3	96
23	GADAP	62	10 MVA 1	84
	GADAP	63	20/23 MVA 2	83
24	GHARO	64	20/26 MVA 1	17
	GHARO	65	20 MVA 2	21
25	GIZRI	66	30/39 MVA 1	57
	GIZRI	67	31.5/40 MVA 2	83
	GIZRI	68	31.5/40 MVA 3	71
26	HUB CHOWKI	69	31.5/40 MVA 1	75
	HUB CHOWKI	70	31.5/40 MVA 2	72
	HUB CHOWKI	71	31.5/40 MVA 3	76
27	HAROONABAD	72	31.5/40 MVA 1	57
	HAROONABAD	73	31.5/40 MVA 2	83
	HAROONABAD	74	31.5/40 MVA 3	91
28	JACOBLINES	75	31.5/40 MVA 1	70
	JACOBLINES	76	31.5/40 MVA 2	80
	JACOBLINES	77	31.5/40 MVA 3	79
29	JAIL ROAD	78	31.5/40 MVA 1	92
	JAIL ROAD	79	31.5/40 MVA 2	92
30	KEPZ	80	31.5/40 MVA 1	45
	KEPZ	81	20/26 MVA 2	36
	KEPZ	82	31.5/40 MVA 3	84
31	KESC HOSPITAL	83	30/39 MVA 1	66
	KESC HOSPITAL	84	31.5/40 MVA 2	79
	KESC HOSPITAL	85	31.5/40 MVA 3	91
32	KORANGI TOWN	86	31.5/40 MVA 1	95
	KORANGI TOWN	87	31.5/40 MVA 2	94
	KORANGI TOWN	88	31.5/40 MVA 3	75
	KORANGI TOWN	89	31.5/40 MVA 4	94
33	KORANGI EAST	90	30/33 MVA 1	62
	KORANGI EAST	91	30 MVA 2	51
	KORANGI EAST	92	31.5/40 MVA 3	92
34	KDA	93	30/39 MVA 1	61
	KDA	94	31.5/40 MVA 2	72

S.no.	Grid Station	Trafo.	Capacity no.	Peak Load
		No.		% (rated)
	KDA	95	31.5/40 MVA 3	58
	KDA	96	31.5/40 MVA 4	50
35	Mobile Grid A	97	15/20MVA	0
36	KORANGI WEST	98	31.5/40 MVA 1	79
37	QAYYUMABAD	99	31.5/40 MVA 2	67
	QAYYUMABAD	100	31.5/40 MVA 3	56
	QAYYUMABAD	101	31.5/40 MVA 4	62
38	KORANGI SOUTH	102	31.5/40 MVA 1	59
	KORANGI SOUTH	103	31.5/40 MVA 2	56
	KORANGI SOUTH	104	31.5/40 MVA 3	52
39	LABOUR SQUARE	105	31.5/40 MVA 1	98
	LABOUR SQUARE	106	31.5/40 MVA 2	65
40	LIAQUATABAD	107	31.5/40 MVA 1	87
	LIAQUATABAD	108	31.5/40 MVA 2	68
	LIAQUATABAD	109	31.5/40 MVA 3	64
41	LYARI	110	31.5/40 MVA 1	86
	LYARI	111	30/33 MVA 2	72
42	LANDHI	112	31.5/40 MVA 1	70
	LANDHI	113	31.5/40 MVA 2	83
	LANDHI	114	31.5/40 MVA 3	66
	LANDHI	115	31.5/40 MVA 4	60
	NEW LANDHI	116	31.5/40 MVA 3	0
	NEW LANDHI	117	31.5/40 MVA 4	31
43	MALIR	118	31.5/40 MVA 1	69
	MALIR	119	31.5/40 MVA 2	62
	MALIR	120	31.5/40 MVA 3	69
44	MAURIPUR	121	31.5/40 MVA 1	48
	MAURIPUR	122	31.5/40 MVA 2	59
	MAURIPUR	123	31.5/40 MVA 3	63
45	MEHMOODABAD	124	31.5/40 MVA 1	55
	MEHMOODABAD	125	31.5/40 MVA 2	45
46	MEMON GOTH	126	31.5/40 MVA 1	48
	MEMON GOTH	127	31.5/40 MVA 2	49
47	NORTH NAZIMABAD	128	31.5/40 MVA 1	93
	NORTH NAZIMABAD	129	30/39 MVA 2	74
	NORTH NAZIMABAD	130	31.5/40 MVA 3	85
48	NORTH KARACHI	131	31.5/40 MVA 1	66
	NORTH KARACHI	132	30/39 MVA 2	43
	NORTH KARACHI	133	31.5/40 MVA 3	61
	NORTH KARACHI	134	31.5/40 MVA 4	63
49	OLD GOLIMAR	135	31.5/40 MVA 1	93
	OLD GOLIMAR	136	31.5/40 MVA 2	99
50	OLD TOWN	137	31.5/40 MVA 1	62
	OLD TOWN	138	31.5/40 MVA 2	96
	OLD TOWN	139	31.5/40 MVA 3	73
51	ORANGI TOWN	140	31.5/40 MVA 1	67
	ORANGI TOWN	141	30/39 MVA 2	63

S.no.	Grid Station	Trafo.	Capacity no.	Peak Load
211201		No.		% (rated)
	ORANGI TOWN	142	31.5/40 MVA 3	75
	ORANGI TOWN	143	31.5/40 MVA 4	70
52	PORT QASIM	144	31.5/40 MVA 1	33
	PORT QASIM	145	31.5/40 MVA 2	67
	PORT QASIM	146	31.5/40 MVA 3	44
53	PIPRI EAST	147	20/26 MVA	27
	PIPRI EAST	148	20/23 MVA 2	51
	PIPRI WEST	149	31.5/40 MVA 3	38
	PIPRI WEST	150	30 MVA 4	6
54	PRL	151	31.5/40 MVA 1	78
· ·	PRL	152	31.5/40 MVA 2	54
	PRL	153	31.5/40 MVA 3	77
55	QUEENS ROAD	154	31.5/40 MVA 1	35
	QUEENS ROAD	155	31.5/40 MVA 2	53
	QUEENS ROAD	156	31.5/40 MVA 3	31
	QUEENS ROAD	157	31.5/40 MVA 4	49
56	RECP	158	31.5/40 MVA 1	60
	RECP	159	30/33 MVA 2	34
57	SHADMAN	160	31.5/40 MVA 1	75
	SHADMAN	161	31.5/40 MVA 2	95
58	SITE	162	31.5/40 MVA 1	69
	SITE	163	30/39 MVA 2	80
	SITE	164	31.5/40 MVA 3	48
	SITE	165	31.5/40 MVA 4	100
	SITE	166	31.5/40 MVA 5	48
	SITE	167	31.5/40 MVA 6	94
59	SURJANI	168	31.5/40 MVA 1	41
/	SURJANI	169	31.5/40 MVA 2	
	SURJANI	170	31.5/40 MVA 3	91
	SURJANI	171	31.5/40 MVA 4	65
60	WEST WHARF	172	31.5/40 MVA 1	47
	WEST WHARF	173	31.5/40 MVA 2	48
61	VALIKA	174	31.5/40 MVA 1	63
	VALIKA	175	31.5/40 MVA 2	85
	VALIKA	176	31.5/40 MVA 3	88
62	VINDER	177	20/23 MVA	59
63	UTHAL	178	20/23 MVA	58
64	Mobile Grid B	179	15/20 MVA	0

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1	3515	SOCIETY	AGHA KHAN	DOLMENARCADE	CDS	300	305	203	67%
2	3513	SOCIETY	AGHA KHAN	MADINA MALL	CDS	300	305	81	27%
3	3508 3520	SOCIETY	AGHA KHAN AGHA KHAN	HILL PARK APARTMENT BIHAR-E-SHARIAT RMU	CDS	300 300	305 305	157	51% 38%
5	3520	SOCIETY	AGHA KHAN	SHAHMIM AHMED	CDS	300	305	115 107	35%
6	3542	SOCIETY	AGHA KHAN	NOOR HOTEL RMU	CDS	300	305	85	28%
7	3516	SOCIETY	AGHA KHAN	DMCHS	CDS	300	305	113	37%
8	3509	SOCIETY	AGHA KHAN	DILKUSHAN CENTER.	CDS	300	305	179	59%
9	3518	SOCIETY	AGHA KHAN	DHORAJEE FOUNDATION	CDS	300	305	138	45%
10	3526	SOCIETY	AGHA KHAN	KASHAN-E-ITFAL	CDS	300	305	42	14%
11	3528	SOCIETY	AGHA KHAN	MAKKAH SQUARE	CDS	300	305	230	76%
12	3525	SOCIETY	AGHA KHAN	OAKWOOD	CDS	300	305	134	44%
13	3492	SOCIETY	AGHA KHAN	SUNNY VOHRA	CDS	300	305	59	19%
14	3892	SOCIETY	AGHA KHAN	LIAQUAT NATIONAL HOSPITAL (LNH)	DDS	300	305	23	7%
15 16	505 3390	SOCIETY	AGHA KHAN AGHA KHAN	ZEENAT BALOCH SAIMA GARDEN	CDS CDS	300 300	305 305	65 142	21% 47%
17	1175	SOCIETY	AGHA KHAN	RANGOONWALA	CDS	300	305	138	45%
18	877	SOCIETY	AGHA KHAN	NATIONAL COACHING	CDS	300	305	114	37%
19	106	SOCIETY	AGHA KHAN	GHAURI RMU +	CDS	300	305	199	65%
20	115 276	SOCIETY Pin Oasim	AGHA KHAN AIRPORT	KDA SCHEME-1 + DRIGH ROAD 'A'	CDS	300 300	305 305	107	35% 53%
22	276	Bin Qasim Bin Qasim	AIRPORT	SANGUM CINEMA	CDS	300	305	160 97	32%
23	270	Bin Qasim Bin Qasim	AIRPORT	PIA PRECISION ENGINEERING	CDS	300	305	121	40%
24	3117	Bin Qasim	AIRPORT	AIR SHIPSHED	DDS	300	305	144	47%
25	273	Bin Qasim	AIRPORT	TERMINAL-II	DDS	300	305	42	14%
26	269	SOCIETY	AIRPORT	POLICE STATION DRIGH ROAD	CDS	300	305	170	56%
27	292	Bin Qasim	AIRPORT	I.A. QURESHI	CDS	300	305	109	36%
28	2016	Bin Qasim	AIRPORT	DIAGNOSTIC CENTER	CDS	300	305	93	31%
29	3277	Bin Qasim	AIRPORT	BLOCK-5 RMU	CDS	300	305	105	34%
30	274	Bin Qasim	AIRPORT	COMMUNITY HALL	CDS	300	305	130	43%
31	286	Bin Qasim	AIRPORT	SHAMA CENTRE	CDS	300	305	175	57%
32	278	Bin Qasim	AIRPORT	CANTT PUMPING	CDS	300	305	89	29%
33	281	Bin Qasim	AIRPORT	SUPERIOR SCIENCE COLLEGE	CDS	300	305	67	22%
34	282	Bin Qasim	AIRPORT	FALAKNAZ PLAZA	CDS	300	305	19	6%
35	277	Bin Qasim	AIRPORT	AIRPORT TEL. EXCHANGE	CDS	300	305	17	6%
36 37	1363 279	Bin Qasim Bin Qasim	AIRPORT AIRPORT	ROSHANABAD BARELI COLONY	CDS	300 300	305 305	138 84	45% 28%
38	285	Bin Qasim	AIRPORT	S.M SADIQ	CDS	300	305	79	26%
39	2088	Bin Qasim	AIRPORT	TANGA STAND RMU	CDS	300	305	172	56%
40	3328	Bin Qasim	AIRPORT	ASIFABAD D/PMT	CDS	300	305	80	26%
41	288	Bin Qasim	AIRPORT	SHOUKAT UMER HOSPITAL	CDS	300	305	117	39%
42	290	Bin Qasim	AIRPORT	PIA HANGAR	DDS	300	305	55	18%
43	280	Bin Qasim	AIRPORT	QEC	DDS	300	305	58	19%
44	289	Bin Qasim	AIRPORT	ABBAS BAWAZIR	CDS	300	305	86	28%
45	268	Bin Qasim	AIRPORT	RAITA PLOT	CDS	300	305	96	32%
46	3561	Bin Qasim	AIRPORT	FEED MILL RMU	CDS	300	305	123	40%
47	3562	Bin Qasim	AIRPORT	SIDDIQIA MASJID RMU	CDS	300	305	68	22%
48	2152	Bin Qasim	AIRPORT	MASJID-E-QUBA RMU	CDS	300	305	98	32%
49 50	3116 3531	Bin Qasim Bin Qasim	AIRPORT AIRPORT	AFZAL RMU NATHA KHAN RMU	CDS	300 300	305 305	71	23%
51	267	Bin Qasim	AIRPORT	KMC BOOSTING	CDS	300	305	64 99	33%
52	3598	Bin Qasim	AIRPORT	NEW IQBALABAD (EX RAZA UL HASSAN RMU)	CDS	300	305	187	61%
53	287	Bin Qasim	AIRPORT	SADAT COLONY	CDS	300	305	89	29%
54	3724	Bin Qasim	AIRPORT-II	GOHAR GREEN CITY	CDS	300	305	83	27%
55	284	Bin Qasim	AIRPORT-II	MALIR CITY	CDS	300	305	64	21%
56	119	Bin Qasim	AIRPORT-II	BAGH-E-MALIR	CDS	300	305	262	86%
57	4064	Bin Qasim	AIRPORT-II	F South	CDS	300	305	103	34%
58	1158	Bin Qasim	AIRPORT-II	GULSHAN-E-GHAZALI	CDS	300	305	186	61%
59	2038	Bin Qasim	AIRPORT-II	GHAZI TOWN	CDS	300	305	246	81%
60	3881	Bin Qasim	AIRPORT-II	K.N CITY	CDS	300	305	33	11%
61	2059	Bin Qasim	AIRPORT-II	PEER MEHFOOZ RMU	CDS	300	305	200	66%
62	272	Bin Qasim	AIRPORT-II	HAFIZ SWEETS (OLD POLICE STATION)	CDS	300	305	230	76%
63 64	3627 2116	Bin Qasim Bin Qasim	AIRPORT-II AIRPORT-II	EOBI RAZA RESIDENCY	CDS	300 300	305 305	107 82	35% 27%
65	1157	Bin Qasim	AIRPORT-II	KDA PUMP HOUSE	CDS	300	305	177	58%
66	3409	Bin Qasim	AIRPORT-II	BARAF KHANA (OLD ZAM ZAM ICE)	CDS	300	305	186	61%
67	2119	Bin Qasim	AIRPORT-II	BABA WILAYAT	CDS	300	305	152	50%
68	3791	Bin Qasim	AIRPORT-II	PAK CARPET INDUSTRY	DDS	300	305	29	10%
69	275	Bin Qasim	AIRPORT-II	SECURITY PRINTING-I	DDS	300	305	74	24%
70	2014	Bin Qasim	AIRPORT-II	KALABOARD CENTRE	CDS	300	305	132	43%
71	3370	Bin Qasim	AIRPORT-II	SHAMSI SOCIETY	CDS	300	305	224	74%
72	3613	Bin Qasim	AIRPORT-II	UMER KHUSHK	CDS	300	305	35	11%
73	2013	Bin Qasim	AIRPORT-II	MALIR WIRELESS	CDS	300	305	202	66%
74	3510	Bin Qasim	AIRPORT-II	GULSHAN-E-AKBAR RMU	CDS	300	305	113	37%
75	2072	Bin Qasim	AIRPORT-II	PUNJAB TOWN	CDS	300	305	100	33%
76	2058	Bin Qasim	AIRPORT-II	CHATTAI GROUND (OLD KAUSAR ICE)	CDS	300	305	162	53%
77	2050	Bin Qasim	AIRPORT-II	NOOR HOUSING	CDS	300	305	173	57%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
78	2111	Bin Qasim	AIRPORT-II	SALMAN GARDEN	CDS	300	305	166	55%
79	1155	Bin Qasim	AIRPORT-II	AMJAD ALI WELLS	CDS	300	305	214	70%
80	2094	GULSHAN	Azizabad	Agha Khan School	CDS	300	305	105	35%
81 82	2113 3107	GULSHAN GULSHAN	Azizabad Azizabad	Ali Square	CDS	300 300	305 305	107 199	35% 65%
83	3107	GULSHAN	Azizabad	Sarafa Bazar Telenor	CDS	300	305	69	23%
84	2023	GULSHAN	Azizabad	Bana Palace	CDS	300	305	119	39%
85	2035	GULSHAN	Azizabad	HEF School	CDS	300	305	84	27%
86	3437	Surjani	Azizabad	North Vista	CDS	300	305	179	59%
87	3103	GULSHAN	Azizabad	Sharifabad	CDS	300	305	111	36%
88	2101	GULSHAN	Azizabad	Usman Hospital	CDS	300	305	126	41%
89	2041	GULSHAN	Azizabad	Quaid Avenue	CDS	300	305	89	29%
90	3903	GULSHAN	Azizabad	Café Bhangoria	CDS	300	305	168	55%
91 92	3342 3904	GULSHAN GULSHAN	Azizabad Azizabad	Anglow School MANZAR-E-JILANI	CDS	300 300	305 305	163	53% 36%
93	3341	GULSHAN	Azizabad	Bukhshi	CDS	300	305	108 140	46%
94	2034	GULSHAN	Azizabad	Gul-Noor Ice	CDS	300	305	113	37%
95	3439	GULSHAN	Azizabad	Sadiq Nagar	CDS	300	305	102	33%
96	3514	GULSHAN	Azizabad	Mucca Chowk	CDS	300	305	118	39%
97	2139	GULSHAN	Azizabad	Trimax Hospital (OLD Comprehensive School)	CDS	300	305	164	54%
98	2019	GULSHAN	Azizabad	Dastagir Society	CDS	300	305	239	78%
99	2012	GULSHAN	Azizabad	Dehli College	CDS	300	305	149	49%
100	2156	GULSHAN	Azizabad	Memon Masjid	CDS	300	305	206	68%
101	2099	GULSHAN	Azizabad	Yasinabad	CDS	300	305	127	42%
102	2084 344	GULSHAN GULSHAN	Azizabad Azizabad	Raza Flour Mills Kohistan Builder (Gul-Shamim)	CDS	300 300	305 305	156 142	51% 47%
103	2073	GULSHAN	Azizabad	M.Younus	CDS	300	305	155	51%
105	3168	GULSHAN	Azizabad	Bantva-3	CDS	300	305	179	59%
106	138	BALDIA	BALDIA	MASJID-E-AKBAR	CDS	300	305	177	58%
107	3392	BALDIA	BALDIA	AL-FAWAD MEDICAL RMU	CDS	300	305	118	39%
108	1164	BALDIA	BALDIA	SECTOR-21	CDS	300	305	174	57%
109	3369	BALDIA	BALDIA	USMAN GHANI MASJID	CDS	300	305	95	31%
110	2025	Orangi	Baldia	RAEES AMROHI	CDS	300	305	158	52%
111	2181	Orangi	Baldia	MILLAT COLONY	CDS	300	305	154 96	50%
112 113	4118 1163	Orangi BALDIA	Baldia BALDIA	RIAZABAD BUS STOP (X-23 Bus Stop) NAVAL LOW COST	CDS	300 300	305 305	196	31% 64%
114	149	BALDIA	BALDIA	ALIFLAILA	CDS	300	305	201	66%
115	137	BALDIA	BALDIA	MOMINABAD	CDS	300	305	70	23%
116	147	Orangi	Baldia	HARYANA COLONY	CDS	300	305	128	42%
117	3915	BALDIA	BALDIA	FERRARI	CDS	300	305	184	60%
118	3916	BALDIA	BALDIA	AMAZON	CDS	300	305	108	36%
119	4011	BALDIA	BALDIA	YASOOB RMU (X-4 BUS STOP)	CDS	300	305	97	32%
120	1111	BALDIA	BALDIA	SAADULLAH GOTH	CDS	300	305	174	57%
121	3136	BALDIA	BALDIA	VIBC BALDIA SUPARCO ROAD P-01	CDS	300 300	305 305	8 178	3% 58%
123	1160 1159	BALDIA BALDIA	BALDIA BALDIA	QUTBI HOTEL	CDS	300	305	118	39%
124	134	BALDIA	BALDIA	AFRIDI COLONY	CDS	300	305	208	68%
125	140	BALDIA	BALDIA	KHYBER CHOWK	CDS	300	305	73	24%
126	136	BALDIA	BALDIA	SAEEDABAD	CDS	300	305	219	72%
127	2055	BALDIA	BALDIA	BUS TERMINAL	CDS	300	305	175	57%
128	3195	BALDIA	BALDIA	ITTEHAD COTTAGE INDUSTRY	CDS	300	305	211	69%
129	145	BALDIA	BALDIA	SIND CONSTABULARY	CDS	300	305	134	44%
130	133	BALDIA	BALDIA	MURSHID HOSPITAL	CDS	300	305	219	72%
131	148	BALDIA	BALDIA	EIDGAH P-47	CDS	300	305	119	39%
132	146 917	BALDIA BALDIA	BALDIA BALDIA	JAM SAHAB ROAD P-12 POLICE TRAINING CENTRE	CDS	300 300	305 305	133 129	44%
134	1161	BALDIA	BALDIA	NORTHERN ELECTRIC	CDS	300	305	75	25%
135	144	BALDIA	BALDIA	GOL SABEEL RMU	CDS	300	305	154	50%
136	3532	Orangi	Baldia	MALIK CHOWK RMU	CDS	300	305	226	74%
137	1162	BALDIA	BALDIA	HAPPY PAN HOUSE(P-29)	CDS	300	305	224	74%
138	130	Orangi	Baldia	FAQEER COLONY	CDS	300	305	174	57%
139	3338	BALDIA	BALDIA	MANSOOR SHER	CDS	300	305	155	51%
140	135	BALDIA	BALDIA	PAKISTAN BAZAR	CDS	300	305	224	73%
141	3622	BALDIA	BALDIA	FARAZ AHMED RMU	CDS	300	305	110	36%
142	3623	BALDIA	BALDIA	P-23 QAIM KHANI RMU	CDS	300	305	173	57%
143	3691 143	BALDIA BALDIA	BALDIA BALDIA	SAFFRON ENGINEERING KOHINOOR-2	CDS	300 300	305 305	109 117	36% 38%
144	3371	BALDIA	BALDIA	HAROON BEHRIA	CDS	300	305	211	69%
145	131	BALDIA	BALDIA	BILAL COACH	CDS	300	305	269	88%
147	3527	BALDIA	BALDIA	AKRAM STORE	CDS	300	305	140	46%
148	3626	BALDIA	BALDIA	MUSHARRAF COLONY RMU	CDS	300	305	170	56%
149	141	BALDIA	BALDIA	IQBAL ROAD RMU	CDS	300	305	219	72%
150	142	Orangi	Baldia	TOORI BANGASH	CDS	300	305	193	63%
151	3917	BALDIA	BALDIA	JACINDA	CDS	300	305	103	34%
152	3391	BALDIA	BALDIA	NOORANI MASJID	CDS	300	305	149	49%
153	2175	SOCIETY	BALOCH COLONY	BALOCH GRID PMT	DDS	300	305	6	2%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
154	483	SOCIETY	BALOCH COLONY	FEROZABAD POLICE STN	CDS	300	305	131	43%
155	3192	SOCIETY	BALOCH COLONY	FAZAIYA HOUSING PHASE-4	CDS	300	305	79	26%
156	489	SOCIETY	BALOCH COLONY	PAF HOUSING +	CDS	300	305	101	33%
157	3246	SOCIETY	BALOCH COLONY	JUMANI SQUARE RMU	CDS	300	305	181	59%
158 159	1141 3245	SOCIETY	BALOCH COLONY BALOCH COLONY	PROGRESSIVE CENTRE +	CDS	300 300	305 305	140 187	46% 61%
160	486	SOCIETY	BALOCH COLONY	JASON TRADE S/S TOYOTA MOTORS	CDS	300	305	106	35%
161	3331	SOCIETY	BALOCH COLONY	PESHAWARI ICE CREAM RMU	CDS	300	305	174	57%
162	488	SOCIETY	BALOCH COLONY	KARACHI MEMON MASJID +	CDS	300	305	89	29%
163	485	SOCIETY	BALOCH COLONY	RAO RMU	CDS	300	305	197	65%
164	504	SOCIETY	BALOCH COLONY	KHALIL A. SATTAR +	CDS	300	305	58	19%
165	498	SOCIETY	BALOCH COLONY	POLE-48+	CDS	300	305	83	27%
166	497	SOCIETY	BALOCH COLONY	SOIL MECHANICS	CDS	300	305	96	32%
167	3447	SOCIETY	BALOCH COLONY	AWAMI CHOWK	CDS	300	305	159	52%
168	495	SOCIETY	BALOCH COLONY	KAMAL PARK +	CDS	300	305	94	31%
169	491	SOCIETY	BALOCH COLONY	KARACHI ADMIN SOCIETY +	CDS	300	305	170	56%
170	499 492	SOCIETY	BALOCH COLONY BALOCH COLONY	MANZOOR COLONY ANUM CLASSIC	CDS	300 300	305 305	151 193	50% 63%
171 172	4143	SOCIETY	BALOCH COLONY	PNS MEHRAN	DDS	300	305	94	31%
173	2134	SOCIETY	BALOCH COLONY	SHEHNAZ ARCADE	CDS	300	305	160	53%
174	482	SOCIETY	BALOCH COLONY	ROYAL APARTMENT	CDS	300	305	115	38%
175	1120	SOCIETY	BALOCH COLONY	REHMAN COLONY +	CDS	300	305	97	32%
176	3433	SOCIETY	BALOCH COLONY	USAMA MASJID	CDS	300	305	70	23%
177	2118	SOCIETY	BALOCH COLONY	BALOCH CENTRE+	CDS	300	305	70	23%
178	490	SOCIETY	BALOCH COLONY	SHAHEEN AIR FORCE HOUSING +	CDS	300	305	118	39%
179	494	SOCIETY	BALOCH COLONY	PAF BASE FAISAL + CAP	DDS	300	305	184	60%
180	484	SOCIETY	BALOCH COLONY	UNITED HOSPITAL	CDS	300	305	45	15%
181	502	SOCIETY	BALOCH COLONY	GULZAR-E-HABIB RMU	CDS	300	305	158	52%
182	506	SOCIETY	BALOCH COLONY	KCHS -D (old name: N A BUILDERS)	CDS	300	305	50	17%
183	2125	SOCIETY	BALOCH COLONY	CITY MALL +	CDS	300	305	37	12%
184	1138	SOCIETY	BALOCH COLONY	DUTY FREE SHOP	CDS	300	305	191	63%
185	3258	SOCIETY	BALOCH COLONY	UBAIDULLAH	CDS	300	305	107	35%
186 187	2140 3445	SOCIETY	BALOCH COLONY BALOCH COLONY	CHAPTER SCHOOL SECTOR I RMU	CDS	300 300	305 305	115 113	38% 37%
188	1124	SOCIETY	BALOCH COLONY BALOCH COLONY	MEDICARE HOSPITAL	CDS	300	305	100	33%
189	503	SOCIETY	BALOCH COLONY	KDA COM COMPLEX	CDS	300	305	15	5%
190	2122	SOCIETY	BALOCH COLONY	RBS BANK	CDS	300	305	32	11%
191	3901	UTHAL	BELA	Bella Cross (Old POLE-01 BARA BAGH)	CDS	300	305	52	17%
192	3954	UTHAL	BELA	Ismailani	CDS	300	305	238	78%
193	3024	UTHAL	BELA	DANDA	CDS	300	305	266	87%
194	3026	UTHAL	BELA	WAYALO-1	CDS	300	305	301	99%
195	3587	UTHAL	BELA	Kandala (Old HT OH P-01)	CDS	300	305	0	0%
196	3025	UTHAL	BELA	KATHORE	CDS	300	305	323	106%
197	3407	UTHAL	BELA	JAM YOUSUF	CDS	300	305	178	58%
198 199	3023 3861	UTHAL Bin Qasim	BELA BOC	BARA BAGH A.M.O REFINARY	CDS	300 300	305 305	240 140	79% 46%
200	3155	Bin Qasim Bin Qasim	BOC	TY WILMER AGRO (old name: DESCON ENGINEER	CDS	300	305	165	54%
201	3049	Bin Qasim	BOC	PROCTER & GAMBLE	DDS	300	305	104	34%
202	3862	Bin Qasim	BOC	H-II CREETE	CDS	300	305	159	52%
203	3875	Bin Qasim	BOC	BH-708	DDS	300	305	136	44%
204	3877	Bin Qasim	BOC	BH-709	DDS	300	305	132	43%
205	4183	Bin Qasim	BOC	SYNERGY PACKAGING PVT LTD	DDS	300	305	29	9%
206	4009	Bin Qasim	BOC	IRFAN NOMAN	CDS	300	305	309	102%
207	3251	Bin Qasim	BOC	H.M EXTRACTION	DDS	300	305	73	24%
208	3252	Bin Qasim	BOC	AUSAF INDUSTRIES (OLD PAKI TEX)	DDS	300	305	52	17%
209	3389	Bin Qasim	BOC	SEPCO - 02	DDS	300	305	2	1%
210	3921	Bin Qasim	BOC	TUFAIL CHEMICAL Ltd (Zubair Tufail)	DDS	300	305	113	37%
211	3863	Bin Qasim	BOC	PLATINUM STEEL (Old name Shafi Iron Steel)	DDS	300	305	176	58%
212	3188 3234	Bin Qasim Bin Qasim	BOC BOC	GHANI CHEMICALS (old: GHANI GASES) COCA COLA-1	DDS	300 300	305 305	335 45	110% 15%
213	3234 4007	Bin Qasim Bin Qasim	BOC	RELIANCE INTERNATIONAL	CDS	400	305	152	44%
214	4209	Bin Qasim Bin Qasim	BOC	GHANI GASSES NO.2	DDS	300	305	0	0%
216	104	SOCIETY	CIVIC CENTRE	QUALITY BUILDER +	CDS	300	305	89	29%
217	2089	SOCIETY	CIVIC CENTRE	ZAHIR HOTEL	CDS	300	305	56	18%
218	2147	SOCIETY	CIVIC CENTRE	ALAMGIR	CDS	300	305	70	23%
219	2166	SOCIETY	CIVIC CENTRE	SHAHEED-E-MILLAT +	CDS	300	305	90	29%
220	1150	SOCIETY	CIVIC CENTRE	AMBER CINEMA+	CDS	300	305	58	19%
221	95	SOCIETY	CIVIC CENTRE	DADA TERRACE +	CDS	300	305	111	36%
222	3014	SOCIETY	CIVIC CENTRE	PEARL RESIDENCY	DDS	300	305	25	8%
223	94	SOCIETY	CIVIC CENTRE	CITY CENTER	CDS	300	305	101	33%
224	1127	SOCIETY	CIVIC CENTRE	PIB COLONY +	CDS	300	305	192	63%
225	107	SOCIETY	CIVIC CENTRE	KE WORKSHOP	CDS	300	305	48	16%
226	1362	SOCIETY	CIVIC CENTRE	TIME PRESS	CDS	300	305	101	33%
227	97	SOCIETY	CIVIC CENTRE	MUHAMMAD ALI SOCIETY	CDS	300	305	87	29%
228	99	GULSHAN	CIVIC CENTRE	Baradari	CDS	300	305	177	58%
229	3548	GULSHAN	CIVIC CENTRE	Rabbi Apartment	CDS	300	305	146	48%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
230	102	GULSHAN	CIVIC CENTRE	Eagle Squad +	CDS	300	305	54	18%
231	103	GULSHAN	CIVIC CENTRE	Paras Textile	CDS	300	305	118	39%
232	2135	SOCIETY	CIVIC CENTRE	A-1 CENTRE +	CDS	300	305	83	27%
233	110 105	SOCIETY	CIVIC CENTRE CIVIC CENTRE	PAK CAPITAL-3 NDFC	CDS	300 300	305 305	125 109	41% 36%
235	1169	SOCIETY	CIVIC CENTRE	FALCON PLAZA	CDS	300	305	110	36%
236	116	SOCIETY	CIVIC CENTRE	NOBLE HEIGHTS +	CDS	300	305	108	35%
237	3507	SOCIETY	CIVIC CENTRE	KERNAL BASTI	CDS	300	305	177	58%
238	98	SOCIETY	CIVIC CENTRE	MILK PLANT +	CDS	300	305	140	46%
239	109	GULSHAN	CIVIC CENTRE	Expo Center +	CDS	300	305	13	4%
240	1152	GULSHAN	CIVIC CENTRE	General Society	CDS	300	305	18	6%
241	114	SOCIETY	CIVIC CENTRE	CHAWLA FLATS	CDS	300	305	87	28%
242	3139	SOCIETY	CIVIC CENTRE	SALATEEN	CDS	300	305	72	24%
243	1168	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-4 +	CDS	300	305	41	14%
244	113	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-5	CDS	300	305	64	21%
245	3697	GULSHAN	CIVIC CENTRE	Ghousia Bakery	CDS	300	305	130	43%
246	117	GULSHAN	CIVIC CENTRE	QDC	CDS	300	305	149	49%
247 248	1170 100	SOCIETY	CIVIC CENTRE CIVIC CENTRE	PNS BAHADUR KARACHI IRON+	CDS	300 300	305 305	40 90	13% 30%
249	3380	SOCIETY	CIVIC CENTRE	MAQBOOLABAD	CDS	300	305	124	41%
250	1176	GULSHAN	CIVIC CENTRE	Army Housing-5	CDS	300	305	23	7%
251	1177	GULSHAN	CIVIC CENTRE	Army Housing-9	CDS	300	305	33	11%
252	108	SOCIETY	CIVIC CENTRE	LIAQUAT NATIONAL LIBRARY+CAP 3	CDS	300	305	68	22%
253	111	GULSHAN	CIVIC CENTRE	Rukknuddin	CDS	300	305	61	20%
254	101	SOCIETY	CIVIC CENTRE	KDA LSR	CDS	300	305	209	68%
255	3274	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 1	DDS	300	305	9	3%
256	4061	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE WEST	DDS	300	305	26	9%
257	3271	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING WEST	DDS	300	305	78	26%
258	3273	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 2	DDS	300	305	115	38%
259	4062	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE EAST	DDS	300	305	20	7%
260	4060	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL 1	DDS	300	305	130	43%
261	3270	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING EAST	DDS	300	305	80	26%
262	3272	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 1	DDS	300	305	100	33%
263	3275	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 2	DDS	300	305	15	5%
264	125	Bin Qasim	CIVIL AVIVATION AUTH	SHAH FAISAL TOWN	CDS	300	305	110	36%
265	124	Bin Qasim	CIVIL AVIVATION AUTH	SAUDABAD PUMPING	CDS	300	305 305	137	45%
266 267	121 3122	Bin Qasim Bin Qasim	CIVIL AVIVATION AUTH CIVIL AVIVATION AUTH	LAL MASJID TARIQ BIN ZIAD	CDS	300 300	305	213 138	70% 45%
268	120	Bin Qasim	CIVIL AVIVATION AUTH	SECURITY PAPER MILL	DDS	300	305	59	19%
269	123	Bin Qasim	CIVIL AVIVATION AUTH	MOINABAD	CDS	300	305	234	77%
270	2070	Bin Qasim	CIVIL AVIVATION AUTH	IBRAHIM NAFEES RMU	CDS	300	305	177	58%
271	126	Bin Qasim	CIVIL AVIVATION AUTH	AIR LOGISTICS (OLD MAKRO HABIB)	DDS	300	305	110	36%
272	122	Bin Qasim	CIVIL AVIVATION AUTH	MODEL COLONY 'A'	CDS	300	305	161	53%
273	3015	DEFENCE	Clifton	International Complex-2	DDS	300	305	92	30%
274	3019	DEFENCE	Clifton	International Complex-4	DDS	300	305	107	35%
275	78	DEFENCE	Clifton	KDA Flats	CDS	300	305	71	23%
276	83	DEFENCE	Clifton	Merchant Construction	CDS	300	305	166	54%
277	1359	DEFENCE	Clifton	Haseeb Polani	CDS	300	305	64	21%
278	82	DEFENCE	Clifton	Caltex	CDS	300	305	111	36%
279	85	DEFENCE	Clifton	Chappal Luxury	CDS	300	305	142	47%
280	3183	DEFENCE	Clifton	Awan House RMU	CDS	300	305	57	19%
281	3190	DEFENCE DEFENCE	Clifton Clifton	M. Ali Chawla	CDS	300	305	133	44% 43%
282	3174 3384	DEFENCE	Clifton	Kuwait Consulate Masan Road RMU	CDS	300 300	305 305	132 229	43% 75%
284	1173	DEFENCE	Clifton	Agha Khan Park	CDS	300	305	192	63%
285	3191	DEFENCE	Clifton	Progressive Garden	CDS	300	305	150	49%
286	3193	DEFENCE	Clifton	Triple Tree	DDS	300	305	103	34%
287	3733	DEFENCE	Clifton	Bakht Tower	DDS	300	305	31	10%
288	3734	DEFENCE	Clifton	M. Ishaq Enterprises	CDS	300	305	85	28%
289	90	DEFENCE	Clifton	Sasi Home	CDS	300	305	178	58%
290	93	DEFENCE	Clifton	China Consulate	CDS	300	305	187	61%
291	3182	DEFENCE	Clifton	Mundra Chowk-2	CDS	300	305	148	49%
292	92	DEFENCE	Clifton	Grammer College	CDS	300	305	84	27%
293	87	DEFENCE	Clifton	Poonawala	CDS	300	305	231	76%
294	89	DEFENCE	Clifton	Clifton Center	CDS	300	305	97	32%
295	1360	DEFENCE	Clifton	Minister Residency	CDS	300	305	162	53%
296	91	DEFENCE	Clifton	Shaista Builder	CDS	300	305	195	64%
297	88	DEFENCE	Clifton	Bath Island	CDS	300	305	105	34%
298	77	DEFENCE	Clifton	MUNEEB KAMIL (CUSTOM SOCIETY)	CDS	300	305	107	35%
299	2068	DEFENCE	Clifton	International Complex-1	DDS	300	305	105	35%
300 301	3018 1174	DEFENCE	Clifton Clifton	International Complex-3	DDS	300 300	305 305	105 145	35% 48%
301	1174 86	DEFENCE DEFENCE	Clifton	Gulshan-e-Faisal Ziauddin Sewerage Pumping	CDS	300	305	145 58	48% 19%
302	2174	DEFENCE	Clifton	Boat View	CDS	300	305	109	36%
202									43%
304	80	DEFENCE	Clifton	Burma Shell	CDS	300	305	132	

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
306	1172	DEFENCE	Clifton	Mundra Chowk-1	CDS	300	305	170	56%
307	79	DEFENCE	Clifton	Shirin Jinnah	CDS	300	305	197	65%
308	84	DEFENCE	Clifton	Marine Blessing	CDS	300	305	59	19%
309	3688	DEFENCE	CREEK CITY VISTA	KIOSK-10	CDS	300	305	0	0%
310	3625	DEFENCE	CREEK CITY VISTA	Moin Khan Academy	DDS	300	305	9	3%
311	3821	DEFENCE	CREEK CITY VISTA	DHA PHASE-8 SECTOR-D (old: Sector-D S/S-3)	CDS	300	305	6	2% 5%
312 313	2002	DEFENCE DEFENCE	CREEK CITY VISTA CREEK CITY VISTA	Creek City SS-4 Creek City SS-6	CDS	300 300	305 305	16 14	5%
314	3393	DEFENCE	CREEK CITY VISTA	Kh-e-Baber KIOSK-3	CDS	300	305	36	12%
315	3151	DEFENCE	CREEK CITY VISTA	Golf Club	CDS	300	305	64	21%
316	3687	DEFENCE	CREEK CITY VISTA	KIOSK-09	CDS	300	305	0	0%
317	3171	DEFENCE	CREEK CITY VISTA	Nue Multi-Plux	CDS	300	305	53	18%
318	2001	DEFENCE	CREEK CITY VISTA	Creek City SS-5	CDS	300	305	16	5%
319	3280	DEFENCE	CREEK CITY VISTA	Creek Club	CDS	300	305	119	39%
320	3715	DEFENCE	CREEK CITY VISTA	Sector C-8 S/S-3	CDS	300	305	3	1%
321	3716	DEFENCE	CREEK CITY VISTA	Sector C-8 S/S-5	CDS	300	305	3	1%
322	3859	DEFENCE	CREEK CITY VISTA	Emaar Giga Karachi Ltd	DDS	300	305	126	41%
323	3317	DEFENCE	CREEK CITY VISTA	KIOSK-1 Iqbal Lane	CDS	300	305	53	17%
324	4037	DEFENCE	CREEK CITY VISTA	AL MURTAZA COMMERCIAL-23	CDS	400	347	11	3%
325	4038	DEFENCE	CREEK CITY VISTA	Zulfigar Commercial -13	CDS	400	347	5	1%
326 327	4039 4002	DEFENCE DEFENCE	CREEK CITY VISTA CREEK CITY VISTA	Zulfiqar Commercial-01 KH-E-SHAJAR SECTOR-E S/S-2	CDS	400 400	347 347	3	1% 1%
327	2009	DEFENCE	CREEK CITY VISTA	Creek City SS-3	CDS	300	347	22	7%
329	2010	DEFENCE	CREEK CITY VISTA	Creek City 53-5	CDS	300	305	25	8%
330	4084	Defence	CREEK CITY VISTA	16TH STREET SHAJAR KIOSK-2	DDS	300	305	1	0%
331	4085	Defence	CREEK CITY VISTA	DHA-2 GRID KIOSK-1	DDS	300	305	2	1%
332	4139	Defence	CREEK CITY VISTA	KH-E-ARFAAT KIOSK-3	DDS	300	305	1	0%
333	4131	Defence	CREEK CITY VISTA	KH-E-GHALIB KIOSK-12	DDS	300	305	11	4%
334	4132	Defence	CREEK CITY VISTA	TIPU SULTAN KIOSK-6	DDS	300	305	75	25%
335	4086	Defence	CREEK CITY VISTA	CREEK GRID KIOSK-7	DDS	300	305	30	10%
336	4070	Bin Qasim	DCK	DHA CITY FEEDER NO.1	DDS	300	305	0	0%
337	3690	DEFENCE	Defence	19th Street Bukhari RMU	CDS	300	305	37	12%
338	66	DEFENCE	Defence	Carlton Hotel	CDS	300	305	74	24%
339	69	DEFENCE	Defence	Darakhshan-4	CDS	300	305	190	62%
340	3494	DEFENCE	Defence	30th Street Rahat RMU	CDS	300	305	39	13%
341	58	DEFENCE	Defence	Defence-14	CDS	300	305	96	31%
342	60	DEFENCE	Defence	Sea View-1	CDS	300	305	188	62%
343	70	DEFENCE	Defence	Shaikh Zaid	CDS	300	305	122	40%
344 345	3506 62	DEFENCE DEFENCE	Defence Defence	Mall Square Mubarak Masjid	CDS	300 300	305 305	190 77	62% 25%
346	3486	DEFENCE	Defence	Saba Avenue RMU	CDS	300	305	152	50%
347	61	DEFENCE	Defence	Zamzama Pump	CDS	300	305	124	41%
348	3467	DEFENCE	Defence	Shaheen Grid RMU	CDS	300	305	123	40%
349	67	DEFENCE	Defence	Kh-e-Bukhari	CDS	300	305	104	34%
350	3501	DEFENCE	Defence	Kh-e-Shujaat-2 RMU	CDS	300	305	47	16%
351	3495	DEFENCE	Defence	Farhat Fatima RMU	CDS	300	305	68	22%
352	65	DEFENCE	Defence	WEST POINT TOWER (ITTEHAD)	CDS	300	305	38	12%
353	2020	DEFENCE	Defence	ISI RMU	CDS	300	305	105	35%
354	2172	DEFENCE	Defence	Zafar Alam (Kh-e-Shujaat)	CDS	300	305	50	16%
355	3485	DEFENCE	Defence	16th Nishat RMU	CDS	300	305	42	14%
356	1180	DEFENCE	Defence	DHA Phase-7 Ext	CDS	300	305	45	15%
357	73	DEFENCE	Defence	Model School	CDS	300	305	191	63%
358	3538	DEFENCE	Defence	Football Ground	CDS	300	305	98	32%
359	74	DEFENCE	Defence	PNS Haider	CDS	300	305	91	30%
360 361	71 3493	DEFENCE DEFENCE	Defence Defence	Defence Pumping-2 DHA Pump RMU	CDS	300 300	305 305	170 50	56% 16%
362	63	DEFENCE	Defence	Misri Shah Tele Exchange	CDS	300	305	92	30%
363	3491	DEFENCE	Defence	Wahid Butt RMU	CDS	300	305	72	24%
364	2149	DEFENCE	Defence	Saeed-uz-Zafar	CDS	300	305	97	32%
365	1178	DEFENCE	Defence	Defence-15	CDS	300	305	154	51%
366	3711	DEFENCE	Defence	Atif Latif RMU	CDS	300	305	33	11%
367	1584	DEFENCE	Defence	Al-Burj	CDS	300	305	45	15%
368	3712	DEFENCE	Defence	Popular Avenue RMU	CDS	300	305	85	28%
369	2063	DEFENCE	Defence	12th Lane Sehar	CDS	300	305	164	54%
370	75	DEFENCE	Defence	Coastal Street	CDS	300	305	222	73%
371	3337	DEFENCE	Defence	Beach View	CDS	300	305	92	30%
372	3713	DEFENCE	Defence	Iftikhar Soomro RMU	CDS	300	305	49	16%
373	2076	DEFENCE	Defence	Shaheen off Nishat	CDS	300	305	29	9%
374	1179	DEFENCE	Defence	Badar Commercial RMU	CDS	300	305	39	13%
375	3346	DEFENCE	Defence	Nasir Saleem RMU	CDS	300	305	30	10%
376	3343	DEFENCE	Defence	Farah Ali RMU	CDS	300	305	31	10%
377	3319	DEFENCE	Defence	Faiz Mari	CDS	300	305	101	33%
378	3307	DEFENCE	Defence	Ejaz Ansari RMU	CDS	300	305	118	39%
379 380	2157 3340	DEFENCE DEFENCE	Defence Defence	21st Street Kh-e-Rahat BRIDG. JAVED RMU	CDS	300 300	305 305	123 79	40% 26%
380	2017	DEFENCE	Defence	DHA Hockey Stadium	CDS	300	305	84	28%
201	1 201/	DEFENCE	Detelling	DITA HOUKEY STAGIGITI	LDS	300	303	04	2070

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
382	2078	DEFENCE	Defence	Kh-e-Ghazi Pumping	CDS	300	305	136	45%
383	3304	DEFENCE	Defence	Tariq Gazdar	CDS	300	305	39	13%
384	59	DEFENCE	Defence	Kh-e-Rahat Park	CDS	300	305	89	29%
385 386	3306 64	DEFENCE DEFENCE	Defence Defence	Asma Begum RMU Sea View-12	CDS	300 300	305 305	146 162	48% 53%
387	3496	DEFENCE	Defence	Sea view-12 Shaikh Jalil	CDS	300	305	149	49%
388	2171	DEFENCE	Defence	Army House	CDS	300	305	131	43%
389	3651	DEFENCE	DHA	Murtaza Commercial S/S-01	CDS	300	305	13	4%
390	3379	DEFENCE	DHA	Kh-e-Tufail S/S-18	CDS	300	305	28	9%
391	3652	DEFENCE	DHA	Zulfiqar Commercial S/S-02	CDS	300	305	15	5%
392	3653	DEFENCE	DHA	Zulfiqar Commercial S/S-03	CDS	300	305	11	3%
393	3408	DEFENCE	DHA	Ayubbia Commercial S/S-07	CDS	300	305	18	6%
394	3254	DEFENCE	DHA	DHA Phase-8 S/S-07	CDS	300	305	98	32%
395	3308	DEFENCE	DHA	Kh-e-Abbasi	CDS	300	305	102	33%
396 397	3322 3253	DEFENCE DEFENCE	DHA DHA	Kh-e-Saadi DHA Phase-8 S/S-14	CDS	300 300	305 305	92 179	59%
398	3377	DEFENCE	DHA	Sun Rise Avenue S/S-40	CDS	300	305	29	9%
399	3378	DEFENCE	DHA	Hussain Shaheed Road S/S-27	CDS	300	305	35	11%
400	4001	DEFENCE	DHA	KH-E-GHALIB SECTOR-E S/S-1	CDS	400	347	1	0%
401	4081	DEFENCE	DHA	35th Street Khy E Khalid	CDS	300	305	1	0%
402	4082	Defence	DHA	31ST STREET KH-E-QASIM S/S-52	CDS	300	305	139	45%
403	4135	DEFENCE	DHA	KH-E-AZEEM STREET S/S-9	CDS	300	305	4	1%
404	4134	DEFENCE	DHA	TARIQ COMMERCIAL S/S-37	CDS	300	305	5	2%
405	4136	DEFENCE	DHA	5TH TARIQ COMM S/S-34	CDS	300	305	5	2%
406	4137	DEFENCE	DHA	KHALID COMMERCIAL S/S-16	CDS	300	305	4	1%
407	4138	DEFENCE Dia Casias	DHA	KH-E- SHABBIR S/S-22	CDS	300	305	4	1%
408	158	Bin Qasim Bin Qasim	DHABEJI	INDUS JUTE	DDS	300	305	41	13%
409 410	3265 3511		DHABEJI DHABEJI	NOORI ENTRPRISES (EX MESKAY & FEMTEE) FAUJI MEAT LTD1 (FML-1)	CDS DDS	300 300	305 305	198 0	65% 0%
410	3354	Bin Qasim Bin Qasim	DHABEJI	FAUJI MEAT LTD1 (FML-1) FAUJI MEAT LTD2 (FML-2)	DDS	300	305	54	18%
412	151	Bin Qasim	DHABEJI	UNIVERSAL BOARD-1 (OLD UNIVERSAL BOARD)	DDS	300	305	1	0%
413	154	Bin Qasim	DHABEJI	UNIVERSAL BOARD-2 (OLD P.I.G-1)	DDS	300	305	0	0%
414	162	Bin Qasim	DHABEJI	MADERSA TALEEM QURAN RMU	CDS	300	305	56	18%
415	2129	Bin Qasim	DHABEJI	PAK IND GASES-2	CDS	300	305	84	28%
416	153	Bin Qasim	DHABEJI	OR MANSHA FARM + Cap (OLD KDA PUMPING N	CDS	300	305	8	3%
417	156	Bin Qasim	DHABEJI	K-III-5	DDS	300	305	2	1%
418	3112	Bin Qasim	DHABEJI	KDA PUMPING NO. 2	DDS	300	305	239	78%
419	166	Bin Qasim	DHABEJI	FORBUS CHLORIDE	CDS	300	305	29	10%
420	155	Bin Qasim	DHABEJI	K-III-2	DDS	300	305	197	65%
421	3705	Bin Qasim	DHABEJI	KDA PUMPING NO. 7	DDS	300	305	158	52%
422 423	157 3593	Bin Qasim Bin Qasim	DHABEJI DHABEJI	K-III-1 NAVAL DDP NWHS	DDS CDS	300 300	305 305	165 21	54% 7%
424	2127	Bin Qasim	DHABEJI	K-III-6	DDS	300	305	177	58%
425	4041	Bin Qasim	DHABEJI	BHAMBORE RICE MILL	DDS	300	305	35	12%
426	3868	Bin Qasim	DHABEJI	KDA PUMPING NO. 9	DDS	300	305	103	34%
427	3867	Bin Qasim	DHABEJI	KDA PUMPING NO. 8	DDS	300	305	106	35%
428	160	Bin Qasim	DHABEJI	N.M POULTRY FARM (OLD BUX TEXTILE)	CDS	300	305	15	5%
429	152	Bin Qasim	DHABEJI	KDA PUMPING NO. 1	DDS	300	305	215	71%
430	165	Bin Qasim	DHABEJI	KDA PUMPING NO. 6	DDS	300	305	86	28%
431	164	Bin Qasim	DHABEJI	KDA PUMPING NO. 5	DDS	300	305	239	78%
432	163	Bin Qasim	DHABEJI	FRIENDS	CDS	300	305	92	30%
433 434	167 168	Bin Qasim Bin Qasim	DHABEJI	K-III-3 K-III-4	DDS DDS	300 300	305 305	236	78% 48%
434	183	BALDIA	ELANDER ROAD	MEHRAB KHAN	CDS	300	305	145 235	48% 77%
436	175	DEFENCE	ELANDER ROAD	High Court	CDS	300	305	35	11%
437	1192	DEFENCE	ELANDER ROAD	Meetha Ram Hostel	CDS	300	305	99	32%
438	1185	DEFENCE	ELANDER ROAD	Caesar Tower	CDS	300	305	56	18%
439	2040	DEFENCE	ELANDER ROAD	Green Street	CDS	300	305	160	52%
440	1187	DEFENCE	ELANDER ROAD	BFC	DDS	300	305	101	33%
441	1339	SOCIETY	ELANDER ROAD	YWCA	CDS	300	305	194	64%
442	182	DEFENCE	ELANDER ROAD	Karim Center	CDS	300	305	153	50%
443	1183	SOCIETY	ELANDER ROAD	RIMPA PLAZA	CDS	300	305	134	44%
444	2109	DEFENCE	ELANDER ROAD	Aiwan-e-Sadar	CDS	300	305	71	23%
445 446	179 171	DEFENCE DEFENCE	ELANDER ROAD ELANDER ROAD	Tibet Center Old Sindh Assembly Building	CDS DDS	300 300	305 305	77 26	25% 9%
446	177	DEFENCE	ELANDER ROAD	President House	CDS	300	305	43	14%
448	3242	DEFENCE	ELANDER ROAD	Railway Colony	CDS	300	305	78	26%
449	1189	SOCIETY	ELANDER ROAD	IQBAL CENTER	CDS	300	305	127	42%
450	894	DEFENCE	ELANDER ROAD	Shaheen Foundation	DDS	300	305	59	19%
451	3289	DEFENCE	ELANDER ROAD	New Sindh Provincial Assembly	DDS	300	305	47	16%
452	3321	SOCIETY	ELANDER ROAD	TRAUMA CENTRE	DDS	300	305	62	20%
453	3358	SOCIETY	ELANDER ROAD	SIUT	DDS	300	305	37	12%
454	3530	SOCIETY	ELANDER ROAD	LADY DUFFERIN	CDS	300	305	144	47%
455	1338	DEFENCE	ELANDER ROAD	Millat Press	CDS	300	305	111	36%
456	2056	DEFENCE	ELANDER ROAD	Jama Cloth	CDS	300	305	105	34%
457	1568	DEFENCE	ELANDER ROAD	Muslim Gymkhana	CDS	300	305	89	29%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
458	1112	DEFENCE	ELANDER ROAD	Landhi Chawl	CDS	300	305	183	60%
459	21	DEFENCE	ELANDER ROAD	Hilton Hotel	CDS	300	305	168	55%
460	1585	SOCIETY	ELANDER ROAD	CIVIL BURNS WARD	DDS	300	305	52	17%
461	3854	DEFENCE	ELANDER ROAD	Surgical Complex (Jinnah-1)	DDS	300	305	111	36%
462	170	DEFENCE	ELANDER ROAD	Pak Herald	CDS	300	305	86	28%
463	178	SOCIETY	ELANDER ROAD	FTC	CDS	300	305	66	22%
464	2008	DEFENCE	ELANDER ROAD	Court Road Rmu	CDS	300	305	92	30%
465	1567	DEFENCE	ELANDER ROAD	Zainab Market	CDS	300	305	107	35%
466	24	DEFENCE	ELANDER ROAD	Jabbar Plaza	CDS	300	305	98	32%
467	2102	DEFENCE	ELANDER ROAD	Saima Tower-3	DDS	300	305	22	7%
468	181	DEFENCE	ELANDER ROAD	Registrar Office	DDS	300	305	48	16%
469	3148	DEFENCE	ELANDER ROAD	Hydro Carbon	CDS	300	305	174	57%
470	1184	DEFENCE	ELANDER ROAD	SH Enterprizes	CDS	300	305	63	21%
471	1191	DEFENCE	ELANDER ROAD	Modern Graphic	CDS	300	305	121	40%
472	172	DEFENCE	ELANDER ROAD	Habib Bank Plaza	CDS	300	305	114	37%
473	174	DEFENCE	ELANDER ROAD	Dehli Muslim	CDS	300	305	68	22%
474	184	DEFENCE	ELANDER ROAD	Cotton Exchange	CDS	300	305	188	62%
475	1186	DEFENCE	ELANDER ROAD	Commerce Center	CDS	300	305	77	25%
476	176	DEFENCE	ELANDER ROAD	Saima Tower-1	DDS	300	305	78	26%
477	737	DEFENCE	ELANDER ROAD	Bank Quarters	CDS	300	305	169	55%
478	2144	DEFENCE	ELANDER ROAD	Radio Pakistan	CDS	300	305	80	26%
479	3424	DEFENCE	ELANDER ROAD	Iran Centre	CDS	300	305	84	27%
480	3423	DEFENCE	ELANDER ROAD	Sunny Side	CDS	300	305	27	9%
481	173	SOCIETY	ELANDER ROAD	VISHANDAS	CDS	300	305	160	52%
482	180	DEFENCE	ELANDER ROAD	Computer Building	CDS	300	305	68	22%
483	1193	DEFENCE	ELANDER ROAD	State Bank Bungalows	CDS	300	305	157	52%
484	185	DEFENCE	ELANDER ROAD	Namco Center	CDS	300	305	172	57%
485	3434	DEFENCE	ELANDER ROAD	Askari-3	CDS	300	305	97	32%
486	3429	DEFENCE	ELANDER ROAD	Jinnah Hospital-2	DDS	300	305	198	65%
487	3142	JOHAR	FEDERAL-A	GULSHAN VIEW	CDS	300	305	73	24%
488	3919	JOHAR	FEDERAL-A	SHUMAIL COMPLEX	CDS	300	305	75	25%
489	893	GULSHAN	Federal-A	Allama Iqbal School (Five Star)	CDS	300	305	28	9%
490	3336	JOHAR	FEDERAL-A	AL-ASIF SQUARE	CDS	300	305	189	62%
491	1631	Surjani	Federal-A	Kiran Arcade (P-19)	CDS	300	305	134	44%
492	3145	Surjani	Federal-A	Miskeenabad	CDS	300	305	117	38%
493	3558	JOHAR	FEDERAL-A	AL MEMON CHS	CDS	300	305	182	60%
494	891 194	Surjani GULSHAN	Federal-A Federal-A	Sewerage Plant Aziz Industries	CDS	300 300	305 305	140 135	46% 44%
496	892	JOHAR	FEDERAL-A	KHAN BROTHERS	CDS	300	305	108	36%
490	3339	JOHAR	FEDERAL-A	PETAL RESIDENCY	CDS	300	305	230	75%
498	3162	GULSHAN	Federal-A	Regal Textile	CDS	300	305	140	46%
499	3918	JOHAR	FEDERAL-A	DELUXE TOWN	CDS	300	305	182	60%
500	186	GULSHAN	Federal-A	Basra Soap	CDS	300	305	68	22%
501	3164	Surjani	Federal-A	Gabol Town	CDS	300	305	189	62%
502	1201	GULSHAN	Federal-B	Abid Plaza	CDS	300	305	92	30%
503	3466	GULSHAN	Federal-B	Anwar-ul-Uloom	CDS	300	305	103	34%
504	206	GULSHAN	Federal-B	Ruqaiyya Square	CDS	300	305	145	48%
505	209	Surjani	Federal-B	Taimuria Library	CDS	300	305	206	68%
506	3335	Surjani	Federal-B	Dental College	CDS	300	305	56	18%
507	211	Surjani	Federal-B	Habib Foundation	CDS	300	305	113	37%
508	1199	GULSHAN	Federal-B	Gulberg	CDS	300	305	163	54%
509	1203	GULSHAN	Federal-B	Farooq-e-Azam	CDS	300	305	120	39%
510	217	GULSHAN	Federal-B	Edhi Home (Old Maymar Housing)	CDS	300	305	142	46%
511	3605	Surjani	Federal-B	Rizwan Plaza	CDS	300	305	193	63%
512	2097	GULSHAN	Federal-B	Aisha Manzil (Old Meena)	CDS	300	305	110	36%
513	197	GULSHAN	Federal-B	KMC Water Pump	CDS	300	305	134	44%
514	192	GULSHAN	Federal-B	Chand Market	CDS	300	305	155	51%
515	4092	GULSHAN	Federal-B	Lyra Shoes	DDS	300	305	122	40%
516	191	GULSHAN	Federal-B	Plastic Crafter	CDS	300	305	193	63%
517	3325	GULSHAN	Federal-B	Union Textile	CDS	300	305	119	39%
518	4264	GULSHAN	Federal-B	MEHBOOB REROLLING	DDS	300	305	0	0%
519	215	Surjani	Federal-B	Labour Square	CDS	300	305	74	24%
520	187	Surjani	Federal-B	New Karachi	CDS	300	305	130	43%
521	1200	GULSHAN	Federal-B	Tahir Villa	CDS	300	305	157	51%
522	204	Surjani	Federal-B	Supreme Height (Old Rizwan Plaza)	CDS	300	305	106	35%
523	205	GULSHAN	Federal-B	UBL Sports	CDS	300	305	78	26%
524	189	Surjani	Federal-B	Rahim Textile	CDS	300	305	127	42%
525	3457	Surjani	Federal-B	Sareena	CDS	300	305	133	44%
526	196	GULSHAN	Federal-B	R.I.G SCHOOL	CDS	300	305	61	20%
527	3604	GULSHAN	Federal-B	Shafiq-II	CDS	300	305	175	58%
528	188	Surjani	Federal-B	RP Confectionary	CDS	300	305	132	43%
529	3428	Surjani	Federal-B	PNSC	CDS	300	305	113	37%
530	193	GULSHAN	Federal-B	Pyramid Center	CDS	300	305	86	28%
531	212	Surjani	Federal-B	KBR Society + Cap-5A	CDS	300	305	166	55%
532	3165	Surjani	Federal-B	Pole-12 Sector 12-D	CDS	300	305	127	42%
533	3287	Surjani	Federal-B	Namak Bank	CDS	300	305	160	53%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
534	3456	Surjani	Federal-B	Summit Bank	CDS	300	305	182	60%
535	213	Surjani	Federal-B	Shamsi Garment	CDS	300	305	178	58%
536	214	GULSHAN	Federal-B	South Federal B	CDS	300	305	148	49%
537 538	225 221	Surjani GULSHAN	Federal-B Federal-B	SHAH KHALID COLONY (OLD ROSHAN BAGH) M. Yousuf Igbal +	CDS	300 300	305 305	122 124	40% 41%
539	216	GULSHAN	Federal-B	Ancholi Society	CDS	300	305	139	46%
540	208	GULSHAN	Federal-B	Ayub Manzil	CDS	300	305	220	72%
541	1198	GULSHAN	Federal-B	UK Square	CDS	300	305	124	41%
542	3143	JOHAR	Federal-B	POLE - 20	CDS	300	305	202	66%
543	195	GULSHAN	Federal-B	Abbas Square	CDS	300	305	60	20%
544	222	GULSHAN	Federal-B	Progressive	CDS	300	305	122	40%
545	3748	Surjani	Federal-B	Al-Akhwan Masjid	CDS	300	305	181	59%
546	3163	Surjani	Federal-B	Al-Madina Godhra	CDS	300	305	180	59%
547	224	GULSHAN	Federal-B	Naseerabad (Khi Academy)	CDS	300	305	75	25%
548 549	1205 218	GULSHAN GULSHAN	Federal-B Federal-B	Shamim Appt. Cosmos Plaza	CDS	300 300	305 305	176 90	58% 29%
550	190	GULSHAN	Federal-B	Saghir Center (Rashid Minhas)	CDS	300	305	124	41%
551	890	GULSHAN	Federal-B	Al-Noor Society +	CDS	300	305	213	70%
552	223	GULSHAN	Federal-B	Relax Appartment	CDS	300	305	124	41%
553	220	GULSHAN	Federal-B	Eastern Services + Cap 6	CDS	300	305	166	54%
554	2083	GULSHAN	Federal-B	Ideal Industry	CDS	300	305	147	48%
555	1196	GULSHAN	Federal-B	Wonder Bread	CDS	300	305	172	56%
556	3956	JOHAR	GADAP	LUBNA FARM	CDS	300	305	112	37%
557	228	JOHAR	GADAP	AGHA SHAHI	CDS	300	305	166	55%
558	227	JOHAR	GADAP	HUDERWA	CDS	300	305	83	27%
559 560	229 3303	JOHAR Bin Qasim	GADAP GADAP	WAPDA O/H GOLF COURSE (BAHRIA TOWN-1)	CDS DDS	300 300	305 305	26	8% 67%
561	230	JOHAR	GADAP	DANISH FARM RMU	CDS	300	305	204 115	38%
562	3484	Bin Qasim	GADAP	PRECINCT 10A (BAHRIA TOWN-2)	DDS	300	305	185	61%
563	226	JOHAR	GADAP	DEH SHAH MUREED	CDS	300	305	136	45%
564	4262	Bin Qasim	GADAP	BAHRIA TOWERS (Bahria-Town-4)	DDS	300	305	238	78%
565	4261	Bin Qasim	GADAP	MIDWAY COMMERCIAL (Bahria-Town-3)	DDS	300	305	248	81%
566	3410	SOCIETY	GARDEN	IBC GARDEN RMU	CDS	300	305	15	5%
567	3590	SOCIETY	GARDEN	PARSA CITY GARDEN	CDS	300	305	32	11%
568	232	SOCIETY	GARDEN	Z00	CDS	300	305	97	32%
569 570	3406 237	SOCIETY	GARDEN GARDEN	NAGORI HOSPITAL AMBAJEE VILLAJEEE	CDS	300 300	305 305	84 159	27% 52%
571	231	SOCIETY	GARDEN	RAM SWAMI	CDS	300	305	84	28%
572	234	SOCIETY	GARDEN	GARDEN-II	CDS	300	305	85	28%
573	235	SOCIETY	GARDEN	ISMAILIA PLATINUM	CDS	300	305	105	34%
574	236	SOCIETY	GARDEN	HOLY FAMILY	CDS	300	305	150	49%
575	3309	SOCIETY	GARDEN	IBA-2	DDS	300	305	35	12%
576	251	SOCIETY	GARDEN	KARACHI SCHOLAR RMU	CDS	300	305	64	21%
577	239	SOCIETY	GARDEN	KMC BUILDING	CDS	300	305	89	29%
578	248	SOCIETY	GARDEN	ADAMJI SCIENCE COLLEGE	CDS	300	305	122	40%
579	254	SOCIETY	GARDEN	MAZAR-E-QUAID-3	CDS	300	305	154	51%
580 581	240 3332	SOCIETY BALDIA	GARDEN GARDEN	HOTI MARKET AZEEM PLAZA SS-1	CDS	300 300	305 305	61 97	20% 32%
582	250	BALDIA	GARDEN	QASIM BHAI MOOSA BHAI	CDS	300	305	194	64%
583	243	BALDIA	GARDEN	SALEEM TERRACE + Cap	CDS	300	305	254	83%
584	2011	DEFENCE	Garden	Star City	CDS	300	305	128	42%
585	244	Orangi	Garden	PASBAN MASJID	CDS	300	305	176	58%
586	682	BALDIA	GARDEN	ANA CROWN	CDS	300	305	217	71%
587	246	SOCIETY	GARDEN	CIVIL HOSPITAL-3	DDS	300	305	72	24%
588	253	SOCIETY	GARDEN	GURUMANDIR	CDS	300	305	79	26%
589	247	DEFENCE	Garden	Naz Plaza	CDS	300	305	31	10%
590	242 257	SOCIETY	GARDEN GARDEN	REVENUE OFFICE NISHTER PARK + CAP-4	CDS	300 300	305 305	116 87	38%
591 592	3552	SOCIETY	GARDEN	JJ APARTMENT	CDS	300	305	69	29%
593	256	DEFENCE	Garden	Income Tax Building	CDS	300	305	148	49%
594	249	SOCIETY	GARDEN	EVERSHINE	CDS	300	305	66	22%
595	3536	SOCIETY	GARDEN	ABDUL MANAN	CDS	300	305	138	45%
596	238	SOCIETY	GARDEN	FATIMID FOUNDATION	CDS	300	305	145	47%
597	1137	SOCIETY	GARDEN	G. H. QASIM ROAD	CDS	300	305	118	39%
598	200	SOCIETY	GARDEN	CITY GOVT. PRESS	CDS	300	305	168	55%
599	245	Orangi	Garden	REXER LANE	CDS	300	305	215	70%
600	2114	SOCIETY	GARDEN	FIA	CDS	300	305	146	48%
601	252	DEFENCE	Garden	State Life Building-11	DDS	300	305	43	14%
602	258	SOCIETY	GARDEN	CAPRI CINEMA	CDS	300	305	64	21%
603 604	2090 255	DEFENCE DEFENCE	Garden Garden	Amma Tower Odean Center	CDS	300 300	305 305	36 135	12% 44%
605	255	SOCIETY	Garden	BANDOOQWALA	CDS	300	305	204	67%
606	262	Bin Qasim	GHARO	GUJJO PUMPING	DDS	300	305	44	14%
607	259	Bin Qasim	GHARO	Saakro Morr	CDS	300	305	64	21%
608	3320	Bin Qasim	GHARO	OLD GHARO PUMPING	DDS	300	305	113	37%
	263	Bin Qasim	GHARO	GHARIB SONS-1	DDS	300	305	31	10%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
610	264	Bin Qasim	GHARO	GHARIB SONS-2	DDS	300	305	31	10%
611	261	Bin Qasim	GHARO	LASHARI GOTH	CDS	300	305	147	48%
612	260	Bin Qasim	GHARO	GHARO TEXTILE MILL	DDS	300	305	11	4%
613	3123	DEFENCE	Gizri	Bahria Complex-4	DDS	300	305	90	30%
614	3291	DEFENCE	Gizri	Bahria University	DDS	300	305	72	24%
615	198	DEFENCE	Gizri	AL-Ayesha	CDS	300	305	33	11%
616	3580	DEFENCE	Gizri	Hussain Developers	CDS	300	305	148	48%
617	1211	DEFENCE	Gizri	11th Commercial RMU	CDS	300	305	44	14%
618	3313	DEFENCE	Gizri	24th Comm Street RMU	CDS	300	305	65	21%
619	2026	DEFENCE	Gizri	Ghardiali Flats	CDS	300	305	197	65%
620	25	DEFENCE	Gizri	Jehangir Rehman	CDS	300	305	128	42%
621	2151	DEFENCE	Gizri	SCADA-2 House Trafo	DDS	300	305	25	8%
622	23	DEFENCE	Gizri	Tanzeem Toheed Commercial	CDS	300	305	75	25%
623	3	DEFENCE	Gizri	Defence-10	CDS	300	305	144	47%
624	1153	DEFENCE	Gizri	Sindh Medical College	CDS	300	305	67	22%
625	13	DEFENCE	Gizri	Bureau of Lab	CDS	300	305	199	65%
626	2069	DEFENCE	Gizri	Ideal Bakery	CDS	300	305	170	56%
627	3055	DEFENCE	Gizri	Khan of Kallat	CDS	300	305	144	47%
628	1	DEFENCE	Gizri	Defence Pumping-1	CDS	300	305	193	63%
629	3359	DEFENCE	Gizri	Defence-30	CDS	300	305	141	46%
630	3360	DEFENCE	Gizri	Saudi Residency RMU	CDS	300	305	58	19%
631	6	DEFENCE	Gizri	Bombay & Co.	CDS	300	305	85	28%
632	16	DEFENCE	Gizri	Hotel Mehran	CDS	300	305	87	29%
633	202	DEFENCE	Gizri	Askari-2	CDS	300	305	33	11%
634	2006	DEFENCE	Gizri	Mirza Sharif Baig	CDS	300	305	21	7%
635	14	DEFENCE	Gizri	Defence-09	CDS	300	305	158	52%
636	3556	DEFENCE	Gizri	Fleet Mess	DDS	300	305	64	21%
637	2	DEFENCE	Gizri	Embassi Villa	CDS	300	305	190	62%
638	7	DEFENCE	Gizri	Pak Crescent	CDS	300	305	91	30%
639	5	DEFENCE	Gizri	Defence-07	CDS	300	305	157	52%
640	19	DEFENCE	Gizri	Defence-12	CDS	300	305	111	36%
641	12	DEFENCE	Gizri	Defence-02	CDS	300	305	137	45%
642	8	DEFENCE	Gizri	Hira Appartments	CDS	300	305	101	33%
643	4	DEFENCE	Gizri	Razi Tower RMU	CDS	300	305	213	70%
644	15	SOCIETY	GIZRI	PARSI TRUST	CDS	300	305	79	26%
645	18	DEFENCE	Gizri	NR Colony	CDS	300	305	145	48%
646	2150	DEFENCE	Gizri	6th Street Badar RMU	CDS	300	305	119	39%
647	20	DEFENCE	Gizri	Clifton-2	CDS	300	305	93	31%
648	32	DEFENCE	Gizri	PSO	CDS	300	305	120	39%
649	29	DEFENCE	Gizri	CMH	CDS	300	305	210	69%
650	22	DEFENCE	Gizri	P&T Colony	CDS	300	305	165	54%
651	11	DEFENCE	Gizri	Glass Tower	CDS	300	305	158	52%
652	3446	DEFENCE	Gizri	Khaliq-uz-Zaman Rd	CDS	300	305	99	33%
653	31	DEFENCE	Gizri	Ashiana Appartment	CDS	300	305	158	52%
654	203	DEFENCE	Gizri	KWSB Punjab Colony	CDS	300	305	72	23%
655	9	DEFENCE	Gizri	Anwer Ali	CDS	300	305	55	18%
656	26	DEFENCE	Gizri	Hassan Terrace	CDS	300	305	87	28%
657	2052	DEFENCE	Gizri	Kh-e-Hafiz	CDS	300	305	177	58%
658	27	DEFENCE	Gizri	Korangi Road	CDS	300	305	74	24%
659	28	DEFENCE	Gizri	Kh-e-Momin (Hilal Park)	CDS	300	305	80	26%
660	30	DEFENCE	Gizri	Forum	DDS	300	305	75	25%
661	1210	DEFENCE	Gizri	SCADA-1	DDS	300	305	11	4%
662	782	GULSHAN	GOLIMAR	Dyre Textile	CDS	300	305	128	42%
663	813	GULSHAN	GOLIMAR	Shah-e-Karbala	CDS	300	305	159	52%
664	3911	Orangi	GOLIMAR	DEEWAN STEEL	DDS	300	305	39	13%
665	3279	Orangi	GOLIMAR	HONDA PAKISTAN	DDS	300	305	39	13%
666	803	Orangi	GOLIMAR	H. NIZAMUDDIN	CDS	300	305	216	71%
667	812	Orangi	GOLIMAR	OLD GOLIMAR	CDS	300	305	149	49%
668	830	Orangi	GOLIMAR	AMBRELI WALA	CDS	300	305	208	68%
669	3851	Orangi	GOLIMAR	SADIQ RE-ROLLING	CDS	300	305	237	78%
670	832	Orangi	GOLIMAR	SHAFI & CO.	CDS	300	305	143	47%
671	833	Orangi	GOLIMAR	REPUBLIC-II	CDS	300	305	103	34%
672	3404	Orangi	GOLIMAR	AMSONS	CDS	300	305	185	61%
673	3737	Orangi	GOLIMAR	SAF COMPANY	CDS	300	305	146	48%
674	3856	Orangi	GOLIMAR	MOLADAD VILLAGE	CDS	300	305	94	31%
675	839	Orangi	GOLIMAR	TAHIR ALI	DDS	300	305	194	64%
676	3444	Orangi	GOLIMAR	FAIZAN STEEL	DDS	300	305	299	98%
677	3738	Orangi	GOLIMAR	HAJI ASIF	DDS	300	305	299	98%
678	3147	Orangi	GOLIMAR	COCA COLA	DDS	300	305	71	23%
679	3229	Orangi	GOLIMAR	RAZZAK STEEL	DDS	300	305	71	23%
680	3350	Orangi	GOLIMAR	HYBRID CELL	DDS	300	305	122	40%
681	798	Orangi	GOLIMAR	REHBER INDUSTRY	CDS	300	305	115	38%
682	3843	Orangi	GOLIMAR	DALL MILL RMU	CDS	300	305	67	22%
683	818	GULSHAN	GOLIMAR	Al-Maroof Sweet RMU +	CDS	300	305	154	51%
684	2197	Orangi	GOLIMAR	TRAILER DEVELOVEMENT CORPORATION	CDS	300	305	111	36%
685	3003	Orangi	GOLIMAR	ASIO AFRICAN	CDS	300	305	139	46%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
686	819	Orangi	GOLIMAR	GHANI CHOWRANGI	CDS	300	305	200	66%
687	3109	Orangi	GOLIMAR	GRAMO PHONE	CDS	300	305	156	51%
688	823	Orangi	GOLIMAR	MEHRAN BOTTLER	CDS	300	305	167	55%
689 690	3006 327	Orangi GULSHAN	GOLIMAR Gulshan	SOVENIER TOBACCO Aziz Bhatti	CDS	300 300	305 305	203 62	67% 20%
691	315	GULSHAN	Gulshan	Gulshan Gulshan	CDS	300	305	153	50%
692	3961	GULSHAN	Gulshan	400 Bed Hospital	CDS	300	305	92	30%
693	3017	GULSHAN	Gulshan	Sindbad	CDS	300	305	91	30%
694	1215	GULSHAN	Gulshan	Erum Developer	CDS	300	305	101	33%
695	318	GULSHAN	Gulshan	Urdu College	CDS	300	305	88	29%
696	325	GULSHAN	Gulshan	Khursheed Homes	CDS	300	305	96	31%
697	1213	GULSHAN	Gulshan	NESCOS	CDS	300	305	144	47%
698	1212	GULSHAN	Gulshan	Station Road	CDS	300	305	140	46%
699	3416	GULSHAN	Gulshan	Pipe Factory	CDS	300	305	147	48%
700 701	2053 324	GULSHAN GULSHAN	Gulshan Gulshan	Jamia Sibtain Faran Club (Old Ashraf Square)	CDS	300 300	305 305	121 78	40%
701	324	SOCIETY	GULSHAN	PNS JOHAR	CDS	300	305	206	68%
703	1214	GULSHAN	Gulshan	Civic View	CDS	300	305	80	26%
704	319	SOCIETY	GULSHAN	KARACHI GAS	CDS	300	305	130	43%
705	331	GULSHAN	Gulshan	Holly Wood	CDS	300	305	83	27%
706	320	GULSHAN	Gulshan	National Stadium	CDS	300	305	40	13%
707	3557	GULSHAN	Gulshan	AG-2+ Cap-2	CDS	300	305	87	29%
708	3873	GULSHAN	Gulshan	AQSA TOWER	CDS	300	305	85	28%
709	316	GULSHAN	Gulshan	Orient Builders	CDS	300	305	135	44%
710	335	GULSHAN	Gulshan	NIPA Pumping	CDS	300	305	123	40%
711	328	GULSHAN	Gulshan	COD Hill	CDS	300	305	133	44%
712	334	GULSHAN	Gulshan	Shanti Nagar	CDS	300	305	202	66%
713	330	GULSHAN	Gulshan	Rub Center	CDS	300	305	83	27% 38%
714 715	326 329	GULSHAN GULSHAN	Gulshan Gulshan	Exhibition Mujahid Colony	CDS	300 300	305 305	116 152	50%
716	353	GULSHAN	Gulshan	Gul Telephone Exchange	CDS	300	305	157	51%
717	332	JOHAR	Gulshan	ASKARI-4	CDS	300	305	89	29%
718	1216	GULSHAN	Gulshan	Karson Complex	CDS	300	305	171	56%
719	323	GULSHAN	Gulshan	NCHS	CDS	300	305	83	27%
720	339	GULSHAN	Gulshan	Al-Azmat	CDS	300	305	124	41%
721	338	GULSHAN	Gulshan	Parkwala	CDS	300	305	107	35%
722	340	GULSHAN	Gulshan	Alladin Park	CDS	300	305	86	28%
723	3118	GULSHAN	Gulshan	Mughal-e-Azam	CDS	300	305	82	27%
724	336	SOCIETY	Gulshan	GULSHAN-E-JAMAL 3	CDS	300	305	85	28%
725	3169	JOHAR	Gulshan	NED RMU	CDS	300	305	147	48%
726	2100	GULSHAN	Gulshan	Rufi Heaven	CDS	300	305	203	67%
727	2124	GULSHAN	Gulshan	Azeem Khan Park	CDS	300 300	305	76 174	25%
728 729	343 345	GULSHAN JOHAR	Gulshan Gulshan	Lucky Center ASKARI-5	CDS	300	305 305	108	57% 36%
730	3550	GULSHAN	Gulshan	Saima Royal Residency-1	CDS	300	305	45	15%
731	3551	GULSHAN	Gulshan	Saima Royal Residency-2	CDS	300	305	77	25%
732	1219	GULSHAN	Gulshan	Dhorajee Colony (Old Usman Plaza)	CDS	300	305	196	64%
733	3477	GULSHAN	Gulshan	Harmain Builders	CDS	300	305	218	72%
734	350	GULSHAN	Gulshan	Saima Classic	CDS	300	305	66	22%
735	3016	GULSHAN	Gulshan	Maskan	CDS	300	305	142	47%
736	355	JOHAR	GULSHAN	SUNNY PRIDE	CDS	300	305	41	13%
737	346	GULSHAN	Gulshan	Training Center	CDS	300	305	95	31%
738	2120	GULSHAN	Gulshan	Mall Residency	CDS	300	305	101	33%
739 740	348 317	GULSHAN GULSHAN	Gulshan Gulshan	Suleman Plaza Nursery	CDS	300 300	305 305	80 79	26% 26%
741	112	JOHAR	GULSHAN	EMPIRE CENTRE	CDS	300	305	114	37%
742	3421	SOCIETY	GULSHAN	RASHID MINHAS	CDS	300	305	101	33%
743	3299	SOCIETY	GULSHAN	ABDUL WAHEED SOHAIL PN	CDS	300	305	99	32%
744	3315	GULSHAN	Gulshan	Square # 1	DDS	300	305	17	6%
745	333	GULSHAN	Gulshan	EPB	CDS	300	305	17	6%
746	347	GULSHAN	Gulshan	Al-Najeeb	CDS	300	305	187	61%
747	3316	GULSHAN	Gulshan	Dream Land	DDS	300	305	21	7%
748	351	GULSHAN	Gulshan	Asif & Zafar	CDS	300	305	144	47%
749	822	Orangi	Haroonabad	FOUNDATION ENGINEERING	CDS	300	305	201	66%
750	814	Orangi	Haroonabad	FREEDOM (old: GULF DYING)	CDS	300	305	125	41%
751	824	Orangi	Haroonabad	STAR TEXTILE	CDS	300	305	54 267	18%
752 753	821 817	Orangi Orangi	Haroonabad Haroonabad	BASHIR TEXTILE DOST MOHAMMAD	CDS	300 300	305 305	267 45	88% 15%
754	840	Orangi	Haroonabad	ABBAS STEEL	DDS	300	305	198	65%
755	3126	Orangi	Haroonabad	AGS BATTERY	DDS	300	305	198	48%
756	826	Orangi	Haroonabad	JEHLUM TEXTILE	CDS	300	305	237	78%
757	3157	GULSHAN	Haroonabad	Nital Colony	CDS	300	305	71	23%
758	816	Orangi	Haroonabad	SITE TELEPHONE EXCHANGE	CDS	300	305	127	42%
759	3249	Orangi	Haroonabad	ABID INDUSTRY	CDS	300	305	49	16%
760	835	Orangi	Haroonabad	DADA CERAMIC	CDS	300	305	164	54%
	831	Orangi	Haroonabad	JAMAL INDUSTRY	CDS	300	305	160	53%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
762	836	Orangi	Haroonabad	SITE PUMPING	CDS	300	305	164	54%
763	838	Orangi	Haroonabad	TYRE SOLE	CDS	300	305	183	60%
764	820	Orangi	Haroonabad	AZAD FRIEND	CDS	300	305	180	59%
765 766	3180 834	Orangi	Haroonabad Haroonabad	NOMAN STEEL EASTERN FILM	DDS CDS	300 300	305 305	25 168	8% 55%
767	3137	Orangi Orangi	Haroonabad	NAURAS	CDS	300	305	199	65%
768	828	Orangi	Haroonabad	ALAMGIR	CDS	300	305	63	21%
769	827	Orangi	Haroonabad	METALAX -II	CDS	300	305	200	66%
770	837	Orangi	Haroonabad	SP CHAMBER	DDS	300	305	16	5%
771	793	Orangi	Haroonabad	PEERABAD	CDS	300	305	238	78%
772	3592	Orangi	Haroonabad	LORENZO	DDS	300	305	126	41%
773	3595	Orangi	Haroonabad	Nawab Brothers	DDS	300	305	126	41%
774	3619	Orangi	Haroonabad	SEARLE PAK	DDS	300	305	108	35%
775 776	3001 3212	Orangi	Haroonabad Haroonabad	AA GHANI SIDDIQ SONS SITE	CDS DDS	300 300	305 305	194	64% 21%
777	3099	Orangi Orangi	Haroonabad	MOONLIGHT	CDS	300	305	65 211	69%
778	811	Orangi	Haroonabad	AB GASES	CDS	300	305	197	65%
779	3260	Orangi	Haroonabad	STEEL TRACK	DDS	300	305	46	15%
780	3855	Orangi	Haroonabad	INDUS RAYON	CDS	300	305	228	75%
781	3499	Orangi	Haroonabad	SHAH SONS	CDS	300	305	176	58%
782	3991	Orangi	Haroonabad	Liberty Mills	DDS	300	305	251	82%
783	785	Orangi	Haroonabad	MERCURY GARMENT	CDS	300	305	202	66%
784	3844	Orangi	Haroonabad	STERLING PLYWOOD	CDS	300	305	136	45%
785	3131	UTHAL	HUB	HITE-5	DDS	300	305	254	83%
786 787	3133 3127	UTHAL	HUB HUB	MARBLE CITY HITE-1	DDS	300 300	305 305	191 237	63% 78%
788	3128	UTHAL	HUB	HITE-2	DDS	300	305	184	60%
789	3129	UTHAL	HUB	HITE-3	DDS	300	305	287	94%
790	3130	UTHAL	HUB	HITE-4	DDS	300	305	304	100%
791	3132	UTHAL	HUB	HITE-6	DDS	300	305	301	99%
792	3092	UTHAL	HUB	BOLAN CASTING -1	CDS	300	305	178	58%
793	3857	UTHAL	HUB	CHEEZALABD RMU (old: HUMAYUN SAGHIR)	CDS	300	305	228	75%
794	3091	UTHAL	HUB	MIAN GIANI RMU	CDS	300	305	102	33%
795	3185	UTHAL	HUB	LATIF JUTE	CDS	300	305	182	60%
796 797	3030 3721	UTHAL UTHAL	HUB HUB	DEGASH HITE-7	CDS DDS	300 300	305 305	269 205	88% 67%
798	3093	UTHAL	HUB	BOLAN CASTING -2	CDS	300	305	8	3%
799	3094	UTHAL	HUB	N.P WATER PROFF	CDS	300	305	31	10%
800	3028	UTHAL	HUB	BALOCHISTAN PRACTICAL BOARD	CDS	300	305	145	48%
801	3159	UTHAL	HUB	AGRI AUTOS	DDS	300	305	72	24%
802	3031	UTHAL	HUB	PAWEL CELL	CDS	300	305	72	24%
803	3095	UTHAL	HUB	BALOCHISTAN FOUNDRY	CDS	300	305	145	48%
804	3096	UTHAL	HUB	AMAAN STEEL -1	DDS	300	305	175	57%
805	3097 3832	UTHAL	HUB HUB	AMAAN STEEL -2 HITE-8	DDS	300 300	305 305	175	57% 64%
806 807	3480	UTHAL UTHAL	HUB	PAKISTAN TELEPHONE CABLE	DDS	300	305	195 48	16%
808	3479	UTHAL	HUB	PIONEER CABLE	DDS	300	305	24	8%
809	3029	UTHAL	HUB	INTERNATIONAL GUM	CDS	300	305	135	44%
810	3184	UTHAL	HUB	JUMA KHAN	CDS	300	305	105	34%
811	3606	UTHAL	HUB	SAKRAN	CDS	300	305	81	27%
812	4042	UTHAL	HUB	NGM STEEL MILL	DDS	300	305	1	0%
813	3683	UTHAL	HUB	GATRON IND. LTD	DDS	300	305	223	73%
814	3236	UTHAL	HUB	TARIQ RAFI	DDS	300	305	122	40%
815 816	3027 3781	UTHAL	HUB JACCOB LINE	BALOCHISTAN POLY PRODUCT A A ENTERPRISES	CDS DDS	300 300	305 305	6 51	2% 17%
816	3/81	SOCIETY	JACCOB LINE	A A ENTERPRISES ISMAIL YOUNUS	CDS	300	305	78	26%
818	1223	SOCIETY	JACCOB LINE	FALAK RMU +	CDS	300	305	73	24%
819	363	SOCIETY	JACCOB LINE	SINDHI MUSLIM-2	CDS	300	305	61	20%
820	3297	SOCIETY	JACCOB LINE	CENTRAL PLAZA-A	DDS	300	305	8	3%
821	3298	SOCIETY	JACCOB LINE	CENTRAL PLAZA-B	DDS	300	305	33	11%
822	3489	SOCIETY	JACCOB LINE	SWEEPER QUARTER	CDS	300	305	203	67%
823	3517	SOCIETY	JACCOB LINE	NIC	CDS	300	305	135	44%
824	368	SOCIETY	JACCOB LINE	HASHOO APARTMENT	CDS	300	305	123	40%
825	364	SOCIETY	JACCOB LINE JACCOB LINE	CDGK PARKING PLAZA	CDS	300	305 305	19	6% 51%
826 827	380 365	SOCIETY	JACCOB LINE	OLD JACOBLINES KDA LOW COST	CDS	300 300	305	154 184	51% 60%
828	371	SOCIETY	JACCOB LINE	WATER BOOSTING	CDS	300	305	183	60%
829	3110	SOCIETY	JACCOB LINE	ZAIN RMU	CDS	300	305	106	35%
	360	SOCIETY	JACCOB LINE	PECHS BLOCK-2	CDS	300	305	96	31%
830		SOCIETY	JACCOB LINE	BABAR GROUND	CDS	300	305	138	45%
	362		IACCOR LINE	AL GHAFOOR CHALET	CDS	300	305	69	23%
830	3473	SOCIETY	JACCOB LINE	AL GIIAI OOK CIIALLI					
830 831		SOCIETY SOCIETY	JACCOB LINE	PIA SQUASH COMPLEX	CDS	300	305	110	36%
830 831 832 833 834	3473 3471 369	SOCIETY SOCIETY	JACCOB LINE JACCOB LINE	PIA SQUASH COMPLEX KYANI SHAHEED	CDS	300	305	114	38%
830 831 832 833	3473 3471	SOCIETY	JACCOB LINE	PIA SQUASH COMPLEX					

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
838	356	SOCIETY	JACCOB LINE	QUAID-E-AZAM-2	CDS	300	305	102	34%
839	377	DEFENCE	JACCOB LINE	Burns Garden	CDS	300	305	139	46%
840	361	SOCIETY	JACCOB LINE	SHAHRAH E QUAIDEEN	CDS	300	305	145	48%
841	3347	SOCIETY	JACCOB LINE	BAHRIA TOWN TOWER	DDS	300	305	40	13%
842 843	2167	SOCIETY SOCIETY	JACCOB LINE JACCOB LINE	COP RMU	CDS	300 300	305 305	121	40% 39%
844	358 373	SOCIETY	JACCOB LINE	MUSLIMABAD ARMY FLAT	CDS	300	305	118 185	61%
845	3104	SOCIETY	JACCOB LINE	SULEMAN ARCADE	CDS	300	305	104	34%
846	1140	SOCIETY	JACCOB LINE	FOUR SQUARE	CDS	300	305	123	40%
847	3503	SOCIETY	JACCOB LINE	MOONA ARCADE	CDS	300	305	139	46%
848	374	DEFENCE	JACCOB LINE	Mehboob Chamber	CDS	300	305	134	44%
849	381	DEFENCE	JACCOB LINE	SM Shahid	CDS	300	305	42	14%
850	375	DEFENCE	JACCOB LINE	Batala	CDS	300	305	49	16%
851	896	DEFENCE	JACCOB LINE	Saifee Foundation	CDS	300	305	109	36%
852	359	SOCIETY	JACCOB LINE	TARIQ ROAD	CDS	300	305	99	32%
853	1136	SOCIETY	JACCOB LINE	FAYYAZ CENTER	CDS	300	305	133	44%
854	383	SOCIETY	JACCOB LINE	JINNAH COMPLEX	CDS	300	305	55	18%
855	379	SOCIETY	JACCOB LINE	JENICA CENTER	CDS	300	305	125	41%
856	384	SOCIETY	JACCOB LINE	MAKRO HABIB	DDS	300	305	1	0%
857	378	DEFENCE	JACCOB LINE	Aram Bagh	CDS	300	305	166	54%
858	895	SOCIETY	JACCOB LINE	DMC HOSTEL	CDS	300	305	166	54%
859 860	382 376	SOCIETY DEFENCE	JACCOB LINE JACCOB LINE	NOORANI KABAB	CDS	300 300	305 305	106 74	35% 24%
861	366	DEFENCE	JACCOB LINE JACCOB LINE	Rimpa Sky Line Palace Theater	CDS	300	305	74	24%
862	372	DEFENCE	JACCOB LINE	Parace Theater Parsi Relief	CDS	300	305	87	28%
863	3563	SOCIETY	Jail	SANA APPTMENT RMU	CDS	300	305	63	21%
864	2103	SOCIETY	Jail	UBL FLATS	CDS	300	305	180	59%
865	2047	GULSHAN	Jail	Nagwan Village	CDS	300	305	135	44%
866	2168	SOCIETY	Jail	HAJI IRSHAD	CDS	300	305	67	22%
867	96	SOCIETY	Jail	KHALID NAGORI	CDS	300	305	198	65%
868	2121	SOCIETY	Jail	BAHADUR YAR JUNG	CDS	300	305	145	48%
869	2108	SOCIETY	Jail	AL-NAZAR	CDS	300	305	151	50%
870	1361	SOCIETY	Jail	JAIL	CDS	300	305	198	65%
871	3385	SOCIETY	Jail	RASOOL BAGH	CDS	300	305	194	64%
872	2051	SOCIETY	Jail	NOORI BABA	CDS	300	305	183	60%
873	2091	SOCIETY	Jail	SHAHEEN LAWN	CDS	300	305	148	48%
874	3566	GULSHAN	Jail	Sanitary Shop	CDS	300	305	146	48%
875	2021	GULSHAN	Jail	Haji Mureed RMU	CDS	300	305	154	51%
876	3560	SOCIETY	Jail	AMIL COLONY	CDS	300	305	59	19%
877	2045	SOCIETY	Jail	NOWSHERWANJEE	CDS	300	305	123	40%
878	2030	GULSHAN	Jail	Baloch Hotel +	CDS	300	305	145	48%
879	3547	GULSHAN	Jail	Rehbar Club	CDS	300	305	165	54%
880	3549	GULSHAN SOCIETY	Jail	Talib Colony	CDS	300	305	165	54%
881 882	2169 2096	SOCIETY	Jail Jail	PECHS-F REHMANI GARDEN	CDS CDS	300 300	305 305	131 219	43% 72%
883	357	SOCIETY	Jail	CLAYTON QUARTERS	CDS	300	305	104	34%
884	1126	SOCIETY	Jail	AMEENABAD	CDS	300	305	113	37%
885	2074	SOCIETY	Jail	NAWAB ISMAIL	CDS	300	305	103	34%
886	3540	SOCIETY	Jail	WAQAS GAS	CDS	300	305	151	49%
887	2160	SOCIETY	Jail	SOCIETY CINEMA	CDS	300	305	106	35%
888	3534	SOCIETY	Jail	GUJRAT COLONY	CDS	300	305	110	36%
889	2018	GULSHAN	Jail	Peetal Gali	CDS	300	305	199	65%
890	4114	SOCIETY	Jail	SINDH MASS TRANSITAUTHORITY	DDS	300	305	32	10%
891	3059	JOHAR	JOHAR	AFNAN DUPLEX	CDS	300	305	151	50%
892	3831	JOHAR	JOHAR	QALANDARABAD RMU	CDS	300	305	138	45%
893	3115	JOHAR	JOHAR	PHOENIX HEIGHT	CDS	300	305	67	22%
894	3086	JOHAR	JOHAR	UNI Gold RMU	CDS	300	305	32	10%
895	304	JOHAR	JOHAR	GLOBE CENTER	CDS	300	305	113	37%
896	3725	JOHAR	JOHAR	TALHA COTTAGES	CDS	300	305	26	9%
897	3310	JOHAR	JOHAR	DOW UNIVERSITY	CDS	300	305	70	23%
898	294	JOHAR	JOHAR	OJHA SANITORIUM	CDS	300	305	152	50%
899	311	JOHAR	JOHAR	KDA PALACE VIEW	CDS	300	305	60	20%
900	302	JOHAR	JOHAR	SANA AVENUE	CDS	300	305	87	29%
901	296	JOHAR JOHAR	JOHAR	SAFARI BLESSING SHERATON SQUARE	CDS	300	305 305	182	60%
902	305 293		JOHAR	·	CDS	300 300		115 76	38% 25%
903	293 3179	JOHAR JOHAR	JOHAR JOHAR	METEROLOGICAL DEPARTMENT TIPU SULTAN SOCIETY	CDS	300	305 305	76 28	25% 9%
904	299	JOHAR	JOHAR	CHAPPLE BUILDER	CDS	300	305	140	46%
905	3714	JOHAR	JOHAR	PINK PARK RMU	CDS	300	305	140	34%
907	3973	JOHAR	JOHAR	HNI RESORT RMU (old name: RASHIDI GOTH RM	CDS	300	305	145	48%
908	2031	JOHAR	JOHAR	BISMILLAH TOWER	CDS	300	305	62	20%
909	310	JOHAR	JOHAR	P.H.A.	CDS	300	305	50	16%
910	1229	JOHAR	JOHAR	DECENT GARDEN	CDS	300	305	86	28%
911	3761	JOHAR	JOHAR	S S BUILDERS	CDS	300	305	78	26%
912	1232	JOHAR	JOHAR	H.E.J	CDS	300	305	128	42%
		JOHAR	JOHAR	KARACHI UNIVERSITY VI	CDS	300	305	128	42%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
914	314	JOHAR	JOHAR	MALIK SOCIETY	CDS	300	305	132	43%
915	3722	JOHAR	JOHAR	SHAEZ RESIDENCY	CDS	300	305	204	67%
916	3080	JOHAR	JOHAR	KHI. MEMON SOCIETY	CDS	300	305	66	22%
917	3731	JOHAR	JOHAR	GUL HOUSES RMU	CDS	300	305	95	31%
918	295	JOHAR	JOHAR	MARORA GOTH	CDS	300	305	142	47%
919	3213	JOHAR	JOHAR	RIM JHIM TOWER	CDS	300	305	121	40%
920	308	JOHAR	JOHAR	GEOLOGICAL SURVEY OF PAKISTAN (GSP)	CDS	300	305	156	51%
921	3262	JOHAR	JOHAR	JUBILEE GATE	CDS	300	305	109	36%
922	306	JOHAR	JOHAR	SUPARCO	CDS	300	305	184	60%
923	3801	JOHAR	JOHAR	NAVY MERCHANT CHS	CDS	300	305	105	35%
924	3120	JOHAR	JOHAR	PAK SCIENTIFIC SOCIETY	CDS	300	305	180	59%
925	3972	JOHAR	JOHAR	KARACHI UNIVERSITY EMPLOYEE SOCIETY	DDS	300	305	79	26%
926	3111	JOHAR	JOHAR	PILI BHEET	CDS	300	305	28	9%
927	309	JOHAR	JOHAR	ABDUL GHANI	CDS	300	305	181	59%
928	3426	JOHAR	JOHAR	RAFI PREMIER RESIDENCY	CDS	300	305	37	12%
929	3114	JOHAR	JOHAR	DUBAI MALL 2000 RMU	CDS	300	305	141	46%
930	3056	JOHAR	JOHAR	CROWN GARDEN	CDS	300	305	157	51%
931	1228	JOHAR	JOHAR	PREM VILLAS	CDS	300	305	128	42%
932	300	JOHAR	JOHAR	AGHA KHAN TRUST	CDS	300	305	148	48%
933	301	JOHAR	JOHAR	BHITTAIABAD	CDS	300	305	150	49%
934	3419	JOHAR	JOHAR	AREESHA CHS (old Name: JOHAR COMPLEX S/S)	CDS	300	305	233	76%
935	3232	JOHAR	JOHAR	PIA SOCIETY	CDS	300	305	113	37%
936	3156	JOHAR	JOHAR	IBA STAFF COLONY	CDS	300	305	108	36%
937	3475	JOHAR	KDA-33	CAPITAL HOUSING SOCIETY 01	CDS	300	305	83	27%
938	3476	JOHAR	KDA-33	POST OFFICE SOCIETY	CDS	300	305	30	10%
939	4043	JOHAR	KDA-33	ABDUL REHMAN	CDS	300	305	26	9%
940	3276	JOHAR	KDA-33	SAADI TOWN RMU	CDS	300	305	101	33%
941	405	JOHAR	KDA-33	ASPHALT PLANT	CDS	300	305	131	43%
942	3442	JOHAR	KDA-33	RUPALI RMU	CDS	300	305	148	49%
943	398	JOHAR	KDA-33	JIWANI HEIGHTS	CDS	300	305	110	36%
944	400	JOHAR	KDA-33	KIRAN HOSPITAL	CDS	300	305	85	28%
945	399	JOHAR	KDA-33	HADIABAD	CDS	300	305	100	33%
946	404	JOHAR	KDA-33	PRINCE ALI	CDS	300	305	140	46%
947	416	JOHAR	KDA-33	SUNLAY DEVELOPERS	CDS	300	305	133	43%
948	414	JOHAR	KDA-33	KAKA KHAIL	CDS	300	305	193	63%
949	3061	JOHAR	KDA-33	MEERIOTH SOCIETY	CDS	300	305	202	66%
950	3435	JOHAR	KDA-33	MEHRAN TOWER	CDS	300	305	121	40%
951	3535	JOHAR	KDA-33	SHAHEED MAKHDOOM BILAWAL	CDS	300	305	58	19%
952	2104	JOHAR	KDA-33	SACHAL SARMAST (old: AFGHAN BASTI)	CDS	300	305	67	22%
953	3771	JOHAR	KDA-33	ZIKRIA GOTH	CDS	300	305	90	30%
954	410	JOHAR	KDA-33	FANCY HEIGHTS	CDS	300	305	115	38%
955	3412	JOHAR	KDA-33	MADRAS SOCIETY	CDS	300	305	63	21%
956	415	JOHAR	KDA-33	RIZVIA SOCIETY	CDS	300	305	249	82%
957	411	JOHAR	KDA-33	KWSB-I	DDS	300	305	176	58%
958	3870	JOHAR	KDA-33	PAK LAND	CDS	300	305	189	62%
959	403	JOHAR	KDA-33	SAHAFI COLONY	CDS	300	305	170	56%
960	3681	JOHAR	KDA-33	AMROHA SOCIETY	CDS	300	305	129	42%
961	408	JOHAR	KDA-33	AL-AZHAR GARDEN	CDS	300	305	166	55%
962	397	JOHAR	KDA-33	BISMILLAH MARKET	CDS	300	305	206	68%
963	3058	JOHAR	KDA-33	IONOSPHERIC LAB	CDS	300	305	129	42%
964	406	JOHAR	KDA-33	PIONEER CITY	CDS	300	305	76	25%
965	409	JOHAR	KDA-33	REEN LAND (old name: GREEN LAND CITY (POLE 7		300	305	209	69%
966	3119	JOHAR	KDA-33	KDA EMPLOYEE SOCIETY	CDS	300	305	232	76%
967	3464	JOHAR	KDA-33	AGRO EXPORT PROCESSING ZONE	CDS	300	305	9	3%
968	3057	JOHAR	KDA-33	PAF CHOTTA MALIR	CDS	300	305	131	43%
969	3415	JOHAR	KDA-33	POLICE SOCIETY	CDS	300	305	19	6%
970	4055	JOHAR	KDA-33	SOOMRA CHS	DDS	300	305	9	3%
971	3318	JOHAR	KDA-33	HALARI MEMON SOCIETY	CDS	300	305	40	13%
972	3247	JOHAR	KDA-33	KATHIAWAR SOCIETY	CDS	300	305	8	3%
973	3685	JOHAR	KDA-33	GULISTAN CHS 1	CDS	300	305	13	4%
974	3686	JOHAR	KDA-33	JAMALI BRIDGE	CDS	300	305	35	11%
975	3730	JOHAR	KDA-33	SECRETARY GOVT CHS	CDS	300	305	38	12%
976	3886	JOHAR	KDA-33	SURTI MUSLIM CHS	DDS	300	305	0	0%
977	4044	JOHAR	KDA-33	HAKEEM VILLAS	DDS	300	305	1	0%
978	3741	JOHAR	KDA-33	MUHAMMAD FAROOQ	CDS	300	305	10	3%
979	4040	Johan	KDA-33	CLASS-4 (old: GAWALIOR SOCIETY)	DDS	300	305	15	5%
980	3876	JOHAR	KDA-33	WHITE HOUSE RMU	CDS	300	305	159	52%
-							305	20	7%
981 982	4167 3879	JOHAR JOHAR	KDA-33	SAIMA ELITE VILLAS TULIP TOWER	CDS	300 300	305		20%
	402		KDA-33		CDS	300	305	170	20% 56%
983		JOHAR	KDA-33	SUPER HIGHWAY PUMPING				170	
984	3853	JOHAR	KDA-33	RANGERS HEAD QUARTER	CDS	300	305	138	45%
985	3334	JOHAR	KDA-33	PUNJABI SUDAGRAN	CDS	300	305	101	33%
986	4004	JOHAR	KDA-33	JHANJAR GOTH	CDS	300	305	188	62%
987	401	JOHAR	KDA-33	TEACHERS SOCIETY	CDS	300	305	141	46%
988	412	JOHAR	KDA-33	KWSB-II	DDS	300	305	158	52%
989	1235	JOHAR	KDA-33	KDA FILTER PLANT	DDS	300	305	15	5%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
990	394	Bin Qasim	KEPZ	GENERAL TYRE-3	DDS	300	305	134	44%
991	389	Bin Qasim	KEPZ	P.M.T.F.	DDS	300	305	25	8%
992	390	KORANGI	KEPZ	E.P.Z 01	DDS	300	305	95	31%
993 994	3175 387	KORANGI Bin Qasim	KEPZ KEPZ	E.P.Z 04 LABOUR FLATS	DDS CDS	300 300	305 305	134 173	44% 57%
994	4003	Bin Qasim Bin Qasim	KEPZ	BORSTAL JAIL	CDS	300	305	146	48%
996	385	KORANGI	KEPZ	E.P.Z 02	DDS	300	305	93	30%
997	3985	KORANGI	KEPZ	E.P.Z 08	DDS	300	305	192	63%
998	3982	KORANGI	KEPZ	E.P.Z 05	DDS	300	305	106	35%
999	3983	KORANGI	KEPZ	E.P.Z 06	DDS	300	305	0	0%
1000	4010	Bin Qasim	KEPZ	500 QUARTER	CDS	300	305	148	48%
1001	3984	KORANGI	KEPZ	E.P.Z 07	DDS	300	305	197	65%
1002	391	Bin Qasim	KEPZ	AL-ATA TEX.	CDS	300	305	168	55%
1003	4036	Bin Qasim	KEPZ	FEROZE MILLS LIMITED	DDS	300	305	0	0%
1004	3837 3394	KORANGI KORANGI	KEPZ KEPZ	MEDICO RMU MUZZAFARABAD	CDS	300 300	305 305	103 162	34% 53%
1005	395	Bin Qasim	KEPZ	E.P.Z 03	DDS	300	305	183	60%
1007	3554	Bin Qasim	KEPZ	SHAH LATIF TOWN	CDS	300	305	233	76%
1008	3153	KORANGI	KEPZ	52-A BUS STOP RMU	CDS	300	305	117	38%
1009	3971	Bin Qasim	KEPZ	FAST RMU (raza city)	CDS	300	305	264	87%
1010	393	KORANGI	KEPZ	SINDH ALKALLIES	CDS	300	305	95	31%
1011	897	Bin Qasim	KEPZ	KMC ABBITOR	CDS	300	305	155	51%
1012	3395	Bin Qasim	KEPZ	ROAD NO.2 RMU	CDS	300	305	160	53%
1013	388	KORANGI	KEPZ	MAJEED COL. RMU	CDS	300	305	138	45%
1014	386	Bin Qasim	KEPZ	CATTLE COLONY RMU	CDS	300	305	233	76%
1015	392	KORANGI	KEPZ	INTERNATIONAL IND. LTD.	CDS	300	305	74	24%
1016	3348	JOHAR	KESC HOSPITAL	COUNTY GARDEN	CDS	300	305	162	53%
1017	3067 303	JOHAR JOHAR	KESC HOSPITAL KESC HOSPITAL	A.D.B.P JOHAR SQUARE	CDS	300 300	305 305	111 191	36% 63%
1018	2153	JOHAR	KESC HOSPITAL	USMAN TERRACE	CDS	300	305	184	60%
1020	298	GULSHAN	KESC HOSPITAL	Time Square	CDS	300	305	176	58%
1021	3053	GULSHAN	KESC HOSPITAL	Hussain Hazara Goth	CDS	300	305	254	83%
1022	3070	JOHAR	KESC HOSPITAL	FARHAN TOWER	CDS	300	305	132	43%
1023	3177	GULSHAN	KESC HOSPITAL	Pak Swiss	CDS	300	305	190	62%
1024	3072	JOHAR	KESC HOSPITAL	SHALIMAR RMU	CDS	300	305	87	28%
1025	3146	GULSHAN	KESC HOSPITAL	Gallant Summit	CDS	300	305	157	51%
1026	3176	GULSHAN	KESC HOSPITAL	Nillat	CDS	300	305	131	43%
1027	349	JOHAR	KESC HOSPITAL	HUNAID CITY	CDS	300	305	82	27%
1028	3073	JOHAR	KESC HOSPITAL	BASERA TOWER	CDS	300	305	80	26%
1029	3068	JOHAR	KESC HOSPITAL	KING RESIDENCY	CDS	300	305	203	67%
1030	4053 312	JOHAR JOHAR	KESC HOSPITAL	AL-KHAIR BAKERS ASKARI-9	CDS	300 300	305 305	202	66% 19%
1031	341	JOHAR	KESC HOSPITAL KESC HOSPITAL	ASKARI-9 ALLIANCE ARCADE	CDS	300	305	58 135	44%
1032	3069	JOHAR	KESC HOSPITAL	UNIVERSAL HEIGHTS	CDS	300	305	94	31%
1034	3292	JOHAR	KESC HOSPITAL	ADMISSION BLOCK	CDS	300	305	11	4%
1035	3074	JOHAR	KESC HOSPITAL	HAROON ROYAL CITY	CDS	300	305	199	65%
1036	3084	JOHAR	KESC HOSPITAL	KDA OVERSEAS BUNGLOWS	CDS	300	305	83	27%
1037	3065	JOHAR	KESC HOSPITAL	GULSHAN-E-AMEEN TOWER	CDS	300	305	217	71%
1038	3087	JOHAR	KESC HOSPITAL	RABIA CITY	CDS	300	305	190	62%
1039	3440	JOHAR	KESC HOSPITAL	NEW LYARI C.H.S	CDS	300	305	99	32%
1040	352	JOHAR	KESC HOSPITAL	BILLY'S PARADISE	CDS	300	305	78	26%
1041	3075	JOHAR	KESC HOSPITAL	IQRA COMPLEX	CDS	300	305	80	26%
1042	342 3465	JOHAR JOHAR	KESC HOSPITAL KESC HOSPITAL	SUNNY VIEW AL-KHIZERA HEIGHTS	CDS	300 300	305 305	126 185	41% 61%
1043	1217	JOHAR	KESC HOSPITAL	GRAND CITY	CDS	300	305	149	49%
1044	3144	JOHAR	KESC HOSPITAL	AZEEM GARDEN	CDS	300	305	122	40%
1046	1231	JOHAR	KESC HOSPITAL	SINDH BALOCH SOCIETY	CDS	300	305	175	57%
1047	3682	JOHAR	KESC HOSPITAL	ABAD BUILDERS	CDS	300	305	69	23%
1048	354	JOHAR	KESC HOSPITAL	NOMAN HEAVEN	CDS	300	305	195	64%
1049	313	JOHAR	KESC HOSPITAL	RUFI PARADISE	CDS	300	305	139	46%
1050	3539	GULSHAN	KESC HOSPITAL	Allah Noor	CDS	300	305	169	56%
1051	3621	JOHAR	KESC HOSPITAL	CITY TOWER AND SHOPPING MALL	CDS	300	305	57	19%
1052	3684	JOHAR	KESC HOSPITAL	GREY HEIGHTS	CDS	300	305	181	59%
1053	3062	JOHAR	KESC HOSPITAL	NED MECHANICAL DEPARTMENT	CDS	300	305	130	43%
1054 1055	3957 4204	Gulshan Gulshan	KESC HOSPITAL	CALLACHI COOPERATIVE HOUSING SOCIETY LTD	DDS	300 300	305 305	92 25	30% 8%
1055	4204	KORANGI	KESC HOSPITAL KORANGI EAST	FAYYAZ ILYAS DUTECH	CDS	300	305	134	44%
1056	437	KORANGI	KORANGI EAST	RCD BALL BEARING	CDS	300	305	63	21%
1057	1237	KORANGI	KORANGI EAST	MERRIT PACKAGES	CDS	300	305	113	37%
1059	421	KORANGI	KORANGI EAST	TIGER STEEL	CDS	300	305	206	68%
1060	432	KORANGI	KORANGI EAST	UNITED STEEL	CDS	300	305	236	77%
1061	3045	KORANGI	KORANGI EAST	J-01 AREA RMU	CDS	300	305	138	45%
1062	3021	KORANGI	KORANGI EAST	OPAL LAB.	CDS	300	305	139	46%
1063	423	KORANGI	KORANGI EAST	DARULULLOOM	CDS	300	305	146	48%
1064	425	KORANGI	KORANGI EAST	ZAFAR ICE	CDS	300	305	149	49%
	426	KORANGI	KORANGI EAST	ELLAHI FLOUR	CDS	300	305	173	57%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1066	3907	KORANGI	KORANGI EAST	NAVEENA EXPORT	CDS	300	305	23	7%
1067	3105	KORANGI	KORANGI EAST	36-B RMU	CDS	300	305	115	38%
1068	419	KORANGI	KORANGI EAST	ZAMANABAD RMU	CDS	300	305	104	34%
1069	3698	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 1	CDS	300	305	21	7%
1070	3699	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 6	CDS	300	305	37	12%
1071	428	KORANGI	KORANGI EAST	7 - A RMU	CDS	300	305	55	18%
1072	431	KORANGI	KORANGI EAST	ROTI PLANT	CDS	300	305	133	44%
1073 1074	2066 4013	KORANGI KORANGI	KORANGI EAST KORANGI EAST	LASSI RMU AMALGAMATED	CDS	300 300	305 305	157 165	52% 54%
1074	3312	KORANGI	KORANGI EAST	MILLAT TOWN	CDS	300	305	103	34%
1076	3546	KORANGI	KORANGI EAST	SEC-10 RMU	CDS	300	305	155	51%
1077	424	KORANGI	KORANGI EAST	DADABHOY PAPER (EAST PAK)	CDS	300	305	136	45%
1078	438	KORANGI	KORANGI EAST	QABRISTAN RMU	CDS	300	305	142	47%
1079	4024	KORANGI	KORANGI EAST	A&S Oil SS	CDS	300	305	164	54%
1080	429	KORANGI	KORANGI EAST	BOOTS PHARMA	CDS	300	305	165	54%
1081	4023	KORANGI	KORANGI EAST	PRECISSION RUBBER	CDS	300	305	89	29%
1082	433	KORANGI	KORANGI EAST	RUSTAM ICE	CDS	300	305	181	59%
1083	4083	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-4	DDS	300	305	163	54%
1084	4242	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-16	DDS	300	305	163	54%
1085	3586	Bin Qasim	KORANGI EAST	NATIONAL MEDICAL CENTER RMU	CDS	300	305	195	64%
1086	436	KORANGI	KORANGI EAST	MOON LIGHT	CDS	300	305	196	64%
1087	434	KORANGI	KORANGI EAST	NOOR BHOUY	CDS	300	305	192	63%
1088	422	KORANGI	KORANGI SOUTH	D-AREA RMU G. MARKET RMU	CDS	300	305	140	46%
1089	1229	KORANGI	KORANGI SOUTH KORANGI SOUTH	· · · · · · · · · · · · · · · · · · ·	CDS	300	305	79 172	26%
1090	1238 3564	KORANGI	KORANGI SOUTH	JUMMA VILLAGE M. SHARIF RMU	CDS	300 300	305 305	172 150	56% 49%
1091	534	KORANGI	KORANGI SOUTH	M. SHARIF RMU LANDHI-C	CDS	300	305	150	49%
1092	420	KORANGI	KORANGI SOUTH	K.TEL EXCH 03	CDS	300	305	187	62%
1094	443	KORANGI	KORANGI SOUTH	VOCATIONAL INSTITUTE	CDS	300	305	144	47%
1095	3838	KORANGI	KORANGI SOUTH	GHAUS PAK ROAD	CDS	300	305	115	38%
1096	1248	KORANGI	KORANGI SOUTH	ALI AKBER SHAH RMU	CDS	300	305	204	67%
1097	427	KORANGI	KORANGI SOUTH	5C BILALABAD (OLD BANK AL-FALAH RMU)	CDS	300	305	130	43%
1098	3933	KORANGI	KORANGI SOUTH	BARAY WALA RMU	CDS	300	305	135	44%
1099	471	KORANGI	KORANGI SOUTH	COMP. HIGH SCHOOL	CDS	300	305	213	70%
1100	3932	KORANGI	KORANGI SOUTH	GULISTAN MARKET RMU	CDS	300	305	151	50%
1101	430	KORANGI	KORANGI SOUTH	GHALIB CINEMA	CDS	300	305	101	33%
1102	1250	KORANGI	KORANGI SOUTH	MADINA COLONY RMU	CDS	300	305	158	52%
1103	1247	KORANGI	KORANGI SOUTH	OLD THANA RMU	CDS	300	305	144	47%
1104	477	KORANGI	KORANGI SOUTH	COAST GUARD	CDS	300	305	145	48%
1105	1240	KORANGI	KORANGI SOUTH	M.A. MOHAMMADI	CDS	300	305	140	46%
1106 1107	1242 1243	KORANGI	KORANGI SOUTH KORANGI SOUTH	TASVEER MAHEL SOHAIL SHAMSI	CDS	300 300	305 305	173 230	57% 75%
1107	3565	KORANGI KORANGI	KORANGI SOUTH	CHINIOT HOSPITAL	CDS	300	305	163	54%
1108	3570	KORANGI	KORANGI SOUTH	RIAZ HOTEL RMU	CDS	300	305	151	50%
1110	3555	KORANGI	KORANGI SOUTH	51-C RMU	CDS	300	305	165	54%
1111	462	KORANGI	KORANGI TOWN	PERAC	CDS	300	305	121	40%
1112	444	KORANGI	KORANGI TOWN	PAK HI OIL	CDS	300	305	164	54%
1113	469	KORANGI	KORANGI TOWN	QANDHARI FLOUR	CDS	300	305	169	56%
1114	480	KORANGI	KORANGI TOWN	LONDON TANNERY	CDS	300	305	132	43%
1115	3052	KORANGI	KORANGI TOWN	AL MOHAMMAD GOTH RMU (OLD MILLAT TOWN	CDS	300	305	45	15%
1116	3571	KORANGI	KORANGI TOWN	ABU ZAR BAKERY RMU	CDS	300	305	126	41%
1117	474	KORANGI	KORANGI TOWN	TANZEEM FLOUR	CDS	300	305	115	38%
1118	3375	KORANGI	KORANGI TOWN	PAK LEATHER	CDS	300	305	164	54%
1119	445	KORANGI	KORANGI TOWN	AHMED INVESTMENT	CDS	300	305	70	23%
1120	481	KORANGI	KORANGI TOWN	FAKHRIA TANNERY	CDS	300	305	149	49%
1121 1122	3577 4021	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	ARA MACHINE RMU OBAID ASHFAQ	CDS CDS	300 300	305 305	157	51% 51%
1122	3048	KORANGI	KORANGI TOWN	KORANGI ZOO	CDS	300	305	157 59	19%
1123	473	KORANGI	KORANGI TOWN	ALI ICE	CDS	300	305	142	47%
1125	459	KORANGI	KORANGI TOWN	FOUNDATION GAS	CDS	300	305	119	39%
1126	2028	KORANGI	KORANGI TOWN	BILAL CHOWRANGI RMU	CDS	300	305	160	52%
1127	460	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 02	CDS	300	305	126	41%
1128	3594	KORANGI	KORANGI TOWN	DENIM CLOTHING	DDS	300	305	43	14%
1129	3579	KORANGI	KORANGI TOWN	FAROOQI ICE	CDS	300	305	142	47%
1130	478	KORANGI	KORANGI TOWN	SUPERLATIVE FEED	CDS	300	305	118	39%
1131	465	KORANGI	KORANGI TOWN	LAKSON TOBACCO	CDS	300	305	116	38%
1132	1254	KORANGI	KORANGI TOWN	CHISHTIA FLOUR	CDS	300	305	115	38%
1133	4022	KORANGI	KORANGI TOWN	KHADDA ABADI RMU (SHARIFABAD RMU)	CDS	300	305	112	37%
1134	3835	KORANGI	KORANGI TOWN	JIVANI TRADERS RMU	CDS	300	305	136	45%
1135	3839	KORANGI	KORANGI TOWN	PRIME PACK	CDS	300	305	99	32%
1136	454	KORANGI	KORANGI TOWN	RAHIL GUM IND.(OLD JINNAH HOUSE)	CDS	300	305	113	37%
1137	457	KORANGI	KORANGI TOWN	WAH FLOUR	CDS	300	305	156	51%
1138	3585	KORANGI	KORANGI TOWN	ANWER MAMA RMU	CDS	300	305	176	58%
1139 1140	3578 450	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	GOLDEN HARVEST ZIA COLONY RMU	CDS	300 300	305 305	192 113	63% 37%
1140	450	KORANGI	KORANGI TOWN	POLY PROPLINE (old name: UNION CARBIDE)	CDS	300	305	113	37%
1141	1 432	IDNIMADA	RUMANUI IUWN	TOLT FROFLINE (OIG HAITIE, UNION CARBIDE)	LDS	300	503	114	3/70

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1142	3044	KORANGI	KORANGI TOWN	ZAM ZAM	CDS	300	305	188	62%
1143	476	KORANGI	KORANGI TOWN	SHAMA FLOUR	CDS	300	305	155	51%
1144	3588	KORANGI	KORANGI TOWN	PEARL FABRICS	CDS	300	305	61	20%
1145	467	KORANGI	KORANGI TOWN	L-AREA RMU	CDS	300	305	126	41%
1146	466	KORANGI	KORANGI TOWN	HAND TOOL	CDS	300	305	142	46%
1147	3355	KORANGI	KORANGI TOWN	GETZ PHARMA	DDS	300	305	108	36%
1148	3581	KORANGI	KORANGI TOWN	BROOKS PHARMA	DDS	300	305	58	19%
1149 1150	4014 439	Korangi KORANGI	KORANGI TOWN KORANGI TOWN	ARTISTIC MILLINERS ASHRAF & CO.	DDS	300 300	305 305	235 122	77% 40%
1151	461	KORANGI	KORANGI TOWN	KAMRAN INDUSTRIES	CDS	300	305	158	52%
1152	468	KORANGI	KORANGI TOWN	IRFAN ASSOCIATES	CDS	300	305	99	32%
1153	3194	KORANGI	KORANGI TOWN	INDUS DYEING	DDS	300	305	235	77%
1154	479	KORANGI	KORANGI TOWN	ASSOCIATED GLASS	CDS	300	305	168	55%
1155	2079	KORANGI	KORANGI TOWN	NATIONAL REF. NO. 6	DDS	300	305	194	64%
1156	4028	Korangi	KORANGI TOWN	METRO ESTATE	DDS	300	305	81	27%
1157	2137	KORANGI	KORANGI TOWN	NATIONAL REF. NO. 5	DDS	300	305	166	54%
1158	456	KORANGI	KORANGI TOWN	SATTAR INDUSTRIES	CDS	300	305	143	47%
1159	2043	KORANGI	KORANGI TOWN	NUCLEOUS HOUSE RMU	CDS	300	305	130	43%
1160	3575	KORANGI	KORANGI TOWN	K-1 CENTRE RMU	CDS	300	305	158	52%
1161 1162	3079 458	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	ASPHALT PLANT (K.T) HABIB KNIT WEAR	CDS	300 300	305 305	74 103	24% 34%
1163	472	KORANGI	KORANGI TOWN	REHMANIA MASJID	CDS	300	305	97	32%
1164	3152	KORANGI	KORANGI TOWN	PAKHTOON CHOWK	CDS	300	305	93	30%
1165	441	KORANGI	KORANGI TOWN	KHAS TRADERS	CDS	300	305	222	73%
1166	440	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 01	CDS	300	305	161	53%
1167	475	KORANGI	KORANGI TOWN	MEHRAN JUTE	CDS	300	305	136	45%
1168	455	KORANGI	KORANGI TOWN	PAK SHOE	CDS	300	305	229	75%
1169	442	KORANGI	KORANGI TOWN	GAS TURBINE RMU	CDS	300	305	179	59%
1170	2098	KORANGI	KORANGI TOWN	33-E	CDS	300	305	103	34%
1171	453	KORANGI	KORANGI TOWN	POLE # 56 RMU	CDS	300	305	114	38%
1172 1173	3841 449	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	KHALID ENTERPRIZE ITTEHAD OIL	CDS	300 300	305 305	63 108	21% 36%
1173	1151	KORANGI	KORANGI TOWN	SMART HI PRESSURE	CDS	300	305	65	21%
1175	3811	KORANGI	KORANGI TOWN	CRESCENT PENCIL	CDS	300	305	199	65%
1176	3363	KORANGI	KORANGI WEST	SANOFI AVENTIS	DDS	300	305	170	56%
1177	3962	KORANGI	KORANGI WEST	SOORTY ENTERPRISES PVT.	DDS	300	305	36	12%
1178	3468	SOCIETY	KORANGI WEST	BANGASH-2	CDS	300	305	100	33%
1179	3078	KORANGI	KORANGI WEST	FLEET MANAGEMENT	DDS	300	305	8	3%
1180	45	SOCIETY	KORANGI WEST	JUNEJO TOWN	CDS	300	305	79	26%
1181	52	KORANGI	KORANGI WEST	PAK JUTE	CDS	300	305	159	52%
1182	4123	KORANGI	KORANGI WEST	Khalil Ahmed RMU	CDS	300	305	160	53%
1183	43	DEFENCE	KORANGI WEST	Defence View-1	CDS	300 300	305	154	51% 69%
1184 1185	3047 4027	KORANGI KORANGI	KORANGI WEST KORANGI WEST	FINE STAR MEHBOOB PROLINE RMU	CDS	300	305 305	212 191	63%
1186	2060	DEFENCE	KORANGI WEST	Kashmir Colony RMU	CDS	300	305	174	57%
1187	4026	KORANGI	KORANGI WEST	AMMAR BUKHARI	CDS	300	305	90	30%
1188	51	DEFENCE	KORANGI WEST	Printex (Bhittai Petroleum)	CDS	300	305	52	17%
1189	3469	SOCIETY	KORANGI WEST	DIN MUHAMMAD-1	CDS	300	305	62	20%
1190	55	DEFENCE	KORANGI WEST	Qayumabad Pumping	CDS	300	305	106	35%
1191	4141	Orangi	LABOUR SQUARE	FAIZAN STEEL-03	DDS	300	305	296	97%
1192	4142	Orangi	LABOUR SQUARE	FAIZAN STEEL-04	DDS	300	305	296	97%
1193	2192	Orangi	LABOUR SQUARE	AL-ATHER	CDS	300	305	100	33%
1194	2196	Orangi	LABOUR SQUARE	IRFAN STEEL	CDS	300	305	175	57%
1195 1196	3462 611	Orangi Orangi	LABOUR SQUARE LABOUR SQUARE	PAKISTAN LEAF COMMON FACILITY	CDS	300 300	305 305	163 34	53% 11%
1196	829	baldia	LABOUR SQUARE	AMIN MAZDA	CDS	300	305	139	46%
1198	783	BALDIA	LABOUR SQUARE	KDA PUMP BALDIA	CDS	300	305	195	64%
1199	4067	Orangi	LABOUR SQUARE	PAF Base Masroor	DDS	300	305	214	70%
1200	3914	Orangi	LABOUR SQUARE	KPI	CDS	300	305	56	18%
1201	3913	Orangi	LABOUR SQUARE	RENOVICKER	CDS	300	305	189	62%
1202	786	Orangi	LABOUR SQUARE	YOUSUF INDUSTRY	CDS	300	305	96	32%
1203	1349	Orangi	LABOUR SQUARE	MS CATTS	CDS	300	305	184	60%
1204	3259	Orangi	LABOUR SQUARE	COMMUNITY CENTER	CDS	300	305	163	53%
1205	1348	Orangi	LABOUR SQUARE	UNI LEVER	CDS	300	305	115	38%
1206	809	Orangi	LABOUR SQUARE	SARHAD ROLLING	CDS	300	305	162	53%
1207 1208	2178 3239	Orangi Orangi	LABOUR SQUARE LABOUR SQUARE	NAVEENA INDUSTRY SUN RISE	CDS DDS	300 300	305 305	63 38	21% 12%
1208	3239 815	Orangi	LABOUR SQUARE	HAIDERY WOOD	CDS	300	305	38 177	58%
1210	790	Orangi	LABOUR SQUARE	INDUSTRIAL LABOUR FLAT	CDS	300	305	142	47%
1211	797	Orangi	LABOUR SQUARE	MEHTAB INDUSTRY	CDS	300	305	127	42%
1212	780	Orangi	LABOUR SQUARE	MANZOOR TRADER	CDS	300	305	188	62%
1213	4148	Orangi	LABOUR SQUARE	TRIPURA HOISERY	CDS	400	347	97	28%
1214	3483	Orangi	LABOUR SQUARE	DALDA FOOD	DDS	300	305	142	47%
1215	517	Bin Qasim	LANDHI	AFTAB FLOUR	CDS	300	305	127	42%
1216	3106	Bin Qasim	LANDHI	LANDHI GRID PMT (OLD GRID PMT)	DDS	300	305	0	0%
1217	508	Bin Qasim	LANDHI	FIRDOUS TEXTILE	CDS	300	305	70	23%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1218	2115	Bin Qasim	LANDHI	RANGEEN CINEMA	CDS	300	305	222	73%
1219	510	KORANGI	LANDHI	KDA WATER PUMP	CDS	300	305	155	51%
1220	536	Bin Qasim	LANDHI	KHUWAJA AUTOS	CDS	300	305	171	56%
1221	3885	Bin Qasim	LANDHI	Gulshan e Askari	CDS	300	305	179	59%
1222	515	Bin Qasim	LANDHI	SINDHI JAMAAT (EX ABBOTT LAB)	CDS	300	305	177	58%
1223	532	Bin Qasim	LANDHI	CONCRETE ENGG.	CDS	300	305	205	67%
1224	521	KORANGI	LANDHI	HUSSAIN III	CDS	300	305	135	44%
1225	522	KORANGI	LANDHI	RICE GRINDING	CDS	300	305	188	62%
1226	2033	Bin Qasim	LANDHI	GREEN PARK CITY	CDS	300	305	177	58%
1227	516	KORANGI	LANDHI	SOCIAL SECURITY	CDS	300	305	195	64%
1228	520	KORANGI	LANDHI	POLE # 1 RMU	CDS	300	305	224	73%
1229	524	KORANGI	LANDHI	LANDHI 'B' (Meter No.: HTO-5352)	CDS	300	305	176	58%
1230	535	Bin Qasim	LANDHI	QUAIDABAD SHOPPING	CDS	300	305	201	66%
1231	3836	KORANGI	LANDHI	SIDDIQ-E-AKBER MASJID	CDS	300	305	184	60%
1232	529	KORANGI	LANDHI	3-A RMU	CDS	300	305	153	50%
1233	2105	Bin Qasim	LANDHI	AL-SYED CENTER	CDS	300	305	172	56%
1234	507	KORANGI	LANDHI	ATLAS AUTOS	CDS	300	305	143	47%
1235	518	Bin Qasim	LANDHI	FAZAL SHAFIQ	CDS	300	305	54	18%
1236	523	Bin Qasim	LANDHI	TRUST CERAMIC	CDS	300	305	124	41%
1237	525	Bin Qasim	LANDHI	DEH LANDHI	CDS	300	305	217	71%
1238	3077	KORANGI	LANDHI	KHURAM ABAD	CDS	300	305	104	34%
1239	537	KORANGI	LANDHI	SHERPAO COLONY	CDS	300	305	175	57%
1240	3537	KORANGI	LANDHI	BALDIA SCHOOL RMU	CDS	300	305	277	91%
1241	530	Bin Qasim	LANDHI	METAL ENGG. COMPLEX	CDS	300	305	153	50%
1242	3411	KORANGI	LANDHI	LANDHI-A	CDS	300	305	164	54%
1243	528	Bin Qasim	LANDHI	ANA INTERNATIONAL RMU (OLD SHABBIR TILES)	CDS	300	305	145	48%
1244	3243	Bin Qasim	LANDHI	SALFI TEXTILE	DDS	300	305	40	13%
1245	509	Bin Qasim	LANDHI	HUSSAIN II	DDS	300	305	8	3%
1246	527	Bin Qasim	LANDHI	AMNA INDUSTRIES (OLD GLOBE TEXTILE)	CDS	300	305	154	51%
1247	533	Bin Qasim	LANDHI	GENERAL TYRE II	DDS	300	305	198	65%
1248	2080	KORANGI	LANDHI	LALABAD	CDS	300	305	63	21%
1249	3864	Bin Qasim	LANDHI	A.I.P Feeder (Old Atlas Engeering)	DDS	300	305	238	78%
1250	3866	Bin Qasim	LANDHI	DAWLANCE PVT LTD	DDS	300	305	180	59%
1251	519	Bin Qasim	LANDHI	GENERAL TYRE I	DDS	300	305	136	45%
1252	538	Bin Qasim	LANDHI	GUL AHMED TEXTILE (EX HABIB GENERAL)	CDS	300	305	58	19%
1253	704	Bin Qasim	LANDHI	RADIO PAKISTAN I	CDS	300	305	145	48%
1254	512	Bin Qasim	LANDHI	INDUS FLOUR	CDS	300	305	129	42%
1255	1123	GULSHAN	LIAQUTABAD	Falak Tower +	CDS	300	305	181	59%
1256	2024	GULSHAN	LIAQUTABAD	Bazar-e-Faisal (National Ice) +	CDS	300	305	141	46%
1257	550	GULSHAN	LIAQUTABAD	Ilyas Goth +	CDS	300	305	68	22%
1258	558	GULSHAN	LIAQUTABAD	Tayya Hotel (Old Liaqatabad-1)	CDS	300	305	164	54%
1259	3905	GULSHAN	LIAQUTABAD	Salman Height	CDS	300	305	124	41%
1260	1269	GULSHAN	LIAQUTABAD	Pakistan College(Old Nazimabad-1) + Cap-1	CDS	300	305	103	34%
1261	554	GULSHAN	LIAQUTABAD	Bhoray Khan +	CDS	300	305	249	82%
1262	548	GULSHAN	LIAQUTABAD	Zeenat Square	CDS	300	305	109	36%
1263	552	GULSHAN	LIAQUTABAD	Café Millat	CDS	300	305	130	43%
1264	547	GULSHAN	LIAQUTABAD	Al-Karam	CDS	300	305	89	29%
1265	542	GULSHAN	LIAQUTABAD	Gol Market (Old Nazimabad-3)	CDS	300	305	165	54%
1266	561	GULSHAN	LIAQUTABAD	Munawwar Engineering	CDS	300	305	115	38%
1267	549	GULSHAN	LIAQUTABAD	Golden Star	CDS	300	305	73	24%
1268	539	GULSHAN	LIAQUTABAD	Gulbahar	CDS	300	305	184	60%
1269	543	GULSHAN	LIAQUTABAD	Timber Market +	CDS	300	305	192	63%
1270	545	GULSHAN	LIAQUTABAD	Super Market	CDS	300	305	112	37%
1271	3461	GULSHAN	LIAQUTABAD	Ismailia Flat	CDS	300	305	155	51%
1272	1265	GULSHAN	LIAQUTABAD	Qureshi Colony	CDS	300	305	44	14%
1273	546	GULSHAN	LIAQUTABAD	Rehmania Masjid	CDS	300	305	144	47%
1274	540	GULSHAN	LIAQUTABAD	Nazimabad-4	CDS	300	305	217	71%
1275	551	GULSHAN	LIAQUTABAD	hakeel Corporation + Cap-3 (OLD Moosa Colony	CDS	300	305	99	33%
1276	563	GULSHAN	LIAQUTABAD	Indus Ice +	CDS	300	305	170	56%
1277	557	GULSHAN	LIAQUTABAD	Apwa College (OLD Govt. School)	CDS	300	305	224	74%
1278	562	GULSHAN	LIAQUTABAD	Masjid-e-Khair-ul-Amal	CDS	300	305	66	21%
1279	544	GULSHAN	LIAQUTABAD	PWD Pumping-2	CDS	300	305	129	42%
1280	1266	GULSHAN	LIAQUTABAD	Fed Capital-4 +	CDS	300	305	115	38%
1281	541	GULSHAN	LIAQUTABAD	Liberty Cinema	CDS	300	305	144	47%
1282	555	GULSHAN	LIAQUTABAD	Nairing Cinema	CDS	300	305	134	44%
1283	560	GULSHAN	LIAQUTABAD	Fatima Barocha	CDS	300	305	191	63%
1284	1267	GULSHAN	LIAQUTABAD	Karimabad	CDS	300	305	168	55%
1285	3459	GULSHAN	LIAQUTABAD	Hadi Market	CDS	300	305	223	73%
1286	1264	GULSHAN	LIAQUTABAD	Liaqatabad-2	CDS	300	305	148	49%
1287	559	GULSHAN	LIAQUTABAD	C1 Area +	CDS	300	305	158	52%
1288	556	GULSHAN	LIAQUTABAD	ABC Computer	CDS	300	305	147	48%
1289	553	GULSHAN	LIAQUTABAD	Al-Murtaza	CDS	300	305	173	57%
1290	3700	BALDIA	LYARI	DOOSA WOOL	CDS	300	305	129	42%
1291	3285	BALDIA	LYARI	KNIGHT SLUM	CDS	300	305	143	47%
1292	3004	BALDIA	LYARI	ATMA RAM PRITAMDAS	CDS	300	305	86	28%
1293	3852	BALDIA	LYARI	BSK SCHOOL	CDS	300	305	127	42%
					-		•		

1996 1988 BALIZAN 17-ABI	S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1996 1977 1978 1979	1294	568	BALDIA	LYARI	FIDA HUSSAIN SHEKHA RD	CDS	300		169	55%
1928 572 BALDA 15/981 15/981 15/981 15/981 15/28 15/	1295	3693	BALDIA	LYARI	SHAHWALIULLAH	CDS	300	305	136	45%
1988 571 BALDA DAME BAMACHAE COLORY MAIL CSS 300 305 345 476 476 1995 577 BALDA LYARI GREAT PRIMER CSS 300 305 305 338 455 476 1995 19	1296	3701	BALDIA	LYARI	BALOCH STAR RMU	CDS	300	305	194	64%
1999 BALDAN LANE	1297	572	BALDIA	LYARI	LYARI ICE	CDS	300	305	129	42%
1900 3-920 8-0,010	1298	571	BALDIA	LYARI	MACHAR COLONY RMU	CDS	300	305	145	47%
1902 5-96 BALDAN LYANE BACHENAN C. 05 300 395 254 700	1299	567	BALDIA	LYARI	BEHAR PUMP	CDS	300	305	138	45%
1902 5-50 MALDA LYABI	1300	3481	BALDIA	LYARI	QADIR KHAN RMU	CDS	300	305	212	70%
1930 570 BALDA LYARI GULISTAN COLONY C03 300 305 202 698	1301	3490	BALDIA	LYARI	BAGHDADI	CDS	300	305	214	70%
1906 5-55 BAUDIA LYABI GOWN CONTAM C05 300 305 68 215 1306 5-77 BAUDIA LYABI MAIN MANDED MAND C05 300 305 64 225 1307 5-74 BAUDIA LYABI M.A.J.ALY ROAD C05 300 305 238 855 1308 297 BAUDIA LYABI M.A.J.ALY ROAD C05 300 305 135 1309 5-76 BAUDIA LYABI JAMAS BUCCH C05 300 305 135 1309 5-76 BAUDIA LYABI JAMAS BUCCH C05 300 305 125 75 1309 5-76 BAUDIA LYABI JAMAS BUCCH C05 300 305 125 75 1311 233 BBUDIA LYABI JAMAS BUCCH C05 300 305 125 75 1312 5-76 BBUDIA LYABI JAMAS BUCCH C05 300 305 125 225 1313 352 BBI GLIBI MAIR JAMAS BUCCH C05 300 305 126 75 1314 5-77 BBI GLIBI MAIR JAMAS BUCCH C05 300 305 136 75 1314 5-77 BBI GLIBI MAIR JAMAS BUCCH C05 300 305 136 75 1315 3522 BBI GLIBI MAIR C05 MAIR BLOCK C05 300 305 136 678 1315 3523 BBI GLIBI MAIR C05 MAIR BLOCK C05 300 305 136 678 1316 3593 JAMAS BUCCH C05 JAMAS BU	1302	569	BALDIA	LYARI	NAVAL FLATS	CDS	300	305	58	19%
1906 575 BAUDIA LYARI MARI MAGDI MAG 300 305 258 895 1306 575 BAUDIA LYARI	1303	570	BALDIA	LYARI	GULISTAN COLONY	CDS	300	305		66%
1300 578 MANDA LYANE M. ALI AW ROAD COS 300 305 258 859	1304	565	BALDIA	LYARI	CROWN CINEMA	CDS	300	305	96	31%
1907 1974 BALDA	1305	575	BALDIA	LYARI	HARI MASJID RMU	CDS	300	305	64	21%
1998 BALDAN LYABI	1306	578	BALDIA	LYARI	M. ALI ALVI ROAD	CDS	300	305	258	85%
1300 576 BALDAA LYANE GRIGGIA GOD CDS 300 305 229 7756	1307		BALDIA	LYARI	LYARI-3		300	305	135	44%
1310 577 BALDA LYANI LYANI LYANITEL EXCHANGE CDS 300 305 135 649;	1308				JUMA BALOCH					
1931 1938 8in Qasim MAUR	1309	576	BALDIA	LYARI	GHOSIA ROAD	CDS	300		229	75%
1932 599 Bin Casim MAUR COMMENDE MULTI-NESTRAIL (CM.H) DOS 300 305 5 28	1310	577	BALDIA	LYARI		CDS	300	305	135	44%
1331 3522 Bin Qasim MAUR COMBINE MULTARY HOSPTAL (CAM-I) DOS 300 305 529 62%	1311	583	Bin Qasim		ADAM HANGORO	CDS	300	305	216	71%
1314 1736 Bin Qasim MAUR SALANE CHOWN RMU CCS 300 305 190 678	1312		Bin Qasim		ALEEMABAD		300		119	39%
1315 1372 Bin Quim MAUR SAMANERE CHOW RMU CDS 300 305 161 53% 1312 5391 DIAMA MAUR MAUR MAUR MAUR MAUR MAUR DEPENCE CDS 300 305 191 63% 63% 1313 274 1313 274 1314	1313	3523	Bin Qasim	MALIR	COMBINED MILITARY HOSPITAL (C.M.H)	DDS	300	305	5	2%
1316 1391 JOHAR MAUR SAMAINTEENATIONAL DEVELOPERS CDS 300 305 29 10%										
1312 1314 1316	-									
1315 1374 Bin Quim MAUR MAUR MES - 03 DOS 300 305 154 54%										
13320 2141 Bin Quarin MAUR PAYMALIC ANTITOPA DASE) DOS 300 305 220 82°N										
1320 2141 BIN Quisim MAUR PAF MAUR CANTT TORE BASE										
1322 1326 Bin Qualim MAUR FARINAT BACH CDS 300 305 103 34%	-		-						250	
1322 594 Bin Quisim MALIR MeS - 105 CDS 300 305 45 15%									179	
1323 1276										
1324 598 Bin Qasim MAUR GUISHNAF-JAMI RMU CD5 300 305 117 39%	1322	594	Bin Qasim	MALIR	FARHAT BAGH	CDS	300	305	45	15%
1325 3361 Bin Casim MAUR GILZAR RMU CDS 300 305 117 39% 1326 4069 Bin Casim MAUR Penjeet Housing CDS 300 305 15 5 5 1327 4057 Bin Casim MAUR Panade Ground DDS 300 305 13 4% 1328 4056 Bin Casim MAUR Panade Ground DDS 300 305 13 4% 1329 3244 DOHAR MAUR CHECK POST CDS 300 305 13 38% 1330 4102 Bin Casim MAUR Jamia Majsi Sector E DDS 300 305 305 305 1330 4102 Bin Casim MAUR Jamia Majsi Sector E DDS 300 305 5 22% 1331 331 3617 JOHAR MAUR KARACHUJUCIALE MENDECE CHS CDS 300 305 5 22% 1332 593 Bin Casim MAUR KARACHUJUCIALE MENDECE CHS CDS 300 305 67 228% 1333 1315 S95 Bin Casim MAUR KARACHUJUCIALE MENDECE CHS CDS 300 305 146 48% 1334 597 Bin Casim MAUR KAZACHUJUCIALE MENDECE CHS CDS 300 305 146 48% 1335 596 Bin Casim MAUR KAZACHUJUCIALE MENDECE CHS CDS 300 305 198 655% 1336 589 Bin Casim MAUR KAZINARA PANU (JOLS SEURITY PAPER) CDS 300 305 176 58% 1337 3599 Bin Casim MAUR KAZINARA PANU (JOLS SEURITY PAPER) CDS 300 305 176 58% 1338 3121 Bin Casim MAUR ASSISTATO IRRECTE RECTRICAL CDS 300 305 176 58% 1338 3121 Bin Casim MAUR ASSISTATO IRRECTE RECTRICAL CDS 300 305 176 58% 1338 3121 Bin Casim MAUR ASSISTATO IRRECTE RECTRICAL CDS 300 305 35 31 17% 1340 2049 Bin Casim MAUR PHASEL HAUR CDS 300 305 33 1176 1341 75 Bin Casim MAUR PHASEL HAUR CDS 300 305 33 1176 1342 1541 Bin Casim MAUR ARMY HOUSING DIRECTORATE 3 (ADH3) CDS 300 305 32 22 30% 1344 392 Bin Casim MAUR ARMY HOUSING DIRECTORATE 3 (ADH3) CDS 300 305 32 22 30% 1344 392 Bin Casim MAUR FABRIC INDUSTRIES MULLI CODE 300 305 305 32 32 32 1345 Bin Casim MAUR FABRIC MULLI CODE CD	1323	1276	Bin Qasim	MALIR	MES - 105	CDS	300	305	89	29%
1326 4069 Bin Quaim	1324	598	Bin Qasim	MALIR	GULSHAN-E-JAMI RMU	CDS	300	305	249	82%
1327 4957 Bit Dasim	1325	3361	Bin Qasim	MALIR	GULZAR RMU	CDS	300	305	117	39%
1328 4056 Bin Quaim	1326	4069	Bin Qasim	MALIR	Project Housing	CDS	300	305	16	5%
1329 3244 JOHAR MAUR VERVAL PATAN C.H.S CDS 300 305 100 33%	1327	4057	Bin Qasim	MALIR	Parade Ground	DDS	300	305	13	4%
1330 4102 Bin Qasim MALIR MA	1328	4056	Bin Qasim	MALIR	CHECK POST 5	CDS	300	305	35	12%
1331 3617	1329	3244	JOHAR	MALIR	VERVAL PATAN C.H.S	CDS	300	305	100	33%
1332 593 Bin Qasim MAUR MALR MAL	1330	4102	Bin Qasim	MALIR	Jamia Masjid Sector E	DDS	300	305	33	11%
1333 1339 Bin Qasim MALIR KHARPUR LINES CDS 300 305 146 48% 48% 1334 597 Bin Qasim MALIR KAUSAR TOWN CDS 300 305 1598 65% 1335 596 Bin Qasim MALIR KAZIMABAD RIMI (OLD SECURITY PAPER) CDS 300 305 107 33% 1336 589 Bin Qasim MALIR DEH KATHORE CDS 300 305 176 58% 1337 3559 Bin Qasim MALIR ASSISTANT DIRECTOR ELECTRICAL CDS 300 305 125 88% 3132 Bin Qasim MALIR G-3 APARTMENTS CDS 300 305 125 37% 37% 3338 3121 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 53 179% 3340 2049 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 33 111% 1341 76 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 33 111% 1342 1381 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 32 30% 3344 113% 3433 3413 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 22 30% 3344 3434 3413 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 22 30% 3344 3434 3413 Bin Qasim MALIR SECTOR-6 CDS 300 305 29 9% 3344 3434 3432 Bin Qasim MALIR SECTOR-6 CDS 300 305 29 9% 3345 1129 Bin Qasim MALIR ARMSHIM (ALREAD BOARD CDS 300 305 124 41% 41% 4134 418	1331	3617	JOHAR	MALIR	KARACHI JUDICIAL EMPLOYEES CHS	CDS	300	305	5	2%
1334 597 8 In Qasim MALIR KAUSAR TOWN CDS 300 305 198 65%	1332	593	Bin Qasim	MALIR	MES - 02	DDS	300	305	87	28%
1335 596	1333	1139	Bin Qasim	MALIR	KHAIRPUR LINES	CDS	300	305	146	48%
1336 S89 Bin Qasim MALIR DEH KATHORE CDS 300 305 176 S8% 1337 3559 Bin Qasim MALIR ASISTANT DIRECTOR ELECTRICAL CDS 300 305 25 8% 1338 3121 Bin Qasim MALIR ASISTANT DIRECTOR ELECTRICAL CDS 300 305 25 8% 1338 3121 Bin Qasim MALIR GA APARTMENTS CDS 300 305 112 37% 1340 2049 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 53 17% 1341 76 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 34 11% 1342 1581 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 33 11% 1342 1581 Bin Qasim MALIR HIGH RISE APARTMENTS CDS 300 305 92 30% 1343 3413 Bin Qasim MALIR SECTOR - G CDS 300 305 29 9% 1344 592 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 197 64% 1346 1271 Bin Qasim MALIR M.G. INDUSTRIES RMU (OLD DUMBA GOTH) CDS 300 305 124 41% 1346 1271 Bin Qasim MALIR ARBASI MARKET CDS 300 305 124 41% 1347 581 Bin Qasim MALIR NAFES CINEMA CDS 300 305 169 55% 1348 595 Bin Qasim MALIR NAFES CINEMA CDS 300 305 169 55% 1349 584 Bin Qasim MALIR MALIR MALIR CURD INAGAR CDS 300 305 169 55% 1350 588 Bin Qasim MALIR FABRICINDUSTRY (OLD YIC' CDS 300 305 151 49% 1351 3544 JOHAR MALIR SHAZIL GOLF RESIDENCY CDS 300 305 151 49% 1352 586 Bin Qasim MALIR AMBRE CARMENTS CDS 300 305 151 49% 1353 580 Bin Qasim MALIR AMBRE CARMENTS CDS 300 305 151 49% 1353 580 Bin Qasim MALIR AMBRE CARMENTS CDS 300 305 151 49% 1354 600 Orangi MAURIPUR ARBER MOTORS CDS 300 305 151 49% 1355 605 Orangi MALIRUPUR ARBER MOTORS CDS 300 305 152 43% 1356 3813 BALDIA MAURIPUR ARBER MOTORS CDS 300 305 132 43% 1356 601 BALDIA MAURIPUR ARBER MALIRUP CDS 300 305	1334	597	Bin Qasim	MALIR	KAUSAR TOWN	CDS	300	305	198	65%
1337 3559 BIN QASIM MALIR ASSISTANT DIRECTOR ELECTRICAL CDS 300 305 25 85%	1335	596	Bin Qasim	MALIR	KAZIMABAD RMU (OLD SECURITY PAPER)	CDS	300	305	107	35%
1338 3121 Bin Qasim MALIR G-3 APARTMENTS CDS 300 305 112 37% 3738 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 53 17% 1340 2049 Bin Qasim MALIR PAPASE-II MALIR CDS 300 305 33 11% 11% 1341 76 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 33 111% 1342 1581 Bin Qasim MALIR HIGH RISE APARTMENTS CDS 300 305 33 111% 1342 1581 Bin Qasim MALIR HIGH RISE APARTMENTS CDS 300 305 92 30% 3343 3413 Bin Qasim MALIR FECTOR-6 CDS 300 305 29 9% 33443 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 197 64% 3444 592 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 197 64% 3446 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 124 41% 3446 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 3147 S81 Bin Qasim MALIR NAFEES (INEMA CDS 300 305 156 51% 3148 595 Bin Qasim MALIR NAFEES (INEMA CDS 300 305 169 55% 3149 584 Bin Qasim MALIR MALIR COS 300 305 169 55% 31350 588 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRYES) CDS 300 305 169 55% 31351 3544 JOHAR MALIR SHANZIL GOUR RESIDENCY CDS 300 305 151 49% 31351 3544 JOHAR MALIR DAMLOTEE-I CDS 300 305 151 49% 31351 3544 JOHAR MALIR DAMLOTEE-I CDS 300 305 100 33% 335 336	1336	589	Bin Qasim	MALIR	DEH KATHORE	CDS	300	305	176	58%
1339 3728 Bin Qasim MALIR ARMY HOUSING DIRECTORATE-3 (ADH-3) CDS 300 305 53 17%	1337	3559	Bin Qasim		ASSISTANT DIRECTOR ELECTRICAL	CDS	300	305	25	8%
1340 2049 Bin Qasim MALIR PHASE-II MALIR CDS 300 305 34 11% 1341 76 Bin Qasim MALIR ARMY HOUSING MALIR CDS 300 305 33 31 11% 3342 1581 Bin Qasim MALIR HIGH RISE APARTMENTS CDS 300 305 92 30% 305 324 3413 3413 3413 3413 Bin Qasim MALIR SECTOR-G CDS 300 305 29 9% 324 3444 592 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 129 9% 3144 592 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 124 41% 3446 1271 Bin Qasim MALIR M.G. INDUSTRIES RMU (OLD DUMBA GOTH) CDS 300 305 124 41% 3464 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 3147 581 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 3148 595 Bin Qasim MALIR MALIR COLONY C CDS 300 305 166 51% 3149 584 Bin Qasim MALIR MALIR COLONY C CDS 300 305 169 55% 3149 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 3151 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 151 49% 31351 3544 JOHAR MALIR DAMLOTEE-I CDS 300 305 100 33% 335 3	1338	3121	Bin Qasim	MALIR	G-3 APARTMENTS	CDS	300	305	112	37%
1341 76	1339	3728	Bin Qasim	MALIR	ARMY HOUSING DIRECTORATE-3 (ADH-3)	CDS	300	305	53	17%
1342 1581 Bin Qasim MALIR HIGH RISE APARTMENTS CDS 300 305 92 30% 3134 3413 3413 Bin Qasim MALIR SECTOR -G CDS 300 305 29 9% 31344 392 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 197 64% 3145 1129 Bin Qasim MALIR M.G. INDUSTRIES RMU (OLD DUMBA GOTH) CDS 300 305 124 41% 41% 3146 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 3147 581 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 3147 581 Bin Qasim MALIR NAFEES CINEMA CDS 300 305 166 51% 3148 595 Bin Qasim MALIR MALIR COLONY C' CDS 300 305 169 55% 31349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 169 55% 31350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 151 49% 31351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 333% 1352 586 Bin Qasim MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 333% 3353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 100 333% 3355 560 Orangi MAURIPUR AKBER MOTORS CDS 300 305 108 355% 3135 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 108 355% 3135 580 Bin Qasim MAURIPUR AKBER MOTORS CDS 300 305 132 43% 3136 3813 BALDIA MAURIPUR AKBER MOTORS CDS 300 305 132 43% 3136 360 Orangi MAURIPUR SHAFLTANNERY CDS 300 305 132 43% 3136 609 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 121 40% 3136 300 305							300		34	
1343 3413 Bin Qasim	1341	76	Bin Qasim	MALIR	ARMY HOUSING MALIR	CDS	300	305	33	11%
1344 592 Bin Qasim MALIR CENTRAL CARD BOARD CDS 300 305 197 64% 1345 1129 Bin Qasim MALIR M.G. INDUSTRIES RMU (OLD DUMBA GOTH) CDS 300 305 124 41% 1346 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 1347 581 Bin Qasim MALIR NAFEES CINEMA CDS 300 305 156 51% 1348 595 Bin Qasim MALIR MALIR MALIR COLONY (° CDS 300 305 169 55% 1349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 1350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 151 49% 1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 151 49% 1352 586 Bin Qasim MALIR DANILOTEE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 7 2% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR HERMAN LAB CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HARMAS STEEL CDS 300 305 132 43% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1358 603 Orangi MAURIPUR CROWN GRINDING CDS 300 305 58 199 1361 3007 Orangi MAURIPUR CROWN GRINDING CDS 300 305 58 199 1362 612 Orangi MAURIPUR RAUFIPUR RAUFIPUR CDS 300 305 58 199 1363 609 Orangi MAURIPUR RAUFIPUR CROWN GRINDING CDS 300 305 58 199 1364 600 Orangi MAURIPUR CROWN GRINDING CDS 300 305 58 199 1365 2061 BALDIA MAURIPUR RAUFIPUR CROWN GRINDING CDS 300 305 512 40% 1366 601 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 512 40% 1366 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 512 40% 1366 601 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 512 40% 1366 601 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 100 33% 1366 601 B	-									
1345 1129 Bin Qasim										
1346 1271 Bin Qasim MALIR ABBASI MARKET CDS 300 305 198 65% 1347 581 Bin Qasim MALIR NAFEES CINEMA CDS 300 305 156 51% 1348 595 Bin Qasim MALIR MALIR COLONY 'C' CDS 300 305 169 55% 1349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 1350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 96 32% 1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 33% 1352 586 Bin Qasim MALIR DAMLOTE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR DAMLOTE-I CDS 300 305 195 64% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR HARMA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 28 9% 1359 602 BALDIA MAURIPUR PARACHA TEXTILE CDS 300 305 58 19% 1361 3007 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1362 612 Orangi MAURIPUR RAUFIPUR RAUFIPUR MEEZAN BANK DDS 300 305 58 19% 1363 609 Orangi MAURIPUR RAUFIPUR RAUFIPUR MEEZAN BANK DDS 300 305 58 19% 1364 3007 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1365 2061 BALDIA MAURIPUR RAUFIPUR ACREW FEEDER CDS 300 305 58 19% 1366 601 BALDIA MAURIPUR RAUFIPUR ACREW FEEDER CDS 300 305 58 19% 1366 601 BALDIA MAURIPUR GARRISON CDS 300 305 121 40% 1368 1277 BALDIA MAURIPUR GARRISON CDS 300 305 121 42% 1368 1277 BALDIA MAURIPUR GARRISON CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR GARRISON CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1369 1370 1370 141 46%										
1347 581 Bin Qasim MALIR NAFEES CINEMA CDS 300 305 156 51% 1348 595 Bin Qasim MALIR MALIR COLONY 'C' CDS 300 305 169 55% 1349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 1350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 151 49% 1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 151 49% 1352 586 Bin Qasim MALIR DAMLOTEE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 195 64% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR AKBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 132 43% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1359 602 BALDIA MAURIPUR PARACHA TEXTILE CDS 300 305 58 19% 1360 3101 Orangi MAURIPUR MEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR AKBER MOTORS CDS 300 305 58 19% 1363 609 Orangi MAURIPUR AREFINING CDS 300 305 58 19% 1364 3951 Orangi MAURIPUR AKBER MOTORS CDS 300 305 58 19% 1365 2061 BALDIA MAURIPUR AKBER MOTORS CDS 300 305 58 19% 1366 601 BALDIA MAURIPUR AKBER MOTORS CDS 300 305 121 40% 1368 1277 BALDIA MAURIPUR AKBER MOTORS CDS 300 305 127 42% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING CDS 300 305 127 42% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH MMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH MMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH MMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH MMU CDS 300			Dill Qualiti			000	500			1270
1348 595 Bin Qasim MALIR MALIR COLONY C' CDS 300 305 169 55% 1349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 1350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 151 49% 1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 33% 1352 586 Bin Qasim MALIR DAMLOTEE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 195 64% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR ARBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 132 43% 1358 603 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1359 602 BALDIA MAURIPUR PARACHA TEXTILE CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR ARBER MANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 68 22% 1363 609 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1364 3951 Orangi MAURIPUR ACME FEEDER CDS 300 305 121 40% 1366 601 BALDIA MAURIPUR ACME FEEDER CDS 300 305 172 56% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 127 42% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 121 46% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1369 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1360 1360 1360 1										
1349 584 Bin Qasim MALIR FABRIC INDUSTRY (OLD SMALL INDUSTRIES) CDS 300 305 96 32% 1350 588 Bin Qasim MALIR URDU NAGAR CDS 300 305 151 49% 1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 33% 1352 586 Bin Qasim MALIR DAMLOTEE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 195 66% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR ARBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 332 43% 1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 332 43% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 58 19% 1362 612 Orangi MAURIPUR RAUFIPUR ARBER GARMEN DDS 300 305 68 22% 1363 609 Orangi MAURIPUR RAUFIPUR RAUFITUR DDS 300 305 68 22% 1364 3951 Orangi MAURIPUR ACME FEEDER CDS 300 305 100 33% 1366 601 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 127 42% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 525 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1369 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1361 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1361 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1361 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1362 1277 1277 1277 1278 1278	-									
1350 588										
1351 3544 JOHAR MALIR SHANZIL GOLF RESIDENCY CDS 300 305 100 33% 1352 586 Bin Qasim MALIR DAMLOTEE-I CDS 300 305 7 2% 1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 195 64% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 355% 1355 605 Orangi MAURIPUR AKBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 79 26% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 58 19% 1360 3101 Orangi MAURIPUR MEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 58 19% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 121 40% 1364 3951 Orangi MAURIPUR ACME FEEDER CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR GARRISON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON CDS 300 305 225 8% 1368 1277 BALDIA MAURIPUR GARRISON CDS 300 305 121 46% 1368 1277 BALDIA MAURIPUR GARRISON CDS 300 305 121 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1369 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1361 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1362 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1363 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1364 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46% 1365 1366 1266 1266										
1352 586										
1353 580 Bin Qasim MALIR AMBER GARMENTS CDS 300 305 195 64% 1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR AKBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 79 26% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 121 40% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 100 33% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 172 56% 1367 3374 BALDIA MAURIPUR GARRISON ENGINERING DDS 300 305 225 8% 1368 1277 BALDIA MAURIPUR GARRISON ENGINERING DDS 300 305 255 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	-									
1354 600 Orangi MAURIPUR HERMAN LAB CDS 300 305 108 35% 1355 605 Orangi MAURIPUR AKBER MOTORS CDS 300 305 133 44% 1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 79 26% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR MEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 58 19% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 172 56% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 127 42% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 255 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%										
1355 605										
1356 3813 BALDIA MAURIPUR HAMZA STEEL CDS 300 305 28 9% 1357 608 Orangi MAURIPUR SHAFI TANNERY CDS 300 305 132 43% 1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 79 26% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 121 40% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 172 56% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%										
1357 608										
1358 603 Orangi MAURIPUR PARACHA TEXTILE CDS 300 305 79 26% 1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 58 19% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDI										
1359 602 BALDIA MAURIPUR CROWN GRINDING CDS 300 305 101 33% 1360 3101 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 121 40% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			_							
1360 3101 Orangi MAURIPUR MEEZAN BANK DDS 300 305 58 19% 1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 121 40% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 127 42% 1368 1277 BA										
1361 3007 Orangi MAURIPUR JAN FINISHING CDS 300 305 121 40% 1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%										
1362 612 Orangi MAURIPUR RAUF TEXTILE DDS 300 305 68 22% 1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%			Orangi							
1363 609 Orangi MAURIPUR ACME FEEDER CDS 300 305 218 71% 1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%			_						121	
1364 3951 Orangi MAURIPUR TAXEM DDS 300 305 100 33% 1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	1362	612	Orangi	MAURIPUR	RAUF TEXTILE	DDS	300		68	22%
1365 2061 BALDIA MAURIPUR KANUPP PUMPING CDS 300 305 172 56% 1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	1363	609	Orangi	MAURIPUR	ACME FEEDER	CDS	300	305	218	71%
1366 601 BALDIA MAURIPUR MEGATRON CDS 300 305 127 42% 1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	1364		Orangi		TAXEM	DDS	300		100	33%
1367 3374 BALDIA MAURIPUR GARRISON ENGINEERING DDS 300 305 25 8% 1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	1365	2061	BALDIA	MAURIPUR	KANUPP PUMPING	CDS	300	305	172	56%
1368 1277 BALDIA MAURIPUR AZIZ BALOCH RMU CDS 300 305 141 46%	1366	601	BALDIA	MAURIPUR	MEGATRON	CDS	300	305	127	42%
	1367	3374	BALDIA	MAURIPUR	GARRISON ENGINEERING	DDS	300	305	25	8%
1369 617 Orangi MAURIPUR GRIND WHEEL CDS 300 305 154 51%	1368	1277	BALDIA	MAURIPUR	AZIZ BALOCH RMU	CDS	300	305	141	46%
	1369	617	Orangi	MAURIPUR	GRIND WHEEL	CDS	300	305	154	51%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1370	604	Orangi	MAURIPUR	KOHINOOR MARBLE	CDS	300	305	73	24%
1371	618	Orangi	MAURIPUR	GOOD LUCK	CDS	300	305	89	29%
1372	616	BALDIA	MAURIPUR	LYARI EXPRESSWAY-I	CDS	300	305	73	24%
1373	2039	Orangi	MAURIPUR	SUFI HOTEL RMU	CDS	300	305	162	53%
1374	3906	BALDIA	MAURIPUR	PAKISTAN ATOMIC ENERGY COMMISSION	DDS	300	305	13	4%
1375	2184	Orangi	MAURIPUR	CAST IRON	CDS	300	305	113	37%
1376	607	BALDIA	MAURIPUR	MAURIPUR TREATMENT PLANT	CDS	300	305	103	34%
1377	614	BALDIA	MAURIPUR	MAURIPUR CENTRE	CDS	300	305	132	43%
1378	606	BALDIA	MAURIPUR	PAK MARINE ACADEMY	CDS	300	305	9	3%
1379	766	Orangi	MAURIPUR	IA INDUSTRIES	CDS	300	305	162	53%
1380	3504	Orangi	MAURIPUR	YAHYA ENTERPRISE	CDS	300	305	211	69%
1381	613	BALDIA	MAURIPUR	MAURIPUR TRUCK STAND	CDS	300	305	72	24%
1382	3723	BALDIA	MAURIPUR	MAXIMUS	CDS	300	305	142	46%
1383	2158	BALDIA	MAURIPUR	PNR COLOY	CDS	300	305	110	36%
1384	3373	BALDIA	MAURIPUR	AGE NAVY	DDS	300	305	71	23%
1385	615	Orangi	MAURIPUR	STANDARD ROLLING	CDS	300	305	77	25%
1386	2186	Orangi	MAURIPUR	TAEEJIN	CDS	300	305	191	63%
1387	4012	BALDIA	MAURIPUR	DASHT (Peoples Low Cast)	CDS	300	305	147	48%
1388	3311	Orangi	MAURIPUR	CBM PLASTIC	DDS	300	305	239	78%
1389	3872	Surjani	MAYMAR	Vay Water	CDS	300	305	298	98%
1390	4071	Surjani	MAYMAR	SAJJAD SHAIKH (old P-V20 RMU)	CDS	300	305	151	49%
1391	4063	JOHAR	MAYMAR	SHAHNAWAZ CHS	DDS	300	305	19	6%
1392	3747	JOHAR	MAYMAR	HEAVEN CITY	CDS	300	305	34	11%
1393	1279	Surjani	MAYMAR	Bashir Chowk	CDS	300	305	209	69%
1394	3883	JOHAR	MAYMAR	ABDULLAH GABOL VILLAGE	CDS	300	305	120	39%
1395	3060	JOHAR	MAYMAR	MASHRIQ SOCIETY	CDS	300	305	158	52%
1396	1281	Surjani	MAYMAR	P-21 RMU	CDS	300	305	246	81%
1397	3753	Johar	MAYMAR	GARDEN CITY (MERRYLAND BUILDERS)	DDS	300	305	25	8%
1398	3497	Surjani	MAYMAR	Javed Metal	CDS	300	305	258	85%
1399	1283	JOHAR	MAYMAR	CHAMBAILI RMU	CDS	300	305	268	88%
1400	3233	Surjani	MAYMAR	Crystal Ice	CDS	300	305	170	56%
1401	3441	JOHAR	MAYMAR	PAK STEEL RMU	CDS	300	305	199	65%
1402	3749	JOHAR	MAYMAR	Alig Old Boys	DDS	300	305	118	39%
1403	1236	JOHAR	MAYMAR	TOWN HALL	CDS	300	305	224	74%
1404	3671	JOHAR	MAYMAR	DIAMOND CITY	DDS CDS	300	305 305	93	30% 37%
1405	1286	JOHAR	MAYMAR	GHANIABAD RMU	CDS	300 300		114	52%
1406 1407	3448 3443	Surjani JOHAR	MAYMAR MAYMAR	AL-Karam Towels SS STAFF HOSTEL	CDS	300	305 305	157 81	27%
1407	3884	JOHAR	MAYMAR	SECTOR Z	CDS	300	305	144	47%
1409	1285	Surjani	MAYMAR	Win Mark	CDS	300	305	86	28%
1410	3498	Surjani	MAYMAR	Lakhani Tower	CDS	300	305	190	62%
1411	3920	JOHAR	MAYMAR	NOOR HAMZA MASJID	CDS	300	305	189	62%
1412	3231	Surjani	MAYMAR	Urooj Garment	CDS	300	305	84	28%
1413	3166	Surjani	MAYMAR	Euro Gulf	CDS	300	305	219	72%
1414	4091	Surjani	MAYMAR	Steelex	CDS	300	305	94	31%
1415	1280	JOHAR	MAYMAR	AHSANABAD PHASE-IV	CDS	300	305	202	66%
1416	1278	JOHAR	MAYMAR	MAYMAR COMPLEX	CDS	300	305	144	47%
1417	1282	JOHAR	MAYMAR	SAIFAL GOTH	CDS	300	305	195	64%
1418	3417	JOHAR	MAYMAR	SENATOR MAZHAR ALI	CDS	300	305	186	61%
1419	3974	JOHAR	MAYMAR	Quetta Town	CDS	300	305	84	27%
1420	4066	JOHAR	MAYMAR	Sharjah Hotel	CDS	300	305	21	7%
1421	4052	JOHAR	MAYMAR	NORTHERN BYPASS	CDS	300	305	144	47%
1422	4182	Surjani	MAYMAR	PAK FLOUR MILL	CDS	300	305	0	0%
1423	3874	Surjani	MAYMAR	Posh Craft	CDS	300	305	135	44%
1424	3230	Surjani	MAYMAR	Phase-2	CDS	300	305	182	60%
1425	4065	Johar	MAYMAR	CHAPAL UPTOWN	DDS	300	305	3	1%
1426	418	JOHAR	MAYMAR	PTV HOUSING SOCIETY	CDS	300	305	65	21%
1427	4059	JOHAR	MAYMAR	Sir Syed	DDS	300	305	4	1%
1428	4201	Surjani	MAYMAR	UTOPIA INDUSTRY	DDS	300	305	15	5%
1429	3772	JOHAR	MAYMAR	PATNI CHS	DDS	300	305	0	0%
1430	4113	Surjani	MAYMAR	HADI INDUSTRY	CDS	300	305	142	46%
1431	1284	Surjani	MAYMAR	Century Engineering (NCB)	CDS	300	305	255	84%
1432	3449	Surjani	MAYMAR	P-10 RMU	CDS	300	305	239	78%
1433	3912	JOHAR	MAYMAR	WASI COUNTRY PARK	DDS	300	305	52	17%
1434	4166	Johar	MAYMAR	MUHAMMAD PATEL	DDS	300	305	0	0%
1435	3237	SOCIETY	Mehmoodabad	MEHMOODABAD ABC	CDS	300	305	161	53%
1436	2082	SOCIETY	Mehmoodabad	LADIES PARK	CDS	300	305	128	42%
1437	3543	SOCIETY	Mehmoodabad	PRESTON UNIVERSITY	CDS	300	305	180	59%
1438	3576	SOCIETY	Mehmoodabad	PUMPING 1	CDS	300	305	106	35%
1439	1130	SOCIETY	Mehmoodabad	MASJID E AQSA +	CDS	300	305	127	42%
1440	1165	SOCIETY	Mehmoodabad	SHAIKH NAZAZ ALI	CDS	300	305	131	43%
1441	3436	SOCIETY	Mehmoodabad	SITARA BAKERY	CDS	300	305	101	33%
1442	4231	SOCIETY	Mehmoodabad	AZAM BASTI (Ideal Bakery PMT RMU)	CDS	300	305	147	48%
1443	4210	SOCIETY	Mehmoodabad	LAC BUS STOP	CDS	300	305	121	40%
1444	3248	SOCIETY	Mehmoodabad	PECHS-I+	CDS	300	305	65	21%
1445	3362	SOCIETY	Mehmoodabad	AMBALA SWEET	CDS	300	305	192	63%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1446	3573	SOCIETY	Mehmoodabad	POLE 32 +	CDS	300	305	110	36%
1447	493	SOCIETY	Mehmoodabad	KDA TP-2	CDS	300	305	79	26%
1448	500	SOCIETY	Mehmoodabad	ZOROASTRIAN +	CDS	300	305	190	62%
1449	1119	SOCIETY	Mehmoodabad	KAWISH CROWN	CDS	300	305	164	54%
1450	1131	SOCIETY	Mehmoodabad	BUSINESS CENTRE	CDS	300	305	153	50%
1451	1571	Bin Qasim	MEMON GOTH	MEMON GOTH TEL. EXCHANGE	CDS	300	305	238	78%
1452	3524	Bin Qasim	MEMON GOTH	KHAYABAN-E-MUHAMMAD	CDS	300	305	6	2%
1453	1579	Bin Qasim	MEMON GOTH	KHOKHRAPAR RMU	CDS	300	305	159	52%
1454 1455	3696 1573	Bin Qasim Bin Qasim	MEMON GOTH MEMON GOTH	BURHANI GARDEN IULLA ESSA GOTH RMU (OLD JALBANI GOTH RMU	CDS	300 300	305 305	27 78	9% 25%
1456	2015	Bin Qasim	MEMON GOTH	RIVER PMT RMU (Malir River)	CDS	300	305	169	55%
1457	1575	Bin Qasim	MEMON GOTH	REST HOUSE	CDS	300	305	181	59%
1458	1572	Bin Qasim	MEMON GOTH	POLE # 58 RMU	CDS	300	305	145	48%
1459	3618	Bin Qasim	MEMON GOTH	NAZAR ALI WELLS	CDS	300	305	76	25%
1460	1577	Bin Qasim	MEMON GOTH	HUSSAINI RMU	CDS	300	305	140	46%
1461	1578	Bin Qasim	MEMON GOTH	DEGREE SCIENCE COLLEGE	CDS	300	305	229	75%
1462	3620	Bin Qasim	MEMON GOTH	BILAL MASJID RMU	CDS	300	305	161	53%
1463	1574	Bin Qasim	MEMON GOTH	KHALID PUMPING	CDS	300	305	215	71%
1464	3695	Bin Qasim	MEMON GOTH	SAIMA GREEN VALLEY	CDS	300	305	1	0%
1465	526	KORANGI	New LANDHI	DAWOOD COTTON	CDS	300	305	209	69%
1466	1262	Bin Qasim	New LANDHI	MANSEHRA COLONY	CDS	300	305	111	36%
1467	4207	Bin Qasim	New LANDHI	ABBOT LABORATORIES	DDS	300	305	172	56%
1468	4165	Bin Qasim	New LANDHI	AM-3 SPINNING (EX ARTISTIC MILLINERS)	DDS	300	305	137	45%
1469	4252	Bin Qasim	New LANDHI	AM TEXTILE 17	DDS	300	305	93	31%
1470 1471	3333 621	Surjani Surjani	North Karachi North Karachi	Peoples Colony Hasan Cold	CDS	300 300	305 305	237 217	78% 71%
1471	621	Surjani Surjani	North Karachi North Karachi	Hasan Cold Paradise	CDS	300	305	190	71% 62%
1473	3382	Surjani	North Karachi	Arman CNG	CDS	300	305	203	67%
1474	643	Surjani	North Karachi	Saleem Centre	CDS	300	305	103	34%
1475	619	Surjani	North Karachi	Buffer Zone Pump	CDS	300	305	157	52%
1476	624	Surjani	North Karachi	UP More (Sheerin Cinema)	CDS	300	305	59	19%
1477	626	Surjani	North Karachi	Barkat Market	CDS	300	305	128	42%
1478	627	Surjani	North Karachi	Masjid-e-Khan Younus	CDS	300	305	191	63%
1479	652	Surjani	North Karachi	Zaibun Nisa College	CDS	300	305	194	64%
1480	622	Surjani	North Karachi	Khayyam Town	CDS	300	305	112	37%
1481	637	Surjani	North Karachi	Sector-5E	CDS	300	305	146	48%
1482	1287	Surjani	North Karachi	North Karachi Pumping	CDS	300	305	36	12%
1483	630	Surjani	North Karachi	Naz College	CDS	300	305	172	56%
1484	632	Surjani	North Karachi	P-17	CDS	300	305	191	63%
1485	3327	Surjani	North Karachi	Falcon House	CDS	300	305	108	35%
1486	3011	Surjani	North Karachi	Crown Plaza	CDS	300	305	153	50%
1487	623	Surjani	North Karachi	Crescent Arcade	CDS	300	305	130	43%
1488 1489	3381 639	Surjani Surjani	North Karachi North Karachi	Al-Ahmed Avenue Maragba Hall	CDS	300 300	305 305	165 162	54% 53%
1490	633	Surjani	North Karachi	Best View (OLD Surjani Town P-1)	CDS	300	305	177	58%
1491	620	Surjani	North Karachi	Haroon Height	CDS	300	305	72	24%
1492	653	Surjani	North Karachi	Karaka Pak	CDS	300	305	211	69%
1493	647	Surjani	North Karachi	SM Obaid	CDS	300	305	180	59%
1494	648	Surjani	North Karachi	Saba Cinema	CDS	300	305	222	73%
1495	651	Surjani	North Karachi	Qaim Khani RMU	CDS	300	305	168	55%
1496	640	Surjani	North Karachi	Muslim Town + Cap	CDS	300	305	145	48%
1497	634	Surjani	North Karachi	Todays Restaurant	CDS	300	305	118	39%
1498	642	Surjani	North Karachi	RT Plaza	CDS	300	305	89	29%
1499	641	Surjani	North Karachi	Red Rose	CDS	300	305	208	68%
1500	650	Surjani	North Karachi	Nice Bakers (Old Saba Cinema)	CDS	300	305	119	39%
1501	1288	Surjani	North Karachi	Gold Smith Sheerani Ice	CDS	300	305	164	54%
1502 1503	646 3100	Surjani Surjani	North Karachi North Karachi	Sheerani Ice Al-Hira	CDS	300 300	305 305	105 210	34% 69%
1503	3288	Surjani	North Karachi	Al-Hira Al-Falah Bank	CDS	300	305	108	35%
1504	644	Surjani	North Karachi	Sunlight	CDS	300	305	108	33%
1506	1290	Surjani	North Nazimabad	Dawat-e-Hidayat (Old Saifee Foundation)	CDS	300	305	64	21%
1507	656	Surjani	North Nazimabad	Shaharyar Clinic	CDS	300	305	97	32%
1508	654	Orangi	NORTH NAZIMABAD	BANARAS PUMPING	CDS	300	305	168	55%
1509	666	Orangi	NORTH NAZIMABAD	ORANGI ICE	CDS	300	305	144	47%
1510	665	Surjani	North Nazimabad	National Youth Center	CDS	300	305	197	64%
1511	1292	Surjani	North Nazimabad	Shipowner College	CDS	300	305	284	93%
1512	3294	Surjani	North Nazimabad	Pole-15 + Cap1A	CDS	300	305	184	61%
1513	1291	Surjani	North Nazimabad	Block-G	CDS	300	305	88	29%
1514	3324	Orangi	North Nazimabad	KATI PAHARI	CDS	300	305	181	59%
1515	3603	Surjani	North Nazimabad	Imam Clinic	CDS	300	305	176	58%
1516	1293	Surjani	North Nazimabad	Asghar Ali Shah	CDS	300	305	110	36%
1517	3397	GULSHAN	North Nazimabad	Chandni Chowk	CDS	300	305	103	34%
1518	670	Surjani	North Nazimahad	Khandoo Goth	CDS	300	305	164	54%
1519 1520	3432 3293	Surjani	North Nazimabad North Nazimabad	Nagina Square Hyderi Sweets	CDS	300 300	305 305	143 102	47% 33%
1520	664	Surjani Surjani	North Nazimabad	Block-A Pumping	CDS	300	305	102	59%
1271	004	Jurjafii	INOLUI INAZIIIIADAU	BIOCK-A PUHIPHING	LUS	300	503	1/3	35%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1522	3414	GULSHAN	North Nazimabad	BOSE	CDS	300	305	134	44%
1523	667	GULSHAN	North Nazimabad	Firdous Colony	CDS	300	305	307	101%
1524	661	Surjani	North Nazimabad	Friends Height	CDS	300	305	114	37%
1525	662	Surjani	North Nazimabad	State Bank	CDS	300	305	138	45%
1526	3602	Surjani	North Nazimabad	Euro Regent Park	CDS	300	305	100	33%
1527	669	GULSHAN	North Nazimabad	Naz Post Office	CDS	300	305	165	54%
1528	1295	GULSHAN	North Nazimabad	Ashraf Nagar	CDS	300	305	208	68%
1529 1530	659 663	Surjani Surjani	North Nazimabad North Nazimabad	Pahar Ganj Jinnah University	CDS	300 300	305 305	207 62	68% 20%
1531	657	GULSHAN	North Nazimabad	Paposh Nagar	CDS	300	305	162	53%
1532	660	Surjani	North Nazimabad	Ali Doulat	CDS	300	305	185	61%
1533	674	Surjani	North Nazimabad	Al-Burhan	CDS	300	305	126	41%
1534	4058	Surjani	North Nazimabad	Walk Way	DDS	300	305	58	19%
1535	2123	Orangi	North Nazimabad	ALI GARH BAZAR	CDS	300	305	109	36%
1536	668	Surjani	North Nazimabad	Mustafabad Pumping	CDS	300	305	69	23%
1537	672	Surjani	North Nazimabad	Blessing Plaza	CDS	300	305	181	59%
1538	1298	Surjani	North Nazimabad	KDA Center View	CDS	300	305	181	59%
1539	658	Surjani	North Nazimabad	TTC	CDS	300	305	171	56%
1540	675	Surjani	North Nazimabad	Taqi Center	CDS	300	305	256	84%
1541	1296	Surjani	North Nazimabad	Maria Homes (Old Saima Avenue)	CDS	300	305	56	19%
1542	1297	Surjani	North Nazimabad	Ziauddin Hospital	CDS	300	305	184	60%
1543	655	Surjani	North Nazimabad	Bab-ul-Ilm	CDS	300	305	264	87%
1544	671	Surjani	North Nazimabad	Marhaba Galaxy	CDS	300	305	123	40%
1545	673	Surjani	North Nazimabad	Gulshan-e-Zubaida	CDS	300	305	165	54%
1546 1547	852 747	BALDIA DEFENCE	OLD TOWN Old Town	OKHAI MEMON Police Head Office	CDS	300 300	305 305	179 145	59% 48%
1547	679	BALDIA	OLD TOWN	BEHAR COLONY	CDS	300	305	145	48% 53%
1549	683	BALDIA	OLD TOWN	LAWRANCE APPARTMENT	CDS	300	305	184	60%
1550	676	BALDIA	OLD TOWN	LIBERTY OIL MILL	CDS	300	305	131	43%
1551	678	BALDIA	OLD TOWN	OLD TOWN RMU-II	CDS	300	305	141	46%
1552	573	BALDIA	OLD TOWN	LEA MARKET RMU	CDS	300	305	160	53%
1553	686	BALDIA	OLD TOWN	GATEWAY	CDS	300	305	125	41%
1554	742	BALDIA	OLD TOWN	MUSLIM GARDEN	CDS	300	305	181	59%
1555	1309	BALDIA	OLD TOWN	DENSO ROAD	CDS	300	305	133	44%
1556	749	BALDIA	OLD TOWN	BARNESS STREET	CDS	300	305	69	23%
1557	746	BALDIA	OLD TOWN	RESALA POLICE	CDS	300	305	93	30%
1558	681	BALDIA	OLD TOWN	NEW NIHAM (8-11-2008)	CDS	300	305	151	50%
1559	1336	BALDIA	OLD TOWN	COMMERCIAL COLD STORAGE	CDS	300	305	188	62%
1560	1307	BALDIA	OLD TOWN	LYARI FIRE BRIGADE	CDS	300	305	177	58%
1561	1305	BALDIA	OLD TOWN	NEW KUMHARWARA	CDS	300	305	239	78%
1562 1563	1310 1311	BALDIA BALDIA	OLD TOWN OLD TOWN	GHAREEB SHAH LYARI PUMPING	CDS	300 300	305 305	192 117	63% 38%
1564	1311	BALDIA	OLD TOWN	NAWABAD	CDS	300	305	157	52%
1565	1301	BALDIA	OLD TOWN	RAUF OIL	CDS	300	305	219	72%
1566	680	BALDIA	OLD TOWN	BENGAL OIL	CDS	300	305	168	55%
1567	1300	BALDIA	OLD TOWN	PAK ICE (31-01-2009)	CDS	300	305	161	53%
1568	3351	BALDIA	OLD TOWN	JUNAID TRADE RMU	CDS	300	305	77	25%
1569	1299	BALDIA	OLD TOWN	BURMA OIL-I	CDS	300	305	96	31%
1570	1303	BALDIA	OLD TOWN	JELANI CENTRE	CDS	300	305	140	46%
1571	1304	BALDIA	OLD TOWN	KWSB CHAWKIWARA	CDS	300	305	152	50%
1572	3740	BALDIA	OLD TOWN	MIDPOINT	CDS	300	305	161	53%
1573	566	BALDIA	Old Town	OLD HAJI CAMP	CDS	300	305	123	40%
1574	1306	BALDIA	OLD TOWN	HAJI ISMAIL	CDS	300	305	142	46%
1575	1312	BALDIA	OLD TOWN	HAJI PIR MUHAMMAD RMU	CDS	300	305	103	34%
1576	3541 3739	BALDIA	OLD TOWN OLD TOWN	GHANCHI PARA	CDS	300	305	141	46% 54%
1577 1578	677	BALDIA BALDIA	OLD TOWN OLD TOWN	OFFBEAT STREET RMU MOOSA LANE RMU	CDS	300 300	305 305	166 85	28%
1579	3010	BALDIA	OLD TOWN	RAMPAT ROAD P-11	CDS	300	305	188	62%
1580	687	Orangi	ORANGI	AL AJAZ + CAP	CDS	300	305	175	58%
1581	3372	Orangi	ORANGI	QATTAR HOSPITAL	CDS	300	305	44	14%
1582	3425	Orangi	ORANGI	DUA CHOWK RMU	CDS	300	305	146	48%
1583	691	Orangi	ORANGI	KHWAJA GHAREEB NAWAZ	CDS	300	305	169	55%
1584	693	Orangi	ORANGI	KAMAL PETROL PUMP	CDS	300	305	144	47%
1585	689	Orangi	ORANGI	NISHAN-E-HYDER	CDS	300	305	124	41%
1586	695	Orangi	ORANGI	NOORI POLICE	CDS	300	305	197	65%
1587	706	Orangi	ORANGI	QAZZAFI CHOWK	CDS	300	305	115	38%
1588	692	Orangi	ORANGI	SHAMS-UDDIN	CDS	300	305	208	68%
1589	690	Orangi	ORANGI	AL-FATEH COLONY	CDS	300	305	188	62%
1590	2095	Orangi	ORANGI	REHMAT CHOWK	CDS	300	305	111	36%
1591	1313	Orangi	ORANGI	MASJID -E- QUBA	CDS	300	305	186	61%
1592	3345	Orangi	ORANGI	PULIA WALI	CDS	300	305	209	69%
1593	698	Orangi	ORANGI	ISLAMIA COLONY	CDS	300	305	214	70%
1594	696	Orangi	ORANGI	GHAZIABAD PUMPING	CDS	300	305	199	65%
1595 1596	697 699	Orangi Orangi	ORANGI ORANGI	CHANDNI CHOWK SHAHFAISAL CHOWK	CDS	300 300	305 305	143 155	47% 51%
1596	700	Orangi	ORANGI	DATA CHOWK	CDS	300	305	195	64%
123/	I /00	Orangi	UNANUI	DATA CHOWK	LCD2	300	303	133	0470

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1598	1314	Orangi	ORANGI	HILAL-E-AHMER	CDS	300	305	159	52%
1599	3387	Orangi	ORANGI	RK STUDIO	CDS	300	305	148	49%
1600	2027	Orangi	ORANGI	BILLING ZONE	CDS	300	305	217	71%
1601	702	Orangi	ORANGI	AL-HIRA PUMPING	CDS	300	305	68	22%
1602	707	Orangi	ORANGI	ZIA-UL-HAQ -COLONY	CDS	300	305	213	70%
1603	708	Orangi	ORANGI	GABOL PUMPING	CDS	300	305	212	70%
1604	705	Orangi	ORANGI	GERMAN SCHOOL	CDS	300	305	138	45%
1605	688	Orangi	ORANGI	HURRIAT NAGAR	CDS	300	305	187	61%
1606	703	Orangi	ORANGI	AL-SHIFA CLINIC	CDS	300	305	147	48%
1607	3263	Orangi	ORANGI	TECHNICAL COLLEGE	CDS	300	305	265	87%
1608	701	Orangi	ORANGI	KALEEM INDUSTRY	CDS	300	305	159	52%
1609	2029	Orangi	ORANGI	BISMILLAH CHOWK	CDS	300	305	120	39%
1610	3422	Orangi	ORANGI	SABRI CHOWK RMU	CDS	300	305	140	46%
1611	2085	Orangi	ORANGI	SPECIAL EDUCATION	CDS	300	305	155	51%
1612	1315	Orangi	ORANGI	SHAIKH M. RASHEED	CDS	300	305	156	51%
1613	3427	Orangi	ORANGI	GULSHAN-E-HASSAM	CDS	300	305	182	60%
1614	3431	Orangi	ORANGI	DANISH KAMIL RMU	CDS	300	305	224	73%
1615	139	Orangi	ORANGI	TOHEED COLONY	CDS	300	305	179	59%
1616	132	Orangi	ORANGI	ZAHOOR COUNCILLOR	CDS	300	305	245	80%
1617	150	Orangi	ORANGI	KHATAK RMU	CDS	300	305	92	30%
1618	725	Bin Qasim	PIPRI EAST	TOWN SHIP (Steel Mill)	DDS	300	305	111	36%
1619	722	Bin Qasim	PIPRI EAST	MDS 1(Steel Mill)	DDS	300	305	24	8%
1620	723	Bin Qasim	PIPRI EAST	MDS 2(Steel Mill)	DDS	300	305	142	47%
1621	724	Bin Qasim	PIPRI EAST	MAGNETIC INTERNATIONAL (OLD MARINE PRIDE	CDS	300	305	49	16%
1622	3305	Bin Qasim	PIPRI EAST	M.M GHEE MILL (OLD MADIHA MOLVI)	CDS	300	305	90	29%
1623	718	Bin Qasim	PIPRI EAST	SINO PAK-1	DDS	300	305	6	2%
1624	4112	Bin Qasim	PIPRI EAST	SINO PAK-2	DDS	300	305	0	0%
1625	717	Bin Qasim	PIPRI EAST	PAK SUZUKI-1	DDS	300	305	153	50%
1626	720	Bin Qasim	PIPRI EAST	PAK SUZUKI-2	DDS	300	305	153	50%
1627	3599	Bin Qasim	PIPRI EAST	M. CORPORATION	DDS	300	305	117	38%
1628	716	Bin Qasim	PIPRI EAST	BAHAWALPUR ENGG.	CDS	300	305	100	33%
1629	3766	Bin Qasim	PIPRI EAST	TECHNO AUTO GLASS	DDS	300	305	77	25%
1630	3767	Bin Qasim	PIPRI EAST	HORIZON STEEL	DDS	300	305	98	32%
1631	714	Bin Qasim	PIPRI WEST	DOWN STREAM 2	DDS	300	305	0	0%
1632	3610	Bin Qasim	PIPRI WEST	MOHSIN ALI RIZVI	DDS DDS	300	305	47	16%
1633	3744	Bin Qasim	PIPRI WEST	RUBA TECH	CDS	300 300	305	48 108	16% 35%
1634 1635	3051 721	Bin Qasim Bin Qasim	PIPRI WEST PIPRI WEST	AL-RAZI SONS PAK SUZUKI-3	DDS	300	305 305	150	49%
1636	3882	Bin Qasim	PIPRI WEST	KIA LUCKY MOTORS	DDS	300	305	130	43%
1637	3282	Bin Qasim	PIPRI WEST	NATIONAL INDUSTRIES PARK	DDS	300	305	78	26%
1638	2005	Bin Qasim	PIPRI WEST	DOWN STREAM 1	DDS	300	305	140	46%
1639	1316	Bin Qasim	PIPRI WEST	HASHOO STEEL	CDS	300	305	163	53%
1640	3768	Bin Qasim	PIPRI WEST	HI-TECH ALLOY WHEELS LTD	DDS	300	305	4	1%
1641	3172	Bin Qasim	PIPRI WEST	AGRI AUTOS	DDS	300	305	37	12%
1642	3329	Bin Qasim	PORT QASIM	CRAFTERS PAPER	DDS	300	305	16	5%
1643	3154	Bin Qasim	PORT QASIM	QASIM INT. CONTAINER	DDS	300	305	28	9%
1644	3353	Bin Qasim	PORT QASIM	NAUSHABA NAEEM	DDS	300	305	82	27%
1645	3812	Bin Qasim	PORT QASIM	TRANS TERMINAL (FAUJI)	DDS	300	305	61	20%
1646	3624	Bin Qasim	PORT QASIM	NATIONAL FOOD	DDS	300	305	74	24%
1647	3141	Bin Qasim	PORT QASIM	NESTLE PAKISTAN	DDS	300	305	80	26%
1648	2146	Bin Qasim	PORT QASIM	FINE GAS 02	DDS	300	305	127	42%
1649	734	Bin Qasim	PORT QASIM	INDUS MOTOR	DDS	300	305	233	76%
1650	727	Bin Qasim	PORT QASIM	PORT QASIM 01	DDS	300	305	65	21%
1651	728	Bin Qasim	PORT QASIM	PORT QASIM 02	DDS	300	305	65	21%
1652	3170	Bin Qasim	PORT QASIM	FINE GAS 03	CDS	300	305	94	31%
1653	2110	Bin Qasim	PORT QASIM	GHULAM HYDAR	CDS	300	305	167	55%
1654	731	Bin Qasim	PORT QASIM	BIO LINK	CDS	300	305	180	59%
1655	726	Bin Qasim	PORT QASIM	P.S.O II	CDS	300	305	165	54%
1656	729	Bin Qasim	PORT QASIM	PLATINUM PHARMA	CDS	300	305	129	42%
1657	1319	Bin Qasim	PORT QASIM	AFZAL MOTORS	CDS	300	305	210	69%
1658	732	Bin Qasim	PORT QASIM	T & T PIPRI	CDS	300	305	62	20%
1659	1318	Bin Qasim	PORT QASIM	POLY TRADE	CDS	300	305	208	68%
1660	3266	Bin Qasim	PORT QASIM	SHIRAZI INVESTMENT	CDS	300	305	120	39%
1661	1570	Bin Qasim	PORT QASIM	AGILITY LOGISTICS	DDS	300	305	16	5%
1662	3356	Bin Qasim	PORT QASIM	IQBAL PEERANI	DDS	300	305	9	3%
1663	3545	Bin Qasim	PORT QASIM	DALDA FOOD	DDS	300	305	87	29%
1664	3463	Bin Qasim	PORT QASIM	PIBT (PAK INT. BULK TERMINAL)	DDS	300	305	44	14%
1665	4205	Bin Qasim	PORT QASIM	BINQASIM PACKAGES	DDS	300	305	26	9%
1666	1320	Bin Qasim	PORT QASIM	GANDHARA NISSAN	DDS	300	305	57	19%
1667	3607	Bin Qasim	PORT QASIM	HASCOL TERMINAL	DDS	300	305	21	7%
1668	730	Bin Qasim	PORT QASIM	BQ LIQUID (EX BINQASIM PACKAGES)	CDS	300	305	150	49%
1669	3764	Bin Qasim	PORT QASIM	BULK MANAGEMENT	CDS	300	305	163	53%
1670	3765	Bin Qasim	PORT QASIM	MAZCO	CDS	300	305	36	12%
1671	3763	Bin Qasim	PORT QASIM	AL-BUKSH	CDS	300	305	167	55%
1672	3953	Bin Qasim	PORT QASIM	TRI PACK FILMS	DDS	300	305	2	1%
1673	3267	Bin Qasim	PORT QASIM	MAPAK EDIBLE OIL (MUJAHID OIL REFINERY)	CDS	300	305	50	16%
				,					

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1674	3330	Bin Qasim	PORT QASIM	MASTER MOTORS	CDS	300	305	164	54%
1675	3702	Bin Qasim	PORT QASIM	AUVITRONICS LTD.	DDS	300	305	88	29%
1676	1324	KORANGI	PRL	NASIR COLONY RMU	CDS	300	305	190	62%
1677 1678	712 1333	KORANGI KORANGI	PRL PRL	FISH MILL SUBSTATION IBRAHIM HYDERI RMU	CDS	300 300	305 305	94 208	31% 68%
1679	3344	KORANGI	PRL	SILVER TOWN	CDS	300	305	153	50%
1680	1326	KORANGI	PRL	ABBASI NAGER RMU	CDS	300	305	195	64%
1681	710	KORANGI	PRL	OMNI BUS DEPOT	CDS	300	305	204	67%
1682	1323	KORANGI	PRL	MEGA BIRD	CDS	300	305	233	77%
1683	1325	KORANGI	PRL	POLE - 70	CDS	300	305	173	57%
1684	3357	KORANGI	PRL	DARUS SALAM	DDS	300	305	112	37%
1685	54	KORANGI	PRL	PAK REFINEERY II	DDS	300	305	120	39%
1686	3264	KORANGI	PRL	BOL TV	DDS	300	305	29	10%
1687	3450	KORANGI	PRL	MEHRUNISA DAK REFINERY 01	DDS	300	305	16	5%
1688 1689	713 711	KORANGI KORANGI	PRL PRL	PAK REFINERY 01 PARCO IV	DDS	300 300	305 305	43 173	14% 57%
1690	3167	KORANGI	PRL	IBM	CDS	300	305	173	56%
1691	709	KORANGI	PRL	SILICON PRODUCT (OLD BURSHANE GAS)	CDS	300	305	153	50%
1692	4226	KORANGI	PRL	KCIP-2	DDS	300	305	254	83%
1693	1331	KORANGI	PRL	PEPCO	DDS	300	305	24	8%
1694	3278	KORANGI	PRL	INDUS HOSPITAL	DDS	300	305	147	48%
1695	3887	KORANGI	PRL	KCIP-1	DDS	300	305	231	76%
1696	3931	KORANGI	PRL	AIR FORCE BASE KORANGI CREEK	DDS	300	305	134	44%
1697	4125	KORANGI	PRL	INTER MARKET	DDS	300	305	33	11%
1698	1330	KORANGI	PRL	PARCO-III	CDS	300	305	179	59%
1699 1700	3286 1332	KORANGI KORANGI	PRL PRL	LUCKNOW SOCIETY C-STATION	CDS	300 300	305 305	264	87% 44%
1700	50	KORANGI	PRL	ISLAMIC MISSION HOSP.	CDS	300	305	134 258	85%
1701	53	KORANGI	PRL	MILL ROCK	CDS	300	305	238	78%
1703	3042	KORANGI	PRL	CHAKRA GOTH RMU	CDS	300	305	234	77%
1704	3694	KORANGI	PRL	DARULFALAH	CDS	300	305	84	27%
1705	1328	KORANGI	PRL	PEGASUS	CDS	300	305	82	27%
1706	3589	KORANGI	PRL	AMAN ORCHID	DDS	300	305	26	9%
1707	3505	KORANGI	PRL	MAKHDOOM BILAWAL SOCIETY	DDS	300	305	42	14%
1708	3241	KORANGI	QAYUMABAD	MEHRAN TOWN	CDS	300	305	169	55%
1709	3661	KORANGI	QAYUMABAD	SECTOR 6B RMU	CDS	300	305	42	14%
1710 1711	3405 3398	DEFENCE DEFENCE	QAYUMABAD QAYUMABAD	Madina Masjid Pole-5 RMU	CDS	300 300	305 305	160 86	53% 28%
1711	3398	DEFENCE	QAYUMABAD	Shaikh Amjad & Mubashir	DDS	300	305	84	28%
1713	33	DEFENCE	QAYUMABAD	Defence Pumping-3	CDS	300	305	71	23%
1714	37	KORANGI	QAYUMABAD	YASIR ASSOCIATES	CDS	300	305	137	45%
1715	39	DEFENCE	QAYUMABAD	Kh-e-Jami RMU	CDS	300	305	87	29%
1716	56	DEFENCE	QAYUMABAD	Najshaz Motors	CDS	300	305	118	39%
1717	41	DEFENCE	QAYUMABAD	Defence Pumping-4	CDS	300	305	57	19%
1718	46	DEFENCE	QAYUMABAD	Nisar Shaheed Park	CDS	300	305	212	69%
1719	44	DEFENCE	QAYUMABAD	Defence-29	CDS	300	305	59	19%
1720 1721	40 34	DEFENCE KORANGI	QAYUMABAD QAYUMABAD	Chayel Corner RMU NAT. FIBER I	CDS	300 300	305 305	99	33% 47%
1721	48	KORANGI	QAYUMABAD	ALPHA BROTHERS(fine food)	CDS	300	305	143 93	31%
1723	3043	KORANGI	QAYUMABAD	KDA TP 03	CDS	300	305	156	51%
1724	3187	KORANGI	QAYUMABAD	KORANGI CROSSING	CDS	300	305	192	63%
1725	3689	DEFENCE	QAYUMABAD	Diamond Residency	CDS	300	305	42	14%
1726	3046	KORANGI	QAYUMABAD	S.G.S KARSAZ	CDS	300	305	136	44%
1727	3451	KORANGI	QAYUMABAD	TURN STYLE RMU	CDS	300	305	119	39%
1728	3400	DEFENCE	QAYUMABAD	Shalimar Ice	CDS	300	305	86	28%
1729	3472	DEFENCE	QAYUMABAD	C-Area RMU	CDS	300	305	190	62%
1730	3454	KORANGI	QAYUMABAD	GHAZI TANNERY	CDS	300	305	193	63%
1731	3521	DEFENCE	QAYUMABAD	Ayaz Masjid Khalid Mehmood RMU	CDS	300	305	19	6% 17%
1732 1733	3522 3519	DEFENCE DEFENCE	QAYUMABAD QAYUMABAD	Khalid Mehmood RMU South Park RMU	CDS	300 300	305 305	52 58	17% 19%
1734	3519	DEFENCE	QAYUMABAD	Akhtar Colony	CDS	300	305	149	49%
1735	3482	DEFENCE	QAYUMABAD	Car Parking	CDS	300	305	59	19%
1736	3438	DEFENCE	QAYUMABAD	EFU-Life Insurance	DDS	300	305	23	8%
1737	3732	DEFENCE	QAYUMABAD	Salma Super Market	CDS	300	305	23	8%
1738	4025	KORANGI	QAYUMABAD	Alamgir Trust RMU	CDS	300	305	47	15%
1739	4015	KORANGI	QAYUMABAD	HILAL CONFECTIONERY	DDS	300	305	101	33%
1740	57	KORANGI	QAYUMABAD	SHAIKH BROS.	CDS	300	305	193	63%
1741	38	KORANGI	QAYUMABAD	IMPERIAL RUBBER	CDS	300	305	193	63%
1742	49	KORANGI	QAYUMABAD	EASTERN EXPORT	CDS	300	305	106	35%
1743	36	KORANGI	QAYUMABAD	NAT. FIBER II	CDS	300	305	156	51%
1744	3050	KORANGI	QAYUMABAD	ITRAT HUSSAIN (OLD PAK MARBLE)	CDS	300	305	184	60%
1745 1746	3240 4121	KORANGI KORANGI	QAYUMABAD QAYUMABAD	NUTRI PAK (OLD RELIANCE INDUSTRIES) AMEERWOOD RMU	CDS	300 400	305 347	246	81% 0%
1746	750	DEFENCE	Queens Road	Sherton Hotel	CDS	300	347	0 91	30%
1747	4034	Defence	QUEENS ROAD	A. HAROON PARK (HIJARAT COLONY S/S)	CDS	300	305	125	41%
		POICTION	QUELITO NOME		1 200	300	505	1 123	1 71/0

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1750	1335	DEFENCE	Queens Road	Tower Oak (International Furnishing)	CDS	300	305	3	1%
1751	755	DEFENCE	Queens Road	Cotton Research	CDS	300	305	119	39%
1752	752	DEFENCE	Queens Road	Techno City-1	CDS	300	305	28	9%
1753	3399	DEFENCE	Queens Road	Alico SS	CDS	300	305	75	25%
1754	1344	DEFENCE	Queens Road	Harmoon Mohata	CDS	300	305	74	24%
1755	736	DEFENCE	Queens Road	Queens Road	CDS	300	305	177	58%
1756 1757	738 743	DEFENCE DEFENCE	Queens Road Queens Road	State Bank-2 Harding Bridge	DDS CDS	300 300	305 305	164 153	54% 50%
1758	3402	DEFENCE	Queens Road	Badshan Khan RMU	CDS	300	305	181	59%
1759	2086	DEFENCE	Queens Road	Avenue Center	CDS	300	305	119	39%
1760	745	DEFENCE	Queens Road	Pak Handi Craft	CDS	300	305	72	24%
1761	1334	DEFENCE	Queens Road	Volkart Brothers	CDS	300	305	108	35%
1762	739	DEFENCE	Queens Road	Bahria Complex-1	CDS	300	305	178	58%
1763	2176	DEFENCE	Queens Road	NTR	CDS	300	305	110	36%
1764	1340	DEFENCE	Queens Road	Foundation-3	CDS	300	305	96	32%
1765	754	DEFENCE	Queens Road	Muhammadi House	CDS	300	305	47	15%
1766	1342	DEFENCE	Queens Road	ABN Ambro Bank	DDS	300	305	44	14%
1767	1341	DEFENCE	Queens Road	Techno City-2	CDS	300	305	23	8%
1768	1343	DEFENCE	Queens Road	Commerce College	CDS	300	305	79	26%
1769	756	DEFENCE	Queens Road	Haji Camp	CDS	300	305	211	69%
1770 1771	753 741	DEFENCE DEFENCE	Queens Road Queens Road	National Refinery Independent News	CDS	300 300	305 305	166 73	55% 24%
1771	735	DEFENCE	Queens Road Queens Road	Hijrat Colony RMU	CDS	300	305	153	50%
1773	3368	DEFENCE	Queens Road Queens Road	Mega Tower	DDS	300	305	58	19%
1774	3403	DEFENCE	Queens Road	United Bank Limited	DDS	300	305	200	66%
1775	2081	DEFENCE	Queens Road	Hayat Regency	CDS	300	305	52	17%
1776	744	DEFENCE	Queens Road	Burton Road	CDS	300	305	58	19%
1777	3173	DEFENCE	Queens Road	American Consulate Gereral	DDS	300	305	66	22%
1778	2044	DEFENCE	Queens Road	Peoples Foundation	CDS	300	305	119	39%
1779	757	DEFENCE	Queens Road	Institute Of Bankers	CDS	300	305	81	27%
1780	740	DEFENCE	Queens Road	Raleigh Brothers	CDS	300	305	114	37%
1781	3553	DEFENCE	Queens Road	Beaumont Plaza	DDS	300	305	42	14%
1782	3860	BALDIA	Queens Road	KAGHZI BAZAR	CDS	300	305	0	0%
1783	762	Bin Qasim	RECP	Usman Goth (old name: KDA FILTER PLANT)	CDS	300	305	11	4%
1784	759	Bin Qasim	RECP	GRAIN GODOWN	CDS	300	305	129	42%
1785	761	Bin Qasim	RECP	KE COLONY (EX GUL. HADEED 06)	CDS	300	305	107	35%
1786	3302	Bin Qasim	RECP	Sidra City (old name: PSO MARDAN)	CDS	300	305	108	36%
1787	3396	Bin Qasim	RECP	GUL. HADEED 10	CDS	300	305	154	51%
1788 1789	1345 760	Bin Qasim Bin Qasim	RECP RECP	RAJA POULTRY FARM BAB-E-REHMAT (EX GUL. HADEED 01)	CDS	300 300	305 305	267 98	88% 32%
1790	3692	Bin Qasim	RECP	IMRAN AMIN MUSTAFA	DDS	300	305	4	1%
1791	3300	Bin Qasim	RECP	KING HATCHERY	CDS	300	305	284	93%
1792	3314	Bin Qasim	RECP	CHAPPAL TRADERS	DDS	300	305	29	10%
1793	3869	Bin Qasim	RECP	MUREE GOTH	CDS	300	305	75	25%
1794	3323	Bin Qasim	RECP	PIPRI FILTER PLANT	DDS	300	305	203	67%
1795	3301	Bin Qasim	RECP	New RAILWAY MARSHALLING YARD	CDS	300	305	189	62%
1796	3460	Bin Qasim	RECP	EXTENSION RMU (OLD ALLAH DINO)	DDS	300	305	87	28%
1797	1346	Bin Qasim	RECP	MADAR-E-MILLAT	CDS	300	305	93	30%
1798	3005	Orangi	S.I.T.E	QADRI BROTHERS	CDS	300	305	192	63%
1799	769	Orangi	S.I.T.E	KAMRAN DISTRIBUTOR	CDS	300	305	161	53%
1800	4117	Orangi	S.I.T.E	SIKANDER IRON	CDS	300	305	58	19%
1801	2065	Orangi	S.I.T.E	ABIDABAD	CDS	300	305	222	73%
1802	3008	Orangi	S.I.T.E	M.R. INDUSTRY	CDS	300	305	229	75%
1803	3842	Orangi	S.I.T.E	MIAN SONS	CDS	300 300	305	132	43% 74%
1804 1805	2148 3149	Orangi Orangi	S.I.T.E S.I.T.E	RASHID INDUSTRY FAIZ-UR-REHMAN	CDS	300	305 305	226 177	74% 58%
1805	774	Orangi	S.I.T.E	MFMY	CDS	300	305	177	57%
1807	779	GULSHAN	S.I.T.E	Bismillah Hotel (Noorani Hotel)	CDS	300	305	200	66%
1808	898	Orangi	S.I.T.E	BROUGHS WELCOME	CDS	300	305	106	35%
1809	773	Orangi	S.I.T.E	PAK CONTAINER	CDS	300	305	154	50%
1810	804	Orangi	S.I.T.E	IBRAHIM ALI BHAI	CDS	300	305	113	37%
1811	776	Orangi	S.I.T.E	ORANGI MEDICOS	CDS	300	305	237	78%
1812	2143	Orangi	S.I.T.E	ATLAS BATTERY	CDS	300	305	102	33%
1813	778	Orangi	S.I.T.E	SHAMSI CLOTH	CDS	300	305	109	36%
1814	772	Orangi	S.I.T.E	BEVERAGES	CDS	300	305	174	57%
1815	3054	Orangi	S.I.T.E	TSW	DDS	300	305	7	2%
1816	3158	Orangi	S.I.T.E	AL WAJID TOWN	CDS	300	305	197	65%
1817	4119	Orangi	S.I.T.E	GHOSIA GRAVEYARD	CDS	300	305	150	49%
1818	787	Orangi	S.I.T.E	JABBAR STEEL	DDS	300	305	201	66%
1819	2032	Orangi	S.I.T.E	SIMA LAB	CDS	300	305	178	58%
1820	810	Orangi	S.I.T.E	DADA ENTERPRISE	CDS	300	305 305	205	67% 78%
1821 1822	3533 777	Orangi Orangi	S.I.T.E S.I.T.E	AHSAN HOTEL MUHAMMADI ROLLING	CDS	300 300	305	238	78% 41%
1823	791	GULSHAN	S.I.T.E	Usmania Colony	CDS	300	305	126 143	41%
1824	3455	Orangi	S.I.T.E	RRP	CDS	300	305	179	59%
1825	792	Orangi	S.I.T.E	SINDH STEEL	CDS	300	305	257	84%
		2.051	J	55 5.222		555	555		0.70

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1826	3140	Orangi	S.I.T.E	ASIM INDUSTRY	CDS	300	305	76	25%
1827	3196	Orangi	S.I.T.E	EXIDE PAKISTAN	DDS	300	305	229	75%
1828	3002	Orangi	S.I.T.E	ARTR	CDS	300	305	178	58%
1829	789	Orangi	S.I.T.E	GOLDEN PLASTIC	CDS	300	305	224	74%
1830	3502	GULSHAN	S.I.T.E	Tooba Masjid (Saifullah RMU)	CDS	300	305	171	56%
1831	799	Orangi	S.I.T.E	DIAMOND SILK	CDS	300	305	94	31%
1832	800	Orangi	S.I.T.E	MEKDA INDUSTRY	CDS	300	305	187	61%
1833	795	GULSHAN	S.I.T.E	Hamdard	CDS	300	305	166	55%
1834	2106	Orangi	S.I.T.E	SANAULLAH WOOLEN	CDS	300	305	277	91%
1835	796	GULSHAN	S.I.T.E	Aurangabad (Fine Textile)	CDS	300	305	193	63%
1836	794	Orangi	S.I.T.E	HAFIZ TEXTILE	CDS	300	305	107	35%
1837	3597	Orangi	S.I.T.E	MUSHTAQ-1	CDS	300	305	114	38%
1838	3582	GULSHAN	S.I.T.E	3H RMU	CDS	300	305	127	42%
1839	3250	Orangi	S.I.T.E	BARRET HODGSON	DDS	300	305	116	38%
1840	802	Orangi	S.I.T.E	METROVILLE	CDS	300	305	159	52%
1841	805	GULSHAN	S.I.T.E	Abbasi Shaheed	CDS	300	305	27	9%
1842	808	Orangi	S.I.T.E	AGRO PROCESS	CDS	300	305	90	30%
1843	1347	Orangi	S.I.T.E	FRONTIER COLONY	CDS	300	305	126	41%
1844	807	Orangi	S.I.T.E	BAWANI CHALLI	CDS	300	305	152	50%
1845	806	Orangi	S.I.T.E	VALIKA INDUSTRY	CDS	300	305	199	65%
1846	775	GULSHAN	S.I.T.E	District Office	CDS	300	305	128	42%
1847	3596	GULSHAN	S.I.T.E	Naz Ice	CDS	300	305	137	45%
1848	3420	Orangi	S.I.T.E	MERCANTILE INDUSTRY	DDS	300	305	139	46%
1849	784	Orangi	S.I.T.E	ALI GOHAR	CDS	300	305	177	58%
1850	3281	Orangi	S.I.T.E	AHMED INDUSTRY	CDS	300	305	197	65%
1851	2179	Orangi	S.I.T.E	MALIR POULTRY FARM	CDS	300	305	201	66%
1852	3418	Orangi	S.I.T.E	UNION STEEL	DDS	300	305	129	42%
1853	3257	Orangi	S.I.T.E	SALALAH FLOUR MILL	CDS	300	305	129	42%
1854	781	Orangi	S.I.T.E	SUPREME STEEL	CDS	300	305	149	49%
1855	2064	Orangi	S.I.T.E	INDUS CELL	CDS	300	305	207	68%
1856	801	Orangi	S.I.T.E	NATIONAL SPINNING	CDS	300	305	150	49%
1857	694	Orangi	S.I.T.E	BIJLI NAGAR	CDS	300	305	196	64%
1858	3401	Orangi	S.I.T.E	GOVT. SCHOOL RMU	CDS	300	305	112	37%
1859	3453	Orangi	S.I.T.E	ROOMI INTERNATIONAL	CDS	300	305	181	59%
1860	3326	Surjani	Shadman	Sehar Palace	CDS	300	305 305	174	57% 47%
1861	3612	Surjani	Shadman	Safia Cottage	CDS	300 300		145	
1862 1863	3383 3762	Surjani	Shadman Shadman	Khatri White Flower	CDS	300	305 305	156 131	51% 43%
1864	649	Surjani Surjani	Shadman	Modern Complex	CDS	300	305	139	46%
1865	636	Surjani	Shadman	Al-Ghori	CDS	300	305	61	20%
1866	3871	Surjani	Shadman	Ocean Lawn RMU (Old Rehmania Hall)	CDS	300	305	116	38%
1867	629	Surjani	Shadman	Bilal Town	CDS	300	305	170	56%
1868	3470	Surjani	Shadman	Iqbal Plaza	CDS	300	305	91	30%
1869	3834	Surjani	Shadman	Terry World	CDS	300	305	134	44%
1870	3745	Surjani	Shadman	Al-Ghafoor Atrium Tower	CDS	300	305	151	50%
1871	3840	Surjani	Shadman	Naseem Textile	CDS	300	305	190	62%
1872	3458	Surjani	Shadman	Moon Net	CDS	300	305	190	62%
1873	625	Surjani	Shadman	MK Builder	CDS	300	305	163	53%
1874	631	Surjani	Shadman	Nazia Square	CDS	300	305	158	52%
1875	3750	Surjani	Shadman	Garishon	CDS	300	305	155	51%
1876	3751	Surjani	Shadman	Faysal Garment	CDS	300	305	156	51%
1877	3833	Surjani	Shadman	Lodhi House	CDS	300	305	146	48%
1878	3865	Surjani	Shadman	Knowledge School	CDS	300	305	184	60%
1879	3981	Surjani	Shadman	Omega Mall	DDS	300	305	29	9%
1880	3770	Surjani	Shadman	Sindh Town	CDS	300	305	164	54%
1881	2163	Surjani	Shadman	Faiza Avenue	CDS	300	305	167	55%
1882	638	Surjani	Shadman	Country Tower	CDS	300	305	168	55%
1883	3386	Surjani	Shadman	Achanak Hotel	CDS	300	305	144	47%
1884	645	Surjani	Shadman	Pentium-4	CDS	300	305	203	67%
1885	4054	Surjani	Shadman	Green Line	DDS	300	305	24	8%
1886	207	Surjani	Shadman	Block-N Pumping	CDS	300	305	145	48%
1887	4101	Surjani	Surjani	Hassan Brohi Goth	CDS	300	305	82	27%
1888	882	Surjani	Surjani	Arsalan Homes (Old Sector-L1)	CDS	300	305	11	3%
1889	1364	Surjani	Surjani	Deh Taisar	CDS	300	305	178	58%
1890	3743	Surjani	Surjani	Sallu Garden	CDS	300	305	152	50%
1891	883	Surjani	Surjani	Michal Academy (Old Pole-97)	CDS	300	305	88	29%
1892	887	Surjani	Surjani	Tawwakal Enterprise	CDS	300	305	203	67%
1893	889	Surjani	Surjani	Bright Star	CDS	300	305	66	22%
1894	884	Surjani	Surjani	Al-Watan	CDS	300	305	137	45%
1895	879	Surjani	Surjani	Yousuf Goth (P-25)	CDS	300	305	212	70%
1896	886	Surjani	Surjani	Noble Point	CDS	300	305	69	23%
1897	888	Surjani	Surjani	Stylish Garden	CDS	300	305	115	38%
1898	3284	Surjani	Surjani	Royal City	CDS	300	305	134	44%
1899	878	Surjani	Surjani	Surjani Tel Exchange	CDS	300	305	87	29%
1900	3376	Surjani	Surjani	Oakland School (Old P-19 RMU)	CDS	300	305	110	36%
1901	3367	Surjani	Surjani	Lal Market P-22/3	CDS	300	305	187	61%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1902	3609	Surjani	Surjani	Mono Technical	CDS	300	305	114	37%
1903	2164	Surjani	Surjani	Maymarabad	CDS	300	305	131	43%
1904	3283	Surjani	Surjani	Gulshan-e-Sheeraz	DDS	300 300	305	65	21% 25%
1905 1906	1351 3124	Surjani Orangi	Surjani Surjani	Anarkali SMALL INDUSTRIES	CDS	300	305 305	76 62	20%
1907	881	Surjani	Surjani	Saiban	CDS	300	305	99	32%
1908	3727	Surjani	Surjani	Ahsan Medical	CDS	300	305	182	60%
1909	880	Surjani	Surjani	Hayat Baig	CDS	300	305	146	48%
1910	2154	Surjani	Surjani	Shah Stadium (Old Deh Taisar-5 + CAP-2)	CDS	300	305	131	43%
1911	4111	Surjani	Surjani	Siddique Goth	CDS	300	305	151	49%
1912	3584	Surjani	Surjani	Khuda Ki Basti	CDS	300	305	185	61%
1913	2155	Surjani	Surjani	Mian Institute (Old Deh Taisar-4)	CDS	300	305	323	106%
1914	3012	Surjani	Surjani	Sultan Plaza (OH-P-55)	CDS	300	305	116	38%
1915 1916	1353 3366	Surjani	Surjani	Global City	CDS	300 300	305 305	221	72% 59%
1916	3703	Surjani Surjani	Surjani Surjani	Health Care P-80 Mountain Valley (OLD Saima Arabian Villas-3)	DDS	300	305	179 39	13%
1918	3500	Surjani	Surjani	Saima Arabian Villas-1	DDS	300	305	61	20%
1919	3704	Surjani	Surjani	Zaki Cottages (OLD Saima Arabian Villas-2)	DDS	300	305	102	33%
1920	3529	Surjani	Surjani	Abdullah More	CDS	300	305	68	22%
1921	1350	Surjani	Surjani	Ever Green	CDS	300	305	165	54%
1922	885	Surjani	Surjani	Kala School	CDS	300	305	159	52%
1923	3583	Surjani	Surjani	Education Centre	CDS	300	305	174	57%
1924	3742	Surjani	Surjani	Aleem Paradise	CDS	300	305	180	59%
1925	3729	Surjani	Surjani	Anamta Society	CDS	300	305	135	44%
1926	3474	Surjani	Surjani	Olympic Pride (Old P-12/13 RMU)	CDS	300	305	136	44%
1927	3616	Surjani	Surjani	Dairy Queen	CDS	300	305	258	85%
1928	3037	UTHAL	UTHAL	DAWOOD YAMAHA	DDS	300	305	32	11%
1929	3090	UTHAL	UTHAL	MANDVIWALA PLASTIC FACTORY	CDS	300	305	0	0%
1930	3858	UTHAL	UTHAL	UNIVERSAL RMU	CDS	300	305	123	40%
1931	3035	UTHAL	UTHAL	BDA	CDS	300	305	106	35%
1932 1933	3038 3036	UTHAL	UTHAL UTHAL	UTHAL BAZAR O/H BANOOLI	CDS	300 300	305 305	126 244	41% 80%
1934	3186	UTHAL	UTHAL	LAKHRA	CDS	300	305	142	47%
1935	3752	Surjani	VALIKA	Al-Hamra	CDS	300	305	186	61%
1936	4116	Orangi	VALIKA	TALHA QAZI RMU (GHAZI VILLAS)	CDS	300	305	107	35%
1937	3601	Orangi	VALIKA	EDHI CLINIC RMU	CDS	300	305	257	84%
1938	3754	Surjani	VALIKA	Al-Mehmil	CDS	300	305	111	37%
1939	3255	Orangi	VALIKA	QUARY COLONY	CDS	300	305	212	69%
1940	1118	Orangi	VALIKA	HIKMAT INSTITUTE	CDS	300	305	189	62%
1941	3296	Orangi	VALIKA	MUGHAL ENTERPRISE	DDS	300	305	5	2%
1942	3736	Orangi	VALIKA	RAITI PAHAR RMU	CDS	300	305	215	71%
1943	3735	Orangi	VALIKA	ALAM MARBLE RMU	CDS	300	305	212	69%
1944	1356	Orangi	VALIKA	O/H POLE-62	CDS	300	305	200	66%
1945	860	Orangi	VALIKA	INTERNATIONAL CERAMIC	CDS	300	305	151	49%
1946	2087	Orangi	VALIKA	SULTANABAD PUMPING	CDS	300	305	265	87%
1947	865	Orangi	VALIKA	AL MUMTAZ RMU	CDS	300 300	305	154	51%
1948 1949	3574 859	Orangi Surjani	VALIKA Valika	NAYA NAZIMABAD Shadman Town	DDS CDS	300	305 305	98 194	32% 64%
1950	3452	Orangi	VALIKA	GLAMOUR MARBLE	CDS	300	305	215	70%
1951	3125	Orangi	VALIKA	HANIF SHAH	CDS	300	305	213	70%
1952	871	Orangi	VALIKA	ARC FURNACE	DDS	300	305	251	82%
1953	867	Orangi	VALIKA	POLE-49	CDS	300	305	151	50%
1954	2177	Orangi	VALIKA	ZAMSON	DDS	300	305	223	73%
1955	3256	Orangi	VALIKA	NUSRAT BHUTTO MORR	CDS	300	305	189	62%
1956	3600	Orangi	VALIKA	MIANWALI COLONY RMU	CDS	300	305	188	62%
1957	863	Orangi	VALIKA	HUB DAM	DDS	300	305	257	84%
1958	864	Orangi	VALIKA	RAHEEL AVENUE	CDS	300	305	247	81%
1959	861	Orangi	VALIKA	QASBA PUMPING	CDS	300	305	199	65%
1960	869	Orangi	VALIKA	LAKHANI	CDS	300	305	170	56%
1961	1355	Orangi	VALIKA	P-30	CDS	300	305	196	64% 37%
1962 1963	866 858	Surjani Surjani	Valika Valika	Blue Bird Khwaja Ajmair Nagri	CDS	300 300	305 305	112 136	37% 45%
1963	858	Orangi	VALIKA	KNWAJA AJMAIR NAGRI MANGHOPIR ROAD	CDS	300	305	215	70%
1965	870	Orangi	VALIKA	ACIL	CDS	300	305	187	61%
1966	3089	UTHAL	VINDER	SIDDIQ SONS	DDS	300	305	77	25%
1967	3726	UTHAL	VINDER	TIN PLATE	DDS	300	305	77	25%
1968	3160	UTHAL	VINDER	Khurkhera (old name Pole-01)	CDS	300	305	73	24%
1969	3034	UTHAL	VINDER	WELLS AREA	CDS	300	305	181	59%
1970	3032	UTHAL	VINDER	ARMY PROOF RANGE	CDS	300	305	113	37%
1971	3955	UTHAL	VINDER	CHINCHARI RMU	CDS	300	305	107	35%
1972	3033	UTHAL	VINDER	VINDER BAZAR	CDS	300	305	207	68%
1973	4068	UTHAL	VINDER	Marshal / DEFENCE PROOF RANGEES	DDS	300	305	10	3%
1974	3088	UTHAL	VINDER	LIDA	DDS	300	305	21	7%
1975	854	BALDIA	WEST WHARF	ICI -2	CDS	300	305	103	34%
1976	848	BALDIA	WEST WHARF	KARACHI SHIPYARD-B	CDS	300	305	131	43%
1977	847	BALDIA	WEST WHARF	UNION COLD STORAGE	CDS	300	305	78	25%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category	Cable Size (sq.mm)	Feeder Capacity (Amp)	June-22 Peak Loading (Amp)	June-22 Peak Loading (%)
1978	1357	BALDIA	WEST WHARF	SPECTRUM	CDS	300	305	89	29%
1979	2071	BALDIA	WEST WHARF	MACHI MIANI	CDS	300	305	87	29%
1980	853	BALDIA	WEST WHARF	SLAUGHTER HOUSE	CDS	300	305	128	42%
1981	849	BALDIA	WEST WHARF	K.P.T. WEST WHARF	CDS	300	305	13	4%
1982	851	BALDIA	WEST WHARF	M. ALI PARK	CDS	300	305	110	36%
1983	2042	BALDIA	WEST WHARF	FALAK NOOR MASJID RMU	CDS	300	305	137	45%
1984	855	BALDIA	WEST WHARF	HAROON SONS	CDS	300	305	89	29%
1985	846	BALDIA	WEST WHARF	NATIVE JETTY(PORT TRUST)	CDS	300	305	75	24%
1986	2159	BALDIA	WEST WHARF	DEENAR HOUSE(SINDH STEEL)	CDS	300	305	18	6%
1987	2062	BALDIA	WEST WHARF	KARACHI LABOUR DOCK	CDS	300	305	34	11%
1988	842	BALDIA	WEST WHARF	INTERNATIONAL PACKAGES	CDS	300	305	9	3%
1989	3430	BALDIA	WEST WHARF	CUSTOM HOUSE	DDS	300	305	32	11%
1990	3488	BALDIA	WEST WHARF	IKHLAQ CHOWK	CDS	300	305	180	59%
1991	857	BALDIA	WEST WHARF	KARACHI SHIPYARD-A	CDS	300	305	86	28%
1992	845	BALDIA	WEST WHARF	EFU	CDS	300	305	128	42%
1993	856	BALDIA	WEST WHARF	AWAMI AUTOS	CDS	300	305	140	46%
1994	843	BALDIA	WEST WHARF	SATTAR CHAMBER	CDS	300	305	39	13%
1995	3608	BALDIA	WEST WHARF	QADRI NOORI	DDS	300	305	63	21%
1996	2075	BALDIA	WEST WHARF	KICT	DDS	300	305	75	24%
1997	844	BALDIA	WEST WHARF	SEA MILL RMU(ALI AUTOS)	CDS	300	305	67	22%
1998	3611	BALDIA	WEST WHARF	CHEVRON PAKISTAN	DDS	300	305	24	8%
1999	748	BALDIA	WEST WHARF	NAVAL DOCK YARD-I	DDS	300	305	127	42%
2000	3952	BALDIA	WEST WHARF	WILLIAM SONS	CDS	300	305	149	49%
2001	841	BALDIA	WEST WHARF	PNS IQBAL	CDS	300	305	1	0%

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1	3515	SOCIETY	AGHA KHAN	DOLMENARCADE	CDS
2	3513	SOCIETY	AGHA KHAN	MADINA MALL	CDS
3	3508	SOCIETY	AGHA KHAN	HILL PARK APARTMENT	CDS
4	3520	SOCIETY	AGHA KHAN	BIHAR-E-SHARIAT RMU	CDS
5	3512	SOCIETY	AGHA KHAN	SHAHMIM AHMED	CDS
6	3542	SOCIETY	AGHA KHAN	NOOR HOTEL RMU	CDS
7	3516	SOCIETY	AGHA KHAN	DMCHS	CDS
8	3509	SOCIETY	AGHA KHAN	DILKUSHAN CENTER.	CDS
9	3518	SOCIETY	AGHA KHAN	DHORAJEE FOUNDATION	CDS
10	3526	SOCIETY	AGHA KHAN	KASHAN-E-ITFAL	CDS
11	3528	SOCIETY	AGHA KHAN	MAKKAH SQUARE	CDS
12	3525	SOCIETY	AGHA KHAN	OAKWOOD	CDS
13	3492	SOCIETY	AGHA KHAN	SUNNY VOHRA	CDS
14	3892	SOCIETY	AGHA KHAN	LIAQUAT NATIONAL HOSPITAL (LNH)	DDS
15	505	SOCIETY	AGHA KHAN	ZEENAT BALOCH	CDS
16	3390	SOCIETY	AGHA KHAN	SAIMA GARDEN	CDS
17	1175	SOCIETY	AGHA KHAN	RANGOONWALA	CDS
18	877	SOCIETY	AGHA KHAN	NATIONAL COACHING	CDS
19	106	SOCIETY	AGHA KHAN	GHAURI RMU +	CDS
20	115	SOCIETY	AGHA KHAN	KDA SCHEME-1 +	CDS
21	276	Bin Qasim	AIRPORT	DRIGH ROAD 'A'	CDS
22	270	Bin Qasim	AIRPORT	SANGUM CINEMA	CDS
23	271	Bin Qasim	AIRPORT	PIA PRECISION ENGINEERING	CDS
24	3117	Bin Qasim	AIRPORT	AIR SHIPSHED	DDS
25	273	Bin Qasim	AIRPORT	TERMINAL-II	DDS
26	269	SOCIETY	AIRPORT	POLICE STATION DRIGH ROAD	CDS
27	292	Bin Qasim	AIRPORT	I.A. QURESHI	CDS
28	2016	Bin Qasim	AIRPORT	DIAGNOSTIC CENTER	CDS
29	3277	Bin Qasim	AIRPORT	BLOCK-5 RMU	CDS
30	274	Bin Qasim	AIRPORT	COMMUNITY HALL	CDS
31	286	Bin Qasim	AIRPORT	SHAMA CENTRE	CDS
32	278	Bin Qasim	AIRPORT	CANTT PUMPING	CDS
33	281	Bin Qasim	AIRPORT	SUPERIOR SCIENCE COLLEGE	CDS
34	282	Bin Qasim	AIRPORT	FALAKNAZ PLAZA	CDS
35	277	Bin Qasim	AIRPORT	AIRPORT TEL. EXCHANGE	CDS
36	1363	Bin Qasim	AIRPORT	ROSHANABAD	CDS
37	279	Bin Qasim	AIRPORT	BARELI COLONY	CDS
38	285	Bin Qasim	AIRPORT	S.M SADIQ	CDS
39	2088	Bin Qasim	AIRPORT	TANGA STAND RMU	CDS
40	3328	Bin Qasim	AIRPORT	ASIFABAD D/PMT	CDS
41	288	Bin Qasim	AIRPORT	SHOUKAT UMER HOSPITAL	CDS
42	290	Bin Qasim	AIRPORT	PIA HANGAR	DDS
43	280	Bin Qasim	AIRPORT	QEC	DDS
44	289	Bin Qasim	AIRPORT	ABBAS BAWAZIR	CDS
45	268	Bin Qasim	AIRPORT	RAITA PLOT	CDS
46	3561	Bin Qasim	AIRPORT	FEED MILL RMU	CDS
47	3562	Bin Qasim	AIRPORT	SIDDIQIA MASJID RMU	CDS
48	2152	Bin Qasim	AIRPORT	MASJID-E-QUBA RMU	CDS
49	3116	Bin Qasim	AIRPORT	AFZAL RMU	CDS
50	3531	Bin Qasim	AIRPORT	NATHA KHAN RMU	CDS
51	267	Bin Qasim	AIRPORT	KMC BOOSTING	CDS
52	3598	Bin Qasim	AIRPORT	NEW IQBALABAD (EX RAZA UL HASSAN RMU)	CDS
53	287	Bin Qasim	AIRPORT	SADAT COLONY	CDS
54	3724	Bin Qasim	AIRPORT-II	GOHAR GREEN CITY	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
55	284	Bin Qasim	AIRPORT-II	MALIR CITY	CDS
56	119	Bin Qasim	AIRPORT-II	BAGH-E-MALIR	CDS
57	4064	Bin Qasim	AIRPORT-II	F South	CDS
58	1158	Bin Qasim	AIRPORT-II	GULSHAN-E-GHAZALI	CDS
59	2038	Bin Qasim	AIRPORT-II	GHAZI TOWN	CDS
60	3881	Bin Qasim	AIRPORT-II	K.N CITY	CDS
61	2059	Bin Qasim	AIRPORT-II	PEER MEHFOOZ RMU	CDS
62	272	Bin Qasim	AIRPORT-II	HAFIZ SWEETS (OLD POLICE STATION)	CDS
63	3627	Bin Qasim	AIRPORT-II	EOBI	CDS
64	2116	Bin Qasim	AIRPORT-II	RAZA RESIDENCY	CDS
65	1157	Bin Qasim	AIRPORT-II	KDA PUMP HOUSE	CDS
66	3409	Bin Qasim	AIRPORT-II	BARAF KHANA (OLD ZAM ZAM ICE)	CDS
67	2119	Bin Qasim	AIRPORT-II	BABA WILAYAT	CDS
68	3791	Bin Qasim	AIRPORT-II	PAK CARPET INDUSTRY	DDS
69	275	Bin Qasim	AIRPORT-II	SECURITY PRINTING-I	DDS
70	2014	Bin Qasim	AIRPORT-II	KALABOARD CENTRE	CDS
71	3370	Bin Qasim	AIRPORT-II	SHAMSI SOCIETY	CDS
72	3613	Bin Qasim	AIRPORT-II	UMER KHUSHK	CDS
73	2013	Bin Qasim	AIRPORT-II	MALIR WIRELESS	CDS
74	3510	Bin Qasim	AIRPORT-II	GULSHAN-E-AKBAR RMU	CDS
75	2072	Bin Qasim	AIRPORT-II	PUNJAB TOWN	CDS
76	2058	Bin Qasim	AIRPORT-II	CHATTAI GROUND (OLD KAUSAR ICE)	CDS
77	2050	Bin Qasim	AIRPORT-II	NOOR HOUSING	CDS
78	2111	Bin Qasim	AIRPORT-II	SALMAN GARDEN	CDS
79	1155	Bin Qasim	AIRPORT-II	AMJAD ALI WELLS	CDS
80	2094	GULSHAN	Azizabad	Agha Khan School	CDS
81	2113	GULSHAN	Azizabad	Ali Square	CDS
82	3107	GULSHAN	Azizabad	Sarafa Bazar	CDS
83	3108	GULSHAN	Azizabad	Telenor	CDS
84	2023	GULSHAN	Azizabad	Bana Palace	CDS
85	2035	GULSHAN	Azizabad	HEF School	CDS
86	3437	Surjani	Azizabad	North Vista	CDS
87	3103	GULSHAN	Azizabad	Sharifabad	CDS
88	2101	GULSHAN	Azizabad	Usman Hospital	CDS
89	2041	GULSHAN	Azizabad	Quaid Avenue	CDS
90	3903	GULSHAN	Azizabad	Café Bhangoria	CDS
91	3342	GULSHAN	Azizabad	Anglow School	CDS
92	3904	GULSHAN	Azizabad	MANZAR-E-JILANI	CDS
93	3341	GULSHAN	Azizabad	Bukhshi	CDS
94	2034	GULSHAN	Azizabad	Gul-Noor Ice	CDS
95	3439	GULSHAN	Azizabad	Sadiq Nagar	CDS
96	3514	GULSHAN	Azizabad	Mucca Chowk	CDS
97	2139	GULSHAN	Azizabad	Trimax Hospital (OLD Comprehensive School)	CDS
98	2019	GULSHAN	Azizabad	Dastagir Society	CDS
99	2013	GULSHAN	Azizabad	Dehli College	CDS
100	2156	GULSHAN	Azizabad	Memon Masjid	CDS
101	2099	GULSHAN	Azizabad	Yasinabad	CDS
102	2084	GULSHAN			CDS
102	344	GULSHAN	Azizabad	Raza Flour Mills	
103	2073	GULSHAN	Azizabad	Kohistan Builder (Gul-Shamim)	CDS
104	3168		Azizabad	M.Younus	CDS
		GULSHAN	Azizabad	Bantva-3	CDS
106 107	138	BALDIA	BALDIA	MASJID-E-AKBAR	CDS
	3392	BALDIA	BALDIA	AL-FAWAD MEDICAL RMU	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
109	3369	BALDIA	BALDIA	USMAN GHANI MASJID	CDS
110	2025	Orangi	Baldia	RAEES AMROHI	CDS
111	2181	Orangi	Baldia	MILLAT COLONY	CDS
112	4118	Orangi	Baldia	RIAZABAD BUS STOP (X-23 Bus Stop)	CDS
113	1163	BALDIA	BALDIA	NAVAL LOW COST	CDS
114	149	BALDIA	BALDIA	ALIFLAILA	CDS
115	137	BALDIA	BALDIA	MOMINABAD	CDS
116	147	Orangi	Baldia	HARYANA COLONY	CDS
117	3915	BALDIA	BALDIA	FERRARI	CDS
118	3916	BALDIA	BALDIA	AMAZON	CDS
119	4011	BALDIA	BALDIA	YASOOB RMU (X-4 BUS STOP)	CDS
120	1111	BALDIA	BALDIA	SAADULLAH GOTH	CDS
121	3136	BALDIA	BALDIA	VIBC BALDIA	CDS
122	1160	BALDIA	BALDIA	SUPARCO ROAD P-01	CDS
123	1159	BALDIA	BALDIA	QUTBI HOTEL	CDS
124	134	BALDIA	BALDIA	AFRIDI COLONY	CDS
125	140	BALDIA	BALDIA	KHYBER CHOWK	CDS
126	136	BALDIA	BALDIA	SAEEDABAD	CDS
127	2055	BALDIA	BALDIA	BUS TERMINAL	CDS
128	3195	BALDIA	BALDIA	ITTEHAD COTTAGE INDUSTRY	CDS
129	145	BALDIA	BALDIA	SIND CONSTABULARY	CDS
130	133	BALDIA	BALDIA	MURSHID HOSPITAL	CDS
131	148	BALDIA	BALDIA	EIDGAH P-47	CDS
132	146	BALDIA	BALDIA	JAM SAHAB ROAD P-12	CDS
133	917	BALDIA	BALDIA	POLICE TRAINING CENTRE	CDS
134	1161	BALDIA	BALDIA	NORTHERN ELECTRIC	CDS
135	144	BALDIA	BALDIA	GOL SABEEL RMU	CDS
136	3532	Orangi	Baldia		CDS
137	1162	BALDIA	BALDIA	MALIK CHOWK RMU	CDS
138	130	Orangi	Baldia	HAPPY PAN HOUSE(P-29)	CDS
139	3338	BALDIA		FAQEER COLONY	
140	135	BALDIA	BALDIA	MANSOOR SHER	CDS
141	3622	BALDIA	BALDIA	PAKISTAN BAZAR	CDS
141	3623	1	BALDIA	FARAZ AHMED RMU	CDS
143	3623	BALDIA BALDIA	BALDIA	P-23 QAIM KHANI RMU	CDS
			BALDIA	SAFFRON ENGINEERING	CDS
144	143	BALDIA	BALDIA	KOHINOOR-2	CDS
145	3371	BALDIA	BALDIA	HAROON BEHRIA	CDS
146	131	BALDIA	BALDIA	BILAL COACH	CDS
147	3527	BALDIA	BALDIA	AKRAM STORE	CDS
148	3626	BALDIA	BALDIA	MUSHARRAF COLONY RMU	CDS
149	141	BALDIA	BALDIA	IQBAL ROAD RMU	CDS
150	142	Orangi	Baldia	TOORI BANGASH	CDS
151	3917	BALDIA	BALDIA	JACINDA	CDS
152	3391	BALDIA	BALDIA	NOORANI MASJID	CDS
153	2175	SOCIETY	BALOCH COLONY	BALOCH GRID PMT	DDS
154	483	SOCIETY	BALOCH COLONY	FEROZABAD POLICE STN	CDS
155	3192	SOCIETY	BALOCH COLONY	FAZAIYA HOUSING PHASE-4	CDS
156	489	SOCIETY	BALOCH COLONY	PAF HOUSING +	CDS
157	3246	SOCIETY	BALOCH COLONY	JUMANI SQUARE RMU	CDS
158	1141	SOCIETY	BALOCH COLONY	PROGRESSIVE CENTRE +	CDS
159	3245	SOCIETY	BALOCH COLONY	JASON TRADE S/S	CDS
160	486	SOCIETY	BALOCH COLONY	TOYOTA MOTORS	CDS
161	3331	SOCIETY	BALOCH COLONY	PESHAWARI ICE CREAM RMU	CDS
162	488	SOCIETY	BALOCH COLONY	KARACHI MEMON MASJID +	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
163	485	SOCIETY	BALOCH COLONY	RAO RMU	CDS
164	504	SOCIETY	BALOCH COLONY	KHALIL A. SATTAR +	CDS
165	498	SOCIETY	BALOCH COLONY	POLE-48+	CDS
166	497	SOCIETY	BALOCH COLONY	SOIL MECHANICS	CDS
167	3447	SOCIETY	BALOCH COLONY	AWAMI CHOWK	CDS
168	495	SOCIETY	BALOCH COLONY	KAMAL PARK +	CDS
169	491	SOCIETY	BALOCH COLONY	KARACHI ADMIN SOCIETY +	CDS
170	499	SOCIETY	BALOCH COLONY	MANZOOR COLONY	CDS
171	492	SOCIETY	BALOCH COLONY	ANUM CLASSIC	CDS
172	4143	SOCIETY	BALOCH COLONY	PNS MEHRAN	DDS
173	2134	SOCIETY	BALOCH COLONY	SHEHNAZ ARCADE	CDS
174	482	SOCIETY	BALOCH COLONY	ROYAL APARTMENT	CDS
175	1120	SOCIETY	BALOCH COLONY	REHMAN COLONY +	CDS
176	3433	SOCIETY	BALOCH COLONY	USAMA MASJID	CDS
177	2118	SOCIETY	BALOCH COLONY	BALOCH CENTRE+	CDS
178	490	SOCIETY	BALOCH COLONY	SHAHEEN AIR FORCE HOUSING +	CDS
179	494	SOCIETY	BALOCH COLONY	PAF BASE FAISAL + CAP	DDS
180	484	SOCIETY	BALOCH COLONY	UNITED HOSPITAL	CDS
181	502	SOCIETY	BALOCH COLONY	GULZAR-E-HABIB RMU	CDS
182	506	SOCIETY	BALOCH COLONY	KCHS -D (old name: N A BUILDERS)	CDS
183	2125	SOCIETY	BALOCH COLONY	CITY MALL +	CDS
184	1138	SOCIETY	BALOCH COLONY	DUTY FREE SHOP	CDS
185	3258	SOCIETY	BALOCH COLONY	UBAIDULLAH	CDS
186	2140	SOCIETY	BALOCH COLONY	CHAPTER SCHOOL	CDS
187	3445	SOCIETY	BALOCH COLONY	SECTOR I RMU	CDS
188	1124	SOCIETY	BALOCH COLONY	MEDICARE HOSPITAL	CDS
189	503	SOCIETY	BALOCH COLONY	KDA COM COMPLEX	CDS
190	2122	SOCIETY	BALOCH COLONY	RBS BANK	CDS
191	3901	UTHAL	BELA	Bella Cross (Old POLE-01 BARA BAGH)	CDS
192	3954	UTHAL	BELA	Ismailani	CDS
193	3024	UTHAL	BELA	DANDA	CDS
194	3026	UTHAL	BELA	WAYALO-1	CDS
195	3587	UTHAL	BELA	Kandala (Old HT OH P-01)	CDS
196	3025	UTHAL	BELA	KATHORE	CDS
197	3407	UTHAL	BELA	JAM YOUSUF	CDS
198	3023	UTHAL	BELA	BARA BAGH	CDS
199	3861	Bin Qasim	BOC	A.M.O REFINARY	CDS
200	3155	Bin Qasim	BOC	TY WILMER AGRO (old name: DESCON ENGINEER	CDS
201	3049	Bin Qasim	ВОС	PROCTER & GAMBLE	DDS
202	3862	Bin Qasim	ВОС	H-II CREETE	CDS
203	3875	Bin Qasim	ВОС	BH-708	DDS
204	3877	Bin Qasim	ВОС	BH-709	DDS
205	4183	Bin Qasim	ВОС	SYNERGY PACKAGING PVT LTD	DDS
206	4009	Bin Qasim	ВОС	IRFAN NOMAN	CDS
207	3251	Bin Qasim	ВОС	H.M EXTRACTION	DDS
208	3252	Bin Qasim	ВОС	AUSAF INDUSTRIES (OLD PAKI TEX)	DDS
209	3389	Bin Qasim	ВОС	SEPCO - 02	DDS
210	3921	Bin Qasim	ВОС	TUFAIL CHEMICAL Ltd (Zubair Tufail)	DDS
211	3863	Bin Qasim	ВОС	PLATINUM STEEL (Old name Shafi Iron Steel)	DDS
212	3188	Bin Qasim	ВОС	GHANI CHEMICALS (old: GHANI GASES)	DDS
213	3234	Bin Qasim	BOC	COCA COLA-1	DDS
214	4007	Bin Qasim	BOC	RELIANCE INTERNATIONAL	CDS
	4209	Bin Qasim	BOC	GHANI GASSES NO.2	DDS
215	7203				
215 216	104	SOCIETY	CIVIC CENTRE	QUALITY BUILDER +	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
218	2147	SOCIETY	CIVIC CENTRE	ALAMGIR	CDS
219	2166	SOCIETY	CIVIC CENTRE	SHAHEED-E-MILLAT +	CDS
220	1150	SOCIETY	CIVIC CENTRE	AMBER CINEMA+	CDS
221	95	SOCIETY	CIVIC CENTRE	DADA TERRACE +	CDS
222	3014	SOCIETY	CIVIC CENTRE	PEARL RESIDENCY	DDS
223	94	SOCIETY	CIVIC CENTRE	CITY CENTER	CDS
224	1127	SOCIETY	CIVIC CENTRE	PIB COLONY +	CDS
225	107	SOCIETY	CIVIC CENTRE	KE WORKSHOP	CDS
226	1362	SOCIETY	CIVIC CENTRE	TIME PRESS	CDS
227	97	SOCIETY	CIVIC CENTRE	MUHAMMAD ALI SOCIETY	CDS
228	99	GULSHAN	CIVIC CENTRE	Baradari	CDS
229	3548	GULSHAN	CIVIC CENTRE	Rabbi Apartment	CDS
230	102	GULSHAN	CIVIC CENTRE	Eagle Squad +	CDS
231	103	GULSHAN	CIVIC CENTRE	Paras Textile	CDS
232	2135	SOCIETY	CIVIC CENTRE	A-1 CENTRE +	CDS
233	110	SOCIETY	CIVIC CENTRE	PAK CAPITAL-3	CDS
234	105	SOCIETY	CIVIC CENTRE	NDFC	CDS
235	1169	SOCIETY	CIVIC CENTRE	FALCON PLAZA	CDS
236	116	SOCIETY	CIVIC CENTRE	NOBLE HEIGHTS +	CDS
237	3507	SOCIETY	CIVIC CENTRE	KERNAL BASTI	CDS
238	98	SOCIETY	CIVIC CENTRE	MILK PLANT +	CDS
239	109	GULSHAN	CIVIC CENTRE	Expo Center +	CDS
240	1152	GULSHAN	CIVIC CENTRE	General Society	CDS
241	114	SOCIETY	CIVIC CENTRE	CHAWLA FLATS	CDS
242	3139	SOCIETY	CIVIC CENTRE	SALATEEN	CDS
243	1168	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-4 +	CDS
244	113	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-5	CDS
245	3697	GULSHAN	CIVIC CENTRE	Ghousia Bakery	CDS
246	117	GULSHAN	CIVIC CENTRE	QDC	CDS
247	1170	SOCIETY	CIVIC CENTRE	PNS BAHADUR	CDS
248	100	SOCIETY	CIVIC CENTRE	KARACHI IRON+	CDS
249	3380	SOCIETY	CIVIC CENTRE	MAQBOOLABAD	CDS
250	1176	GULSHAN	CIVIC CENTRE	Army Housing-5	CDS
251	1177	GULSHAN	CIVIC CENTRE	Army Housing-9	CDS
252	108	SOCIETY	CIVIC CENTRE	LIAQUAT NATIONAL LIBRARY+CAP 3	CDS
253	111	GULSHAN	CIVIC CENTRE	Rukknuddin	CDS
254	101	SOCIETY	CIVIC CENTRE	KDA LSR	CDS
255	3274	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 1	DDS
256	4061	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE WEST	DDS
257	3271	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING WEST	DDS
258	3273	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 2	DDS
259	4062	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE EAST	DDS
260	4060	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL 1	DDS
261	3270	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING EAST	DDS
262	3272	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 1	DDS
263	3275	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 2	DDS
264	125	Bin Qasim	CIVIL AVIVATION AUTH	SHAH FAISAL TOWN	CDS
265	124	Bin Qasim	CIVIL AVIVATION AUTH	SAUDABAD PUMPING	CDS
266	121	Bin Qasim	CIVIL AVIVATION AUTH	LAL MASJID	CDS
267	3122	Bin Qasim	CIVIL AVIVATION AUTH	TARIQ BIN ZIAD	CDS
268	120	Bin Qasim	CIVIL AVIVATION AUTH	SECURITY PAPER MILL	DDS
269	123	Bin Qasim		MOINABAD	CDS
270	2070	Bin Qasim	CIVIL AVIVATION AUTH		CDS
271	126	Bin Qasim	CIVIL AVIVATION AUTH CIVIL AVIVATION AUTH	IBRAHIM NAFEES RMU AIR LOGISTICS (OLD MAKRO HABIB)	DDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
272	122	Bin Qasim	CIVIL AVIVATION AUTH	MODEL COLONY 'A'	CDS
273	3015	DEFENCE	Clifton	International Complex-2	DDS
274	3019	DEFENCE	Clifton	International Complex-4	DDS
275	78	DEFENCE	Clifton	KDA Flats	CDS
276	83	DEFENCE	Clifton	Merchant Construction	CDS
277	1359	DEFENCE	Clifton	Haseeb Polani	CDS
278	82	DEFENCE	Clifton	Caltex	CDS
279	85	DEFENCE	Clifton	Chappal Luxury	CDS
280	3183	DEFENCE	Clifton	Awan House RMU	CDS
281	3190	DEFENCE	Clifton	M. Ali Chawla	CDS
282	3174	DEFENCE	Clifton	Kuwait Consulate	CDS
283	3384	DEFENCE	Clifton	Masan Road RMU	CDS
284	1173	DEFENCE	Clifton	Agha Khan Park	CDS
285	3191	DEFENCE	Clifton	Progressive Garden	CDS
286	3193	DEFENCE	Clifton	Triple Tree	DDS
287	3733	DEFENCE	Clifton	Bakht Tower	DDS
288	3734	DEFENCE	Clifton	M. Ishaq Enterprises	CDS
289	90	DEFENCE	Clifton	Sasi Home	CDS
290	93	DEFENCE	Clifton	China Consulate	CDS
291	3182	DEFENCE	Clifton	Mundra Chowk-2	CDS
292	92	DEFENCE	Clifton	Grammer College	CDS
293	87	DEFENCE	Clifton	Poonawala	CDS
294	89	DEFENCE	Clifton	Clifton Center	CDS
295	1360	DEFENCE	Clifton	Minister Residency	CDS
296	91	DEFENCE	Clifton	Shaista Builder	CDS
297	88	DEFENCE	Clifton	Bath Island	CDS
298	77	DEFENCE	Clifton	MUNEEB KAMIL (CUSTOM SOCIETY)	CDS
299	2068	DEFENCE	Clifton	International Complex-1	DDS
300	3018	DEFENCE	Clifton	International Complex-3	DDS
301	1174	DEFENCE	Clifton	Gulshan-e-Faisal	CDS
302	86	DEFENCE	Clifton	Ziauddin Sewerage Pumping	CDS
303	2174	DEFENCE	Clifton	Boat View	CDS
304	80	DEFENCE	Clifton	Burma Shell	CDS
305	1171	DEFENCE	Clifton	Kemari Center	CDS
306	1172	DEFENCE	Clifton	Mundra Chowk-1	CDS
307	79	DEFENCE	Clifton	Shirin Jinnah	CDS
308	84	DEFENCE	Clifton	Marine Blessing	CDS
309	3688	DEFENCE	CREEK CITY VISTA	KIOSK-10	CDS
310	3625	DEFENCE	CREEK CITY VISTA	Moin Khan Academy	DDS
311	3821	DEFENCE	CREEK CITY VISTA	DHA PHASE-8 SECTOR-D (old: Sector-D S/S-3)	CDS
312	2002	DEFENCE	CREEK CITY VISTA	Creek City SS-4	CDS
313	2003	DEFENCE	CREEK CITY VISTA	Creek City 55-4 Creek City SS-6	CDS
314	3393	DEFENCE	CREEK CITY VISTA	Kh-e-Baber KIOSK-3	CDS
315	3151	DEFENCE	CREEK CITY VISTA	Golf Club	CDS
316	3687	DEFENCE	CREEK CITY VISTA	KIOSK-09	CDS
317	3171	DEFENCE	CREEK CITY VISTA	Nue Multi-Plux	CDS
318	2001	DEFENCE	CREEK CITY VISTA	Creek City SS-5	CDS
319	3280	DEFENCE	CREEK CITY VISTA	Creek Club	CDS
320	3715	DEFENCE		Sector C-8 S/S-3	CDS
321	3716	DEFENCE	CREEK CITY VISTA	Sector C-8 S/S-3 Sector C-8 S/S-5	
322	3859	DEFENCE	CREEK CITY VISTA		CDS
323	3317	DEFENCE	CREEK CITY VISTA	Emaar Giga Karachi Ltd	DDS
323	4037	DEFENCE	CREEK CITY VISTA	KIOSK-1 Iqbal Lane	CDS
324	4037	DEFENCE	CREEK CITY VISTA CREEK CITY VISTA	AL MURTAZA COMMERCIAL-23 Zulfigar Commercial-13	CDS CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
326	4039	DEFENCE	CREEK CITY VISTA	Zulfiqar Commercial-01	CDS
327	4002	DEFENCE	CREEK CITY VISTA	KH-E-SHAJAR SECTOR-E S/S-2	CDS
328	2009	DEFENCE	CREEK CITY VISTA	Creek City SS-3	CDS
329	2010	DEFENCE	CREEK CITY VISTA	Creek City SS-1	CDS
330	4084	Defence	CREEK CITY VISTA	16TH STREET SHAJAR KIOSK-2	DDS
331	4085	Defence	CREEK CITY VISTA	DHA-2 GRID KIOSK-1	DDS
332	4139	Defence	CREEK CITY VISTA	KH-E-ARFAAT KIOSK-3	DDS
333	4131	Defence	CREEK CITY VISTA	KH-E-GHALIB KIOSK-12	DDS
334	4132	Defence	CREEK CITY VISTA	TIPU SULTAN KIOSK-6	DDS
335	4086	Defence	CREEK CITY VISTA	CREEK GRID KIOSK-7	DDS
336	4070	Bin Qasim	DCK	DHA CITY FEEDER NO.1	DDS
337	3690	DEFENCE	Defence	19th Street Bukhari RMU	CDS
338	66	DEFENCE	Defence	Carlton Hotel	CDS
339	69	DEFENCE	Defence	Darakhshan-4	CDS
340	3494	DEFENCE	Defence	30th Street Rahat RMU	CDS
341	58	DEFENCE	Defence	Defence-14	CDS
342	60	DEFENCE	Defence	Sea View-1	CDS
343	70	DEFENCE	Defence	Shaikh Zaid	CDS
344	3506	DEFENCE	Defence	Mall Square	CDS
345	62	DEFENCE	Defence	Mubarak Masjid	CDS
346	3486	DEFENCE	Defence	Saba Avenue RMU	CDS
347	61	DEFENCE	Defence	Zamzama Pump	CDS
348	3467	DEFENCE	Defence	Shaheen Grid RMU	CDS
349	67	DEFENCE	Defence	Kh-e-Bukhari	CDS
350	3501	DEFENCE	Defence	Kh-e-Shujaat-2 RMU	CDS
351	3495	DEFENCE	Defence	Farhat Fatima RMU	CDS
352	65	DEFENCE	Defence	WEST POINT TOWER (ITTEHAD)	CDS
353	2020	DEFENCE	Defence	ISI RMU	CDS
354	2172	DEFENCE	Defence	Zafar Alam (Kh-e-Shujaat)	CDS
355	3485	DEFENCE	Defence	16th Nishat RMU	CDS
356	1180	DEFENCE	Defence	DHA Phase-7 Ext	CDS
357	73	DEFENCE	Defence	Model School	CDS
358	3538	DEFENCE	Defence	Football Ground	CDS
359	74	DEFENCE	Defence	PNS Haider	CDS
360	71	DEFENCE	Defence		CDS
361	3493	DEFENCE	Defence	Defence Pumping-2	CDS
362	63	DEFENCE		DHA Pump RMU	
363	3491	DEFENCE	Defence Defence	Misri Shah Tele Exchange Wahid Butt RMU	CDS CDS
364	2149	DEFENCE			
365	1178	DEFENCE	Defence	Saeed-uz-Zafar	CDS
366	3711	DEFENCE	Defence	Defence-15	CDS
367	1584	DEFENCE	Defence	Atif Latif RMU	CDS
367			Defence	Al-Burj	CDS
368	3712	DEFENCE	Defence	Popular Avenue RMU	CDS
	2063 75	DEFENCE DEFENCE	Defence	12th Lane Sehar	CDS
370		DEFENCE	Defence	Coastal Street	CDS
371	3337		Defence	Beach View	CDS
372	3713	DEFENCE DEFENCE	Defence	Iftikhar Soomro RMU	CDS
373	2076		Defence	Shaheen off Nishat	CDS
374	1179	DEFENCE	Defence	Badar Commercial RMU	CDS
375	3346	DEFENCE	Defence	Nasir Saleem RMU	CDS
376	3343	DEFENCE	Defence	Farah Ali RMU	CDS
377	3319	DEFENCE	Defence	Faiz Mari	CDS
378	3307	DEFENCE	Defence	Ejaz Ansari RMU	CDS
379	2157	DEFENCE	Defence	21st Street Kh-e-Rahat	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
380	3340	DEFENCE	Defence	BRIDG. JAVED RMU	CDS
381	2017	DEFENCE	Defence	DHA Hockey Stadium	CDS
382	2078	DEFENCE	Defence	Kh-e-Ghazi Pumping	CDS
383	3304	DEFENCE	Defence	Tariq Gazdar	CDS
384	59	DEFENCE	Defence	Kh-e-Rahat Park	CDS
385	3306	DEFENCE	Defence	Asma Begum RMU	CDS
386	64	DEFENCE	Defence	Sea View-12	CDS
387	3496	DEFENCE	Defence	Shaikh Jalil	CDS
388	2171	DEFENCE	Defence	Army House	CDS
389	3651	DEFENCE	DHA	Murtaza Commercial S/S-01	CDS
390	3379	DEFENCE	DHA	Kh-e-Tufail S/S-18	CDS
391	3652	DEFENCE	DHA	Zulfiqar Commercial S/S-02	CDS
392	3653	DEFENCE	DHA	Zulfiqar Commercial S/S-03	CDS
393	3408	DEFENCE	DHA	Ayubbia Commercial S/S-07	CDS
394	3254	DEFENCE	DHA	DHA Phase-8 S/S-07	CDS
395	3308	DEFENCE	DHA	Kh-e-Abbasi	CDS
396	3322	DEFENCE	DHA	Kh-e-Saadi	CDS
397	3253	DEFENCE	DHA	DHA Phase-8 S/S-14	CDS
398	3377	DEFENCE	DHA	Sun Rise Avenue S/S-40	CDS
399	3378	DEFENCE	DHA	Hussain Shaheed Road S/S-27	CDS
400	4001	DEFENCE	DHA	KH-E-GHALIB SECTOR-E S/S-1	CDS
401	4081	DEFENCE	DHA	35th Street Khy E Khalid	CDS
402	4082	Defence	DHA	31ST STREET KH-E-QASIM S/S-52	CDS
403	4135	DEFENCE	DHA	KH-E-AZEEM STREET S/S-9	CDS
404	4134	DEFENCE	DHA	TARIQ COMMERCIAL S/S-37	CDS
405	4136	DEFENCE	DHA	5TH TARIQ COMM S/S-34	CDS
406	4137	DEFENCE	DHA	KHALID COMMERCIAL S/S-16	CDS
407	4138	DEFENCE	DHA	KH-E- SHABBIR S/S-22	CDS
408	158	Bin Qasim	DHABEJI	INDUS JUTE	DDS
409	3265	Bin Qasim	DHABEJI	NOORI ENTRPRISES (EX MESKAY & FEMTEE)	CDS
410	3511	Bin Qasim	DHABEJI	FAUJI MEAT LTD1 (FML-1)	DDS
411	3354	Bin Qasim	DHABEJI	FAUJI MEAT LTD2 (FML-2)	DDS
412	151	Bin Qasim	DHABEJI	UNIVERSAL BOARD-1 (OLD UNIVERSAL BOARD)	DDS
413	154	Bin Qasim	DHABEJI	UNIVERSAL BOARD-2 (OLD P.I.G-1)	DDS
414	162	Bin Qasim	DHABEJI	MADERSA TALEEM QURAN RMU	CDS
415	2129	Bin Qasim	DHABEJI	PAK IND GASES-2	CDS
416	153	Bin Qasim	DHABEJI	OR MANSHA FARM + Cap (OLD KDA PUMPING N	CDS
417	156	Bin Qasim	DHABEJI	K-III-5	DDS
418	3112	Bin Qasim	DHABEJI	KDA PUMPING NO. 2	DDS
419	166	Bin Qasim	DHABEJI	FORBUS CHLORIDE	CDS
420	155	Bin Qasim	DHABEJI	K-III-2	DDS
421	3705	Bin Qasim	DHABEJI	KDA PUMPING NO. 7	DDS
422	157	Bin Qasim	DHABEJI	K-III-1	DDS
423	3593	Bin Qasim	DHABEJI	NAVAL DDP NWHS	CDS
424	2127	Bin Qasim	DHABEJI	K-III-6	DDS
425	4041	Bin Qasim	DHABEJI	BHAMBORE RICE MILL	DDS
426	3868	Bin Qasim	DHABEJI	KDA PUMPING NO. 9	DDS
427	3867	Bin Qasim	DHABEJI	KDA PUMPING NO. 8	DDS
428	160	Bin Qasim	DHABEJI	N.M POULTRY FARM (OLD BUX TEXTILE)	CDS
429	152	Bin Qasim	DHABEJI	KDA PUMPING NO. 1	DDS
430	165	Bin Qasim	DHABEJI	KDA PUMPING NO. 6	DDS
431	164	Bin Qasim	DHABEJI	KDA PUMPING NO. 5	DDS
432	163	Bin Qasim	DHABEJI	FRIENDS	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
434	168	Bin Qasim	DHABEJI	K-III-4	DDS
435	183	BALDIA	ELANDER ROAD	MEHRAB KHAN	CDS
436	175	DEFENCE	ELANDER ROAD	High Court	CDS
437	1192	DEFENCE	ELANDER ROAD	Meetha Ram Hostel	CDS
438	1185	DEFENCE	ELANDER ROAD	Caesar Tower	CDS
439	2040	DEFENCE	ELANDER ROAD	Green Street	CDS
440	1187	DEFENCE	ELANDER ROAD	BFC	DDS
441	1339	SOCIETY	ELANDER ROAD	YWCA	CDS
442	182	DEFENCE	ELANDER ROAD	Karim Center	CDS
443	1183	SOCIETY	ELANDER ROAD	RIMPA PLAZA	CDS
444	2109	DEFENCE	ELANDER ROAD	Aiwan-e-Sadar	CDS
445	179	DEFENCE	ELANDER ROAD	Tibet Center	CDS
446	171	DEFENCE	ELANDER ROAD	Old Sindh Assembly Building	DDS
447	177	DEFENCE	ELANDER ROAD	President House	CDS
448	3242	DEFENCE	ELANDER ROAD	Railway Colony	CDS
449	1189	SOCIETY	ELANDER ROAD	IQBAL CENTER	CDS
450	894	DEFENCE	ELANDER ROAD	Shaheen Foundation	DDS
451	3289	DEFENCE	ELANDER ROAD	New Sindh Provincial Assembly	DDS
452	3321	SOCIETY	ELANDER ROAD	TRAUMA CENTRE	DDS
453	3358	SOCIETY	ELANDER ROAD	SIUT	DDS
454	3530	SOCIETY	ELANDER ROAD	LADY DUFFERIN	CDS
455	1338	DEFENCE	ELANDER ROAD	Millat Press	CDS
456	2056	DEFENCE	ELANDER ROAD	Jama Cloth	CDS
457	1568	DEFENCE	ELANDER ROAD	Muslim Gymkhana	CDS
458	1112	DEFENCE	ELANDER ROAD	Landhi Chawl	CDS
459	21	DEFENCE	ELANDER ROAD	Hilton Hotel	CDS
460	1585	SOCIETY	ELANDER ROAD	CIVIL BURNS WARD	DDS
461	3854	DEFENCE	ELANDER ROAD	Surgical Complex (Jinnah-1)	DDS
462	170	DEFENCE	ELANDER ROAD	Pak Herald	CDS
463	178	SOCIETY	ELANDER ROAD	FTC	CDS
464	2008	DEFENCE	ELANDER ROAD	Court Road Rmu	CDS
465	1567	DEFENCE	ELANDER ROAD	Zainab Market	CDS
466	24	DEFENCE	ELANDER ROAD	Jabbar Plaza	CDS
467	2102	DEFENCE	ELANDER ROAD	Saima Tower-3	DDS
468	181	DEFENCE			DDS
469	3148	DEFENCE	ELANDER ROAD ELANDER ROAD	Registrar Office Hydro Carbon	CDS
470	1184	DEFENCE		,	
471	1191	DEFENCE	ELANDER ROAD	SH Enterprizes	CDS CDS
472	172	DEFENCE	ELANDER ROAD	Modern Graphic	
472	174	DEFENCE	ELANDER ROAD	Habib Bank Plaza	CDS
473	184	DEFENCE	ELANDER ROAD	Dehli Muslim	CDS
474	1186	DEFENCE	ELANDER ROAD	Commerce Center	CDS
475	176		ELANDER ROAD	Commerce Center	CDS
		DEFENCE	ELANDER ROAD	Saima Tower-1	DDS
477	737	DEFENCE	ELANDER ROAD	Bank Quarters	CDS
478	2144	DEFENCE	ELANDER ROAD	Radio Pakistan	CDS
479	3424	DEFENCE	ELANDER ROAD	Iran Centre	CDS
480	3423	DEFENCE	ELANDER ROAD	Sunny Side	CDS
481	173	SOCIETY	ELANDER ROAD	VISHANDAS	CDS
482	180	DEFENCE	ELANDER ROAD	Computer Building	CDS
483	1193	DEFENCE	ELANDER ROAD	State Bank Bungalows	CDS
484	185	DEFENCE	ELANDER ROAD	Namco Center	CDS
485	3434	DEFENCE	ELANDER ROAD	Askari-3	CDS
486	3429	DEFENCE	ELANDER ROAD	Jinnah Hospital-2	DDS
487	3142	JOHAR	FEDERAL-A	GULSHAN VIEW	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
488	3919	JOHAR	FEDERAL-A	SHUMAIL COMPLEX	CDS
489	893	GULSHAN	Federal-A	Allama Iqbal School (Five Star)	CDS
490	3336	JOHAR	FEDERAL-A	AL-ASIF SQUARE	CDS
491	1631	Surjani	Federal-A	Kiran Arcade (P-19)	CDS
492	3145	Surjani	Federal-A	Miskeenabad	CDS
493	3558	JOHAR	FEDERAL-A	AL MEMON CHS	CDS
494	891	Surjani	Federal-A	Sewerage Plant	CDS
495	194	GULSHAN	Federal-A	Aziz Industries	CDS
496	892	JOHAR	FEDERAL-A	KHAN BROTHERS	CDS
497	3339	JOHAR	FEDERAL-A	PETAL RESIDENCY	CDS
498	3162	GULSHAN	Federal-A	Regal Textile	CDS
499	3918	JOHAR	FEDERAL-A	DELUXE TOWN	CDS
500	186	GULSHAN	Federal-A	Basra Soap	CDS
501	3164	Surjani	Federal-A	Gabol Town	CDS
502	1201	GULSHAN	Federal-B	Abid Plaza	CDS
503	3466	GULSHAN	Federal-B	Anwar-ul-Uloom	CDS
504	206	GULSHAN	Federal-B	Rugaiyya Square	CDS
505	209	Surjani	Federal-B	Taimuria Library	CDS
506	3335	Surjani	Federal-B	Dental College	CDS
507	211	Surjani	Federal-B	Habib Foundation	CDS
508	1199	GULSHAN	Federal-B	Gulberg	CDS
509	1203	GULSHAN	Federal-B	Farooq-e-Azam	CDS
510	217	GULSHAN	Federal-B	Edhi Home (Old Maymar Housing)	CDS
511	3605	Surjani	Federal-B	Rizwan Plaza	CDS
512	2097	GULSHAN	Federal-B	Aisha Manzil (Old Meena)	CDS
513	197	GULSHAN	Federal-B	KMC Water Pump	CDS
514	192	GULSHAN	Federal-B	Chand Market	CDS
515	4092	GULSHAN	Federal-B	Lyra Shoes	DDS
516	191	GULSHAN	Federal-B	Plastic Crafter	CDS
517	3325	GULSHAN	Federal-B	Union Textile	CDS
518	4264	GULSHAN	Federal-B	MEHBOOB REROLLING	DDS
519	215	Surjani	Federal-B	Labour Square	CDS
520	187	Surjani	Federal-B	New Karachi	CDS
521	1200	GULSHAN	Federal-B	Tahir Villa	CDS
522	204	Surjani	Federal-B	Supreme Height (Old Rizwan Plaza)	CDS
523	205	GULSHAN	Federal-B	· · · · · · · · · · · · · · · · · · ·	CDS
524	189	Surjani		UBL Sports	
525	3457	Surjani	Federal-B Federal-B	Rahim Textile	CDS CDS
526	196	GULSHAN		Sareena	
527	3604	GULSHAN	Federal-B	R.I.G SCHOOL	CDS
527	188		Federal-B	Shafiq-II	CDS
528	3428	Surjani	Federal-B	RP Confectionary	CDS
530	193	Surjani	Federal-B	PNSC Duramid Contar	CDS
		GULSHAN	Federal-B	Pyramid Center	CDS
531	212	Surjani	Federal-B	KBR Society + Cap-5A	CDS
532	3165	Surjani	Federal-B	Pole-12 Sector 12-D	CDS
533	3287	Surjani	Federal-B	Namak Bank	CDS
534	3456	Surjani	Federal-B	Summit Bank	CDS
535	213	Surjani	Federal-B	Shamsi Garment	CDS
536	214	GULSHAN	Federal-B	South Federal B	CDS
537	225	Surjani	Federal-B	SHAH KHALID COLONY (OLD ROSHAN BAGH)	CDS
538	221	GULSHAN	Federal-B	M. Yousuf Iqbal +	CDS
539	216	GULSHAN	Federal-B	Ancholi Society	CDS
540	208	GULSHAN	Federal-B	Ayub Manzil	CDS
541	1198	GULSHAN	Federal-B	UK Square	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
542	3143	JOHAR	Federal-B	POLE - 20	CDS
543	195	GULSHAN	Federal-B	Abbas Square	CDS
544	222	GULSHAN	Federal-B	Progressive	CDS
545	3748	Surjani	Federal-B	Al-Akhwan Masjid	CDS
546	3163	Surjani	Federal-B	Al-Madina Godhra	CDS
547	224	GULSHAN	Federal-B	Naseerabad (Khi Academy)	CDS
548	1205	GULSHAN	Federal-B	Shamim Appt.	CDS
549	218	GULSHAN	Federal-B	Cosmos Plaza	CDS
550	190	GULSHAN	Federal-B	Saghir Center (Rashid Minhas)	CDS
551	890	GULSHAN	Federal-B	Al-Noor Society +	CDS
552	223	GULSHAN	Federal-B	Relax Appartment	CDS
553	220	GULSHAN	Federal-B	Eastern Services + Cap 6	CDS
554	2083	GULSHAN	Federal-B	Ideal Industry	CDS
555	1196	GULSHAN	Federal-B	Wonder Bread	CDS
556	3956	JOHAR	GADAP	LUBNA FARM	CDS
557	228	JOHAR	GADAP	AGHA SHAHI	CDS
558	227	JOHAR	GADAP	HUDERWA	CDS
559	229	JOHAR	GADAP	WAPDA O/H	CDS
560	3303	Bin Qasim	GADAP	GOLF COURSE (BAHRIA TOWN-1)	DDS
561	230	JOHAR	GADAP	DANISH FARM RMU	CDS
562	3484	Bin Qasim	GADAP	PRECINCT 10A (BAHRIA TOWN-2)	DDS
563	226	JOHAR	GADAP	DEH SHAH MUREED	CDS
564	4262	Bin Qasim	GADAP	BAHRIA TOWERS (Bahria-Town-4)	DDS
565	4261	Bin Qasim	GADAP	MIDWAY COMMERCIAL (Bahria-Town-3)	DDS
566	3410	SOCIETY	GARDEN	IBC GARDEN RMU	CDS
567	3590	SOCIETY	GARDEN	PARSA CITY GARDEN	CDS
568	232	SOCIETY	GARDEN	ZOO	CDS
569	3406	SOCIETY	GARDEN		CDS
570	237	SOCIETY		NAGORI HOSPITAL AMBAJEE VILLAJEEE	CDS
571	231	SOCIETY	GARDEN GARDEN		CDS
572	234	SOCIETY		RAM SWAMI	1
573	235	SOCIETY	GARDEN	GARDEN-II	CDS
574	236	SOCIETY	GARDEN	ISMAILIA PLATINUM	CDS
575	3309	1	GARDEN	HOLY FAMILY	CDS
576	251	SOCIETY	GARDEN	IBA-2	DDS
		SOCIETY	GARDEN	KARACHI SCHOLAR RMU	CDS
577	239	SOCIETY	GARDEN	KMC BUILDING	CDS
578	248	SOCIETY	GARDEN	ADAMJI SCIENCE COLLEGE	CDS
579	254	SOCIETY	GARDEN	MAZAR-E-QUAID-3	CDS
580	240	SOCIETY	GARDEN	HOTI MARKET	CDS
581	3332	BALDIA	GARDEN	AZEEM PLAZA SS-1	CDS
582	250	BALDIA	GARDEN	QASIM BHAI MOOSA BHAI	CDS
583	243	BALDIA	GARDEN	SALEEM TERRACE + Cap	CDS
584	2011	DEFENCE	Garden	Star City	CDS
585	244	Orangi	Garden	PASBAN MASJID	CDS
586	682	BALDIA	GARDEN	ANA CROWN	CDS
587	246	SOCIETY	GARDEN	CIVIL HOSPITAL-3	DDS
588	253	SOCIETY	GARDEN	GURUMANDIR	CDS
589	247	DEFENCE	Garden	Naz Plaza	CDS
590	242	SOCIETY	GARDEN	REVENUE OFFICE	CDS
591	257	SOCIETY	GARDEN	NISHTER PARK + CAP-4	CDS
592	3552	SOCIETY	GARDEN	JJ APARTMENT	CDS
593	256	DEFENCE	Garden	Income Tax Building	CDS
594	249	SOCIETY	GARDEN	EVERSHINE	CDS
595	3536	SOCIETY	GARDEN	ABDUL MANAN	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
596	238	SOCIETY	GARDEN	FATIMID FOUNDATION	CDS
597	1137	SOCIETY	GARDEN	G. H. QASIM ROAD	CDS
598	200	SOCIETY	GARDEN	CITY GOVT. PRESS	CDS
599	245	Orangi	Garden	REXER LANE	CDS
600	2114	SOCIETY	GARDEN	FIA	CDS
601	252	DEFENCE	Garden	State Life Building-11	DDS
602	258	SOCIETY	GARDEN	CAPRI CINEMA	CDS
603	2090	DEFENCE	Garden	Amma Tower	CDS
604	255	DEFENCE	Garden	Odean Center	CDS
605	241	SOCIETY	GARDEN	BANDOOQWALA	CDS
606	262	Bin Qasim	GHARO	GUJJO PUMPING	DDS
607	259	Bin Qasim	GHARO	Saakro Morr	CDS
608	3320	Bin Qasim	GHARO	OLD GHARO PUMPING	DDS
609	263	Bin Qasim	GHARO	GHARIB SONS-1	DDS
610	264	Bin Qasim	GHARO	GHARIB SONS-2	DDS
611	261	Bin Qasim	GHARO	LASHARI GOTH	CDS
612	260	Bin Qasim	GHARO	GHARO TEXTILE MILL	DDS
613	3123	DEFENCE	Gizri	Bahria Complex-4	DDS
614	3291	DEFENCE	Gizri	Bahria University	DDS
615	198	DEFENCE	Gizri	AL-Ayesha	CDS
616	3580	DEFENCE	Gizri	Hussain Developers	CDS
617	1211	DEFENCE	Gizri	11th Commercial RMU	CDS
618	3313	DEFENCE	Gizri	24th Comm Street RMU	CDS
619	2026	DEFENCE	Gizri	Ghardiali Flats	CDS
620	25	DEFENCE	Gizri	Jehangir Rehman	CDS
621	2151	DEFENCE	Gizri	SCADA-2 House Trafo	DDS
622	23	DEFENCE	Gizri	Tanzeem Toheed Commercial	CDS
623	3	DEFENCE	Gizri	Defence-10	CDS
624	1153	DEFENCE	Gizri	Sindh Medical College	CDS
625	13	DEFENCE	Gizri	Bureau of Lab	CDS
626	2069	DEFENCE	Gizri	Ideal Bakery	CDS
627	3055	DEFENCE	Gizri	Khan of Kallat	CDS
628	1	DEFENCE	Gizri	Defence Pumping-1	CDS
629	3359	DEFENCE	Gizri	Defence-30	CDS
630	3360	DEFENCE	Gizri	Saudi Residency RMU	CDS
631	6	DEFENCE	Gizri	Bombay & Co.	CDS
632	16	DEFENCE	Gizri	Hotel Mehran	CDS
633	202	DEFENCE	Gizri	Askari-2	CDS
634	2006	DEFENCE	Gizri	Mirza Sharif Baig	CDS
635	14	DEFENCE	Gizri	Defence-09	CDS
636	3556	DEFENCE	Gizri	Fleet Mess	DDS
637	2	DEFENCE	Gizri	Embassi Villa	CDS
638	7	DEFENCE	Gizri	Pak Crescent	CDS
639	5	DEFENCE	Gizri	Defence-07	CDS
640	19	DEFENCE	Gizri	Defence-12	CDS
641	12	DEFENCE	Gizri	Defence-02	CDS
642	8	DEFENCE	Gizri	Hira Appartments	CDS
643	4	DEFENCE	Gizri	Razi Tower RMU	CDS
644	15	SOCIETY	GIZRI	PARSI TRUST	CDS
645	18	DEFENCE			CDS
646	2150	DEFENCE	Gizri	NR Colony 6th Street Radar RMII	CDS
647	20	DEFENCE	Gizri	6th Street Badar RMU	CDS
648	32	DEFENCE	Gizri	Clifton-2	
649	29	DEFENCE	Gizri	PSO	CDS
049	1 29	DEFENCE	Gizri	СМН	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
650	22	DEFENCE	Gizri	P&T Colony	CDS
651	11	DEFENCE	Gizri	Glass Tower	CDS
652	3446	DEFENCE	Gizri	Khaliq-uz-Zaman Rd	CDS
653	31	DEFENCE	Gizri	Ashiana Appartment	CDS
654	203	DEFENCE	Gizri	KWSB Punjab Colony	CDS
655	9	DEFENCE	Gizri	Anwer Ali	CDS
656	26	DEFENCE	Gizri	Hassan Terrace	CDS
657	2052	DEFENCE	Gizri	Kh-e-Hafiz	CDS
658	27	DEFENCE	Gizri	Korangi Road	CDS
659	28	DEFENCE	Gizri	Kh-e-Momin (Hilal Park)	CDS
660	30	DEFENCE	Gizri	Forum	DDS
661	1210	DEFENCE	Gizri	SCADA-1	DDS
662	782	GULSHAN	GOLIMAR	Dyre Textile	CDS
663	813	GULSHAN	GOLIMAR	Shah-e-Karbala	CDS
664	3911	Orangi	GOLIMAR	DEEWAN STEEL	DDS
665	3279	Orangi	GOLIMAR	HONDA PAKISTAN	DDS
666	803	Orangi	GOLIMAR	H. NIZAMUDDIN	CDS
667	812	Orangi	GOLIMAR		CDS
668	830	Orangi		OLD GOLIMAR	CDS
669	3851		GOLIMAR	AMBRELI WALA	
670	832	Orangi Orangi	GOLIMAR GOLIMAR	SADIQ RE-ROLLING	CDS
671	833			SHAFI & CO.	CDS
672	3404	Orangi Orangi	GOLIMAR	REPUBLIC-II	CDS
673	3737		GOLIMAR	AMSONS	CDS
674		Orangi	GOLIMAR	SAF COMPANY	CDS
675	3856 839	Orangi	GOLIMAR	MOLADAD VILLAGE	CDS
		Orangi	GOLIMAR	TAHIR ALI	DDS
676	3444	Orangi	GOLIMAR	FAIZAN STEEL	DDS
677	3738	Orangi	GOLIMAR	HAJI ASIF	DDS
678	3147	Orangi	GOLIMAR	COCA COLA	DDS
679	3229	Orangi	GOLIMAR	RAZZAK STEEL	DDS
680	3350	Orangi	GOLIMAR	HYBRID CELL	DDS
681	798	Orangi	GOLIMAR	REHBER INDUSTRY	CDS
682	3843	Orangi	GOLIMAR	DALL MILL RMU	CDS
683	818	GULSHAN	GOLIMAR	Al-Maroof Sweet RMU +	CDS
684	2197	Orangi	GOLIMAR	TRAILER DEVELOVEMENT CORPORATION	CDS
685	3003	Orangi	GOLIMAR	ASIO AFRICAN	CDS
686	819	Orangi	GOLIMAR	GHANI CHOWRANGI	CDS
687	3109	Orangi	GOLIMAR	GRAMO PHONE	CDS
688	823	Orangi	GOLIMAR	MEHRAN BOTTLER	CDS
689	3006	Orangi	GOLIMAR	SOVENIER TOBACCO	CDS
690	327	GULSHAN	Gulshan	Aziz Bhatti	CDS
691	315	GULSHAN	Gulshan	Gulshan Gulshan	CDS
692	3961	GULSHAN	Gulshan	400 Bed Hospital	CDS
693	3017	GULSHAN	Gulshan	Sindbad	CDS
694	1215	GULSHAN	Gulshan	Erum Developer	CDS
695	318	GULSHAN	Gulshan	Urdu College	CDS
696	325	GULSHAN	Gulshan	Khursheed Homes	CDS
697	1213	GULSHAN	Gulshan	NESCOS	CDS
698	1212	GULSHAN	Gulshan	Station Road	CDS
699	3416	GULSHAN	Gulshan	Pipe Factory	CDS
700	2053	GULSHAN	Gulshan	Jamia Sibtain	CDS
701	324	GULSHAN	Gulshan	Faran Club (Old Ashraf Square)	CDS
702	321	SOCIETY	GULSHAN	PNS JOHAR	CDS
703	1214	GULSHAN	Gulshan	Civic View	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
704	319	SOCIETY	GULSHAN	KARACHI GAS	CDS
705	331	GULSHAN	Gulshan	Holly Wood	CDS
706	320	GULSHAN	Gulshan	National Stadium	CDS
707	3557	GULSHAN	Gulshan	AG-2+ Cap-2	CDS
708	3873	GULSHAN	Gulshan	AQSA TOWER	CDS
709	316	GULSHAN	Gulshan	Orient Builders	CDS
710	335	GULSHAN	Gulshan	NIPA Pumping	CDS
711	328	GULSHAN	Gulshan	COD Hill	CDS
712	334	GULSHAN	Gulshan	Shanti Nagar	CDS
713	330	GULSHAN	Gulshan	Rub Center	CDS
714	326	GULSHAN	Gulshan	Exhibition	CDS
715	329	GULSHAN	Gulshan	Mujahid Colony	CDS
716	353	GULSHAN	Gulshan	Gul Telephone Exchange	CDS
717	332	JOHAR	Gulshan	ASKARI-4	CDS
718	1216	GULSHAN	Gulshan	Karson Complex	CDS
719	323	GULSHAN	Gulshan	NCHS	CDS
720	339	GULSHAN	Gulshan	Al-Azmat	CDS
721	338	GULSHAN	Gulshan	Parkwala	CDS
722	340	GULSHAN	Gulshan	Alladin Park	CDS
723	3118	GULSHAN	Gulshan	Mughal-e-Azam	CDS
724	336	SOCIETY	Gulshan	GULSHAN-E-JAMAL 3	CDS
725	3169	JOHAR	Gulshan	NED RMU	CDS
726	2100	GULSHAN	Gulshan	Rufi Heaven	CDS
727	2124	GULSHAN	Gulshan	Azeem Khan Park	CDS
728	343	GULSHAN	Gulshan	Lucky Center	CDS
729	345	JOHAR	Gulshan	ASKARI-5	CDS
730	3550	GULSHAN	Gulshan	Saima Royal Residency-1	CDS
730	3551	GULSHAN	Gulshan		CDS
731	1219	GULSHAN		Saima Royal Residency-2	CDS
732	3477	GULSHAN	Gulshan	Dhorajee Colony (Old Usman Plaza)	CDS
734	350	GULSHAN	Gulshan	Harmain Builders	
735	3016		Gulshan	Saima Classic	CDS
736	355	GULSHAN	Gulshan	Maskan	CDS
737	346	JOHAR GULSHAN	GULSHAN	SUNNY PRIDE	CDS
737	2120		Gulshan	Training Center	CDS
		GULSHAN	Gulshan	Mall Residency	CDS
739	348	GULSHAN	Gulshan	Suleman Plaza	CDS
740	317	GULSHAN	Gulshan	Nursery	CDS
741	112	JOHAR	GULSHAN	EMPIRE CENTRE	CDS
742	3421	SOCIETY	GULSHAN	RASHID MINHAS	CDS
743	3299	SOCIETY	GULSHAN	ABDUL WAHEED SOHAIL PN	CDS
744	3315	GULSHAN	Gulshan	Square # 1	DDS
745	333	GULSHAN	Gulshan	EPB	CDS
746	347	GULSHAN	Gulshan	Al-Najeeb	CDS
747	3316	GULSHAN	Gulshan	Dream Land	DDS
748	351	GULSHAN	Gulshan	Asif & Zafar	CDS
749	822	Orangi	Haroonabad	FOUNDATION ENGINEERING	CDS
750	814	Orangi	Haroonabad	FREEDOM (old: GULF DYING)	CDS
751	824	Orangi	Haroonabad	STAR TEXTILE	CDS
752	821	Orangi	Haroonabad	BASHIR TEXTILE	CDS
753	817	Orangi	Haroonabad	DOST MOHAMMAD	CDS
754	840	Orangi	Haroonabad	ABBAS STEEL	DDS
755	3126	Orangi	Haroonabad	AGS BATTERY	DDS
756	826	Orangi	Haroonabad	JEHLUM TEXTILE	CDS
757	3157	GULSHAN	Haroonabad	Nital Colony	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
758	816	Orangi	Haroonabad	SITE TELEPHONE EXCHANGE	CDS
759	3249	Orangi	Haroonabad	ABID INDUSTRY	CDS
760	835	Orangi	Haroonabad	DADA CERAMIC	CDS
761	831	Orangi	Haroonabad	JAMAL INDUSTRY	CDS
762	836	Orangi	Haroonabad	SITE PUMPING	CDS
763	838	Orangi	Haroonabad	TYRE SOLE	CDS
764	820	Orangi	Haroonabad	AZAD FRIEND	CDS
765	3180	Orangi	Haroonabad	NOMAN STEEL	DDS
766	834	Orangi	Haroonabad	EASTERN FILM	CDS
767	3137	Orangi	Haroonabad	NAURAS	CDS
768	828	Orangi	Haroonabad	ALAMGIR	CDS
769	827	Orangi	Haroonabad	METALAX -II	CDS
770	837	Orangi	Haroonabad	SP CHAMBER	DDS
771	793	Orangi	Haroonabad	PEERABAD	CDS
772	3592	Orangi	Haroonabad	LORENZO	DDS
773	3595	Orangi	Haroonabad	Nawab Brothers	DDS
774	3619	Orangi	Haroonabad	SEARLE PAK	DDS
775	3001	Orangi	Haroonabad	AA GHANI	CDS
776	3212	Orangi	Haroonabad	SIDDIQ SONS SITE	DDS
777	3099	Orangi	Haroonabad	MOONLIGHT	CDS
778	811	Orangi	Haroonabad	AB GASES	CDS
779	3260	Orangi	Haroonabad	STEEL TRACK	DDS
780	3855	Orangi	Haroonabad	INDUS RAYON	CDS
781	3499	Orangi	Haroonabad	SHAH SONS	CDS
782	3991	Orangi	Haroonabad	Liberty Mills	DDS
783	785	Orangi	Haroonabad	MERCURY GARMENT	CDS
784	3844	Orangi	Haroonabad	STERLING PLYWOOD	CDS
785	3131	UTHAL	HUB	HITE-5	DDS
786	3133	UTHAL	HUB	MARBLE CITY	DDS
787	3127	UTHAL	HUB	HITE-1	DDS
788	3128	UTHAL	HUB	HITE-2	DDS
789	3129	UTHAL	HUB	HITE-3	DDS
790	3130	UTHAL	HUB	HITE-4	DDS
791	3132	UTHAL	HUB	HITE-6	DDS
792	3092	UTHAL	HUB	BOLAN CASTING -1	CDS
793	3857	UTHAL	HUB	CHEEZALABD RMU (old: HUMAYUN SAGHIR)	CDS
794	3091	UTHAL	HUB	MIAN GIANI RMU	CDS
795	3185	UTHAL	HUB	LATIF JUTE	CDS
796	3030	UTHAL	HUB	DEGASH	CDS
797	3721	UTHAL	HUB	HITE-7	DDS
798	3093	UTHAL	HUB	BOLAN CASTING -2	CDS
799	3094	UTHAL	HUB	N.P WATER PROFF	CDS
800	3028	UTHAL	HUB	BALOCHISTAN PRACTICAL BOARD	CDS
801	3159	UTHAL	HUB	AGRI AUTOS	DDS
802	3031	UTHAL	HUB	PAWEL CELL	CDS
803	3095	UTHAL	HUB	BALOCHISTAN FOUNDRY	CDS
804	3093	UTHAL	HUB	AMAAN STEEL -1	DDS
805	3097	UTHAL	HUB	AMAAN STEEL -1 AMAAN STEEL -2	DDS
806	3832	UTHAL			
807	3480	UTHAL	HUB	HITE-8	DDS
808	3479	UTHAL	HUB	PAKISTAN TELEPHONE CABLE	DDS
809	3029		HUB	PIONEER CABLE	DDS
		UTHAL	HUB	INTERNATIONAL GUM	CDS
810	3184	UTHAL	HUB	JUMA KHAN	CDS
811	3606	UTHAL	HUB	SAKRAN	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
812	4042	UTHAL	HUB	NGM STEEL MILL	DDS
813	3683	UTHAL	HUB	GATRON IND. LTD	DDS
814	3236	UTHAL	HUB	TARIQ RAFI	DDS
815	3027	UTHAL	HUB	BALOCHISTAN POLY PRODUCT	CDS
816	3781	SOCIETY	JACCOB LINE	A A ENTERPRISES	DDS
817	3487	SOCIETY	JACCOB LINE	ISMAIL YOUNUS	CDS
818	1223	SOCIETY	JACCOB LINE	FALAK RMU +	CDS
819	363	SOCIETY	JACCOB LINE	SINDHI MUSLIM-2	CDS
820	3297	SOCIETY	JACCOB LINE	CENTRAL PLAZA-A	DDS
821	3298	SOCIETY	JACCOB LINE	CENTRAL PLAZA-B	DDS
822	3489	SOCIETY	JACCOB LINE	SWEEPER QUARTER	CDS
823	3517	SOCIETY	JACCOB LINE	NIC	CDS
824	368	SOCIETY	JACCOB LINE	HASHOO APARTMENT	CDS
825	364	SOCIETY	JACCOB LINE	CDGK PARKING PLAZA	CDS
826	380	SOCIETY	JACCOB LINE	OLD JACOBLINES	CDS
827	365	SOCIETY	JACCOB LINE	KDA LOW COST	CDS
828	371	SOCIETY	JACCOB LINE	WATER BOOSTING	CDS
829	3110	SOCIETY	JACCOB LINE	ZAIN RMU	CDS
830	360	SOCIETY	JACCOB LINE	PECHS BLOCK-2	CDS
831	362	SOCIETY	JACCOB LINE	BABAR GROUND	CDS
832	3473	SOCIETY	JACCOB LINE	AL GHAFOOR CHALET	CDS
833	3471	SOCIETY	JACCOB LINE	PIA SQUASH COMPLEX	CDS
834	369	SOCIETY	JACCOB LINE	KYANI SHAHEED	CDS
835	367	DEFENCE	JACCOB LINE	Panorama	CDS
836	3891	SOCIETY	JACCOB LINE	FAZAL PAN RMU	CDS
837	370	SOCIETY	JACCOB LINE	JACOBLINES COMPLEX-1	CDS
838	356	SOCIETY	JACCOB LINE	QUAID-E-AZAM-2	CDS
839	377	DEFENCE	JACCOB LINE	Burns Garden	CDS
840	361	SOCIETY	JACCOB LINE	SHAHRAH E QUAIDEEN	CDS
841	3347	SOCIETY	JACCOB LINE	BAHRIA TOWN TOWER	DDS
842	2167	SOCIETY	JACCOB LINE	COP RMU	CDS
843	358	SOCIETY	JACCOB LINE	MUSLIMABAD	CDS
844	373	SOCIETY	JACCOB LINE	ARMY FLAT	CDS
845	3104	SOCIETY	JACCOB LINE	SULEMAN ARCADE	CDS
846	1140	SOCIETY	JACCOB LINE	FOUR SQUARE	CDS
847	3503	SOCIETY	JACCOB LINE	MOONA ARCADE	CDS
848	374	DEFENCE	JACCOB LINE	Mehboob Chamber	CDS
849	381	DEFENCE	JACCOB LINE	SM Shahid	CDS
850	375	DEFENCE	JACCOB LINE	Batala	CDS
851	896	DEFENCE	JACCOB LINE	Saifee Foundation	CDS
852	359	SOCIETY	JACCOB LINE JACCOB LINE	TARIQ ROAD	CDS
853	1136	SOCIETY	JACCOB LINE JACCOB LINE	FAYYAZ CENTER	CDS
854	383	SOCIETY	JACCOB LINE JACCOB LINE	JINNAH COMPLEX	CDS
855	379	SOCIETY	JACCOB LINE JACCOB LINE	JENICA CENTER	CDS
856	384	SOCIETY	JACCOB LINE JACCOB LINE	MAKRO HABIB	DDS
857	378	DEFENCE	JACCOB LINE JACCOB LINE	Aram Bagh	CDS
858	895	SOCIETY	JACCOB LINE JACCOB LINE	DMC HOSTEL	CDS
859	382	SOCIETY	JACCOB LINE JACCOB LINE	NOORANI KABAB	CDS
860	376	DEFENCE	JACCOB LINE JACCOB LINE		
861	366	DEFENCE	JACCOB LINE JACCOB LINE	Rimpa Sky Line Palace Theater	CDS
862	372	DEFENCE			CDS CDS
863	3563	SOCIETY	JACCOB LINE	Parsi Relief	CDS
864	2103	SOCIETY	Jail	SANA APPTMENT RMU	
	2047	GULSHAN	Jail	UBL FLATS	CDS
865	204/	UULSHAN	Jail	Nagwan Village	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
866	2168	SOCIETY	Jail	HAJI IRSHAD	CDS
867	96	SOCIETY	Jail	KHALID NAGORI	CDS
868	2121	SOCIETY	Jail	BAHADUR YAR JUNG	CDS
869	2108	SOCIETY	Jail	AL-NAZAR	CDS
870	1361	SOCIETY	Jail	JAIL	CDS
871	3385	SOCIETY	Jail	RASOOL BAGH	CDS
872	2051	SOCIETY	Jail	NOORI BABA	CDS
873	2091	SOCIETY	Jail	SHAHEEN LAWN	CDS
874	3566	GULSHAN	Jail	Sanitary Shop	CDS
875	2021	GULSHAN	Jail	Haji Mureed RMU	CDS
876	3560	SOCIETY	Jail	AMIL COLONY	CDS
877	2045	SOCIETY	Jail	NOWSHERWANJEE	CDS
878	2030	GULSHAN	Jail	Baloch Hotel +	CDS
879	3547	GULSHAN	Jail	Rehbar Club	CDS
880	3549	GULSHAN	Jail	Talib Colony	CDS
881	2169	SOCIETY	Jail	PECHS-F	CDS
882	2096	SOCIETY	Jail	REHMANI GARDEN	CDS
883	357	SOCIETY	Jail	CLAYTON QUARTERS	CDS
884	1126	SOCIETY	Jail	AMEENABAD	CDS
885	2074	SOCIETY	Jail	NAWAB ISMAIL	CDS
886	3540	SOCIETY	Jail	WAQAS GAS	CDS
887	2160	SOCIETY	Jail	SOCIETY CINEMA	CDS
888	3534	SOCIETY	Jail	GUJRAT COLONY	CDS
889	2018	GULSHAN	Jail	Peetal Gali	CDS
890	4114	SOCIETY	Jail	SINDH MASS TRANSITAUTHORITY	DDS
891	3059	JOHAR	JOHAR	AFNAN DUPLEX	CDS
892	3831	JOHAR	JOHAR	QALANDARABAD RMU	CDS
893	3115	JOHAR	JOHAR	PHOENIX HEIGHT	CDS
894	3086	JOHAR	JOHAR	UNI Gold RMU	CDS
895	304	JOHAR	JOHAR	GLOBE CENTER	CDS
896	3725	JOHAR	JOHAR	TALHA COTTAGES	CDS
897	3310	JOHAR	JOHAR	DOW UNIVERSITY	CDS
898	294	JOHAR	JOHAR	OJHA SANITORIUM	CDS
899	311	JOHAR	JOHAR	KDA PALACE VIEW	CDS
900	302	JOHAR	JOHAR	SANA AVENUE	CDS
901	296	JOHAR	JOHAR	SAFARI BLESSING	CDS
902	305	JOHAR	JOHAR	SHERATON SQUARE	CDS
903	293	JOHAR	JOHAR	METEROLOGICAL DEPARTMENT	CDS
904	3179	JOHAR	JOHAR	TIPU SULTAN SOCIETY	CDS
905	299	JOHAR	JOHAR	CHAPPLE BUILDER	CDS
906	3714	JOHAR	JOHAR	PINK PARK RMU	CDS
907	3973	JOHAR	JOHAR	DHNI RESORT RMU (old name: RASHIDI GOTH RM	CDS
908	2031	JOHAR	JOHAR	BISMILLAH TOWER	CDS
909	310	JOHAR	JOHAR	P.H.A.	CDS
910	1229	JOHAR	JOHAR	DECENT GARDEN	CDS
911	3761	JOHAR	JOHAR	S S BUILDERS	CDS
912	1232	JOHAR	JOHAR	H.E.J	CDS
913	307	JOHAR	JOHAR	KARACHI UNIVERSITY VI	CDS
914	314	JOHAR	JOHAR	MALIK SOCIETY	CDS
915	3722	JOHAR			
916	3080	JOHAR	JOHAR	SHAEZ RESIDENCY	CDS
917	3731	JOHAR	JOHAR	KHI. MEMON SOCIETY	CDS
917	295	JOHAR	JOHAR	GUL HOUSES RMU	CDS
310	233	JOHAN	JOHAR	MARORA GOTH	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
920	308	JOHAR	JOHAR	GEOLOGICAL SURVEY OF PAKISTAN (GSP)	CDS
921	3262	JOHAR	JOHAR	JUBILEE GATE	CDS
922	306	JOHAR	JOHAR	SUPARCO	CDS
923	3801	JOHAR	JOHAR	NAVY MERCHANT CHS	CDS
924	3120	JOHAR	JOHAR	PAK SCIENTIFIC SOCIETY	CDS
925	3972	JOHAR	JOHAR	KARACHI UNIVERSITY EMPLOYEE SOCIETY	DDS
926	3111	JOHAR	JOHAR	PILI BHEET	CDS
927	309	JOHAR	JOHAR	ABDUL GHANI	CDS
928	3426	JOHAR	JOHAR	RAFI PREMIER RESIDENCY	CDS
929	3114	JOHAR	JOHAR	DUBAI MALL 2000 RMU	CDS
930	3056	JOHAR	JOHAR	CROWN GARDEN	CDS
931	1228	JOHAR	JOHAR	PREM VILLAS	CDS
932	300	JOHAR	JOHAR	AGHA KHAN TRUST	CDS
933	301	JOHAR	JOHAR	BHITTAIABAD	CDS
934	3419	JOHAR	JOHAR	AREESHA CHS (old Name: JOHAR COMPLEX S/S)	CDS
935	3232	JOHAR	JOHAR	PIA SOCIETY	CDS
936	3156	JOHAR	JOHAR	IBA STAFF COLONY	CDS
937	3475	JOHAR	KDA-33	CAPITAL HOUSING SOCIETY 01	CDS
938	3476	JOHAR	KDA-33	POST OFFICE SOCIETY	CDS
939	4043	JOHAR	KDA-33	ABDUL REHMAN	CDS
940	3276	JOHAR	KDA-33	SAADI TOWN RMU	CDS
941	405	JOHAR	KDA-33	ASPHALT PLANT	CDS
942	3442	JOHAR	KDA-33	RUPALI RMU	CDS
943	398	JOHAR	KDA-33	JIWANI HEIGHTS	CDS
944	400	JOHAR			CDS
945	399	JOHAR	KDA-33	KIRAN HOSPITAL	CDS
946	404	JOHAR	KDA-33	HADIABAD	CDS
947	416	JOHAR	KDA-33	PRINCE ALI	CDS
948	414	JOHAR	KDA-33	SUNLAY DEVELOPERS	CDS
949	3061	JOHAR	KDA-33 KDA-33	KAKA KHAIL	CDS
950	3435	JOHAR		MEERIOTH SOCIETY	
951	3535	JOHAR	KDA-33	MEHRAN TOWER	CDS
952	2104	JOHAR	KDA-33	SHAHEED MAKHDOOM BILAWAL	CDS
953	3771		KDA-33	SACHAL SARMAST (old: AFGHAN BASTI)	CDS
953	410	JOHAR	KDA-33	ZIKRIA GOTH	CDS
		JOHAR	KDA-33	FANCY HEIGHTS	CDS
955	3412	JOHAR	KDA-33	MADRAS SOCIETY	CDS
956	415	JOHAR	KDA-33	RIZVIA SOCIETY	CDS
957	411	JOHAR	KDA-33	KWSB-I	DDS
958	3870	JOHAR	KDA-33	PAK LAND	CDS
959	403	JOHAR	KDA-33	SAHAFI COLONY	CDS
960	3681	JOHAR	KDA-33	AMROHA SOCIETY	CDS
961	408	JOHAR	KDA-33	AL-AZHAR GARDEN	CDS
962	397	JOHAR	KDA-33	BISMILLAH MARKET	CDS
963	3058	JOHAR	KDA-33	IONOSPHERIC LAB	CDS
964	406	JOHAR	KDA-33	PIONEER CITY	CDS
965	409	JOHAR	KDA-33	REEN LAND (old name: GREEN LAND CITY (POLE 7)	CDS
966	3119	JOHAR	KDA-33	KDA EMPLOYEE SOCIETY	CDS
967	3464	JOHAR	KDA-33	AGRO EXPORT PROCESSING ZONE	CDS
968	3057	JOHAR	KDA-33	PAF CHOTTA MALIR	CDS
969	3415	JOHAR	KDA-33	POLICE SOCIETY	CDS
970	4055	JOHAR	KDA-33	SOOMRA CHS	DDS
971	3318	JOHAR	KDA-33	HALARI MEMON SOCIETY	CDS
972	3247	JOHAR	KDA-33	KATHIAWAR SOCIETY	CDS
973	3685	JOHAR	KDA-33	GULISTAN CHS 1	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
974	3686	JOHAR	KDA-33	JAMALI BRIDGE	CDS
975	3730	JOHAR	KDA-33	SECRETARY GOVT CHS	CDS
976	3886	JOHAR	KDA-33	SURTI MUSLIM CHS	DDS
977	4044	JOHAR	KDA-33	HAKEEM VILLAS	DDS
978	3741	JOHAR	KDA-33	MUHAMMAD FAROOQ	CDS
979	4040	Johar	KDA-33	CLASS-4 (old: GAWALIOR SOCIETY)	DDS
980	3876	JOHAR	KDA-33	WHITE HOUSE RMU	CDS
981	4167	JOHAR	KDA-33	SAIMA ELITE VILLAS	CDS
982	3879	JOHAR	KDA-33	TULIP TOWER	CDS
983	402	JOHAR	KDA-33	SUPER HIGHWAY PUMPING	CDS
984	3853	JOHAR	KDA-33	RANGERS HEAD QUARTER	CDS
985	3334	JOHAR	KDA-33	PUNJABI SUDAGRAN	CDS
986	4004	JOHAR	KDA-33	JHANJAR GOTH	CDS
987	401	JOHAR	KDA-33	TEACHERS SOCIETY	CDS
988	412	JOHAR	KDA-33	KWSB-II	DDS
989	1235	JOHAR	KDA-33	KDA FILTER PLANT	DDS
990	394	Bin Qasim	KEPZ	GENERAL TYRE-3	DDS
991	389	Bin Qasim	KEPZ	P.M.T.F.	DDS
992	390	KORANGI	KEPZ	E.P.Z 01	DDS
993	3175	KORANGI	KEPZ	E.P.Z 04	DDS
994	387	Bin Qasim	KEPZ	LABOUR FLATS	CDS
995	4003	Bin Qasim	KEPZ	BORSTAL JAIL	CDS
996	385	KORANGI	KEPZ	E.P.Z 02	DDS
997	3985	KORANGI	KEPZ	E.P.Z 08	DDS
998	3982	KORANGI	KEPZ	E.P.Z 05	DDS
999	3983	KORANGI	KEPZ	E.P.Z 06	DDS
1000	4010	Bin Qasim	KEPZ	500 QUARTER	CDS
1001	3984	KORANGI	KEPZ	E.P.Z 07	DDS
1002	391	Bin Qasim	KEPZ	AL-ATA TEX.	CDS
1003	4036	Bin Qasim	KEPZ	FEROZE MILLS LIMITED	DDS
1004	3837	KORANGI	KEPZ	MEDICO RMU	CDS
1005	3394	KORANGI	KEPZ	MUZZAFARABAD	CDS
1006	395	Bin Qasim	KEPZ	E.P.Z 03	DDS
1007	3554	Bin Qasim	KEPZ	SHAH LATIF TOWN	CDS
1008	3153	KORANGI	KEPZ	52-A BUS STOP RMU	CDS
1009	3971	Bin Qasim	KEPZ	FAST RMU (raza city)	CDS
1010	393	KORANGI	KEPZ	SINDH ALKALLIES	CDS
1011	897	Bin Qasim	KEPZ	KMC ABBITOR	CDS
1012	3395	Bin Qasim	KEPZ	ROAD NO.2 RMU	CDS
1013	388	KORANGI	KEPZ	MAJEED COL. RMU	CDS
1014	386	Bin Qasim	KEPZ	CATTLE COLONY RMU	CDS
1015	392	KORANGI	KEPZ	INTERNATIONAL IND. LTD.	CDS
1016	3348	JOHAR	KESC HOSPITAL	COUNTY GARDEN	CDS
1017	3067	JOHAR	KESC HOSPITAL	A.D.B.P	CDS
1018	303	JOHAR	KESC HOSPITAL	JOHAR SQUARE	CDS
1019	2153	JOHAR	KESC HOSPITAL	USMAN TERRACE	CDS
1020	298	GULSHAN	KESC HOSPITAL	Time Square	CDS
1021	3053	GULSHAN	KESC HOSPITAL	Hussain Hazara Goth	CDS
1022	3070	JOHAR	KESC HOSPITAL	FARHAN TOWER	CDS
1023	3177	GULSHAN	KESC HOSPITAL	Pak Swiss	CDS
1024	3072	JOHAR	KESC HOSPITAL	SHALIMAR RMU	CDS
1025	3146	GULSHAN	KESC HOSPITAL	Gallant Summit	CDS
1026	3176	GULSHAN	KESC HOSPITAL	Nillat	CDS
1027	349	JOHAR	KESC HOSPITAL	HUNAID CITY	CDS
	1 373	, , , , , , , , , , , , , , , , , , ,	RESCHOSFIIAL	HONAID CITI	I CD3

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1028	3073	JOHAR	KESC HOSPITAL	BASERA TOWER	CDS
1029	3068	JOHAR	KESC HOSPITAL	KING RESIDENCY	CDS
1030	4053	JOHAR	KESC HOSPITAL	AL-KHAIR BAKERS	CDS
1031	312	JOHAR	KESC HOSPITAL	ASKARI-9	CDS
1032	341	JOHAR	KESC HOSPITAL	ALLIANCE ARCADE	CDS
1033	3069	JOHAR	KESC HOSPITAL	UNIVERSAL HEIGHTS	CDS
1034	3292	JOHAR	KESC HOSPITAL	ADMISSION BLOCK	CDS
1035	3074	JOHAR	KESC HOSPITAL	HAROON ROYAL CITY	CDS
1036	3084	JOHAR	KESC HOSPITAL	KDA OVERSEAS BUNGLOWS	CDS
1037	3065	JOHAR	KESC HOSPITAL	GULSHAN-E-AMEEN TOWER	CDS
1038	3087	JOHAR	KESC HOSPITAL	RABIA CITY	CDS
1039	3440	JOHAR	KESC HOSPITAL	NEW LYARI C.H.S	CDS
1040	352	JOHAR	KESC HOSPITAL	BILLY'S PARADISE	CDS
1041	3075	JOHAR	KESC HOSPITAL	IQRA COMPLEX	CDS
1042	342	JOHAR	KESC HOSPITAL	SUNNY VIEW	CDS
1043	3465	JOHAR	KESC HOSPITAL	AL-KHIZERA HEIGHTS	CDS
1044	1217	JOHAR	KESC HOSPITAL	GRAND CITY	CDS
1045	3144	JOHAR	KESC HOSPITAL	AZEEM GARDEN	CDS
1046	1231	JOHAR	KESC HOSPITAL	SINDH BALOCH SOCIETY	CDS
1047	3682	JOHAR	KESC HOSPITAL	ABAD BUILDERS	CDS
1048	354	JOHAR	KESC HOSPITAL	NOMAN HEAVEN	CDS
1049	313	JOHAR	KESC HOSPITAL	RUFI PARADISE	CDS
1050	3539	GULSHAN	KESC HOSPITAL	Allah Noor	CDS
1051	3621	JOHAR	KESC HOSPITAL	CITY TOWER AND SHOPPING MALL	CDS
1052	3684	JOHAR	KESC HOSPITAL	GREY HEIGHTS	CDS
1053	3062	JOHAR	KESC HOSPITAL	NED MECHANICAL DEPARTMENT	CDS
1054	3957	Gulshan	KESC HOSPITAL	CALLACHI COOPERATIVE HOUSING SOCIETY LTD	DDS
1055	4204	Gulshan	KESC HOSPITAL	FAYYAZ ILYAS	DDS
1056	437	KORANGI	KORANGI EAST	DUTECH	CDS
1057	435	KORANGI	KORANGI EAST	RCD BALL BEARING	CDS
1058	1237	KORANGI	KORANGI EAST	MERRIT PACKAGES	CDS
1059	421	KORANGI	KORANGI EAST	TIGER STEEL	CDS
1060	432	KORANGI	KORANGI EAST	UNITED STEEL	CDS
1061	3045	KORANGI	KORANGI EAST	J-01 AREA RMU	CDS
1062	3021	KORANGI	KORANGI EAST	OPAL LAB.	CDS
1063	423	KORANGI	KORANGI EAST	DARULULLOOM	CDS
1064	425	KORANGI	KORANGI EAST	ZAFAR ICE	CDS
1065	426	KORANGI	KORANGI EAST	ELLAHI FLOUR	CDS
1066	3907	KORANGI	KORANGI EAST	NAVEENA EXPORT	CDS
1067	3105	KORANGI	KORANGI EAST	36-B RMU	CDS
1068	419	KORANGI	KORANGI EAST	ZAMANABAD RMU	CDS
1069	3698	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 1	CDS
1070	3699	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 6	CDS
1071	428	KORANGI	KORANGI EAST	7 - A RMU	CDS
1071	431	KORANGI	KORANGI EAST	ROTI PLANT	CDS
1073	2066	KORANGI	KORANGI EAST	LASSI RMU	CDS
1074	4013	KORANGI	KORANGI EAST	AMALGAMATED	CDS
1075	3312	KORANGI	KORANGI EAST	MILLAT TOWN	CDS
1076	3546	KORANGI			
1076	424	KORANGI	KORANGI EAST	SEC-10 RMU	CDS
1077	438	KORANGI	KORANGI EAST	DADABHOY PAPER (EAST PAK)	CDS
		 	KORANGI EAST	QABRISTAN RMU	CDS
1079	4024 429	KORANGI KORANGI	KORANGI EAST KORANGI EAST	A&S Oil SS BOOTS PHARMA	CDS CDS
1080					1.118

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1082	433	KORANGI	KORANGI EAST	RUSTAM ICE	CDS
1083	4083	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-4	DDS
1084	4242	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-16	DDS
1085	3586	Bin Qasim	KORANGI EAST	NATIONAL MEDICAL CENTER RMU	CDS
1086	436	KORANGI	KORANGI EAST	MOON LIGHT	CDS
1087	434	KORANGI	KORANGI EAST	NOOR BHOUY	CDS
1088	422	KORANGI	KORANGI SOUTH	D-AREA RMU	CDS
1089	448	KORANGI	KORANGI SOUTH	G. MARKET RMU	CDS
1090	1238	KORANGI	KORANGI SOUTH	JUMMA VILLAGE	CDS
1091	3564	KORANGI	KORANGI SOUTH	M. SHARIF RMU	CDS
1092	534	KORANGI	KORANGI SOUTH	LANDHI-C	CDS
1093	420	KORANGI	KORANGI SOUTH	K.TEL EXCH 03	CDS
1094	443	KORANGI	KORANGI SOUTH	VOCATIONAL INSTITUTE	CDS
1095	3838	KORANGI	KORANGI SOUTH	GHAUS PAK ROAD	CDS
1096	1248	KORANGI	KORANGI SOUTH	ALI AKBER SHAH RMU	CDS
1097	427	KORANGI	KORANGI SOUTH	5C BILALABAD (OLD BANK AL-FALAH RMU)	CDS
1098	3933	KORANGI	KORANGI SOUTH	BARAY WALA RMU	CDS
1099	471	KORANGI	KORANGI SOUTH	COMP. HIGH SCHOOL	CDS
1100	3932	KORANGI	KORANGI SOUTH	GULISTAN MARKET RMU	CDS
1101	430	KORANGI	KORANGI SOUTH	GHALIB CINEMA	CDS
1102	1250	KORANGI	KORANGI SOUTH	MADINA COLONY RMU	CDS
1103	1247	KORANGI	KORANGI SOUTH	OLD THANA RMU	CDS
1104	477	KORANGI	KORANGI SOUTH	COAST GUARD	CDS
1105	1240	KORANGI	KORANGI SOUTH	M.A. MOHAMMADI	CDS
1106	1242	KORANGI	KORANGI SOUTH	TASVEER MAHEL	CDS
1107	1243	KORANGI	KORANGI SOUTH	SOHAIL SHAMSI	CDS
1108	3565	KORANGI	KORANGI SOUTH	CHINIOT HOSPITAL	CDS
1109	3570	KORANGI	KORANGI SOUTH	RIAZ HOTEL RMU	CDS
1110	3555	KORANGI	KORANGI SOUTH	51-C RMU	CDS
1111	462	KORANGI	KORANGI TOWN	PERAC	CDS
1112	444	KORANGI	KORANGI TOWN	PAK HI OIL	CDS
1113	469	KORANGI	KORANGI TOWN	QANDHARI FLOUR	CDS
1114	480	KORANGI	KORANGI TOWN	LONDON TANNERY	CDS
1115	3052	KORANGI	KORANGI TOWN	AL MOHAMMAD GOTH RMU (OLD MILLAT TOWN	CDS
1116	3571	KORANGI	KORANGI TOWN	ABU ZAR BAKERY RMU	CDS
1117	474	KORANGI	KORANGI TOWN	TANZEEM FLOUR	CDS
1118	3375	KORANGI	KORANGI TOWN	PAK LEATHER	CDS
1119	445	KORANGI	KORANGI TOWN	AHMED INVESTMENT	CDS
1120	481	KORANGI	KORANGI TOWN	FAKHRIA TANNERY	CDS
1121	3577	KORANGI	KORANGI TOWN	ARA MACHINE RMU	CDS
1122	4021	KORANGI	KORANGI TOWN	OBAID ASHFAQ	CDS
1123	3048	KORANGI	KORANGI TOWN	KORANGI ZOO	CDS
1124	473	KORANGI	KORANGI TOWN	ALI ICE	CDS
1125	459	KORANGI	KORANGI TOWN	FOUNDATION GAS	CDS
1126	2028	KORANGI	KORANGI TOWN	BILAL CHOWRANGI RMU	CDS
1127	460	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 02	CDS
1128	3594	KORANGI	KORANGI TOWN	DENIM CLOTHING	DDS
1129	3579	KORANGI	KORANGI TOWN	FAROOQI ICE	CDS
1130	478	KORANGI		SUPERLATIVE FEED	
1131	465	KORANGI	KORANGI TOWN		CDS
1132	1254	KORANGI	KORANGI TOWN	LAKSON TOBACCO	CDS
1133	4022	KORANGI	KORANGI TOWN	CHISHTIA FLOUR	CDS
1133	3835	KORANGI	KORANGI TOWN	KHADDA ABADI RMU (SHARIFABAD RMU)	CDS
1134	3033	KONANGI	KORANGI TOWN	JIVANI TRADERS RMU	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1136	454	KORANGI	KORANGI TOWN	RAHIL GUM IND.(OLD JINNAH HOUSE)	CDS
1137	457	KORANGI	KORANGI TOWN	WAH FLOUR	CDS
1138	3585	KORANGI	KORANGI TOWN	ANWER MAMA RMU	CDS
1139	3578	KORANGI	KORANGI TOWN	GOLDEN HARVEST	CDS
1140	450	KORANGI	KORANGI TOWN	ZIA COLONY RMU	CDS
1141	452	KORANGI	KORANGI TOWN	POLY PROPLINE (old name: UNION CARBIDE)	CDS
1142	3044	KORANGI	KORANGI TOWN	ZAM ZAM	CDS
1143	476	KORANGI	KORANGI TOWN	SHAMA FLOUR	CDS
1144	3588	KORANGI	KORANGI TOWN	PEARL FABRICS	CDS
1145	467	KORANGI	KORANGI TOWN	L-AREA RMU	CDS
1146	466	KORANGI	KORANGI TOWN	HAND TOOL	CDS
1147	3355	KORANGI	KORANGI TOWN	GETZ PHARMA	DDS
1148	3581	KORANGI	KORANGI TOWN	BROOKS PHARMA	DDS
1149	4014	Korangi	KORANGI TOWN	ARTISTIC MILLINERS	DDS
1150	439	KORANGI	KORANGI TOWN	ASHRAF & CO.	CDS
1151	461	KORANGI	KORANGI TOWN	KAMRAN INDUSTRIES	CDS
1152	468	KORANGI	KORANGI TOWN	IRFAN ASSOCIATES	CDS
1153	3194	KORANGI	KORANGI TOWN	INDUS DYEING	DDS
1154	479	KORANGI	KORANGI TOWN	ASSOCIATED GLASS	CDS
1155	2079	KORANGI	KORANGI TOWN	NATIONAL REF. NO. 6	DDS
1156	4028	Korangi	KORANGI TOWN	METRO ESTATE	DDS
1157	2137	KORANGI	KORANGI TOWN	NATIONAL REF. NO. 5	DDS
1158	456	KORANGI	KORANGI TOWN	SATTAR INDUSTRIES	CDS
1159	2043	KORANGI	KORANGI TOWN	NUCLEOUS HOUSE RMU	CDS
1160	3575	KORANGI	KORANGI TOWN	K-1 CENTRE RMU	CDS
1161	3079	KORANGI	KORANGI TOWN	ASPHALT PLANT (K.T)	CDS
1162	458	KORANGI	KORANGI TOWN	HABIB KNIT WEAR	CDS
1163	472	KORANGI	KORANGI TOWN	REHMANIA MASJID	CDS
1164	3152	KORANGI	KORANGI TOWN	PAKHTOON CHOWK	CDS
1165	441	KORANGI	KORANGI TOWN	KHAS TRADERS	CDS
1166	440	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 01	CDS
1167	475	KORANGI	KORANGI TOWN	MEHRAN JUTE	CDS
1168	455	KORANGI	KORANGI TOWN	PAK SHOE	CDS
1169	442	KORANGI	KORANGI TOWN	GAS TURBINE RMU	CDS
1170	2098	KORANGI	KORANGI TOWN	33-E	CDS
1171	453	KORANGI	KORANGI TOWN	POLE # 56 RMU	CDS
1172	3841	KORANGI	KORANGI TOWN	KHALID ENTERPRIZE	CDS
1173	449	KORANGI	KORANGI TOWN	ITTEHAD OIL	CDS
1174	1151	KORANGI	KORANGI TOWN	SMART HI PRESSURE	CDS
1175	3811	KORANGI	KORANGI TOWN	CRESCENT PENCIL	CDS
1176	3363	KORANGI	KORANGI WEST	SANOFI AVENTIS	DDS
1177	3962	KORANGI	KORANGI WEST	SOORTY ENTERPRISES PVT.	DDS
1178	3468	SOCIETY	KORANGI WEST	BANGASH-2	CDS
1179	3078	KORANGI	KORANGI WEST	FLEET MANAGEMENT	DDS
1180	45	SOCIETY	KORANGI WEST	JUNEJO TOWN	CDS
1181	52	KORANGI	KORANGI WEST	PAK JUTE	CDS
1182	4123	KORANGI	KORANGI WEST	Khalil Ahmed RMU	CDS
1183	43	DEFENCE	KORANGI WEST	Defence View-1	CDS
1184	3047	KORANGI	KORANGI WEST	FINE STAR	CDS
1185	4027	KORANGI	KORANGI WEST	MEHBOOB PROLINE RMU	CDS
1186	2060	DEFENCE	KORANGI WEST	Kashmir Colony RMU	CDS
1187	4026	KORANGI	KORANGI WEST	AMMAR BUKHARI	CDS
-		+			
1188	51	DEFENCE	KORANGI WEST	Printex (Bhittai Petroleum)	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1190	55	DEFENCE	KORANGI WEST	Qayumabad Pumping	CDS
1191	4141	Orangi	LABOUR SQUARE	FAIZAN STEEL-03	DDS
1192	4142	Orangi	LABOUR SQUARE	FAIZAN STEEL-04	DDS
1193	2192	Orangi	LABOUR SQUARE	AL-ATHER	CDS
1194	2196	Orangi	LABOUR SQUARE	IRFAN STEEL	CDS
1195	3462	Orangi	LABOUR SQUARE	PAKISTAN LEAF	CDS
1196	611	Orangi	LABOUR SQUARE	COMMON FACILITY	CDS
1197	829	baldia	LABOUR SQUARE	AMIN MAZDA	CDS
1198	783	BALDIA	LABOUR SQUARE	KDA PUMP BALDIA	CDS
1199	4067	Orangi	LABOUR SQUARE	PAF Base Masroor	DDS
1200	3914	Orangi	LABOUR SQUARE	KPI	CDS
1201	3913	Orangi	LABOUR SQUARE	RENOVICKER	CDS
1202	786	Orangi	LABOUR SQUARE	YOUSUF INDUSTRY	CDS
1203	1349	Orangi	LABOUR SQUARE	MS CATTS	CDS
1204	3259	Orangi	LABOUR SQUARE	COMMUNITY CENTER	CDS
1205	1348	Orangi	LABOUR SQUARE	UNI LEVER	CDS
1206	809	Orangi	LABOUR SQUARE	SARHAD ROLLING	CDS
1207	2178	Orangi	LABOUR SQUARE	NAVEENA INDUSTRY	CDS
1208	3239	Orangi	LABOUR SQUARE	SUN RISE	DDS
1209	815	Orangi	LABOUR SQUARE	HAIDERY WOOD	CDS
1210	790	Orangi	LABOUR SQUARE	INDUSTRIAL LABOUR FLAT	CDS
1211	797	Orangi	LABOUR SQUARE	MEHTAB INDUSTRY	CDS
1212	780	Orangi	LABOUR SQUARE	MANZOOR TRADER	CDS
1213	4148	Orangi	LABOUR SQUARE	TRIPURA HOISERY	CDS
1214	3483	Orangi	LABOUR SQUARE	DALDA FOOD	DDS
1215	517	Bin Qasim	LANDHI	AFTAB FLOUR	CDS
1216	3106	Bin Qasim	LANDHI	LANDHI GRID PMT (OLD GRID PMT)	DDS
1217	508	Bin Qasim	LANDHI	FIRDOUS TEXTILE	CDS
1218	2115	Bin Qasim	LANDHI	RANGEEN CINEMA	CDS
1219	510	KORANGI	LANDHI	KDA WATER PUMP	CDS
1220	536	Bin Qasim	LANDHI	KHUWAJA AUTOS	CDS
1221	3885	Bin Qasim	LANDHI	Gulshan e Askari	CDS
1222	515	Bin Qasim	LANDHI	SINDHI JAMAAT (EX ABBOTT LAB)	CDS
1223	532	Bin Qasim	LANDHI	CONCRETE ENGG.	CDS
1224	521	KORANGI	LANDHI	HUSSAIN III	CDS
1225	522	KORANGI	LANDHI	RICE GRINDING	CDS
1226	2033	Bin Qasim	LANDHI	GREEN PARK CITY	CDS
1227	516	KORANGI	LANDHI	SOCIAL SECURITY	CDS
1228	520	KORANGI	LANDHI	POLE # 1 RMU	CDS
1229	524	KORANGI	LANDHI	LANDHI 'B' (Meter No.: HTO-5352)	CDS
1230	535	Bin Qasim	LANDHI	QUAIDABAD SHOPPING	CDS
1231	3836	KORANGI	LANDHI	SIDDIQ-E-AKBER MASJID	CDS
1232	529	KORANGI	LANDHI	3-A RMU	CDS
1233	2105	Bin Qasim	LANDHI	AL-SYED CENTER	CDS
1234	507	KORANGI	LANDHI	ATLAS AUTOS	CDS
1235	518	Bin Qasim	LANDHI	FAZAL SHAFIQ	CDS
1236	523	Bin Qasim	LANDHI	TRUST CERAMIC	CDS
1237	525	Bin Qasim	LANDHI	DEH LANDHI	CDS
1238	3077	KORANGI	LANDHI	KHURAM ABAD	CDS
1239	537	KORANGI	LANDHI	SHERPAO COLONY	CDS
1240	3537	KORANGI	LANDHI	BALDIA SCHOOL RMU	CDS
1241	530	Bin Qasim	LANDHI	METAL ENGG. COMPLEX	CDS
1242	3411	KORANGI	LANDHI	LANDHI-A	CDS
1243	528	Bin Qasim	LANDHI	ANA INTERNATIONAL RMU (OLD SHABBIR TILES)	CDS
				1	

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1244	3243	Bin Qasim	LANDHI	SALFI TEXTILE	DDS
1245	509	Bin Qasim	LANDHI	HUSSAIN II	DDS
1246	527	Bin Qasim	LANDHI	AMNA INDUSTRIES (OLD GLOBE TEXTILE)	CDS
1247	533	Bin Qasim	LANDHI	GENERAL TYRE II	DDS
1248	2080	KORANGI	LANDHI	LALABAD	CDS
1249	3864	Bin Qasim	LANDHI	A.I.P Feeder (Old Atlas Engeering)	DDS
1250	3866	Bin Qasim	LANDHI	DAWLANCE PVT LTD	DDS
1251	519	Bin Qasim	LANDHI	GENERAL TYRE I	DDS
1252	538	Bin Qasim	LANDHI	GUL AHMED TEXTILE (EX HABIB GENERAL)	CDS
1253	704	Bin Qasim	LANDHI	RADIO PAKISTAN I	CDS
1254	512	Bin Qasim	LANDHI	INDUS FLOUR	CDS
1255	1123	GULSHAN	LIAQUTABAD	Falak Tower +	CDS
1256	2024	GULSHAN	LIAQUTABAD	Bazar-e-Faisal (National Ice) +	CDS
1257	550	GULSHAN	LIAQUTABAD	Ilyas Goth +	CDS
1258	558	GULSHAN	LIAQUTABAD	Tayya Hotel (Old Liagatabad-1)	CDS
1259	3905	GULSHAN	LIAQUTABAD	Salman Height	CDS
1260	1269	GULSHAN	LIAQUTABAD	Pakistan College(Old Nazimabad-1) + Cap-1	CDS
1261	554	GULSHAN	LIAQUTABAD	Bhoray Khan +	CDS
1262	548	GULSHAN	LIAQUTABAD	Zeenat Square	CDS
1263	552	GULSHAN	LIAQUTABAD	Café Millat	CDS
1264	547	GULSHAN	LIAQUTABAD	Al-Karam	CDS
1265	542	GULSHAN	LIAQUTABAD	Gol Market (Old Nazimabad-3)	CDS
1266	561	GULSHAN	LIAQUTABAD	Munawwar Engineering	CDS
1267	549	GULSHAN	LIAQUTABAD	Golden Star	CDS
1268	539	GULSHAN	LIAQUTABAD	Gulbahar	CDS
1269	543	GULSHAN	LIAQUTABAD	Timber Market +	CDS
1270	545	GULSHAN	LIAQUTABAD	Super Market	CDS
1271	3461	GULSHAN	LIAQUTABAD	Ismailia Flat	CDS
1272	1265	GULSHAN	LIAQUTABAD	Qureshi Colony	CDS
1273	546	GULSHAN	LIAQUTABAD	Rehmania Masjid	CDS
1274	540	GULSHAN	LIAQUTABAD	Nazimabad-4	CDS
1275	551	GULSHAN	LIAQUTABAD	Shakeel Corporation + Cap-3 (OLD Moosa Colony)	CDS
1276	563	GULSHAN	LIAQUTABAD	Indus Ice +	CDS
1277	557	GULSHAN	LIAQUTABAD	Apwa College (OLD Govt. School)	CDS
1278	562	GULSHAN	LIAQUTABAD	Masjid-e-Khair-ul-Amal	CDS
1279	544	GULSHAN	LIAQUTABAD	PWD Pumping-2	CDS
1280	1266	GULSHAN	LIAQUTABAD	Fed Capital-4 +	CDS
1281	541	GULSHAN	LIAQUTABAD	· ·	CDS
1282	555	GULSHAN		Liberty Cinema	
1283	560	GULSHAN	LIAQUTABAD	Nairing Cinema	CDS CDS
1284	1267	GULSHAN	LIAQUTABAD	Fatima Barocha	
1285	3459	GULSHAN	LIAQUTABAD	Karimabad	CDS
1286	1264	GULSHAN	LIAQUTABAD	Hadi Market	CDS
	559	GULSHAN	LIAQUTABAD	Liaqatabad-2	CDS
1287		+	LIAQUTABAD	C1 Area +	CDS
1288	556	GULSHAN	LIAQUTABAD	ABC Computer	CDS
1289	553	GULSHAN	LIAQUTABAD	Al-Murtaza	CDS
1290	3700	BALDIA	LYARI	DOOSA WOOL	CDS
1291	3285	BALDIA	LYARI	KNIGHT SLUM	CDS
1292	3004	BALDIA	LYARI	ATMA RAM PRITAMDAS	CDS
1293	3852	BALDIA	LYARI	BSK SCHOOL	CDS
1294	568	BALDIA	LYARI	FIDA HUSSAIN SHEKHA RD	CDS
1295	3693	BALDIA	LYARI	SHAHWALIULLAH	CDS
1296	3701	BALDIA	LYARI	BALOCH STAR RMU	CDS
1297	572	BALDIA	LYARI	LYARI ICE	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1298	571	BALDIA	LYARI	MACHAR COLONY RMU	CDS
1299	567	BALDIA	LYARI	BEHAR PUMP	CDS
1300	3481	BALDIA	LYARI	QADIR KHAN RMU	CDS
1301	3490	BALDIA	LYARI	BAGHDADI	CDS
1302	569	BALDIA	LYARI	NAVAL FLATS	CDS
1303	570	BALDIA	LYARI	GULISTAN COLONY	CDS
1304	565	BALDIA	LYARI	CROWN CINEMA	CDS
1305	575	BALDIA	LYARI	HARI MASJID RMU	CDS
1306	578	BALDIA	LYARI	M. ALI ALVI ROAD	CDS
1307	574	BALDIA	LYARI	LYARI-3	CDS
1308	199	BALDIA	LYARI	JUMA BALOCH	CDS
1309	576	BALDIA	LYARI	GHOSIA ROAD	CDS
1310	577	BALDIA	LYARI	LYARI TEL. EXCHANGE	CDS
1311	583	Bin Qasim	MALIR	ADAM HANGORO	CDS
1312	599	Bin Qasim	MALIR	ALEEMABAD	CDS
1313	3523	Bin Qasim	MALIR	COMBINED MILITARY HOSPITAL (C.M.H)	DDS
1314	579	Bin Qasim	MALIR	BLOCK 'D'	CDS
1315	1273	Bin Qasim	MALIR	SHAHEED CHOWK RMU	CDS
1316	3591	JOHAR	MALIR	SAIMA INTERNATIONAL DEVELOPERS	CDS
1317	591	Bin Qasim	MALIR	MALIR DEFENCE	CDS
1318	1274	Bin Qasim	MALIR	DUCT PUMP	DDS
1319	582	Bin Qasim	MALIR	MES - 03	DDS
1320	2141	Bin Qasim	MALIR	PAF MALIR CANTT (PAF BASE)	DDS
1321	587	Bin Qasim	MALIR	S.D HOUSES	CDS
1322	594	Bin Qasim	MALIR	FARHAT BAGH	CDS
1323	1276	Bin Qasim	MALIR	MES - 105	CDS
1324	598	Bin Qasim	MALIR	GULSHAN-E-JAMI RMU	CDS
1325	3361	Bin Qasim	MALIR	GULZAR RMU	CDS
1326	4069	Bin Qasim	MALIR	Project Housing	CDS
1327	4057	Bin Qasim	MALIR	Parade Ground	DDS
1328	4056	Bin Qasim	MALIR	CHECK POST 5	CDS
1329	3244	JOHAR	MALIR	VERVAL PATAN C.H.S	CDS
1330	4102	Bin Qasim	MALIR	Jamia Masjid Sector E	DDS
1331	3617	JOHAR	MALIR	KARACHI JUDICIAL EMPLOYEES CHS	CDS
1332	593	Bin Qasim	MALIR	MES - 02	DDS
1333	1139	Bin Qasim	MALIR	KHAIRPUR LINES	CDS
1334	597	Bin Qasim	MALIR	KAUSAR TOWN	CDS
1335	596	Bin Qasim	MALIR	KAZIMABAD RMU (OLD SECURITY PAPER)	CDS
1336	589	Bin Qasim	MALIR	DEH KATHORE	CDS
1337	3559	Bin Qasim	MALIR	ASSISTANT DIRECTOR ELECTRICAL	CDS
1338	3121	Bin Qasim	MALIR	G-3 APARTMENTS	CDS
1339	3728	Bin Qasim	MALIR	ARMY HOUSING DIRECTORATE-3 (ADH-3)	CDS
1340	2049	Bin Qasim	MALIR	PHASE-II MALIR	CDS
1341	76	Bin Qasim	MALIR	ARMY HOUSING MALIR	CDS
1342	1581	Bin Qasim	MALIR	HIGH RISE APARTMENTS	CDS
1343	3413	Bin Qasim	MALIR	SECTOR -G	CDS
1344	592	Bin Qasim	MALIR	CENTRAL CARD BOARD	CDS
1345	1129	Bin Qasim	MALIR	M.G. INDUSTRIES RMU (OLD DUMBA GOTH)	CDS
1346	1271	Bin Qasim	MALIR	ABBASI MARKET	CDS
1347	581	Bin Qasim	MALIR	NAFEES CINEMA	CDS
1348	595	Bin Qasim	MALIR	MALIR COLONY 'C'	CDS
1349	584	Bin Qasim	MALIR	FABRIC INDUSTRY (OLD SMALL INDUSTRIES)	CDS
1350	588	Bin Qasim	MALIR	URDU NAGAR	CDS
1351	3544	JOHAR	MALIR	SHANZIL GOLF RESIDENCY	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1352	586	Bin Qasim	MALIR	DAMLOTEE-I	CDS
1353	580	Bin Qasim	MALIR	AMBER GARMENTS	CDS
1354	600	Orangi	MAURIPUR	HERMAN LAB	CDS
1355	605	Orangi	MAURIPUR	AKBER MOTORS	CDS
1356	3813	BALDIA	MAURIPUR	HAMZA STEEL	CDS
1357	608	Orangi	MAURIPUR	SHAFI TANNERY	CDS
1358	603	Orangi	MAURIPUR	PARACHA TEXTILE	CDS
1359	602	BALDIA	MAURIPUR	CROWN GRINDING	CDS
1360	3101	Orangi	MAURIPUR	MEEZAN BANK	DDS
1361	3007	Orangi	MAURIPUR	JAN FINISHING	CDS
1362	612	Orangi	MAURIPUR	RAUF TEXTILE	DDS
1363	609	Orangi	MAURIPUR	ACME FEEDER	CDS
1364	3951	Orangi	MAURIPUR	TAXEM	DDS
1365	2061	BALDIA	MAURIPUR	KANUPP PUMPING	CDS
1366	601	BALDIA	MAURIPUR	MEGATRON	CDS
1367	3374	BALDIA	MAURIPUR	GARRISON ENGINEERING	DDS
1368	1277	BALDIA	MAURIPUR	AZIZ BALOCH RMU	CDS
1369	617	Orangi	MAURIPUR	GRIND WHEEL	CDS
1370	604	Orangi	MAURIPUR	KOHINOOR MARBLE	CDS
1371	618	Orangi	MAURIPUR	GOOD LUCK	CDS
1372	616	BALDIA	MAURIPUR	LYARI EXPRESSWAY-I	CDS
1373	2039	Orangi	MAURIPUR	SUFI HOTEL RMU	CDS
1374	3906	BALDIA	MAURIPUR	PAKISTAN ATOMIC ENERGY COMMISSION	DDS
1375	2184	Orangi	MAURIPUR	CAST IRON	CDS
1376	607	BALDIA	MAURIPUR	MAURIPUR TREATMENT PLANT	CDS
1377	614	BALDIA	MAURIPUR	MAURIPUR CENTRE	CDS
1378	606	BALDIA	MAURIPUR	PAK MARINE ACADEMY	CDS
1379	766	Orangi	MAURIPUR	IA INDUSTRIES	CDS
1380	3504	Orangi	MAURIPUR	YAHYA ENTERPRISE	CDS
1381	613	BALDIA	MAURIPUR	MAURIPUR TRUCK STAND	CDS
1382	3723	BALDIA	MAURIPUR	MAXIMUS	CDS
1383	2158	BALDIA	MAURIPUR	PNR COLOY	CDS
1384	3373	BALDIA	MAURIPUR	AGE NAVY	DDS
1385	615	Orangi	MAURIPUR	STANDARD ROLLING	CDS
1386	2186	Orangi	MAURIPUR	TAEEJIN	CDS
1387	4012	BALDIA	MAURIPUR	DASHT (Peoples Low Cast)	CDS
1388	3311	Orangi	MAURIPUR	CBM PLASTIC	DDS
1389	3872	Surjani	MAYMAR	Vay Water	CDS
1390	4071	Surjani	MAYMAR	SAJJAD SHAIKH (old P-V20 RMU)	CDS
1391	4063	JOHAR	MAYMAR	SHAHNAWAZ CHS	DDS
1392	3747	JOHAR	MAYMAR	HEAVEN CITY	CDS
1393	1279	Surjani	MAYMAR	Bashir Chowk	CDS
1394	3883	JOHAR	MAYMAR	ABDULLAH GABOL VILLAGE	CDS
1395	3060	JOHAR	MAYMAR	MASHRIQ SOCIETY	CDS
1396	1281	Surjani	MAYMAR	P-21 RMU	CDS
1397	3753	Johar	MAYMAR	GARDEN CITY (MERRYLAND BUILDERS)	DDS
1398	3497	Surjani	MAYMAR	Javed Metal	CDS
1399	1283	JOHAR	MAYMAR	CHAMBAILI RMU	CDS
1400	3233	Surjani	MAYMAR	Crystal Ice	CDS
1401	3441	JOHAR	MAYMAR	PAK STEEL RMU	CDS
1402	3749	JOHAR	MAYMAR	Alig Old Boys	DDS
1403	1236	JOHAR	MAYMAR	TOWN HALL	CDS
1404	3671	JOHAR	MAYMAR	DIAMOND CITY	DDS
1405	1286	JOHAR	MAYMAR	GHANIABAD RMU	CDS
				•	•

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1406	3448	Surjani	MAYMAR	AL-Karam Towels SS	CDS
1407	3443	JOHAR	MAYMAR	STAFF HOSTEL	CDS
1408	3884	JOHAR	MAYMAR	SECTOR Z	CDS
1409	1285	Surjani	MAYMAR	Win Mark	CDS
1410	3498	Surjani	MAYMAR	Lakhani Tower	CDS
1411	3920	JOHAR	MAYMAR	NOOR HAMZA MASJID	CDS
1412	3231	Surjani	MAYMAR	Urooj Garment	CDS
1413	3166	Surjani	MAYMAR	Euro Gulf	CDS
1414	4091	Surjani	MAYMAR	Steelex	CDS
1415	1280	JOHAR	MAYMAR	AHSANABAD PHASE-IV	CDS
1416	1278	JOHAR	MAYMAR	MAYMAR COMPLEX	CDS
1417	1282	JOHAR	MAYMAR	SAIFAL GOTH	CDS
1418	3417	JOHAR	MAYMAR	SENATOR MAZHAR ALI	CDS
1419	3974	JOHAR	MAYMAR	Quetta Town	CDS
1420	4066	JOHAR	MAYMAR	Sharjah Hotel	CDS
1421	4052	JOHAR	MAYMAR	NORTHERN BYPASS	CDS
1422	4182	Surjani	MAYMAR	PAK FLOUR MILL	CDS
1423	3874	Surjani	MAYMAR	Posh Craft	CDS
1424	3230	Surjani	MAYMAR	Phase-2	CDS
1425	4065	Johar	MAYMAR	CHAPAL UPTOWN	DDS
1426	418	JOHAR	MAYMAR	PTV HOUSING SOCIETY	CDS
1427	4059	JOHAR	MAYMAR	Sir Syed	DDS
1428	4201	Surjani	MAYMAR	UTOPIA INDUSTRY	DDS
1429	3772	JOHAR	MAYMAR	PATNI CHS	DDS
1430	4113	Surjani	MAYMAR	HADI INDUSTRY	CDS
1431	1284	Surjani	MAYMAR	Century Engineering (NCB)	CDS
1432	3449	Surjani	MAYMAR	P-10 RMU	CDS
1433	3912	JOHAR	MAYMAR	WASI COUNTRY PARK	DDS
1434	4166	Johar	MAYMAR	MUHAMMAD PATEL	DDS
1435	3237	SOCIETY	Mehmoodabad	MEHMOODABAD ABC	CDS
1436	2082	SOCIETY	Mehmoodabad	LADIES PARK	CDS
1437	3543	SOCIETY	Mehmoodabad	PRESTON UNIVERSITY	CDS
1438	3576	SOCIETY	Mehmoodabad	PUMPING 1	CDS
1439	1130	SOCIETY	Mehmoodabad	MASJID E AQSA +	CDS
1440	1165	SOCIETY	Mehmoodabad	SHAIKH NAZAZ ALI	CDS
1441	3436	SOCIETY	Mehmoodabad	SITARA BAKERY	CDS
1442	4231	SOCIETY	Mehmoodabad	AZAM BASTI (Ideal Bakery PMT RMU)	CDS
1443	4210	SOCIETY	Mehmoodabad	LAC BUS STOP	CDS
1444	3248	SOCIETY	Mehmoodabad	PECHS-I+	CDS
1445	3362	SOCIETY	Mehmoodabad	AMBALA SWEET	CDS
1446	3573	SOCIETY	Mehmoodabad	POLE 32 +	CDS
1447	493	SOCIETY	Mehmoodabad	KDA TP-2	CDS
1448	500	SOCIETY	Mehmoodabad	ZOROASTRIAN +	CDS
1449	1119	SOCIETY	Mehmoodabad	KAWISH CROWN	CDS
1450	1131	SOCIETY	Mehmoodabad	BUSINESS CENTRE	CDS
1451	1571	Bin Qasim	MEMON GOTH	MEMON GOTH TEL. EXCHANGE	CDS
1452	3524	Bin Qasim	MEMON GOTH	KHAYABAN-E-MUHAMMAD	CDS
1453	1579	Bin Qasim	MEMON GOTH	KHOKHRAPAR RMU	CDS
1454	3696	Bin Qasim	MEMON GOTH	BURHANI GARDEN	CDS
1455	1573	Bin Qasim	MEMON GOTH	IULLA ESSA GOTH RMU (OLD JALBANI GOTH RMU	CDS
1456	2015	Bin Qasim	MEMON GOTH	RIVER PMT RMU (Malir River)	CDS
1457	1575	Bin Qasim	MEMON GOTH	REST HOUSE	CDS
1458	1572	Bin Qasim	MEMON GOTH	POLE # 58 RMU	CDS
1459	3618	Bin Qasim	MEMON GOTH	NAZAR ALI WELLS	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1460	1577	Bin Qasim	MEMON GOTH	HUSSAINI RMU	CDS
1461	1578	Bin Qasim	MEMON GOTH	DEGREE SCIENCE COLLEGE	CDS
1462	3620	Bin Qasim	MEMON GOTH	BILAL MASJID RMU	CDS
1463	1574	Bin Qasim	MEMON GOTH	KHALID PUMPING	CDS
1464	3695	Bin Qasim	MEMON GOTH	SAIMA GREEN VALLEY	CDS
1465	526	KORANGI	New LANDHI	DAWOOD COTTON	CDS
1466	1262	Bin Qasim	New LANDHI	MANSEHRA COLONY	CDS
1467	4207	Bin Qasim	New LANDHI	ABBOT LABORATORIES	DDS
1468	4165	Bin Qasim	New LANDHI	AM-3 SPINNING (EX ARTISTIC MILLINERS)	DDS
1469	4252	Bin Qasim	New LANDHI	AM TEXTILE 17	DDS
1470	3333	Surjani	North Karachi	Peoples Colony	CDS
1471	621	Surjani	North Karachi	Hasan Cold	CDS
1472	628	Surjani	North Karachi	Paradise	CDS
1473	3382	Surjani	North Karachi	Arman CNG	CDS
1474	643	Surjani	North Karachi	Saleem Centre	CDS
1475	619	Surjani	North Karachi	Buffer Zone Pump	CDS
1476	624	Surjani	North Karachi	UP More (Sheerin Cinema)	CDS
1477	626	Surjani	North Karachi	Barkat Market	CDS
1478	627	Surjani	North Karachi	Masjid-e-Khan Younus	CDS
1479	652	Surjani	North Karachi	Zaibun Nisa College	CDS
1480	622	Surjani	North Karachi	Khayyam Town	CDS
1481	637	Surjani	North Karachi	Sector-5E	CDS
1482	1287	Surjani	North Karachi	North Karachi Pumping	CDS
1483	630	Surjani	North Karachi	Naz College	CDS
1484	632	Surjani	North Karachi	P-17	CDS
1485	3327	Surjani	North Karachi	Falcon House	CDS
1486	3011	Surjani	North Karachi	Crown Plaza	CDS
1487	623	Surjani	North Karachi	Crescent Arcade	CDS
1488	3381	Surjani	North Karachi	Al-Ahmed Avenue	CDS
1489	639	Surjani	North Karachi	Maraqba Hall	CDS
1490	633	Surjani	North Karachi	Best View (OLD Surjani Town P-1)	CDS
1491	620	Surjani	North Karachi	Haroon Height	CDS
1492	653	Surjani	North Karachi	Karaka Pak	CDS
1493	647	Surjani	North Karachi	SM Obaid	CDS
1494	648	Surjani	North Karachi	Saba Cinema	CDS
1495	651	Surjani	North Karachi	Qaim Khani RMU	CDS
1496	640	Surjani	North Karachi	Muslim Town + Cap	CDS
1497	634	Surjani	North Karachi	Todays Restaurant	CDS
1498	642	Surjani	North Karachi	RT Plaza	CDS
1499	641	Surjani	North Karachi	Red Rose	CDS
1500	650	Surjani	North Karachi	Nice Bakers (Old Saba Cinema)	CDS
1501	1288	Surjani	North Karachi	Gold Smith	CDS
1502	646	Surjani	North Karachi	Sheerani Ice	CDS
1503	3100	Surjani	North Karachi	Al-Hira	CDS
1504	3288	Surjani	North Karachi	Al-Falah Bank	CDS
1505	644	Surjani	North Karachi	Sunlight	CDS
1506	1290	Surjani	North Nazimabad	Dawat-e-Hidayat (Old Saifee Foundation)	CDS
1507	656	Surjani	North Nazimabad	Shaharyar Clinic	CDS
1508	654	Orangi	NORTH NAZIMABAD	BANARAS PUMPING	CDS
1509	666	Orangi	NORTH NAZIMABAD	ORANGI ICE	CDS
1510	665	Surjani	North Nazimabad	National Youth Center	CDS
1511	1292	Surjani	North Nazimabad	Shipowner College	CDS
1512	3294	Surjani	North Nazimabad	Pole-15 + Cap1A	CDS
1513	1291	Surjani	North Nazimabad	Block-G	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1514	3324	Orangi	North Nazimabad	KATI PAHARI	CDS
1515	3603	Surjani	North Nazimabad	Imam Clinic	CDS
1516	1293	Surjani	North Nazimabad	Asghar Ali Shah	CDS
1517	3397	GULSHAN	North Nazimabad	Chandni Chowk	CDS
1518	670	Surjani	North Nazimabad	Khandoo Goth	CDS
1519	3432	Surjani	North Nazimabad	Nagina Square	CDS
1520	3293	Surjani	North Nazimabad	Hyderi Sweets	CDS
1521	664	Surjani	North Nazimabad	Block-A Pumping	CDS
1522	3414	GULSHAN	North Nazimabad	BOSE	CDS
1523	667	GULSHAN	North Nazimabad	Firdous Colony	CDS
1524	661	Surjani	North Nazimabad	Friends Height	CDS
1525	662	Surjani	North Nazimabad	State Bank	CDS
1526	3602	Surjani	North Nazimabad	Euro Regent Park	CDS
1527	669	GULSHAN	North Nazimabad	Naz Post Office	CDS
1528	1295	GULSHAN	North Nazimabad	Ashraf Nagar	CDS
1529	659	Surjani	North Nazimabad	Pahar Ganj	CDS
1530	663	Surjani	North Nazimabad	Jinnah University	CDS
1531	657	GULSHAN	North Nazimabad	Paposh Nagar	CDS
1532	660	Surjani	North Nazimabad	Ali Doulat	CDS
1533	674	Surjani	North Nazimabad	Al-Burhan	CDS
1534	4058	Surjani	North Nazimabad	Walk Way	DDS
1535	2123	Orangi	North Nazimabad	ALI GARH BAZAR	CDS
1536	668	Surjani	North Nazimabad	Mustafabad Pumping	CDS
1537	672	Surjani	North Nazimabad	Blessing Plaza	CDS
1538	1298	Surjani		Ĭ	CDS
1539	658	Surjani	North Nazimahad	KDA Center View TTC	CDS
1540	675	Surjani	North Nazimabad North Nazimabad		CDS
1541	1296	Surjani		Taqi Center	CDS
1542	1297	Surjani	North Nazimabad North Nazimabad	Maria Homes (Old Saima Avenue)	CDS
1543	655	Surjani	North Nazimabad	Ziauddin Hospital Bab-ul-llm	CDS
1544	671	Surjani	North Nazimabad	Marhaba Galaxy	CDS
1545	673	Surjani	North Nazimabad	Gulshan-e-Zubaida	CDS
1546	852	BALDIA	OLD TOWN	OKHAI MEMON	CDS
1547	747	DEFENCE	Old Town	Police Head Office	CDS
1548	679	BALDIA	OLD TOWN		CDS
1549	683	BALDIA	OLD TOWN	BEHAR COLONY LAWRANCE APPARTMENT	CDS
1550	676	BALDIA			
1551	678	BALDIA	OLD TOWN OLD TOWN	LIBERTY OIL MILL	CDS CDS
1552	573	BALDIA	OLD TOWN	OLD TOWN RMU-II	
	686	BALDIA		LEA MARKET RMU	CDS
1553 1554	742	BALDIA	OLD TOWN	GATEWAY MUSUM CARDEN	CDS
			OLD TOWN	MUSLIM GARDEN	CDS
1555	1309 749	BALDIA	OLD TOWN	DENSO ROAD	CDS
1556	749	BALDIA	OLD TOWN	BARNESS STREET	CDS
1557 1558	681	BALDIA	OLD TOWN	RESALA POLICE	CDS
1558		BALDIA	OLD TOWN	NEW NIHAM (8-11-2008)	CDS
1560	1336 1307	BALDIA	OLD TOWN	COMMERCIAL COLD STORAGE	CDS
		BALDIA	OLD TOWN	LYARI FIRE BRIGADE	CDS
1561	1305	BALDIA	OLD TOWN	NEW KUMHARWARA	CDS
1562	1310	BALDIA	OLD TOWN	GHAREEB SHAH	CDS
1563	1311	BALDIA	OLD TOWN	LYARI PUMPING	CDS
1564	1308	BALDIA	OLD TOWN	NAWABAD	CDS
1565	1301	BALDIA	OLD TOWN	RAUF OIL	CDS
1566	680	BALDIA	OLD TOWN	BENGAL OIL	CDS
1567	1300	BALDIA	OLD TOWN	PAK ICE (31-01-2009)	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1568	3351	BALDIA	OLD TOWN	JUNAID TRADE RMU	CDS
1569	1299	BALDIA	OLD TOWN	BURMA OIL-I	CDS
1570	1303	BALDIA	OLD TOWN	JELANI CENTRE	CDS
1571	1304	BALDIA	OLD TOWN	KWSB CHAWKIWARA	CDS
1572	3740	BALDIA	OLD TOWN	MIDPOINT	CDS
1573	566	BALDIA	Old Town	OLD HAJI CAMP	CDS
1574	1306	BALDIA	OLD TOWN	HAJI ISMAIL	CDS
1575	1312	BALDIA	OLD TOWN	HAJI PIR MUHAMMAD RMU	CDS
1576	3541	BALDIA	OLD TOWN	GHANCHI PARA	CDS
1577	3739	BALDIA	OLD TOWN	OFFBEAT STREET RMU	CDS
1578	677	BALDIA	OLD TOWN	MOOSA LANE RMU	CDS
1579	3010	BALDIA	OLD TOWN	RAMPAT ROAD P-11	CDS
1580	687	Orangi	ORANGI	AL AJAZ + CAP	CDS
1581	3372	Orangi	ORANGI	QATTAR HOSPITAL	CDS
1582	3425	Orangi	ORANGI	DUA CHOWK RMU	CDS
1583	691	Orangi	ORANGI	KHWAJA GHAREEB NAWAZ	CDS
1584	693	Orangi	ORANGI	KAMAL PETROL PUMP	CDS
1585	689	Orangi	ORANGI	NISHAN-E-HYDER	CDS
1586	695	Orangi	ORANGI	NOORI POLICE	CDS
1587	706	Orangi	ORANGI	QAZZAFI CHOWK	CDS
1588	692	Orangi	ORANGI	SHAMS-UDDIN	CDS
1589	690	Orangi	ORANGI		CDS
1590	2095	Orangi		AL-FATEH COLONY REHMAT CHOWK	CDS
1591	1313	_	ORANGI		
1591	3345	Orangi	ORANGI	MASJID -E- QUBA	CDS
1592	698	Orangi	ORANGI	PULIA WALI	CDS
		Orangi	ORANGI	ISLAMIA COLONY	CDS
1594	696	Orangi	ORANGI	GHAZIABAD PUMPING	CDS
1595	697	Orangi	ORANGI	CHANDNI CHOWK	CDS
1596	699	Orangi	ORANGI	SHAHFAISAL CHOWK	CDS
1597	700	Orangi	ORANGI	DATA CHOWK	CDS
1598	1314	Orangi	ORANGI	HILAL-E-AHMER	CDS
1599	3387	Orangi	ORANGI	RK STUDIO	CDS
1600	2027	Orangi	ORANGI	BILLING ZONE	CDS
1601	702	Orangi	ORANGI	AL-HIRA PUMPING	CDS
1602	707	Orangi	ORANGI	ZIA-UL-HAQ -COLONY	CDS
1603	708	Orangi	ORANGI	GABOL PUMPING	CDS
1604	705	Orangi	ORANGI	GERMAN SCHOOL	CDS
1605	688	Orangi	ORANGI	HURRIAT NAGAR	CDS
1606	703	Orangi	ORANGI	AL-SHIFA CLINIC	CDS
1607	3263	Orangi	ORANGI	TECHNICAL COLLEGE	CDS
1608	701	Orangi	ORANGI	KALEEM INDUSTRY	CDS
1609	2029	Orangi	ORANGI	BISMILLAH CHOWK	CDS
1610	3422	Orangi	ORANGI	SABRI CHOWK RMU	CDS
1611	2085	Orangi	ORANGI	SPECIAL EDUCATION	CDS
1612	1315	Orangi	ORANGI	SHAIKH M. RASHEED	CDS
1613	3427	Orangi	ORANGI	GULSHAN-E-HASSAM	CDS
1614	3431	Orangi	ORANGI	DANISH KAMIL RMU	CDS
1615	139	Orangi	ORANGI	TOHEED COLONY	CDS
1616	132	Orangi	ORANGI	ZAHOOR COUNCILLOR	CDS
1617	150	Orangi	ORANGI	KHATAK RMU	CDS
1618	725	Bin Qasim	PIPRI EAST	TOWN SHIP (Steel Mill)	DDS
1619	722	Bin Qasim	PIPRI EAST	MDS 1(Steel Mill)	DDS
1620	723	Bin Qasim	PIPRI EAST	MDS 2(Steel Mill)	DDS
1621	724	Bin Qasim	PIPRI EAST	MAGNETIC INTERNATIONAL (OLD MARINE PRIDE	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1622	3305	Bin Qasim	PIPRI EAST	M.M GHEE MILL (OLD MADIHA MOLVI)	CDS
1623	718	Bin Qasim	PIPRI EAST	SINO PAK-1	DDS
1624	4112	Bin Qasim	PIPRI EAST	SINO PAK-2	DDS
1625	717	Bin Qasim	PIPRI EAST	PAK SUZUKI-1	DDS
1626	720	Bin Qasim	PIPRI EAST	PAK SUZUKI-2	DDS
1627	3599	Bin Qasim	PIPRI EAST	M. CORPORATION	DDS
1628	716	Bin Qasim	PIPRI EAST	BAHAWALPUR ENGG.	CDS
1629	3766	Bin Qasim	PIPRI EAST	TECHNO AUTO GLASS	DDS
1630	3767	Bin Qasim	PIPRI EAST	HORIZON STEEL	DDS
1631	714	Bin Qasim	PIPRI WEST	DOWN STREAM 2	DDS
1632	3610	Bin Qasim	PIPRI WEST	MOHSIN ALI RIZVI	DDS
1633	3744	Bin Qasim	PIPRI WEST	RUBA TECH	DDS
1634	3051	Bin Qasim	PIPRI WEST	AL-RAZI SONS	CDS
1635	721	Bin Qasim	PIPRI WEST	PAK SUZUKI-3	DDS
1636	3882	Bin Qasim	PIPRI WEST	KIA LUCKY MOTORS	DDS
1637	3282	Bin Qasim	PIPRI WEST	NATIONAL INDUSTRIES PARK	DDS
1638	2005	Bin Qasim	PIPRI WEST	DOWN STREAM 1	DDS
1639	1316	Bin Qasim	PIPRI WEST	HASHOO STEEL	CDS
1640	3768	Bin Qasim	PIPRI WEST	HI-TECH ALLOY WHEELS LTD	DDS
1641	3172	Bin Qasim	PIPRI WEST	AGRI AUTOS	DDS
1642	3329	Bin Qasim	PORT QASIM	CRAFTERS PAPER	DDS
1643	3154	Bin Qasim	PORT QASIM	QASIM INT. CONTAINER	DDS
1644	3353	Bin Qasim	PORT QASIM	NAUSHABA NAEEM	DDS
1645	3812	Bin Qasim	PORT QASIM	TRANS TERMINAL (FAUJI)	DDS
1646	3624	Bin Qasim	PORT QASIM	NATIONAL FOOD	DDS
1647	3141	Bin Qasim	PORT QASIM	NESTLE PAKISTAN	DDS
1648	2146	Bin Qasim	PORT QASIM	FINE GAS 02	DDS
1649	734	Bin Qasim	PORT QASIM	INDUS MOTOR	DDS
1650	727	Bin Qasim	PORT QASIM	PORT QASIM 01	DDS
1651	728	Bin Qasim	PORT QASIM	PORT QASIM 02	DDS
1652	3170	Bin Qasim	PORT QASIM	FINE GAS 03	CDS
1653	2110	Bin Qasim	PORT QASIM	GHULAM HYDAR	CDS
1654	731	Bin Qasim	PORT QASIM	BIO LINK	CDS
1655	726	Bin Qasim	PORT QASIM	P.S.O II	CDS
1656	729	Bin Qasim	PORT QASIM	PLATINUM PHARMA	CDS
1657	1319	Bin Qasim	PORT QASIM	AFZAL MOTORS	CDS
1658	732	Bin Qasim	PORT QASIM	T & T PIPRI	CDS
1659	1318	Bin Qasim	PORT QASIM	POLY TRADE	CDS
1660	3266	Bin Qasim	PORT QASIM	SHIRAZI INVESTMENT	CDS
1661	1570	Bin Qasim	PORT QASIM	AGILITY LOGISTICS	DDS
1662	3356	Bin Qasim	PORT QASIM	IQBAL PEERANI	DDS
1663	3545	Bin Qasim	PORT QASIM	DALDA FOOD	DDS
1664	3463	Bin Qasim	PORT QASIM	PIBT (PAK INT. BULK TERMINAL)	DDS
1665	4205	Bin Qasim	PORT QASIM	BINQASIM PACKAGES	DDS
1666	1320	Bin Qasim	PORT QASIM	GANDHARA NISSAN	DDS
1667	3607	Bin Qasim	PORT QASIM	HASCOL TERMINAL	DDS
1668	730	Bin Qasim	PORT QASIM	BQ LIQUID (EX BINQASIM PACKAGES)	CDS
1669	3764	Bin Qasim	PORT QASIM	BULK MANAGEMENT	CDS
1670	3765	Bin Qasim	PORT QASIM	MAZCO	CDS
1671	3763	Bin Qasim			CDS
1672	3953	Bin Qasim	PORT QASIM	AL-BUKSH TRI DACK FILMS	DDS
1673	3267	Bin Qasim	PORT QASIM	TRI PACK FILMS	CDS
1674	3330	Bin Qasim	PORT QASIM	MAPAK EDIBLE OIL (MUJAHID OIL REFINERY)	
1675	3702		PORT QASIM	MASTER MOTORS	CDS
10/5	3/02	Bin Qasim	PORT QASIM	AUVITRONICS LTD.	DDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1676	1324	KORANGI	PRL	NASIR COLONY RMU	CDS
1677	712	KORANGI	PRL	FISH MILL SUBSTATION	CDS
1678	1333	KORANGI	PRL	IBRAHIM HYDERI RMU	CDS
1679	3344	KORANGI	PRL	SILVER TOWN	CDS
1680	1326	KORANGI	PRL	ABBASI NAGER RMU	CDS
1681	710	KORANGI	PRL	OMNI BUS DEPOT	CDS
1682	1323	KORANGI	PRL	MEGA BIRD	CDS
1683	1325	KORANGI	PRL	POLE - 70	CDS
1684	3357	KORANGI	PRL	DARUS SALAM	DDS
1685	54	KORANGI	PRL	PAK REFINEERY II	DDS
1686	3264	KORANGI	PRL	BOL TV	DDS
1687	3450	KORANGI	PRL	MEHRUNISA	DDS
1688	713	KORANGI	PRL	PAK REFINERY 01	DDS
1689	711	KORANGI	PRL	PARCO IV	DDS
1690	3167	KORANGI	PRL	IBM	CDS
1691	709	KORANGI	PRL	SILICON PRODUCT (OLD BURSHANE GAS)	CDS
1692	4226	KORANGI	PRL	KCIP-2	DDS
1693	1331	KORANGI	PRL	PEPCO	DDS
1694	3278	KORANGI	PRL	INDUS HOSPITAL	DDS
1695	3887	KORANGI	PRL	KCIP-1	DDS
1696	3931	KORANGI	PRL	AIR FORCE BASE KORANGI CREEK	DDS
1697	4125	KORANGI	PRL	INTER MARKET	DDS
1698	1330	KORANGI	PRL	PARCO-III	CDS
1699	3286	KORANGI	PRL	LUCKNOW SOCIETY	CDS
1700	1332	KORANGI	PRL	C-STATION	CDS
1701	50	KORANGI	PRL	ISLAMIC MISSION HOSP.	CDS
1702	53	KORANGI	PRL	MILL ROCK	CDS
1703	3042	KORANGI	PRL	CHAKRA GOTH RMU	CDS
1704	3694	KORANGI	PRL	DARULFALAH	CDS
1705	1328	KORANGI	PRL	PEGASUS	CDS
1706	3589	KORANGI	PRL	AMAN ORCHID	DDS
1707	3505	KORANGI	PRL	MAKHDOOM BILAWAL SOCIETY	DDS
1708	3241	KORANGI	QAYUMABAD	MEHRAN TOWN	CDS
1709	3661	KORANGI	QAYUMABAD	SECTOR 6B RMU	CDS
1710	3405	DEFENCE	QAYUMABAD	Madina Masjid	CDS
1711	3398	DEFENCE	QAYUMABAD	Pole-5 RMU	CDS
1712	3261	DEFENCE	QAYUMABAD	Shaikh Amjad & Mubashir	DDS
1713	33	DEFENCE		· · · · · · · · · · · · · · · · · · ·	CDS
1714	37	KORANGI	QAYUMABAD	Defence Pumping-3	
1715	39	DEFENCE	QAYUMABAD	YASIR ASSOCIATES	CDS
1716	56	DEFENCE	QAYUMABAD	Kh-e-Jami RMU	CDS
1717	41	DEFENCE	QAYUMABAD	Najshaz Motors	CDS
1717	41	DEFENCE	QAYUMABAD	Defence Pumping-4	CDS
		+	QAYUMABAD	Nisar Shaheed Park	CDS
1719	44	DEFENCE DEFENCE	QAYUMABAD	Defence-29	CDS
1720	40	+ +	QAYUMABAD	Chayel Corner RMU	CDS
1721	34	KORANGI	QAYUMABAD	NAT. FIBER I	CDS
1722	48	KORANGI	QAYUMABAD	ALPHA BROTHERS(fine food)	CDS
1723	3043	KORANGI	QAYUMABAD	KDA TP 03	CDS
1724	3187	KORANGI	QAYUMABAD	KORANGI CROSSING	CDS
1725	3689	DEFENCE	QAYUMABAD	Diamond Residency	CDS
1726	3046	KORANGI	QAYUMABAD	S.G.S KARSAZ	CDS
1727	3451	KORANGI	QAYUMABAD	TURN STYLE RMU	CDS
1728	3400	DEFENCE	QAYUMABAD	Shalimar Ice	CDS
1729	3472	DEFENCE	QAYUMABAD	C-Area RMU	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1730	3454	KORANGI	QAYUMABAD	GHAZI TANNERY	CDS
1731	3521	DEFENCE	QAYUMABAD	Ayaz Masjid	CDS
1732	3522	DEFENCE	QAYUMABAD	Khalid Mehmood RMU	CDS
1733	3519	DEFENCE	QAYUMABAD	South Park RMU	CDS
1734	35	DEFENCE	QAYUMABAD	Akhtar Colony	CDS
1735	3482	DEFENCE	QAYUMABAD	Car Parking	CDS
1736	3438	DEFENCE	QAYUMABAD	EFU-Life Insurance	DDS
1737	3732	DEFENCE	QAYUMABAD	Salma Super Market	CDS
1738	4025	KORANGI	QAYUMABAD	Alamgir Trust RMU	CDS
1739	4015	KORANGI	QAYUMABAD	HILAL CONFECTIONERY	DDS
1740	57	KORANGI	QAYUMABAD	SHAIKH BROS.	CDS
1741	38	KORANGI	QAYUMABAD	IMPERIAL RUBBER	CDS
1742	49	KORANGI	QAYUMABAD	EASTERN EXPORT	CDS
1743	36	KORANGI	QAYUMABAD	NAT. FIBER II	CDS
1744	3050	KORANGI	QAYUMABAD	ITRAT HUSSAIN (OLD PAK MARBLE)	CDS
1745	3240	KORANGI	QAYUMABAD	NUTRI PAK (OLD RELIANCE INDUSTRIES)	CDS
1746	4121	KORANGI	QAYUMABAD	AMEERWOOD RMU	CDS
1747	750	DEFENCE	Queens Road	Sherton Hotel	CDS
1748	4034	Defence	QUEENS ROAD	A. HAROON PARK (HIJARAT COLONY S/S)	CDS
1749	2004	DEFENCE	Queens Road	Staff Flag House	DDS
1750	1335	DEFENCE	Queens Road	Tower Oak (International Furnishing)	CDS
1751	755	DEFENCE	Queens Road	Cotton Research	CDS
1752	752	DEFENCE	Queens Road	Techno City-1	CDS
1753	3399	DEFENCE	Queens Road	Alico SS	CDS
1754	1344	DEFENCE	Queens Road	Harmoon Mohata	CDS
1755	736	DEFENCE	Queens Road	Queens Road	CDS
1756	738	DEFENCE	Queens Road	State Bank-2	DDS
1757	743	DEFENCE	Queens Road	Harding Bridge	CDS
1758	3402	DEFENCE	Queens Road	Badshan Khan RMU	CDS
1759	2086	DEFENCE	Queens Road	Avenue Center	CDS
1760	745	DEFENCE	Queens Road	Pak Handi Craft	CDS
1761	1334	DEFENCE	Queens Road	Volkart Brothers	CDS
1762	739	DEFENCE	Queens Road	Bahria Complex-1	CDS
1763	2176	DEFENCE	Queens Road	NTR	CDS
1764	1340	DEFENCE	Queens Road	Foundation-3	CDS
1765	754	DEFENCE	Queens Road	Muhammadi House	CDS
1766	1342	DEFENCE	Queens Road	ABN Ambro Bank	DDS
1767	1341	DEFENCE	Queens Road	Techno City-2	CDS
1768	1343	DEFENCE	Queens Road	Commerce College	CDS
1769	756	DEFENCE	Queens Road	Haji Camp	CDS
1770	753	DEFENCE	Queens Road	National Refinery	CDS
1771	741	DEFENCE	Queens Road	Independent News	CDS
1772	735	DEFENCE	Queens Road	Hijrat Colony RMU	CDS
1773	3368	DEFENCE	Queens Road	Mega Tower	DDS
1774	3403	DEFENCE	Queens Road	United Bank Limited	DDS
1775	2081	DEFENCE	Queens Road	Hayat Regency	CDS
1776	744	DEFENCE	Queens Road	Burton Road	CDS
1777	3173	DEFENCE	Queens Road	American Consulate Gereral	DDS
1778	2044	DEFENCE	Queens Road	Peoples Foundation	CDS
1779	757	DEFENCE	Queens Road Queens Road	<u>'</u>	CDS
1780	740	DEFENCE		Institute Of Bankers Raleigh Brothers	
1780	3553	DEFENCE	Queens Road	Raleigh Brothers	CDS
1781	3860	BALDIA	Queens Road	Beaumont Plaza	DDS
1783	762	Bin Qasim	Queens Road RECP	KAGHZI BAZAR Usman Goth (old name: KDA FILTER PLANT)	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1784	759	Bin Qasim	RECP	GRAIN GODOWN	CDS
1785	761	Bin Qasim	RECP	KE COLONY (EX GUL. HADEED 06)	CDS
1786	3302	Bin Qasim	RECP	Sidra City (old name: PSO MARDAN)	CDS
1787	3396	Bin Qasim	RECP	GUL. HADEED 10	CDS
1788	1345	Bin Qasim	RECP	RAJA POULTRY FARM	CDS
1789	760	Bin Qasim	RECP	BAB-E-REHMAT (EX GUL. HADEED 01)	CDS
1790	3692	Bin Qasim	RECP	IMRAN AMIN MUSTAFA	DDS
1791	3300	Bin Qasim	RECP	KING HATCHERY	CDS
1792	3314	Bin Qasim	RECP	CHAPPAL TRADERS	DDS
1793	3869	Bin Qasim	RECP	MUREE GOTH	CDS
1794	3323	Bin Qasim	RECP	PIPRI FILTER PLANT	DDS
1795	3301	Bin Qasim	RECP	New RAILWAY MARSHALLING YARD	CDS
1796	3460	Bin Qasim	RECP	EXTENSION RMU (OLD ALLAH DINO)	DDS
1797	1346	Bin Qasim	RECP	MADAR-E-MILLAT	CDS
1798	3005	Orangi	S.I.T.E	QADRI BROTHERS	CDS
1799	769	Orangi	S.I.T.E	KAMRAN DISTRIBUTOR	CDS
1800	4117	Orangi	S.I.T.E	SIKANDER IRON	CDS
1801	2065	Orangi	S.I.T.E	ABIDABAD	CDS
1802	3008	Orangi	S.I.T.E	M.R. INDUSTRY	CDS
1803	3842	Orangi	S.I.T.E	MIAN SONS	CDS
1804	2148	Orangi	S.I.T.E	RASHID INDUSTRY	CDS
1805	3149	Orangi	S.I.T.E	FAIZ-UR-REHMAN	CDS
1806	774	Orangi	S.I.T.E	MFMY	CDS
1807	779	GULSHAN	S.I.T.E	Bismillah Hotel (Noorani Hotel)	CDS
1808	898	Orangi	S.I.T.E	BROUGHS WELCOME	CDS
1809	773	Orangi	S.I.T.E	PAK CONTAINER	CDS
1810	804	Orangi	S.I.T.E	IBRAHIM ALI BHAI	CDS
1811	776	Orangi	S.I.T.E	ORANGI MEDICOS	CDS
1812	2143	Orangi	S.I.T.E	ATLAS BATTERY	CDS
1813	778	Orangi	S.I.T.E	SHAMSI CLOTH	CDS
1814	772	Orangi	S.I.T.E	BEVERAGES	CDS
1815	3054	Orangi	S.I.T.E	TSW	DDS
1816	3158	Orangi	S.I.T.E	AL WAJID TOWN	CDS
1817	4119	Orangi	S.I.T.E	GHOSIA GRAVEYARD	CDS
1818	787	Orangi	S.I.T.E		DDS
1819	2032	Orangi	S.I.T.E	JABBAR STEEL SIMA LAB	CDS
1820	810	Orangi		DADA ENTERPRISE	CDS
1821	3533	Orangi	S.I.T.E S.I.T.E	AHSAN HOTEL	CDS
1822	777	Orangi			CDS
1823	791	GULSHAN	S.I.T.E	MUHAMMADI ROLLING	
1824	3455	Orangi	S.I.T.E	Usmania Colony RRP	CDS CDS
1825	792	Orangi	S.I.T.E S.I.T.E	SINDH STEEL	CDS
1826	3140	Orangi			CDS
1827	3196	Orangi	S.I.T.E S.I.T.E	ASIM INDUSTRY	DDS
1828	3002	Orangi		EXIDE PAKISTAN	CDS
1829	789	Orangi	S.I.T.E	ARTR GOLDEN PLASTIC	CDS
1830	3502	GULSHAN	S.I.T.E		
1831	799	Orangi	S.I.T.E	Tooba Masjid (Saifullah RMU)	CDS
1832	800		S.I.T.E	DIAMOND SILK	CDS
1833	795	Orangi GULSHAN	S.I.T.E	MEKDA INDUSTRY	CDS
1833	2106		S.I.T.E	Hamdard	CDS
		Orangi	S.I.T.E	SANAULLAH WOOLEN	CDS
1835	796	GULSHAN	S.I.T.E	Aurangabad (Fine Textile)	CDS
1836	794	Orangi	S.I.T.E	HAFIZ TEXTILE	CDS
1837	3597	Orangi	S.I.T.E	MUSHTAQ-1	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1838	3582	GULSHAN	S.I.T.E	3H RMU	CDS
1839	3250	Orangi	S.I.T.E	BARRET HODGSON	DDS
1840	802	Orangi	S.I.T.E	METROVILLE	CDS
1841	805	GULSHAN	S.I.T.E	Abbasi Shaheed	CDS
1842	808	Orangi	S.I.T.E	AGRO PROCESS	CDS
1843	1347	Orangi	S.I.T.E	FRONTIER COLONY	CDS
1844	807	Orangi	S.I.T.E	BAWANI CHALLI	CDS
1845	806	Orangi	S.I.T.E	VALIKA INDUSTRY	CDS
1846	775	GULSHAN	S.I.T.E	District Office	CDS
1847	3596	GULSHAN	S.I.T.E	Naz Ice	CDS
1848	3420	Orangi	S.I.T.E	MERCANTILE INDUSTRY	DDS
1849	784	Orangi	S.I.T.E	ALI GOHAR	CDS
1850	3281	Orangi	S.I.T.E	AHMED INDUSTRY	CDS
1851	2179	Orangi	S.I.T.E	MALIR POULTRY FARM	CDS
1852	3418	Orangi	S.I.T.E	UNION STEEL	DDS
1853	3257	Orangi	S.I.T.E	SALALAH FLOUR MILL	CDS
1854	781	Orangi	S.I.T.E	SUPREME STEEL	CDS
1855	2064	Orangi	S.I.T.E	INDUS CELL	CDS
1856	801	Orangi	S.I.T.E	NATIONAL SPINNING	CDS
1857	694	Orangi	S.I.T.E	BIJLI NAGAR	CDS
1858	3401	Orangi	S.I.T.E	GOVT. SCHOOL RMU	CDS
1859	3453	Orangi	S.I.T.E	ROOMI INTERNATIONAL	CDS
1860	3326	Surjani	Shadman	Sehar Palace	CDS
1861	3612	Surjani	Shadman	Safia Cottage	CDS
1862	3383	Surjani	Shadman	Khatri	CDS
1863	3762	Surjani	Shadman	White Flower	CDS
1864	649	Surjani	Shadman	Modern Complex	CDS
1865	636	Surjani	Shadman	Al-Ghori	CDS
1866	3871	Surjani	Shadman	Ocean Lawn RMU (Old Rehmania Hall)	CDS
1867	629	Surjani	Shadman	Bilal Town	CDS
1868	3470	Surjani	Shadman	Igbal Plaza	CDS
1869	3834	Surjani	Shadman	Terry World	CDS
1870	3745	Surjani	Shadman	Al-Ghafoor Atrium Tower	CDS
1871	3840	Surjani	Shadman	Naseem Textile	CDS
1872	3458	Surjani	Shadman	Moon Net	CDS
1873	625	Surjani	Shadman	MK Builder	CDS
1874	631	Surjani	Shadman	Nazia Square	CDS
1875	3750	Surjani	Shadman	Garishon	CDS
1876	3751	Surjani	Shadman	Faysal Garment	CDS
1877	3833	Surjani	Shadman	Lodhi House	CDS
1878	3865	Surjani	Shadman	Knowledge School	CDS
1879	3981	Surjani	Shadman	Omega Mall	DDS
1880	3770	Surjani	Shadman	Sindh Town	CDS
1881	2163	Surjani	Shadman	Faiza Avenue	CDS
1882	638	Surjani	Shadman	Country Tower	CDS
1883	3386	Surjani	Shadman	Achanak Hotel	CDS
1884	645	Surjani	Shadman	Pentium-4	CDS
1885	4054	Surjani	Shadman	Green Line	DDS
1886	207	Surjani	Shadman	Block-N Pumping	CDS
1887	4101	Surjani	Surjani	Hassan Brohi Goth	CDS
1888	882	Surjani	Surjani	Arsalan Homes (Old Sector-L1)	CDS
1889	1364	Surjani	Surjani	Deh Taisar	CDS
1890	3743	Surjani	Surjani	Sallu Garden	CDS
1891	883	Surjani	Surjani	Michal Academy (Old Pole-97)	CDS
1001		Julijulii	l Juljalii	Ivilicitat Academy (Old Pole-97)	L

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1892	887	Surjani	Surjani	Tawwakal Enterprise	CDS
1893	889	Surjani	Surjani	Bright Star	CDS
1894	884	Surjani	Surjani	Al-Watan	CDS
1895	879	Surjani	Surjani	Yousuf Goth (P-25)	CDS
1896	886	Surjani	Surjani	Noble Point	CDS
1897	888	Surjani	Surjani	Stylish Garden	CDS
1898	3284	Surjani	Surjani	Royal City	CDS
1899	878	Surjani	Surjani	Surjani Tel Exchange	CDS
1900	3376	Surjani	Surjani	Oakland School (Old P-19 RMU)	CDS
1901	3367	Surjani	Surjani	Lal Market P-22/3	CDS
1902	3609	Surjani	Surjani	Mono Technical	CDS
1903	2164	Surjani	Surjani	Maymarabad	CDS
1904	3283	Surjani	Surjani	Gulshan-e-Sheeraz	DDS
1905	1351	Surjani	Surjani	Anarkali	CDS
1906	3124	Orangi	Surjani	SMALL INDUSTRIES	CDS
1907	881	Surjani	Surjani	Saiban	CDS
1908	3727	Surjani	Surjani	Ahsan Medical	CDS
1909	880	Surjani	Surjani	Hayat Baig	CDS
1910	2154	Surjani	Surjani	Shah Stadium (Old Deh Taisar-5 + CAP-2)	CDS
1911	4111	Surjani	Surjani	Siddique Goth	CDS
1912	3584	Surjani	Surjani	Khuda Ki Basti	CDS
1913	2155	Surjani	Surjani	Mian Institute (Old Deh Taisar-4)	CDS
1914	3012	Surjani	Surjani	Sultan Plaza (OH-P-55)	CDS
1915	1353	Surjani	Surjani	Global City	CDS
1916	3366	Surjani	Surjani	Health Care P-80	CDS
1917	3703	Surjani	Surjani	Mountain Valley (OLD Saima Arabian Villas-3)	DDS
1918	3500	Surjani	Surjani	Saima Arabian Villas-1	DDS
1919	3704	Surjani	Surjani	Zaki Cottages (OLD Saima Arabian Villas-2)	DDS
1920	3529	Surjani	Surjani	Abdullah More	CDS
1921	1350	Surjani	Surjani	Ever Green	CDS
1922	885	Surjani	Surjani	Kala School	CDS
1923	3583	Surjani		Education Centre	CDS
1924	3742	Surjani	Surjani Surjani	Aleem Paradise	CDS
1925	3729	Surjani		Anamta Society	CDS
1926	3474	Surjani	Surjani Surjani	,	CDS
1927	3616	Surjani		Olympic Pride (Old P-12/13 RMU)	CDS
1928	3037	UTHAL	Surjani	Dairy Queen	
1929	3090	UTHAL	UTHAL	DAWOOD YAMAHA	DDS
1930	3858	UTHAL	UTHAL	MANDVIWALA PLASTIC FACTORY	CDS
1930	3035	UTHAL	UTHAL	UNIVERSAL RMU	CDS
		+	UTHAL	BDA	CDS
1932	3038	UTHAL	UTHAL	UTHAL BAZAR	CDS
1933	3036	UTHAL	UTHAL	O/H BANOOLI	CDS
1934	3186	UTHAL	UTHAL	LAKHRA	CDS
1935	3752	Surjani	VALIKA	Al-Hamra	CDS
1936	4116	Orangi	VALIKA	TALHA QAZI RMU (GHAZI VILLAS)	CDS
1937	3601	Orangi	VALIKA	EDHI CLINIC RMU	CDS
1938	3754	Surjani	VALIKA	Al-Mehmil	CDS
1939	3255	Orangi	VALIKA	QUARY COLONY	CDS
1940	1118	Orangi	VALIKA	HIKMAT INSTITUTE	CDS
1941	3296	Orangi	VALIKA	MUGHAL ENTERPRISE	DDS
1942	3736	Orangi	VALIKA	RAITI PAHAR RMU	CDS
1943	3735	Orangi	VALIKA	ALAM MARBLE RMU	CDS
1944	1356	Orangi	VALIKA	O/H POLE-62	CDS
1945	860	Orangi	VALIKA	INTERNATIONAL CERAMIC	CDS

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
1946	2087	Orangi	VALIKA	SULTANABAD PUMPING	CDS
1947	865	Orangi	VALIKA	AL MUMTAZ RMU	CDS
1948	3574	Orangi	VALIKA	NAYA NAZIMABAD	DDS
1949	859	Surjani	Valika	Shadman Town	CDS
1950	3452	Orangi	VALIKA	GLAMOUR MARBLE	CDS
1951	3125	Orangi	VALIKA	HANIF SHAH	CDS
1952	871	Orangi	VALIKA	ARC FURNACE	DDS
1953	867	Orangi	VALIKA	POLE-49	CDS
1954	2177	Orangi	VALIKA	ZAMSON	DDS
1955	3256	Orangi	VALIKA	NUSRAT BHUTTO MORR	CDS
1956	3600	Orangi	VALIKA	MIANWALI COLONY RMU	CDS
1957	863	Orangi	VALIKA	HUB DAM	DDS
1958	864	Orangi	VALIKA	RAHEEL AVENUE	CDS
1959	861	Orangi	VALIKA	QASBA PUMPING	CDS
1960	869	Orangi	VALIKA	LAKHANI	CDS
1961	1355	Orangi	VALIKA	P-30	CDS
1962	866	Surjani	Valika	Blue Bird	CDS
1963	858	Surjani	Valika	Khwaja Ajmair Nagri	CDS
1964	868	Orangi	VALIKA	MANGHOPIR ROAD	CDS
1965	870	Orangi	VALIKA	ACIL	CDS
1966	3089	UTHAL	VINDER	SIDDIQ SONS	DDS
1967	3726	UTHAL	VINDER	TIN PLATE	DDS
1968	3160	UTHAL	VINDER	Khurkhera (old name Pole-01)	CDS
1969	3034	UTHAL	VINDER	WELLS AREA	CDS
1970	3032	UTHAL	VINDER	ARMY PROOF RANGE	CDS
1971	3955	UTHAL	VINDER	CHINCHARI RMU	CDS
1972	3033	UTHAL	VINDER	VINDER BAZAR	CDS
1973	4068	UTHAL	VINDER	Marshal / DEFENCE PROOF RANGEES	DDS
1974	3088	UTHAL	VINDER	LIDA	DDS
1975	854	BALDIA	WEST WHARF	ICI -2	CDS
1976	848	BALDIA	WEST WHARF	KARACHI SHIPYARD-B	CDS
1977	847	BALDIA	WEST WHARF	UNION COLD STORAGE	CDS
1978	1357	BALDIA	WEST WHARF	SPECTRUM	CDS
1979	2071	BALDIA	WEST WHARF	MACHI MIANI	CDS
1980	853	BALDIA	WEST WHARF	SLAUGHTER HOUSE	CDS
1981	849	BALDIA	WEST WHARF	K.P.T. WEST WHARF	CDS
1982	851	BALDIA	WEST WHARF	M. ALI PARK	CDS
1983	2042	BALDIA	WEST WHARF	FALAK NOOR MASJID RMU	CDS
1984	855	BALDIA	WEST WHARF	HAROON SONS	CDS
1985	846	BALDIA	WEST WHARF	NATIVE JETTY(PORT TRUST)	CDS
1986	2159	BALDIA	WEST WHARF	DEENAR HOUSE(SINDH STEEL)	CDS
1987	2062	BALDIA	WEST WHARF	KARACHI LABOUR DOCK	CDS
1988	842	BALDIA	WEST WHARF	INTERNATIONAL PACKAGES	CDS
1989	3430	BALDIA	WEST WHARF	CUSTOM HOUSE	DDS
1990	3488	BALDIA	WEST WHARF	IKHLAQ CHOWK	CDS
1991	857	BALDIA	WEST WHARF	KARACHI SHIPYARD-A	CDS
1992	845	BALDIA	WEST WHARF	EFU EFU	CDS
1993	856	BALDIA	WEST WHARF	AWAMI AUTOS	CDS
1994	843	BALDIA	WEST WHARF	SATTAR CHAMBER	CDS
1995	3608	BALDIA	WEST WHARF	QADRI NOORI	DDS
1996	2075	BALDIA	WEST WHARF	KICT	DDS
1997	844	BALDIA	WEST WHARF	SEA MILL RMU(ALI AUTOS)	CDS
1998	3611	BALDIA	WEST WHARF	CHEVRON PAKISTAN	DDS
1999	748	BALDIA			1
1333	/40	DUTDIN	WEST WHARF	NAVAL DOCK YARD-I	DDS

K-Electric Limited
Integrated Investment Plan FY24-FY30

Feeder Count - 11kV

S. No	Feeder ID	Cluster Name	Grid Name	Feeder name	Feeder Category
2000	3952	BALDIA	WEST WHARF	WILLIAM SONS	CDS
2001	841	BALDIA	WEST WHARF	PNS IQBAL	CDS

Annexure G

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1	3515	SOCIETY	AGHA KHAN	DOLMENARCADE	CDS	1,395	5,585	6,980
2	3513	SOCIETY	AGHA KHAN	MADINA MALL	CDS	167	5,502	5,669
3	3508	SOCIETY	AGHA KHAN	HILL PARK APARTMENT	CDS	299	8,544	8,843
5	3520 3512	SOCIETY	AGHA KHAN	BIHAR-E-SHARIAT RMU	CDS	691	3,974	4,665
6	3542	SOCIETY	AGHA KHAN AGHA KHAN	SHAHMIM AHMED NOOR HOTEL RMU	CDS	985	5,712	6,696 3,838
7	3516	SOCIETY	AGHA KHAN	DMCHS	CDS	-	3,838 5,770	5,770
8	3509	SOCIETY	AGHA KHAN	DILKUSHAN CENTER.	CDS	120	4,682	4,802
9	3518	SOCIETY	AGHA KHAN	DHORAJEE FOUNDATION	CDS	303	3,860	4,163
10	3526	SOCIETY	AGHA KHAN	KASHAN-E-ITFAL	CDS	749	2,905	3,654
11	3528	SOCIETY	AGHA KHAN	MAKKAH SQUARE	CDS	140	7,197	7,336
12	3525	SOCIETY	AGHA KHAN	OAKWOOD	CDS	432	5,690	6,122
13	3492	SOCIETY	AGHA KHAN	SUNNY VOHRA	CDS	181	5,355	5,536
14 15	3892 505	SOCIETY	AGHA KHAN	LIAQUAT NATIONAL HOSPITAL (LNH)	DDS	-	642	642
16	3390	SOCIETY	AGHA KHAN	ZEENAT BALOCH	CDS	1,232	8,099	9,331
17	1175	SOCIETY	AGHA KHAN AGHA KHAN	SAIMA GARDEN RANGOONWALA	CDS	539 105	6,426 4,006	6,965 4,111
18	877	SOCIETY	AGHA KHAN	NATIONAL COACHING	CDS	601	5,657	6,258
19	106	SOCIETY	AGHA KHAN	GHAURI RMU +	CDS	200	5,912	6,112
20	115	SOCIETY	AGHA KHAN	KDA SCHEME-1 +	CDS	613	5,633	6,245
21	276	Bin Qasim	AIRPORT	DRIGH ROAD 'A'	CDS	358	2,999	3,356
22	270	Bin Qasim	AIRPORT	SANGUM CINEMA	CDS	196	3,742	3,938
23	271	Bin Qasim	AIRPORT	PIA PRECISION ENGINEERING	CDS	-	3,832	3,832
24	3117	Bin Qasim	AIRPORT	AIR SHIPSHED	DDS	8	5,641	5,648
25	273	Bin Qasim	AIRPORT	TERMINAL-II	DDS	-	4,178	4,178
26	269	SOCIETY	AIRPORT	POLICE STATION DRIGH ROAD	CDS	-	8,767	8,767
27 28	292 2016	Bin Qasim Bin Qasim	AIRPORT	I.A. QURESHI	CDS	416	3,069	3,486
29	3277	Bin Qasim	AIRPORT AIRPORT	DIAGNOSTIC CENTER BLOCK-5 RMU	CDS	336	6,673	6,673 2,997
30	274	Bin Qasim	AIRPORT	COMMUNITY HALL	CDS	592	2,661 2,343	2,935
31	286	Bin Qasim	AIRPORT	SHAMA CENTRE	CDS	1,474	3,371	4,844
32	278	Bin Qasim	AIRPORT	CANTT PUMPING	CDS	570	1,702	2,271
33	281	Bin Qasim	AIRPORT	SUPERIOR SCIENCE COLLEGE	CDS	660	2,897	3,557
34	282	Bin Qasim	AIRPORT	FALAKNAZ PLAZA	CDS	781	5,871	6,652
35	277	Bin Qasim	AIRPORT	AIRPORT TEL. EXCHANGE	CDS	-	3,969	3,969
36	1363	Bin Qasim	AIRPORT	ROSHANABAD	CDS	199	2,356	2,555
37	279	Bin Qasim	AIRPORT	BARELI COLONY	CDS	11	1,114	1,125
38 39	285 2088	Bin Qasim Bin Qasim	AIRPORT	S.M SADIQ	CDS	395	3,191	3,586
40	3328	Bin Qasim	AIRPORT AIRPORT	TANGA STAND RMU ASIFABAD D/PMT	CDS	774 552	2,218 3,580	2,992 4,133
41	288	Bin Qasim	AIRPORT	SHOUKAT UMER HOSPITAL	CDS	546	3,796	4,133
42	290	Bin Qasim	AIRPORT	PIA HANGAR	DDS	-	4,228	4,228
43	280	Bin Qasim	AIRPORT	QEC	DDS	-	4,050	4,050
44	289	Bin Qasim	AIRPORT	ABBAS BAWAZIR	CDS	1,011	1,719	2,730
45	268	Bin Qasim	AIRPORT	RAITA PLOT	CDS	555	1,761	2,315
46	3561	Bin Qasim	AIRPORT	FEED MILL RMU	CDS	720	3,893	4,614
47	3562	Bin Qasim	AIRPORT	SIDDIQIA MASJID RMU	CDS	412	2,209	2,621
48	2152	Bin Qasim	AIRPORT	MASJID-E-QUBA RMU	CDS	242	3,342	3,583
49	3116	Bin Qasim	AIRPORT	AFZAL RMU	CDS	581	4,585	5,166
50 51	3531 267	Bin Qasim Bin Qasim	AIRPORT	NATHA KHAN RMU	CDS	422	1,880	2,302
52	3598	Bin Qasim Bin Qasim	AIRPORT AIRPORT	KMC BOOSTING NEW IQBALABAD (EX RAZA UL HASSAN RMU)	CDS	735 519	3,727 3,653	4,462 4,172
53	287	Bin Qasim	AIRPORT	SADAT COLONY	CDS	115	2,605	2,720
54	3724	Bin Qasim	AIRPORT-II	GOHAR GREEN CITY	CDS	1,365	3,462	4,828
55	284	Bin Qasim	AIRPORT-II	MALIR CITY	CDS	650	3,194	3,845
56	119	Bin Qasim	AIRPORT-II	BAGH-E-MALIR	CDS	1,371	7,150	8,521
57	4064	Bin Qasim	AIRPORT-II	F South	CDS	790	4,905	5,695
58	1158	Bin Qasim	AIRPORT-II	GULSHAN-E-GHAZALI	CDS	3,828	3,468	7,296
59	2038	Bin Qasim	AIRPORT-II	GHAZI TOWN	CDS	2,819	7,089	9,908
60	3881	Bin Qasim	AIRPORT-II	K.N CITY	CDS	1,653	3,249	4,903
61	2059	Bin Qasim	AIRPORT-II	PEER MEHFOOZ RMU	CDS	534	5,643	6,177
62	272 3627	Bin Qasim Bin Qasim	AIRPORT-II AIRPORT-II	HAFIZ SWEETS (OLD POLICE STATION) EOBI	CDS	1,271 980	4,252	5,523
64	2116	Bin Qasim	AIRPORT-II	RAZA RESIDENCY	CDS	1,530	2,624 3,708	3,604 5,238
65	1157	Bin Qasim	AIRPORT-II	KDA PUMP HOUSE	CDS	1,259	2,040	3,298
66	3409	Bin Qasim	AIRPORT-II	BARAF KHANA (OLD ZAM ZAM ICE)	CDS	1,460	6,453	7,914
67	2119	Bin Qasim	AIRPORT-II	BABA WILAYAT	CDS	3,513	2,929	6,442
68	3791	Bin Qasim	AIRPORT-II	PAK CARPET INDUSTRY	DDS	-	2,534	2,534
69	275	Bin Qasim	AIRPORT-II	SECURITY PRINTING-I	DDS	-	7,497	7,497
70	2014	Bin Qasim	AIRPORT-II	KALABOARD CENTRE	CDS	1,061	4,310	5,371
71	3370	Bin Qasim	AIRPORT-II	SHAMSI SOCIETY	CDS	942	4,477	5,419
72	3613	Bin Qasim	AIRPORT-II	UMER KHUSHK	CDS	921	5,819	6,740
73	2013	Bin Qasim	AIRPORT-II	MALIR WIRELESS	CDS	1,239	4,615	5,854
74	3510	Bin Qasim	AIRPORT-II	GULSHAN-E-AKBAR RMU	CDS	1,147	1,358	2,506

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
75	2072	Bin Qasim	AIRPORT-II	PUNJAB TOWN	CDS	1,206	4,377	5,583
76	2058	Bin Qasim	AIRPORT-II	CHATTAI GROUND (OLD KAUSAR ICE)	CDS	2,067	3,755	5,822
77	2050	Bin Qasim	AIRPORT-II	NOOR HOUSING	CDS	1,742	3,702	5,444
78	2111	Bin Qasim	AIRPORT-II	SALMAN GARDEN	CDS	2,137	3,741	5,878
79 80	1155 2094	Bin Qasim GULSHAN	AIRPORT-II	AMJAD ALI WELLS	CDS	2,499	2,865	5,364
81	2094	GULSHAN	Azizabad	Agha Khan School	CDS	1,197	2,032	3,229
82	3107	GULSHAN	Azizabad Azizabad	Ali Square Sarafa Bazar	CDS	963 191	3,046 3,632	4,009 3,823
83	3108	GULSHAN	Azizabad	Telenor	CDS	158	2,545	2,703
84	2023	GULSHAN	Azizabad	Bana Palace	CDS	1,420	2,178	3,598
85	2035	GULSHAN	Azizabad	HEF School	CDS	684	1,355	2,039
86	3437	Surjani	Azizabad	North Vista	CDS	2,009	3,240	5,249
87	3103	GULSHAN	Azizabad	Sharifabad	CDS	1,097	538	1,635
88	2101	GULSHAN	Azizabad	Usman Hospital	CDS	939	1,393	2,332
89	2041	GULSHAN	Azizabad	Quaid Avenue	CDS	1,271	2,819	4,090
90	3903	GULSHAN	Azizabad	Café Bhangoria	CDS	1,087	1,769	2,856
91	3342	GULSHAN	Azizabad	Anglow School	CDS	1,572	3,378	4,949
92	3904	GULSHAN	Azizabad	MANZAR-E-JILANI	CDS	609	3,315	3,923
93 94	3341 2034	GULSHAN	Azizabad	Bukhshi	CDS	587	4,872	5,458
95	3439	GULSHAN GULSHAN	Azizabad	Gul-Noor Ice	CDS	225	3,434	3,659
96	3514	GULSHAN	Azizabad Azizabad	Sadiq Nagar	CDS	1,307 1,026	2,904 2,616	4,211 3,643
97	2139	GULSHAN	Azizabad	Mucca Chowk Trimax Hospital (OLD Comprehensive School)	CDS	1,026	2,616	3,643
98	2019	GULSHAN	Azizabad	Dastagir Society	CDS	1,549	4,504	6,053
99	2012	GULSHAN	Azizabad	Dehli College	CDS	900	1,113	2,013
100	2156	GULSHAN	Azizabad	Memon Masjid	CDS	1,447	1,547	2,994
101	2099	GULSHAN	Azizabad	Yasinabad	CDS	698	2,725	3,423
102	2084	GULSHAN	Azizabad	Raza Flour Mills	CDS	985	1,095	2,079
103	344	GULSHAN	Azizabad	Kohistan Builder (Gul-Shamim)	CDS	1,576	3,582	5,157
104	2073	GULSHAN	Azizabad	M.Younus	CDS	296	1,394	1,690
105	3168	GULSHAN	Azizabad	Bantva-3	CDS	1,231	2,297	3,528
106	138	BALDIA	BALDIA	MASJID-E-AKBAR	CDS	3,139	882	4,021
107	3392	BALDIA	BALDIA	AL-FAWAD MEDICAL RMU	CDS	732	3,982	4,714
108 109	1164 3369	BALDIA BALDIA	BALDIA	SECTOR-21	CDS	7,587	1,135	8,722
110	2025	Orangi	BALDIA Baldia	USMAN GHANI MASJID RAEES AMROHI	CDS	1,865 3,310	1,913 3,843	3,778 7,153
111	2181	Orangi	Baldia	MILLAT COLONY	CDS	1,339	3,511	4,850
112	4118	Orangi	Baldia	RIAZABAD BUS STOP (X-23 Bus Stop)	CDS	1,349	2,469	3,818
113	1163	BALDIA	BALDIA	NAVAL LOW COST	CDS	3,225	842	4,067
114	149	BALDIA	BALDIA	ALIFLAILA	CDS	4,974	1,638	6,612
115	137	BALDIA	BALDIA	MOMINABAD	CDS	1,269	655	1,924
116	147	Orangi	Baldia	HARYANA COLONY	CDS	2,413	2,154	4,567
117	3915	BALDIA	BALDIA	FERRARI	CDS	3,043	5,971	9,015
118	3916	BALDIA	BALDIA	AMAZON	CDS	2,568	4,579	7,147
119	4011	BALDIA	BALDIA	YASOOB RMU (X-4 BUS STOP)	CDS	1,565	3,300	4,865
120	1111	BALDIA	BALDIA	SAADULLAH GOTH	CDS	7,003	1,968	8,971
121	3136	BALDIA	BALDIA	VIBC BALDIA	CDS	14	326	340
122 123	1160 1159	BALDIA BALDIA	BALDIA BALDIA	SUPARCO ROAD P-01	CDS	4,481	3,605	8,086
124	134	BALDIA	BALDIA	QUTBI HOTEL AFRIDI COLONY	CDS	2,115 850	1,429 4,195	3,543 5,045
125	140	BALDIA	BALDIA	KHYBER CHOWK	CDS	4,859	3,382	8,241
126	136	BALDIA	BALDIA	SAEEDABAD	CDS	2,639	730	3,369
127	2055	BALDIA	BALDIA	BUS TERMINAL	CDS	15,588	9,394	24,982
128	3195	BALDIA	BALDIA	ITTEHAD COTTAGE INDUSTRY	CDS	4,140	2,202	6,342
129	145	BALDIA	BALDIA	SIND CONSTABULARY	CDS	3,590	5,463	9,053
130	133	BALDIA	BALDIA	MURSHID HOSPITAL	CDS	5,408	8,434	13,842
131	148	BALDIA	BALDIA	EIDGAH P-47	CDS	1,870	4,653	6,523
132	146	BALDIA	BALDIA	JAM SAHAB ROAD P-12	CDS	1,489	2,929	4,418
133	917	BALDIA	BALDIA	POLICE TRAINING CENTRE	CDS	2,247	5,030	7,277
134	1161	BALDIA	BALDIA	NORTHERN ELECTRIC	CDS	1,222	1,571	2,793
135	144	BALDIA	BALDIA	GOL SABEEL RMU	CDS	446	7,439	7,885
136	3532	Orangi	Baldia	MALIK CHOWK RMU	CDS	2,296	4,055	6,351
137 138	1162 130	BALDIA Orangi	BALDIA	HAPPY PAN HOUSE(P-29)	CDS	1,381	3,961	5,343
138	3338	BALDIA	Baldia	FAQEER COLONY MANSOOR SHER	CDS	1,914	2,522	4,436
140	135	BALDIA	BALDIA BALDIA	MANSOOR SHER PAKISTAN BAZAR	CDS	8,230 3,029	4,955 2,060	13,185 5,089
141	3622	BALDIA	BALDIA	FARAZ AHMED RMU	CDS	2,793	5,444	8,237
141	3623	BALDIA	BALDIA	P-23 QAIM KHANI RMU	CDS	2,793	2,276	5,214
143	3691	BALDIA	BALDIA	SAFFRON ENGINEERING	CDS	8,882	6,685	15,567
144	143	BALDIA	BALDIA	KOHINOOR-2	CDS	1,980	4,027	6,008
145	3371	BALDIA	BALDIA	HAROON BEHRIA	CDS	2,599	5,840	8,440
146	131	BALDIA	BALDIA	BILAL COACH	CDS	3,099	1,046	4,145
147	3527	BALDIA	BALDIA	AKRAM STORE	CDS	2,261	1,094	3,355
148	3626	BALDIA	BALDIA	MUSHARRAF COLONY RMU	CDS	9,730	7,388	17,118

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
149	141	BALDIA	BALDIA	IQBAL ROAD RMU	CDS	3,251	2,435	5,686
150	142	Orangi	Baldia	TOORI BANGASH	CDS	4,466	4,448	8,915
151	3917	BALDIA	BALDIA	JACINDA	CDS	3,187	6,287	9,473
152 153	3391 2175	BALDIA SOCIETY	BALDIA	NOORANI MASJID	CDS DDS	836	5,973 27	6,809 179
154	483	SOCIETY	BALOCH COLONY BALOCH COLONY	BALOCH GRID PMT FEROZABAD POLICE STN	CDS	153 390	6,748	7,138
155	3192	SOCIETY	BALOCH COLONY	FAZAIYA HOUSING PHASE-4	CDS	1,059	2,503	3,563
156	489	SOCIETY	BALOCH COLONY	PAF HOUSING +	CDS	863	2,277	3,139
157	3246	SOCIETY	BALOCH COLONY	JUMANI SQUARE RMU	CDS	-	3,044	3,044
158	1141	SOCIETY	BALOCH COLONY	PROGRESSIVE CENTRE +	CDS	-	3,613	3,613
159	3245 486	SOCIETY	BALOCH COLONY	JASON TRADE S/S	CDS	789	4,471	5,260
160 161	3331	SOCIETY	BALOCH COLONY BALOCH COLONY	TOYOTA MOTORS PESHAWARI ICE CREAM RMU	CDS	530 407	3,582 3,956	4,112 4,363
162	488	SOCIETY	BALOCH COLONY	KARACHI MEMON MASJID +	CDS	-	2,565	2,565
163	485	SOCIETY	BALOCH COLONY	RAO RMU	CDS	135	2,049	2,184
164	504	SOCIETY	BALOCH COLONY	KHALIL A. SATTAR +	CDS	285	1,170	1,455
165	498	SOCIETY	BALOCH COLONY	POLE-48+	CDS	600	3,051	3,651
166	497	SOCIETY	BALOCH COLONY	SOIL MECHANICS	CDS	1,749	1,478	3,227
167	3447	SOCIETY	BALOCH COLONY	AWAMI CHOWK	CDS	528	3,568	4,096
168 169	495 491	SOCIETY	BALOCH COLONY	KAMAL PARK +	CDS	383	4,829	5,213
170	491	SOCIETY	BALOCH COLONY BALOCH COLONY	KARACHI ADMIN SOCIETY + MANZOOR COLONY	CDS	377 985	1,885 3,303	2,262 4,288
171	492	SOCIETY	BALOCH COLONY	ANUM CLASSIC	CDS	-	2,410	2,410
172	4143	SOCIETY	BALOCH COLONY	PNS MEHRAN	DDS	_	9,339	9,339
173	2134	SOCIETY	BALOCH COLONY	SHEHNAZ ARCADE	CDS	441	5,856	6,297
174	482	SOCIETY	BALOCH COLONY	ROYAL APARTMENT	CDS	863	7,033	7,896
175	1120	SOCIETY	BALOCH COLONY	REHMAN COLONY +	CDS	-	3,582	3,582
176	3433	SOCIETY	BALOCH COLONY	USAMA MASJID	CDS	813	1,213	2,026
177	2118	SOCIETY	BALOCH COLONY	BALOCH CENTRE+	CDS	315	1,962	2,278
178 179	490 494	SOCIETY	BALOCH COLONY	SHAHEEN AIR FORCE HOUSING +	CDS	1,038	1,518	2,556
180	494	SOCIETY	BALOCH COLONY BALOCH COLONY	PAF BASE FAISAL + CAP UNITED HOSPITAL	DDS CDS	925	2,397 2,589	2,522 3,514
181	502	SOCIETY	BALOCH COLONY	GULZAR-E-HABIB RMU	CDS	197	3,215	3,412
182	506	SOCIETY	BALOCH COLONY	KCHS -D (old name: N A BUILDERS)	CDS	-	5,275	5,275
183	2125	SOCIETY	BALOCH COLONY	CITY MALL +	CDS	759	2,818	3,577
184	1138	SOCIETY	BALOCH COLONY	DUTY FREE SHOP	CDS	157	3,172	3,329
185	3258	SOCIETY	BALOCH COLONY	UBAIDULLAH	CDS	-	3,910	3,910
186	2140	SOCIETY	BALOCH COLONY	CHAPTER SCHOOL	CDS	352	984	1,336
187 188	3445 1124	SOCIETY	BALOCH COLONY	SECTOR I RMU	CDS	516	2,920	3,436
189	503	SOCIETY	BALOCH COLONY BALOCH COLONY	MEDICARE HOSPITAL KDA COM COMPLEX	CDS	93 1,580	4,238 3,020	4,331 4,600
190	2122	SOCIETY	BALOCH COLONY	RBS BANK	CDS	1,244	3,412	4,656
191	3901	UTHAL	BELA	Bella Cross (Old POLE-01 BARA BAGH)	CDS	-	10	10
192	3954	UTHAL	BELA	Ismailani	CDS	-	2,000	2,000
193	3024	UTHAL	BELA	DANDA	CDS	-	27	27
194	3026	UTHAL	BELA	WAYALO-1	CDS	-	19	19
195 196	3587 3025	UTHAL	BELA	Kandala (Old HT OH P-01)	CDS	-	18	18
196	3407	UTHAL	BELA BELA	KATHORE	CDS	-	17 26	17 26
198	3023	UTHAL	BELA	JAM YOUSUF BARA BAGH	CDS	-	29	29
199	3861	Bin Qasim	BOC	A.M.O REFINARY	CDS	_	12,373	12,373
200	3155	Bin Qasim	BOC	TY WILMER AGRO (old name: DESCON ENGINEER	CDS	-	7,783	7,783
201	3049	Bin Qasim	BOC	PROCTER & GAMBLE	DDS	-	1,561	1,561
202	3862	Bin Qasim	BOC	H-II CREETE	CDS	-	9,756	9,756
203	3875	Bin Qasim	BOC	BH-708	DDS	-	50	50
204	3877	Bin Qasim	BOC	BH-709	DDS	-	50	50
205 206	4183 4009	Bin Qasim Bin Qasim	BOC	SYNERGY PACKAGING PVT LTD	DDS	-	5,800	5,800
207	3251	Bin Qasim	BOC BOC	IRFAN NOMAN H.M EXTRACTION	CDS DDS	-	5,354 2,779	5,354 2,779
208	3252	Bin Qasim	BOC	AUSAF INDUSTRIES (OLD PAKI TEX)	DDS	-	3,977	3,977
209	3389	Bin Qasim	BOC	SEPCO - 02	DDS	-	2,262	2,262
210	3921	Bin Qasim	BOC	TUFAIL CHEMICAL Ltd (Zubair Tufail)	DDS		1,321	1,321
211	3863	Bin Qasim	BOC	PLATINUM STEEL (Old name Shafi Iron Steel)	DDS	-	6,231	6,231
212	3188	Bin Qasim	BOC	GHANI CHEMICALS (old: GHANI GASES)	DDS	-	280	280
213	3234	Bin Qasim	BOC	COCA COLA-1	DDS	-	2,235	2,235
214 215	4007 4209	Bin Qasim Bin Qasim	BOC BOC	RELIANCE INTERNATIONAL	CDS	-	10,000	10,000
216	104	SOCIETY	CIVIC CENTRE	GHANI GASSES NO.2 QUALITY BUILDER +	DDS CDS	1,586	280 1,419	280 3,005
217	2089	SOCIETY	CIVIC CENTRE	ZAHIR HOTEL	CDS	654	1,762	2,416
218	2147	SOCIETY	CIVIC CENTRE	ALAMGIR	CDS	172	4,360	4,532
219	2166	SOCIETY	CIVIC CENTRE	SHAHEED-E-MILLAT +	CDS	1,081	7,435	8,517
220	1150	SOCIETY	CIVIC CENTRE	AMBER CINEMA+	CDS	-	5,544	5,544
221	95	SOCIETY	CIVIC CENTRE	DADA TERRACE +	CDS	395	5,145	5,540
222	3014	SOCIETY	CIVIC CENTRE	PEARL RESIDENCY	DDS	113	649	762

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
223	94	SOCIETY	CIVIC CENTRE	CITY CENTER	CDS	-	3,447	3,447
224	1127	SOCIETY	CIVIC CENTRE	PIB COLONY +	CDS	-	3,519	3,519
225	107	SOCIETY	CIVIC CENTRE	KE WORKSHOP	CDS	452	5,532	5,984
226	1362	SOCIETY	CIVIC CENTRE	TIME PRESS	CDS	1,151	2,303	3,454
227	97	SOCIETY	CIVIC CENTRE	MUHAMMAD ALI SOCIETY	CDS	213	5,459	5,672
228	99	GULSHAN	CIVIC CENTRE	Baradari	CDS	882	3,989	4,871
229	3548	GULSHAN	CIVIC CENTRE	Rabbi Apartment	CDS	614	4,304	4,917
230	102	GULSHAN	CIVIC CENTRE	Eagle Squad +	CDS	1,245	3,018	4,264
231	103	GULSHAN	CIVIC CENTRE	Paras Textile	CDS	-	3,454	3,454
232	2135	SOCIETY	CIVIC CENTRE	A-1 CENTRE +	CDS	118	2,484	2,601
233	110	SOCIETY	CIVIC CENTRE	PAK CAPITAL-3	CDS	18	3,788	3,807
234	105	SOCIETY	CIVIC CENTRE	NDFC	CDS	59	5,326	5,385
235	1169	SOCIETY	CIVIC CENTRE	FALCON PLAZA	CDS	842	6,394	7,236
236	116	SOCIETY	CIVIC CENTRE	NOBLE HEIGHTS +	CDS	960	3,869	4,829
237	3507	SOCIETY	CIVIC CENTRE	KERNAL BASTI	CDS	49	2,342	2,392
238	98	SOCIETY	CIVIC CENTRE	MILK PLANT +	CDS	763	1,389	2,151
239	109	GULSHAN	CIVIC CENTRE	Expo Center +	CDS	-	1,549	1,549
240	1152	GULSHAN	CIVIC CENTRE	General Society	CDS	-	3,337	3,337
241	114	SOCIETY	CIVIC CENTRE	CHAWLA FLATS	CDS	248	6,284	6,532
242	3139	SOCIETY	CIVIC CENTRE	SALATEEN	CDS	279	6,091	6,371
243	1168	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-4 +	CDS	-	5,394	5,394
244	113	SOCIETY	CIVIC CENTRE	NAVAL HOUSING-5	CDS	-	7,960	7,960
245	3697	GULSHAN	CIVIC CENTRE	Ghousia Bakery	CDS	205	3,918	4,124
246	117	GULSHAN	CIVIC CENTRE	QDC	CDS	92	3,804	3,897
247	1170	SOCIETY	CIVIC CENTRE	PNS BAHADUR	CDS	24	4,851	4,875
248	100	SOCIETY	CIVIC CENTRE	KARACHI IRON+	CDS	-	2,913	2,913
249	3380	SOCIETY	CIVIC CENTRE	MAQBOOLABAD	CDS	139	6,136	6,275
250	1176	GULSHAN	CIVIC CENTRE	Army Housing-5	CDS	238	3,219	3,457
251	1177	GULSHAN	CIVIC CENTRE	Army Housing-9	CDS	-	3,690	3,690
252	108	SOCIETY	CIVIC CENTRE	LIAQUAT NATIONAL LIBRARY+CAP 3	CDS	272	4,422	4,694
253	111	GULSHAN	CIVIC CENTRE	Rukknuddin	CDS	-	3,798	3,798
254	101	SOCIETY	CIVIC CENTRE	KDA LSR	CDS	-	3,184	3,184
255	3274	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 1	DDS	-	200	200
256	4061	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE WEST	DDS	-	200	200
257	3271	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING WEST	DDS	-	200	200
258	3273	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 2	DDS	-	200	200
259	4062	Bin Qasim	CIVIL AVIVATION AUTH	SATELLITE EAST	DDS	-	200	200
260	4060	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL 1	DDS	-	200	200
261	3270	Bin Qasim	CIVIL AVIVATION AUTH	TERMINAL BUILDING EAST	DDS	-	200	200
262	3272	Bin Qasim	CIVIL AVIVATION AUTH	UTILITY BUILD 1	DDS	-	200	200
263	3275	Bin Qasim	CIVIL AVIVATION AUTH	VAULT STATION 2	DDS	-	200	200
264	125	Bin Qasim	CIVIL AVIVATION AUTH	SHAH FAISAL TOWN	CDS	781	4,411	5,192
265	124	Bin Qasim	CIVIL AVIVATION AUTH	SAUDABAD PUMPING	CDS	1,064	3,997	5,061
266	121	Bin Qasim	CIVIL AVIVATION AUTH	LAL MASJID	CDS	1,075	3,847	4,922
267	3122	Bin Qasim	CIVIL AVIVATION AUTH	TARIQ BIN ZIAD	CDS	2,456	4,027	6,484
268	120	Bin Qasim	CIVIL AVIVATION AUTH	SECURITY PAPER MILL	DDS	-	981	981
269	123	Bin Qasim	CIVIL AVIVATION AUTH	MOINABAD	CDS	1,640	3,885	5,526
270	2070	Bin Qasim	CIVIL AVIVATION AUTH	IBRAHIM NAFEES RMU	CDS	1,006	5,565	6,572
271	126	Bin Qasim	CIVIL AVIVATION AUTH	AIR LOGISTICS (OLD MAKRO HABIB)	DDS	-	5,354	5,354
272	122	Bin Qasim	CIVIL AVIVATION AUTH	MODEL COLONY 'A'	CDS	846	4,974	5,820
273	3015	DEFENCE	Clifton	International Complex-2	DDS	-	3,583	3,583
274	3019	DEFENCE	Clifton	International Complex-4	DDS	-	3,583	3,583
275	78	DEFENCE	Clifton	KDA Flats	CDS	87	4,461	4,547
276	83	DEFENCE	Clifton	Merchant Construction	CDS	25	9,252	9,277
277	1359	DEFENCE	Clifton	Haseeb Polani	CDS	4	3,166	3,170
278	82	DEFENCE	Clifton	Caltex	CDS	89	4,753	4,842
279	85	DEFENCE	Clifton	Chappal Luxury	CDS	164	9,674	9,839
280	3183	DEFENCE	Clifton	Awan House RMU	CDS	475	3,516	3,992
281	3190	DEFENCE	Clifton	M. Ali Chawla	CDS	198	7,816	8,014
282	3174	DEFENCE	Clifton	Kuwait Consulate	CDS	209	7,837	8,046
283	3384	DEFENCE	Clifton	Masan Road RMU	CDS	863	3,206	4,069
284	1173	DEFENCE	Clifton	Agha Khan Park	CDS	81	9,808	9,888
285	3191	DEFENCE	Clifton	Progressive Garden	CDS	28	6,966	6,993
286	3193	DEFENCE	Clifton	Triple Tree	DDS	-	3,891	3,891
287	3733	DEFENCE	Clifton	Bakht Tower	DDS	-	1,206	1,206
288	3734	DEFENCE	Clifton	M. Ishaq Enterprises	CDS	-	1,523	1,523
289	90	DEFENCE	Clifton	Sasi Home	CDS	32	7,470	7,502
290	93	DEFENCE	Clifton	China Consulate	CDS	107	6,562	6,669
291	3182	DEFENCE	Clifton	Mundra Chowk-2	CDS	837	1,544	2,382
292	92	DEFENCE	Clifton	Grammer College	CDS	1,701	5,353	7,054
293	87	DEFENCE	Clifton	Poonawala	CDS	42	4,962	5,004
294	89	DEFENCE	Clifton	Clifton Center	CDS	14	6,156	6,170
295	1360	DEFENCE	Clifton	Minister Residency	CDS	705	2,196	2,901
		DEFENCE	* **	Shaista Builder	CDS	178	8,238	8,416

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
297	88	DEFENCE	Clifton	Bath Island	CDS	52	8,413	8,466
298	77	DEFENCE	Clifton	MUNEEB KAMIL (CUSTOM SOCIETY)	CDS	118	5,808	5,926
299	2068	DEFENCE	Clifton	International Complex-1	DDS	-	3,563	3,563
300	3018	DEFENCE	Clifton	International Complex-3	DDS	-	3,562	3,562
301	1174	DEFENCE	Clifton	Gulshan-e-Faisal	CDS	441	8,265	8,705
302 303	86 2174	DEFENCE	Clifton	Ziauddin Sewerage Pumping	CDS	40	3,453	3,492
303	80	DEFENCE DEFENCE	Clifton	Boat View	CDS	125	3,267	3,393
305	1171	DEFENCE	Clifton Clifton	Burma Shell Kemari Center	CDS	39 608	7,324 5,677	7,363 6,285
306	1172	DEFENCE	Clifton	Mundra Chowk-1	CDS	58	3,464	3,522
307	79	DEFENCE	Clifton	Shirin Jinnah	CDS	767	3,048	3,814
308	84	DEFENCE	Clifton	Marine Blessing	CDS	208	5,115	5,323
309	3688	DEFENCE	CREEK CITY VISTA	KIOSK-10	CDS	-	794	794
310	3625	DEFENCE	CREEK CITY VISTA	Moin Khan Academy	DDS	-	585	585
311	3821	DEFENCE	CREEK CITY VISTA	DHA PHASE-8 SECTOR-D (old: Sector-D S/S-3)	CDS	-	4,133	4,133
312	2002	DEFENCE	CREEK CITY VISTA	Creek City SS-4	CDS	-	1,324	1,324
313	2003	DEFENCE	CREEK CITY VISTA	Creek City SS-6	CDS	-	867	867
314	3393	DEFENCE	CREEK CITY VISTA	Kh-e-Baber KIOSK-3	CDS	-	7,137	7,137
315	3151	DEFENCE	CREEK CITY VISTA	Golf Club	CDS	32	10,431	10,462
316	3687	DEFENCE	CREEK CITY VISTA	KIOSK-09	CDS	-	119	119
317 318	3171 2001	DEFENCE DEFENCE	CREEK CITY VISTA	Nue Multi-Plux	CDS	7	779 1,039	786 1,039
319	3280	DEFENCE	CREEK CITY VISTA CREEK CITY VISTA	Creek City SS-5 Creek Club	CDS	163	1,039 8,992	9,155
320	3715	DEFENCE	CREEK CITY VISTA	Sector C-8 S/S-3	CDS	163	8,992 4,164	9,155 4,164
321	3716	DEFENCE	CREEK CITY VISTA	Sector C-8 S/S-5	CDS	-	3,560	3,560
322	3859	DEFENCE	CREEK CITY VISTA	Emaar Giga Karachi Ltd	DDS	_	4,487	4,487
323	3317	DEFENCE	CREEK CITY VISTA	KIOSK-1 Igbal Lane	CDS	-	7,128	7,128
324	4037	DEFENCE	CREEK CITY VISTA	AL MURTAZA COMMERCIAL-23	CDS	-	3,762	3,762
325	4038	DEFENCE	CREEK CITY VISTA	Zulfiqar Commercial-13	CDS	-	2,249	2,249
326	4039	DEFENCE	CREEK CITY VISTA	Zulfiqar Commercial-01	CDS	-	2,629	2,629
327	4002	DEFENCE	CREEK CITY VISTA	KH-E-SHAJAR SECTOR-E S/S-2	CDS	-	2,990	2,990
328	2009	DEFENCE	CREEK CITY VISTA	Creek City SS-3	CDS	-	804	804
329	2010	DEFENCE	CREEK CITY VISTA	Creek City SS-1	CDS	-	396	396
330	4084	Defence	CREEK CITY VISTA	16TH STREET SHAJAR KIOSK-2	DDS	-	2,138	2,138
331 332	4085 4139	Defence Defence	CREEK CITY VISTA	DHA-2 GRID KIOSK-1	DDS	-	2,563	2,563
333	4133	Defence	CREEK CITY VISTA CREEK CITY VISTA	KH-E-ARFAAT KIOSK-3	DDS	-	1,800 41	1,800 41
334	4131	Defence	CREEK CITY VISTA	KH-E-GHALIB KIOSK-12 TIPU SULTAN KIOSK-6	DDS	-	2,440	2,440
335	4086	Defence	CREEK CITY VISTA	CREEK GRID KIOSK-7	DDS	-	151	151
336	4070	Bin Qasim	DCK	DHA CITY FEEDER NO.1	DDS	-	15,000	15,000
337	3690	DEFENCE	Defence	19th Street Bukhari RMU	CDS	84	2,194	2,278
338	66	DEFENCE	Defence	Carlton Hotel	CDS	179	4,257	4,437
339	69	DEFENCE	Defence	Darakhshan-4	CDS	72	6,807	6,879
340	3494	DEFENCE	Defence	30th Street Rahat RMU	CDS	49	4,350	4,399
341	58	DEFENCE	Defence	Defence-14	CDS	940	7,733	8,672
342	60	DEFENCE	Defence	Sea View-1	CDS	57	13,474	13,530
343	70	DEFENCE	Defence	Shaikh Zaid	CDS	216	5,155	5,370
344 345	3506 62	DEFENCE DEFENCE	Defence	Mall Square	CDS	92	5,590	5,682
345	3486	DEFENCE	Defence	Mubarak Masjid	CDS	67 109	6,351	6,418
347	61	DEFENCE	Defence Defence	Saba Avenue RMU	CDS	35	7,121 9,460	7,230 9,495
348	3467	DEFENCE	Defence Defence	Zamzama Pump Shaheen Grid RMU	CDS	253	4,180	4,433
349	67	DEFENCE	Defence	Kh-e-Bukhari	CDS	340	3,518	3,858
350	3501	DEFENCE	Defence	Kh-e-Shujaat-2 RMU	CDS	67	5,981	6,048
351	3495	DEFENCE	Defence	Farhat Fatima RMU	CDS	443	3,951	4,394
352	65	DEFENCE	Defence	WEST POINT TOWER (ITTEHAD)	CDS	70	6,938	7,008
353	2020	DEFENCE	Defence	ISI RMU	CDS	171	3,591	3,762
354	2172	DEFENCE	Defence	Zafar Alam (Kh-e-Shujaat)	CDS	96	1,980	2,076
355	3485	DEFENCE	Defence	16th Nishat RMU	CDS	91	2,373	2,464
356	1180	DEFENCE	Defence	DHA Phase-7 Ext	CDS	-	4,540	4,540
357	73	DEFENCE	Defence	Model School	CDS	76	7,352	7,427
358	3538	DEFENCE	Defence	Football Ground	CDS	167	5,383	5,550
359	74	DEFENCE	Defence	PNS Haider	CDS	-	7,668	7,668
360 361	71 3493	DEFENCE DEFENCE	Defence	Defence Pumping-2	CDS	483	9,389	9,872
362	63	DEFENCE	Defence Defence	DHA Pump RMU Misri Shah Tele Eychange	CDS	327 725	3,591 4,558	3,918 5,283
363	3491	DEFENCE	Defence	Misri Shah Tele Exchange Wahid Butt RMU	CDS	223	6,235	6,458
364	2149	DEFENCE	Defence	Saeed-uz-Zafar	CDS	70	6,235	6,458
365	1178	DEFENCE	Defence	Defence-15	CDS	42	7,311	7,353
366	3711	DEFENCE	Defence	Atif Latif RMU	CDS	341	4,413	4,754
367	1584	DEFENCE	Defence	Al-Burj	CDS	94	1,821	1,915
368	3712	DEFENCE	Defence	Popular Avenue RMU	CDS	902	2,553	3,455
	2002	DEFENCE	Defence	12th Lane Sehar	CDS	410	7,623	8,033
369	2063	DEFERRE	Defence	12til talle Sellal	CD3	410	7,023	0,033

1772 1773 1774 1775	S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1772 1776	371	3337	DEFENCE	Defence	Beach View	CDS	112	5,329	5,441
1375 1376 DEFENCE Defence Bast Commercial Mol. COS E2 4,112 4,137 4,137 3,137 3310 DEFENCE Defence Fazah All Bold COS 5,7 3,223 3,323 3,33 3,10 DEFENCE Defence Fazah All Bold COS 5,7 3,223 3,323 3,33 3,10 DEFENCE Defence Fazah All Bold COS 5,7 3,223 3,323 3,33 3,30 DEFENCE Defence Fazah All Bold COS 5,7 3,223 3,323 3,30 3,30 DEFENCE Defence Fazah All Bold COS E8 4,402 4,402 4,402 4,403	372	3713	DEFENCE	Defence	Iftikhar Soomro RMU	CDS	70	1,521	1,591
1975 3346 OFFICIC Defence Paga Mari Saleem BMU COS 57 3273 3303 3319 OFFICIC Defence Faga Mari COS 171 172 173 3319 3319 OFFICIC Defence Faga Mari COS 171 172 173 3319 3319 OFFICIC Defence Faga Mari COS 171 172 173 3319 3319 OFFICIC Defence Faga Mari COS 171 172 173 173 3319 3319 OFFICIC Defence Faga Mari COS 171 172 173	373	2076	DEFENCE	Defence	Shaheen off Nishat	CDS	71	3,127	3,198
1772 3393 OFFERCE Defence Fath Mail Mul CO5 27 3,223 3,333 3,77 3393 OFFERCE Defence Gala Ansart Most CO5 13 5,786 5,997 3,777 3397 OFFERCE Defence Gala Ansart Most CO5 18 4,5271 4,000 3,997 2715 7,997 2715	374			Defence	Badar Commercial RMU	CDS	82	4,112	4,194
177 3319 OFFICEC Defence				Defence	Nasir Saleem RMU	CDS		4,027	4,111
1979 1397 DEFENCE Defence East Ansatt MAU COS 81 6,321 4,000									3,320
2257 OFFINEE Defence 21st Street Nr #ahrls CO2 3.4 2,276 2,296 2,381 2,390 3480 3490 OFFINEE Defence De									5,891
1840 1840 DEFENCE Defence BIDDS_DATE BAUU CDS 7.8 4_387 2.617	$\overline{}$				•				
2817 DEFENCE Defence Dirik Heckey Statelam COS 78 6,887 5,056									
1822 1978 OFFINCE Orderince Non-Edition Printaging CDS G481 4,618 5,024									
384 39 OFFENCE Defence Tartq Garder CDS S81 3,223 2,104									
384 396 OFFERCE Defence Anna Began RMU COS 117 5,522 5,740									
SSS OPERICE Defence Asma Begum RNU CCS 117 5,923 5,740		59			· ·				
S80 64	385	3306							
S88 S81 DEFENCE	386	64	DEFENCE						13,127
\$809 \$359 DEFENCE DHA Muttara Commercial \$5-01 CIO - 4,005 4,005 4,005 3909 \$359 DEFENCE DHA Elb-Fullal \$5-38 CIO - 3,251 3,351	387	3496	DEFENCE	Defence	Shaikh Jalil	CDS	151	8,530	8,681
3879 DEFENCE DHA Sh-e-Turall \$5-18 COS - 6-616 5-416	388	2171	DEFENCE	Defence	Army House	CDS	49	5,973	6,022
3952 3952 DEFENCE DHA Zufflager Commercial SF-02 COS - 3,851 3,955	389		DEFENCE	DHA	Murtaza Commercial S/S-01	CDS	-	4,605	4,605
1922 3653 DEFENCE DHA				DHA	Kh-e-Tufail S/S-18	CDS	-	6,416	6,416
390 3408 DEFENCE DHA Apublish Commercial SS-07 CDS A 4,508 4,312				DHA		CDS	-		3,651
396 3325 3327 DEFENCE DHA New-AddRess CDS 5 6,919 6,975	$\overline{}$						-		2,952
396 332 DEFENCE DUIA KIN-ADASS COS 56 6,919 6,929									6,013
397 322 DEFENCE DUIA NEW-SARD CDS 555 11,139 11,129					'				
398 337 DEFENCE DHA									
399 3377									
1939 3378 DEFENCE DHA					'				
4001 DEFENCE DHA									
4021 4081 DEFENCE DHA 33th STREET KINF & KNAIII CDS - 1,500 1,500 1,200 1,401 1,					· ·				
4092 096R0E	401	4081	DEFENCE				-		1,500
405	402	4082	Defence	DHA	·		21		4,192
405	403	4135	DEFENCE	DHA	KH-E-AZEEM STREET S/S-9	CDS	-	3,500	3,500
406 4137 DEFENCE DHA	404	4134	DEFENCE	DHA	TARIQ COMMERCIAL S/S-37	CDS	-	6,186	6,186
407	405			DHA	5TH TARIQ COMM S/S-34	CDS	-	5,835	5,835
408 158 Bin Qasim									4,200
409 3265 Bin Qasim							-		5,378
410 3511 Bin Qasim									
411 3354 Bin Qasim			-		·				
412 151 Bin Qasim									
413									
414 162 Bin Qasim									
415 2129 Bin Qasim									
415	415	2129	Bin Qasim						
417	416	153	Bin Qasim						3,483
166	417	156	Bin Qasim						3,326
A	418	3112	Bin Qasim	DHABEJI	KDA PUMPING NO. 2	DDS	-	3,195	3,195
421 3705 Bin Qasim DHABEJI KDA PUMPING NO. 7 DDS - 3,313 3,313 3,313 422 157 Bin Qasim DHABEJI K-III-1 DDS - 3,526 3,526 3,526 423 3593 Bin Qasim DHABEJI NAVAL DDP NWHS CDS 1,151 16,605 17,756 424 2127 Bin Qasim DHABEJI NAVAL DDP NWHS CDS - 3,356 3,356 3,356 424 2127 Bin Qasim DHABEJI BHAMBORE RICE MILL DDS - 3,608 3,608 426 3868 Bin Qasim DHABEJI KDA PUMPING NO. 9 DDS - 3,194 3,194 427 3867 Bin Qasim DHABEJI KDA PUMPING NO. 8 DDS - 3,182 3,182 428 160 Bin Qasim DHABEJI N.M POULTRY FARM (OLD BUX TEXTILE) CDS 5,852 11,294 17,145 429 152 Bin Qasim DHABEJI KDA PUMPING NO. 1 DDS - 3,188 3,188 430 165 Bin Qasim DHABEJI KDA PUMPING NO. 6 DDS - 3,331 3,311 431 164 Bin Qasim DHABEJI KDA PUMPING NO. 5 DDS - 3,302 3,302 432 163 Bin Qasim DHABEJI KDA PUMPING NO. 5 DDS - 3,302 3,302 433 167 Bin Qasim DHABEJI FRIENDS CDS 7,160 12,581 19,741 433 167 Bin Qasim DHABEJI KDA PUMPING NO. 5 DDS - 3,362 3,362 434 168 Bin Qasim DHABEJI KDA PUMPING NO. 5 DDS - 3,260 3,260 435 183 BALDIA ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 2,696 2,694 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421 443	419		Bin Qasim	DHABEJI	FORBUS CHLORIDE	CDS	34	1,507	1,541
422 157							-		3,442
A23 3593 Bin Qasim DHABEII NAVAL DDP NWHS CDS 1,151 16,605 17,756							-		3,313
A24 2127 Bin Qasim									3,526
AUSTON A									17,756
A26 3868 Bin Qasim	-								
A27 3867 Bin Qasim DHABEJI KDA PUMPING NO. 8 DDS - 3,182 3,182 3,182 428 160 Bin Qasim DHABEJI N.M POULTRY FARM (OLD BUX TEXTILE) CDS 5,852 11,294 17,145 429 152 Bin Qasim DHABEJI KDA PUMPING NO. 1 DDS - 3,188 3,188									
August A									
A29 152									
A30 165 Bin Qasim DHABEII KDA PUMPING NO. 6 DDS - 3,311 3,311 3,311 431 164 Bin Qasim DHABEII KDA PUMPING NO. 5 DDS - 3,302 3,302 3,302 3,302 3,302 432 163 Bin Qasim DHABEII FRIENDS CDS 7,160 12,581 19,741 433 167 Bin Qasim DHABEII K-III-3 DDS - 3,362 3,362					` ` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '				
431 164 Bin Qasim DHABEJI KDA PUMPING NO. 5 DDS - 3,302 3,302 432 163 Bin Qasim DHABEJI FRIENDS CDS 7,160 12,581 19,741 433 167 Bin Qasim DHABEJI K-III-3 DDS - 3,362 3,362 434 168 Bin Qasim DHABEJI K-III-4 DDS - 3,260 3,260 435 183 BALDIA ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD HIgh Court CDS - 1,716 1,716 437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Green Street CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD BFC DDS - 2,696 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
432 163 Bin Qasim DHABEII FRIENDS CDS 7,160 12,581 19,741 433 167 Bin Qasim DHABEII K-III-3 DDS - 3,362 3,362 434 168 Bin Qasim DHABEII K-III-4 DDS - 3,260 3,260 435 183 BALDIA ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD High Court CDS - 1,716 1,716 437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Green Street CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3,302</td>									3,302
433 167 Bin Qasim DHABEJI K-III-3 DDS - 3,362 3,362 434 168 Bin Qasim DHABEJI K-III-4 DDS - 3,260 3,260 435 183 BALDIA ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD High Court CDS - 1,716 1,716 437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Geesar Tower CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 <t< td=""><td></td><td></td><td>Bin Qasim</td><td></td><td></td><td></td><td>7,160</td><td></td><td>19,741</td></t<>			Bin Qasim				7,160		19,741
434 168 Bin Qasim DHABEJI K-III-4 DDS - 3,260 3,260 435 183 BALDIA ELANDER ROAD MEHRAB KHAN CDS 553 5,738 6,291 436 175 DEFENCE ELANDER ROAD High Court CDS - 1,716 1,716 437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Caesar Tower CDS 4 4,685 4,685 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS - 3,421	433	167	Bin Qasim						3,362
436 175 DEFENCE ELANDER ROAD High Court CDS - 1,716 1,716 437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Caesar Tower CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421	434	168	Bin Qasim						3,260
437 1192 DEFENCE ELANDER ROAD Meetha Ram Hostel CDS 28 2,474 2,502 438 1185 DEFENCE ELANDER ROAD Caesar Tower CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421	435	183		ELANDER ROAD	MEHRAB KHAN	CDS	553		6,291
438 1185 DEFENCE ELANDER ROAD Caesar Tower CDS 4 4,685 4,688 439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421				ELANDER ROAD	High Court	CDS	-		1,716
439 2040 DEFENCE ELANDER ROAD Green Street CDS 133 3,941 4,074 440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421				ELANDER ROAD	Meetha Ram Hostel	CDS	28	2,474	2,502
440 1187 DEFENCE ELANDER ROAD BFC DDS - 2,696 2,696 441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421									4,688
441 1339 SOCIETY ELANDER ROAD YWCA CDS 25 5,415 5,440 442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421									4,074
442 182 DEFENCE ELANDER ROAD Karim Center CDS 11 3,172 3,183 443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421									2,696
443 1183 SOCIETY ELANDER ROAD RIMPA PLAZA CDS - 3,421 3,421									5,440
9,00									
	444	2109	DEFENCE	ELANDER ROAD ELANDER ROAD	RIMPA PLAZA Aiwan-e-Sadar	CDS	100	3,421 3,063	3,421 3,164

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
445	179	DEFENCE	ELANDER ROAD	Tibet Center	CDS	24	2,914	2,939
446 447	171 177	DEFENCE	ELANDER ROAD	Old Sindh Assembly Building	DDS	-	989	989
447	3242	DEFENCE DEFENCE	ELANDER ROAD ELANDER ROAD	President House Railway Colony	CDS	58 253	2,790 242	2,848 495
449	1189	SOCIETY	ELANDER ROAD	IQBAL CENTER	CDS	66	3,111	3,178
450	894	DEFENCE	ELANDER ROAD	Shaheen Foundation	DDS	-	377	377
451	3289	DEFENCE	ELANDER ROAD	New Sindh Provincial Assembly	DDS	-	1,259	1,259
452	3321	SOCIETY	ELANDER ROAD	TRAUMA CENTRE	DDS	338	2,211	2,549
453	3358	SOCIETY	ELANDER ROAD	SIUT	DDS	155	2,113	2,268
454 455	3530 1338	SOCIETY DEFENCE	ELANDER ROAD ELANDER ROAD	LADY DUFFERIN Millat Press	CDS	531 148	3,335 2,892	3,867 3,040
456	2056	DEFENCE	ELANDER ROAD	Jama Cloth	CDS	225	3,020	3,040
457	1568	DEFENCE	ELANDER ROAD	Muslim Gymkhana	CDS	4	2,570	2,574
458	1112	DEFENCE	ELANDER ROAD	Landhi Chawl	CDS	11	6,198	6,209
459	21	DEFENCE	ELANDER ROAD	Hilton Hotel	CDS	114	5,345	5,459
460	1585	SOCIETY	ELANDER ROAD	CIVIL BURNS WARD	DDS	381	1,899	2,279
461	3854 170	DEFENCE	ELANDER ROAD	Surgical Complex (Jinnah-1)	DDS	-	4,351	4,351
462 463	178	DEFENCE	ELANDER ROAD ELANDER ROAD	Pak Herald FTC	CDS	18 77	2,428 6,805	2,445 6,882
464	2008	DEFENCE	ELANDER ROAD	Court Road Rmu	CDS	56	3,689	3,745
465	1567	DEFENCE	ELANDER ROAD	Zainab Market	CDS	320	2,214	2,534
466	24	DEFENCE	ELANDER ROAD	Jabbar Plaza	CDS	200	3,096	3,297
467	2102	DEFENCE	ELANDER ROAD	Saima Tower-3	DDS	-	442	442
468	181	DEFENCE	ELANDER ROAD	Registrar Office	DDS	-	1,686	1,686
469 470	3148 1184	DEFENCE	ELANDER ROAD	Hydro Carbon	CDS	391	10,725	11,116
470	1191	DEFENCE DEFENCE	ELANDER ROAD ELANDER ROAD	SH Enterprizes Modern Graphic	CDS	13 46	2,040 1,800	2,053 1,845
472	172	DEFENCE	ELANDER ROAD	Habib Bank Plaza	CDS	-	1,740	1,740
473	174	DEFENCE	ELANDER ROAD	Dehli Muslim	CDS	28	2,193	2,221
474	184	DEFENCE	ELANDER ROAD	Cotton Exchange	CDS	4	2,298	2,302
475	1186	DEFENCE	ELANDER ROAD	Commerce Center	CDS	7	2,529	2,536
476	176	DEFENCE	ELANDER ROAD	Saima Tower-1	DDS	-	469	469
477 478	737 2144	DEFENCE DEFENCE	ELANDER ROAD	Bank Quarters	CDS	75	3,686 3,980	3,686 4,055
479	3424	DEFENCE	ELANDER ROAD ELANDER ROAD	Radio Pakistan Iran Centre	CDS	32	4,318	4,053
480	3423	DEFENCE	ELANDER ROAD	Sunny Side	CDS	14	3,117	3,131
481	173	SOCIETY	ELANDER ROAD	VISHANDAS	CDS	121	3,433	3,553
482	180	DEFENCE	ELANDER ROAD	Computer Building	CDS	-	464	464
483	1193	DEFENCE	ELANDER ROAD	State Bank Bungalows	CDS	140	2,571	2,711
484 485	185 3434	DEFENCE DEFENCE	ELANDER ROAD	Namco Center	CDS	46 56	3,467	3,512
486	3429	DEFENCE	ELANDER ROAD ELANDER ROAD	Askari-3 Jinnah Hospital-2	DDS	- 50	7,914 4,361	7,970 4,361
487	3142	JOHAR	FEDERAL-A	GULSHAN VIEW	CDS	1,746	2,626	4,372
488	3919	JOHAR	FEDERAL-A	SHUMAIL COMPLEX	CDS	964	3,655	4,619
489	893	GULSHAN	Federal-A	Allama Iqbal School (Five Star)	CDS	812	2,145	2,957
490	3336	JOHAR	FEDERAL-A	AL-ASIF SQUARE	CDS	1,905	3,723	5,628
491	1631 3145	Surjani	Federal-A	Kiran Arcade (P-19)	CDS	1,050	2,390	3,440
492 493	3558	Surjani JOHAR	Federal-A FEDERAL-A	Miskeenabad AL MEMON CHS	CDS	1,206 2,346	1,276 4,905	2,482
494	891	Surjani	Federal-A	Sewerage Plant	CDS	782	2,407	7,251 3,189
495	194	GULSHAN	Federal-A	Aziz Industries	CDS	1,107	1,769	2,876
496	892	JOHAR	FEDERAL-A	KHAN BROTHERS	CDS	1,579	3,347	4,926
497	3339	JOHAR	FEDERAL-A	PETAL RESIDENCY	CDS	671	3,706	4,378
498	3162	GULSHAN	Federal-A	Regal Textile	CDS	874	1,116	1,990
499 500	3918 186	JOHAR GULSHAN	FEDERAL-A	DELUXE TOWN	CDS	2,911	4,782	7,693
501	3164	Surjani	Federal-A Federal-A	Basra Soap Gabol Town	CDS	277 1,119	1,499 1,675	1,775 2,794
502	1201	GULSHAN	Federal-B	Abid Plaza	CDS	1,119	5,406	6,575
503	3466	GULSHAN	Federal-B	Anwar-ul-Uloom	CDS	1,207	4,017	5,224
504	206	GULSHAN	Federal-B	Ruqaiyya Square	CDS	1,047	5,035	6,082
505	209	Surjani	Federal-B	Taimuria Library	CDS	1,998	5,661	7,659
506	3335	Surjani	Federal-B	Dental College	CDS	1,178	2,548	3,726
507	211	Surjani	Federal-B	Habib Foundation	CDS	1,149	2,466	3,615
508 509	1199 1203	GULSHAN GULSHAN	Federal-B Federal-B	Gulberg Farooq-e-Azam	CDS	1,222 957	1,994 3,734	3,216 4,692
510	217	GULSHAN	Federal-B	Edhi Home (Old Maymar Housing)	CDS	934	2,255	3,190
511	3605	Surjani	Federal-B	Rizwan Plaza	CDS	2,067	4,648	6,715
512	2097	GULSHAN	Federal-B	Aisha Manzil (Old Meena)	CDS	910	2,098	3,007
513	197	GULSHAN	Federal-B	KMC Water Pump	CDS	1,046	3,222	4,268
	192	GULSHAN	Federal-B	Chand Market	CDS	1,299	2,641	3,941
514				Laura Channa	DDS	587	630	1,216
515	4092	GULSHAN	Federal-B	Lyra Shoes				
	4092 191 3325	GULSHAN GULSHAN GULSHAN	Federal-B Federal-B Federal-B	Lyra Snoes Plastic Crafter Union Textile	CDS CDS	614	1,106 781	1,719 1,268

GIS deta			Г		·	1	1	
S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
519	215	Surjani	Federal-B	Labour Square	CDS	747	2,979	3,725
520	187	Surjani	Federal-B	New Karachi	CDS	1,617	1,777	3,395
521 522	1200 204	GULSHAN Surjani	Federal-B Federal-B	Tahir Villa Supreme Height (Old Rizwan Plaza)	CDS CDS	2,133 1,266	4,788 2,565	6,921 3,830
523	205	GULSHAN	Federal-B	UBL Sports	CDS	761	3,737	4,498
524	189	Surjani	Federal-B	Rahim Textile	CDS	830	1,309	2,139
525	3457	Surjani	Federal-B	Sareena	CDS	579	6,088	6,666
526	196	GULSHAN	Federal-B	R.I.G SCHOOL	CDS	1,317	285	1,602
527	3604	GULSHAN	Federal-B	Shafiq-II	CDS	1,064	1,585	2,650
528 529	188 3428	Surjani Surjani	Federal-B	RP Confectionary	CDS	447	1,686	2,134
530	193	GULSHAN	Federal-B Federal-B	PNSC Pyramid Center	CDS CDS	1,039 937	3,345 2,549	4,384 3,486
531	212	Surjani	Federal-B	KBR Society + Cap-5A	CDS	1,029	1,929	2,958
532	3165	Surjani	Federal-B	Pole-12 Sector 12-D	CDS	987	3,274	4,261
533	3287	Surjani	Federal-B	Namak Bank	CDS	2,865	1,602	4,466
534	3456	Surjani	Federal-B	Summit Bank	CDS	915	2,226	3,141
535	213	Surjani	Federal-B	Shamsi Garment	CDS	1,182	5,073	6,255
536 537	214 225	GULSHAN	Federal-B	South Federal B	CDS	844	3,607	4,451
538	225	Surjani GULSHAN	Federal-B Federal-B	SHAH KHALID COLONY (OLD ROSHAN BAGH) M. Yousuf Igbal +	CDS CDS	590 386	2,353 925	2,943 1,311
539	216	GULSHAN	Federal-B	Ancholi Society	CDS	1,445	1,543	2,988
540	208	GULSHAN	Federal-B	Ayub Manzil	CDS	1,902	4,687	6,589
541	1198	GULSHAN	Federal-B	UK Square	CDS	879	4,080	4,959
542	3143	JOHAR	Federal-B	POLE - 20	CDS	1,979	4,022	6,000
543	195	GULSHAN	Federal-B	Abbas Square	CDS	457	4,406	4,863
544	222	GULSHAN	Federal-B	Progressive	CDS	1,326	2,794	4,121
545	3748	Surjani	Federal-B	Al-Akhwan Masjid	CDS	1,401	3,943	5,344
546	3163	Surjani	Federal-B	Al-Madina Godhra	CDS	1,475	2,745	4,220
547 548	224 1205	GULSHAN GULSHAN	Federal-B	Naseerabad (Khi Academy)	CDS	1,201	5,647	6,848
549	218	GULSHAN	Federal-B Federal-B	Shamim Appt. Cosmos Plaza	CDS CDS	2,187 579	5,299 2,307	7,486 2,886
550	190	GULSHAN	Federal-B	Saghir Center (Rashid Minhas)	CDS	1,116	3,468	4,583
551	890	GULSHAN	Federal-B	Al-Noor Society +	CDS	1,966	2,270	4,236
552	223	GULSHAN	Federal-B	Relax Appartment	CDS	971	1,341	2,312
553	220	GULSHAN	Federal-B	Eastern Services + Cap 6	CDS	732	3,903	4,635
554	2083	GULSHAN	Federal-B	Ideal Industry	CDS	1,261	4,092	5,353
555	1196	GULSHAN	Federal-B	Wonder Bread	CDS	1,108	3,039	4,147
556 557	3956 228	JOHAR JOHAR	GADAP	LUBNA FARM	CDS	29,953	9,241	39,194
558	227	JOHAR	GADAP GADAP	AGHA SHAHI HUDERWA	CDS CDS	42,281 19,296	557 259	42,839 19,554
559	229	JOHAR	GADAP	WAPDA O/H	CDS	47,846	130	47,976
560	3303	Bin Qasim	GADAP	GOLF COURSE (BAHRIA TOWN-1)	DDS	-	7,823	7,823
561	230	JOHAR	GADAP	DANISH FARM RMU	CDS	25,389	1,029	26,418
562	3484	Bin Qasim	GADAP	PRECINCT 10A (BAHRIA TOWN-2)	DDS	-	7,827	7,827
563	226	JOHAR	GADAP	DEH SHAH MUREED	CDS	46,792	411	47,203
564	4262	Bin Qasim	GADAP	BAHRIA TOWERS (Bahria-Town-4)	DDS	-	14,000	14,000
565	4261	Bin Qasim SOCIETY	GADAP	MIDWAY COMMERCIAL (Bahria-Town-3)	DDS	-	14,000	14,000
566 567	3410 3590	SOCIETY	GARDEN GARDEN	IBC GARDEN RMU PARSA CITY GARDEN	CDS CDS	586	723 609	1,309 609
568	232	SOCIETY	GARDEN	ZOO	CDS	115	5,752	5,867
569	3406	SOCIETY	GARDEN	NAGORI HOSPITAL	CDS	672	3,189	3,861
570	237	SOCIETY	GARDEN	AMBAJEE VILLAJEEE	CDS	213	2,464	2,677
571	231	SOCIETY	GARDEN	RAM SWAMI	CDS	653	4,851	5,504
572	234	SOCIETY	GARDEN	GARDEN-II	CDS	137	3,668	3,805
573	235	SOCIETY	GARDEN	ISMAILIA PLATINUM	CDS	21	3,637	3,657
574	236	SOCIETY	GARDEN	HOLY FAMILY	CDS	117	5,423	5,540
575 576	3309 251	SOCIETY	GARDEN	IBA-2	DDS	7	505	512
577	231	SOCIETY	GARDEN GARDEN	KARACHI SCHOLAR RMU KMC BUILDING	CDS CDS	1,586 95	5,191 4,555	6,777 4,650
578	248	SOCIETY	GARDEN	ADAMJI SCIENCE COLLEGE	CDS	109	4,555	4,650
579	254	SOCIETY	GARDEN	MAZAR-E-QUAID-3	CDS	-	9,420	9,420
580	240	SOCIETY	GARDEN	HOTI MARKET	CDS	-	3,255	3,255
581	3332	BALDIA	GARDEN	AZEEM PLAZA SS-1	CDS	11	2,552	2,563
582	250	BALDIA	GARDEN	QASIM BHAI MOOSA BHAI	CDS	578	4,317	4,895
583	243	BALDIA	GARDEN	SALEEM TERRACE + Cap	CDS	120	2,983	3,104
584	2011	DEFENCE	Garden	Star City	CDS	87	2,770	2,857
585 586	244 682	Orangi BALDIA	Garden	PASBAN MASJID	CDS	160	5,321	5,480
587	246	SOCIETY	GARDEN GARDEN	ANA CROWN CIVIL HOSPITAL-3	CDS DDS	339 655	3,792 2,633	4,130 3,288
588	253	SOCIETY	GARDEN	GURUMANDIR	CDS	295	5,125	5,420
589	247	DEFENCE	Garden	Naz Plaza	CDS	- 293	1,092	1,092
590	242	SOCIETY	GARDEN	REVENUE OFFICE	CDS	360	5,456	5,816
591	257	SOCIETY	GARDEN	NISHTER PARK + CAP-4	CDS	757	4,985	5,743
592	3552	SOCIETY	GARDEN	JJ APARTMENT	CDS	53	2,644	2,697
				· · · · · · · · · · · · · · · · · · ·				

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
593	256	DEFENCE	Garden	Income Tax Building	CDS	25	3,533	3,558
594	249	SOCIETY	GARDEN	EVERSHINE	CDS	582	4,193	4,775
595 596	3536 238	SOCIETY	GARDEN GARDEN	ABDUL MANAN FATIMID FOUNDATION	CDS	520 690	3,698 3,577	4,218 4,267
597	1137	SOCIETY	GARDEN	G. H. QASIM ROAD	CDS	-	2,837	2,837
598	200	SOCIETY	GARDEN	CITY GOVT. PRESS	CDS	932	4,925	5,857
599	245	Orangi	Garden	REXER LANE	CDS	2,198	5,328	7,525
600	2114	SOCIETY	GARDEN	FIA	CDS	-	4,670	4,670
601	252 258	SOCIETY	Garden GARDEN	State Life Building-11	DDS	-	2,878	2,878
603	2090	DEFENCE	GARDEN	CAPRI CINEMA Amma Tower	CDS	-	1,812 1,219	1,812 1,219
604	255	DEFENCE	Garden	Odean Center	CDS	89	4,354	4,443
605	241	SOCIETY	GARDEN	BANDOOQWALA	CDS	1,015	2,735	3,750
606	262	Bin Qasim	GHARO	GUIJO PUMPING	DDS	2,569	82	2,651
607	259	Bin Qasim	GHARO	Saakro Morr	CDS	3,831	722	4,554
608	3320 263	Bin Qasim Bin Qasim	GHARO	OLD GHARO PUMPING	DDS	-	6,870	6,870
610	264	Bin Qasim	GHARO GHARO	GHARIB SONS-1 GHARIB SONS-2	DDS	-	438 437	438 437
611	261	Bin Qasim	GHARO	LASHARI GOTH	CDS	14,867	1,466	16,333
612	260	Bin Qasim	GHARO	GHARO TEXTILE MILL	DDS	-	794	794
613	3123	DEFENCE	Gizri	Bahria Complex-4	DDS	-	1,561	1,561
614	3291	DEFENCE	Gizri	Bahria University	DDS	-	1,929	1,929
615	198	DEFENCE	Gizri	AL-Ayesha	CDS	21	1,747	1,768
616 617	3580 1211	DEFENCE DEFENCE	Gizri	Hussain Developers 11th Commercial RMU	CDS	7 88	3,594 3,747	3,601 3,835
618	3313	DEFENCE	Gizri Gizri	24th Comm Street RMU	CDS	130	4,957	5,087
619	2026	DEFENCE	Gizri	Ghardiali Flats	CDS	68	9,042	9,110
620	25	DEFENCE	Gizri	Jehangir Rehman	CDS	116	2,212	2,328
621	2151	DEFENCE	Gizri	SCADA-2 House Trafo	DDS	-	116	116
622	23	DEFENCE	Gizri	Tanzeem Toheed Commercial	CDS	84	4,880	4,964
623 624	3 1153	DEFENCE DEFENCE	Gizri	Defence-10	CDS	70	7,733	7,803
625	133	DEFENCE	Gizri Gizri	Sindh Medical College Bureau of Lab	CDS	49 18	6,682 4,239	6,731 4,257
626	2069	DEFENCE	Gizri	Ideal Bakery	CDS	116	10,006	10,122
627	3055	DEFENCE	Gizri	Khan of Kallat	CDS	53	6,147	6,200
628	1	DEFENCE	Gizri	Defence Pumping-1	CDS	63	5,058	5,121
629	3359	DEFENCE	Gizri	Defence-30	CDS	985	3,758	4,744
630	3360	DEFENCE	Gizri	Saudi Residency RMU	CDS	28	3,223	3,251
631 632	6 16	DEFENCE DEFENCE	Gizri Gizri	Bombay & Co. Hotel Mehran	CDS	32 18	5,580 8,293	5,612 8,311
633	202	DEFENCE	Gizri	Askari-2	CDS	7	7,152	7,159
634	2006	DEFENCE	Gizri	Mirza Sharif Baig	CDS	11	4,651	4,662
635	14	DEFENCE	Gizri	Defence-09	CDS	439	3,576	4,016
636	3556	DEFENCE	Gizri	Fleet Mess	DDS	7	4,120	4,127
637	2	DEFENCE	Gizri	Embassi Villa	CDS	74	7,765	7,838
638 639	7 5	DEFENCE DEFENCE	Gizri	Pak Crescent	CDS	37	6,641	6,678
640	19	DEFENCE	Gizri Gizri	Defence-07 Defence-12	CDS	232 116	7,438 6,865	7,670 6,981
641	12	DEFENCE	Gizri	Defence-02	CDS	42	5,812	5,854
642	8	DEFENCE	Gizri	Hira Appartments	CDS	7	5,976	5,983
643	4	DEFENCE	Gizri	Razi Tower RMU	CDS	68	8,721	8,789
644	15	SOCIETY	GIZRI	PARSI TRUST	CDS	864	4,870	5,734
645	18	DEFENCE DEFENCE	Gizri	NR Colony	CDS	290	5,943	6,233
646 647	2150 20	DEFENCE	Gizri Gizri	6th Street Badar RMU Clifton-2	CDS	486 317	5,651 7,095	6,137 7,412
648	32	DEFENCE	Gizri	PSO	CDS	14	7,095 4,691	4,705
649	29	DEFENCE	Gizri	CMH	CDS	374	5,054	5,428
650	22	DEFENCE	Gizri	P&T Colony	CDS	28	2,472	2,500
651	11	DEFENCE	Gizri	Glass Tower	CDS	46	4,488	4,534
652	3446	DEFENCE	Gizri	Khaliq-uz-Zaman Rd	CDS	25	4,041	4,066
653 654	31 203	DEFENCE DEFENCE	Gizri	Ashiana Appartment	CDS	35	3,724	3,759
655	9	DEFENCE	Gizri Gizri	KWSB Punjab Colony Anwer Ali	CDS	57	2,249 3,462	2,306 3,466
656	26	DEFENCE	Gizri	Hassan Terrace	CDS	- "	4,672	4,672
657	2052	DEFENCE	Gizri	Kh-e-Hafiz	CDS	54	4,366	4,419
658	27	DEFENCE	Gizri	Korangi Road	CDS	18	4,805	4,824
659	28	DEFENCE	Gizri	Kh-e-Momin (Hilal Park)	CDS	32	6,385	6,416
660	30	DEFENCE	Gizri	Forum	DDS	-	1,852	1,852
661 662	1210 782	DEFENCE GULSHAN	Gizri	SCADA-1	DDS	- 000	145	145
663	813	GULSHAN	GOLIMAR GOLIMAR	Dyre Textile Shah-e-Karbala	CDS	898 46	4,544 6,850	5,442 6,897
664	3911	Orangi	GOLIMAR	DEEWAN STEEL	DDS	-	1,589	1,589
665	3279	Orangi	GOLIMAR	HONDA PAKISTAN	DDS	-	1,737	1,737
666	803	Orangi	GOLIMAR	H. NIZAMUDDIN	CDS	673	2,934	3,607

667	Length-(m)	GIS Total Feeder Length-(m)
669 3851 Orangi GOLIMAR SADIQ RE-ROLLING CDS 4 670 832 Orangi GOLIMAR SHAFI & CO. CDS 651 671 833 Orangi GOLIMAR REPUBLIC-II CDS 188 672 3404 Orangi GOLIMAR AMSONS CDS 610 673 3737 Orangi GOLIMAR AMSONS CDS 418 674 3856 Orangi GOLIMAR MOLOAD VILLAGE CDS 298 675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FALZAN STEEL DDS - 677 3738 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR REHBER INDUSTRY CDS 7 681 798	3,814	4,563
670 832 Orangi GOLIMAR SHAFI & CO. CDS 651 671 833 Orangi GOLIMAR REPUBLIC-II CDS 188 672 3404 Orangi GOLIMAR AMSONS CDS 610 673 3737 Orangi GOLIMAR SAF COMPANY CDS 418 674 3856 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 675 839 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR ALIMILURMU CDS 1,075 682 3843 <td>2,283</td> <td>2,303</td>	2,283	2,303
671 833 Orangi GOLIMAR REPUBLIC-II CDS 189 672 3404 Orangi GOLIMAR AMSONS CDS 610 673 3737 Orangi GOLIMAR SAF COMPANY CDS 418 674 3856 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RYBRID CELL DDS - 681 798 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR RIPBRID NOLITRY CDS 1,07 682 3843	2,831	2,835
672 3404 Orangi GOLIMAR AMSONS CDS 610 673 3737 Orangi GOLIMAR SAF COMPANY CDS 418 674 3856 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR CCCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3330 Orangi GOLIMAR RHYBRID CELL DDS - 681 798 Orangi GOLIMAR RHHBRID CELL DDS - 681 798 Orangi GOLIMAR RHHBRID CELL DDS - 682 3843 <td< td=""><td>3,710</td><td>4,361</td></td<>	3,710	4,361
673 3737 Orangi GOLIMAR SAF COMPANY CDS 418 674 3856 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR AI-Maroof Sweet RMU + CDS 1,075 683 818 GULSHAN GOLIMAR AI-Maroof Sweet RMU + CDS 3,55 684 <td>· · · · · ·</td> <td>3,420</td>	· · · · · ·	3,420
674 3856 Orangi GOLIMAR MOLADAD VILLAGE CDS 298 675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 679 3229 Orangi GOLIMAR CCCA COLA DDS - 680 3350 Orangi GOLIMAR RAZZAK STEEL DDS - 681 798 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GULSHAN GOLIMAR AI-MADO Sweet RMU + CDS 1,26 684 2197 Orangi GOLIMAR AI-BERCON SWEET RMU + CDS 1,26 685		6,372
675 839 Orangi GOLIMAR TAHIR ALI DDS - 676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR RHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR RHBER INDUSTRY CDS 1,075 684 2197 Orangi GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 <td< td=""><td></td><td>4,977</td></td<>		4,977
676 3444 Orangi GOLIMAR FAIZAN STEEL DDS - 677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR REHBER INDUSTRY CDS 1,075 683 818 GULSHAN GOLIMAR REHBER INDUSTRY CDS 1,075 684 2197 Orangi GOLIMAR Al-Maroof Sweet RMU + CDS 1,075 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 1,181 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181		4,439
677 3738 Orangi GOLIMAR HAJI ASIF DDS - 678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GULSHAN GOLIMAR AI-Maroof Sweet RMU + CDS 1,075 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 1,181 686 819 Orangi GOLIMAR ASIO AFRICAN CDS 1,218 687 3100 Orangi GOLIMAR GHANI CHOWRANGI CDS 1,218	1,397	1,397
678 3147 Orangi GOLIMAR COCA COLA DDS - 679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GULSHAN GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOWEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GRAMO PHONE CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 112 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 161	1,056	1,056
679 3229 Orangi GOLIMAR RAZZAK STEEL DDS - 680 3350 Orangi GOLIMAR HYBRID CELL DDS - 681 798 Orangi GOLIMAR RHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GULSHAN GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GRAMO PHONE CDS 120 687 3109 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 121 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61	1,053	1,053
GREEN GOLIMAR HYBRID CELL DDS	1,270 1,279	1,270 1,279
681 798 Orangi GOLIMAR REHBER INDUSTRY CDS 7 682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GULSHAN GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOYEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GHANI CHOWRANGI CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 128 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 66 691 315 GULSHAN GuIshan GuIshan GuIshan CDS 593 </td <td>1,809</td> <td>1,809</td>	1,809	1,809
682 3843 Orangi GOLIMAR DALL MILL RMU CDS 1,075 683 818 GUSHAN GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GRAMO PHONE CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 593 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan Frum Developer CDS 1,105		2,026
683 818 GULSHAN GOLIMAR Al-Maroof Sweet RMU + CDS 355 684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GHANI CHOWRANGI CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Gulshan Gulshan CDS 593 691 315 GULSHAN Gulshan 400 Bed Hospital CDS 593 692 3961 GULSHAN Gulshan Sindad CDS 1,105 693 3017 GULSHAN Gulshan Erum Developer CDS 1,210 </td <td>3,592</td> <td>4,666</td>	3,592	4,666
684 2197 Orangi GOLIMAR TRAILER DEVELOVEMENT CORPORATION CDS 463 685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GHANI CHOWRANGI CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 61 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Erum Developer CDS 1,105 694 1215 GULSHAN Gulshan Brun Developer CDS 228		4,980
685 3003 Orangi GOLIMAR ASIO AFRICAN CDS 1,181 686 819 Orangi GOLIMAR GHANI CHOWRANGI CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan Sindbad CDS - 693 3017 GULSHAN Gulshan Erum Developer CDS 1,105 694 1215 GULSHAN Gulshan Ferum Developer CDS 288 695 318 GULSHAN Gulshan Khursheed Homes CDS 408	3,368	3,831
686 819 Orangi GOLIMAR GHANI CHOWRANGI CDS 120 687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 1,205 694 1215 GULSHAN Gulshan Brum Developer CDS 1,205 694 1215 GULSHAN Gulshan Brum Developer CDS 289 695 318 GULSHAN Gulshan Brum Developer CDS 175	3,688	4,869
687 3109 Orangi GOLIMAR GRAMO PHONE CDS 188 688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 289 695 318 GULSHAN Gulshan Hordu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 484 698		3,904
688 823 Orangi GOLIMAR MEHRAN BOTTLER CDS 112 689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 289 695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan NESCOS CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 484 698 1212 GULSHAN Gulshan Station Road CDS 467 699	<u> </u>	3,971
689 3006 Orangi GOLIMAR SOVENIER TOBACCO CDS 61 690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Erum Developer CDS 1,105 694 1215 GULSHAN Gulshan Urdu College CDS 1,105 695 318 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Jamia Sibtain CDS 583		3,402
690 327 GULSHAN Gulshan Aziz Bhatti CDS 66 691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 288 695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701	3,104	3,166
691 315 GULSHAN Gulshan Gulshan Gulshan CDS 593 692 3961 GULSHAN Gulshan 400 Bed Hospital CDS - 693 3017 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 289 695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtatin CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191		2,797
693 3017 GULSHAN Gulshan Sindbad CDS 1,105 694 1215 GULSHAN Gulshan Erum Developer CDS 289 695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS -	3,904	4,497
694 1215 GULSHAN Gulshan Erum Developer CDS 288 695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS - <	1,724	1,724
695 318 GULSHAN Gulshan Urdu College CDS 175 696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684	4,025	5,131
696 325 GULSHAN Gulshan Khursheed Homes CDS 408 697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtatin CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	2,834	3,123
697 1213 GULSHAN Gulshan NESCOS CDS 844 698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	4,277	4,451
698 1212 GULSHAN Gulshan Station Road CDS 467 699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	4,435	4,842
699 3416 GULSHAN Gulshan Pipe Factory CDS 642 700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	3,890	4,733
700 2053 GULSHAN Gulshan Jamia Sibtain CDS 583 701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	4,241	4,709
701 324 GULSHAN Gulshan Faran Club (Old Ashraf Square) CDS 191 702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	7,738	8,380
702 321 SOCIETY GULSHAN PNS JOHAR CDS 17 703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -		3,749
703 1214 GULSHAN Gulshan Civic View CDS - 704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	3,955	4,145
704 319 SOCIETY GULSHAN KARACHI GAS CDS 417 705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -		6,215
705 331 GULSHAN Gulshan Holly Wood CDS 684 706 320 GULSHAN Gulshan National Stadium CDS -	4,791	4,791
706 320 GULSHAN Gulshan National Stadium CDS -	6,086	6,502
		3,335
707 3557 GULSHAN Gulshan AG-2+ Cap-2 CDS 32	4,010	4,010
707 3557 GULSHAN Gulshan AG-2+ Cap-2 CDS 32 708 3873 GULSHAN Gulshan AQSA TOWER CDS 765		2,303 4,569
709 316 GULSHAN Gulshan Orient Builders CDS 345	· ·	4,688
710 335 GULSHAN Gulshan NIPA Pumping CDS 564	1	4,459
711 328 GULSHAN Gulshan COD Hill CDS 958		3,830
712 334 GULSHAN Gulshan Shanti Nagar CDS 713	<u> </u>	3,092
713 330 GULSHAN Gulshan Rub Center CDS 1,334		5,233
714 326 GULSHAN Gulshan Exhibition CDS 338	4,359	4,697
715 329 GULSHAN Gulshan Mujahid Colony CDS 905	3,029	3,934
716 353 GULSHAN Gulshan Gul Telephone Exchange CDS 385	3,607	3,992
717 332 JOHAR Gulshan ASKARI-4 CDS -	8,624	8,624
718 1216 GULSHAN Gulshan Karson Complex CDS 36	6,312	6,348
719 323 GULSHAN Gulshan NCHS CDS 340		3,737
720 339 GULSHAN Gulshan Al-Azmat CDS 572		4,377
721 338 GULSHAN Gulshan Parkwala CDS 788		3,565
722 340 GULSHAN Gulshan Alladin Park CDS -	4,109	4,109
723 3118 GULSHAN Gulshan Mughal-e-Azam CDS 782		4,418
724 336 SOCIETY Gulshan GULSHAN-E-JAMAL 3 CDS 774		6,624
725 3169 JOHAR Gulshan NED RMU CDS 1,461		8,374
726 2100 GULSHAN Gulshan Rufi Heaven CDS 1,569		5,181
727 2124 GULSHAN Gulshan Azeem Khan Park CDS 208		7,123
728 343 GULSHAN Gulshan Lucky Center CDS 2,496		8,967
729 345 JOHAR Gulshan ASKARI-5 CDS - 730 3550 GULSHAN Gulshan Saima Royal Residency-1 CDS -	6,675	6,675
	3,427	3,427
		4,589
		9,254
		7,304
	-	7,168
		7,585
	3,535 998	3,535 1,525
737 346 GULSHAN Gulshan Training Center CDS 528 738 2120 GULSHAN Gulshan Mall Residency CDS -	3,416	3,416
739 348 GULSHAN Gulshan Suleman Plaza CDS 1,805		5,188
739 340 GUSHAN Gulshan Nursery CDS 834		4,273

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
741	112	JOHAR	GULSHAN	EMPIRE CENTRE	CDS	1,079	5,890	6,969
742	3421	SOCIETY	GULSHAN	RASHID MINHAS	CDS	496	5,873	6,369
743 744	3299 3315	SOCIETY GULSHAN	GULSHAN	ABDUL WAHEED SOHAIL PN	CDS DDS	198	10,192	10,390
745	333	GULSHAN	Gulshan Gulshan	Square # 1 EPB	CDS	-	2,990 2,303	2,990 2,303
746	347	GULSHAN	Gulshan	Al-Najeeb	CDS	783	4,962	5,744
747	3316	GULSHAN	Gulshan	Dream Land	DDS	-	3,082	3,082
748	351	GULSHAN	Gulshan	Asif & Zafar	CDS	1,305	5,360	6,664
749	822	Orangi	Haroonabad	FOUNDATION ENGINEERING	CDS	1,038	1,261	2,299
750 751	814 824	Orangi	Haroonabad	FREEDOM (old: GULF DYING)	CDS	328	1,846	2,175
752	824	Orangi Orangi	Haroonabad Haroonabad	STAR TEXTILE BASHIR TEXTILE	CDS	392	1,225 683	1,617 683
753	817	Orangi	Haroonabad	DOST MOHAMMAD	CDS	128	1,003	1,131
754	840	Orangi	Haroonabad	ABBAS STEEL	DDS	-	3,732	3,732
755	3126	Orangi	Haroonabad	AGS BATTERY	DDS	-	4,171	4,171
756	826	Orangi	Haroonabad	JEHLUM TEXTILE	CDS	-	3,836	3,836
757	3157	GULSHAN	Haroonabad	Nital Colony	CDS	53	3,721	3,774
758 759	816 3249	Orangi Orangi	Haroonabad	SITE TELEPHONE EXCHANGE	CDS	7	3,181	3,188
760	835	Orangi	Haroonabad Haroonabad	ABID INDUSTRY DADA CERAMIC	CDS	662	3,661 1,824	3,668 2,486
761	831	Orangi	Haroonabad	JAMAL INDUSTRY	CDS	279	2,314	2,486
762	836	Orangi	Haroonabad	SITE PUMPING	CDS	907	1,110	2,017
763	838	Orangi	Haroonabad	TYRE SOLE	CDS	25	4,386	4,411
764	820	Orangi	Haroonabad	AZAD FRIEND	CDS	94	5,024	5,118
765	3180	Orangi	Haroonabad	NOMAN STEEL	DDS	-	1,501	1,501
766	834	Orangi	Haroonabad	EASTERN FILM	CDS	228	5,548	5,776
767 768	3137 828	Orangi Orangi	Haroonabad Haroonabad	NAURAS ALAMGIR	CDS	1,640 598	6,004	7,644 2,975
769	827	Orangi	Haroonabad	METALAX -II	CDS	138	2,377 5,177	5,315
770	837	Orangi	Haroonabad	SP CHAMBER	DDS	-	1,971	1,971
771	793	Orangi	Haroonabad	PEERABAD	CDS	1,349	3,689	5,037
772	3592	Orangi	Haroonabad	LORENZO	DDS	-	1,622	1,622
773	3595	Orangi	Haroonabad	Nawab Brothers	DDS	-	1,698	1,698
774	3619	Orangi	Haroonabad	SEARLE PAK	DDS	-	909	909
775	3001	Orangi	Haroonabad	AA GHANI	CDS	11	3,948	3,959
776 777	3212 3099	Orangi Orangi	Haroonabad Haroonabad	SIDDIQ SONS_SITE MOONLIGHT	DDS CDS	145	1,288 4,483	1,288 4,628
778	811	Orangi	Haroonabad	AB GASES	CDS	7	2,331	2,338
779	3260	Orangi	Haroonabad	STEEL TRACK	DDS	-	1,539	1,539
780	3855	Orangi	Haroonabad	INDUS RAYON	CDS	1,379	2,358	3,737
781	3499	Orangi	Haroonabad	SHAH SONS	CDS	316	4,880	5,196
782	3991	Orangi	Haroonabad	Liberty Mills	DDS	-	1,603	1,603
783	785	Orangi	Haroonabad	MERCURY GARMENT	CDS	11	4,803	4,814
784	3844	Orangi UTHAL	Haroonabad	STERLING PLYWOOD	CDS	1,212	3,964	5,176
785 786	3131 3133	UTHAL	HUB HUB	HITE-5 MARBLE CITY	DDS DDS	-	17 17	17 17
787	3127	UTHAL	HUB	HITE-1	DDS	-	17	17
788	3128	UTHAL	HUB	HITE-2	DDS	_	17	17
789	3129	UTHAL	HUB	HITE-3	DDS	-	17	17
790	3130	UTHAL	HUB	HITE-4	DDS	-	17	17
791	3132	UTHAL	HUB	HITE-6	DDS	-	17	17
792	3092	UTHAL	HUB	BOLAN CASTING -1	CDS	-	2,204	2,204
793 794	3857 3091	UTHAL	HUB	CHEEZALABD RMU (old: HUMAYUN SAGHIR)	CDS	2,806	5,000	7,806
794	3185	UTHAL	HUB HUB	MIAN GIANI RMU LATIF JUTE	CDS	12,574 3,686	310 3,871	12,884 7,557
796	3030	UTHAL	HUB	DEGASH	CDS	2,862	1,006	3,867
797	3721	UTHAL	HUB	HITE-7	DDS	-	16	16
798	3093	UTHAL	HUB	BOLAN CASTING -2	CDS	-	5	5
799	3094	UTHAL	HUB	N.P WATER PROFF	CDS	-	699	699
800	3028	UTHAL	HUB	BALOCHISTAN PRACTICAL BOARD	CDS	13,060	2,870	15,929
801	3159	UTHAL	HUB	AGRI AUTOS	DDS	46.504	4,656	4,656
802 803	3031 3095	UTHAL	HUB HUB	PAWEL CELL BALOCHISTAN FOUNDRY	CDS	46,501 4	716 1,498	47,217 1,502
804	3096	UTHAL	HUB	AMAAN STEEL -1	DDS	- 4	561	561
805	3097	UTHAL	HUB	AMAAN STEEL -2	DDS	-	562	562
806	3832	UTHAL	HUB	HITE-8	DDS	-	18	18
807	3480	UTHAL	HUB	PAKISTAN TELEPHONE CABLE	DDS	-	864	864
808	3479	UTHAL	HUB	PIONEER CABLE	DDS	-	919	919
809	3029	UTHAL	HUB	INTERNATIONAL GUM	CDS	32,461	3,023	35,484
810	3184	UTHAL	HUB	JUMA KHAN	CDS	57,586	6,628	64,214
811 812	3606 4042	UTHAL UTHAL	HUB	SAKRAN NGM STEEL MILL	CDS	76,065	6,687	82,752
813	3683	UTHAL	HUB HUB	NGM STEEL MILL GATRON IND. LTD	DDS	-	1,300 900	1,300 900
-10	3236	UTHAL	HUB	TARIQ RAFI	DDS	-	3,135	3,135

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
815	3027	UTHAL	HUB	BALOCHISTAN POLY PRODUCT	CDS	849	371	1,220
816	3781	SOCIETY	JACCOB LINE	A A ENTERPRISES	DDS	-	4,619	4,619
817 818	3487 1223	SOCIETY	JACCOB LINE JACCOB LINE	ISMAIL YOUNUS FALAK RMU +	CDS	1,020	7,245 4,755	8,265 5,415
819	363	SOCIETY	JACCOB LINE JACCOB LINE	SINDHI MUSLIM-2	CDS	227	3,667	3,894
820	3297	SOCIETY	JACCOB LINE	CENTRAL PLAZA-A	DDS	350	1,889	2,239
821	3298	SOCIETY	JACCOB LINE	CENTRAL PLAZA-B	DDS	1,459	1,925	3,385
822	3489	SOCIETY	JACCOB LINE	SWEEPER QUARTER	CDS	336	3,076	3,412
823	3517 368	SOCIETY	JACCOB LINE	NIC	CDS	683	4,947	5,630
824 825	364	SOCIETY	JACCOB LINE JACCOB LINE	HASHOO APARTMENT CDGK PARKING PLAZA	CDS	345 659	4,947 2,612	5,292 3,271
826	380	SOCIETY	JACCOB LINE	OLD JACOBLINES	CDS	843	1,422	2,265
827	365	SOCIETY	JACCOB LINE	KDA LOW COST	CDS	339	3,538	3,877
828	371	SOCIETY	JACCOB LINE	WATER BOOSTING	CDS	622	3,393	4,015
829	3110	SOCIETY	JACCOB LINE	ZAIN RMU	CDS	6,192	6,210	12,403
830	360	SOCIETY	JACCOB LINE	PECHS BLOCK-2	CDS	1,004	4,766	5,769
831 832	362 3473	SOCIETY	JACCOB LINE	BABAR GROUND	CDS	192 570	6,135	6,326
833	3471	SOCIETY	JACCOB LINE JACCOB LINE	AL GHAFOOR CHALET PIA SQUASH COMPLEX	CDS	355	5,309 5,306	5,878 5,661
834	369	SOCIETY	JACCOB LINE	KYANI SHAHEED	CDS	162	3,796	3,958
835	367	DEFENCE	JACCOB LINE	Panorama	CDS	11	2,495	2,506
836	3891	SOCIETY	JACCOB LINE	FAZAL PAN RMU	CDS	-	2,995	2,995
837	370	SOCIETY	JACCOB LINE	JACOBLINES COMPLEX-1	CDS	-	3,208	3,208
838 839	356 377	SOCIETY DEFENCE	JACCOB LINE	QUAID-E-AZAM-2	CDS	263	4,524	4,787
840	361	SOCIETY	JACCOB LINE JACCOB LINE	Burns Garden SHAHRAH E QUAIDEEN	CDS	53 260	6,120 5,833	6,172 6,093
841	3347	SOCIETY	JACCOB LINE	BAHRIA TOWN TOWER	DDS	-	3,207	3,207
842	2167	SOCIETY	JACCOB LINE	COP RMU	CDS	-	3,811	3,811
843	358	SOCIETY	JACCOB LINE	MUSLIMABAD	CDS	1,055	4,873	5,928
844	373	SOCIETY	JACCOB LINE	ARMY FLAT	CDS	280	2,176	2,456
845	3104	SOCIETY	JACCOB LINE	SULEMAN ARCADE	CDS	-	1,967	1,967
846 847	1140 3503	SOCIETY	JACCOB LINE JACCOB LINE	FOUR SQUARE MOONA ARCADE	CDS	337 1,262	5,977 5,149	6,314 6,411
848	374	DEFENCE	JACCOB LINE JACCOB LINE	Mehboob Chamber	CDS	1,262	3,453	3,471
849	381	DEFENCE	JACCOB LINE	SM Shahid	CDS	6	2,580	2,586
850	375	DEFENCE	JACCOB LINE	Batala	CDS	7	2,266	2,273
851	896	DEFENCE	JACCOB LINE	Saifee Foundation	CDS	42	2,638	2,680
852	359	SOCIETY	JACCOB LINE	TARIQ ROAD	CDS	291	5,795	6,086
853 854	1136 383	SOCIETY	JACCOB LINE	FAYYAZ CENTER	CDS	116 43	4,087	4,203
855	379	SOCIETY	JACCOB LINE JACCOB LINE	JINNAH COMPLEX JENICA CENTER	CDS	456	1,237 2,979	1,281 3,435
856	384	SOCIETY	JACCOB LINE	MAKRO HABIB	DDS	231	1,794	2,024
857	378	DEFENCE	JACCOB LINE	Aram Bagh	CDS	91	4,846	4,937
858	895	SOCIETY	JACCOB LINE	DMC HOSTEL	CDS	1,084	5,099	6,183
859	382	SOCIETY	JACCOB LINE	NOORANI KABAB	CDS	104	5,018	5,122
860	376	DEFENCE	JACCOB LINE	Rimpa Sky Line	CDS	14	3,930	3,944
861 862	366 372	DEFENCE DEFENCE	JACCOB LINE JACCOB LINE	Palace Theater Parsi Relief	CDS	139	3,522 1,902	3,661 1,902
863	3563	SOCIETY	Jail	SANA APPTMENT RMU	CDS	-	3,226	3,226
864	2103	SOCIETY	Jail	UBL FLATS	CDS	321	4,150	4,471
865	2047	GULSHAN	Jail	Nagwan Village	CDS	154	2,530	2,684
866	2168	SOCIETY	Jail	HAJI IRSHAD	CDS	-	4,140	4,140
867	96 2121	SOCIETY	Jail	KHALID NAGORI	CDS	153	4,820	4,973
868 869	2121	SOCIETY	Jail Jail	BAHADUR YAR JUNG AL-NAZAR	CDS	340 269	4,614 3,458	4,954 3,727
870	1361	SOCIETY	Jail	JAIL	CDS	298	2,959	3,727
871	3385	SOCIETY	Jail	RASOOL BAGH	CDS	806	3,201	4,006
872	2051	SOCIETY	Jail	NOORI BABA	CDS	372	2,283	2,655
873	2091	SOCIETY	Jail	SHAHEEN LAWN	CDS	490	3,271	3,761
874	3566	GULSHAN	Jail 	Sanitary Shop	CDS	95	3,319	3,413
875 876	2021 3560	GULSHAN SOCIETY	Jail	Haji Mureed RMU AMIL COLONY	CDS	216	3,377	3,592
877	2045	SOCIETY	Jail Jail	NOWSHERWANJEE	CDS	370 1,666	2,985 4,320	3,356 5,986
878	2030	GULSHAN	Jail	Baloch Hotel +	CDS	144	2,441	2,586
879	3547	GULSHAN	Jail	Rehbar Club	CDS	229	3,758	3,987
880	3549	GULSHAN	Jail	Talib Colony	CDS	53	3,735	3,788
881	2169	SOCIETY	Jail	PECHS-F	CDS	408	5,575	5,983
882	2096	SOCIETY	Jail	REHMANI GARDEN	CDS	648	1,721	2,370
883 884	357 1126	SOCIETY	Jail Jail	CLAYTON QUARTERS AMEENABAD	CDS	1,196	2,614 3,687	3,810 3,705
885	2074	SOCIETY	Jail	NAWAB ISMAIL	CDS	1,631	4,013	5,644
886	3540	SOCIETY	Jail	WAQAS GAS	CDS	421	1,723	2,144
887	2160	SOCIETY	Jail	SOCIETY CINEMA	CDS	141	3,155	3,296
888	3534	SOCIETY	Jail	GUJRAT COLONY	CDS	8	4,063	4,071

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
889	2018	GULSHAN	Jail	Peetal Gali	CDS	7	3,799	3,806
890	4114	SOCIETY	Jail	SINDH MASS TRANSITAUTHORITY	DDS	-	910	910
891	3059	JOHAR	JOHAR	AFNAN DUPLEX	CDS	2,396	2,554	4,951
892	3831	JOHAR	JOHAR	QALANDARABAD RMU	CDS	2,463	1,635	4,098
893	3115	JOHAR	JOHAR	PHOENIX HEIGHT	CDS	1,741	4,288	6,028
894 895	3086 304	JOHAR	JOHAR	UNI Gold RMU	CDS	1,099	5,525	6,624
896	3725	JOHAR JOHAR	JOHAR JOHAR	GLOBE CENTER TALHA COTTAGES	CDS CDS	2,023	1,708 1,435	3,731 1,435
897	3310	JOHAR	JOHAR	DOW UNIVERSITY	CDS	_	1,517	1,517
898	294	JOHAR	JOHAR	OJHA SANITORIUM	CDS	1,981	2,334	4,314
899	311	JOHAR	JOHAR	KDA PALACE VIEW	CDS	597	4,300	4,897
900	302	JOHAR	JOHAR	SANA AVENUE	CDS	1,464	3,257	4,722
901	296	JOHAR	JOHAR	SAFARI BLESSING	CDS	2,031	4,044	6,075
902	305	JOHAR	JOHAR	SHERATON SQUARE	CDS	3,317	2,392	5,709
903	293	JOHAR	JOHAR	METEROLOGICAL DEPARTMENT	CDS	1,178	3,506	4,684
904	3179	JOHAR	JOHAR	TIPU SULTAN SOCIETY	CDS	1,650	5,263	6,912
905 906	299 3714	JOHAR JOHAR	JOHAR	CHAPPLE BUILDER	CDS	1,407	3,604	5,011
907	3973	JOHAR	JOHAR JOHAR	PINK PARK RMU PHNI RESORT RMU (old name: RASHIDI GOTH RM	CDS CDS	4,264	1,866 4,946	6,131 8,470
908	2031	JOHAR	JOHAR	BISMILLAH TOWER	CDS	3,524	2,318	2,318
909	310	JOHAR	JOHAR	P.H.A.	CDS	-	2,471	2,316
910	1229	JOHAR	JOHAR	DECENT GARDEN	CDS	2,207	1,474	3,681
911	3761	JOHAR	JOHAR	S S BUILDERS	CDS	2,176	3,100	5,276
912	1232	JOHAR	JOHAR	H.E.J	CDS	-	6,832	6,832
913	307	JOHAR	JOHAR	KARACHI UNIVERSITY VI	CDS	-	7,872	7,872
914	314	JOHAR	JOHAR	MALIK SOCIETY	CDS	3,571	5,832	9,403
915	3722	JOHAR	JOHAR	SHAEZ RESIDENCY	CDS	3,001	3,155	6,157
916	3080	JOHAR	JOHAR	KHI. MEMON SOCIETY	CDS	1,665	6,258	7,924
917	3731	JOHAR	JOHAR	GUL HOUSES RMU	CDS	1,069	2,926	3,995
918 919	295 3213	JOHAR JOHAR	JOHAR	MARORA GOTH	CDS	1,746	6,871	8,617
920	308	JOHAR	JOHAR JOHAR	RIM JHIM TOWER GEOLOGICAL SURVEY OF PAKISTAN (GSP)	CDS CDS	1,311 1,992	3,099 2,064	4,410 4,055
921	3262	JOHAR	JOHAR	JUBILEE GATE	CDS	2,196	2,004	4,033
922	306	JOHAR	JOHAR	SUPARCO	CDS	2,155	3,194	5,349
923	3801	JOHAR	JOHAR	NAVY MERCHANT CHS	CDS	6,880	6,373	13,253
924	3120	JOHAR	JOHAR	PAK SCIENTIFIC SOCIETY	CDS	3,336	4,499	7,834
925	3972	JOHAR	JOHAR	KARACHI UNIVERSITY EMPLOYEE SOCIETY	DDS	2,067	5,790	7,857
926	3111	JOHAR	JOHAR	PILI BHEET	CDS	839	7,609	8,449
927	309	JOHAR	JOHAR	ABDUL GHANI	CDS	3,292	1,836	5,129
928 929	3426 3114	JOHAR JOHAR	JOHAR	RAFI PREMIER RESIDENCY	CDS	-	3,757	3,757
930	3056	JOHAR	JOHAR JOHAR	DUBAI MALL 2000 RMU CROWN GARDEN	CDS	2,409 2,201	1,256 1,451	3,665 3,652
931	1228	JOHAR	JOHAR	PREM VILLAS	CDS	3,587	9,128	12,715
932	300	JOHAR	JOHAR	AGHA KHAN TRUST	CDS	2,334	4,212	6,546
933	301	JOHAR	JOHAR	BHITTAIABAD	CDS	1,856	1,850	3,707
934	3419	JOHAR	JOHAR	AREESHA CHS (old Name: JOHAR COMPLEX S/S)	CDS	1,735	3,691	5,426
935	3232	JOHAR	JOHAR	PIA SOCIETY	CDS	1,755	2,314	4,069
936	3156	JOHAR	JOHAR	IBA STAFF COLONY	CDS	-	5,117	5,117
937	3475	JOHAR	KDA-33	CAPITAL HOUSING SOCIETY 01	CDS	3,967	7,581	11,548
938	3476	JOHAR	KDA-33	POST OFFICE SOCIETY	CDS	1,378	4,445	5,822
939 940	4043 3276	JOHAR	KDA-33	ABDUL REHMAN	CDS	878	1,465	2,344
940	405	JOHAR JOHAR	KDA-33 KDA-33	SAADI TOWN RMU ASPHALT PLANT	CDS	5,682 3,859	951 5,826	6,632 9,686
942	3442	JOHAR	KDA-33 KDA-33	RUPALI RMU	CDS	4,228	5,826	9,686
943	398	JOHAR	KDA-33	JIWANI HEIGHTS	CDS	1,364	10,467	11,831
944	400	JOHAR	KDA-33	KIRAN HOSPITAL	CDS	3,481	3,350	6,831
945	399	JOHAR	KDA-33	HADIABAD	CDS	2,649	3,660	6,308
946	404	JOHAR	KDA-33	PRINCE ALI	CDS	2,785	12,816	15,600
947	416	JOHAR	KDA-33	SUNLAY DEVELOPERS	CDS	1,484	6,538	8,022
948	414	JOHAR	KDA-33	KAKA KHAIL	CDS	5,389	6,561	11,950
949	3061	JOHAR	KDA-33	MEERIOTH SOCIETY	CDS	10,393	5,768	16,162
950 951	3435 3535	JOHAR JOHAR	KDA-33	MEHRAN TOWER	CDS	3,571	4,449	8,020
951	2104	JOHAR	KDA-33 KDA-33	SHAHEED MAKHDOOM BILAWAL SACHAL SARMAST (old: AFGHAN BASTI)	CDS	2,883	3,080 523	3,927 3,406
953	3771	JOHAR	KDA-33 KDA-33	ZIKRIA GOTH	CDS CDS	2,883 5,573	7,931	13,504
954	410	JOHAR	KDA-33	FANCY HEIGHTS	CDS	5,573	9,061	9,601
955	3412	JOHAR	KDA-33	MADRAS SOCIETY	CDS	348	7,265	7,613
956	415	JOHAR	KDA-33	RIZVIA SOCIETY	CDS	4,511	5,462	9,973
957	411	JOHAR	KDA-33	KWSB-I	DDS	-	2,420	2,420
958	3870	JOHAR	KDA-33	PAK LAND	CDS	3,686	2,251	5,937
959	403	JOHAR	KDA-33	SAHAFI COLONY	CDS	2,839	7,582	10,421
960	3681	JOHAR	KDA-33	AMROHA SOCIETY	CDS	6,433	4,757	11,190
961	408	JOHAR	KDA-33	AL-AZHAR GARDEN	CDS	4,239	2,116	6,355
962	397	JOHAR	KDA-33	BISMILLAH MARKET	CDS	10,243	6,723	16,966

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
963	3058	JOHAR	KDA-33	IONOSPHERIC LAB	CDS	99	8,284	8,383
964 965	406 409	JOHAR JOHAR	KDA-33	PIONEER CITY	CDS	-	7,192	7,192
966	3119	JOHAR	KDA-33 KDA-33	REEN LAND (old name: GREEN LAND CITY (POLE 7) KDA EMPLOYEE SOCIETY	CDS	2,333 2,759	11,029 9,576	13,362 12,336
967	3464	JOHAR	KDA-33	AGRO EXPORT PROCESSING ZONE	CDS	1,159	6,195	7,354
968	3057	JOHAR	KDA-33	PAF CHOTTA MALIR	CDS	2,991	4,544	7,536
969	3415	JOHAR	KDA-33	POLICE SOCIETY	CDS	1,913	3,650	5,563
970	4055	JOHAR	KDA-33	SOOMRA CHS	DDS	8,771	4,500	13,271
971	3318	JOHAR	KDA-33	HALARI MEMON SOCIETY	CDS	4,323	4,371	8,694
972 973	3247 3685	JOHAR JOHAR	KDA-33 KDA-33	KATHIAWAR SOCIETY GULISTAN CHS 1	CDS	1,229 995	3,818 5,320	5,047 6,315
974	3686	JOHAR	KDA-33	JAMALI BRIDGE	CDS	1,097	5,695	6,792
975	3730	JOHAR	KDA-33	SECRETARY GOVT CHS	CDS	1,204	3,865	5,069
976	3886	JOHAR	KDA-33	SURTI MUSLIM CHS	DDS	1,476	2,199	3,674
977	4044	JOHAR	KDA-33	HAKEEM VILLAS	DDS	536	3,631	4,167
978	3741	JOHAR	KDA-33	MUHAMMAD FAROOQ	CDS	1,160	3,753	4,914
979 980	4040 3876	Johan	KDA-33	CLASS-4 (old: GAWALIOR SOCIETY)	DDS	3,066	7,135	10,202
980	4167	JOHAR JOHAR	KDA-33 KDA-33	WHITE HOUSE RMU SAIMA ELITE VILLAS	CDS CDS	2,670	5,350 6,265	8,020 6,265
982	3879	JOHAR	KDA-33	TULIP TOWER	CDS	2,238	1,179	3,417
983	402	JOHAR	KDA-33	SUPER HIGHWAY PUMPING	CDS	4,250	3,919	8,169
984	3853	JOHAR	KDA-33	RANGERS HEAD QUARTER	CDS	4,040	13,427	17,467
985	3334	JOHAR	KDA-33	PUNJABI SUDAGRAN	CDS	2,738	5,695	8,433
986	4004	JOHAR	KDA-33	JHANJAR GOTH	CDS	4,111	5,308	9,419
987	401	JOHAR	KDA-33	TEACHERS SOCIETY	CDS	8,350	7,415	15,765
988 989	412 1235	JOHAR JOHAR	KDA-33	KWSB-II	DDS	325	2,965	2,965
990	394	Bin Qasim	KDA-33 KEPZ	KDA FILTER PLANT GENERAL TYRE-3	DDS	- 325	7,012 2,595	7,337 2,595
991	389	Bin Qasim	KEPZ	P.M.T.F.	DDS	-	3,069	3,069
992	390	KORANGI	KEPZ	E.P.Z 01	DDS	-	150	150
993	3175	KORANGI	KEPZ	E.P.Z 04	DDS	-	144	144
994	387	Bin Qasim	KEPZ	LABOUR FLATS	CDS	5,403	3,602	9,005
995	4003	Bin Qasim	KEPZ	BORSTAL JAIL	CDS	1,730	7,919	9,648
996 997	385 3985	KORANGI	KEPZ	E.P.Z 02	DDS	-	162	162
998	3982	KORANGI KORANGI	KEPZ KEPZ	E.P.Z 08 E.P.Z 05	DDS DDS	-	136 126	136 126
999	3983	KORANGI	KEPZ	E.P.Z 06	DDS		135	135
1000	4010	Bin Qasim	KEPZ	500 QUARTER	CDS	1,352	1,151	2,503
1001	3984	KORANGI	KEPZ	E.P.Z 07	DDS	-	126	126
1002	391	Bin Qasim	KEPZ	AL-ATA TEX.	CDS	-	5,224	5,224
1003	4036	Bin Qasim	KEPZ	FEROZE MILLS LIMITED	DDS		2,246	2,246
1004	3837 3394	KORANGI KORANGI	KEPZ	MEDICO RMU	CDS	1,471	2,985	4,456
1005	395	Bin Qasim	KEPZ KEPZ	MUZZAFARABAD E.P.Z 03	CDS DDS	714	3,065 2,177	3,779 2,177
1007	3554	Bin Qasim	KEPZ	SHAH LATIF TOWN	CDS	3,680	3,973	7,653
1008	3153	KORANGI	KEPZ	52-A BUS STOP RMU	CDS	1,184	2,558	3,741
1009	3971	Bin Qasim	KEPZ	FAST RMU (raza city)	CDS	2,984	6,436	9,420
1010	393	KORANGI	KEPZ	SINDH ALKALLIES	CDS	4,164	3,509	7,673
1011	897	Bin Qasim	KEPZ	KMC ABBITOR	CDS	5,961	5,393	11,355
1012	3395	Bin Qasim	KEPZ	ROAD NO.2 RMU	CDS	1,755	2,349	4,104
1013	388 386	KORANGI Bin Qasim	KEPZ KEPZ	MAJEED COL. RMU CATTLE COLONY RMU	CDS	711 2,182	3,198 4,328	3,909 6,509
1015	392	KORANGI	KEPZ	INTERNATIONAL IND. LTD.	CDS	878	4,005	4,883
1016	3348	JOHAR	KESC HOSPITAL	COUNTY GARDEN	CDS	1,714	8,300	10,014
1017	3067	JOHAR	KESC HOSPITAL	A.D.B.P	CDS		1,792	1,792
1018	303	JOHAR	KESC HOSPITAL	JOHAR SQUARE	CDS	2,340	2,359	4,699
1019	2153	JOHAR	KESC HOSPITAL	USMAN TERRACE	CDS	1,630	4,914	6,544
1020	298	GULSHAN	KESC HOSPITAL	Time Square	CDS	610	7,027	7,637
1021	3053 3070	GULSHAN JOHAR	KESC HOSPITAL	Hussain Hazara Goth	CDS	1,893	2,595 3,913	4,488
1022	3177	GULSHAN	KESC HOSPITAL KESC HOSPITAL	FARHAN TOWER Pak Swiss	CDS	1,099	5,385	3,913 6,484
1024	3072	JOHAR	KESC HOSPITAL	SHALIMAR RMU	CDS	791	2,906	3,698
1025	3146	GULSHAN	KESC HOSPITAL	Gallant Summit	CDS	-	4,714	4,714
1026	3176	GULSHAN	KESC HOSPITAL	Nillat	CDS	465	6,799	7,263
1027	349	JOHAR	KESC HOSPITAL	HUNAID CITY	CDS	1,390	3,272	4,662
1028	3073	JOHAR	KESC HOSPITAL	BASERA TOWER	CDS	528	1,045	1,574
1029	3068	JOHAR	KESC HOSPITAL	KING RESIDENCY	CDS	1,049	4,485	5,534
1030 1031	4053 312	JOHAR JOHAR	KESC HOSPITAL KESC HOSPITAL	AL-KHAIR BAKERS ASKARI-9	CDS CDS	1,378	4,371 4,091	5,749 4,091
1031	341	JOHAR	KESC HOSPITAL KESC HOSPITAL	ASKARI-9 ALLIANCE ARCADE	CDS	1,909	2,462	4,091
1033	3069	JOHAR	KESC HOSPITAL	UNIVERSAL HEIGHTS	CDS	1,439	3,158	4,570
1034	3292	JOHAR	KESC HOSPITAL	ADMISSION BLOCK	CDS		3,638	3,638
1035	3074	JOHAR	KESC HOSPITAL	HAROON ROYAL CITY	CDS	1,430	493	1,924
1036	3084	JOHAR	KESC HOSPITAL	KDA OVERSEAS BUNGLOWS	CDS	840	3,544	4,384

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1037	3065	JOHAR	KESC HOSPITAL	GULSHAN-E-AMEEN TOWER	CDS	2,649	1,319	3,969
1038	3087	JOHAR	KESC HOSPITAL	RABIA CITY	CDS	1,581	5,646	7,226
1039	3440	JOHAR	KESC HOSPITAL	NEW LYARI C.H.S	CDS	1,454	6,679	8,134
1040	352	JOHAR	KESC HOSPITAL	BILLY'S PARADISE	CDS	394	4,081	4,474
1041	3075	JOHAR	KESC HOSPITAL	IQRA COMPLEX	CDS	410	997	1,407
1042	342	JOHAR	KESC HOSPITAL	SUNNY VIEW	CDS	1,805	1,888	3,694
1043 1044	3465 1217	JOHAR JOHAR	KESC HOSPITAL	AL-KHIZERA HEIGHTS	CDS	3,862	2,461	6,323
1044	3144	JOHAR	KESC HOSPITAL	GRAND CITY	CDS	9	3,939	3,948
1045	1231	JOHAR	KESC HOSPITAL KESC HOSPITAL	AZEEM GARDEN SINDH BALOCH SOCIETY	CDS	820 1,590	2,240 4,441	3,060 6,031
1047	3682	JOHAR	KESC HOSPITAL	ABAD BUILDERS	CDS	1,390	6,085	7,392
1048	354	JOHAR	KESC HOSPITAL	NOMAN HEAVEN	CDS	2,237	1,746	3,983
1049	313	JOHAR	KESC HOSPITAL	RUFI PARADISE	CDS	-	1,975	1,975
1050	3539	GULSHAN	KESC HOSPITAL	Allah Noor	CDS	1,623	5,942	7,566
1051	3621	JOHAR	KESC HOSPITAL	CITY TOWER AND SHOPPING MALL	CDS	-	3,831	3,831
1052	3684	JOHAR	KESC HOSPITAL	GREY HEIGHTS	CDS	2,292	1,940	4,232
1053	3062	JOHAR	KESC HOSPITAL	NED MECHANICAL DEPARTMENT	CDS	-	5,073	5,073
1054	3957	Gulshan	KESC HOSPITAL	CALLACHI COOPERATIVE HOUSING SOCIETY LTD	DDS	1,179	5,385	6,564
1055	4204	Gulshan	KESC HOSPITAL	FAYYAZ ILYAS	DDS	-	937	937
1056	437	KORANGI	KORANGI EAST	DUTECH	CDS	875	2,802	3,677
1057	435	KORANGI	KORANGI EAST	RCD BALL BEARING	CDS	349	3,617	3,966
1058	1237	KORANGI	KORANGI EAST	MERRIT PACKAGES	CDS	292	2,049	2,341
1059 1060	421 432	KORANGI KORANGI	KORANGI EAST KORANGI EAST	TIGER STEEL UNITED STEEL	CDS	1,029 462	2,699 2,341	3,728
1061	3045	KORANGI	KORANGI EAST KORANGI EAST	J-01 AREA RMU	CDS	1,930	5,131	2,803 7,061
1062	3021	KORANGI	KORANGI EAST	OPAL LAB.	CDS	1,028	3,250	4,278
1063	423	KORANGI	KORANGI EAST	DARULULLOOM	CDS	2,064	2,504	4,568
1064	425	KORANGI	KORANGI EAST	ZAFAR ICE	CDS	1,794	5,518	7,311
1065	426	KORANGI	KORANGI EAST	ELLAHI FLOUR	CDS	1,019	2,016	3,035
1066	3907	KORANGI	KORANGI EAST	NAVEENA EXPORT	CDS	-	1,734	1,734
1067	3105	KORANGI	KORANGI EAST	36-B RMU	CDS	967	2,595	3,562
1068	419	KORANGI	KORANGI EAST	ZAMANABAD RMU	CDS	1,370	1,621	2,991
1069	3698	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 1	CDS	-	5,748	5,748
1070	3699	KORANGI	KORANGI EAST	SAIMA LUXURY HOMES - 6	CDS	-	6,331	6,331
1071	428	KORANGI	KORANGI EAST	7 - A RMU	CDS	629	4,952	5,581
1072 1073	431 2066	KORANGI KORANGI	KORANGI EAST	ROTI PLANT	CDS	2,481	3,772	6,253
1073	4013	KORANGI	KORANGI EAST	LASSI RMU	CDS	1,271	3,860	5,131
1075	3312	KORANGI	KORANGI EAST KORANGI EAST	AMALGAMATED MILLAT TOWN	CDS	5,231 4,397	1,790 3,119	7,021 7,516
1076	3546	KORANGI	KORANGI EAST	SEC-10 RMU	CDS	4,397	3,819	8,216
1077	424	KORANGI	KORANGI EAST	DADABHOY PAPER (EAST PAK)	CDS	144	3,020	3,164
1078	438	KORANGI	KORANGI EAST	QABRISTAN RMU	CDS	1,159	698	1,857
1079	4024	KORANGI	KORANGI EAST	A&S Oil SS	CDS	41	1,695	1,736
1080	429	KORANGI	KORANGI EAST	BOOTS PHARMA	CDS	-	2,329	2,329
1081	4023	KORANGI	KORANGI EAST	PRECISSION RUBBER	CDS	167	4,146	4,313
1082	433	KORANGI	KORANGI EAST	RUSTAM ICE	CDS	2,390	4,690	7,080
1083	4083	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-4	DDS	-	5,241	5,241
1084	4242	KORANGI	KORANGI EAST	ARTISTIC MILLINERS UNIT-16	DDS	-	6,995	6,995
1085	3586	Bin Qasim	KORANGI EAST	NATIONAL MEDICAL CENTER RMU	CDS	597	4,611	5,208
1086 1087	436 434	KORANGI KORANGI	KORANGI EAST	MOON LIGHT	CDS	3,004	1,704	4,708 4,172
1087	434	KORANGI	KORANGI EAST KORANGI SOUTH	NOOR BHOUY D-AREA RMU	CDS	1,892 2,409	2,280 1,386	3,795
1089	448	KORANGI	KORANGI SOUTH	G. MARKET RMU	CDS	1,564	1,386	2,705
1090	1238	KORANGI	KORANGI SOUTH	JUMMA VILLAGE	CDS	3,266	803	4,069
1091	3564	KORANGI	KORANGI SOUTH	M. SHARIF RMU	CDS	2,288	3,199	5,487
1092	534	KORANGI	KORANGI SOUTH	LANDHI-C	CDS	1,497	5,565	7,062
1093	420	KORANGI	KORANGI SOUTH	K.TEL EXCH 03	CDS	2,381	3,290	5,671
1094	443	KORANGI	KORANGI SOUTH	VOCATIONAL INSTITUTE	CDS	3,642	4,472	8,114
1095	3838	KORANGI	KORANGI SOUTH	GHAUS PAK ROAD	CDS	2,331	2,449	4,780
1096	1248	KORANGI	KORANGI SOUTH	ALI AKBER SHAH RMU	CDS	2,330	1,695	4,025
1097	427	KORANGI	KORANGI SOUTH	5C BILALABAD (OLD BANK AL-FALAH RMU)	CDS	1,445	3,556	5,001
1098	3933	KORANGI	KORANGI SOUTH	BARAY WALA RMU	CDS	3,282	3,737	7,019
1099	471	KORANGI	KORANGI SOUTH	COMP. HIGH SCHOOL	CDS	2,026	4,363	6,389
1100	3932	KORANGI	KORANGI SOUTH	GULISTAN MARKET RMU	CDS	2,391	1,815	4,207
1101	430	KORANGI	KORANGI SOUTH	GHALIB CINEMA	CDS	2,001	2,489	4,490
1102	1250 1247	KORANGI	KORANGI SOUTH	MADINA COLONY RMU	CDS	2,642	3,088	5,731
1103 1104	477	KORANGI KORANGI	KORANGI SOUTH	OLD THANA RMU	CDS	1,801	1,505	3,306
1104	1240	KORANGI	KORANGI SOUTH	COAST GUARD	CDS	2,009	3,406	5,416
1105	1240	KORANGI	KORANGI SOUTH	M.A. MOHAMMADI TASVEER MAHEL	CDS CDS	3,292 4 568	2,959 220	6,251
1106	1242	KORANGI	KORANGI SOUTH KORANGI SOUTH	SOHAIL SHAMSI	CDS	4,568 5,733	4,326	4,787 10,058
1107	3565	KORANGI	KORANGI SOUTH	CHINIOT HOSPITAL	CDS	1,354	6,272	7,626
1109	3570	KORANGI	KORANGI SOUTH	RIAZ HOTEL RMU	CDS	620	4,897	5,517
1 1103 1				,			,,	-,,

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1111	462	KORANGI	KORANGI TOWN	PERAC	CDS	1,224	3,810	5,034
1112	444	KORANGI	KORANGI TOWN	PAK HI OIL	CDS	1,506	1,869	3,375
1113 1114	469 480	KORANGI KORANGI	KORANGI TOWN	QANDHARI FLOUR	CDS	2,311	4,423	6,734
1115	3052	KORANGI	KORANGI TOWN KORANGI TOWN	LONDON TANNERY AL MOHAMMAD GOTH RMU (OLD MILLAT TOWN	CDS	1,571 2,957	3,636 629	5,207 3,586
1116	3571	KORANGI	KORANGI TOWN	ABU ZAR BAKERY RMU	CDS	1,929	3,020	4,949
1117	474	KORANGI	KORANGI TOWN	TANZEEM FLOUR	CDS	17	3,625	3,643
1118	3375	KORANGI	KORANGI TOWN	PAK LEATHER	CDS	1,786	6,299	8,085
1119	445	KORANGI	KORANGI TOWN	AHMED INVESTMENT	CDS	40	895	935
1120 1121	481 3577	KORANGI KORANGI	KORANGI TOWN	FAKHRIA TANNERY	CDS	1,746	3,644	5,390
1121	4021	KORANGI	KORANGI TOWN KORANGI TOWN	ARA MACHINE RMU OBAID ASHFAQ	CDS	1,500 2,056	3,253 4,708	4,754 6,764
1123	3048	KORANGI	KORANGI TOWN	KORANGI ZOO	CDS	1,756	3,685	5,441
1124	473	KORANGI	KORANGI TOWN	ALI ICE	CDS	2,150	3,116	5,266
1125	459	KORANGI	KORANGI TOWN	FOUNDATION GAS	CDS	4,787	3,932	8,719
1126	2028	KORANGI	KORANGI TOWN	BILAL CHOWRANGI RMU	CDS	1,397	3,202	4,599
1127	460	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 02	CDS	2,227	1,554	3,781
1128 1129	3594 3579	KORANGI KORANGI	KORANGI TOWN	DENIM CLOTHING	DDS	-	541	541
1130	478	KORANGI	KORANGI TOWN KORANGI TOWN	FAROOQIICE SUPERLATIVE FEED	CDS	860 405	3,520 3,508	4,381 3,913
1131	465	KORANGI	KORANGI TOWN	LAKSON TOBACCO	CDS	1,666	2,043	3,709
1132	1254	KORANGI	KORANGI TOWN	CHISHTIA FLOUR	CDS	1,442	3,996	5,439
1133	4022	KORANGI	KORANGI TOWN	KHADDA ABADI RMU (SHARIFABAD RMU)	CDS	-	4,814	4,814
1134	3835	KORANGI	KORANGI TOWN	JIVANI TRADERS RMU	CDS	1,197	3,756	4,953
1135	3839	KORANGI	KORANGI TOWN	PRIME PACK	CDS	1,445	3,229	4,674
1136	454	KORANGI	KORANGI TOWN	RAHIL GUM IND.(OLD JINNAH HOUSE)	CDS	-	1,850	1,850
1137 1138	457 3585	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	WAH FLOUR	CDS	841	5,016	5,856
1139	3578	KORANGI	KORANGI TOWN	ANWER MAMA RMU GOLDEN HARVEST	CDS	2,167 763	2,115 3,875	4,282 4,638
1140	450	KORANGI	KORANGI TOWN	ZIA COLONY RMU	CDS	1,676	3,241	4,916
1141	452	KORANGI	KORANGI TOWN	POLY PROPLINE (old name: UNION CARBIDE)	CDS	330	4,463	4,793
1142	3044	KORANGI	KORANGI TOWN	ZAM ZAM	CDS	1,135	3,117	4,252
1143	476	KORANGI	KORANGI TOWN	SHAMA FLOUR	CDS	1,425	2,589	4,014
1144	3588	KORANGI	KORANGI TOWN	PEARL FABRICS	CDS	609	1,886	2,495
1145	467	KORANGI	KORANGI TOWN	L-AREA RMU	CDS	2,473	3,260	5,733
1146 1147	466 3355	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	HAND TOOL GETZ PHARMA	CDS DDS	1,310	3,268 1,848	4,578 1,848
1148	3581	KORANGI	KORANGI TOWN	BROOKS PHARMA	DDS	-	3,502	3,502
1149	4014	Korangi	KORANGI TOWN	ARTISTIC MILLINERS	DDS	-	1,457	1,457
1150	439	KORANGI	KORANGI TOWN	ASHRAF & CO.	CDS	654	1,609	2,263
1151	461	KORANGI	KORANGI TOWN	KAMRAN INDUSTRIES	CDS	-	3,095	3,095
1152	468	KORANGI	KORANGI TOWN	IRFAN ASSOCIATES	CDS	587	4,792	5,378
1153	3194	KORANGI	KORANGI TOWN	INDUS DYEING	DDS	2	2,866	2,868
1154 1155	479 2079	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	ASSOCIATED GLASS	DDS DDS	3,924	5,450	9,374 2,528
1156	4028	Korangi	KORANGI TOWN	NATIONAL REF. NO. 6 METRO ESTATE	DDS	-	2,528 2,184	2,328
1157	2137	KORANGI	KORANGI TOWN	NATIONAL REF. NO. 5	DDS	-	2,512	2,512
1158	456	KORANGI	KORANGI TOWN	SATTAR INDUSTRIES	CDS	795	4,937	5,733
1159	2043	KORANGI	KORANGI TOWN	NUCLEOUS HOUSE RMU	CDS	1,850	2,430	4,279
1160	3575	KORANGI	KORANGI TOWN	K-1 CENTRE RMU	CDS	1,546	3,186	4,732
1161	3079	KORANGI	KORANGI TOWN	ASPHALT PLANT (K.T)	CDS	1,163	3,085	4,248
1162 1163	458 472	KORANGI KORANGI	KORANGI TOWN KORANGI TOWN	HABIB KNIT WEAR REHMANIA MASJID	CDS	1,477 1,638	4,408 2,794	5,885 4,431
1164	3152	KORANGI	KORANGI TOWN	PAKHTOON CHOWK	CDS	1,638	3,557	5,283
1165	441	KORANGI	KORANGI TOWN	KHAS TRADERS	CDS	1,726	6,911	8,208
1166	440	KORANGI	KORANGI TOWN	KOR. TELE EXCH. 01	CDS	1,793	1,650	3,443
1167	475	KORANGI	KORANGI TOWN	MEHRAN JUTE	CDS	1,292	1,181	2,473
1168	455	KORANGI	KORANGI TOWN	PAK SHOE	CDS	1,246	5,229	6,475
1169	442	KORANGI	KORANGI TOWN	GAS TURBINE RMU	CDS	2,897	497	3,394
1170 1171	2098 453	KORANGI KORANGI	KORANGI TOWN	33-E	CDS	1,736	1,864	3,600
1171	3841	KORANGI	KORANGI TOWN KORANGI TOWN	POLE # 56 RMU KHALID ENTERPRIZE	CDS	1,660 945	3,104 3,066	4,764 4,011
1173	449	KORANGI	KORANGI TOWN	ITTEHAD OIL	CDS	2,094	1,915	4,011
1174	1151	KORANGI	KORANGI TOWN	SMART HI PRESSURE	CDS	311	1,940	2,251
1175	3811	KORANGI	KORANGI TOWN	CRESCENT PENCIL	CDS	1,034	2,928	3,962
1176	3363	KORANGI	KORANGI WEST	SANOFI AVENTIS	DDS	-	2,024	2,024
1177	3962	KORANGI	KORANGI WEST	SOORTY ENTERPRISES PVT.	DDS	-	3,391	3,391
1178	3468	SOCIETY	KORANGI WEST	BANGASH-2	CDS	169	3,370	3,539
1179 1180	3078 45	KORANGI SOCIETY	KORANGI WEST KORANGI WEST	FLEET MANAGEMENT JUNEJO TOWN	DDS CDS	481	96 2,482	96
1181	52	KORANGI	KORANGI WEST	PAK JUTE	CDS	93	3,413	2,963 3,506
1182	4123	KORANGI	KORANGI WEST	Khalil Ahmed RMU	CDS	1,194	3,413	4,625
1183	43	DEFENCE	KORANGI WEST	Defence View-1	CDS	863	3,378	4,241
	3047	KORANGI	KORANGI WEST	FINE STAR	CDS	814	3,966	4,781

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1185	4027	KORANGI	KORANGI WEST	MEHBOOB PROLINE RMU	CDS	1,951	3,516	5,466
1186	2060	DEFENCE	KORANGI WEST	Kashmir Colony RMU	CDS	61	2,380	2,441
1187	4026	KORANGI	KORANGI WEST	AMMAR BUKHARI	CDS	1,332	2,549	3,881
1188	51	DEFENCE	KORANGI WEST	Printex (Bhittai Petroleum)	CDS	28	3,555	3,583
1189	3469	SOCIETY	KORANGI WEST	DIN MUHAMMAD-1	CDS	360	3,695	4,055
1190	55	DEFENCE	KORANGI WEST	Qayumabad Pumping	CDS	25	1,826	1,851
1191	4141	Orangi	LABOUR SQUARE	FAIZAN STEEL-03	DDS	-	1,424	1,424
1192 1193	4142 2192	Orangi Orangi	LABOUR SQUARE	FAIZAN STEEL-04	DDS	- 440	1,418	1,418
1194	2196	Orangi	LABOUR SQUARE LABOUR SQUARE	AL-ATHER IRFAN STEEL	CDS CDS	230	2,678 2,164	3,127 2,394
1195	3462	Orangi	LABOUR SQUARE	PAKISTAN LEAF	CDS	646	4,740	5,386
1196	611	Orangi	LABOUR SQUARE	COMMON FACILITY	CDS	314	2,817	3,132
1197	829	baldia	LABOUR SQUARE	AMIN MAZDA	CDS	439	3,988	4,427
1198	783	BALDIA	LABOUR SQUARE	KDA PUMP BALDIA	CDS	1,455	5,544	6,999
1199	4067	Orangi	LABOUR SQUARE	PAF Base Masroor	DDS	-	7,078	7,078
1200	3914	Orangi	LABOUR SQUARE	KPI	CDS	240	2,186	2,425
1201	3913	Orangi	LABOUR SQUARE	RENOVICKER	CDS	164	3,481	3,645
1202	786	Orangi	LABOUR SQUARE	YOUSUF INDUSTRY	CDS	4	2,680	2,684
1203	1349	Orangi	LABOUR SQUARE	MS CATTS	CDS	1,216	2,982	4,197
1204	3259	Orangi	LABOUR SQUARE	COMMUNITY CENTER	CDS	447	2,687	3,134
1205	1348	Orangi	LABOUR SQUARE	UNI LEVER	CDS	426	3,838	4,264
1206	809	Orangi	LABOUR SQUARE	SARHAD ROLLING	CDS	7	2,986	2,993
1207 1208	2178 3239	Orangi Orangi	LABOUR SQUARE LABOUR SQUARE	NAVEENA INDUSTRY SUN RISE	CDS DDS	820	2,921	3,740 1,580
1209	815	Orangi	LABOUR SQUARE	HAIDERY WOOD	CDS	582	1,580 1,652	2,234
1210	790	Orangi	LABOUR SQUARE	INDUSTRIAL LABOUR FLAT	CDS	1,743	4,117	5,860
1211	797	Orangi	LABOUR SQUARE	MEHTAB INDUSTRY	CDS	538	2,292	2,830
1212	780	Orangi	LABOUR SQUARE	MANZOOR TRADER	CDS	390	3,654	4,044
1213	4148	Orangi	LABOUR SQUARE	TRIPURA HOISERY	CDS	546	2,000	2,546
1214	3483	Orangi	LABOUR SQUARE	DALDA FOOD	DDS	-	3,780	3,780
1215	517	Bin Qasim	LANDHI	AFTAB FLOUR	CDS	20	922	942
1216	3106	Bin Qasim	LANDHI	LANDHI GRID PMT (OLD GRID PMT)	DDS	-	63	63
1217	508	Bin Qasim	LANDHI	FIRDOUS TEXTILE	CDS	1,355	2,254	3,608
1218	2115	Bin Qasim	LANDHI	RANGEEN CINEMA	CDS	1,689	4,268	5,956
1219	510	KORANGI	LANDHI	KDA WATER PUMP	CDS	655	4,545	5,200
1220 1221	536 3885	Bin Qasim Bin Qasim	LANDHI	KHUWAJA AUTOS	CDS	482	3,153	3,636
1222	515	Bin Qasim	LANDHI	Gulshan e Askari	CDS	1,272	2,641	3,913
1223	532	Bin Qasim	LANDHI LANDHI	SINDHI JAMAAT (EX ABBOTT LAB) CONCRETE ENGG.	CDS	3,878 720	6,221 3,825	10,100 4,545
1224	521	KORANGI	LANDHI	HUSSAIN III	CDS	1,255	4,461	5,716
1225	522	KORANGI	LANDHI	RICE GRINDING	CDS	1,491	2,391	3,882
1226	2033	Bin Qasim	LANDHI	GREEN PARK CITY	CDS	2,634	3,008	5,642
1227	516	KORANGI	LANDHI	SOCIAL SECURITY	CDS	2,365	2,771	5,136
1228	520	KORANGI	LANDHI	POLE # 1 RMU	CDS	5,192	1,104	6,296
1229	524	KORANGI	LANDHI	LANDHI 'B' (Meter No.: HTO-5352)	CDS	1,027	6,865	7,892
1230	535	Bin Qasim	LANDHI	QUAIDABAD SHOPPING	CDS	162	2,566	2,728
1231	3836	KORANGI	LANDHI	SIDDIQ-E-AKBER MASJID	CDS	2,353	4,266	6,619
1232	529	KORANGI	LANDHI	3-A RMU	CDS	1,779	3,777	5,556
1233 1234	2105 507	Bin Qasim	LANDHI	AL-SYED CENTER	CDS	1,340	3,796	5,136
1234	518	KORANGI Bin Qasim	LANDHI	ATLAS AUTOS FAZAL SHAFIQ	CDS	419	4,090	4,510 1,810
1236	523	Bin Qasim	LANDHI LANDHI	TRUST CERAMIC	CDS	287 1,000	1,523 3,277	4,276
1237	525	Bin Qasim	LANDHI	DEH LANDHI	CDS	12,102	4,080	16,181
1238	3077	KORANGI	LANDHI	KHURAM ABAD	CDS	1,993	2,675	4,669
1239	537	KORANGI	LANDHI	SHERPAO COLONY	CDS	1,150	1,004	2,153
1240	3537	KORANGI	LANDHI	BALDIA SCHOOL RMU	CDS	2,309	1,982	4,291
1241	530	Bin Qasim	LANDHI	METAL ENGG. COMPLEX	CDS	94	2,831	2,925
1242	3411	KORANGI	LANDHI	LANDHI-A	CDS	1,532	4,781	6,314
1243	528	Bin Qasim	LANDHI	ANA INTERNATIONAL RMU (OLD SHABBIR TILES)	CDS	1,197	4,145	5,342
1244	3243	Bin Qasim	LANDHI	SALFI TEXTILE	DDS	-	3,522	3,522
1245	509	Bin Qasim	LANDHI	HUSSAIN II	DDS	-	971	971
1246	527	Bin Qasim	LANDHI	AMNA INDUSTRIES (OLD GLOBE TEXTILE)	CDS	9	5,810	5,819
1247	533	Bin Qasim	LANDHI	GENERAL TYRE II	DDS	-	2,396	2,396
1248	2080	KORANGI Bin Oasim	LANDHI	LALABAD	CDS	1	10,247	10,248
1249 1250	3864 3866	Bin Qasim Bin Qasim	LANDHI	A.I.P Feeder (Old Atlas Engeering)	DDS	-	3,433	3,433
1250	519	Bin Qasim Bin Qasim	LANDHI	DAWLANCE PVT LTD	DDS	-	4,676	4,676
1251	538	Bin Qasim Bin Qasim	LANDHI LANDHI	GENERAL TYRE I GUL AHMED TEXTILE (EX HABIB GENERAL)	DDS	-	2,407	2,407 1,250
1252	704	Bin Qasim	LANDHI	RADIO PAKISTAN I	CDS CDS	911	1,250 5,387	6,298
1254	512	Bin Qasim	LANDHI	INDUS FLOUR	CDS	508	3,380	3,888
1255	1123	GULSHAN	LIAQUTABAD	Falak Tower +	CDS	1,362	2,839	4,200
1256	2024	GULSHAN	LIAQUTABAD	Bazar-e-Faisal (National Ice) +	CDS	1,506	2,170	3,676
1257	550	GULSHAN	LIAQUTABAD	Ilyas Goth +	CDS	22	5,148	5,171
1258	558	GULSHAN	LIAQUTABAD	Tayya Hotel (Old Liaqatabad-1)	CDS	120	3,250	3,370

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1259	3905	GULSHAN	LIAQUTABAD	Salman Height	CDS	890	4,858	5,748
1260	1269	GULSHAN	LIAQUTABAD	Pakistan College(Old Nazimabad-1) + Cap-1	CDS	1,123	3,163	4,286
1261 1262	554 548	GULSHAN GULSHAN	LIAQUTABAD	Bhoray Khan +	CDS	999 549	3,474	4,473 1,575
1263	552	GULSHAN	LIAQUTABAD LIAQUTABAD	Zeenat Square Café Millat	CDS	229	1,026 4,187	4,416
1264	547	GULSHAN	LIAQUTABAD	Al-Karam	CDS	-	2,513	2,513
1265	542	GULSHAN	LIAQUTABAD	Gol Market (Old Nazimabad-3)	CDS	572	4,771	5,343
1266	561	GULSHAN	LIAQUTABAD	Munawwar Engineering	CDS	-	3,665	3,665
1267	549	GULSHAN	LIAQUTABAD	Golden Star	CDS	454	2,206	2,661
1268 1269	539 543	GULSHAN GULSHAN	LIAQUTABAD	Gulbahar	CDS	1,005	4,749	5,754
1270	545	GULSHAN	LIAQUTABAD LIAQUTABAD	Timber Market + Super Market	CDS	539 99	3,901 2,750	4,440 2,849
1271	3461	GULSHAN	LIAQUTABAD	Ismailia Flat	CDS	399	4,101	4,500
1272	1265	GULSHAN	LIAQUTABAD	Qureshi Colony	CDS	485	3,624	4,109
1273	546	GULSHAN	LIAQUTABAD	Rehmania Masjid	CDS	7	2,559	2,565
1274	540	GULSHAN	LIAQUTABAD	Nazimabad-4	CDS	1,043	3,301	4,345
1275	551	GULSHAN	LIAQUTABAD	Shakeel Corporation + Cap-3 (OLD Moosa Colony	CDS	763	2,139	2,901
1276 1277	563 557	GULSHAN GULSHAN	LIAQUTABAD	Indus Ice +	CDS	915 995	4,299	5,213
1277	562	GULSHAN	LIAQUTABAD LIAQUTABAD	Apwa College (OLD Govt. School) Masjid-e-Khair-ul-Amal	CDS	286	4,294 1,661	5,289 1,947
1279	544	GULSHAN	LIAQUTABAD	PWD Pumping-2	CDS	487	1,888	2,375
1280	1266	GULSHAN	LIAQUTABAD	Fed Capital-4 +	CDS	547	2,191	2,738
1281	541	GULSHAN	LIAQUTABAD	Liberty Cinema	CDS	926	5,272	6,198
1282	555	GULSHAN	LIAQUTABAD	Nairing Cinema	CDS	46	2,858	2,903
1283	560	GULSHAN	LIAQUTABAD	Fatima Barocha	CDS	1,164	5,028	6,192
1284 1285	1267 3459	GULSHAN GULSHAN	LIAQUTABAD	Karimabad	CDS	838 1,127	4,151	4,989
1286	1264	GULSHAN	LIAQUTABAD LIAQUTABAD	Hadi Market Liaqatabad-2	CDS	1,127	3,907 6,034	5,034 6,222
1287	559	GULSHAN	LIAQUTABAD	C1 Area +	CDS	914	4,286	5,200
1288	556	GULSHAN	LIAQUTABAD	ABC Computer	CDS	1,698	3,491	5,189
1289	553	GULSHAN	LIAQUTABAD	Al-Murtaza	CDS	539	3,604	4,143
1290	3700	BALDIA	LYARI	DOOSA WOOL	CDS	68	5,339	5,406
1291 1292	3285 3004	BALDIA BALDIA	LYARI	KNIGHT SLUM	CDS	600	3,226	3,825
1293	3852	BALDIA	LYARI LYARI	ATMA RAM PRITAMDAS BSK SCHOOL	CDS	284 508	1,036 1,919	1,320 2,427
1294	568	BALDIA	LYARI	FIDA HUSSAIN SHEKHA RD	CDS	347	2,254	2,601
1295	3693	BALDIA	LYARI	SHAHWALIULLAH	CDS	97	2,008	2,105
1296	3701	BALDIA	LYARI	BALOCH STAR RMU	CDS	281	7,323	7,604
1297	572	BALDIA	LYARI	LYARI ICE	CDS	193	2,956	3,149
1298 1299	571 567	BALDIA BALDIA	LYARI	MACHAR COLONY RMU	CDS	1,820	2,164	3,984
1300	3481	BALDIA	LYARI LYARI	BEHAR PUMP QADIR KHAN RMU	CDS	1,249	2,182 2,017	2,785 3,266
1301	3490	BALDIA	LYARI	BAGHDADI	CDS	524	4,754	5,279
1302	569	BALDIA	LYARI	NAVAL FLATS	CDS	127	4,502	4,629
1303	570	BALDIA	LYARI	GULISTAN COLONY	CDS	573	3,137	3,710
1304	565	BALDIA	LYARI	CROWN CINEMA	CDS	673	1,156	1,828
1305	575	BALDIA	LYARI	HARI MASJID RMU	CDS	64	3,767	3,830
1306 1307	578 574	BALDIA BALDIA	LYARI	M. ALI ALVI ROAD	CDS	434	4,264	4,698
1307	199	BALDIA	LYARI LYARI	LYARI-3 JUMA BALOCH	CDS	1,172 302	2,392 1,462	3,564 1,764
1309	576	BALDIA	LYARI	GHOSIA ROAD	CDS	119	2,750	2,869
1310	577	BALDIA	LYARI	LYARI TEL. EXCHANGE	CDS	176	2,167	2,343
1311	583	Bin Qasim	MALIR	ADAM HANGORO	CDS	5,789	6,698	12,487
1312	599	Bin Qasim	MALIR	ALEEMABAD	CDS	1,167	6,990	8,158
1313	3523	Bin Qasim	MALIR	COMBINED MILITARY HOSPITAL (C.M.H)	DDS	- 2 277	2,521	2,521
1314 1315	579 1273	Bin Qasim Bin Qasim	MALIR MALIR	BLOCK 'D' SHAHEED CHOWK RMU	CDS	2,377	6,026 4,664	8,403 5,992
1316	3591	JOHAR	MALIR	SAIMA INTERNATIONAL DEVELOPERS	CDS	1,327	4,664	4,908
1317	591	Bin Qasim	MALIR	MALIR DEFENCE	CDS	4,523	6,709	11,232
1318	1274	Bin Qasim	MALIR	DUCT PUMP	DDS		1,222	1,222
1319	582	Bin Qasim	MALIR	MES - 03	DDS	-	1,925	1,925
1320	2141	Bin Qasim	MALIR	PAF MALIR CANTT (PAF BASE)	DDS	-	410	410
1321 1322	587 594	Bin Qasim Bin Qasim	MALIR	S.D HOUSES	CDS	3,259	6,066	9,326
1323	1276	Bin Qasim	MALIR MALIR	FARHAT BAGH MES - 105	CDS	8,530 22,306	6,765 4,018	15,296 26,324
1324	598	Bin Qasim	MALIR	GULSHAN-E-JAMI RMU	CDS	1,202	6,058	7,260
1325	3361	Bin Qasim	MALIR	GULZAR RMU	CDS	970	4,681	5,651
1326	4069	Bin Qasim	MALIR	Project Housing	CDS	-	5,312	5,312
1327	4057	Bin Qasim	MALIR	Parade Ground	DDS	-	5,512	5,512
1328	4056	Bin Qasim	MALIR	CHECK POST 5	CDS	-	5,198	5,198
1329 1330	3244 4102	JOHAR Bin Qasim	MALIR	VERVAL PATAN C.H.S	CDS	3,834	5,944	9,779
1331	3617	JOHAR	MALIR MALIR	Jamia Masjid Sector E KARACHI JUDICIAL EMPLOYEES CHS	DDS CDS	925	5,253 3,580	5,253 4,506
	593	Bin Qasim	MALIR	MES - 02	DDS	- 923	1,495	1,495

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1333	1139	Bin Qasim	MALIR	KHAIRPUR LINES	CDS	1,001	3,242	4,243
1334	597	Bin Qasim	MALIR	KAUSAR TOWN	CDS	692	5,764	6,457
1335 1336	596 589	Bin Qasim Bin Qasim	MALIR MALIR	KAZIMABAD RMU (OLD SECURITY PAPER) DEH KATHORE	CDS	1,481	7,747	9,227
1337	3559	Bin Qasim	MALIR	ASSISTANT DIRECTOR ELECTRICAL	CDS	40,358	5,615 5,626	45,973 5,677
1338	3121	Bin Qasim	MALIR	G-3 APARTMENTS	CDS	-	5,758	5,758
1339	3728	Bin Qasim	MALIR	ARMY HOUSING DIRECTORATE-3 (ADH-3)	CDS	-	5,333	5,333
1340	2049	Bin Qasim	MALIR	PHASE-II MALIR	CDS	-	5,702	5,702
1341	76	Bin Qasim	MALIR	ARMY HOUSING MALIR	CDS	-	3,162	3,162
1342 1343	1581 3413	Bin Qasim Bin Qasim	MALIR	HIGH RISE APARTMENTS	CDS	-	8,680	8,680
1344	592	Bin Qasim	MALIR MALIR	SECTOR -G CENTRAL CARD BOARD	CDS	5 705	8,775 6,727	8,781 7,433
1345	1129	Bin Qasim	MALIR	M.G. INDUSTRIES RMU (OLD DUMBA GOTH)	CDS	5,026	3,626	8,651
1346	1271	Bin Qasim	MALIR	ABBASI MARKET	CDS	2,278	8,242	10,520
1347	581	Bin Qasim	MALIR	NAFEES CINEMA	CDS	734	7,531	8,266
1348	595	Bin Qasim	MALIR	MALIR COLONY 'C'	CDS	1,393	5,903	7,296
1349	584	Bin Qasim	MALIR	FABRIC INDUSTRY (OLD SMALL INDUSTRIES)	CDS	762	9,209	9,971
1350 1351	588 3544	Bin Qasim JOHAR	MALIR	URDU NAGAR	CDS	787	6,370	7,158
1352	586	Bin Qasim	MALIR MALIR	SHANZIL GOLF RESIDENCY DAMLOTEE-I	CDS	634 3,165	4,859 2,540	5,493 5,705
1353	580	Bin Qasim	MALIR	AMBER GARMENTS	CDS	797	9,780	10,577
1354	600	Orangi	MAURIPUR	HERMAN LAB	CDS	641	4,363	5,004
1355	605	Orangi	MAURIPUR	AKBER MOTORS	CDS	640	3,958	4,598
1356	3813	BALDIA	MAURIPUR	HAMZA STEEL	CDS	1,793	2,431	4,224
1357	608	Orangi	MAURIPUR	SHAFI TANNERY	CDS	600	5,054	5,654
1358	603	Orangi	MAURIPUR	PARACHA TEXTILE	CDS	125	4,112	4,238
1359	602	BALDIA	MAURIPUR	CROWN GRINDING	CDS	470	5,647	6,118
1360 1361	3101 3007	Orangi	MAURIPUR	MEEZAN BANK JAN FINISHING	DDS	- 28	2,088	2,088 4,016
1362	612	Orangi Orangi	MAURIPUR MAURIPUR	RAUF TEXTILE	CDS DDS		3,988 5,799	5,799
1363	609	Orangi	MAURIPUR	ACME FEEDER	CDS	25	3,400	3,425
1364	3951	Orangi	MAURIPUR	TAXEM	DDS	-	1,592	1,592
1365	2061	BALDIA	MAURIPUR	KANUPP PUMPING	CDS	4,273	31,202	35,475
1366	601	BALDIA	MAURIPUR	MEGATRON	CDS	9,608	14,304	23,912
1367	3374	BALDIA	MAURIPUR	GARRISON ENGINEERING	DDS	-	6,824	6,824
1368	1277	BALDIA	MAURIPUR	AZIZ BALOCH RMU	CDS	1,840	5,620	7,460
1369 1370	617 604	Orangi	MAURIPUR	GRIND WHEEL	CDS	866	3,581	4,447
1371	618	Orangi Orangi	MAURIPUR MAURIPUR	KOHINOOR MARBLE GOOD LUCK	CDS	244 477	3,281 2,546	3,526 3,024
1372	616	BALDIA	MAURIPUR	LYARI EXPRESSWAY-I	CDS	4//	12,326	12,329
1373	2039	Orangi	MAURIPUR	SUFI HOTEL RMU	CDS	31	4,167	4,198
1374	3906	BALDIA	MAURIPUR	PAKISTAN ATOMIC ENERGY COMMISSION	DDS	-	12,057	12,057
1375	2184	Orangi	MAURIPUR	CAST IRON	CDS	45	4,457	4,502
1376	607	BALDIA	MAURIPUR	MAURIPUR TREATMENT PLANT	CDS	4,236	3,761	7,996
1377	614	BALDIA	MAURIPUR	MAURIPUR CENTRE	CDS	1,384	6,270	7,654
1378 1379	606 766	BALDIA	MAURIPUR	PAK MARINE ACADEMY	CDS	7	7,242	7,249
1380	3504	Orangi Orangi	MAURIPUR MAURIPUR	IA INDUSTRIES YAHYA ENTERPRISE	CDS	492 450	3,254 4,820	3,747 5,270
1381	613	BALDIA	MAURIPUR	MAURIPUR TRUCK STAND	CDS	352	3,001	3,353
1382	3723	BALDIA	MAURIPUR	MAXIMUS	CDS	33,387	11,452	44,839
1383	2158	BALDIA	MAURIPUR	PNR COLOY	CDS	171	14,359	14,530
1384	3373	BALDIA	MAURIPUR	AGE NAVY	DDS	-	14,406	14,406
1385	615	Orangi	MAURIPUR	STANDARD ROLLING	CDS	7	3,042	3,049
1386	2186	Orangi	MAURIPUR	TAEEJIN	CDS	106	5,007	5,113
1387 1388	4012 3311	BALDIA Orangi	MAURIPUR	DASHT (Peoples Low Cast)	CDS	2,250	13,613	15,863
1388	3872	Surjani	MAURIPUR MAYMAR	CBM PLASTIC Vay Water	DDS CDS	2,657	1,982 1,498	1,982 4,155
1390	4071	Surjani	MAYMAR	SAJJAD SHAIKH (old P-V20 RMU)	CDS	3,349	2,832	6,181
1391	4063	JOHAR	MAYMAR	SHAHNAWAZ CHS	DDS	767	3,085	3,852
1392	3747	JOHAR	MAYMAR	HEAVEN CITY	CDS	2,017	1,063	3,080
1393	1279	Surjani	MAYMAR	Bashir Chowk	CDS	1,421	5,043	6,464
1394	3883	JOHAR	MAYMAR	ABDULLAH GABOL VILLAGE	CDS	4,517	4,332	8,849
1395	3060	JOHAR	MAYMAR	MASHRIQ SOCIETY	CDS	2,842	4,188	7,030
1396 1397	1281 3753	Surjani Johar	MAYMAR MAYMAR	P-21 RMU GARDEN CITY (MERRYLAND BUILDERS)	CDS	2,546	2,617	5,163
1397	3497	Surjani	MAYMAR MAYMAR	GARDEN CITY (MERRYLAND BUILDERS) Javed Metal	DDS CDS	1,487 1,696	5,876 2,190	7,363 3,886
1399	1283	JOHAR	MAYMAR	CHAMBAILI RMU	CDS	2,895	5,187	8,082
1399	3233	Surjani	MAYMAR	Crystal Ice	CDS	1,437	4,595	6,032
1400	3233		MAYMAR	PAK STEEL RMU	CDS	6,053	4,616	10,669
	3441	JOHAR	IVIATIVIAN					
1400		JOHAR JOHAR	MAYMAR	Alig Old Boys	DDS	1,955	4,464	6,419
1400 1401 1402 1403	3441 3749 1236	JOHAR JOHAR			DDS CDS	1,955 3,278	4,464 4,304	6,419 7,582
1400 1401 1402	3441 3749	JOHAR	MAYMAR	Alig Old Boys				6,419 7,582 7,012 13,265

1460 1577 Bin Qasim MEMON GOTH HUSSAINI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILAL MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI	GIS deta								
1408 3864 19546	S. No	Feeder ID	Cluster	Grid Name	Feeder name			_	
1409 1785 Surjan				MAYMAR	STAFF HOSTEL	CDS	2,685	4,123	6,807
1409 1498 Surjent									
1411 2923 JOHAN					·				
1412 3271									
1431 1432 1398 Surjein MAMANER BLUE GOT COS 1,579 2,275 4,955 1,914 1431 1432 1,914 1,91									
1415 1220 JOHAN MANNARA MISMARD PUSE PUSE 055 3,709 2,091 1,141 1,	1413	3166			· ·				
1456 1278 JOHAN	1414	4091	Surjani	MAYMAR	Steelex	CDS		90	1,442
1417 1418 3417 10HAR				MAYMAR		CDS	5,709	2,016	7,725
1431 3437 JOHAN									
1439 3974 JOHAR									
1400 1001AR								·	
1402									
1422 4382 Surjani MAMMAR PANTLOURMIL CDS 4,000 4,000					-				
1424 1425	1422	4182	Surjani				-		
1425 4053	1423	3874	Surjani	MAYMAR	Posh Craft	CDS	1,571	2,717	4,288
1426 1428 JOHAR MATMAR PTVHOUSING SOCIETY CDS 3,203 2,448 5,522	1424	3230	Surjani	MAYMAR	Phase-2	CDS	3,453	2,375	5,828
1427 4699 JOHAR				MAYMAR	CHAPAL UPTOWN	DDS	-	4,864	4,864
1429 3772 JOHAR MATMAR					PTV HOUSING SOCIETY	CDS			
1979 3777					·				
1431 1348 Surjani									
1931 1284 Surjani									
1432 3469									
1433 3912 JOHAR									
1343 1366 John									
1435 3237 SOUETY Mehmoodabad LADIES PARK CDS 5.28 1.880 2.129	1434	4166	Johar				1		·
1937 3943 SOCIETY	1435	3237	SOCIETY	Mehmoodabad	MEHMOODABAD ABC	CDS	248		
1383 3376	1436	2082	SOCIETY	Mehmoodabad	LADIES PARK	CDS	522	3,755	4,278
1330 SOCIETY Mehmoodabad SHANKH NAZAZ ALI CDS	1437	3543	SOCIETY	Mehmoodabad	PRESTON UNIVERSITY	CDS	-	3,586	3,586
1411 1155				Mehmoodabad	PUMPING 1	CDS	-	1,462	
1442 3436							1		
1442 4231							1		
1441 3248 SOCIETY Mehmoodabad									
1445 3362 SOCIETY Mehmoodabad PECHS-H CDS 2,985 2,985 1445 3362 SOCIETY Mehmoodabad AMBALA SWEET CDS 431 431 1471 1473 493 SOCIETY Mehmoodabad POLE 32+ CDS 642 642 642 642 642 643 644									
1445 3362 SOCIETY Mehmoodabad AMBALA SWEET CDS							1		· ·
1446 3573	1445	3362	SOCIETY				443		
1448 SOO SOCIETY Mehmoodabad ZOROASTRIAN + CDS - 4,546 4,546 4,546 1449 1119 SOCIETY Mehmoodabad KAWISH CROWN CDS 54 7,259 7,313 1450 1131 SOCIETY Mehmoodabad BUSINESS CENTRE CDS 140 6,212 6,351 1451 1571 Bin Qasim MEMON GOTH MEMON GOTH TEL EXCHANGE CDS 9,350 4,536 13,886 1452 3524 Bin Qasim MEMON GOTH MEMON GOTH TEL EXCHANGE CDS 9,350 4,536 13,886 1452 3524 Bin Qasim MEMON GOTH KHAYABANI-E-MUHAMMAD CDS 1,811 3,768 5,579 1573 Bin Qasim MEMON GOTH BURHANI GARDEN CDS 2,106 4,341 6,448 1454 3696 Bin Qasim MEMON GOTH BURHANI GARDEN CDS 2,272 3,553 5,825 1455 1573 Bin Qasim MEMON GOTH RIVER PRITE MILL GARDEN CDS 2,277 3,553 5,825 1455 1573 Bin Qasim MEMON GOTH RIVER PRITE MILL GARDEN CDS 2,277 1,909 4,286 1456 2015 Bin Qasim MEMON GOTH RIVER PRITE MILL GARDEN CDS 2,377 1,909 4,286 1457 1575 Bin Qasim MEMON GOTH REST HOUSE CDS 8,866 11,416 80,022 1458 1572 Bin Qasim MEMON GOTH REST HOUSE CDS 8,866 11,416 80,022 1458 1572 Bin Qasim MEMON GOTH NAZAR ALI WELLS CDS 1,748 5,318 7,066 1460 1577 Bin Qasim MEMON GOTH HUSSAIN RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH HUSSAIN RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH BILLAL MASID RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH BILLAL MASID RMU CDS 1,391 1,977 3,696 1,464 3695 Bin Qasim MEMON GOTH BILLAL MASID RMU CDS 1,592 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH BILLAL MASID RMU CDS 1,591 1,977 3,696 1,466	1446	3573	SOCIETY			CDS	-		
1449	1447	493	SOCIETY	Mehmoodabad	KDA TP-2	CDS	-	642	642
1450	1448		SOCIETY	Mehmoodabad	ZOROASTRIAN +	CDS	-	4,546	4,546
1451				Mehmoodabad			1		
1452 3524 Bin Qasim MEMON GOTH KHAYABAN-E-MUHAMMAD CDS 1,811 3,768 5,579 1453 1579 Bin Qasim MEMON GOTH KHOKHRAPAR RMU CDS 2,106 4,341 6,448 1454 3696 Bin Qasim MEMON GOTH BURHANN GARDEN CDS 2,272 3,553 5,825 1455 1573 Bin Qasim MEMON GOTH ULLA ESSA GOTH RMU (OLD JALBANI GOTH RMU CDS 2,277 1,909 4,286 1456 2015 Bin Qasim MEMON GOTH RIVER PMT RMU (Malir River) CDS 2,377 1,909 4,286 1457 1575 Bin Qasim MEMON GOTH RIVER PMT RMU (Malir River) CDS 68,606 11,416 80,022 1458 1572 Bin Qasim MEMON GOTH POLE #S 8 RMU CDS 8,262 2,928 11,190 1459 3618 Bin Qasim MEMON GOTH POLE #S 8 RMU CDS 8,262 2,928 11,190 1460 1577 Bin Qasim MEMON GOTH HUSSANI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH HUSSANI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILAL MASID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH BILAL MASID RMU CDS 5,7,664 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,719 1,977 3,696 1465 1526 KORANGI NEW LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim NEW LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1468 4165 Bin Qasim New LANDHI AMASEHRA COLONY CDS 678 5,351 6,029 1470 3333 Surjani North Karachi Peoples Colony CDS 1,510 2,117 3,526 1471 621 Surjani North Karachi Peoples Colony CDS 1,510 2,135 4,009 1472 628 Surjani North Karachi Amas Cold CDS 3,535 3,437 1475 626 Surjani North Karachi Baffet Market CDS 1,511 4,911 5,326 1476 624 Surjani North Karachi Baffet Market CDS 1,511 1,944 3,508 1478 622 Surjani North Karachi Baffet Market CDS 1,511 4,941 6,694 1479 652 S							1		
1453									
1454 3696 Bin Qasim MEMON GOTH BURHANI GARDEN CDS 2,272 3,553 5,825 1455 1573 Bin Qasim MEMON GOTH ULLA ESSA GOTH RMU (OLD ALBANI GOTH RMU CDS 2,180 2,309 4,490 1456 2015 Bin Qasim MEMON GOTH RIVER PMT RMU (Malir River) CDS 2,377 1,909 4,286 1457 1575 Bin Qasim MEMON GOTH RIVER PMT RMU (Malir River) CDS 68,606 11,416 80,022 1458 1572 Bin Qasim MEMON GOTH POLE # 58 RMU CDS 8,262 2,928 11,190 1459 3618 Bin Qasim MEMON GOTH NAZAR ALI WELLS CDS 1,748 5,318 7,066 1460 1577 Bin Qasim MEMON GOTH HUSSANI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILLA MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH BILLA MASJID RMU CDS 1,092 3,260 4,352 1464 3695 Bin Qasim MEMON GOTH KHALID PUMPING CDS 5,7064 13,078 70,142 1465 526 KORANGI NEW LANDHI DAWOOD COTTON CDS 1,510 2,117 3,627 1466 1262 Bin Qasim NEW LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1468 4165 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1469 4252 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 1,0800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Paradise CDS 1,315 4,011 5,326 1473 6382 Surjani North Karachi Barfact Market CDS 1,941 1,763 3,704 1474 643 Surjani North Karachi Buffer Zone Pump CDS 1,941 1,763 3,704 1476 624 Surjani North Karachi Buffer Zone Pump CDS 1,945 4,432 4,477 1476 625 Surjani North Karachi Buffer Zone Pump CDS 2,455 2,432 4,777 1477 626 Surjani North Karachi Buffer Z									
1455 1573									
1456 2015									·
1457 1575 Bin Qasim MEMON GOTH REST HOUSE CDS 68,606 11,416 80,022 1458 1572 Bin Qasim MEMON GOTH POLE # SR RMU CDS 8,262 2,928 11,190 1459 3618 Bin Qasim MEMON GOTH NAZAR ALI WELLS CDS 1,748 5,318 7,066 1460 1577 Bin Qasim MEMON GOTH HUSSAINI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILA MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI NEW LANDHI	1456	2015	Bin Qasim		'				
1459 3618 Bin Qasim	1457	1575	Bin Qasim	MEMON GOTH		CDS	68,606	11,416	80,022
1460 1577 Bin Qasim MEMON GOTH HUSSAINI RMU CDS 1,381 1,765 3,146 1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILAL MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1470 3333 Surjani Nort	1458			MEMON GOTH	POLE # 58 RMU	CDS	8,262	2,928	11,190
1461 1578 Bin Qasim MEMON GOTH DEGREE SCIENCE COLLEGE CDS 2,303 5,432 7,735 1462 3620 Bin Qasim MEMON GOTH BILAL MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi									7,066
1462 3620 Bin Qasim MEMON GOTH BILAL MASJID RMU CDS 1,092 3,260 4,352 1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 33333 Surjani North Karachi People									
1463 1574 Bin Qasim MEMON GOTH KHALID PUMPING CDS 57,064 13,078 70,142 1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,335 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1469 4252 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
1464 3695 Bin Qasim MEMON GOTH SAIMA GREEN VALLEY CDS 1,510 2,117 3,627 1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1469 4252 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,581 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi Buffer Zone Pump CDS 1,941 1,763 3,704 1477 626 Surjani North Karachi Barkat Market CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Masjid-e-Khan Younus CDS 2,345 2,432 4,777									
1465 526 KORANGI New LANDHI DAWOOD COTTON CDS 1,719 1,977 3,696 1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 3,700 3,700 3,700 10,800 1469 4252 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473									
1466 1262 Bin Qasim New LANDHI MANSEHRA COLONY CDS 678 5,351 6,029 1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1469 4252 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Sale									
1467 4207 Bin Qasim New LANDHI ABBOT LABORATORIES DDS - 4,600 4,600 1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1469 4252 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buff									
1468 4165 Bin Qasim New LANDHI AM-3 SPINNING (EX ARTISTIC MILLINERS) DDS - 3,700 3,700 1469 4252 Bin Qasim New LANDHI AM TEXTILE 17 DDS - 10,800 10,800 1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP									4,600
1470 3333 Surjani North Karachi Peoples Colony CDS 1,567 2,532 4,099 1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Kh	1468	4165	Bin Qasim				-		3,700
1471 621 Surjani North Karachi Hasan Cold CDS 985 3,166 4,151 1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun				New LANDHI	AM TEXTILE 17	DDS	+		
1472 628 Surjani North Karachi Paradise CDS 1,571 2,017 3,588 1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777									
1473 3382 Surjani North Karachi Arman CNG CDS 1,315 4,011 5,326 1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777									
1474 643 Surjani North Karachi Saleem Centre CDS 2,164 1,344 3,508 1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777									
1475 619 Surjani North Karachi Buffer Zone Pump CDS 1,294 3,034 4,329 1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777					-				
1476 624 Surjani North Karachi UP More (Sheerin Cinema) CDS 804 2,653 3,457 1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777									
1477 626 Surjani North Karachi Barkat Market CDS 1,941 1,763 3,704 1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777					·				
1478 627 Surjani North Karachi Masjid-e-Khan Younus CDS 2,151 4,544 6,694 1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777					·				
1479 652 Surjani North Karachi Zaibun Nisa College CDS 2,345 2,432 4,777									
	1480	622							3,989

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1481	637	Surjani	North Karachi	Sector-5E	CDS	1,481	1,937	3,418
1482	1287	Surjani	North Karachi	North Karachi Pumping	CDS	-	1,690	1,690
1483	630	Surjani	North Karachi	Naz College	CDS	2,207	4,782	6,989
1484 1485	632 3327	Surjani	North Karachi	P-17	CDS	1,768	1,737	3,505
1485	3011	Surjani Surjani	North Karachi North Karachi	Falcon House Crown Plaza	CDS CDS	2,005 1,934	1,907 3,024	3,912 4,958
1487	623	Surjani	North Karachi	Crescent Arcade	CDS	1,934	1,598	2,816
1488	3381	Surjani	North Karachi	Al-Ahmed Avenue	CDS	1,802	1,622	3,424
1489	639	Surjani	North Karachi	Maraqba Hall	CDS	2,533	2,912	5,445
1490	633	Surjani	North Karachi	Best View (OLD Surjani Town P-1)	CDS	2,390	988	3,378
1491	620	Surjani	North Karachi	Haroon Height	CDS	930	2,109	3,039
1492 1493	653 647	Surjani Surjani	North Karachi	Karaka Pak	CDS	1,607	3,608	5,216
1493	648	Surjani	North Karachi North Karachi	SM Obaid Saba Cinema	CDS	1,092 1,297	3,151 3,279	4,243 4,576
1495	651	Surjani	North Karachi	Qaim Khani RMU	CDS	1,908	2,890	4,798
1496	640	Surjani	North Karachi	Muslim Town + Cap	CDS	906	4,556	5,461
1497	634	Surjani	North Karachi	Todays Restaurant	CDS	851	3,728	4,579
1498	642	Surjani	North Karachi	RT Plaza	CDS	1,313	6,220	7,533
1499	641	Surjani	North Karachi	Red Rose	CDS	2,209	4,612	6,821
1500 1501	650 1288	Surjani	North Karachi	Nice Bakers (Old Saba Cinema)	CDS	1,669	2,637	4,306
1501	1288 646	Surjani Surjani	North Karachi North Karachi	Gold Smith Sheerani Ice	CDS	1,009 657	1,714 4 139	2,724 4,796
1503	3100	Surjani	North Karachi	Sneerani ice Al-Hira	CDS	3,160	4,139 4,123	7,282
1504	3288	Surjani	North Karachi	Al-Falah Bank	CDS	1,187	4,123	6,071
1505	644	Surjani	North Karachi	Sunlight	CDS	1,584	2,445	4,029
1506	1290	Surjani	North Nazimabad	Dawat-e-Hidayat (Old Saifee Foundation)	CDS	1,499	2,544	4,043
1507	656	Surjani	North Nazimabad	Shaharyar Clinic	CDS	684	3,537	4,221
1508	654	Orangi	NORTH NAZIMABAD	BANARAS PUMPING	CDS	160	3,348	3,508
1509	666	Orangi	NORTH NAZIMABAD	ORANGI ICE	CDS	959	3,628	4,587
1510	665	Surjani	North Nazimabad	National Youth Center	CDS	1,930	3,545	5,475
1511	1292	Surjani	North Nazimabad	Shipowner College	CDS	682	2,818	3,500
1512 1513	3294 1291	Surjani Surjani	North Nazimabad	Pole-15 + Cap1A Block-G	CDS	3,600	2,185 3,974	5,785
1514	3324	Orangi	North Nazimabad North Nazimabad	KATI PAHARI	CDS	1,896 1,663	1,480	5,870 3,143
1515	3603	Surjani	North Nazimabad	Imam Clinic	CDS	2,187	3,706	5,894
1516	1293	Surjani	North Nazimabad	Asghar Ali Shah	CDS	1,662	577	2,240
1517	3397	GULSHAN	North Nazimabad	Chandni Chowk	CDS	87	3,765	3,851
1518	670	Surjani	North Nazimabad	Khandoo Goth	CDS	2,068	3,166	5,234
1519	3432	Surjani	North Nazimabad	Nagina Square	CDS	1,334	2,792	4,126
1520	3293 664	Surjani	North Nazimabad	Hyderi Sweets	CDS	1,254	1,818	3,072
1521 1522	3414	Surjani GULSHAN	North Nazimabad	Block-A Pumping BOSE	CDS	2,323 1,221	904 5,072	3,228 6,292
1523	667	GULSHAN	North Nazimabad North Nazimabad	Firdous Colony	CDS	554	3,465	4,019
1524	661	Surjani	North Nazimabad	Friends Height	CDS	547	3,753	4,300
1525	662	Surjani	North Nazimabad	State Bank	CDS	1,692	2,631	4,323
1526	3602	Surjani	North Nazimabad	Euro Regent Park	CDS	705	2,455	3,160
1527	669	GULSHAN	North Nazimabad	Naz Post Office	CDS	1,024	5,954	6,978
1528	1295	GULSHAN	North Nazimabad	Ashraf Nagar	CDS	619	3,051	3,670
1529	659	Surjani	North Nazimabad	Pahar Ganj	CDS	1,159	2,573	3,732
1530	663	Surjani	North Nazimabad	Jinnah University	CDS	906	4,411	5,317
1531 1532	657 660	GULSHAN Surjani	North Nazimabad North Nazimabad	Paposh Nagar Ali Doulat	CDS	503 1,631	3,518 2,673	4,021 4,303
1533	674	Surjani	North Nazimabad	Ali Doulat Al-Burhan	CDS	3,553	2,613	6,166
1534	4058	Surjani	North Nazimabad	Walk Way	DDS	-	1,350	1,350
1535	2123	Orangi	North Nazimabad	ALI GARH BAZAR	CDS	599	2,491	3,090
1536	668	Surjani	North Nazimabad	Mustafabad Pumping	CDS	-	5,016	5,016
1537	672	Surjani	North Nazimabad	Blessing Plaza	CDS	3,404	4,542	7,946
1538	1298	Surjani	North Nazimabad	KDA Center View	CDS	1,469	5,439	6,908
1539	658	Surjani	North Nazimabad	тс	CDS	1,926	1,845	3,770
1540 1541	675 1296	Surjani Surjani	North Nazimahad	Tagi Center	CDS	1,962	4,503	6,465
1541	1296	Surjani	North Nazimabad North Nazimabad	Maria Homes (Old Saima Avenue) Ziauddin Hospital	CDS	437 1,821	5,754 4,275	6,192 6,096
1543	655	Surjani	North Nazimabad	Bab-ul-Ilm	CDS	3,081	2,672	5,753
1544	671	Surjani	North Nazimabad	Marhaba Galaxy	CDS	860	4,116	4,976
1545	673	Surjani	North Nazimabad	Gulshan-e-Zubaida	CDS	905	3,408	4,313
1546	852	BALDIA	OLD TOWN	OKHAI MEMON	CDS	101	2,160	2,261
1547	747	DEFENCE	Old Town	Police Head Office	CDS	7	1,661	1,668
1548	679	BALDIA	OLD TOWN	BEHAR COLONY	CDS	74	2,767	2,841
1549	683	BALDIA	OLD TOWN	LAWRANCE APPARTMENT	CDS	448	8,126	8,573
1550	676	BALDIA	OLD TOWN	LIBERTY OIL MILL	CDS	235	3,206	3,441
1551 1552	678 573	BALDIA BALDIA	OLD TOWN	OLD TOWN RMU-II	CDS	686	1,496	2,182
1552	686	BALDIA	OLD TOWN OLD TOWN	LEA MARKET RMU GATEWAY	CDS	662 152	3,461 1,325	4,123 1,478
1554	742	BALDIA	OLD TOWN	MUSLIM GARDEN	CDS	198	2,590	2,788
1007		ט, גבטות	OLD TOWN	INIOSLINI GARDEN	LUS	139	2,390	2,788

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1555	1309	BALDIA	OLD TOWN	DENSO ROAD	CDS	114	2,855	2,969
1556	749	BALDIA	OLD TOWN	BARNESS STREET	CDS	21	5,083	5,104
1557	746	BALDIA	OLD TOWN	RESALA POLICE	CDS	113	2,625	2,737
1558	681	BALDIA	OLD TOWN	NEW NIHAM (8-11-2008)	CDS	489	1,816	2,305
1559	1336	BALDIA	OLD TOWN	COMMERCIAL COLD STORAGE	CDS	511	4,385	4,896
1560	1307	BALDIA	OLD TOWN	LYARI FIRE BRIGADE	CDS	826	5,436	6,262
1561	1305	BALDIA	OLD TOWN	NEW KUMHARWARA	CDS	275	5,432	5,707
1562	1310	BALDIA	OLD TOWN	GHAREEB SHAH	CDS	258	3,752	4,010
1563	1311	BALDIA	OLD TOWN	LYARI PUMPING	CDS	287	3,359	3,646
1564	1308	BALDIA	OLD TOWN	NAWABAD	CDS	731	1,497	2,229
1565	1301	BALDIA	OLD TOWN	RAUF OIL	CDS	284	3,299	3,583
1566	680	BALDIA	OLD TOWN	BENGAL OIL	CDS	101	2,615	2,717
1567	1300	BALDIA	OLD TOWN	PAK ICE (31-01-2009)	CDS	1,036	5,617	6,653
1568	3351	BALDIA	OLD TOWN	JUNAID TRADE RMU	CDS	29	2,142	2,171
1569	1299	BALDIA	OLD TOWN	BURMA OIL-I	CDS	169	2,313	2,482
1570	1303	BALDIA	OLD TOWN	JELANI CENTRE	CDS	231	2,346	2,577
1571	1304	BALDIA	OLD TOWN	KWSB CHAWKIWARA	CDS	25	4,471	4,496
1572	3740	BALDIA	OLD TOWN	MIDPOINT	CDS	183	5,278	5,461
1573	566	BALDIA	Old Town	OLD HAJI CAMP	CDS	230	3,448	3,678
1574	1306	BALDIA	OLD TOWN	HAJI ISMAIL	CDS	233	1,829	2,062
1575	1312	BALDIA	OLD TOWN	HAJI PIR MUHAMMAD RMU	CDS	113	2,307	2,420
1576	3541	BALDIA	OLD TOWN	GHANCHI PARA	CDS	641	4,188	4,830
1577	3739	BALDIA	OLD TOWN	OFFBEAT STREET RMU	CDS	278	3,996	4,274
1578	677	BALDIA	OLD TOWN	MOOSA LANE RMU	CDS	191	2,538	2,729
1579	3010	BALDIA	OLD TOWN	RAMPAT ROAD P-11	CDS	52	1,488	1,541
1580	687	Orangi	ORANGI	AL AJAZ + CAP	CDS	1,432	1,767	3,199
1581	3372	Orangi	ORANGI	QATTAR HOSPITAL	CDS	39	1,681	1,720
1582	3425	Orangi	ORANGI	DUA CHOWK RMU	CDS	2,363	1,813	4,176
1583	691	Orangi	ORANGI	KHWAJA GHAREEB NAWAZ	CDS	3,068	861	3,928
1584	693	Orangi	ORANGI	KAMAL PETROL PUMP	CDS	2,207	2,087	4,294
1585	689	Orangi	ORANGI	NISHAN-E-HYDER	CDS	1,749	1,706	3,455
1586	695	Orangi	ORANGI	NOORI POLICE	CDS	1,179	2,693	3,872
1587	706	Orangi	ORANGI	QAZZAFI CHOWK	CDS	840	2,340	3,180
1588	692	Orangi	ORANGI	SHAMS-UDDIN	CDS	811	3,023	3,834
1589	690	Orangi	ORANGI	AL-FATEH COLONY	CDS	2,093	3,924	6,017
1590	2095	Orangi	ORANGI	REHMAT CHOWK	CDS	2,175	2,827	5,002
1591	1313	Orangi	ORANGI	MASJID -E- QUBA	CDS	1,538	2,799	4,337
1592	3345	Orangi	ORANGI	PULIA WALI	CDS	2,553	3,620	6,173
1593	698	Orangi	ORANGI	ISLAMIA COLONY	CDS	1,721	3,852	5,573
1594	696	Orangi	ORANGI	GHAZIABAD PUMPING	CDS	5,287	4,920	10,207
1595	697	Orangi	ORANGI	CHANDNI CHOWK	CDS	3,018	3,220	6,238
1596	699	Orangi	ORANGI	SHAHFAISAL CHOWK	CDS	2,906	1,920	4,826
1597	700	Orangi	ORANGI	DATA CHOWK	CDS	4,008	3,408	7,416
1598	1314	Orangi	ORANGI	HILAL-E-AHMER	CDS	2,491	1,965	4,456
1599	3387	Orangi	ORANGI	RK STUDIO	CDS	1,723	2,223	3,946
1600	2027	Orangi	ORANGI	BILLING ZONE	CDS	724	5,106	5,830
1601	702	Orangi	ORANGI	AL-HIRA PUMPING	CDS	2,570	3,254	5,824
1602	707	Orangi	ORANGI	ZIA-UL-HAQ -COLONY	CDS	2,147	2,584	4,731
1603	708	Orangi	ORANGI	GABOL PUMPING	CDS	1,454	1,172	2,625
1604	705	Orangi	ORANGI	GERMAN SCHOOL	CDS	2,242	2,946	5,187
1605	688	Orangi	ORANGI	HURRIAT NAGAR	CDS	1,313	2,400	3,713
1606	703	Orangi	ORANGI	AL-SHIFA CLINIC	CDS	1,861	1,043	2,903
1607	3263	Orangi	ORANGI	TECHNICAL COLLEGE	CDS	2,475	2,163	4,638
1608	701	Orangi	ORANGI	KALEEM INDUSTRY	CDS	1,299	918	2,217
1609	2029	Orangi	ORANGI	BISMILLAH CHOWK	CDS	1,553	4,322	5,875
1610	3422	Orangi	ORANGI	SABRI CHOWK RMU	CDS	1,142	2,502	3,644
1611	2085	Orangi	ORANGI	SPECIAL EDUCATION	CDS	7,504	4,990	12,494
1612	1315	Orangi	ORANGI	SHAIKH M. RASHEED	CDS	3,354	534	3,888
1613	3427	Orangi	ORANGI	GULSHAN-E-HASSAM	CDS	10,476	5,424	15,900
1614	3431	Orangi	ORANGI	DANISH KAMIL RMU	CDS	1,780	2,868	4,648
1615	139	Orangi	ORANGI	TOHEED COLONY	CDS	4,404	4,155	8,559
1616	132	Orangi	ORANGI	ZAHOOR COUNCILLOR	CDS	2,118	4,236	6,354
1617	150	Orangi	ORANGI	KHATAK RMU	CDS	1,978	2,858	4,836
1618	725	Bin Qasim	PIPRI EAST	TOWN SHIP (Steel Mill)	DDS	-	7,112	7,112
1619	722	Bin Qasim	PIPRI EAST	MDS 1(Steel Mill)	DDS	-	7,115	7,115
1620	723	Bin Qasim	PIPRI EAST	MDS 2(Steel Mill)	DDS	-	7,124	7,124
1621	724	Bin Qasim	PIPRI EAST	MAGNETIC INTERNATIONAL (OLD MARINE PRIDE	CDS	-	20,737	20,737
1622	3305	Bin Qasim	PIPRI EAST	M.M GHEE MILL (OLD MADIHA MOLVI)	CDS	-	9,938	9,938
1623	718	Bin Qasim	PIPRI EAST	SINO PAK-1	DDS	-	2,011	2,011
1624	4112	Bin Qasim	PIPRI EAST	SINO PAK-2	DDS	-	2,011	2,011
1625	717	Bin Qasim	PIPRI EAST	PAK SUZUKI-1	DDS	-	980	980
1626	720	Bin Qasim	PIPRI EAST	PAK SUZUKI-2	DDS	_	978	978
		Bin Qasim	PIPRI EAST	M. CORPORATION	DDS	_	2,877	2,877
1627	3599							

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1629	3766	Bin Qasim	PIPRI EAST	TECHNO AUTO GLASS	DDS	-	5,870	5,870
1630	3767	Bin Qasim	PIPRI EAST	HORIZON STEEL	DDS	-	5,224	5,224
1631	714	Bin Qasim	PIPRI WEST	DOWN STREAM 2	DDS	-	1,861	1,861
1632 1633	3610 3744	Bin Qasim Bin Qasim	PIPRI WEST	MOHSIN ALI RIZVI RUBA TECH	DDS DDS	-	664	664
1634	3051	Bin Qasim	PIPRI WEST PIPRI WEST	AL-RAZI SONS	CDS	-	1,014 2,342	1,014 2,342
1635	721	Bin Qasim	PIPRI WEST	PAK SUZUKI-3	DDS	_	984	984
1636	3882	Bin Qasim	PIPRI WEST	KIA LUCKY MOTORS	DDS	-	6,496	6,496
1637	3282	Bin Qasim	PIPRI WEST	NATIONAL INDUSTRIES PARK	DDS	-	4,064	4,064
1638	2005	Bin Qasim	PIPRI WEST	DOWN STREAM 1	DDS	-	4,053	4,053
1639	1316	Bin Qasim	PIPRI WEST	HASHOO STEEL	CDS	-	5,257	5,257
1640 1641	3768 3172	Bin Qasim Bin Qasim	PIPRI WEST PIPRI WEST	HI-TECH ALLOY WHEELS LTD AGRI AUTOS	DDS DDS	-	5,408 1,718	5,408 1,718
1642	3329	Bin Qasim	PORT QASIM	CRAFTERS PAPER	DDS	-	8,497	8,497
1643	3154	Bin Qasim	PORT QASIM	QASIM INT. CONTAINER	DDS	-	10,397	10,397
1644	3353	Bin Qasim	PORT QASIM	NAUSHABA NAEEM	DDS	-	3,088	3,088
1645	3812	Bin Qasim	PORT QASIM	TRANS TERMINAL (FAUJI)	DDS	-	2,382	2,382
1646	3624	Bin Qasim	PORT QASIM	NATIONAL FOOD	DDS	-	2,030	2,030
1647	3141	Bin Qasim	PORT QASIM	NESTLE PAKISTAN	DDS	-	2,458	2,458
1648	2146	Bin Qasim	PORT QASIM	FINE GAS 02	DDS	-	607	607
1649	734	Bin Qasim	PORT QASIM	INDUS MOTOR	DDS	-	984	984
1650 1651	727 728	Bin Qasim Bin Qasim	PORT QASIM	PORT QASIM 01	DDS	-	229 226	229 226
1652	3170	Bin Qasim	PORT QASIM PORT QASIM	PORT QASIM 02 FINE GAS 03	DDS CDS	-	3,269	3,269
1653	2110	Bin Qasim	PORT QASIM	GHULAM HYDAR	CDS		5,415	5,415
1654	731	Bin Qasim	PORT QASIM	BIO LINK	CDS	-	7,698	7,698
1655	726	Bin Qasim	PORT QASIM	P.S.O II	CDS	2,621	15,490	18,111
1656	729	Bin Qasim	PORT QASIM	PLATINUM PHARMA	CDS	-	5,913	5,913
1657	1319	Bin Qasim	PORT QASIM	AFZAL MOTORS	CDS	7,087	9,071	16,159
1658	732	Bin Qasim	PORT QASIM	T & T PIPRI	CDS	7,003	15,423	22,425
1659	1318	Bin Qasim	PORT QASIM	POLY TRADE	CDS	28,688	5,176	33,864
1660	3266	Bin Qasim	PORT QASIM	SHIRAZI INVESTMENT	CDS	-	4,837	4,837
1661 1662	1570 3356	Bin Qasim Bin Qasim	PORT QASIM	AGILITY LOGISTICS	DDS	-	1,932	1,932
1663	3545	Bin Qasim	PORT QASIM PORT QASIM	IQBAL PEERANI DALDA FOOD	DDS DDS	-	2,622 8,521	2,622 8,521
1664	3463	Bin Qasim	PORT QASIM	PIBT (PAK INT. BULK TERMINAL)	DDS	_	5,200	5,200
1665	4205	Bin Qasim	PORT QASIM	BINQASIM PACKAGES	DDS	-	995	995
1666	1320	Bin Qasim	PORT QASIM	GANDHARA NISSAN	DDS	-	1,648	1,648
1667	3607	Bin Qasim	PORT QASIM	HASCOL TERMINAL	DDS	-	3,104	3,104
1668	730	Bin Qasim	PORT QASIM	BQ LIQUID (EX BINQASIM PACKAGES)	CDS	-	7,366	7,366
1669	3764	Bin Qasim	PORT QASIM	BULK MANAGEMENT	CDS	-	6,830	6,830
1670	3765	Bin Qasim Bin Qasim	PORT QASIM	MAZCO	CDS	-	3,815	3,815
1671 1672	3763 3953	Bin Qasim Bin Qasim	PORT QASIM	AL-BUKSH	CDS DDS	-	7,925 3,482	7,925 3,482
1673	3267	Bin Qasim	PORT QASIM PORT QASIM	TRI PACK FILMS MAPAK EDIBLE OIL (MUJAHID OIL REFINERY)	CDS	-	10,864	10,864
1674	3330	Bin Qasim	PORT QASIM	MASTER MOTORS	CDS	-	3,266	3,266
1675	3702	Bin Qasim	PORT QASIM	AUVITRONICS LTD.	DDS	-	1,159	1,159
1676	1324	KORANGI	PRL	NASIR COLONY RMU	CDS	2,305	2,109	4,414
1677	712	KORANGI	PRL	FISH MILL SUBSTATION	CDS	3,262	5,611	8,873
1678	1333	KORANGI	PRL	IBRAHIM HYDERI RMU	CDS	1,310	4,792	6,102
1679	3344	KORANGI	PRL	SILVER TOWN	CDS	2,161	3,841	6,002
1680	1326 710	KORANGI	PRL	ABBASI NAGER RMU	CDS	1,730	3,814	5,544
1681 1682	1323	KORANGI KORANGI	PRL PRL	OMNI BUS DEPOT MEGA BIRD	CDS	3,375 1,883	4,209 2,954	7,584 4,837
1683	1325	KORANGI	PRL	POLE - 70	CDS	2,322	3,017	5,340
1684	3357	KORANGI	PRL	DARUS SALAM	DDS	3,118	3,409	6,527
1685	54	KORANGI	PRL	PAK REFINEERY II	DDS	734	5,244	5,978
1686	3264	KORANGI	PRL	BOL TV	DDS	-	410	410
1687	3450	KORANGI	PRL	MEHRUNISA	DDS	-	1,625	1,625
1688	713	KORANGI	PRL	PAK REFINERY 01	DDS	-	1,147	1,147
1689	711	KORANGI	PRL	PARCO IV	DDS	-	1,458	1,458
1690 1691	3167 709	KORANGI	PRL	IBM	CDS	1,594	4,477	6,071
1691	709 4226	KORANGI KORANGI	PRL PRL	SILICON PRODUCT (OLD BURSHANE GAS)	CDS	2,835	4,388	7,223
1693	1331	KORANGI	PRL PRL	KCIP-2 PEPCO	DDS DDS	-	2,800 1,464	2,800 1,464
1694	3278	KORANGI	PRL	INDUS HOSPITAL	DDS	77	2,576	2,653
1695	3887	KORANGI	PRL	KCIP-1	DDS	-	4,660	4,660
1696	3931	KORANGI	PRL	AIR FORCE BASE KORANGI CREEK	DDS	-	2,920	2,920
1697	4125	KORANGI	PRL	INTER MARKET	DDS	-	2,454	2,454
1698	1330	KORANGI	PRL	PARCO-III	CDS	2,266	5,507	7,773
1699	3286	KORANGI	PRL	LUCKNOW SOCIETY	CDS	3,118	4,022	7,140
1700	1332	KORANGI	PRL	C-STATION	CDS	1,761	3,477	5,238
1701	50	KORANGI	PRL	ISLAMIC MISSION HOSP.	CDS	5,014	4,076	9,090
1702	53	KORANGI	PRL	MILL ROCK	CDS	3,014	3,185	6,198

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1703	3042	KORANGI	PRL	CHAKRA GOTH RMU	CDS	1,825	3,302	5,128
1704	3694	KORANGI	PRL	DARULFALAH	CDS	1,739	5,734	7,473
1705 1706	1328 3589	KORANGI KORANGI	PRL PRL	PEGASUS AMAN ORCHID	CDS DDS	3,987	2,516 3,680	6,503 3,680
1707	3505	KORANGI	PRL	MAKHDOOM BILAWAL SOCIETY	DDS	1,993	4,090	6,083
1708	3241	KORANGI	QAYUMABAD	MEHRAN TOWN	CDS	5,081	2,860	7,940
1709	3661	KORANGI	QAYUMABAD	SECTOR 6B RMU	CDS	3,912	4,057	7,969
1710	3405	DEFENCE	QAYUMABAD	Madina Masjid	CDS	91	4,111	4,202
1711	3398	DEFENCE	QAYUMABAD	Pole-5 RMU	CDS	2,651	2,956	5,608
1712 1713	3261 33	DEFENCE DEFENCE	QAYUMABAD QAYUMABAD	Shaikh Amjad & Mubashir Defence Pumping-3	DDS CDS	52	1,171 4,741	1,175 4,794
1714	37	KORANGI	QAYUMABAD	YASIR ASSOCIATES	CDS	977	3,627	4,604
1715	39	DEFENCE	QAYUMABAD	Kh-e-Jami RMU	CDS	335	5,505	5,840
1716	56	DEFENCE	QAYUMABAD	Najshaz Motors	CDS	179	1,982	2,161
1717	41	DEFENCE	QAYUMABAD	Defence Pumping-4	CDS	21	6,972	6,993
1718	46	DEFENCE	QAYUMABAD	Nisar Shaheed Park	CDS	550	9,033	9,583
1719 1720	44 40	DEFENCE DEFENCE	QAYUMABAD	Defence-29	CDS	74	4,175	4,249
1721	34	KORANGI	QAYUMABAD QAYUMABAD	Chayel Corner RMU NAT. FIBER I	CDS CDS	210 2,124	4,745 4,038	4,955 6,162
1722	48	KORANGI	QAYUMABAD	ALPHA BROTHERS(fine food)	CDS	829	4,639	5,468
1723	3043	KORANGI	QAYUMABAD	KDA TP 03	CDS	2,630	2,985	5,615
1724	3187	KORANGI	QAYUMABAD	KORANGI CROSSING	CDS	1,825	3,017	4,841
1725	3689	DEFENCE	QAYUMABAD	Diamond Residency	CDS	-	1,906	1,906
1726 1727	3046 3451	KORANGI KORANGI	QAYUMABAD	S.G.S KARSAZ	CDS	3,389	3,516	6,906
1728	3400	DEFENCE	QAYUMABAD QAYUMABAD	TURN STYLE RMU Shalimar Ice	CDS	1,491 25	4,735 5,777	6,225 5,801
1729	3472	DEFENCE	QAYUMABAD	C-Area RMU	CDS	131	3,032	3,163
1730	3454	KORANGI	QAYUMABAD	GHAZI TANNERY	CDS	1,270	4,438	5,708
1731	3521	DEFENCE	QAYUMABAD	Ayaz Masjid	CDS	39	4,831	4,870
1732	3522	DEFENCE	QAYUMABAD	Khalid Mehmood RMU	CDS	63	2,259	2,322
1733	3519	DEFENCE	QAYUMABAD	South Park RMU	CDS	53	2,686	2,740
1734 1735	35 3482	DEFENCE DEFENCE	QAYUMABAD QAYUMABAD	Akhtar Colony Car Parking	CDS	146 68	3,674 2,222	3,820 2,290
1736	3438	DEFENCE	QAYUMABAD	EFU-Life Insurance	DDS	- 08	2,222	2,290
1737	3732	DEFENCE	QAYUMABAD	Salma Super Market	CDS	-	639	639
1738	4025	KORANGI	QAYUMABAD	Alamgir Trust RMU	CDS	1,892	3,155	5,047
1739	4015	KORANGI	QAYUMABAD	HILAL CONFECTIONERY	DDS	-	4,127	4,127
1740	57	KORANGI	QAYUMABAD	SHAIKH BROS.	CDS	993	4,562	5,555
1741 1742	38 49	KORANGI KORANGI	QAYUMABAD	IMPERIAL RUBBER	CDS	667	4,717 4,282	5,384
1743	36	KORANGI	QAYUMABAD QAYUMABAD	EASTERN EXPORT NAT. FIBER II	CDS	1,459 2,194	4,282	5,741 6,376
1744	3050	KORANGI	QAYUMABAD	ITRAT HUSSAIN (OLD PAK MARBLE)	CDS	560	3,414	3,974
1745	3240	KORANGI	QAYUMABAD	NUTRI PAK (OLD RELIANCE INDUSTRIES)	CDS	1,781	4,855	6,635
1746	4121	KORANGI	QAYUMABAD	AMEERWOOD RMU	CDS	-	3,800	3,800
1747	750	DEFENCE	Queens Road	Sherton Hotel	CDS	-	3,210	3,210
1748	4034 2004	Defence	QUEENS ROAD	A. HAROON PARK (HIJARAT COLONY S/S)	CDS	130	4,944	5,074
1749 1750	1335	DEFENCE DEFENCE	Queens Road Queens Road	Staff Flag House Tower Oak (International Furnishing)	DDS CDS	-	6,741 1,994	6,741 1,994
1751	755	DEFENCE	Queens Road	Cotton Research	CDS	547	2,433	2,980
1752	752	DEFENCE	Queens Road	Techno City-1	CDS	-	2,850	2,850
1753	3399	DEFENCE	Queens Road	Alico SS	CDS	4	3,606	3,610
1754	1344	DEFENCE	Queens Road	Harmoon Mohata	CDS	11	2,773	2,784
1755 1756	736 738	DEFENCE DEFENCE	Queens Road	Queens Road	CDS	25	5,176	5,200
1757	738	DEFENCE	Queens Road	State Bank-2	DDS CDS	367	2,840 7,192	2,840 7,559
1758	3402	DEFENCE	Queens Road Queens Road	Harding Bridge Badshan Khan RMU	CDS	277	7,192 8,724	9,001
1759	2086	DEFENCE	Queens Road	Avenue Center	CDS	386	7,099	7,485
1760	745	DEFENCE	Queens Road	Pak Handi Craft	CDS	153	6,326	6,480
1761	1334	DEFENCE	Queens Road	Volkart Brothers	CDS	4	5,347	5,351
1762	739	DEFENCE	Queens Road	Bahria Complex-1	CDS	7	4,007	4,014
1763 1764	2176 1340	DEFENCE DEFENCE	Queens Road	NTR Foundation 2	CDS	11	3,059	3,070
1765	754	DEFENCE	Queens Road Queens Road	Foundation-3 Muhammadi House	CDS	144	3,021 3,992	3,024 4,136
1766	1342	DEFENCE	Queens Road	ABN Ambro Bank	DDS	-	3,066	3,066
1767	1341	DEFENCE	Queens Road	Techno City-2	CDS	-	2,853	2,853
1768	1343	DEFENCE	Queens Road	Commerce College	CDS	138	3,189	3,326
1769	756	DEFENCE	Queens Road	Haji Camp	CDS	119	3,393	3,512
1770	753	DEFENCE	Queens Road	National Refinery	CDS	11	12,466	12,477
1771 1772	741 735	DEFENCE DEFENCE	Queens Road Queens Road	Independent News Hijrat Colony RMU	CDS	14 32	3,370 2,723	3,384
1773	3368	DEFENCE	Queens Road Queens Road	Mega Tower	DDS	- 32	3,682	2,755 3,682
1774	3403	DEFENCE	Queens Road	United Bank Limited	DDS	-	2,284	2,284
1775	2081	DEFENCE	Queens Road	Hayat Regency	CDS	-	2,825	2,825
1776	744	DEFENCE	Queens Road	Burton Road	CDS	189	4,675	4,863

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1777	3173	DEFENCE	Queens Road	American Consulate Gereral	DDS	-	583	583
1778	2044	DEFENCE	Queens Road	Peoples Foundation	CDS	14	4,559	4,573
1779 1780	757 740	DEFENCE DEFENCE	Queens Road Queens Road	Institute Of Bankers Raleigh Brothers	CDS CDS	10	3,229 3,010	3,239 3,010
1781	3553	DEFENCE	Queens Road	Beaumont Plaza	DDS	-	1,993	1,993
1782	3860	BALDIA	Queens Road	KAGHZI BAZAR	CDS	45	3,984	4,029
1783	762	Bin Qasim	RECP	Usman Goth (old name: KDA FILTER PLANT)	CDS	6,739	6,328	13,066
1784	759	Bin Qasim	RECP	GRAIN GODOWN	CDS	2,413	5,828	8,241
1785	761	Bin Qasim	RECP	KE COLONY (EX GUL. HADEED 06)	CDS	202	3,919	4,121
1786 1787	3302 3396	Bin Qasim Bin Qasim	RECP RECP	Sidra City (old name: PSO MARDAN) GUL. HADEED 10	CDS CDS	28,405 482	10,146 3,349	38,550 3,831
1788	1345	Bin Qasim	RECP	RAJA POULTRY FARM	CDS	7,126	11,439	18,565
1789	760	Bin Qasim	RECP	BAB-E-REHMAT (EX GUL. HADEED 01)	CDS	238	3,457	3,695
1790	3692	Bin Qasim	RECP	IMRAN AMIN MUSTAFA	DDS	-	4,609	4,609
1791	3300	Bin Qasim	RECP	KING HATCHERY	CDS	5,544	3,037	8,581
1792	3314	Bin Qasim	RECP	CHAPPAL TRADERS	DDS	-	383	383
1793 1794	3869 3323	Bin Qasim	RECP	MUREE GOTH	CDS	3,524	4,176	7,700
1794	3301	Bin Qasim Bin Qasim	RECP RECP	PIPRI FILTER PLANT New RAILWAY MARSHALLING YARD	DDS CDS	1,775	4,855 12,760	4,855 14,535
1796	3460	Bin Qasim	RECP	EXTENSION RMU (OLD ALLAH DINO)	DDS	3,930	807	4,737
1797	1346	Bin Qasim	RECP	MADAR-E-MILLAT	CDS	294	3,907	4,201
1798	3005	Orangi	S.I.T.E	QADRI BROTHERS	CDS	61	3,136	3,197
1799	769	Orangi	S.I.T.E	KAMRAN DISTRIBUTOR	CDS	655	7,467	8,122
1800	4117	Orangi	S.I.T.E	SIKANDER IRON	CDS	766	2,501	3,267
1801 1802	2065 3008	Orangi	S.I.T.E	ABIDABAD	CDS	2,885	2,684	5,570
1802	3842	Orangi Orangi	S.I.T.E S.I.T.E	M.R. INDUSTRY MIAN SONS	CDS	808 660	2,245 2,524	3,053 3,184
1804	2148	Orangi	S.I.T.E	RASHID INDUSTRY	CDS	956	3,125	4,081
1805	3149	Orangi	S.I.T.E	FAIZ-UR-REHMAN	CDS	1,207	1,982	3,189
1806	774	Orangi	S.I.T.E	MFMY	CDS	1,470	4,961	6,431
1807	779	GULSHAN	S.I.T.E	Bismillah Hotel (Noorani Hotel)	CDS	194	7,002	7,196
1808	898	Orangi	S.I.T.E	BROUGHS WELCOME	CDS	7	3,015	3,022
1809 1810	773 804	Orangi Orangi	S.I.T.E S.I.T.E	PAK CONTAINER	CDS CDS	144 186	2,689 2,413	2,833 2,599
1811	776	Orangi	S.I.T.E	IBRAHIM ALI BHAI ORANGI MEDICOS	CDS	1,861	2,413	3,997
1812	2143	Orangi	S.I.T.E	ATLAS BATTERY	CDS	166	6,194	6,359
1813	778	Orangi	S.I.T.E	SHAMSI CLOTH	CDS	481	2,189	2,670
1814	772	Orangi	S.I.T.E	BEVERAGES	CDS	51	2,960	3,011
1815	3054	Orangi	S.I.T.E	TSW	DDS	7	603	610
1816 1817	3158 4119	Orangi Orangi	S.I.T.E S.I.T.E	AL WAJID TOWN	CDS	1,903	2,438 2,972	4,341 4,265
1818	787	Orangi	S.I.T.E	GHOSIA GRAVEYARD JABBAR STEEL	DDS	1,294	3,310	3,310
1819	2032	Orangi	S.I.T.E	SIMA LAB	CDS	218	1,234	1,452
1820	810	Orangi	S.I.T.E	DADA ENTERPRISE	CDS	742	2,001	2,742
1821	3533	Orangi	S.I.T.E	AHSAN HOTEL	CDS	810	4,120	4,931
1822	777	Orangi	S.I.T.E	MUHAMMADI ROLLING	CDS	317	3,804	4,122
1823	791	GULSHAN	S.I.T.E	Usmania Colony	CDS	41	8,213	8,253
1824 1825	3455 792	Orangi Orangi	S.I.T.E S.I.T.E	RRP SINDH STEEL	CDS	424 14	1,464 1,950	1,888
1826	3140	Orangi	S.I.T.E	ASIM INDUSTRY	CDS	60	2,295	1,964 2,355
1827	3196	Orangi	S.I.T.E	EXIDE PAKISTAN	DDS	-	2,780	2,780
1828	3002	Orangi	S.I.T.E	ARTR	CDS	159	2,416	2,575
1829	789	Orangi	S.I.T.E	GOLDEN PLASTIC	CDS	3	3,787	3,790
1830	3502	GULSHAN	S.I.T.E	Tooba Masjid (Saifullah RMU)	CDS	310	4,768	5,078
1831 1832	799 800	Orangi Orangi	S.I.T.E	DIAMOND SILK	CDS	14	3,595	3,609
1833	795	GULSHAN	S.I.T.E S.I.T.E	MEKDA INDUSTRY Hamdard	CDS CDS	1,327	4,337 7,108	4,341 8,435
1834	2106	Orangi	S.I.T.E	SANAULLAH WOOLEN	CDS	608	1,553	2,161
1835	796	GULSHAN	S.I.T.E	Aurangabad (Fine Textile)	CDS	396	5,014	5,410
1836	794	Orangi	S.I.T.E	HAFIZ TEXTILE	CDS	236	5,214	5,449
1837	3597	Orangi	S.I.T.E	MUSHTAQ-1	CDS	181	5,825	6,006
1838	3582	GULSHAN	S.I.T.E	3H RMU	CDS	371	5,500	5,871
1839 1840	3250 802	Orangi Orangi	S.I.T.E	BARRET HODGSON METROVILLE	DDS CDS	1,398	919 1,949	919
1841	805	GULSHAN	S.I.T.E S.I.T.E	METROVILLE Abbasi Shaheed	CDS	1,398	1,949 4,455	3,346 4,488
1842	808	Orangi	S.I.T.E	AGRO PROCESS	CDS	160	1,979	2,140
1843	1347	Orangi	S.I.T.E	FRONTIER COLONY	CDS	933	2,417	3,350
1844	807	Orangi	S.I.T.E	BAWANI CHALLI	CDS	748	1,452	2,200
1845	806	Orangi	S.I.T.E	VALIKA INDUSTRY	CDS	1,416	3,258	4,673
1846	775	GULSHAN	S.I.T.E	District Office	CDS	336	7,656	7,992
1847 1848	3596	GULSHAN	S.I.T.E	Naz Ice	CDS	627	7,830	8,457
1040	3420	Orangi	S.I.T.E	MERCANTILE INDUSTRY	DDS	-	2,859	2,859
1849	784	Orangi	S.I.T.E	ALI GOHAR	CDS	23	2,097	2,119

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1851	2179	Orangi	S.I.T.E	MALIR POULTRY FARM	CDS	751	3,775	4,526
1852 1853	3418 3257	Orangi Orangi	S.I.T.E	UNION STEEL	DDS	- 4 027	2,686	2,686
1854	781	Orangi	S.I.T.E S.I.T.E	SALALAH FLOUR MILL SUPREME STEEL	CDS CDS	1,037	3,111 2,381	4,148 2,790
1855	2064	Orangi	S.I.T.E	INDUS CELL	CDS	398	5,073	5,471
1856	801	Orangi	S.I.T.E	NATIONAL SPINNING	CDS	588	3,148	3,736
1857	694	Orangi	S.I.T.E	BIJLI NAGAR	CDS	1,567	3,047	4,614
1858	3401	Orangi	S.I.T.E	GOVT. SCHOOL RMU	CDS	120	7,091	7,210
1859 1860	3453 3326	Orangi Surjani	S.I.T.E Shadman	ROOMI INTERNATIONAL Sehar Palace	CDS CDS	1,888	2,074 2,575	2,515 4,464
1861	3612	Surjani	Shadman	Safia Cottage	CDS	1,889	2,070	3,959
1862	3383	Surjani	Shadman	Khatri	CDS	1,425	3,198	4,624
1863	3762	Surjani	Shadman	White Flower	CDS	1,238	1,467	2,705
1864	649	Surjani	Shadman	Modern Complex	CDS	2,125	2,244	4,369
1865	636	Surjani	Shadman	Al-Ghori	CDS	929	805	1,734
1866 1867	3871 629	Surjani Surjani	Shadman Shadman	Ocean Lawn RMU (Old Rehmania Hall) Bilal Town	CDS CDS	1,279 2,992	2,152 275	3,430 3,266
1868	3470	Surjani	Shadman	Iqbal Plaza	CDS	1,806	3,161	4,966
1869	3834	Surjani	Shadman	Terry World	CDS	638	5,618	6,256
1870	3745	Surjani	Shadman	Al-Ghafoor Atrium Tower	CDS	1,416	1,034	2,450
1871	3840	Surjani	Shadman	Naseem Textile	CDS	1,311	3,917	5,228
1872	3458	Surjani	Shadman	Moon Net	CDS	1,278	2,809	4,087
1873 1874	625 631	Surjani Surjani	Shadman	MK Builder	CDS	3 202	7,288	7,344
1875	3750	Surjani	Shadman Shadman	Nazia Square Garishon	CDS CDS	2,392 1,174	2,647 3,282	5,040 4,456
1876	3751	Surjani	Shadman	Faysal Garment	CDS	1,036	3,540	4,576
1877	3833	Surjani	Shadman	Lodhi House	CDS	1,321	1,460	2,782
1878	3865	Surjani	Shadman	Knowledge School	CDS	1,822	3,244	5,066
1879	3981	Surjani	Shadman	Omega Mall	DDS	-	1,900	1,900
1880	3770	Surjani	Shadman	Sindh Town	CDS	1,638	3,536	5,174
1881 1882	2163 638	Surjani Surjani	Shadman	Faiza Avenue	CDS CDS	1,552	4,112 3,628	5,664
1883	3386	Surjani	Shadman Shadman	Country Tower Achanak Hotel	CDS	1,571 1,673	1,999	5,199 3,672
1884	645	Surjani	Shadman	Pentium-4	CDS	2,500	2,688	5,187
1885	4054	Surjani	Shadman	Green Line	DDS	-	2,090	2,090
1886	207	Surjani	Shadman	Block-N Pumping	CDS	563	3,680	4,243
1887	4101	Surjani	Surjani	Hassan Brohi Goth	CDS	4,508	3,690	8,198
1888 1889	882 1364	Surjani Surjani	Surjani Surjani	Arsalan Homes (Old Sector-L1) Deh Taisar	CDS CDS	3,368 2,709	5,707 5,674	9,075 8,382
1890	3743	Surjani	Surjani	Sallu Garden	CDS	2,415	2,240	4,655
1891	883	Surjani	Surjani	Michal Academy (Old Pole-97)	CDS	1,608	4,863	6,471
1892	887	Surjani	Surjani	Tawwakal Enterprise	CDS	1,916	5,472	7,389
1893	889	Surjani	Surjani	Bright Star	CDS	1,321	3,676	4,997
1894	884	Surjani	Surjani	Al-Watan	CDS	2,794	1,573	4,368
1895 1896	879 886	Surjani Surjani	Surjani	Yousuf Goth (P-25)	CDS	2,008	3,760	5,768
1897	888	Surjani	Surjani Surjani	Noble Point Stylish Garden	CDS CDS	1,548 1,385	3,660 3,989	5,207 5,374
1898	3284	Surjani	Surjani	Royal City	CDS	9,768	1,793	11,561
1899	878	Surjani	Surjani	Surjani Tel Exchange	CDS	2	2,546	2,548
1900	3376	Surjani	Surjani	Oakland School (Old P-19 RMU)	CDS	1,380	4,105	5,485
1901	3367	Surjani	Surjani	Lal Market P-22/3	CDS	1,763	5,782	7,546
1902	3609	Surjani Surjani	Surjani	Mono Technical	CDS	1,252	4,262	5,514
1903 1904	2164 3283	Surjani	Surjani Surjani	Maymarabad Gulshan-e-Sheeraz	CDS DDS	2,413 2,643	2,708 1,503	5,121 4,145
1905	1351	Surjani	Surjani	Anarkali	CDS	1,539	2,712	4,145
1906	3124	Orangi	Surjani	SMALL INDUSTRIES	CDS	1,478	13,334	14,812
1907	881	Surjani	Surjani	Saiban	CDS	3,292	2,116	5,408
1908	3727	Surjani	Surjani	Ahsan Medical	CDS	5,126	2,164	7,290
1909	880	Surjani	Surjani	Hayat Baig	CDS	2,760	1,276	4,035
1910 1911	2154 4111	Surjani Surjani	Surjani	Shah Stadium (Old Deh Taisar-5 + CAP-2)	CDS	1,827	7,604	9,431
1911	3584	Surjani	Surjani Surjani	Siddique Goth Khuda Ki Basti	CDS CDS	3,733 3,649	4,871 6,495	8,604 10,143
1913	2155	Surjani	Surjani	Mian Institute (Old Deh Taisar-4)	CDS	6,019	10,304	16,322
1914	3012	Surjani	Surjani	Sultan Plaza (OH-P-55)	CDS	1,781	3,390	5,171
1915	1353	Surjani	Surjani	Global City	CDS	3,831	1,622	5,453
1916	3366	Surjani	Surjani	Health Care P-80	CDS	2,427	4,882	7,309
1917	3703	Surjani	Surjani	Mountain Valley (OLD Saima Arabian Villas-3)	DDS	-	7,237	7,237
1918 1919	3500 3704	Surjani Surjani	Surjani	Saima Arabian Villas-1	DDS	-	7,913	7,913
1919	3704 3529	Surjani	Surjani Surjani	Zaki Cottages (OLD Saima Arabian Villas-2) Abdullah More	DDS CDS	3,804	7,283 1,822	7,283 5,627
1921	1350	Surjani	Surjani	Ever Green	CDS	4,379	686	5,065
1922	885	Surjani	Surjani	Kala School	CDS	1,795	3,966	5,761
1923	3583	Surjani	Surjani	Education Centre	CDS	2,004	3,402	5,407
1924	3742	Surjani	Surjani	Aleem Paradise	CDS	3,604	4,526	8,129

1926 3472 Surjani Surjani Oympic Pride (Old P-12/13 RMU) COS 2,700 3,02 1927 3616 Surjani Surjani Oympic Pride (Old P-12/13 RMU) COS 2,700 3,02 1928 3037 UTHAL	i. No	d GIS Total Feede Length-(m)
1927 3616 Surjani Surjani Dany Outrees COS 1,655 2,218	1925	4,09
1929 3007	1926	5,725
1990 3090	1927	4,465
1991 3938	_	1,480
1931 3035		
1932 3038		
1938 3336		
1936 3186		
1935 3752 Surjani VALIKA A-Hamra C.D.S 1,007 4,78 1936 4316 Orangi VALIKA TALHA QAZI RMU (GHAZI VILLAS) C.D.S B. 3,300 1938 3754 Surjani VALIKA A-Hamma C.D.S 617 8,211 1939 3755 Orangi VALIKA A-Hamma C.D.S 617 8,211 1940 1118 Orangi VALIKA A-Hamma C.D.S 617 8,211 1940 1118 Orangi VALIKA A-Hamma C.D.S 1,511 1941 3296 Orangi VALIKA HIKMAT INSTITUTE C.D.S 12,305 1,611 1941 3296 Orangi VALIKA HIKMAT INSTITUTE C.D.S 1,2305 1,611 1942 3736 Orangi VALIKA RATIT PAHAR RMU C.D.S 1,338 1942 3738 Orangi VALIKA RATIT PAHAR RMU C.D.S 1,338 1944 1356 Orangi VALIKA O.D.H.POLE-62 C.D.S 2,344 2,801 1945 2607 Orangi VALIKA O.D.H.POLE-62 C.D.S 2,344 2,801 1946 2607 Orangi VALIKA SULTANIABA DUPMPING C.D.S 3,615 1,727 1947 865 Orangi VALIKA SULTANIABA DUPMPING C.D.S 3,615 1,727 1948 3574 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1949 859 SURJani VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1959 3452 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1959 3452 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1959 3574 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1959 3574 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,471 6,797 1950 3452 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1951 3125 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1951 3125 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1952 857 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1953 867 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1953 867 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,634 1,313 1954 3555 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,539 1,666 1958 868 Orangi VALIKA ALMUMTAZ RMU C.D.S 1,539 1,666 1959 869 Or		
1936 4116		
1938 3754 Surjani VALIKA		
1938 3754 Surjani		
1939 3255 Orangi VALIKA		
1940		
1941 3226 Orangi VALIKA MUGHAL ENTERPRISE DDS		
1942 3726 Orangi VALIKA RATII PAHAR RMU CDS 1,350 2,49;	-	
1943 3735 Orangi	_	
1944 1356 Orangi	1943	
1945 860 Orangi	1944	
1946 2087 Orangi	1945	
1948	1946	
1949	1947	
1950 3452 Orangi	1948	2,368
1951 3125	1949	5,176
1952 871	1950	4,404
1953 867 Orangi VALIKA POLE-49 CDS 1,089 3,715 1954 2177 Orangi VALIKA ZAMSON DDS - 3,275 1955 32256 Orangi VALIKA NUSRAT BHUTTO MORR CDS 1,554 1,135 1956 3600 Orangi VALIKA MIANWALI COLONY RMU CDS 1,559 1,966 1957 863 Orangi VALIKA HUB DAM DDS - 5,866 1958 864 Orangi VALIKA RAHELAVENUE CDS 1,281 2,646 1959 861 Orangi VALIKA RAHELAVENUE CDS 1,281 2,646 1959 861 Orangi VALIKA QASBA PUMPING CDS 1,372 5,194 1960 869 Orangi VALIKA LAKHANI CDS 1,371 397 1961 1355 Orangi VALIKA LAKHANI CDS 1,371 397 1962 866 Surjani Valika Blue Bird CDS 1,207 2,785 1963 858 Surjani Valika Khwaja Ajmair Nagri CDS 1,207 2,785 1964 868 Orangi VALIKA ACIL CDS 1,207 2,785 1965 870 Orangi VALIKA ACIL CDS 1,851 1966 3089 UTHAL VINDER SIDDIQ SONS DDS - 1,733 1967 3726 UTHAL VINDER TIN PLATE DDS - 3,351 1970 3032 UTHAL VINDER Khurkhera (old name Pole-01) CDS - 7,652 311 1971 3935 UTHAL VINDER ARMY PROOF RANGE CDS 6,826 5,877 1973 3033 UTHAL VINDER CHINCHARI RMU CDS 3,7930 6,600 1974 3088 UTHAL VINDER CHINCHARI RMU CDS 3,7930 6,600 1975 854 BALDIA WEST WHARF LIDA DDS - 1,200 1977 847 BALDIA WEST WHARF WEALS ARCA CDS - 1,200 1979 2071 BALDIA WEST WHARF SALQHITER CDS 449 1988 833 BALDIA WEST WHARF SALQHITER CDS 449 1988 839 BALDIA WEST WHARF SALQHITER CDS 76,552 4,991 1988 838 BALDIA WEST WHARF SALQHITER HOUSE CDS 444 5,488 1988 834 BALDIA WEST WHARF SALQHITER HOUSE CDS 449 1988 853 BALDIA WEST WHARF SALQHITER HOUSE CDS 449 1988 851 BALDIA WEST WHARF SALQHITER HOUSE CDS 449 1988 851 BALDIA WEST WHARF SALQHITER HOUSE CDS 449 1988 851 BA	1951	3,370
1954 2177 Orangi	1952	3,343
1955 3256	_	4,808
1956 3600		3,279
1957 863		2,688
1958 864		3,505
1959 861		
1960 869 Orangi		
1961 1355		
1962 866 Surjani Valika Blue Bird CDS 150 3,55; 1963 858 Surjani Valika Khwaja Ajmair Nagri CDS 1,207 2,78; 1964 868 Orangi VALIKA MANGHOPIR ROAD CDS 2,055 1,32; 1965 870 Orangi VALIKA ACIL CDS 1,851 1,436 1966 3089 UTHAL VINDER SIDDIQ SONS DDS - 1,73; 1967 3726 UTHAL VINDER TIN PLATE DDS - 36; 1968 3160 UTHAL VINDER Khurkhera (old name Pole-01) CDS - 76; 1969 3034 UTHAL VINDER WELLS AREA CDS 76,522 31; 1970 3032 UTHAL VINDER ARMY PROOF RANGE CDS 66,826 5,87; 1971 3955 UTHAL VINDER CHINCHARI RMU CDS 37,930 6,600 1972 3033 UTHAL VINDER VINDER WINDER BAZAR CDS 27,156 1,796 1973 4068 UTHAL VINDER Warshal / DEFENCE PROOF RANGEES DDS - 3,300 1974 3088 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 3,300 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,436 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1980 853 BALDIA WEST WHARF SALUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF KAPACHI MIANI CDS 4 2,322 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 44 2,322 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 851 BALDIA WEST WHARF KALIGHTER HOUSE CDS 765 4,995 1982 8		
1963 858 Surjani Valika Khwaja Ajmair Nagri CDS 1,207 2,788 1964 868 Orangi VALIKA MANGHOPIR ROAD CDS 2,055 1,327 1965 870 Orangi VALIKA ACIL CDS 1,851 1,436 1966 3089 UTHAL VINDER SIDDIQ SONS DDS - 1,731 1967 3726 UTHAL VINDER TIN PLATE DDS - 36 1968 3160 UTHAL VINDER Khurkhera (old name Pole-01) CDS - 76 1969 3034 UTHAL VINDER WELLS AREA CDS 76,522 311 1970 3032 UTHAL VINDER ARMY PROOF RANGE CDS 66,826 5,871 1971 3955 UTHAL VINDER ARMY PROOF RANGE CDS 66,826 5,871 1972 3033 UTHAL VINDER VINDER VINDER VINDER BAZAR CDS 27,156 1,796 1973 4068 UTHAL VINDER Marshal / DEFENCE PROOF RANGES DDS - 3,300 1974 3088 UTHAL VINDER Marshal / DEFENCE PROOF RANGES DDS - 5,50 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,436 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,207 1977 847 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1981 849 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF KAPACHI SHIPYARF CDS 4 2,322 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,342 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,342 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,342 1983 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,342 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 765 4,999 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 765 4,999 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 765 4,999 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 765 4,999 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 765 4,999 1983 851 BALDIA WEST WHARF K.P.T. WEST WHARF		
1964 868 Orangi VALIKA MANGHOPIR ROAD CDS 2,055 1,327 1965 870 Orangi VALIKA ACIL CDS 1,851 1,436 1966 3089 UTHAL VINDER SIDDIQ SONS DDS - 1,733 1967 3726 UTHAL VINDER TIN PLATE DDS - 36 1968 3160 UTHAL VINDER Khurkhera (old name Pole-01) CDS - 76 1969 3034 UTHAL VINDER Khurkhera (old name Pole-01) CDS - 76,522 311 1970 3032 UTHAL VINDER ARMY PROOF RANGE CDS 66,826 5,873 1971 3955 UTHAL VINDER CHINCHARI RMU CDS 37,930 6,600 1972 3033 UTHAL VINDER VINDER VINDER BAZAR CDS 27,156 1,794 1973 4068 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 3,300 1974 3088 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 56 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,434 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1977 847 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,488 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,322 1982 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 4,992 1980 851 BALDIA WEST WHARF K.P.T. WEST		
1965 870		
1966 3089	-	
1967 3726	-	
1968 3160		
1969 3034		
1970 3032 UTHAL VINDER ARMY PROOF RANGE CDS 66,826 5,87: 1971 3955 UTHAL VINDER CHINCHARI RMU CDS 37,930 6,600 1972 3033 UTHAL VINDER VINDER BAZAR CDS 27,156 1,794 1973 4068 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 3,300 1974 3088 UTHAL VINDER LIDA DDS - 5,60 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,430 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,206 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS <t< td=""><td></td><td></td></t<>		
1971 3955 UTHAL VINDER CHINCHARI RMU CDS 37,930 6,600 1972 3033 UTHAL VINDER VINDER BAZAR CDS 27,156 1,794 1973 4068 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 3,300 1974 3088 UTHAL VINDER LIDA DDS - 5,60 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,430 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,206 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,142 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS <t< td=""><td></td><td></td></t<>		
1972 3033 UTHAL VINDER VINDER BAZAR CDS 27,156 1,796 1973 4068 UTHAL VINDER Marshal / DEFENCE PROOF RANGEES DDS - 3,300 1974 3088 UTHAL VINDER LIDA DDS - 56 1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,436 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,200 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,14: 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS	1971	
1974 3088 UTHAL VINDER LIDA DDS - 55 1975 854 BALDIA WEST WHARF ICI - 2 CDS 261 3,436 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,207 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,206 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,14 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,322 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,993	1972	28,952
1975 854 BALDIA WEST WHARF ICI -2 CDS 261 3,431 1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,201 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,206 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,142 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,488 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,322 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,992	1973	3,300
1976 848 BALDIA WEST WHARF KARACHI SHIPYARD-B CDS 7 2,200 1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,206 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,142 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,486 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,32: 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,99:	1974	5 56
1977 847 BALDIA WEST WHARF UNION COLD STORAGE CDS - 1,200 1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,14: 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,480 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,32: 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,99:	1975	3,69
1978 1357 BALDIA WEST WHARF SPECTRUM CDS 34 2,400 1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,14: 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,480 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,32: 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,99:		2,214
1979 2071 BALDIA WEST WHARF MACHI MIANI CDS 129 4,14: 1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,48 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,32: 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,99:	_	
1980 853 BALDIA WEST WHARF SLAUGHTER HOUSE CDS 474 5,48t 1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,323 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,993	-	
1981 849 BALDIA WEST WHARF K.P.T. WEST WHARF CDS 4 2,32: 1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,99:		
1982 851 BALDIA WEST WHARF M. ALI PARK CDS 765 4,993		
	-	
1983 2042 BALDIA WEST WHARF FALAK NOOR MASJID RMU CDS 715 4,175	-	
1994 855 BALDIA WEST WHARF HAROON SONS CDS 579 3,58:		
1985 846 BALDIA WEST WHARF NATIVE JETTY(PORT TRUST) CDS 4 3,908		
1986 2159 BALDIA WEST WHARF DEENAR HOUSE(SINDH STEEL) CDS 4 3,17(-	
1987 2062 BALDIA WEST WHARF KARACHI LABOUR DOCK CDS - 2,675 1988 842 BALDIA WEST WHARF INTERNATIONAL PACKAGES CDS 7 2,021	_	
1989 3430 BALDIA WEST WHARF CUSTOM HOUSE DDS - 2,839 1990 3488 BALDIA WEST WHARF IKHLAQ CHOWK CDS 2,741 4,360	_	
1994 843 BALDIA WEST WHARF SATTAR CHAMBER CDS 4 3,137 1995 3608 BALDIA WEST WHARF QADRI NOORI DDS - 2,300		
1996 2075 BALDIA WEST WHARF QADKI NOURI DDS - 2,302	-	
1997 844 BALDIA WEST WHARF SEA MILL RMU(ALI AUTOS) CDS 369 3,128		
1998 3611 BALDIA WEST WHARF CHEVRON PAKISTAN DDS - 207		

S. No	Feeder ID	Cluster	Grid Name	Feeder name	Feeder Category	GIS Overhead Length-(m)	GIS Underground Length-(m)	GIS Total Feeder Length-(m)
1999	748	BALDIA	WEST WHARF	NAVAL DOCK YARD-I	DDS	-	1,416	1,416
2000	3952	BALDIA	WEST WHARF	WILLIAM SONS	CDS	24	3,348	3,372
2001	841	BALDIA	WEST WHARF	PNS IQBAL	CDS	-	705	705

POWER PROCUREMENT PLAN

(FY 2024 – FY 2030)

Table of Contents

D	ISCLA	IMER	. 2
Pı	REAM	BLE	. 3
E	XECU'	TIVE SUMMARY	. 4
1.	Int	roduction	. 5
	KE's l KE's l	pany Overview Existing Generation Capacity Fuel Mix jective	· 5
3.	Ass	sumptions / Inputs of Procurement Plan	. 8
	Comr Other	nical Assumptionsnercial and Economic Assumptions	. 9 10
	Capa	city Additions Installed Capacity Mix (MW)	12
		and-Supply Outlook	
		ration Fuel Mix (GWh)	
	_	ct on Basket Price	
5.		ticipated Challenges	
6.	Co	nclusion	16
Ar	nnexu	re I - Details and status of Ongoing Projects	18
	1.	3 x 50 MW Winder, Uthal and Bela Solar Project	18
	2.	350 MW Sindh Solar Energy Projects	19
	3.	82 MW Uzghor Hydel Power Plant	19
	4.	Siddiqsons Energy Limited 330 MW Thar Mine Mouth Power Plant	20
\mathbf{G}	lossa	ry	

DISCLAIMER

The Power Procurement Plan ('the Plan') has been prepared only as an indicative development plan for the period from FY 2024 to FY 2030. The Plan does not contain or determine targets or ascertain liabilities pertaining to power purchase or procurement, commissioning of future power projects assumed within the Plan, regulation or determination of electricity tariff(s), performance or ascertainment of economic despatch etc. The Plan has been prepared in compliance with regulatory requirements and is based on proprietary input data as received from various entities and best estimates/assumptions. Use or reliance on this Plan or any portion or variation thereof by any third party shall be at their sole discretion and risk. KE shall not be held responsible/liable in any manner whatsoever for the integrity, accuracy, authenticity, correctness or representation of such data or consequences resulting from dependency on the Plan therefrom.

PREAMBLE

This Plan is developed in compliance with the requirements stipulated under NEPRA Licensing (Electric Power Supplier) Regulations, 2022.

The Plan envisages KE's long-term planning to ensure security of power supply with an objective to determine a minimum cost strategy for long-range expansion of power generation, which is adequate to supply the load forecasted within a set of prevailing policies and technical and socioeconomic considerations. The Plan is indicative and pertains to the period from FY 2024 till FY 2030 duly considering the future electricity demand forecast, KE's generating fleet (including external sources of supply) and energy mix, as well as most suitable possible options for power procurement.

The Plan will serve as a roadmap for KE's power augmentation with a focus on leveraging indigenous fuel resources followed by meaningful inclusion of renewable sources of power generation.

EXECUTIVE SUMMARY

The provision of reliable, adequate, and affordable electricity is a pre-requisite for socio- economic growth and development of any country. In this context, KE has formulated this Plan spanning on a horizon from FY 2024 till FY 2030, aptly identifying KE's long-term power needs through addition of new power generation and power supply sources with a focus on reduction of KE's basket price keeping in view the reliability of the system through induction of renewables and indigenous power sources.

This Plan is being formulated at the crucial juncture of time, when both the local and global power markets are going through unprecedent challenges such as growing emphasis on induction of renewable energy power sources to reduce the carbon footprint and address the global warming and climatic changes followed by change on political landscape globally. Additionally, the world is still recovering from the aftermath of COVID-19 pandemic, which posed challenges including but not limited to the pent-up demand scenario, supply chain bottlenecks due to global disruption of supply chain, rising inflation levels and alarming increase in commodity and fuel price(s). In addition to aforementioned, formulation of the Plan has also considered the directives pronounced by the Government of Pakistan (GoP), as also iterated through the National Electricity Policy 2021, encouraging development of power projects on indigenous and renewable resources.

In order to effectively respond to these impeding challenges, KE remains committed towards adding sustainable and cheaper power generation in its fleet. To achieve this, KE has devised this Plan as part of its long-term planning in line with the best international practices, assisting it to achieve not just the future financial success, but also to provide cheaper and reliable power to its customers, along with meeting its regulatory obligations whilst navigating the constraints as elaborated in preceding para.

It may please be noted that the Plan has been modeled on the assumption of power availability from National Grid up to 2,050 MW throughout the planning horizon from the time of commissioning of KKI Grid in FY 2024 with new capacity additions of Renewables (1,100MW), Hydro (82MW) and Thermal Baseload (990MW). The data utilized for the purpose of this Plan has been sourced internally or has been referenced from the assumptions taken by NTDC during the development of draft Integrated Generation capacity Expansion plant (IGCEP) 2022-2031, submitted to the NEPRA Authority by NTDC in September 2022. Based on these data and assumptions, the results achieved clearly depict a positive impact in terms of reduction of KE's basket price based on indexed tariff to ~9 c/kWh in FY 2030 from ~11.1 c/kWh in FY 2024.

Going forward, KE will be re-evaluating its assumptions and long-term forecast on annual basis, as required under regulation 12 of NEPRA Licensing (Electric Power Supplier) Regulations, 2022, which will be submitted to the Authority for its consideration and approval.

1. Introduction

The provision of reliable, adequate, and affordable electricity is a pre-requisite for growth and development of economy and as an emerging economy, a country's demand for electricity correlates with the GDP of the country. Accordingly, certain electricity indices such as per capita consumption of electricity and access to electricity are used to express the socioeconomic strength of a country. The per capita consumption of Pakistan is 644¹ kWh compared to 1,218² kWh in India. Considering the consequential high capacity costs in the National Grid as well as given the volatility of electricity demand, it is imperative to conduct planning in such a manner that reliable supply is ensured, which is crucial for the economy and socio-economic development of Pakistan.

Company Overview

KE is a vertically integrated power utility in Pakistan providing utility services to the city of Karachi and adjoining parts of Sindh and Baluchistan. KE was incorporated in the year 1913 and subsequently privatized in November 2005. As a vertically integrated utility, KE is engaged in generation, transmission, distribution, and supply of electricity by virtue of its licenses granted by NEPRA. KE is a public limited company duly listed on the Pakistan Stock Exchange and serving a consumer base of over 3.4 million consumers.

KE's Existing Generation Capacity

Since privatization and up to FY 2022, KE has invested an amount of ~PKR 474 Billion across the power value chain through fresh equity injection, debt, and reinvestment of all profits in the business, resulting in significant improvements across the power value chain. Out of the PKR 474 Billion invested across the power value chain, ~PKR 204 Billion have been invested in the Generation function. As a result of investments made in the Generation function, KE since privatization has added 1,977 MW of installed capacity in its generation fleet which includes BQPS-III currently under testing and commissioning. KE's licensed installed capacity including BQPS III is 2,817 MW.

The total net generation capacity in KE system (after considering auxiliary consumption) including procurement from IPPs and import from National Grid at present stands at around 4,061 MW (including BQPS III) which will further increase upon enhancement in interconnection capacity enabling off-take of upto 2,050 MW from National Grid.

¹ NEPRA State of Industry Report 2022

² Statista.com

Table 1: Existing Generation Capacities in KE System

Plants	Fuel	Installed Capacity as per License (MW)	
BQPS-I	NG/RLNG / RFO	840	693
BQPS-II	NG/RLNG	573	494.5
BQPS-III	RLNG / HSD	942	899.63
SGTPS	NG/RLNG	107	93
Korangi CCPP	NG/RLNG/HSD	248	220.8
KGTPS	NG/RLNG	107	92
Total KE Fleet		2,817	2,493
Gul Ahmed	RFO	136	128
Tapal Energy	RFO	126	124
SNPC-I	NG	52	51
SNPC-II	NG	52	51
FPCL	Imp. Coal	60	52
Oursun	Solar	50	9
Gharo	Solar	50	11
Total IPPs		526	426
Total CPPs		42	42
National Grid Supply		1,100	1,100
Total Existing Capacity		4,485	4,061

KE's Fuel Mix

During FY 2022, KE served a total energy of 19,802 GWh, which was generated by $1.9\%^4$ renewables, 53.2% thermal (KE's own and IPPs), and 44.9% from National Grid.

Chart 1: KE Fuel Mix 2022

44.9%

53.2%

National Grid Renewables Thermal (KE Own + IPPs)

³ Actual dependable capacity of BQPS III will be determined post commissioning ⁴ Includes 44GWh of power import from net metering consumers

2. Objective

The key objective of the Plan is to develop a 7-year indicative generation capacity expansion plan for KE's service territory to meet the load and energy demand in a reliable and sustainable manner, while maximizing use of indigenous resources. Accordingly, this Plan has been prepared with the following objectives:

a) <u>Identification of KE's requirements</u>

This is the prime objective of this Plan, which envisages identification of generation requirements by capacity, fuel, technology, type and planned commissioning dates on year-by-year basis.

b) <u>Creation of a long-term plan</u>

Identification of KE's requirements is followed by formulation of a long-term plan to ensure that the projected demand in the system is adequately met by adding most optimal and reliable generation capacity, which would not only diversify KE's generation fleet mix, but also reduce its generation cost. This Plan is however indicative in nature and based on estimates/ projections that involve various economic and business uncertainties and is subject to changes upon its future iterations.

c) <u>Reduction in generation costs</u>

The Plan also focuses on reduction of KE's generation costs through induction of indigenous and renewable resources to meet the future load growth in KE's service area. Considering the challenges and restrictions in procuring power from indigenous resources such as hydel and local coal from outside KE's system via wheeling, the Plan has been conceived keeping a balance between procurement within and outside KE's territory, to ensure reliability of project commissioning and evacuation timelines. It is pertinent to mention that wheeling is a critical element for KE to procure power based on indigenous sources and hence, now with the enactment of open access regulations, support of the Authority is of key importance in this regard.

d) Ensure reliability of the system

Another key consideration accounted for in the Plan is availability of reliable sources of generation to meet the future load demand with maintenance of contingency and spinning reserve along with other requirements and due compliance with the provisions of the applicable documents.

3. Assumptions / Inputs of Procurement Plan

The Plan takes into account several assumptions including but not limited to technical, commercial and economic factors, as detailed below.

Technical Assumptions

Following technical assumptions have been accounted for in this Plan.

1) Renewable Energy Generation

Actual data of wind and solar, collected from the vicinity of KE's renewable corridors has been used to predict the future energy generation and the annual generation pattern. For the sake of the Plan, the capacity utilization factor of 23.1% and 40.3% has been taken for Solar and Wind generation plant(s) respectively.

2) System Reserve Requirement

Reserve of a generating system is a measure of the system's ability to respond to a rapid increase in load or loss of the generating unit(s). For the purpose of this Plan, two types of reserves have been modelled as per provisions of the Grid Code, i.e., contingency and secondary reserve.

a) Contingency Reserve

The contingency reserve is the level of generation over the forecasted demand, which is required from real time plus 24 hours to cover for uncertainties. This reserve is provided by the generators, which are not required to be synchronized but they can be synchronized within 30 minutes of the initiation of the contingency and the corresponding fall in frequency. As per best industry practices, this is equal to the capacity of the largest generator in the system.

b) Secondary Reserve

The secondary reserve is a type of spinning reserve, and it is the increase in power output of the online generators following the falling frequency and is fully sustainable for 30 minutes after achieving its maximum value. It is equal to the one third of the largest unit in the system.

3) Scheduled Maintenance / Availability of power plants

Scheduled maintenance plays an important role in retaining the desired efficiency and reliability while at the same time preserving the useful life of a generating unit. Scheduled maintenance of available plants has also been considered while formulating this Plan.

⁵ Based on Actual capacity factor of Gharo Solar

⁶ Based on latest NEPRA benchmark for wind plants

4) Renewables Integration Study

KE is in the process of conducting a VRE study, which shall evaluate the extent to which renewables can be incorporated into KE's network, without making a compromise to the reliability of the network. The current Plan assumes that all the proposed renewable projects, as delineated in the Plan, shall be incorporated subject to the outcome of VRE study being conducted, and with no additional cost of development of spinning/contingency reserve and transmission augmentation which could differ from the Transmission System Investment Plan.

5) Transmission System Investment Plan of KE

The long-term transmission investment plan has been developed by KE, which will be submitted for NEPRA's approval as part of KE's MYT Petition (FY 2024-FY 2030) for Transmission business, and the generation selected under this Plan is in accordance with the availability of the grid and transmission capacities envisaged under the investment plan.

Commercial and Economic Assumptions

Following commercial and economic assumptions have been accounted for in this Plan.

1) Demand Forecast

Energy and power demand forecast provides the basis for all planning activities in the power sector and it is one of the decisive inputs for generation planning. In line with this, KE foresees following demand projections, based on historical demand and macroeconomic environment:

Fiscal Year	Peak Demand 7 (MW)	Sent out (GWh)						
2024	4,168	19,932						
2025	4,290	20,558						
2026	4,404	21,052						
2027	4,522	21,478						
2028	4,631	21,848						
2029	4,768	22,208						
2030	4,896	22,539						

Table 2: Peak Demand

Sent-out growth per annum has been taken at \sim 1.77%. Following aspects are considered while calculating sent-out growth:

- a) Data sources (GDP, Historic Demand etc.)
- b) Demand side considerations (Impact of equipment efficiency)
- c) Net metering/Solar disruptions
- d) AT&C loss based load-shed has been considered in the projected sent-out

⁷ based on demand peak observed during night-time

e) Non-AT&C loss based load management

2) Fuel price Forecast

Base fuel prices for the indexed tariff have been taken as per the prevailing fuel prices in August 2022 and have been further indexed for future years in accordance with the indexation factors provided in the draft IGCEP 2022-31, submitted to the NEPRA Authority for approval.

Whereas, for non-indexed tariffs, Fuel prices prevalent in November 2022 have been considered while no indexation of fuel prices and macro-economic factors have been taken during the planning horizon.

3) Contractual Assumptions

Following contractual commitments have been assumed under the Plan:

- a) Up to 2,050 MW power drawl from National Grid throughout the year for the entire planning horizon starting from June 2024, subsequent to commissioning of KKI grid station.
- b) Take or Pay obligations of existing fuel contracts and IPPs

Other Assumptions

In addition to aforementioned, retirement of KE's own power plants and IPPs has also been considered based on completion of their useful lives and/or expiry of PPA (shown in Table 3 below). KE will further evaluate their retirement before their expiry date as per its business needs and keeping in view the expected demand-supply situation. Therefore, KE, keeping in view the safety and operational viability, may request the NEPRA Authority for extension in their useful lives, if required.

Table 3: Retirement Schedule of Existing Power Projects in KE's System

S No.	Name of Project	Fuel Type	Installed Capacity (MW)	Retirement /PPA Expiry	
1	Gul Ahmed	RFO	136	FY 25	
2	Tapal	RFO	126	FY 24	
3	BQPS 1 – Unit 1	NG/RLNG/RFO	210	FY 24	
4	BQPS 1 – Unit 2	NG/RLNG/RFO	210	FY 24	
5	BQPS 1 – Unit 5	NG/RLNG/RFO	210	FY 27	

4. KE Proposed Power Procurement Plan

KE's proposed procurement plan focuses on reduction in future generation cost by maximizing induction of renewables and use of indigenous coal for base load generation. The proposed Plan provides the most prudent scenario of KE's long-term procurement planning with addition of generation planned from different generation technologies, with majority of the power coming from renewables i.e., Solar 900MW and Wind 200MW till FY 2030. In addition to this, 82MW hydel is also proposed to be added in the generation mix in year FY 2029. Additionally, KE has also considered that the import of power from National Grid up to 2,050 MW will be available throughout the year, for the entire planning horizon i.e., FY 2024 till FY 2030. With respect to baseload power, 330MW Siddiqsons Energy Limited is expected to come online in FY 2026, followed by two additional units of 330MW coal power project in FY 2027 and 2029 respectively.

Table 4 - Year Wise Addition of New Capacity | FY 2024 - FY 2030

Financial Year Technology Type		Installed Capacity (MW)		
2025	Solar	150		
2025	Solar	350		
2026	Local Coal	330		
2027	Local Coal	330		
2027	Solar	200		
2028	Wind	100		
	Local Coal	330		
2029	Solar	200		
	Hydel	82		
2030	Wind	100		
Total Additions		2,172		

Detail of key Projects are enclosed as **Annexure I** of this Plan while KE had also submitted a detailed plan for renewable energy additions to the Honorable NEPRA Authority in September 2022.

Moreover, KE is also actively evaluating the possibility of direct offtake from larger hydel projects, however they have not been included in the planning horizon of this Plan due to later commissioning of the projects being targeted (i.e. post FY 2030).

Capacity Additions | Installed Capacity Mix (MW)

KE's year-wise Installed capacity (including additions planned from FY 2024-2030) is depicted below:

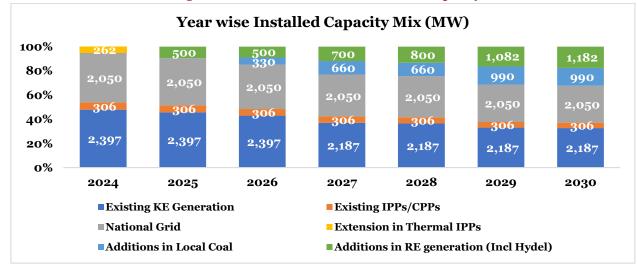


Chart 2: Existing and Planned Additions in Installed Capacity (MW)

<u>Demand-Supply Outlook</u>

KE's future Demand Supply outlook, considering optimum mix of baseload and renewable projects is presented below for consideration. The demand supply scenario depicts that if the planned capacity addition is pursued, then there will be power surplus for each of the year considered in the planning horizon, which is in accordance with prudent utility planning principles.

The below table depicts the picture of peak demand for every year and also presents the available capacities that will be utilized to serve the projected demand. It is pertinent to mention here that the expected peak demand will be observed during the night-time, therefore solar PV projects will not be available to serve the demand at that point of time.

Particulars (MW) ⁸	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
KE Existing Plants	1,253	1,253	1,253	1,077	1,077	1,077	1,077
BQPS III	900	900	900	900	900	900	900
Existing IPPs / CPPs ⁹	173	173	173	173	173	173	173
National Grid	2,050	2,050	2,050	2,050	2,050	2,050	2,050
Supply – Before Additions	4,376	4,376	4,376	4,200	4,200	4,200	4,200

Table 5: Demand and Supply outlook

 $^{^{\}rm 8}$ Based on Net Capacity after auxiliary consumption

⁹ Existing Solar IPPs not considered against night Peak

Particulars (MW) ⁸	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
							1
Proposed Supply Additions							
Thermal Extension	251	-	-	-	-	-	-
Local Coal	-	-	305	610	610	915	915
Wind	-	-	-	-	40	40	81
Solar ¹⁰	-	-	-	-	-	-	-
Hydel	-	-	-	-	-	80	80
Total Supply	4,627	4,376	4,681	4,810	4,850	5,235	5,276
Peak Demand (Night Peak)	4,168	4,290	4,404	4,522	4,631	4,768	4,896
Surplus	459	86	277	288	219	467	380

Generation Fuel Mix (GWh)

The energy contribution by FY 2030 in KE's system (excluding supply from National Grid) will primarily be dominated by indigenous fuels and renewables. The percentage of renewables and indigenous fuel penetration in KE's network will be 24% and 54% respectively by FY 2030, wherein the percentage increment of indigenous fuel utilization and renewables will by 70%.

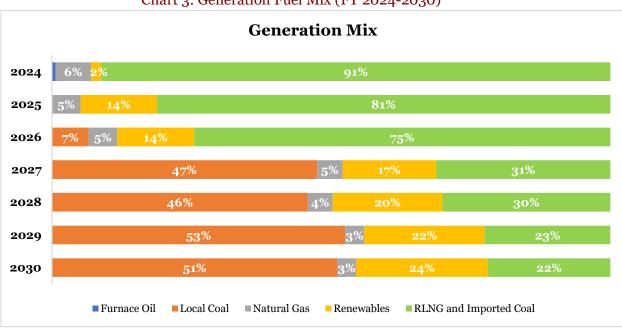


Chart 3: Generation Fuel Mix (FY 2024-2030)

¹⁰ Additions in Solar IPPs not considered in night peak

This significant shift towards renewables and indigenized fuel resources along with off-take of 2,050 MW from National Grid will help reduce KE's cost of generation, and accordingly, the basket price is expected to reduce from ~11.1 cents/kWh in year FY-2024 to ~9 cents/kWh in year FY-2030.

<u>Impact on Basket Price</u>

Paradigm shift towards indigenous fuel and renewable power sources over the years will result in substantial reduction in KE's basket price. However, as highlighted earlier, the development of coal power generation is subject to the support of international technology providers and financiers. KE is currently engaging with all the relevant stakeholders to assess the viability of development of coal-based project and to acquire further clarity in this regard.

In parallel, KE will also actively engage with Hydel developers of KPK and AJK, to create a fallback option in case the development of indigenous coal project does not materialize.

Movement of Basket price on both indexed and non-indexed tariff is given below:

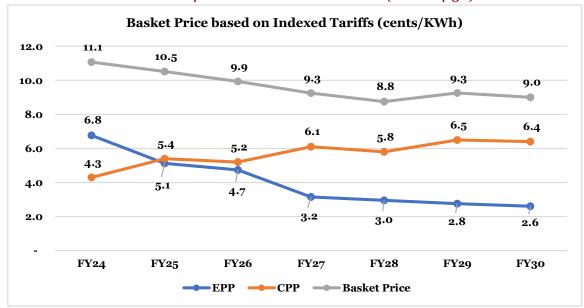


Chart 4: Basket Price Indexed Tariff (FY 2024-30)

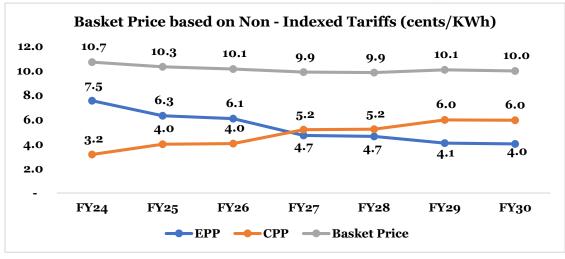


Chart 5: Basket Price Non-indexed Tariff (FY 2024-30)

5. Anticipated Challenges

KE anticipates the following challenges, which, may be faced in implementation/execution of this Plan.

a) Local Coal: Other than SEL, for which, there is a signed EPC contract and signed term sheet based on mainly local financing, future development on local coal remains to be seen due to the moratorium on coal projects in consideration of global carbon targets.

KE is actively pursuing a multifaceted strategy, to create a fallback option in case the current plan of developing indigenous coal power projects doesn't materialize due to the challenges narrated in preceding paras. To mitigate the impact of coal projects, KE is actively working with the private developers of KPK and AJK and is also in close contact with the Federal and Provincial Hydel power development agencies like PPIB and PEDO to ensure that the required capacity of hydel power is developed and contracted in a timely manner, to displace the power, which, has been planned to be generated from indigenous coal assets.

b) National Grid: KE in collaboration with National Transmission & Distribution Company (NTDC), had successfully implemented the cross-trip scheme along with rehabilitation of KDA-Jamshoro lines, enabling KE to draw additional power of 450-600 MW from the National Grid through existing interconnections.

At present, KE is also in the process of constructing grids at KKI and Dhabeji, which will enable KE to increase its power evacuation from the National Grid. However, the firm capacity available to KE from NTDC remains to be finalized.

For NTDC to be able to deliver the planned 2,050 MW capacity for KE's import, timely development of large hydel power projects will be pivotal, especially the projects supported by public sector like Dasu (2,160MW), Mohmand (800MW), Tarbela Ext. 5

(1,630MW) and Thakot (1,490MW), which are significantly dependent upon availability of funds and land for construction. Considering that historically there have been significant delays in commissioning of large-scale hydel power projects from their stipulated timelines, there is a material risk that the proposed generation and its timelines assumed in the draft IGCEP 2022-31 would turn out to be drastically different from the actual commissioning dates. This would certainly have a consequential impact on the execution of this Plan.

- c) Induction of Renewables: Renewables induction in KE's network, up to its maximum technical capability will always remain a top priority for KE. The fact remains that the development timelines of renewables are also shorter as compared to other generation options, and ample appetite is available amongst international and local lenders to finance such projects. In this context, KE is in the process of conducting a renewable integration study with the assistance of international consultant, which would assist KE in determination of the most optimum capacity of renewables that could be inducted into KE's network, in line with the international best practices with due regards to the inherent technical limitations. Further, in case of any changes to the proposed Plan in light of the results of the VRE Study, the same shall be duly shared with NEPRA.
- **d) Implementation of CTBCM:** While KE has already incorporated an impact of net metering and solar penetration on its expected demand, the possible impact of defections of KE's Bulk Power Consumers (i.e., over 1 MW of load) towards the bilateral mode contracts post implementation of CTBCM cannot be ascertained at this stage. However, KE anticipates that this may alter KE's demand forecast, which will also affect this Plan in future years.

6. Conclusion

KE is committed to adding cheaper power to its system and humbly requests the NEPRA Authority to consider and approve this Plan to enable KE to continue working upon the avenues as highlighted under this Plan.

Further, KE humbly submits that this Plan is conceived with limited foresight of future dynamics of the power market and the current geopolitical environment, based on the factors listed below:

• **Geo-political conditions:** Have added to global fuel constraints and has led to exponential rise in fuel prices that are depressing the global economy. This in turn has increased the need for self-sufficiency to ensure fuel supply security for Pakistan. To consider as an example the global brent prices varied between \$ 37 to \$ 76 per barrel in FY 2021 compared to a variation of \$ 65 to \$ 123 per barrel in FY 2022 representing an increase of ~ 70%¹¹.

¹¹ Trading Economics

• Rupee devaluation: Rupee has lost over 30 per cent of its value during 2022, according to the Foreign Exchange Association of Pakistan¹².

All the above factors have necessitated the requirement for development in indigenous projects to ensure economic security. Keeping this in perspective, KE has planned to add indigenous coal-based projects for its baseload requirements and renewable projects to limit the dependency on imported fuels, which is also in accordance with the principles of National Electricity Policy 2021.

KE humbly requests NEPRA for approval of the Plan and shall keep NEPRA Authority apprised of any changes in the Plan on annual basis as required under the NEPRA Electric Power Supplier Regulations, 2022. Further, it is humbly submitted that the implementation and timely execution of this Plan is also dependent upon a sustainable tariff for the next tariff control period as well as timely investment approvals such that required network infrastructure is in place for smooth and reliable evacuation of power from the sources envisaged under this Plan. Furthermore, it is important that a level playing field is provided to the IPPs to be contracted with by KE, as envisaged under this Plan, and the IPPs to be contracted by CPPA through PPIB or AEDB in order to ensure that the investors are provided similar attraction for investments.

¹² State Bank of Pakistan

Annexure I - Details and status of Ongoing Projects

1. 3 x 50 MW Winder, Uthal and Bela Solar Project

KE is undertaking 3 x 50 MW Solar Project(s) in the Winder, Uthal and Bela region of Balochistan via competitive bidding mechanism as stipulated under the NEPRA Competitive Bidding Tariff Regulations, 2017, whereby KE is the Relevant Agent and the Power Purchaser.

These are strategic projects for KE to improve the reliability of power supply for these regions as KE is also planning to install new 132 kV lines / grids from Hub to Bela. These initiatives are expected to improve the service delivery, pave way for industrial growth, increase employment in the region and socially uplift the adjoining areas. Proposed $3 \times 50 \text{ MW}$ solar power projects entail a combined landmark investment of c. USD 200 Million in the region (including upgradation of transmission infrastructure).

Tremendous interest was shown for these Solar Projects by local and international investors, in the form of 56 Expression of Interests (EOIs) that were submitted, which were finally brought down to 22 pre-qualified applicants. Once the bidding process for the generation projects is concluded, the successful Bidder will have majority shareholding and management control in the SPV, while KE may participate as a non-controlling shareholder with the successful bidder. Such discussion will only be initiated upon culmination of the bidding process in a clear and transparent manner. The Bidding process will be overseen by an independent consultant, who will be part of the Bid Evaluation Committee and the Bid Evaluation report would be submitted to NEPRA prior to the Letter of Interest (LOI) being issued to the Successful Bidder.

Moreover, the land for the 3 x 50 MW Solar Projects will be provided by GoB. Successful Bidder will be responsible for development and financial close of the projects with KE providing the necessary support required.

In June 2021, KE had completed all requisite technical studies and submitted them as part of the Request for Proposal (RFP) package to NEPRA and the prospective bidders for the projects in Lasbela. RFP was submitted in April 2021 and was approved by NEPRA in October 2022. It is expected that KE will soon obtain requisite land approvals from the Government of Balochistan enabling initiation of Bidding process.

Milestones achieved since inception include the following:

Milestones	Date
Advertisement seeking EOIs	07-Aug-2020
EOIs received from 56 parties	21-Aug-2020
Issuance of Prequalification Document	05-Nov-2020
Submission of Prequalification Applications from the Applicants	21-Dec -2020
Submission of RFP to NEPRA and issuance to Prequalified Applicants	28-Apr-2021
Submission of Feasibility Studies to NEPRA for the three sites	30-Jun-2021

Milestones	Date
NEPRA hearing on RFP	22-Sep-2021
NEPRA approval on RFP	14-Oct-2022

2. 350 MW Sindh Solar Energy Projects

To increase solar power generation and access to electricity in the province of Sindh, Sindh Energy Department (SED) in collaboration with the World Bank Group (WB) will undertake as one of the components of the Sindh Solar Energy Project (SSEP), a 400 MW of Utility-Scale Solar Park to be developed by the private sector under a competitive bidding model, bifurcated into:

- Single or multiple solar projects with cumulative capacity of 350 MW to be set up in KE's service territory
- Remaining 50 MW Project in Jamshoro district, with Central Power Purchasing Agency (CPPA-G) as the power off-taker

KE, WB and SED signed a Memorandum of Understanding (MoU) on December 10, 2021 for the development of 350 MW solar projects.

SED will be the Relevant Agent for the Project and will be responsible for carrying out the competitive bidding process including the RFP submission to NEPRA, bid evaluation and contract award to the Successful Bidder(s).

Sites for the Projects have been identified by the SED at Deh Halkani and Deh Mita Ghar, with a requirement of 612 acres of land for each site, for which land allocation has been approved by GoS Cabinet. SED is now expected to undertake feasibility studies and initiate Grid Interconnection Studies (GIS) through its consultant and submit draft RFP for NEPRA approval.

3. 82 MW Uzghor Hydel Power Plant

The proposed 82.25 MW, Turtonas-Uzghor Hydropower Project (TUHPP) is in Chitral district of KPK, located at a distance of 390 km from Islamabad, spanning over an area of 52.7 acres. It is a run of the river project, located on River Golen Gol, upstream of existing WAPDA HPP.

On December 21, 2021, KE issued a letter to indicate KE's potential interest in power procurement to the project. The project already has a generation license granted in December 2020 and has completed environmental and feasibility studies. The feasibility stage tariff was determined by NEPRA in April 2021 for which a review petition was filed by the project. NEPRA in its review determination on July 29, 2021, has directed the Project to supply power under CTCBM. TUHPP is further reviewing the decision since TUHPP will be supplying power to KE, an SoLR, for the regulated consumers, and hence will require a tariff from NEPRA. In this regard, KE requests NEPRA to consider their request. TUHPP has been included by KE in its list of proposed additions in 2029.

It is pertinent to mention that the addition of low-cost hydro power to KE system will benefit the electricity consumers through reduction of KE basket price and will help diversify KE's generation fuel mix. The project will further match the seasonal demand requirement by catering to serve during peak summer months.

4. Siddigsons Energy Limited 330 MW Thar Mine Mouth Power Plant

The project was initially conceived to sell power to CPPA-G and has completed various project milestones including signed project agreements, completion of feasibility studies, upfront tariff and Generation License award by NEPRA. SEL approached KE for power off-take and has been in active discussions with lenders and are confident of securing financing for the Project. KE has completed its due diligence. SEL has approached the Government to sort out the pending issues for the Project so that they may move forward. SEL has also approached NTDC at the working level for discussions on wheeling and initiate the requisite studies. The development of the wheeling structure would be the most critical element for the success of this project with KE, opening the doors for future evacuation of power by KE from projects not located in or around its service territory. In parallel, SEL is pursuing SECMC and GoS for consents and extensions of already executed contracts including Coal Supply Agreement and Water Use Agreement.

Glossary

Abbreviation	Definition
BQPS	Bin Qasim Power Station
CCPP	Combined Cycle Power Plant
CPPA-G	Central Power Purchase Agency (Guarantee) Limited
CPP	Captive Power Producers
FPCL	FFBL Power Company Limited
GENCO	Generation Company
GoP	Government of Pakistan
ICA	Interconnection Agreement
IGCEP	Indicative Generation Capacity Expansion Plan
IPPs	Independent Power Producers
KGTPS	Korangi Gas Turbine Power Station
KE	K-Electric Limited
KKI	KANUPP Karachi Interconnection
kWh	Kilo-Watt Hours
NTDC	National Transmission and Despatch Company
NEPRA	National Electric Power Regulatory Authority
PAEC	Pakistan Atomic Energy Commission
PPA	Power Purchase Agreement
SGTPS	Site Gas Turbine Power Station
SNPC	Sindh Nooriabad Power Company (Private) Limited and Sindh
SNPC	Nooriabad Power Company Phase II (Private) Limited
TSEP	Transmission System Expansion Plan
USD	United States Dollar
WAPDA	Water and Power Development Authority
VRE Study	Variable Renewable Energy Integration study

Human Resource Improvement Plan Details

Annexure J

A. <u>LEARNING & DEVELOPMENT</u>

1. AZM Learning Institute

With a focus on Learning & Development, KE has a state-of-the-art learning institute, "AZM Learning Institute" that provides structured learning on a range of topics covering behavioral, enabling technical skills and leadership development.

K Electric runs multiple training programs under the 3E Learning Philosophy which lays the foundation for Education, Exposure and Experience for the employees. A competency-based learning framework is developed to identify functional/technical and behavioral needs of employees for targeted learning interventions for their development. Learning & Development has formulated a Competency based LNA Framework linked with a comprehensive Learning Catalogue, comprising of Functional and Behavioral competencies mapped against job levels with relevant learning interventions. This is prepared to conduct focused LNA against required competencies and its relevant training needs. The learning catalogue serves as a comprehensive library for the content of the learning interventions against Functional and Behavioral Competencies that are mapped against all individuals. With this methodology, technological integrations are planned in years to come to make the learning experience based on individual gaps identified against competencies.

Yearly around 6,500 trainings are offered to employees in various business and functional areas. On average, trainings conducted for males and females include 11 and 90 man-hours respectively. The trainings are delivered face to face via classroom facilities, virtually using online platforms, e-learning modules that allow learning at one's own pace, inhouse trainings with external trainers, public programmes and through internal Azm Master Trainer Program.

AZM Master Trainer Program

KE has an internal pool of trainers who are chosen and trained to conduct trainings in-house. An annual cycle is run to select trainers through a rigorous selection and assessment process where a neutral panel evaluates facilitation skills, content design skills and knowledge on the subject. A process of evaluation of the trainer follows throughout the year with a quarterly and annual reward and recognition of the trainers. KE will enhance the program in the next 3 years to develop more in-house trainers to cater to customized learning needs of the organization.

E-Library

To ensure access to learning opportunities, and build a continuous culture of learning and development, our AZM Learning e-library consists of more than 280 e-modules on different soft and technical skills. KE will continue to build more e-modules internally customized to the organization in the coming years.

Leadership Academy

With a targeted approach to develop top talent, KE runs a Leadership Academy for all top talent of the organization from Assistant Managers up to Senior leadership team. The programs are designed to focus on learning the art of becoming new managers, team building, leadership in

different situations and habits required to excel. These programs include First Time Managers, Building High Performance Teams, 7 Habits of Highly Effective People and Situational Leadership, all through external global expertise of trainers. KE will run assessment centers for selection of top talent to eventually go through the leadership academy.

Officers & NMS Learning Programs:

To develop and upskill Officers and Non-Management employees, focused Learning Interventions introduced through development programs, Meri Shanakht, Up Your Game and Hum Qadam. These programs focus on enhancing skills, personal branding, self-awareness as well as grooming towards a customer centric approach. To ensure linkage of academia with the on-ground operations, KE partners with NED University to run a customized Certification Program for Generation & Transmission Officers.

- Meri Shanakht

A flagship program of L&D which is committed to upskill Non-Management Staff on self-awareness so that they can tap into their potential and maximize their inspiration. Under this program 1500 participants have been trained so far. All NMS staff will be covered in the next 2 years.

- Up your Game

Up your Game is specifically designed to enhance the skills of the officers across KE by motivating them and sharing best practices as well as tips and techniques to be more efficient at work and in personal life. More than 900 participants have been trained in total 40 Batches. KE will continue the program to upskill all of its officers cadre in the next 2 years.

- NEPRA CSM - Customer Centricity

KE is committed to serve customers hence customer centricity is at the heart of everything that is done. Under the ambit of Customer Centricity, KE launched a detailed e-module on NEPRA CSM that serves as a guide to power policy and customer service manual to employees at customer touch points. KE will continue to collaborate with NEPRA to upgrade the module as and when required along with training all customer facing employees to go through the module in the coming years.

- HumQadam - Customer Centricity

HumQadam, is designed for the employees to upskill them to be able to deal with customers more effectively. The program has run for over 1000 Non-Management Staff. KE will continue to develop all NMS staff in the next 2 years to enable them to exhibit customer centricity in all communication.

- G&T Officers Certification Program (NED)

To ensure linkage of academia with the on-ground operations, KE partnered with NED University to run a customized Certification Program for Generation & Transmission Officers. The program aimed to enhance the technical skills of officers and an in-depth understanding of theory behind basic technical concepts. KE will partner with the university to develop customized module based programs to certify engineers.

To enhance the process of Learning & Development, KE is working towards technological advancements to enable employees to learn about competency gaps in their positions, identify respective learning interventions and develop their development plans accordingly. Success Factor integrations play a major role along with targeted learning interventions to fuel organizational strategy of KE in the next 2 years.

2. Distribution Network Academy (KE DNA)

KE Distribution Network Academy (DNA) is state-of-the-art Technical Training Institute, which develops globally competent resources at global bench marked Level of knowledge and skills for workmanship, ensuring all aspects of safety. Thereby contributing to the mission of KE by building the capacity to deliver uninterrupted, safe, and affordable power to Karachiites by trainings its employees to serve safely with quality and excellence.

DNA offers competency building programs for all levels of distribution operations. DNA also provides apprentice and journey-level training. Major utility industries, in their never-ending quest to improve safety and reliability, look upon to DNA for training and product advice as well. These relationships led to DNA's development of the comprehensive modules with modern and innovative training mechanism.

Portfolio

The portfolio of KE DNA can be categorized into two areas:

- Technical Training Program for KE Distribution Staff
- Apprenticeship Program

Technical Training Program

DNA design and develop Technical Trainings for KE Distribution Staff. They offer variety of training programs.

Long Term Skillset Development Training package is one of them which is targeted to augment proficiencies of a cadre. These trainings are designed to cultivate technical, analytical, and social skills of Distribution Staff and will help them accomplish same level of capability. A few trainings projects are mentioned below that will continue to fuel technical competencies in the staff:

- Vertical Skill Enhancement: This program will upgrade the skill level of field staff to create a competent workforce ready to work with great enthusiasm and safety protocols.
- Horizontal Skill Enhancement: KE Leadership along with DNA has always been interested and passionate in creating a workforce that is not only skilled but multi skilled.
- Focused Training on Recurring Faults to Gauge Efficacy: Faults (HT/LT) are very prone to the health of Distribution Network, fault occurrence causes downtime which in turn badly hits the revenue generation, we always have a check on faults specifically that are repetitive. To reduce the downtime caused by faults, a program called Uplifting of AOCs (To improve Efficacy) has been launched.

These training sessions are aimed to make a positive difference in the fault profile of Area Operation Centers. DNA has designed detailed training sessions with specific theory and practical slots. Keeping in mind the aspect of Quality, special arrangements are made in field for the practical sessions and to give the participants one-on-one hand on experience.

On an average **200,000**+ learning hours are being planned annually catering **6000**+ no. of employees.

Apprenticeship Program

Apprenticeship Program is run from the past 5 years for NMS & MS trade as Apprentice Lineman, Fitter, Cable Jointer & Assistant Engineer respectively. The program is registered with Sindh Technical Educational & Vocational Training Authority (STEVTA).

Apprentices are given an unparalleled learning experience during the O2-year program and are trained hands on with in-class tools and equipment used for Power Distribution. The Program is developed with focus towards Field-Based Learning and combines theoretical & practical learning with an experiential learning at different departments of KE through On-the-Job Training (OJT). The theory and practical ratio of curriculum for Apprenticeship is 25 /75 respectively.

In 2021, for the first time in energy sector, a batch of female apprentices as Apprentice Assistant Engineer were inducted. To-date 419 apprentices have graduated from DNA and are successfully working in KE and different industries. KE will continue to run the program catering to diverse background of students.

3. State of the Art Training Field & Labs

DNA Field has complete HT/LT distribution network (ABC and Bare Conductor), Multistory busbar, Load Break Switch, Substation with complete switchgear, workbenches, and other trainer modules etc. and is used for practical demonstration to apprentices as well as KE distribution field staff. Any new addition in KE's network is also incorporated in DNA field to fulfill the requirement of jobs while making it one of its kind.



DNA Training Field

4. Meter Lab

DNA Meter lab is a fully equipped lab which has a wide variety of the most important revenue generating device i.e., Energy Meter. It has a live panel that demonstrates the working or meter in normal and abnormal conditions, meter faults, theft detection, using Meter Testing Equipment and other devices.





Meter Lab

5. Switchgear Lab

Switchgear Lab has a variety of switches used in KE and is used for demonstration on most important phenomenon of making and breaking of circuit on large scale using OCBs, VCBs, SF6 CBs and Isolators. Assembling and dismantling, repair and maintenance tasks are also done for demonstration purpose on these switches. Dissected VCB is also available for visible demonstration of switch operations.





Switchgear Lab

6. Affiliations & Liaisons

DNA entertains universities, institutes, and delegations to visit this state-of-the-art Training Facility for educational purposes. Many universities, institutes and delegations have visited DNA including HESCO Officials, Sindh Board of Technical Education Team, IBA Sukkur University, UNDP & TUSDEC, FFBL Power Company Ltd., SIEMENS Pakistan Engg. Company Ltd., NED University of Engg. & Tech., Sir Syed University of Engg. & Tech., Quaid-e-Awaam University of Engg. & Tech., Pakistan Naval Engineering College – Nust, DHA Suffa University, Dawood University of Engg. & Tech., Jinnah Polytechnic Institute and Others. KE will continue these affiliations for a step towards giving to the society.

B. IMPROVING THE WORK ENVIRONMENT

1. Diversity & Inclusion at K-Electric

Gender Diversity

Over the years KE has initiated various Programs and Initiatives to Build & Leverage a diverse and engaged workforce supported by an inclusive culture with equal access to opportunities that drives greater business results to achieve KE's vision. These Programs aim to encourage females in non-traditional roles (as the industry first) in combination with gender specific benefits to attract and retain the best talent.

K-Electric being the largest power company in Pakistan, has an ongoing agenda to create outreach, facilitate through inclusive policies, encourage participation and develop females through specific training programs. KE's management recognized diversity and inclusion as one of the important aspect of KE's modernization efforts to attract and have a diverse and productive workplace.

KE is engaged in the global mission towards promoting & living Diversity & Inclusion. KE became the first energy sector company to hire qualified females as 'Grid Operating Officers' and launched women as 'Meter Readers'. Moreover, female apprenticeship programs introduced along with technical internships. In areas where Females have not completed Education, introduced programs to through vocational training and livelihood opportunities. These talent outreach initiatives make KE more Gender Diverse and increases women percentile in technical-roles to become leading Power utility which believes in women empowerment.

To retain women and empower them, it is essential to introduce female friendly policies to facilitate them for their commute through commute to work policy, create an environment to help in journey of Motherhood and childcare commitments through maternity leaves, pregnancy & vitality programs, childcare assistance, healthcare; give them opportunity to restart their Careers along with flexibility in working schedule through agile working policy. A critical part of our initiatives has been around driving greater female participation, development through training in traditional and non-traditional roles.

Talent Attraction Initiatives for gender that will keep evolving over the next 7 years:

- 1. <u>Empowering Women Program</u>: Aim is to attract & develop women in the engineering field by providing them 5 weeks internship. Each year 10 females of Engineering Universities are given opportunity to go through technical experience as well as personal development trainings.
- 2. F<u>emale Grid Operating Officers: K</u>E inducted first o5 Female Grid Operating Officers (GOOs) in Transmission Business from Engineering Universities. The program is aimed at training women to take on challenging roles in technical field.
- 3. <u>Female Apprenticeship:</u> To provide diverse learning experience, Female Apprentices are onboarded in a 2-year program certified by STEVTA where students are selected from technical vocational training institutes. This challenging idea was initiated & adopted to change the inherent perception that Energy Utilities are Male Orientated workplace.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

- 4. F<u>emale Meter Readers (MDMOs):</u> A targeted first of its kind program in Pakistan launched to recruit, train and deploy female meter readers (MDMOs). It is expanded each year with induction of multiple MDMOs.
- 5. Roshni Baji Project: It is a women neighbourhood ambassador programme on safety awareness and reducing illegal usage of electricity in the densely populated slums of Karachi. It is a compelling example of women rewiring the system and breaking barriers in untraditional gender areas. These women have also been trained as Pakistan's first female certified electricians.
- 6. <u>Returnship Program:</u> The program aims to offer opportunities to women professionals who have been on a career break due to any reason. The program will be scaled to allow more females resume their career.

Talent Retention Initiatives for gender that will keep evolving over the next 7 years:

- Commute to Work Benefit: To support daily commute of female colleagues and ensure their work is not hindered due to logistical issues, 'Commute to Work Allowance' introduced.
- 2. <u>Pregnancy wellness & vitality Program</u>: This program aims to provide facilitation and support to our expecting mothers along with guidance to managers. It is a learning emodule and sets expectations for new mothers along with their managers on behaviors and their interactions.
- 3. <u>Agile Working</u>: KE provides flexible work practices to make employees achieve better work-life balance while ensuring optimal performance through remote working and flexible timings.
- 4. <u>Parental Leaves</u>: To facilitate employees to recover from child's birth, well embracing the new journey in their lives, adequate period to rest is given in form of Parental Leaves. Female employees get up to 6 months, while male employees get 7 days paid leaves.
- 5. <u>Compassionate Leaves:</u> To facilitate females who face death of their spouse/child/parents and to facilitate females who get divorced, KE provides compassionate leaves.
- 6. <u>Childcare Assistance Program</u>: To support a mother's childcare commitments and ensure that her child remains in good hands while she is at work, KE facilitates mothers in providing day care/caregiver allowance. Mothers are availing this facility by sending their kids to a daycare of choice or by hiring a caregiver at home.
- 7. <u>Health Care:</u> To look after health and well-being of its employees, KE provides outpatient and hospitalization benefit to all its Regular Employees along with healthcare facility that has in-house clinics and on-duty doctors to facilitate employees. More than 10,000 employees and their dependants are availing these health facilities.
- 8. <u>Gender Pay Analysis</u>: To ascertain market positioning from a compensation and benefits perspective, KE participates in Total Remuneration Surveys to analyze gender pay gaps if

K-Electric Limited Integrated Investment Plan (FY2024-2030)

any. The gap analysis is published in Annual Sustainability Report. KE will strategize and completely eliminate any pay gap in gender in the next few years.

KE monitors internal targets of Female hiring and retention which are reviewed each month. Concentrated efforts are in place to encourage Females profiles are equally considered for any relevant vacancy. KE will continue to come up with and launch Programs that encourage Women in non-traditional roles within the Power sector like GOOs, MDMOs, Female Apprentices, Roshni Bajis, Returnship and Female Interns with increasing the breadth of current on-going programs through increased number each year. All these programs have been introduced by KE first time in the power sector and will be expanded; for the organization to continue playing its part in Women Empowerment and inclusion.

Building Disability Confidence:

Disability Inclusion is a part of Diversity & Inclusion Strategy of KE where objective of the strategy is to Build & leverage a diverse and engaged workforce supported by an inclusive culture with equal access to opportunities that drives greater business results to achieve KE's vision. Scope of this strategy runs around Focus on people processes, policies, decision making & practices. One main element of this strategy is "Building Disability Confidence" which is framework to create an inclusive workplace environment which encourages disclosure, recruitment, career development and retention of current and potential employees who have a disability.

- Accessibility Building infrastructure through reviews, recommendations and audits in order to ensure KE has the infrastructural capacity to accommodate persons with disabilities (PWDs).
- Sensitization Raising awareness through disability sensitization sessions to equip stakeholders with the skills and knowledge required to interact and communicate with PWDs.
- Employment Empowering ability through equal opportunity employment whereby PWDs get a fair chance to avail positions at inclusive KE locations in accordance with their abilities.
- Sustainability Institutionalizing inclusion and diversity by creating disability champions, providing recommendations, conducting trainings, and disseminating HR relevant information so as to ensure sustainability.

KE will work towards the strategy to inculcate a culture of inclusivity.

2. Talent Development & Culture Initiatives:

Employee Engagement and Culture:

KE uses Mercer's model to assess the employee engagement index across the organization. Based on these findings, specific action plans are designed and executed to improve engagement index. It also gives us an opportunity to compare ourselves with the industry in general and the energy sector specifically. Looking at the results, we plan on using this methodology in future as well (after every 2 years) to assess the engagement index and align our priorities accordingly.

Performance Management Framework:

A performance management system is a process used by K-Electric to evaluate and improve employee performance. This typically includes setting goals and objectives, regularly assessing progress, providing feedback and coaching, and making decisions about promotions, pay increases, and other forms of recognition or reward. The overall goal of a performance management system is to align individual performance with organizational goals, and to improve overall organizational performance. This is a yearly activity which starts in the month of July along with the fiscal year with the goal setting exercise and ends in June.

Reward & Recognition

KE's reward philosophy is about paying competitive compensation allowing engagement and enrichment of our talent funnel with the aim of supporting the organization to optimize its profits by leveraging the productivity of its Human Capital.

It follows a market competitive reward and remuneration program through benchmarking itself against industry, equitable to both employee and the organization, fostering a high-performance culture that augments organization strategy.

Leadership Exploration and Development (LEAD):

"Top talent" typically refers to individuals who possess exceptional skills, abilities, and/or experience in their field. Leadership Exploration and Development (LEAD) was initiated in 2019 to identify the top talent of K-Electric. These are the people who exhibit high standards of performance along both on operational task as well as leadership capabilities. Currently we have 8% of the total employee population in the top talent pool. This talent pool fuels our succession pipeline for the critical positions.

Emerging Talent Program (ETP):

Emerging Talent (recently graduated from universities) play an important role in the growth and development of a company. They bring fresh perspectives and new ideas and can help to revitalize a company's operations and processes. They also represent the future of the company and are often groomed to take on leadership roles in the future.

We usually hire 40-45 trainees every year. This gives us good talent pipeline for future openings in the organization at the leadership level.

Nudging New Behaviors (NNB):

With the changes anticipated in the dynamics of the utility industry, KE has identified the need to build upon external and internal efficiency. Nudging Behaviors is about entrenching the transformation behaviors and values to help steer the organization for the next phase of evolution. The key steps in the process will be to:

- Inform & Energize people at KE for shifting dynamics. Proactively address any feelings of uncertainty
- Refresh KE Values and this time make them more Actionable to embed them as part of DNA

K-Electric Limited Integrated Investment Plan (FY2024-2030)

- Adopt proactive **Transformation Behaviours** that will make us sail through, and will enable KE to Lead: **Imagine**, **Collaborate**
- Build an Employer Brand for KE by showcasing what are people up to and how is Life Inside KE

3. Health & Wellness

KE HealthCare Department is focused to nurture good health & wellbeing of its employees and their families by converging preventive healthcare protocols for best lifestyle modifications and provision of best possible healthcare facilities for disease management and rehabilitation.

Our HealthCare Centers run by team of professional Family & General Physicians are committed to provide consultations, in-house pharmacy and laboratory and panel consultant facility with specialist referrals and hospital care to more than 11,000 employees and approximately 28,000 dependents. Provision of Digital Teleclinic services is the topmost speedy access to medical facilities to the employees and their families located distantly. Generating Power Complexes are also supported by HealthCare Team with provision of OPD services and Medical emergency support.

KE has its own preventive healthcare program KE VITALITY in which physical, mental and social wellness of its employees along families remains top priority, enabling them to take charge of their own health and well-being leading to a more active, energetic and happy life by reducing their risks to illness and disease complications through persistent healthy lifestyle alterations. Highlights of our initiatives include:

- Periodic health checks of all employees followed by One on one consultations of identified high risk population for better disease management and disease prevention.
- To keep employees energetic and physically active, BMI Challenges 1.0, 2.0 and 3.0 launched in last 3 years in which more than 3000 employees registered themselves and accepted our 90 days challenge to lower BMI through diet and workout plan shared by us for better and healthy lifestyle. KE will continue to run such programs for health and wellbeing of employees.
- Pregnancy Wellness Program for new moms to ensure best possible pre & postnatal care along mandatory trainings for employee and managers through D&I team for better and safe workplace environment. These programs will continue to support expecting and new moms.
- Our Vitality Program is all about wellness and wellbeing of our employees for better productivity and happiness at workplace. Preventive health check-ups for our KE Officers from Tabba heart institute will continue to identify any ill health risk and to manage and prevent illness timely.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

- Vitality yearly drives for creating awareness through on-site sessions, WHO days celebrations, screening drives, vaccination programs for our employees and families to nurture wellness culture will continue in the next few years.
- Mental Wellness Program including sessions and workshops for employees to create awareness about stress management techniques at workplace and preventing mental illness. With a cut throat and challenging environment, KE will continue to run these sessions for mental wellbeing of employees.

Form No.	Particulars
2.4.1	Annual Investment update - updated Capex
2.4.1.1	Annual Investment update - updated Capex (Support)
2.4.2	Annual Investment update - updated RAB and Return
2.4.2.1	Annual Investment update - updated RAB and Return (Support)
2.4.3	Revised RoE Indexation
3.1	Biennial Complete Investment review - updated CAPEX
3.1.1	Biennial Complete Investment review - updated CAPEX (Support)
3.2	Biennial Complete Investment review - updated RAB & Return
3.2.1	Biennial Complete Investment review - updated RAB & Return (Support)

Note: Complete Tariff table will be updated after Annual / Biennial adjustments

Form 2.4.1

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex

	1 1									
Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
1 Capex allowed - Reference										
aupor anomou monomou										
i Macro economic factors - Reference										
PKR/US\$ Exchange Rate- Average	PKR / USD	a	206.0	206.0	206.0	206.0	206.0	206.0	206.0	
Pak CPI	No.	b	158.5	158.5	158.5	158.5	158.5	158.5	158.5	
US CPI	No.	С	282.0	282.0	282.0	282.0	282.0	282.0	282.0	
i Capex Allowed										
Total	PKR Mn	d	46,628	48,986	51,786	49,654	41,623	22,416	19,821	280,915
i Capex Proportion										
USD based Capex	%	e	90%	90%	90%	90%	90%	90%	90%	90%
PKR based Capex	%	f	10%	10%	10%	10%	10%	10%	10%	10%
Total	%	g	100%	100%	100%	100%	100%	100%	100%	100%
Capex allowed										
USD based Capex	PKR Mn	$h = d \times e$	41,965	44,088	46,608	44,689	37,461	20,174	17,839	252,823
PKR based Capex	PKR Mn	$i = d \times f$	4,663	4,899	5,179	4,965	4,162	2,242	1,982	28,091
Total	PKR Mn	j	46,628	48,986	51,786	49,654	41,623	22,416	19,821	280,915
Addition to Deferred revenue										
USD based	PKR Mn	k	-							-
PKR based	PKR Mn	1	400							400
Total	PKR Mn		400	-	-	-	-	-	-	400

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated Capex

After completion of		Year 1 - FY 2024								
				•						
Description	Linda	Lonoval	EV 2024	EV 202E	EV 2026	EV 2027	EV 2020	EV 2020	EV 2020	т.

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
2 Capex allowed - Indexed on actual Macro econ	omic factors till EV 3	0024								
Capex allowed - Indexed on actual Macro econ	offic factors till FT 2	1024								
i Macro economic factors - actual [Average of fo	ur factors used in q	uarterly indexation in FY	2024]							
PKR/US\$ Exchange Rate- Average	PKR / USD	m	236.0							
Pak CPI	No.	n	173.5							
US CPI	No.	0	292.0							
ii Capex - indexed										
USD based Capex	PKR Mn	p = h x (m/a) x (o/c)	49,781							
PKR based Capex	PKR Mn	q = i x (n/b)	5,104							
Total	PKR Mn		54,885							
ii Addition to deferred revenue actual										
USD based	PKR Mn	r	_							
PKR based	PKR Mn	s	400							
Total	PKR Mn	J	400							
ii Capex - Additional based on specific approval										
USD based Capex	PKR Mn	t	250							
PKR based Capex	PKR Mn	u	-							
Total	PKR Mn		250							
ii Deferred revenue - Additional based on specifi	• •									
USD based	PKR Mn	V	-							
PKR based	PKR Mn	w	-							
Total	PKR Mn		-							
Capex - Indexed + specific approved										
USD based Capex	PKR Mn	x = p + t	50,031							
PKR based Capex	PKR Mn	y = q + u	5,104							
Total	PKR Mn	z	55,135							

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex

After completion of	Year 1 - FY 2024

				J							
Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
iv Deferred revenue - Indexed + specific approved											
USD based Capex	PKR Mn	aa = r + v	_								
PKR based Capex	PKR Mn	ab = s + w	400								
Total	PKR Mn	ub = 3 · ••	400	-							
v Capex - Actually incurred											
USD based Capex	PKR Mn	ac	48,500								
PKR based Capex	PKR Mn	ad	3,000								
Total	PKR Mn		51,500								
v Deferred revenue - Actually received											
USD based	PKR Mn	ae									
PKR based	PKR Mn	af	400	-							
Total	PKR Mn		400								
vi Capex - Under / (Over) spent											
USD based Capex	PKR Mn	ag = x - ac	1,531								
PKR based Capex	PKR Mn	ah = y - ad	2,104								
Total	PKR Mn	ai	3,635	-							
vi Deferred revenue - Under / (Over)											
USD based	PKR Mn	aj = aa - ae	-								
PKR based	PKR Mn	ak = ab - af	-	_							
Total	PKR Mn		-								
vii Revised Allowed capex for FY 2024											
USD based Capex	PKR Mn	al = see comment	48,500								Over/ Under expenditure is adjusted against actual
											CAPEX incurred in the proportion of NEPRA Allowed
PKR based Capex	PKR Mn	am = see comment	3,000	_							Indexed CAPEX for the year on combined basis.
Total	PKR Mn		51,500								

Form 2.4.1

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex

PKR based Capex	
USD based	Comments
USD based	
PKR based PKR Mr ao = af + ao Ado PKR Mr ao af + ao Ado Ado PKR Mr ao af + ao Ado	
Total PKR Mr A00	
Machine Mac	
Machine Mac	
PKR based Capex PKR Mr aq 2,104 - - - - 2,104 Reserted for total PKR Mr ar aq 3,635 - - - - - 2,104 A,635 A - - - - - - - A,635 A,635 A A A A A A A A A	ons for delay to be enclosed
Deferred revenue - Under spent carried forward to next years USD based	ons for delay to be enclosed
See PKR Min	
PKR based PKR Mr	
Total PKR Mn as	
Macro economic factors PKR/USS Exchange Rate- Average	
Macro economic factors	
PKR/USS Exchange Rate- Average	
Pak CPI No. au 173.5 173	
No. av 292.0 2	
II Revised capex for FY 2025 onwards indexed on latest macro economic factors USD based Capex	
USD based Capex	
PKR based Capex	
Total PKR Mn	
ii Revised deferred revenue additions for FY 2025 onwards (will be claimed on actual basis) USD based PKR Mn ay -	
USD based PKR Mn ay	
PKR based PKR Mn az	
Total PKR Mn	
iii Revised capex USD based Capex PKR Mn ba = aw + ap 48,500 53,830 55,289 53,012 44,438 23,932 21,162 300,162 FY24 is as per PKR based Capex PKR based Capex PKR Mn bb = ax + aq 3,000 7,466 5,669 5,435 4,556 2,454 2,170 30,750	
USD based Capex PKR Mn ba = aw + ap 48,500 53,830 55,289 53,012 44,438 23,932 21,162 300,162 FY24 is as per PKR based Capex PKR Mn bb = ax + aq 3,000 7,466 5,669 5,435 4,556 2,454 2,170 30,750	
PKR based Capex PKR Mn bb = ax + aq 3,000 7,466 5,669 5,435 4,556 2,454 2,170 30,750	
PKR based Capex PKR Mn bb = ax + aq 3,000 7,466 5,669 5,435 4,556 2,454 2,170 30,750	is as per above workings. Rest is as per lege
Total PKR Mn 51,500 61,296 60,957 58,448 48,994 26,385 23,331 330,913	given

K-Electric Limited Form 2.4.1

Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex

After completion of	Year 1 - FY 2024

	Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
	and defermed according										
iii Kevi	sed deferred revenue										
USD	based	PKR Mn	bc = an	-	-	-	-	-	-	-	-
PKR	based	PKR Mn	bd = ao	400	_	_	_	_	_	_	400
Tota		PKR Mn		400	-	-	-	-	-	-	400

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex (Support)

·										
Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
1 Capex allowed - Reference										
i Macro economic factors - Reference										
PKR/US\$ Exchange Rate- Average	PKR / USD	a	206.0	206.0	206.0	206.0	206.0	206.0	206.0	
Pak CPI	No.	b	158.5	158.5	158.5	158.5	158.5	158.5	158.5	
US CPI	No.	С	282.0	282.0	282.0	282.0	282.0	282.0	282.0	
i Capex Allowed										
Total	%	d	3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514
i Capex Proportion (Allowed)										
USD based Capex	%	e	70%	70%	70%	70%	70%	70%	70%	70%
PKR based Capex	%	f	30%	30%	30%	30%	30%	30%	30%	30%
Total	%		100%	100%	100%	100%	100%	100%	100%	100%
v Capex allowed										
USD based Capex	PKR Mn	g = d x e	2,518	1,675	1,808	1,556	1,915	1,983	1,505	12,960
PKR based Capex	PKR Mn	h = d x f	1,079	718	775	667	821	850	645	5,554
Total	PKR Mn		3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514
			5,555	_,	_,	_,	_,	_,	_,	,
2 Capex allowed - Indexed on actual Macro econ	nomic factors till FY 202	24								
i Macro economic factors - actual [Average of fo	our factors used in qua	rterly indexation in I	FY 2024]							
PKR/US\$ Exchange Rate- Average	PKR / USD	i	211.0							
Pak CPI	No.	j	163.5							
US CPI	No.	k	287.0							
i Capex - indexed										
USD based Capex	PKR Mn	$I = g \times (i/a) \times (k/c)$	2,534							
PKR based Capex	PKR Mn	$m = h \times (j/b)$	1,113							
Total	PKR Mn		3,647							
i Capex - Additional based on specific approval										
USD based Capex	PKR Mn	n	250							
PKR based Capex	PKR Mn	o	-							
Total	PKR Mn		250							

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex (Support)

Description	11-2	Lancing Co.	EV 2024	EV 2025	EV 2026	EV 2027	FV 2029	EV 2020	EV 2020	Takal	Comments
Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Capex - Indexed + specific approved											
USD based Capex	PKR Mn	p = l + n	2,784								
PKR based Capex	PKR Mn	q = m + o	1,113								
Total	PKR Mn	r	3,897								
v Capex - Actually incurred											
USD based Capex	PKR Mn	S	2,796								
PKR based Capex	PKR Mn	t	1,218								
Total	PKR Mn	u	4,014								
i Capex - Under / (Over) spent											
USD based Capex	PKR Mn	v = p - s	(12)								
PKR based Capex	PKR Mn	w = q - t	(105)								
Total	PKR Mn	x	(117)								
ri Allowed capex for FY 2024											
USD based Capex	PKR Mn	y = see comment	2,712								Over/ Under expenditure is adjusted against ac
PKR based Capex	PKR Mn	z = see comment	1,185								CAPEX incurred in the proportion of NEPRA Allo Indexed CAPEX for the year on combined bas
Total	PKR Mn		3,897								
Capex - Under spent capex carried forward to	o next years										
USD based Capex	PKR Mn	aa	-	-	-	-	-	-	-	-	
PKR based Capex	PKR Mn	ab	-	-	-	-	-	-	-	-	
Total	PKR Mn		-	-	-		-	-	-	-	_

Form 2.4.1.1

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex (Support)

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
Revised capex to be allowed										
Macro economic factors										
PKR/US\$ Exchange Rate- Average	PKR / USD	ac	211.0	211.0	211.0	211.0	211.0	211.0	211.0	
Pak CPI	No.	ad	163.5	163.5	163.5	163.5	163.5	163.5	163.5	
US CPI	No.	ae	287.0	287.0	287.0	287.0	287.0	287.0	287.0	
Revised capex for FY 2025 onwards indexed	on latest macro econo	mic factors								
USD based Capex	PKR Mn	af = g x (ac/a) x (ae/c)		1,747	1,885	1,622	1,996	2,067	1,569	10,886
PKR based Capex	PKR Mn	$ag = h \times (ad/b)$		741	799	688	847	877	665	4,617
Total	PKR Mn		-	2,487	2,684	2,310	2,843	2,943	2,234	15,502
Revised capex										
USD based Capex	PKR Mn	ah = aa +af	2,712	1,747	1,885	1,622	1,996	2,067	1,569	13,598
PKR based Capex	PKR Mn	ai = ab + ag	1,185	741	799	688	847	877	665	5,801
Total	PKR Mn	-	3,897	2,487	2,684	2,310	2,843	2,943	2,234	19,399

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

	•		_								
Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RAB movement											
Assumptions											
Capitalization % Disposal Cost %	% %	a = cx b = dc		69.0% 0.8%	61.1% 0.0%	67.3% 0.1%	58.5% 0.0%	74.2% 0.0%	48.2% 0.0%	91.0% 0.0%	FY 2024 %ages are actualized based on financial statements. Onward years as per initial
Disposal Acc. Dep%	%	c = dh		3.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	estimate.
4											
Depreciation rate %	%	e f		2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	As per initial estimate.
Amortization of deferred revenue %	%	Ť		5.19%	5.19%	5.19%	5.19%	5.19%	5.19%	5.19%	As per initial estimate.
Exchange rate - average	PKR/USD	g		236	236	236	236	236	236	236	Updated based on FY 2024
Pak CPI	No.	h		173	173	173	173	173	173	173	Updated based on FY 2024
US CPI	No.	i		292	292	292	292	292	292	292	Updated based on FY 2024
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn	j		11,667	55,117	82,726	88,047	95,004	73,488	64,439	
Addition	PKR Mn	k		51,500	61,296	60,957	58,448	48,994	26,385	23,331	From 2.4.1
Capitalization	PKR Mn	l = a x j		(8,050)	(33,688)	(55,636)	(51,491)	(70,511)	(35,434)	(58,664)	From %age method for Future. FY24 as per financials
Closing	PKR Mn	m = j + k + l	11,667	55,117	82,726	88,047	95,004	73,488	64,439	29,106	
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn	n		159,433	166,208	199,895	255,279	306,770	377,281	412,715	
Capitalization	PKR Mn	o = - I		8,050	33,688	55,636	51,491	70,511	35,434	58,664	
Disposal	PKR Mn	p = n x b		(1,275)	-	(253)	-	-	-	-	From %age method for Future. FY24 as per financials
Closing	PKR Mn	q = n + o + p	159,433	166,208	199,895	255,279	306,770	377,281	412,715	471,379	
Accumulated Depreciation											
Opening	PKR Mn	r		34,694	37,927	42,851	48,768	56,328	65,530	76,157	
Depreciation for the year	PKR Mn	s = average (q + n) x e		4,380	4,925	6,123	7,561	9,202	10,627	11,893	
Depreciation - Disposal	PKR Mn	t=rxc		(1,148)	-	(206)	-	-,	,	,	From %age method for Future. FY24 as per financials
Closing	PKR Mn	u=r+s+t	34,694	37,927	42,851	48,768	56,328	65,530	76,157	88,049	
CWIP + Fixed assets	PKR Mn	v = m + q - u	136,406	183,398	239,770	294,558	345,446	385,238	400,997	412,436	
Average RAB - Excl. Deferred Revenue		w		159,902	211,584	267,164	320,002	365,342	393,118	406,716	
Deferred revenue											
Opening	PKR Mn	x		4,570	4,712	4,468	4,236	4,016	3,808	3,610	
Additions	PKR Mn	у		400	-	-	-	-	-	-	Based on actual additions for FY24
Amortization	PKR Mn	$z = (x + y) \times f$		(258)	(244)	(232)	(220)	(208)	(197)	(187)	From %age method for Future. FY24 as per financials
Closing	PKR Mn	ab = x + y + z	4,570	4,712	4,468	4,236	4,016	3,808	3,610	3,423	
RAB	PKR Mn	ac = v - ab	131,837	178,686	235,302	290,322	341,429	381,430	397,387	409,012	

Form 2.4.2

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
dated RoRB %											
eighted Avg. Spreads of Various Foreign Loans											
CA Financing	%	ae		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per initial estimate.
FI Financing & Others	%	af		4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	As per initial estimate.
CA Financing (Weightage)	%	ag		65.00%	65.00%	65.00%	65.00%	65.00%	65.00%	65.00%	FY24 actualized as per Accounts. Future years same as FY24
FI Financing & Others (Weightage)	%	ah		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	FY24 actualized as per Accounts. Future years same as FY24
eighted Avg. Spread of Foreign Loans	%	ai = (ae x ag) + (af x ah)		4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	
st of Debt - Foreign											
BOR / SOFR	%	aj		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
read	%	ak		4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	As computed above
edging cost	%	ap = ao		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	As per computation below
oD - Foreign	%	aq = aj + ak + ap		23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	
edging cost											
BOR	%	al		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
BOR / SOFR	%	am		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
edging spread	%	an		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
edging cost	%	ao = al - am + an		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
ost of Debt - Local											
BOR	%	ar = al		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
oread	%	as		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
DD - Local	%	at = ar + as		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
oreign Debt %	%	au		85.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	Actualized every year and update forecast for future years
ocal Debt %	%	av		15.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	Actualized every year and update forecast for future years
Veighted average cost of debt	%	aw = (aq x au) + (at x av)		22.38%	22.16%	22.16%	22.16%	22.16%	22.16%	22.16%	
ost of Equity - Base	%	ax		15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
ost of Equity - Indexation	%	ay		55.3%	42.3%	34.4%	29.4%	26.3%	25.2%	24.6%	As per form 2.4.3
ost of Equity - indexed	%	az = ax x (1 + ay)		23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%	
ebt %	%	ba		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
quity	%	bb		30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
eturn on Regulatory Asset Base - Revised		$bc = (aw \times ba) + (bb \times az)$		22.65%	21.92%	21.56%	21.33%	21.20%	21.15%	21.12%	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RoRB amount											
Average RAB - PKR	PKR Mn	bd = ad		155,262	206,994	262,812	315,876	361,430	389,409	403,199	
Total Debt %	%	be = ba		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Foreign Debt %	%	bf = au		85.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	
Cost of Debt - Foreign	%	bg = aq		23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	
CoD - Foreign	PKR Mn	$bh = bd \times be \times bf \times bg$		21,271	26,690	33,887	40,729	46,603	50,210	51,989	
CoD - Foreign - support	PKR Mn	bi		125	150	188	233	273	311	356	Form 2.4.2.1(S) from Distribution Network
CoD - Foreign - (Including Support)	PKR Mn	bj = bh + bi		21,395	26,840	34,075	40,962	46,875	50,522	52,344	
Local Debt %	%	bk = av		15.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
Cost of Debt - Local	%	bl = at		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
CoD - Local - Transmission	PKR Mn	$bm = bd \times be \times bk \times bl$		3,049	5,419	6,880	8,270	9,462	10,195	10,556	
CoD - Local - support	PKR Mn	bn		54	52	65	81	95	108	124	Form 2.4.2.1(S) from Distribution Network
CoD - Local - (Including Support)	PKR Mn	bo = bm + bn		3,103	5,471	6,946	8,351	9,557	10,303	10,680	
Equity %	%	bp = bb		30%	30%	30%	30%	30%	30%	30%	
Cost of Equity - Indexed	%	bq = az		23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%	
RoE - Transmission	PKR Mn	br = bq x bd x bp		10,848	13,256	15,896	18,389	20,545	21,947	22,600	
RoE - support	PKR Mn	bs		83	85	101	120	137	155	177	Form 2.4.2.1(S) from Distribution Network
RoE - Total	PKR Mn	bt = br + bs		10,931	13,341	15,996	18,509	20,683	22,102	22,777	
Depreciation on transmission assets	PKR Mn	bu = s		4,380	4,925	6,123	7,561	9,202	10,627	11,893	
Depreciation on support assets	PKR Mn	bu = s bv		789	4,925 893	1,116	1,387	1,623	1,852	2,119	Form 2.4.2.1(S) from Distribution Network
Total depreciation	PKR Mn	bw = bu + bv		5,169	5,818	7,239	8,947	10,825	12,479	14,012	FORM 2.4.2.1(3) NOW DISTRIBUTION NETWORK
Total depreciation		511 - 5u · 51		3,203	5,010	,,233	0,547	10,023	12,475	14,012	
Amortization of deferred revenue	PKR Mn	bx = z		(258)	(244)	(232)	(220)	(208)	(197)	(187)	
Units Served	No.	by		19,932	20,290	20,779	21,198	21,564	21,919	22,246	FY24 Actual. Remaining as per initial estimate
Revised tariff components											
CoD - Foreign	PKR / kWh	bz = bj / by		1.07	1.32	1.63	1.92	2.16	2.29	2.34	
CoD - Local	PKR / kWh	ca = bo / by		0.16	0.27	0.33	0.39	0.44	0.47	0.48	
RoE	PKR / kWh	cb = bt / by		0.55	0.66	0.77	0.87	0.96	1.01	1.02	
Depreciation	PKR / kWh	cc = bw / by		0.26	0.29	0.35	0.42	0.50	0.57	0.63	
Amortization of deferred revenue	PKR / kWh	cd = bx / by		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Over / (Under) recovery in FY 2024											
Units Served - actual	No.	ce		19,932							
Amount recovered on above tariff components											
CoD - Foreign	PKR Mn	cf = bz x ce		21,395							
CoD - Local	PKR Mn	cg = ca x ce		3,103							
RoE	PKR Mn	ch = cb x ce		10,931							
Depreciation	PKR Mn	ci = cc x ce		5,169							
· ·											
Amortization of deferred revenue	PKR Mn	cj = cd x ce		(258)							
Total	PKR Mn	ck = cf + cg + ch + ci + cj		40,341							
Amount already recovered											
CoD - Foreign	PKR Mn	cl		18,090							Actual recovery for the year
CoD - Local	PKR Mn	cm		1,624							Actual recovery for the year
RoE	PKR Mn	cn		8,297							Actual recovery for the year
Depreciation	PKR Mn	со		4,075							Actual recovery for the year
Amortization of deferred revenue	PKR Mn			(192)							Actual recovery for the year
		ср									Actual recovery for the year
Total	PKR Mn	cq = cl + cm + cn + co + cp		31,894							
(Over) / Under recover to be allowed in next year		cr = ck - cq		8,447							
Formulas for percentages											
Capitalization % as per financial statements											
Opening CWIP	PKR Mn	cs		100							
Addition to CWIP	PKR Mn	ct		52							
Available for capitalization	PKR Mn	cu = cs + ct		152							
Capitalization	PKR Mn	cv		(105)							
Closing	PKR Mn	cw = cs + ct + cv		47							
Capitalization %	%	cx = cv / cu		69.00%							
Disposal Cost % as per financial statements											
Opening PPE	PKR Mn	cy		100.00							
Addition	PKR Mn	cz = cv		104.88							
Disposal	PKR Mn	da		(0.80)							
Closing	PKR Mn	db = cy + cz + da		204.08							
Disposal Cost %	%	dc = da / cy		0.80%							
Disposal Acc. Depreciation % as per financial statements											
Opening Acc. Dep	PKR Mn	dd		50.00							
Depreciation	PKR Mn	de		10.00							
Disposal	PKR Mn	df		(1.65)							
Closing	PKR Mn	dg = dd + de + df		58.35							
Acc. Dep. Disposal %	%	dh = df / dd		3.31%							

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return (Support)

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
1 Updated RAB movement											
Assumptions											
Capitalization %	%			69.0%	51.0%	48.0%	49.3%	42.6%	46.2%	53.2%	
Disposal Cost %	%			10.0%	11.2%	2.6% 5.8%	3.1% 6.6%	5.2%	3.9%	7.4%	estimate
Disposal Acc. Dep% Depreciation rate %	% %			18.0% 12.9%	20.4% 12.9%	5.8% 12.9%	12.9%	10.7% 12.9%	7.7% 12.9%	13.9% 12.9%	
Exchange rate - average	™ PKR/USD			211	211	211	211	211	211	211	As per initial estimate.
Pak CPI	No.			163	163	163	163	163	163	163	
US CPI	No.			287	287	287	287	287	287	287	
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn			1,098	4,237	4,565	5,059	4,877	5,644	5,983	
· -				•	,		•				From 2.4.4 (C)
Addition	PKR Mn			3,897	2,487	2,684	2,310	2,843	2,943	2,234	From 2.4.1 (S)
Capitalization	PKR Mn			(758)	(2,159)	(2,190)	(2,492)	(2,075)	(2,605)	(3,185)	<u> </u>
Closing	PKR Mn		1,098	4,237	4,565	5,059	4,877	5,644	5,983	5,032	
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn			6,031	6,185	7,651	9,638	11,836	13,302	15,387	
Capitalization	PKR Mn			758	2,159	2,190	2,492	2,075	2,605	3,185	
Disposal	PKR Mn			(603)	(694)	(203)	(294)	(610)	(520)	(1,143)	From %age method for Future. FY24 matched with Accounts
Closing	PKR Mn		6,031	6,185	7,651	9,638	11,836	13,302	15,387	17,429	•
Accumulated Depreciation											
Opening	PKR Mn			-	789	1,521	2,550	3,767	4,988	6,458	
Depreciation for the year	PKR Mn			789	893	1,116	1,387	1,623	1,852	2,119	
Depreciation - Disposal	PKR Mn			-	(161)	(88)	(169)	(403)	(382)	(898)	From %age method for Future. FY24 matched with Accounts
Closing	PKR Mn		-	789	1,521	2,550	3,767	4,988	6,458	7,679	
CWIP + Fixed assets (RAB)	PKR Mn		7,129	9,634	10,694	12,147	12,946	13,958	14,911	14,782	-
Average RAB	i Kit IVIII		7,123	8,381	10,164	11,421	12,547	13,452	14,435	14,846	•
Average IAD				0,361	10,104	11,421	12,34/	13,432	14,433	14,040	

K-Electric Limited

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return (Support)

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Support RAB Allocation on Generation, Transmis	sion & Distribution	n Network									
CAPEX Allocation Percentages											
Transmission	%			19%	19%	19%	19%	19%	19%	19%	As per Initial Estimate
Cost of Fixed Assets (Gross Fixed Assets)											
Transmission	PKR Mn			1,189	1,471	1,853	2,276	2,558	2,959	3,351	
Net RAB											
Transmission	PKR Mn			1,852	2,056	2,336	2,489	2,684	2,867	2,842	
Updated RoRB %											
Cost of Debt - Foreign											
LIBOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
Spread	%			4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	As per initial estimate.
Hedging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	As per computation below
CoD - Foreign	%			23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	
Hedging cost											
KIBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
LIBOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
Hedging spread	%			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
Hedging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
Cost of Debt - Local											
KIBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
Spread	%			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
CoD - Local	%			18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Foreign Debt %	%			65.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	Actualized every year and update forecast for future years
Local Debt %	%			35.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	Actualized every year and update forecast for future years
Weighted average cost of debt	%			21.51%	21.73%	21.73%	21.73%	21.73%	21.73%	21.73%	

K-Electric Limited

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return (Support)

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Cost of Equity - Base	%			15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Cost of Equity - Indexation	. %			55.3%	42.3%	34.4%	29.4%	26.3%	25.2%	24.6%
Cost of Equity - indexed	. %			23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%
Debt %	%			70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Equity	%			30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
. ,										
2 Updated RoRB amount										
opuateu koko amount										
Average RAB - PKR	PKR Mn			1,189	1,330	1,662	2,065	2,417	2,758	3,155
Total Debt %	%			70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Foreign Debt %	%			65.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Cost of Debt - Foreign	%		_	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%
CoD - Foreign - Support	PKR Mn		_	125	150	188	233	273	311	356
Local Debt %	%			35.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Cost of Debt - Local	%		_	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%
CoD - Local - Support	PKR Mn			54	52	65	81	95	108	124
Equity %	%			30%	30%	30%	30%	30%	30%	30%
Cost of Equity - Indexed	%		_	23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%
RoE - Support	PKR Mn			83	85	101	120	137	155	177
Depreciation on support assets	PKR Mn			789	893	1,116	1,387	1,623	1,852	2,119
Total depreciation	PKR Mn		-	789	893	1,116	1,387	1,623	1,852	2,119
Total acpreciation	1 100 14111			703	033	1,110	1,507	1,023	1,032	2,113
3 Formulas for percentages										
Capitalization % as per financial statements										
Opening CWIP	PKR Mn			100						
Addition to CWIP	PKR Mn			52						
Available for capitalization	PKR Mn			152						
Capitalization	PKR Mn			(105)						
Closing	PKR Mn		-	47						
Capitalization %	%		-	69.00%						
Disposal Cost % as per financial statements										
Opening PPE	PKR Mn			100						
Addition	PKR Mn			105						
Disposal	PKR Mn			(10)						
Closing	PKR Mn			195						
Disposal Cost %	%			10.00%						
Disposal Acc. Depreciation % as per financial states										
Opening Acc. Dep	PKR Mn			50						
Depreciation Disposal	PKR Mn PKR Mn			10 (9)						
Closing	PKR Mn			(9) 51						
Acc. Dep. Disposal %	%		-	18.00%						
. tee. 2-cp. 2/3p03u/70	70		-	10.00/6						

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Revised RoE Indexation

Particulars		Jun-16	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
					'	Actualized			'		'		Forec	asted		
Average Exchange rates FTY	PKR / USD	104.82	104.81	110.01	136.17	158.38	160.21	178.00	240.00	236.00	236.00	236.00	236.00	236.00	236.00	236.00
Regulatory Asset Base (RAB) at year end	PKR mn	35,207	39,776	63,727	78,343	94,907	104,043	116,563	138,966	188,320	245,997	302,470	354,375	395,389	412,298	423,794
Additions during the year	PKR mn		4,569	23,950	14,616	16,564	9,136	12,520	22,402	49,355	57,676	56,473	51,905	41,013	16,909	11,496
Indexation based on exchange rates (A)																
FY 2016	%		-0.01%	4.95%	29.91%	51.10%	52.84%	69.81%	128.96%	125.15%	125.15%	125.15%	125.15%	125.15%	125.15%	125.15%
FY 2017	%			4.96%	29.92%	51.12%	52.86%	69.84%	128.99%	125.18%	125.18%	125.18%	125.18%	125.18%	125.18%	125.18%
FY 2018	%				23.78%	43.97%	45.64%	61.81%	118.17%	114.54%	114.54%	114.54%	114.54%	114.54%	114.54%	114.54%
FY 2019	%					16.31%	17.65%	30.72%	76.25%	73.31%	73.31%	73.31%	73.31%	73.31%	73.31%	73.31%
FY 2020	%						1.15%	12.39%	51.53%	49.01%	49.01%	49.01%	49.01%	49.01%	49.01%	49.01%
FY 2021	%							11.11%	49.81%	47.31%	47.31%	47.31%	47.31%	47.31%	47.31%	47.31%
FY 2022	%								34.83%	32.58%	32.58%	32.58%	32.58%	32.58%	32.58%	32.58%
FY 2023	%									-1.67%	-1.67%	-1.67%	-1.67%	-1.67%	-1.67%	-1.67%
FY 2024	%										0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FY 2025	%											0.00%	0.00%	0.00%	0.00%	0.00%
FY 2026	%												0.00%	0.00%	0.00%	0.00%
FY 2027	%													0.00%	0.00%	0.00%
FY 2028	%														0.00%	0.00%
FY 2029	%															0.00%
FY 2030	%															0.00%

Calculated with reference to exchange rate of a relevant year vs exchange rate of base year for example 16.31% in FY 2020 calculated as PKR 158.38 / USD divided by PKR 136.17 / USD

Year wise b	reak up	of RAB
-------------	---------	--------

FY 2016	PKR mn PKR mn	35,207	35,207	35,207	35,207	35,207	35,207	25 207	25 207	25 207	25 207	25 207	25 207	25 207	25 207	25 207
EV 2247	PKR mn				/	33,207	33,207	35,207	35,207	35,207	35,207	35,207	35,207	35,207	35,207	35,207
FY 2017			4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569	4,569
FY 2018	PKR mn			23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950	23,950
FY 2019	PKR mn				14,616	14,616	14,616	14,616	14,616	14,616	14,616	14,616	14,616	14,616	14,616	14,616
FY 2020	PKR mn					16,564	16,564	16,564	16,564	16,564	16,564	16,564	16,564	16,564	16,564	16,564
FY 2021	PKR mn						9,136	9,136	9,136	9,136	9,136	9,136	9,136	9,136	9,136	9,136
FY 2022	PKR mn							12,520	12,520	12,520	12,520	12,520	12,520	12,520	12,520	12,520
FY 2023	PKR mn								22,402	22,402	22,402	22,402	22,402	22,402	22,402	22,402
FY 2024	PKR mn									49,355	49,355	49,355	49,355	49,355	49,355	49,355
FY 2025	PKR mn										57,676	57,676	57,676	57,676	57,676	57,676
FY 2026	PKR mn											56,473	56,473	56,473	56,473	56,473
FY 2027	PKR mn												51,905	51,905	51,905	51,905
FY 2028	PKR mn													41,013	41,013	41,013
FY 2029	PKR mn														16,909	16,909
FY 2030	PKR mn															11,496
Total RAB		35,207	39,776	63,727	78,343	94,907	104,043	116,563	138,966	188,320	245,997	302,470	354,375	395,389	412,298	423,794

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Revised RoE Indexation

Particulars		Jun-16	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 20
			<u> </u>		·	Actualized	·						Foreca	asted		
ightage of RAB (B)	%	100%	89%	55%	45%	37%	34%	30%	25%	19%	14%	12%	10%	9%	9%	
FY 2016	%				6%	5%	4%	4%	3%	2%	2%	2%	10%	1%	1%	
FY 2017 FY 2018	%	0% 0%	11% 0%	7% 38%	31%	25%	23%	21%	3% 17%		10%	2% 8%	7%	6%	6%	
FY 2019	%	0%	0%	0%	19%	15%	14%	13%	11%	13% 8%	6%	5%	4%	4%	4%	
FY 2019	%	0%	0%	0%	0%	17%	16%	14%	12%	9%	7%	5%	5%	4%	4%	
FY 2020 FY 2021	%	0%	0%		0%	0%	9%	8%	7%	5%	7% 4%	3%	3%	2%	2%	
FY 2021 FY 2022		0%		0%			0%		7% 9%		4% 5%	3% 4%		3%	3%	
	%		0%	0%	0%	0%		11%		7%			4%			
FY 2023	%	0%	0%	0%	0%	0%	0%	0%	16%	12%	9%	7%	6%	6%	5%	
FY 2024	%	0%	0%	0%	0%	0%	0%	0%	0%	26%	20%	16%	14%	12%	12%	
FY 2025	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	23%	19%	16%	15%	14%	
FY 2026	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	19%	16%	14%	14%	
FY 2027	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	13%	13%	
FY 2028	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	10%	
FY 2029	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	
FY 2030	%	0%	0%	0%	0%	0% 100%	0% 100%	0% 100%	0%	0%	0%	0%	0%	0% 100%	0%	
FY 2016	%	0%	-0.01%	3%	13%	19%	18%	21%	33%	23%	18%	15%	12%	11%	11%	
r wise indexation - considering RA																
FY 2017	%	0%	0%	0%	2%	2%	2%	3%	4%	3%	2%	2%	2%	1%	1%	
FY 2018	%	0%	0%	0%	7%	11%	11%	13%	20%	15%	11%	9%	8%	7%	7%	
FY 2019	%	0%	0%	0%	0%	3%	2%	4%	8%	6%	4%	4%	3%	3%	3%	
FY 2020	%	0%	0%	0%	0%	0%	0%	2%	6%	4%	3%	3%	2%	2%	2%	
FY 2021	%	0%	0%	0%	0%	0%	0%	1%	3%	2%	2%	1%	1%	1%	1%	
FY 2022	%	0%	0%	0%	0%	0%	0%	0%	3%	2%	2%	1%	1%	1%	1%	
FY 2023	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2024	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2025	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2026				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2026 FY 2027	%	0%	()%				0,0		0%	0%	0%	0%	0%		0%	
FY 2027	%	0%	0%			0%	0%	0%								
FY 2027 FY 2028	%	0%	0%	0%	0%	0% 0%	0% 0%	0%						0% 0%		
FY 2027 FY 2028 FY 2029	% %	0% 0%	0% 0%	0% 0%	0% 0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2027 FY 2028	%	0%	0%	0%	0%											
FY 2027 FY 2028 FY 2029 FY 2030 al indexation	% % % %	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0%	0% 0%	0% 0%	0% 0% 77.86%	0% 0% 55.26%	0% 0% 42.31%	0% 0% 34.41%	0% 0% 29.37%	0% 0% 26.32%	0% 0% 25.24%	2
FY 2027 FY 2028 FY 2029 FY 2030 al indexation - USD based	% % % %	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0%	0% 0%	0% 0%	0% 0% 77.86% 15.00%	0% 0% 55.26% 15.00%	0% 0% 42.31% 15.00%	0% 0% 34.41% 15.00%	0% 0% 29.37% 15.00%	0% 0% 26.32% 15.00%	0% 0% 25.24% 15.00%	1
FY 2027 FY 2028 FY 2029 FY 2030 al indexation	% % % %	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 0%	0% 0%	0% 0%	0% 0% 77.86%	0% 0% 55.26%	0% 0% 42.31%	0% 0% 34.41%	0% 0% 29.37%	0% 0% 26.32%	0% 0% 25.24%	

After completion of Year 2 - FY 2025

Description	Unit	Reference	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Initial Investment Plan											
i Capex Allowed											
USD based Capex	PKR Mn	a	48,500	53,741	55,789	53,512	44,938	24,432	21,662	302,573	Revised Capex based on form 2.4.1
PKR based Capex	PKR Mn	b	3,000	7,415	5,669	5,435	4,556	2,454	2,170	30,699	after completion of FY 2025
Total capex	PKR Mn	С	51,500	61,156	61,457	58,948	49,494	26,885	23,831	333,273	-
i Deferred revenue allowed											
USD based	PKR Mn	d	-	-	-	-	-	-	-	-	Revised Capex based on form 2.4.1
PKR based	PKR Mn	e	400	1,000	-	-	-	-	-	1,400	after completion of FY 2025
Total	PKR Mn	f	400	1,000	-	-	-	-	-	1,400	-
Proposed changes in Investment Plan											
і Сарех											
USD based Capex	PKR Mn	g	-	-	(1,800)	1,600	1,640	(1,420)	1,020	1,040	Please refer the justifications for the
PKR based Capex	PKR Mn	h	-	-	2,200	1,800	1,100	1,240	1,800	8,140	changes in Annexure (Will be
Total capex	PKR Mn	i	-	-	400	3,400	2,740	(180)	2,820	9,180	enclosed)
i Deferred revenue											
USD based	PKR Mn	j	-	-	-	-	-	-	-	-	
PKR based	PKR Mn	k	-	-	-	-	-	-	-	-	
Total	PKR Mn	1	-	-	-	-	-	-	-	-	-
Revised Investment Plan											
i Capex											
USD based Capex	PKR Mn	m = a + g	48,500	53,741	53,989	55,112	46,578	23,012	22,682	303,613	
PKR based Capex	PKR Mn	n = b + h	3,000	7,415	7,869	7,235	5,656	3,694	3,970	38,839	
Total capex	PKR Mn	0	51,500	61,156	61,857	62,348	52,234	26,705	26,651	342,453	-
i Deferred revenue											
USD based	PKR Mn	p = d + j	-	-	-	-	-	-	-	-	
PKR based	PKR Mn	q = e + k	400	1,000	-	-	-	-		1,400	
Total	PKR Mn	r	400	1,000	-	-	-	-	-	1,400	-

K-Electric Limited Form 3.1.1

After completion of	Year 2 - FY 2025
---------------------	------------------

Description	Unit	Reference	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
1 Initial Investment Plan											
i Capex Allowed											
USD based Capex	PKR Mn	a	2,712	1,658	1,885	1,622	1,996	2,067	1,569	13,509	Revised Capex based on form 2.4.1
PKR based Capex	PKR Mn	b	1,185	690	799	688	847	877	665	5,750	after completion of FY 2025
Total capex	PKR Mn	С	3,897	2,347	2,684	2,310	2,843	2,943	2,234	19,259	
2 Proposed changes in Investment Plan											
і Сарех											
USD based Capex	PKR Mn	d	-	-	(450)	400	410	(355)	255	260	
PKR based Capex	PKR Mn	е	-	-	550	450	275	310	450	2,035	Please refer the justifications for these changes in Annexure .
Total capex	PKR Mn	f	-	-	100	850	685	(45)	705	2,295	changes in Afficació
3 Revised Investment Plan											
і Сарех											
USD based Capex	PKR Mn	g = a + d	2,712	1,658	1,435	2,022	2,406	1,712	1,824	13,769	
PKR based Capex	PKR Mn	h = b + e	1,185	690	1,349	1,138	1,122	1,187	1,115	7,785	
Total capex	PKR Mn	i	3,897	2,347	2,784	3,160	3,528	2,898	2,939	21,554	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Biennial Complete Investment review - updated RAB & Return (Support)

Deferred revenue

Opening

Additions

Closing

Amortization

PKR Mn

PKR Mn

PKR Mn

PKR Mn

ν

x = (v + w) x e

Year 2 - FY 2025 After completion of Description Reference FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2028 FY 2029 FY 2030 Updated RAB movement Assumptions 69.0% 69.0% 69.0% 69.0% 69.0% 69.0% FY 2024 & FY 2025 %ages are actualized. Onward years as per revised Capitalization % % a = ci 61.1% Disposal Cost % % 0.8% 0.0% 1.0% 0.9% 0.9% 0.8% b = coDisposal Acc. Dep% % 3.3% 0.0% 1.0% 1.0% 1.0% 1.1% 1.0% c = cs% 2.7% 2.7% 2.7% 2.7% 2.7% 2.7% 2.7% As per initial estimate. Depreciation rate % d Amortization of deferred revenue % % 5.2% 5.2% 5.2% 5.2% 5.2% 5.2% 5.2% As per initial estimate. е PKR/USD 236 241 241 241 241 Exchange rate - average 241 241 FY 2024 & FY 2025 %ages are actualized. Onward years as per revised Pak CPI 173 191 191 191 191 191 191 No. g plan . US CPI 292 321 321 321 No. 321 321 321 PKR Based Working **Capital Work in Progress** Opening PKR Mn 11,667 55,117 82,726 88,047 95,004 73,488 64,439 Revised amounts as per Form 3.2 including additional items requested Addition PKR Mn 51,500 61,296 61,357 61,848 51,734 26,205 in Form 3.1 PKR Mn (33,688)(57,081) (44,463) Capitalization $k = i \times a$ (8,050)(60,752)(65,553) (50,706)Closing PKR Mn 1 11,667 55,117 82,726 87,002 89,142 81,186 48,987 46,127 Operating Fixed Assets (without revaluation) 412,715 Opening PKR Mn m 159,433 166,208 199,895 255,279 306,770 377,281 Capitalization PKR Mn 8,050 33,688 57,081 60,752 65,553 50,706 44,463 PKR Mn (1,275)(1,999)(2,360)(2,652)(3,078)(3,179)Disposal $o = m \times b$ 159,433 PKR Mn 166,208 254,977 313,672 369,671 424,909 453,999 Closing р 199,895 **Accumulated Depreciation** Opening PKR Mn q 34,694 37,927 42,851 48,768 56,328 65,530 76,157 Depreciation for the year PKR Mn r = average (m,p) x d 4,380 4,925 6,119 7,653 9,099 10,791 11,659 Depreciation - Disposal PKR Mn $s = c \times q$ (1,148)(429)(504)(587) (688)(772) PKR Mn 34,694 42,851 48,542 64,840 Closing t 37,927 55,917 75,633 87,043 CWIP + Fixed assets PKR Mn u = l + p - t 136,406 183,398 239,770 293,438 346,897 386,016 398,263 413,083 Average RAB - Excl. Deferred Revenue 159,902 211,584 266,604 320,168 366,457 392,140 405,673

4,570

400

(258)

4,712

4,570

4,712

1,000

(296)

5,416

(281)

5,135

5,135

(266)

4,869

4,869

(252)

4,616

(239)

4,377

(227)

4,150

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
RAB	PKR Mn	z = u - y	131,837	178,686	234,354	288,303	342,028	381,400	393,886	408,933	
Average RAB - PKR	PKR Mn	aa		155,262	206,520	261,329	315,166	361,714	387,643	401,410	
Updated RoRB %											
Weighted Avg. Spreads of Various Foreign Loans											
ECA Financing	%	ab		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per initial estimate.
DFI Financing & Others	%	ac		4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	As per initial estimate.
ECA Financing (Weightage)	%	ad		65.00%	68.00%	68.00%	68.00%	68.00%	68.00%	68.00%	FY24 & FY25 actualized as per Accounts. Future years same as FY25
DFI Financing & Others (Weightage)	%	ae		35.00%	32.00%	32.00%	32.00%	32.00%	32.00%	32.00%	FY24 & FY25 actualized as per Accounts. Future years same as FY25
Weighted Avg. Spread of Foreign Loans	%	af = ab x ad + ac x ae		4.33%	4.34%	4.34%	4.34%	4.34%	4.34%	4.34%	
Cost of Debt - Foreign											
LIBOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY
Spread	%			4.33%	4.34%	4.34%	4.34%	4.34%	4.34%	4.34%	2025 As computed above
Hedging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	•
CoD - Foreign	%	ag		23.03%	23.04%	23.04%	23.04%	23.04%	23.04%	23.04%	•
Hedging cost											
KIBOR	%	ah		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
LIBOR / SOFR	%	ai		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Hedging spread	%	aj		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	
Hedging cost	%	ak = ah - ai +aj		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	•
Cost of Debt - Local											
KIBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Spread	%			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	
CoD - Local	%	al		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Foreign Debt %	%	am		85.0%	80.0%	82.0%	82.0%	82.0%	82.0%	82.0%	Actualized every year and update forecast for future years
Local Debt %	%	an		15.0%	20.0%	18.0%	18.0%	18.0%	18.0%	18.0%	
Weighted average cost of debt	%	ao = ag x am + al x an		22.38%	22.17%	22.26%	22.26%	22.26%	22.26%	22.26%	
Weighted average cost of debt	/0	uo - ag x aiii + ai X dii		22.30%	22.1770	22.2076	22.20%	22.2076	22.20%	22.20%	•

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Cost of Equity - Base	%	ар		15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
Cost of Equity - Indexation	%	aq		55.3%	42.3%	34.4%	29.4%	26.3%	25.2%	24.6%	Form 2.4.3 after Annual Investment Update of FY 2025
Cost of Equity - indexed	%	ar = ap x (1 + aq)		23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%	
Debt %		as		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
equity %		at		30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
teturn on Regulatory Asset Base - Revised		au = ao x as + ar x at		22.65%	21.92%	21.63%	21.40%	21.27%	21.22%	21.19%	
Jpdated RoRB amount											
Average RAB	PKR Mn	av		155,262	206,520	261,329	315,166	361,714	387,643	401,410	
Total Debt %	%	aw		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
oreign Debt %	%	ax		85.0%	80.0%	82.0%	82.0%	82.0%	82.0%	82.0%	
ost of Debt - Foreign	%	ay		23.03%	23.04%	23.04%	23.04%	23.04%	23.04%	23.04%	
oD - Foreign	PKR Mn	az = av x aw x ax x ay		21,271	26,646	34,561	41,681	47,837	51,266	53,086	
oD - Foreign - support	PKR Mn	ba		97	221	259	305	336	353	367	Form 3.2.1(S) from Distribution Network
oD - Foreign - (Including Support)	PKR Mn	bb		21,368	26,867	34,819	41,986	48,173	51,618	53,454	
ocal Debt %	%	bc		15.0%	20.0%	18.0%	18.0%	18.0%	18.0%	18.0%	
Cost of Debt - Local	%	bd		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
oD - Local - Transmission	PKR Mn	be = av x aw x bc x bd		3,049	5,407	6,157	7,426	8,523	9,134	9,458	
oD - Local - support	PKR Mn	bf		42	77	90	106	117	123	128	Form 3.2.1(S) from Distribution Network
DD - Local - (Including Support)	PKR Mn	bg		3,091	5,483	6,248	7,532	8,640	9,256	9,586	
quity %	%	bh		30%	30%	30%	30%	30%	30%	30%	
ost of Equity - Indexed	%	bi		23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%	
oE - Transmission	PKR Mn	bj = av x bh x bi	•	10,848	13,225	15,806	18,348	20,562	21,847	22,499	
oE - support	PKR Mn	bk		65	125	139	157	169	176	183	Form 3.2.1(S) from Distribution Network
oE - Total	PKR Mn	bl	•	10,913	13,350	15,945	18,505	20,731	22,023	22,682	
epreciation on transmission assets	PKR Mn			4,380	4,925	6,119	7,653	9,099	10,791	11,659	
Depreciation on support assets	PKR Mn			789	893	247	305	362	409	468	Form 3.2.1(S) from Distribution Network
otal depreciation	PKR Mn	bm		5,169	5,818	6,366	7,958	9,462	11,200	12,127	
Amortization of deferred revenue	PKR Mn	bn		(258)	(296)	(281)	(266)	(252)	(239)	(227)	

Integrated Investment Plan - FY 2024 to FY 2030

Biennial Complete Investment review - updated RAB & Return (Support)

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Units Served	GWh	bo		19,932	20,790	20,779	21,198	21,564	21,919	22,246	FY24 & FY25 Actual. Remaining as per initial estim
Revised tariff components											
CoD - Foreign	PKR / kWh	bp = bb / bo		1.07	1.29	1.68	1.98	2.23	2.35	2.40	
oD - Local	PKR / kWh	bq = bg / bo		0.16	0.26	0.30	0.36	0.40	0.42	0.43	
οE	PKR / kWh	br = bl / bo		0.55	0.64	0.77	0.87	0.96	1.00	1.02	
epreciation	PKR / kWh	bs = bm / bo		0.26	0.28	0.31	0.38	0.44	0.51	0.55	
mortization of deferred revenue	PKR / kWh	bt = bn / bo		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	
ormulas for percentages											
apitalization % as per financial statements											
pening CWIP	PKR Mn	bu				43	26	25	27	21	
ddition to CWIP	PKR Mn	bv				40	55	62	42	35	
vailable for capitalization	PKR Mn	bw = bu + bv				83	81	87	69	56	
apitalization	PKR Mn	bx				(57)	(56)	(60)	(48)	(39)	
losing	PKR Mn	by = bw + bx			_	26	25	27	21	17	
apitalization %	PKR Mn	bz = bx / bw			-	69%	69%	69%	69%	69%	
visposal Cost % as per financial statements											
pening PPE	PKR Mn	ca				260	314	367	424	468	
ddition	PKR Mn	cb				57	56	60	48	39	
isposal	PKR Mn	сс				(3)	(3)	(3)	(3)	(4)	
losing	PKR Mn	cd = ca + cb + cc			_	314	367	424	468	503	
isposal Cost%	PKR Mn	ce = cc / ca			-	1%	1%	1%	1%	1%	
visposal Acc. Dep. % as per financial statements											
pening PPE	PKR Mn	cf				260	281	304	329	355	
epreciation	PKR Mn	cg				24	26	28	30	30	
isposal	PKR Mn	ch				(3)	(3)	(3)	(3)	(4)	
losing	PKR Mn	ci = cf + cg + ch			_	281	304	329	355	382	
isposal Acc. Dep.%	PKR Mn	cj = ch / cf				1%	1%	1%	1%	1%	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030

Biennial Complete Investment review - updated RAB & Return (Support)

Updated RAB movement Assumptions Capitalization %											
Capitalization %											
Capitalization %											
·				69.0%	51.0%	69.0%	69.0%	69.0%	69.0%	69.0%	
Disposal Cost %				10.0%	11.2%	1.0%	0.9%	0.9%	0.8%	0.8%	FY 2024 & FY 2025 %ages are actualized. Onward years as per
Disposal Acc. Dep%				18.0%	20.4%	1.0%	1.2%	1.5%	2.0%	2.6%	revised plan .
Depreciation rate %				12.9%	12.9%	2.7%	2.7%	2.7%	2.7%	2.7%	As per initial determination.
Exchange rate - average	PKR/USD			211	216	216	216	216	216	216	As per initial determination.
Pak CPI	No.			163	180	180	180	180	180	180	FY 2024 & FY 2025 %ages are actualized. Onward years as per
US CPI	No.			287	316	316	316	316	316	316	revised plan .
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn		-	1,098	4,237	4,565	5,059	4,877	5,644	5,983	
Addition	PKR Mn		-	3,897	2,487	2,784	3,160	3,528	2,898	2,939	Revised amounts as per Form 3.2 including additional items requested in Form 3.1
Capitalization	PKR Mn		_	(758)	(2,159)	(3,150)	(3,491)	(3,365)	(3,894)	(4,128)	requested in Form 3.1
Closing	PKR Mn		1,098	4,237	4,565	4,200	4,728	5,039	4,648	4,794	
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn		-	6,031	6,185	7,651	9,638	11,836	13,302	15,387	
Capitalization	PKR Mn		-	758	2,159	3,150	3,491	3,365	3,894	4,128	
Disposal	PKR Mn		-	(603)	(694)	(77)	(89)	(102)	(109)	(119)	
Closing	PKR Mn		6,031	6,185	7,651	10,724	13,040	15,099	17,088	19,396	
Accumulated Depreciation											
Opening	PKR Mn		-	-	789	1,521	2,550	3,767	4,988	6,458	
Depreciation for the year	PKR Mn		-	789	893	247	305	362	409	468	
Depreciation - Disposal	PKR Mn		-	-	(161)	(15)	(32)	(58)	(100)	(166)	
Closing	PKR Mn		-	789	1,521	1,753	2,823	4,071	5,297	6,760	
CWIP + Fixed assets	PKR Mn		7,129	9,634	10,694	13,170	14,945	16,067	16,439	17,430	
Average RAB - Excl. Deferred Revenue				8,381	10,164	11,932	14,058	15,506	16,253	16,934	
Support RAB Allocation on Generation, Transmission & D	istribution Ne	twork									
CAPEX Allocation Percentages											
Generation	%										
Transmission	%			19%	19%	19%	19%	19%	19%	19%	As per Initial Submission

After completion of Year 2 -	- FY 2025
------------------------------	-----------

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
										_	
Net RAB											
Transmission	PKR Mn		-	1,852	2,056	2,532	2,874	3,090	3,161	3,352	
Updated RoRB %											
Cost of Debt - Foreign											
LIBOR / SOFR				2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Spread				4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	As per initial determination.
Hedging cost				15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
CoD - Foreign				23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	
Hedging cost											
KIBOR				16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
LIBOR / SOFR				2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Hedging spread				2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per determination
Hedging cost				15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
Cost of Debt - Local											
KIBOR				16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Spread				2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per determination
CoD - Local				18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Foreign Debt %				65.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	Actualized every year and update forecast for future years
Local Debt %				35.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	Actualized every year and update forecast for future years
Weighted average cost of debt				21.51%	21.73%	21.73%	21.73%	21.73%	21.73%	21.73%	
	-، [
Cost of Equity - Base Cost of Equity - Indexation	%			15.0% 55.3%	15.0% 42.3%	15.0% 34.4%	15.0% 29.4%	15.0% 26.3%	15.0% 25.2%	15.0% 24.6%	
Cost of Equity - indexed	_			23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%	
Debt %				70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Equity %				30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
Return on Regulatory Asset Base - Revised				22.04%	21.61%	21.26%	21.03%	20.89%	20.85%	20.81%	

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Updated RoRB amount										
Average RAB				926	1,954	2,294	2,703	2,982	3,125	3,256
					,	, -	,	,	-, -	,
Total Debt %				70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Foreign Debt %	%			65.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Cost of Debt - Foreign	%			23.03%	23.03%	23.03%	23.03%	23.03%	23.03%	23.03%
CoD - Foreign - support	PKR Mn			97	221	259	305	336	353	367
Local Debt %	%			35.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Cost of Debt - Local	%			18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%
CoD - Local - support	PKR Mn			42	77	90	106	117	123	128
Equity %	%			30%	30%	30%	30%	30%	30%	30%
Cost of Equity - Indexed	%			23.3%	21.3%	20.2%	19.4%	18.9%	18.8%	18.7%
RoE - support	PKR Mn			65	125	139	157	169	176	183
Depreciation on support assets				789	893	247	305	362	409	468
Total depreciation				789	893	247	305	362	409	468

After completion of	Year 2 - FY 2025
---------------------	------------------

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	
nulas for percentages											
alization % as per financial statements											
ing CWIP						43	26	25	27	21	
on to CWIP						40	55	62	42	35	
ble for capitalization						83	81	87	69	56	
alization						(57)	(56)	(60)	(48)	(39)	
g						26	25	27	21	17	
ization %						69%	69%	69%	69%	69%	9%
sal Cost % as per financial statements											
g PPE						260	314	367	424	468	
						57	56	60	48	39	
						(3)	(3)	(3)	(3)	(4)	
						314	367	424	468	503	
Cost%						1%	1%	1%	1%	1%	L%
Acc. Dep. % as per financial statements											
PPE						260	234	205	173	140	
iation						(24)	(26)	(28)	(30)	(30)	
ll .						(3)	(3)	(3)	(3)	(4)	
g						234	205	173	140	107	
al Acc. Dep.%						1%	1%	2%	2%	3%	3%

O&M Break up as of FY 2022

Annexure L

Category	Total
Salaries, wages and other benefits	1,574
Third party services	907
Internal Energy consumption	513
Store & Spares Consumed	495
Transport cost & Others	585
Allocated Support	1,372
Total	5,446
Transmission Other income / expense	(117)
Support Other income / expense	(3)
Total O&M - Net	5,326

Head wise brief of O&M cost

Salary Wages & Other Benefits

This head comprises of Salaries and other Benefits including retirement benefits, Medical Allowances, Gratuity & Provident Fund Expenses etc.

Based on FY22 actual numbers, this head contributes PKR 1,574 million to total KE O&M.

Third Party Services

Third party services comprise of following costs:

Security Costs: This includes the payments for security guards deputed at all KE Grid Stations along with the teams involved for patrolling of Transmission Overhead Lines.

<u>Fleet Costs:</u> This includes the transport costs including payments for rentals of hired vehicles used in routine maintenance activities such as Line Patrolling and emergency maintenance runs during Rains & Fault Rectification etc. Current KE Fleet of Vehicles includes Vans, Cranes, Double Cabins, Pickups etc.

The above-mentioned transmission lines are spread across remote areas of Baluchistan and suburb areas of Sindh, so extensive patrolling is inevitable by technical staff for the maintenance of the transmission system as well as by the security staff to avoid sabotage activities. So, vehicles have to run for maintenance and patrolling, hence KE requires funds for running of vehicles as well as for their maintenance.

<u>Other Services:</u> This includes payroll expenses for contractual staff employed in the transmission network and any other services required for the maintenance of Transmission Network such as SCADA systems, licenses renewals, and SLAs for maintenance of systems through external vendors. Additionally, this includes the payments for housekeeping staff deputed at all of the KE Grid Stations

All the above services are arranged through an independent contractor on contractual terms and payment is directly made to the relevant vendor by KE as per agreement.

Based on FY22 actual numbers, this head contributes PKR 907 million to total KE's O&M.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

Internal energy Consumption

This comprises of the in-house electricity consumption for the equipment installed at KE Grid Stations. Major contributors including equipment installed in 11kV Yards, PLC (Power Line Carrier) Room and Control & Protection (C&P) Room for temperature control of sensitive equipment & Battery Chargers for the DC Equipment installed.

Based on FY22 actual numbers, this head contributes PKR 513 million to total KE O&M.

Stores & Spares

Stores & spares include low value inventory items/ consumables along with materials requiring regular maintenance. This is necessary keeping in view the continuous growth in demand load of the Company to ensure and attain optimal level of its Transmission network reliability and sustainability.

Based on FY22 actual numbers, this head contributes PKR 495 million to total KE O&M.

Other Expenses

It includes various other miscellaneous expenses such as insurance of existing KE Grid Stations & Transmission line infrastructure. It also comprises of rents and government taxes and fees paid to consultants for feasibility studies and load flow studies.

Moreover, KE has a large number of employees to which regular trainings are provided. Additionally, KE has to incur building maintenance costs for minor civil works related to building maintenance and repair of furniture at all KE Grid Stations.

Based on FY22 actual numbers, this head contributes PKR 584 million to total KE O&M.

Support Department Cost Allocation

Support refers to Transmission's proportion of expenses incurred by various shared services such as:

- > Procurement Department.
- Legal Department.
- > IT Department.
- > Finance department
- > HR department
- > CHSEQ department
- > Administrative and other teams.

Based on FY22 actual numbers, this head contributes **PKR 1,372 million** to total KE O&M. These numbers are further allocated in the proportion of transmission O&M of the respective voltage level.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

Annexure M

O&M Break up as of FY 2022

Expense Head	Distribution (PKR millions)	Supply (PKR millions)
Salary, Wages & Other Benefits	7,889	1,418
Third Party Services	3,462	1,343
Internal Energy Consumption	170	20
Stores & Spares	417	-
Transport Cost & Others	2,105	291
Allocated Support	3,729	817
Total	17,772	3,890
Distribution Other income / expense	85	19
Support Other income / expense	(9)	(2)
Total O&M - Net	17,849	3,907

Head wise brief of O&M cost

Salary Wages & Other Benefits

This head comprises of Salaries and other Benefits including retirement benefits, Medical Allowances, Gratuity & Provident Fund Expenses etc.

The Salary Wages and Other benefits of distribution segment covers around **PKR 7,889 million**, while supply segment covers **PKR 1,418 million**. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply. The Salaries and Wages and other benefits head is bifurcated on headcount associated with distribution & supply respectively. Salaries, wages and other benefits break up is summarized in the table below;

Expense Head	Distribution (PKR Mn)	Supply (PKR Mn)
Salaries and Wages	5,641	1,042
Other Benefits	2,248	376
Total	7,889	1,418

Third Party Services

This head comprises of expenses such as rental for hired vehicles, OSP manpower and services such as bills printing and distribution, janitorial & security services etc.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

Expense Head	Distribution (PKR Mn)	Supply (PKR Mn)
Rental for Hired Vehicles	862	49
OSP Manpower	1,629	123
Bill Printing & Distribution	-	235
Janitorial & Security	341	22
Disconnection / Recovery Services	116	818
Others	514	96
Total	3,462	1,343

The basis of the bifurcation of expenses including bill printing & distribution, janitorial & security and recovery services into distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply. Details of remaining expense headers is explained below separately.

Rental for hired vehicles Expenses

For the Base Year MYT working, the distribution segment rental for hired vehicles expenses contributes around **PKR 862 million** for the distribution segment whereas **PKR 49 million** for the supply segment. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply.

OSP Manpower

This head pertains to OSP Manpower cost pertaining to supply and distribution.

For the Base Year MYT working, the distribution segment of OSP Manpower contributes **PKR 1,629 million** to KE O&M whereas supply segment contributes **PKR 123 million**. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply. The OSP Manpower head is bifurcated on headcount associated with distribution & supply respectively.

Others - Third Party Services

This head mainly comprises of expense related to daily wages hired labor cost, customer services, IBC on wheels, customer facilitation centers and collection booths. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply.

Internal Energy Consumption

This head pertains to expense concerning energy utilization within company. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply.

Stores and Spares

This head pertains to stores and spares consumed mainly contributed by personal protective equipment (PPEs), tools and uniforms for field staff. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply.

K-Electric Limited Integrated Investment Plan (FY2024-2030)

Transport Cost & Others

This head comprises of transport (fuel) and other expenses including auditors remuneration, professional charges, legal fees, bank collection charges, rent / rates and other similar items etc.

For the Base Year MYT working, distribution segment of transport & other expenses contributes **PKR 2,061 million** whereas supply segment contributes to **PKR 291 million** respectively. The basis of the bifurcation of distribution and supply is centered at cost allocation of business segments directly associated with either distribution or supply.

Expense Head	Distribution (PKR Mn)	Supply (PKR Mn)
Transport Cost (fuel)	773	100
Auditors Remuneration	200	18
Bank Collection Charges	215	20
Legal Fees	23	9
Nepra License Fees	49	4
Professional Charges	16	3
Rent, Rates & Taxes	26	2
Repairs & Maintenance	275	7
Public Relations & Corporate Communications	35	62
Provision against slow moving inventory	10	0.9
Others (office supplies, trainings, data connectivity, printing & postage etc)	483	65
Total	2,105	291

Support Allocation

Support refers to distribution's proportion of expenses incurred by various shared services such as:

- ➤ Procurement Department.
- ➤ Legal Department.
- ➤ IT Department.
- ➤ Finance department
- ➤ HR department
- ➤ CHSEQ department
- > Administrative and other teams.

Based on FY22 actual numbers, this head contributes **PKR 3,722 million** to Distribution O&M expenses.

K-Electric Limited
Integrated Investment Plan - FY 2024 to FY 2030
Summary of Indexation Forms (based on sample data)

Λ	n	16	v .	··	^	N	
Δ	nı	112	ΧI	ır	ρ	IV	

Form No.	Particulars Particulars
2.4.1	Annual Investment update - updated Capex
2.4.1.1	Annual Investment update - updated Capex - Support
2.4.2	Annual Investment update - updated RAB and Return
2.4.2.1	Annual Investment update - updated RAB and Return - Support
2.4.3	Revised RoE Indexation
3.1	Biennial Complete Investment review - updated CAPEX
3.1.1	Biennial Complete Investment review - updated CAPEX - Support
3.2	Biennial Complete Investment review - updated RAB & Return
3.2.1	Biennial Complete Investment review - updated RAB & Return - Support

Note: Complete Tariff table will be updated after Annual / Biennial adjustments

After completion of	Year 1 - FY 2024
After completion of	Teal 1 - 11 2024

Capex allowed - Reference
Canay allowed Pateronea
Capex allowed - neterelice
Macro economic factors - Reference
PKR/US\$ Exchange Rate- Average PKR / USD a 206.0 206.0 206.0 206.0 206.0 206.0
Pak CPI No. b 158.5 158.5 158.5 158.5 158.5 158.5
US CPI No. c 282.0 282.0 282.0 282.0 282.0 282.0 282.0 282.0 282.0
Capex Allowed
Total PKR Mn d 24,881 30,062 29,541 29,082 24,161 24,158 22,765 184,6
Capex Proportion
USD based Capex
PKR based Capex
Total % g 100% 100% 100% 100% 100% 100% 100%
Capex allowed
USD based Capex PKR Mn h = d x e 17,417 21,043 20,679 20,357 16,913 16,911 15,935 129,2
PKR based Capex PKR Mn i = d x f 7,464 9,019 8,862 8,724 7,248 7,247 6,829 55,3
Total PKR Mn j 24,881 30,062 29,541 29,082 24,161 24,158 22,765 184,6
Addition to Deferred revenue
USD based PKR Mn k -
PKR based PKR Mn I 400 4
Total PKR Mn 400 4
Capex allowed - Indexed on actual Macro economic factors till FY 2024
Macro economic factors - actual [Average of four factors used in quarterly indexation in FY 2024]
PKR/US\$ Exchange Rate- Average PKR / USD m 236.0
Pak CPI No. n 173.5
US CPI No. 0 292.0

Comments

K-Electric Limited

After completion of	Year 1 - FY 2024
---------------------	------------------

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
i Capex - indexed										
USD based Capex	PKR Mn	p = h x (m/a) x (o/c)	20,661							
PKR based Capex	PKR Mn	$q = i \times (n/b)$	8,171							
Total	PKR Mn	q = 1 x (11/5)	28,831							
. Oct.			20,031							
i Addition to deferred revenue actual										
USD based	PKR Mn	r	-							
PKR based	PKR Mn	S	400							
Total	PKR Mn		400							
i Capex - Additional based on specific approval										
USD based Capex	PKR Mn	t	250							
PKR based Capex	PKR Mn	u								
Total	PKR Mn		250							
i Deferred revenue - Additional based on specific appr	oval									
USD based	PKR Mn	V	-							
PKR based	PKR Mn	w	-							
Total	PKR Mn		-							
/ Capex - Indexed + specific approved										
USD based Capex	PKR Mn	x = p + t	20,911							
PKR based Capex	PKR Mn	y = q + u	8,171							
Total	PKR Mn	z	29,081							
/ Deferred revenue - Indexed + specific approved										
USD based Capex	PKR Mn	aa = r + v	-							
PKR based Capex	PKR Mn	ab = s + w	400							
Total	PKR Mn		400							

After completion of	Year 1 - FY 2024
---------------------	------------------

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
										· · ·
apex - Actually incurred										
SD based Capex	PKR Mn	ac	22,500							
KR based Capex	PKR Mn	ad	3,000							
otal	PKR Mn		25,500							
eferred revenue - Actually received										
SD based	PKR Mn	ae								
CR based	PKR Mn	af	400							
otal	PKR Mn		400							
apex - Under / (Over) spent										
SD based Capex	PKR Mn	ag = x - ac	(1,589)							
KR based Capex	PKR Mn	ah = y - ad	5,171							
otal	PKR Mn	ai	3,581							
eferred revenue - Under / (Over)										
SD based	PKR Mn	aj = aa - ae	-							
(R based	PKR Mn	ak = ab - af	-							
otal	PKR Mn		-							
evised Allowed capex for FY 2024										
SD based Capex	PKR Mn	al = see comment	22,500							
(R based Capex	PKR Mn	am = see comment	3,000							
otal	PKR Mn		25,500							
lowed deferred revenue for FY 2024										
SD based	PKR Mn	an = ae + aj	-							
KR based	PKR Mn	ao = af + ak	400							
otal	PKR Mn	•	400							

After completion of Year 1 - FY 2024

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Capex - Under spent capex carried forward to	o next years wrt original	indexed NEPRA allow	ed CAPEX (incl	uding specific	approved)						
JSD based Capex	PKR Mn	ар		3,581	-	-	-	-	-	3,581	Reasons for delay to be enclosed
PKR based Capex	PKR Mn	aq		-	-	-	-	-	-	-	Reasons for delay to be enclosed
otal	PKR Mn	ar	·	3,581	-	-	-	-	-	3,581	
Deferred revenue - Under spent carried forw	ard to next years										
JSD based	PKR Mn			-	-	-	-	-	-	-	
PKR based	PKR Mn				-	-	-	-	-		
otal	PKR Mn	as		-	-	-	-	-	-	-	
Revised capex to be allowed											
Macro economic factors											
PKR/US\$ Exchange Rate- Average	PKR / USD	at	236.0	236.0	236.0	236.0	236.0	236.0	236.0		
Pak CPI	No.	au	173.5	173.5	173.5	173.5	173.5	173.5	173.5		
JS CPI	No.	av	292.0	292.0	292.0	292.0	292.0	292.0	292.0		
Revised capex for FY 2025 onwards indexed of	on latest macro econom	c factors									
JSD based Capex	PKR Mn a	w = h x (at/a) x (av/c)		24,963	24,530	24,149	20,063	20,060	18,903	132,668	
PKR based Capex	PKR Mn	ax = i x (au/b)		9,872	9,701	9,550	7,934	7,933	7,476	52,467	
-otal	PKR Mn			34,835	34,231	33,699	27,997	27,994	26,379	185,135	
Revised deferred revenue additions for FY 20	025 onwards (will be clai	med on actual basis)									
JSD based	PKR Mn	ay		-	-	-	-	-	-	-	
PKR based	PKR Mn	az		-	-	-	-	-	-	-	
otal	PKR Mn			-	-	-	-	-	-	-	

K-Electric Limited Form 2.4.1

After completion of	Year 1 - FY 2024
---------------------	------------------

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
i Revised capex											
USD based Capex	PKR Mn	ba = aw + ap	22,500	28,544	24,530	24,149	20,063	20,060	18,903	158,750	FY24 is as per above workings. Rest is as per legend
PKR based Capex	PKR Mn	bb = ax + aq	3,000	9,872	9,701	9,550	7,934	7,933	7,476	55,467	given
Total	PKR Mn		25,500	38,416	34,231	33,699	27,997	27,994	26,379	214,217	-
i Revised deferred revenue											
USD based	PKR Mn	bc = an	-	-	-	-	-	-	-	-	
PKR based	PKR Mn	bd = ao	400	-	-	-	-	-	-	400	_
Total	PKR Mn		400	-	-	-	-	-	-	400	

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total
				•	•					
Capex allowed - Reference										
Macro economic factors - Reference										
PKR/US\$ Exchange Rate- Average	PKR / USD	а	206.0	206.0	206.0	206.0	206.0	206.0	206.0	
Pak CPI	No.	b	158.5	158.5	158.5	158.5	158.5	158.5	158.5	
US CPI	No.	С	282.0	282.0	282.0	282.0	282.0	282.0	282.0	
Capex Allowed										
Total	%	d	3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514
Capex Proportion (Allowed)										
USD based Capex	%	e	70%	70%	70%	70%	70%	70%	70%	70%
PKR based Capex	%	f	30%	30%	30%	30%	30%	30%	30%	30%
Total	%		100%	100%	100%	100%	100%	100%	100%	100%
Capex allowed										
USD based Capex	PKR Mn	g = d x e	2,518	1,675	1,808	1,556	1,915	1,983	1,505	12,960
PKR based Capex	PKR Mn	h = d x f	1,079	718	775	667	821	850	645	5,554
Total	PKR Mn		3,596	2,394	2,583	2,223	2,736	2,833	2,150	18,514
Capex allowed - Indexed on actual Macro eco	onomic factors till FY 2024									
Macro economic factors - actual [Average of	four factors used in quart	erly indexation in FY	2024]							
PKR/US\$ Exchange Rate- Average	PKR / USD	i	211.0							
Pak CPI	No.	j	163.5							
US CPI	No.	k	287.0							
Capex - indexed										
USD based Capex	PKR Mn	$I = g \times (i/a) \times (k/c)$	2,624							
PKR based Capex	PKR Mn	$m = h \times (j/b)$	1,113							
Total	PKR Mn		3,737							

Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex - Support

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Capex - Additional based on specific approval											
USD based Capex	PKR Mn	n	250								
PKR based Capex	PKR Mn	0	-								
Total	PKR Mn		250								
Capex - Indexed + specific approved											
USD based Capex	PKR Mn	p = l + n	2,874								
PKR based Capex	PKR Mn	q = m + o	1,113								
Total	PKR Mn	r	3,987								
Capex - Actually incurred											
USD based Capex	PKR Mn	S	2,796								
PKR based Capex	PKR Mn	t	1,218								
Total	PKR Mn	u	4,014								
Capex - Under / (Over) spent											
USD based Capex	PKR Mn	v = p - s	79								
PKR based Capex	PKR Mn	w = q - t	(105)								
Total	PKR Mn	x	(27)								
Revised Allowed capex for FY 2024											
USD based Capex	PKR Mn	y = see comment	2,777								Over/ Under expenditure is adjusted against actual
PKR based Capex	PKR Mn	z = see comment	1,211								CAPEX incurred in the proportion of NEPRA Allowed Indexed CAPEX for the year on combined basis.
Total	PKR Mn		3,987								mached on Experimental surveys
Capex - Under spent capex carried forward to nex	ct years wrt origina	l indexed NEPRA allow	ed CAPEX (includ	ding specific	approved)						
USD based Capex	PKR Mn	aa		-	-	-	-	-	-	-	
PKR based Capex	PKR Mn	ab		-	-	-	-	-	-	-	
Total	PKR Mn		_	-	-	-	-	-	-	-	-
Revised capex to be allowed											
Macro economic factors											
PKR/US\$ Exchange Rate- Average	PKR / USD	ac	211.0	211.0	211.0	211.0	211.0	211.0	211.0		
Pak CPI	No.	ad	163.5	163.5	163.5	163.5	163.5	163.5	163.5		
US CPI	No.	ae	287.0	287.0	287.0	287.0	287.0	287.0	287.0		

K-Electric Limited Form 2.4.1.1

Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated Capex - Support

Description	Unit	Legend	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
i Revised capex for FY 2025 onwards indexed on late	st macro econo	mic factors									
The vised capex for 11 2025 offwards indexed off fate.	st macro ccono										
USD based Capex	PKR Mn	af = g x (ac/a) x (ae/c)		1,747	1,885	1,622	1,996	2,067	1,569	10,886	
PKR based Capex	PKR Mn	ag = h x (ad/b)		741	799	688	847	877	665	4,617	
Total	PKR Mn			2,487	2,684	2,310	2,843	2,943	2,234	15,502	-
i Revised capex											
USD based Capex	PKR Mn	ah = aa +af	2,777	1,747	1,885	1,622	1,996	2,067	1,569	13,662	FY24 is as per above workings. Rest is as per legend
PKR based Capex	PKR Mn	ai = ab + ag	1,211	741	799	688	847	877	665	5,827	given
Total	PKR Mn	•	3,987	2,487	2,684	2,310	2,843	2,943	2,234	19,490	-

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

Arter completion of		100.1.1.202.	_								
Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RAB movement											
Spatica III III III III III III III III III I											
Assumptions											
Capitalization %	%	a = cx		69.0%	35.9%	29.4%	33.5%	21.8%	40.0%	42.0%	EV 2024 0/
Disposal Cost %	%	b = dc		2.0%	1.8%	1.8%	1.8%	1.7%	1.7%	1.7%	FY 2024 %ages are actualized based on financial statements. Onward years as per initial determination.
Disposal Acc. Dep%	%	c = dh		2.4%	6.3%	6.6%	6.6%	6.5%	6.2%	5.9%	determination.
Depreciation rate %	%	e		3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	As per initial estimate.
Amortization of deferred revenue %	%	f		6.32%	6.32%	6.32%	6.32%	6.32%	6.32%	6.32%	As per initial estimate.
Exchange rate - average	PKR/USD	g		236	236	236	236	236	236	236	Updated based on FY 2024
Pak CPI	No.	h		173	173	173	173	173	173	173	Updated based on FY 2024
US CPI	No.	i		292	292	292	292	292	292	292	Updated based on FY 2024
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn	i		31,278	35,196	60,972	77,306	85,124	94,606	84,715	
Addition	PKR Mn	, k		25,500	38,416	34,231	33,699	27,997	27,994	26,379	From 2.4.1
Capitalization	PKR Mn	l=axi		(21,582)	(12,641)	(17,897)	(25,881)	(18,515)	(37,885)	(35,560)	From %age method for Future. FY24 as per financials.
Closing	PKR Mn	m=I+k+I	31,278	35,196	60,972	77,306	85,124	94,606	84,715	75,534	Trom rouge method for rotation right as per minimals.
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn	n		145,388	164,062	173,791	188,572	211,097	225,919	259,961	
Capitalization	PKR Mn	0 = -		21,582	12,641	17,897	25,881	18,515	37,885	35,560	
Disposal	PKR Mn	p = n x b		(2,908)	(2,912)	(3,116)	(3,357)	(3,694)	(3,843)	(4,349)	From %age method for Future. FY24 as per financials.
Closing	PKR Mn	q = n + o + p	145,388	164,062	173,791	188,572	211,097	225,919	259,961	291,172	
Accumulated Depreciation											
Opening	PKR Mn	r		38,766	43,992	47,921	51,988	56,500	61,521	67,375	
Depreciation for the year	PKR Mn	s = average (q + n) x e		6,157	6,722	7,209	7,952	8,695	9,667	10,965	
Depreciation - Disposal	PKR Mn	t = r x c		(930)	(2,793)	(3,142)	(3,440)	(3,674)	(3,813)	(3,972)	From %age method for Future. FY24 as per financials
Closing	PKR Mn	u = r + s + t	38,766	43,992	47,921	51,988	56,500	61,521	67,375	74,368	
CWIP + Fixed assets	PKR Mn	v = m + q - u	137,901	155,267	186,842	213,891	239,721	259,004	277,301	292,339	
Average RAB - Excl. Deferred Revenue		w		146,584	171,054	200,366	226,806	249,363	268,152	284,820	
Deferred revenue											
Opening	PKR Mn	x		44,036	41,630	39,000	36,537	34,230	32,068	30,043	
Additions	PKR Mn	у		400	-	-	-	-	-	-	Based on actual additions for FY24
Amortization	PKR Mn	z = (x + y) x f		(2,806)	(2,629)	(2,463)	(2,308)	(2,162)	(2,025)	(1,897)	From %age method for Future. FY24 as per financials
Closing	PKR Mn	ab = x + y + z	44,036	41,630	39,000	36,537	34,230	32,068	30,043	28,145	-
RAB	PKR Mn	ac = v - ab	93,865	113,637	147,842	177,353	205,492	226,936	247,259	264,193	
Average RAB - PKR	PKR Mn	ad		103,751	130,739	162,598	191,423	216,214	237,097	255,726	
Areinde IVD - LVV	FKK WIII	au		103,731	130,733	102,330	191,423	210,214	231,031	233,720	

Annual Investment update - updated RAB and Return

|--|

FY24 actualized as per Accounts. Future years same as FY26 FY2024 - average of 4 quarters; remaining sam	Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
### A PASS SPECIAL ON VARIOUS Foreign Learns A Financing (S												
Financing % ae	dated RoRB %											
Planaring (Rothers % af 4.50%	eighted Avg. Spreads of Various Foreign Loans											
A financing (Weightage) % ag 1,000 0,000	CA Financing	%	ae		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	As per initial estimate.
Fire Analogies Combers (Weightage)	FI Financing & Others	%	af		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per initial estimate.
A	CA Financing (Weightage)	%	ag		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	FY24 actualized as per Accounts. Future years same as FY2
Section Sect	FI Financing & Others (Weightage)	%	ah		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	FY24 actualized as per Accounts. Future years same as FY2
800 / SOFR	eighted Avg. Spread of Foreign Loans	%	ai = (ae x ag) + (af x ah)		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	
80R SOR	ost of Debt - Foreign											
As computed above weeking cost	•	%	ai		2 79%	2 79%	2 79%	2 79%	2 79%	2 79%	2 79%	EV 2024 - average of 4 quarters: remaining same as EV 202
As per computation below As per as 15.91%	·		,									
Seeding cost Seed	•											•
Seeding cost Seed	Hedging cost	%	ap = ao		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	As per computation below
A	:oD - Foreign	%	aq = aj + ak + ap		23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	
IBON	ledging cost											
BIRDR 50		9/	al		16 20%	16 20%	16 20%	16 20%	16 20%	16 20%	16 20%	EV 2024 - average of 4 guarters: remaining same as EV 202
ledging spread % an 2.50% 2.												
Seeding cost Was as all -am + an 15.91%												
Cost of Debt - Local												As per initial estimate.
CREATED 16.20%												
Spread % as 2.50% 2.	Cost of Debt - Local											
Second S	KIBOR		ar = al									FY 2024 - average of 4 quarters; remaining same as FY 202
Foreign Debt % au 85.0% 80.0%	Spread		as		2.50%		2.50%		2.50%			As per initial estimate.
Actualized every year and update forecast for future year and up	oD - Local	%	at = ar + as		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Actualized every year and update forecast for future year and upda	Foreign Debt %	%	au		85.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	Actualized every year and update forecast for future year
Weighted average cost of debt % aw = (aq x au) + (at x av) 22.53% 22.30%		%	av		15.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
ost of Equity - Base % ax 16.7% 16.7	ocal Debt %	76	av		15.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	Actualized every year and update forecast for future year
As per form 2.4.3 ost of Equity - Indexation % az = ax x (1 + ay) 26.5% 24.2% 22.9% 22.0% 21.5% 21.1% 20.8% 24.7% 20.8% 24.7% 20.8% 24.7% 26.5% 24.7% 20.8% 24.2% 22.9% 22.0% 21.5% 21.1% 20.8%	Veighted average cost of debt	%	aw = (aq x au) + (at x av)		22.53%	22.30%	22.30%	22.30%	22.30%	22.30%	22.30%	
As per form 2.4.3 ost of Equity - Indexation % az = ax x (1 + ay) 26.5% 24.2% 22.9% 22.0% 21.5% 21.1% 20.8% 24.7% 20.8% 24.7% 20.8% 24.7% 26.5% 24.7% 20.8% 24.2% 22.9% 22.0% 21.5% 21.1% 20.8%												
cost of Equity - indexed % az = ax x (1 + ay) 26.5% 24.2% 22.9% 22.0% 21.5% 21.1% 20.8% Debt % % ba 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 30.	Cost of Equity - Base		ax			16.7%	16.7%	16.7%		16.7%	16.7%	
Debt % ba 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 90.00%												As per form 2.4.3
equity % bb 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00% 30.00%	Cost of Equity - indexed	%	az = ax x (1 + ay)		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
	Pebt %	%	ba		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Detuga an Pagulatany Accel Base Davised hea/ayyy hal / //hy carl 12 709/ 22 009/ 22 009/ 22 009/ 23 00	quity	%	bb		30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
	Datum on Branch and Branch Branch Branch		h = - (h-) - /hh }		22 700/	22.07*	22.400/	22 222	22.0521	24.0401	24 040/	

Annual Investment update - updated RAB and Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RoRB amount											
Average RAB - PKR	PKR Mn	bd = ad		103,751	130,739	162,598	191,423	216,214	237,097	255,726	
Total Debt %	%	be = ba		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Foreign Debt %	%	bf = au		85.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	
Cost of Debt - Foreign	% PKD 84-	bg = aq		23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	
CoD - Foreign CoD - Foreign - support	PKR Mn PKR Mn	bh = bd x be x bf x bg bi		14,322 421	16,986 484	21,125 640	24,870 837	28,090 1,018	30,804 1,209	33,224 1,455	Form 2.4.2.1(S)
COD - Foreign - Support COD - Foreign - (Including Support)	PKR Mn	bj = bh + bi	_	14,742	17,470	21,765	25,707	29,109	32,012	34,679	ruiii 2.4.2.1(3)
Local Debt %	%	bk = av		15.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
Cost of Debt - Local	%	bl = at		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
CoD - Local - Distribution	PKR Mn	$bm = bd \times be \times bk \times bl$	_	2,037	3,423	4,257	5,011	5,660	6,207	6,695	
CoD - Local - support	PKR Mn	bn	_	226	260	344	450	547	649	782	Form 2.4.2.1(S)
CoD - Local - (Including Support)	PKR Mn	bo = bm + bn		2,263	3,683	4,601	5,461	6,208	6,857	7,477	
Equity %	%	bp = bb		30%	30%	30%	30%	30%	30%	30%	
Cost of Equity - Indexed	%	bq = az	_	26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
RoE - Distribution	PKR Mn	$br = bq \times bd \times bp$		8,233	9,487	11,175	12,652	13,955	15,003	15,944	
RoE - support	PKR Mn	bs	_	343	361	452	568	674	785	931	Form 2.4.2.1(S)
RoE - Total	PKR Mn	bt = br + bs		8,575	9,847	11,627	13,220	14,629	15,788	16,875	
Depreciation on Distribution assets	PKR Mn	bu = s		6,157	6,722	7,209	7,952	8,695	9,667	10,965	
Depreciation on support assets	PKR Mn	bv		750	896	1,184	1,548	1,883	2,235	2,691	Form 2.4.2.1(S)
Total depreciation	PKR Mn	bw = bu + bv	_	6,907	7,618	8,394	9,500	10,578	11,902	13,656	
Amortization of deferred revenue	PKR Mn	bx = z		(2,806)	(2,629)	(2,463)	(2,308)	(2,162)	(2,025)	(1,897)	
Units billed	No.	by		13,845	17,623	18,137	18,600	18,989	19,359	19,690	FY24 Actual. Remaining as per initial estimate.
Revised tariff components											
CoD - Foreign	PKR / kWh	bz = bj / by		1.06	0.96	1.16	1.34	1.48	1.59	1.69	
CoD - Local	PKR / kWh	ca = bo / by		0.16	0.21	0.25	0.29	0.33	0.35	0.38	
RoE	PKR / kWh	cb = bt / by		0.62	0.56	0.64	0.71	0.77	0.82	0.86	
	PKR / kWh										
Depreciation		cc = bw / by		0.50	0.43	0.46	0.51	0.56	0.61	0.69	
Amortization of deferred revenue	PKR / kWh	cd = bx / by		(0.20)	(0.15)	(0.14)	(0.12)	(0.11)	(0.10)	(0.10)	

Integrated Investment Plan - FY 2024 to FY 2030 Annual Investment update - updated RAB and Return

K-Electric Limited

Arter completion of		10011 112021										
Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Commo	ents
					•							
ver / (Under) recovery in FY 2024												
Billed - actual	No.	ce		13,845								
				-5,2 .2								
Amount recovered on above tariff components												
CoD - Foreign	PKR Mn	cf = bz x ce		14,742								
CoD - Local	PKR Mn	cg = ca x ce		2,263								
RoE	PKR Mn	ch = cb x ce		8,575								
Depreciation	PKR Mn	ci = cc x ce		6,907								
Amortization of deferred revenue	PKR Mn	cj = cd x ce		(2,806)							
Fotal .	PKR Mn	ck = cf + cg + ch + ci + cj		29,682								
				-,								
Amount already recovered												
CoD - Foreign	PKR Mn	cl		8,396							As per fo	m 2.2
CoD - Local	PKR Mn	cm		4,378							As per fo	rm 2.2
RoE	PKR Mn	cn		6,282							As per fo	rm 2.2
Depreciation	PKR Mn	co		6,348							As per for	
Amortization of deferred revenue	PKR Mn	ср		(2,296							As per for	m 2.2
Total	PKR Mn	cq = cl + cm + cn + co + cp		23,107								
(Over) / Under recover to be allowed in next year		cr = ck - cq		6,574								
Formulas for percentages												
Capitalization % as per financial statements												
Opening CWIP	PKR Mn	CS		100								
Addition to CWIP	PKR Mn	ct		52								
Available for capitalization	PKR Mn	cu = cs + ct		152								
Capitalization	PKR Mn	cv		(105)							
Closing	PKR Mn	cw = cs + ct + cv		47	_							
Capitalization %	%	cx = cv / cu		69.00%	6							
Disposal Cost % as per financial statements												
Opening PPE	PKR Mn	су		100								
Addition	PKR Mn	cz = cv		105								
Disposal	PKR Mn	da		(2								
Closing	PKR Mn	db = cy + cz + da		203								
Disposal Cost %	%	dc = da / cy		2.00%	<u>6</u>							
Disposal Acc. Depreciation % as per financial statements												
Opening Acc. Dep	PKR Mn	dd		50								
Depreciation	PKR Mn	de		10								
Disposal	PKR Mn	df		(1								
				EO								
Closing Acc. Dep. Disposal %	PKR Mn %	dg = dd + de + df dh = df / dd		2.40%								

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return - Support

After completion of

Year 1 - FY 2024

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RAB movement											
opuateu KAB movement											
Assumptions											
Capitalization %	%	a		69.0%	52.8%	54.2%	61.7%	60.2%	75.3%	112.7%	
Disposal Cost %	%	b		10.0%	13.0%	1.7%	3.1%	4.5%	3.5%	7.1%	FY 2024 %ages are actualized based on financial statements. Onward years as per t
Disposal Acc. Dep%	%	С		18.0%	34.3%	5.5%	9.0%	11.4%	8.1%	15.2%	determination.
Depreciation rate %	%	d		14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	As per initial estimate.
mortization of deferred revenue %	%	e		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	As per initial estimate.
xchange rate - average	PKR/USD	f		236	236	236	236	236	236	236	Updated based on FY 2024
ak CPI	No.	g		173	173	173	173	173	173	173	Updated based on FY 2024
US CPI	No.	h		292	292	292	292	292	292	292	Updated based on FY 2024
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn	i		1,274	4,382	4,556	4,771	4,137	4,491	4,055	
Addition	PKR Mn	i		3,987	2,487	2,684	2,310	2,843	2,943	2,234	From 2.4.1 (S)
Capitalization	PKR Mn	k=axi		(879)	(2,314)	(2,470)	(2,944)	(2,489)	(3,380)	(4,569)	From %age method for Future. FY24 matched with Accounts
Closing	PKR Mn	l l	1,274	4,382	4,556	4,771	4,137	4,491	4,055	1,720	
Operating Fixed Assets (without revaluation) Opening	PKR Mn	m		4,966	5,349	6,966	9,316	11,966	13,920	16,810	
Capitalization	PKR Mn	n		4,900 879	2,314	2,470	2,944	2,489	3,380	4,569	
Disposal	PKR Mn	o = m x b		(497)	(697)	(120)	(293)	(535)	(490)	(1,201)	From %age method for Future. FY24 matched with Accounts
Closing	PKR Mn	p	4,966	5,349	6,966	9,316	11,966	13,920	16,810	20,178	From %age method for ruture. F124 matched with Accounts
•		•	,	.,.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,-	,	.,.	.,.	,	
Accumulated Depreciation											
Opening	PKR Mn	q		1,814	2,238	2,366	3,420	4,660	6,010	7,759	
Depreciation for the year	PKR Mn	r = (m,p) /2 x d		750	896	1,184	1,548	1,883	2,235	2,691	
Depreciation - Disposal	PKR Mn	s = q x c		(326)	(767)	(131)	(308)	(533)	(487)	(1,182)	From %age method for Future. FY24 matched with Accounts
Closing	PKR Mn	t	1,814	2,238	2,366	3,420	4,660	6,010	7,759	9,268	
CWIP + Fixed assets (RAB)	PKR Mn	u = I + p - t	4,427	7,494	9,156	10,667	11,444	12,401	13,106	12,629	
Average RAB				5,960	8,325	9,911	11,055	11,922	12,753	12,868	
Support RAB Allocation on Distribution											
	0/	v		81%	81%	81%	81%	81%	81%	81%	As per Initial Estimate
CAPEX Allocation Percentages	%	V		01/0							715 per militar Estimate
CAPEX Allocation Percentages Cost of Fixed Assets (Gross Fixed Assets)	PKR Mn	v w = p x v		4,318	5,623	7,520	9,660	11,237	13,570	16,288	7.5 per minut estimate

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return - Support

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
pdated RoRB %											
Juacea ROND 70											
ost of Debt - Foreign											
BOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
pread	%			4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per Initial Estimate
ledging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	As per computation below
oD - Foreign	%	У		23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	
ledging cost											
IBOR	%	Z		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
BOR / SOFR	%	aa		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 - average of 4 quarters; remaining same as FY 2024
edging spread	%	ab		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per Initial Estimate
edging cost	%	ac = z - aa + ab		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
ost of Debt - Local											
IBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 - average of 4 quarters; remaining same as FY 2024
pread	% %	ad		2.50% 18.70%	As per Initial Estimate						
oD - Local	%	ad		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
oreign Debt %	%	ae		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	Actualized every year and update forecast for future years
ocal Debt %	%	af		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	Actualized every year and update forecast for future years
eighted average cost of debt	%	ag = y x ae + ad x af		21.40%	21.40%	21.40%	21.40%	21.40%	21.40%	21.40%	
ost of Equity - Base	%	ah	Г	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	
ost of Equity - Indexation	%	ai		58.7%	45.1%	37.4%	32.2%	29.1%	26.5%	24.7%	
ost of Equity - indexed	% %	aj = ah x (1 + ai)		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
ost of Equity - Indexed	76	aj – ali x (1 + ai)		20.5%	24.276	22.376	22.0%	21.5%	21.176	20.8%	
ebt %	%	ak		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
pdated RoRB amount											
verage RAB - PKR	PKR Mn	am		4,318	4,970	6,572	8,590	10,448	12,403	14,929	
recoge to D T M	1 KIN WILL	um		7,510	4,5,0	0,5,2	0,330	10,770	12,403	17,525	
otal Debt %	%	an		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
oreign Debt %	%	ao		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	
ost of Debt - Foreign	%	ар	_	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	
oD - Foreign - Support	PKR Mn	aq = am x an x ao x ap		421	484	640	837	1,018	1,209	1,455	
ocal Debt %	%	ar		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	
st of Debt - Local	%	as		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
oD - Local - Support	PKR Mn	at = am x an x ar x as	_	226	260	344	450	547	649	782	

Integrated Investment Plan - FY 2024 to FY 2030

Annual Investment update - updated RAB and Return - Support

After completion of

Year 1 - FY 2024

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
uity %	%	au		30%	30%	30%	30%	30%	30%	30%	
st of Equity - Indexed	%	av		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
E - Support	PKR Mn	aw		343	361	452	568	674	785	931	
preciation on support assets	PKR Mn			750	896	1,184	1,548	1,883	2,235	2,691	
al depreciation	PKR Mn	ax		750	896	1,184	1,548	1,883	2,235	2,691	
mulas for percentages											
oitalization % as per financial statements											
ening CWIP	PKR Mn	az		100							
dition to CWIP	PKR Mn	ba		52							
ailable for capitalization	PKR Mn	bb = az + ba		152							
pitalization	PKR Mn	bc		(105)							
sing	PKR Mn	bd = az + ba + bc		47							
otialzation %	%	be		69.00%							
posal Cost % as per financial statements											
ening PPE	PKR Mn	bf		100							
dition	PKR Mn	bg		105							
posal	PKR Mn	bh		(10)							
sing	PKR Mn	bi = bf + bg + bh		195							
posal Cost %	%	bj = bh / bf		10.00%							
posal Acc. Depreciation % as per financial											
ening Acc. Dep	PKR Mn	bk		50							
preciation	PKR Mn	bl		10							
posal	PKR Mn	bm		(9)							
sing	PKR Mn	bn = bk + bl + bm		51							
. Dep. Disposal %	%	bo = bm / bk		18.00%							

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Revised RoE Indexation

Particulars		Jun-16	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
						Actualized					•	-	Forec	asted		
Average Exchange rates FTY	PKR / USD	104.82	104.81	110.01	136.17	158.38	160.21	178.00	240.00	236.00	236.00	236.00	236.00	236.00	236.00	236.00
Regulatory Asset Base (RAB) at year end	PKR mn	17,713	25,876	34,297	45,851	58,327	74,667	89,747	93,006	117,955	153,465	184,873	215,151	238,173	260,828	280,482
Additions during the year	PKR mn		8,163	8,421	11,554	12,476	16,340	15,080	3,259	24,949	35,510	31,408	30,278	23,021	22,656	19,654
Indexation based on exchange rates (A)																
FY 2016	%		-0.01%	4.95%	29.91%	51.10%	52.84%	69.81%	128.96%	125.15%	125.15%	125.15%	125.15%	125.15%	125.15%	125.15%
FY 2017	%			4.96%	29.92%	51.12%	52.86%	69.84%	128.99%	125.18%	125.18%	125.18%	125.18%	125.18%	125.18%	125.18%
FY 2018	%				23.78%	43.97%	45.64%	61.81%	118.17%	114.54%	114.54%	114.54%	114.54%	114.54%	114.54%	114.54%
FY 2019	%					16.31%	17.65%	30.72%	76.25%	73.31%	73.31%	73.31%	73.31%	73.31%	73.31%	73.31%
FY 2020	%						1.15%	12.39%	51.53%	49.01%	49.01%	49.01%	49.01%	49.01%	49.01%	49.01%
FY 2021	%							11.11%	49.81%	47.31%	47.31%	47.31%	47.31%	47.31%	47.31%	47.31%
FY 2022	%								34.83%	32.58%	32.58%	32.58%	32.58%	32.58%	32.58%	32.58%
FY 2023	%									-1.67%	-1.67%	-1.67%	-1.67%	-1.67%	-1.67%	-1.67%
FY 2024	%										0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FY 2025	%											0.00%	0.00%	0.00%	0.00%	0.00%
FY 2026	%												0.00%	0.00%	0.00%	0.00%
FY 2027	%													0.00%	0.00%	0.00%
FY 2028	%														0.00%	0.00%
FY 2029	%															0.00%
FY 2030	%															0.00%

Calculated with reference to exchange rate of a relevant year vs exchange rate of base year for example 16.31% in FY 2020 calculated as PKR 158.38 / USD divided by PKR 136.17 / USD

Year	wise	break	uр	of	RAB
------	------	-------	----	----	-----

Total RAB			17,713	25,876	34,297	45,851	58,327	74,667	89,747	93,006	117,955	153,465	184,873	215,151	238,173	260,828	280,482
	FY 2030	PKR mn															19,654
	FY 2029	PKR mn														22,656	22,656
	FY 2028	PKR mn													23,021	23,021	23,021
	FY 2027	PKR mn												30,278	30,278	30,278	30,278
	FY 2026	PKR mn											31,408	31,408	31,408	31,408	31,408
	FY 2025	PKR mn										35,510	35,510	35,510	35,510	35,510	35,510
	FY 2024	PKR mn									24,949	24,949	24,949	24,949	24,949	24,949	24,949
	FY 2023	PKR mn								3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259
	FY 2022	PKR mn							15,080	15,080	15,080	15,080	15,080	15,080	15,080	15,080	15,080
	FY 2021	PKR mn						16,340	16,340	16,340	16,340	16,340	16,340	16,340	16,340	16,340	16,340
	FY 2020	PKR mn					12,476	12,476	12,476	12,476	12,476	12,476	12,476	12,476	12,476	12,476	12,476
	FY 2019	PKR mn				11,554	11,554	11,554	11,554	11,554	11,554	11,554	11,554	11,554	11,554	11,554	11,554
	FY 2018	PKR mn			8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421	8,421
	FY 2017	PKR mn		8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163	8,163
	FY 2016	PKR mn	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713	17,713

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Revised RoE Indexation

DE - USD based 16.67% 16.67% 16.67% 16.67% 16.67% 16.67% 16.67% 16.67% 16.67% 1			Jun-16	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 203
FY 2016							Actualized							Foreca	asted		
FY 2017 M	eightage of RAB (B)																
FY 2018			100%		52%	39%	30%	24%	20%	19%	15%		10%		7%	7%	
FY 2019			0%			18%			9%	9%	7%	5%	4%		3%		
PY 2020			0%			18%							5%		4%		
FY 2021 % 0% 0% 0% 0% 0% 0% 0% 12% 18% 13% 14% 11% 9% 8% 7% 6% 6% 6% FY 2022 % 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 10% 1		%	0%	0%	0%	25%	20%		13%	12%	10%	8%	6%	5%	5%	4%	
FY 2023	FY 2020	%	0%	0%	0%	0%	21%	17%	14%	13%	11%	8%	7%	6%	5%	5%	
FY 2024	FY 2021	%	0%	0%	0%	0%	0%	22%	18%	18%	14%	11%	9%	8%	7%	6%	
FY 2024	FY 2022	%	0%	0%	0%	0%	0%	0%	17%	16%	13%	10%	8%	7%	6%	6%	
FY 2025	FY 2023	%	0%	0%	0%	0%	0%	0%	0%	4%	3%	2%	2%	2%	1%	1%	
FY 2026	FY 2024	%	0%	0%	0%	0%	0%	0%	0%	0%	21%	16%	13%	12%	10%	10%	
FY 2027	FY 2025	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	23%	19%	17%	15%	14%	
FY 2028 % 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	FY 2026	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17%	15%	13%	12%	
FY 2029 % 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	FY 2027	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	13%	12%	
FY 2030 % 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	FY 2028	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	9%	
ar wise indexation - considering RAB weightage (A x B) FY 2016	FY 2029	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	
ar wise indexation - considering RAB weightage (A x B) FY 2016	FY 2030	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
FY 2016			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
FY 2018	ar wise indexation - considering RAB weight	tage (A x B)															
FY 2019		• • •	0%	-0.01%	3%	12%	16%	13%	14%	25%	19%	14%	12%	10%	9%	8%	
FY 2020	FY 2016 FY 2017	% %		0%			7%							5%			
FY 2021	FY 2016 FY 2017 FY 2018	% %	0%	0%	1%	5%	7%	6%	6%	11%	9%	7%	6%	5%	4%	4%	
FY 2022	FY 2016 FY 2017 FY 2018 FY 2019	% % %	0% 0%	0% 0%	1% 0%	5% 4%	7% 6%	6% 5%	6% 6%	11% 11%	9% 8%	7% 6%	6% 5%	5% 4%	4% 4%	4% 4%	
FY 2023	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020	% % % %	0% 0% 0%	0% 0% 0%	1% 0% 0%	5% 4% 0%	7% 6% 3% 0%	6% 5% 3%	6% 6% 4%	11% 11% 9%	9% 8% 7%	7% 6% 6%	6% 5% 5%	5% 4% 4% 3%	4% 4% 4%	4% 4% 3%	
FY 2024	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020	% % % %	0% 0% 0% 0%	0% 0% 0% 0%	1% 0% 0% 0%	5% 4% 0% 0%	7% 6% 3% 0%	6% 5% 3% 0%	6% 6% 4% 2%	11% 11% 9% 7%	9% 8% 7% 5%	7% 6% 6% 4%	6% 5% 5% 3%	5% 4% 4% 3%	4% 4% 4% 3%	4% 4% 3% 2%	
FY 2025	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022	% % % % %	0% 0% 0% 0% 0%	0% 0% 0% 0% 0%	1% 0% 0% 0% 0%	5% 4% 0% 0% 0%	7% 6% 3% 0% 0%	6% 5% 3% 0% 0%	6% 6% 4% 2% 2%	11% 11% 9% 7% 9%	9% 8% 7% 5% 7%	7% 6% 6% 4% 5%	6% 5% 5% 3% 4%	5% 4% 4% 3% 4%	4% 4% 4% 3% 3%	4% 4% 3% 2% 3%	
FY 2026	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022	% % % % % %	0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0%	7% 6% 3% 0% 0%	6% 5% 3% 0% 0%	6% 6% 4% 2% 2%	11% 11% 9% 7% 9% 6%	9% 8% 7% 5% 7% 4%	7% 6% 6% 4% 5% 3%	6% 5% 5% 3% 4% 3%	5% 4% 4% 3% 4% 2%	4% 4% 4% 3% 3% 2%	4% 4% 3% 2% 3% 2%	
FY 2027 % 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023	% % % % % % % % %	0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0%	6% 5% 3% 0% 0% 0%	6% 6% 4% 2% 2% 0%	11% 11% 9% 7% 9% 6% 0%	9% 8% 7% 5% 7% 4%	7% 6% 6% 4% 5% 3%	6% 5% 5% 3% 4% 3% 0%	5% 4% 4% 3% 4% 2% 0%	4% 4% 4% 3% 3% 2% 0%	4% 4% 3% 2% 3% 2% 0%	
FY 2028	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024	% % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0%	11% 11% 9% 7% 9% 6% 0%	9% 8% 7% 5% 7% 4% 0%	7% 6% 6% 4% 5% 3% 0%	6% 5% 5% 3% 4% 3% 0% 0%	5% 4% 4% 3% 4% 2% 0%	4% 4% 4% 3% 3% 2% 0%	4% 4% 3% 2% 3% 2% 0% 0%	
FY 2029	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025	% % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0%	
FY 2030 % 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2026	% % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0% 0%	
tal indexation % 0.00% -0.01% 3.74% 21.25% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 37.43% 32.17% 29.06% 26.53% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 33.63% 32.25% 26.39% 32.25% 26.39% 33.63% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.39% 32.25% 26.25% 2	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2026 FY 2026 FY 2027	% % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0% 0%	
DE - USD based 16.67% 1	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2024 FY 2025 FY 2026 FY 2026 FY 2027 FY 2027	% % % % % % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0% 0% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0% 0% 0%	
dexation % 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 3	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2025 FY 2026 FY 2027 FY 2028 FY 2028 FY 2029	% % % % % % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0% 0% 0% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0% 0% 0%	
dexation % 77.37% 58.67% 45.10% 37.43% 32.17% 29.06% 26.53% 3	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2025 FY 2026 FY 2027 FY 2028 FY 2029 FY 2029 FY 2030	% % % % % % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0% 0% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0% 0% 0% 0%	9% 8% 7% 5% 7% 4% 0% 0% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0% 0% 0% 0%	6% 5% 5% 3% 4% 3% 0% 0% 0% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0% 0% 0% 0%	4% 4% 4% 3% 3% 2% 0% 0% 0% 0% 0% 0% 0%	4% 4% 3% 2% 3% 2% 0% 0% 0% 0% 0%	2
	FY 2016 FY 2017 FY 2018 FY 2019 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2027 FY 2028 FY 2028 FY 2029 FY 2030 Ottal indexation	% % % % % % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0% 0% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 0% 0% 0% 0% 0% 77.37%	9% 8% 7% 5% 7% 4% 0% 0% 0% 0% 0% 0% 0%	7% 6% 6% 4% 5% 3% 0% 0% 0% 0% 0% 45.10%	6% 5% 5% 3% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0% 0% 0% 32.17%	4% 4% 4% 3% 3% 0% 0% 0% 0% 0% 0% 0% 29.06%	4% 44% 3% 2% 3% 0% 0% 0% 0% 0% 0% 0%	2
	FY 2016 FY 2017 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 FY 2025 FY 2025 FY 2026 FY 2027 FY 2028 FY 2029 FY 2030 FY 2030 FY 2040 FY 2050 FY 2050 FY 2070 FY 2070 FY 2080 FY 2080 FY 2090 FY 2030	% % % % % % % % % % % % % % % % % % %	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0	1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	5% 4% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	7% 6% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 5% 3% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	6% 6% 4% 2% 2% 0% 0% 0% 0% 0% 0% 0% 0% 0%	11% 11% 9% 7% 9% 6% 6% 0% 0% 0% 0% 77.37%	9% 8% 7% 5% 7% 4% 4% 0% 0% 0% 0% 0% 0% 58.67%	7% 6% 6% 4% 5% 3% 0% 0% 0% 0% 0% 45.10%	6% 5% 5% 3% 4% 0% 0% 0% 0% 0% 0% 5% 37.43%	5% 4% 4% 3% 4% 2% 0% 0% 0% 0% 0% 532.17%	4% 4% 4% 3% 3% 2% 0% 0% 0% 0% 0% 29.06%	4% 4% 3% 2% 3% 0% 0% 0% 0% 0% 0% 0% 0%	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Biennial Complete Investment review - updated CAPEX

 After completion of
 Year 2 - FY 2025

 Description
 Unit
 Reference

Description	Unit	Reference	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Initial Investment Plan											
i Capex Allowed											
USD based Capex	PKR Mn	a	22,500	28,455	25,030	24,649	20,563	20,560	19,403	161,161	Revised Capex based on form 2.4.1
PKR based Capex	PKR Mn	b	3,000	9,821	9,701	9,550	7,934	7,933	7,476	55,416	
Total capex	PKR Mn	c	25,500	38,276	34,731	34,199	28,497	28,494	26,879	216,577	_
i Deferred revenue allowed											
USD based	PKR Mn	d								_	Revised Capex based on form 2.4.1
PKR based	PKR Mn	e	400	1,000	_	-		-		1,400	·
Total	PKR Mn	f	400	1,000	-	-	-	-	-	1,400	-
Proposed changes in Investment Plan											
і Сарех											
USD based Capex	PKR Mn	g	-	-	(1,800)	1,600	1,640	(1,420)	1,020	1,040	Please refer the justifications for these
PKR based Capex	PKR Mn	h	-	-	2,200	1,800	1,100	1,240	1,800	8,140	
Total capex	PKR Mn	i	-	-	400	3,400	2,740	(180)	2,820	9,180	enclosed)
i Deferred revenue											
USD based	PKR Mn	j	-	-	-	-	-	-	-	-	
PKR based	PKR Mn	k	-	-	-	-	-	-	-	-	
Total	PKR Mn	I	-	-	-	-	-	-	-	-	_
Revised Investment Plan											
i Capex											
USD based Capex	PKR Mn	m = a + g	22,500	28,455	23,230	26,249	22,203	19,140	20,423	162,201	
PKR based Capex	PKR Mn	n = b + h	3,000	9,821	11,901	11,350	9,034	9,173	9,276	63,556	
Total capex	PKR Mn	0	25,500	38,276	35,131	37,599	31,237	28,314	29,699	225,757	_
i Deferred revenue											
USD based	PKR Mn	p = d + j	-	-	-	-	-	-	-	-	
PKR based	PKR Mn	q = e + k	400	1,000	-	-	-	-	-	1,400	
Total	PKR Mn	r	400	1,000	-	-	-	-	-	1,400	_

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Biennial Complete Investment review - updated CAPEX - Support

After completion of	Year 2 - FY 2025
---------------------	------------------

Description	Unit	Reference	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Total	Comments
Initial Investment Plan											
i Capex Allowed											
·											
USD based Capex	PKR Mn	а	2,777	1,658	1,885	1,622	1,996	2,067	1,569	13,573	Revised Capex based on form 2.4.1
PKR based Capex	PKR Mn	b	1,211	690	799	688	847	877	665	5,776	after completion of FY 2025
Total capex	PKR Mn	с	3,987	2,347	2,684	2,310	2,843	2,943	2,234	19,350	
Proposed changes in Investment Plan											
і Сарех											
USD based Capex	PKR Mn	d	-	-	(450)	400	410	(355)	255	260	Please refer the justifications for these
PKR based Capex	PKR Mn	e	-	-	550	450	275	310	450	2,035	changes in Annexure (Will be
Total capex	PKR Mn	f	-	-	100	850	685	(45)	705	2,295	enclosed)
Revised Investment Plan											
i Capex											
USD based Capex	PKR Mn	g = a + d	2,777	1,658	1,435	2,022	2,406	1,712	1,824	13,833	
PKR based Capex	PKR Mn	h = b + e	1,211	690	1,349	1,138	1,122	1,187	1,115	7,811	
Total capex	PKR Mn	i	3,987	2,347	2,784	3,160	3,528	2,898	2,939	21,645	

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030

Biennial Complete Investment review - updated RAB & Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RAB movement											
Opuated RAB movement											
Assumptions											
Capitalization %	%	a = ci		69.0%	35.9%	69.0%	69.0%	69.0%	69.0%	69.0%	FY 2024 & FY 2025 %ages are actualized. Onward years as per revise
Disposal Cost %	%	b = co		2.0%	1.8%	1.0%	0.9%	0.9%	0.8%	0.8%	plan .
Disposal Acc. Dep%	%	c = cs		2.4%	6.3%	1.0%	1.0%	1.0%	1.1%	1.0%	F
Depreciation rate %	%	d		3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	3.98%	As per initial estimate.
Amortization of deferred revenue %	%	e		6.32%	6.32%	6.32%	6.32%	6.32%	6.32%	6.32%	As per initial estimate.
Exchange rate - average	PKR/USD	f		236	241	241	241	241	241	241	EV 2024 9 EV 2025 Variation and the lived Occupant
Pak CPI	No.	g		173	191	191	191	191	191	191	FY 2024 & FY 2025 %ages are actualized. Onward years as per revise- plan .
US CPI	No.	h		292	321	321	321	321	321	321	pan.
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn	i	-	31,278	35,196	60,972	77,306	85,124	94,606	84,715	
Addition	PKR Mn	j	-	25,500	38,416	34,631	37,099	30,737	27,814	29,199	Revised amounts as per Form 2.4.2 including additional items requested in Form 3.1
Capitalization	PKR Mn	k = I x a	-	(21,582)	(12,641)	(42,071)	(53,341)	(58,736)	(65,278)	(58,453)	requested in Form 5.1
Closing	PKR Mn	I	31,278	35,196	60,972	53,532	61,064	57,126	57,142	55,461	•
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn	m	-	145,388	164,062	173,791	188,572	211,097	225,919	259,961	
Capitalization	PKR Mn	n	-	21,582	12,641	42,071	53,341	58,736	65,278	58,453	
Disposal	PKR Mn	o = m x b	=	(2,908)	(2,912)	(1,738)	(1,743)	(1,825)	(1,843)	(2,002)	
Closing	PKR Mn	р	145,388	164,062	173,791	214,124	240,170	268,007	289,353	316,412	
Accumulated Depreciation											
Opening	PKR Mn	q	-	38,766	43,992	47,921	51,988	56,500	61,521	67,375	
Depreciation for the year	PKR Mn	r = average (m,p) x d	-	6,157	6,722	7,718	8,530	9,532	10,251	11,467	
Depreciation - Disposal	PKR Mn	s = c x q	=	(930)	(2,793)	(479)	(537)	(589)	(646)	(683)	
Closing	PKR Mn	t	38,766	43,992	47,921	55,159	59,981	65,442	71,126	78,158	
CWIP + Fixed assets	PKR Mn	u = I + p - t	137,901	155,267	186,842	212,497	241,254	259,691	275,369	293,714	
Deferred revenue											
Opening	PKR Mn	v	=	44,036	41,630	39,937	37,415	35,052	32,838	30,764	
Additions	PKR Mn	w	-	400	1,000	-	-	-	-	-	
Amortization	PKR Mn	x = (v + w) x e	-	(2,806)	(2,692)	(2,522)	(2,363)	(2,214)	(2,074)	(1,943)	-
Closing	PKR Mn	У	44,036	41,630	39,937	37,415	35,052	32,838	30,764	28,821	
RAB	PKR Mn	z = u - y	93,865	113,637	146,905	175,082	206,202	226,853	244,605	264,893	•

Biennial Complete Investment review - updated RAB & Return

After completion of

Year 2 - FY 2025

Arter completion of											
Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Average RAB - PKR	PKR Mn	aa		103,751	130,271	160,993	190,642	216,527	235,729	254,749	
Updated RoRB %											
Weighted Avg. Spreads of Various Foreign Loans											
ECA Financing	%	ab		4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	As per initial estimate.
DFI Financing & Others	%	ac		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per initial estimate.
ECA Financing (Weightage)	%	ad		25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	FY24 & FY25 actualized as per Accounts. Future years same as FY25
DFI Financing & Others (Weightage)	%	ae		75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	FY24 & FY25 actualized as per Accounts. Future years same as FY25
Weighted Avg. Spread of Foreign Loans	%	af = ab x ad + ac x ae		4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	•
Cost of Debt - Foreign											
LIBOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 202
Spread	%			4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	4.38%	As computed above
Hedging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	•
CoD - Foreign	%	ag		23.08%	23.08%	23.08%	23.08%	23.08%	23.08%	23.08%	
Hedging cost											
KIBOR	%	ah		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 202
LIBOR / SOFR	%	ai		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 202
Hedging spread	%	aj		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
Hedging cost	%	ak = ah - ai +aj		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	·
Cost of Debt - Local											
KIBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 202
Spread	%			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
CoD - Local	%	al		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Foreign Debt %	%	am		85.0%	80.0%	82.0%	82.0%	82.0%	82.0%	82.0%	Actualized every year and update forecast for future years
Local Debt %	%	an		15.0%	20.0%	18.0%	18.0%	18.0%	18.0%	18.0%	Actualized every year and update forecast for future years
Weighted average cost of debt	%	ao = ag x am + al x an		22.42%	22.20%	22.29%	22.29%	22.29%	22.29%	22.29%	
Cost of Equity - Base	% Г	ар		16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	1
Cost of Equity - Indexation	%	aq		58.7%	45.1%	37.4%	32.2%	29.1%	26.5%	24.7%	Form 2.4.3 after Annual Investment Update of FY 2025
Cost of Equity - indexed	%	ar = ap x (1 + aq)		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	•

Biennial Complete Investment review - updated RAB & Return

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Description	Onit	Reference	F1 2023	FT 2024	F1 2025	F1 2026	FT 2027	FT 2028	FT 2029	PT 2030	Comments
Debt %	%	as		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Equity %	%	at		30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
Data and Daniel Access David David	%			22 520	22.000/	22.47%	22.21%	22.06%	21.93%	21.84%	
Return on Regulatory Asset Base - Revised	70	au = ao x as + ar x at		23.63%	22.80%	22.47%	22.21%	22.06%	21.95%	21.64%	
Updated RoRB amount											
Average RAB	PKR Mn	av		103,751	130,271	160,993	190,642	216,527	235,729	254,749	
Total Debt %	%	aw		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Foreign Debt %	%	ax		85.0%	80.0%	82.0%	82.0%	82.0%	82.0%	82.0%	
Cost of Debt - Foreign	% %	ay		23.08%	23.08%	23.08%	23.08%	23.08%	23.08%	23.08%	
CoD - Foreign	PKR Mn	az = av x aw x ax x ay		14,245	16,834	21,324	25,251	28,679	31,222	33,742	
CoD - Foreign - support	PKR Mn	ba		295	655	779	899	991	1,025	1,044	Form 3.2.1(S)
CoD - Foreign - (Including Support)	PKR Mn	bb		14,539	17,488	22,103	26,149	29,670	32,247	34,785	101111 3.2.2(3)
cob - Foreign - (metading Support)	1 KK WIII	55		14,555	17,400	22,103	20,143	25,070	32,247	34,703	
Local Debt %	%	bc		15.0%	20.0%	18.0%	18.0%	18.0%	18.0%	18.0%	
Cost of Debt - Local	%	bd		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
CoD - Local - Distribution	PKR Mn	be = av x aw x bc x bd		2,037	3,410	3,793	4,492	5,102	5,554	6,002	
CoD - Local - support	PKR Mn	bf		158	352	419	483	532	551	561	Form 3.2.1(S)
CoD - Local - (Including Support)	PKR Mn	bg		2,196	3,762	4,212	4,975	5,634	6,105	6,563	
Equity %	%	bh		30%	30%	30%	30%	30%	30%	30%	
Cost of Equity - Indexed	%	bi		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
RoE - Distribution	PKR Mn	bj = av x bh x bi		8,233	9,453	11,065	12,601	13,975	14,917	15,883	
RoE - support	PKR Mn	bk		240	488	550	610	656	666	668	Form 3.2.1(S)
RoE - Total	PKR Mn	bl		8,473	9,940	11,615	13,210	14,631	15,582	16,551	
Depreciation on Distribution assets	PKR Mn			6,157	6,722	7,718	8,530	9,532	10,251	11,467	
Depreciation on support assets	PKR Mn			750	896	1,237	1,589	1,941	2,242	2,640	Form 3.2.1(S)
Total depreciation	PKR Mn	bm		6,907	7,618	8,955	10,119	11,473	12,494	14,107	• •
•											
Amortization of deferred revenue	PKR Mn	bn		(2,806)	(2,692)	(2,522)	(2,363)	(2,214)	(2,074)	(1,943)	
Units Billed on Allowed D.loss	PKR Mn	bo		13,845	18,123	18,137	18,600	18,989	19,359	19,690	FY24 & FY25 Actual. Remaining as per initial estimate
				.,	•	•	,,,,,	,,,,,,	,,,,,,	,,,,,,	
Revised tariff components											
CoD - Foreign	PKR / kWh	bp = bb / bo		1.05	0.97	1.22	1.41	1.56	1.67	1.77	
CoD - Local	PKR / kWh	bq = bg / bo		0.16	0.21	0.23	0.27	0.30	0.32	0.33	
RoE	PKR / kWh	br = bl / bo		0.61	0.55	0.64	0.71	0.77	0.80	0.84	
Depreciation	PKR / kWh	bs = bm / bo		0.50	0.42	0.49	0.54	0.60	0.65	0.72	
Amortization of deferred revenue	PKR / kWh	bt = bn / bo		(0.20)	(0.15)	(0.14)	(0.13)	(0.12)	(0.11)	(0.10)	
	•	•		,	,	. ,	,	. ,	. ,	,	

Integrated Investment Plan - FY 2024 to FY 2030

Biennial Complete Investment review - updated RAB & Return

After completion of Year 2 - FY 2025

Capitalization % as per financial statements					W/ 2022	W/ 000 4	W/ 999#	EV 2025	EV 200E	EU 0000	W/ 9999	EV 2020	1
Capitalization % as per financial statements Opening CWIP PKR Mn bu 43 26 25 27 21 Addition to CWIP PKR Mn bv bu + bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn b bw + bw 26 25 27 21 17 Closing PKR Mn b by = bw + bw 26 25 27 21 17 Capitalization % bz = bx / bw 69% <td></td> <td>Description</td> <td>Unit</td> <td>Reference</td> <td>FY 2023</td> <td>FY 2024</td> <td>FY 2025</td> <td>FY 2026</td> <td>FY 2027</td> <td>FY 2028</td> <td>FY 2029</td> <td>FY 2030</td> <td></td>		Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	
Capitalization % as per financial statements Opening CWIP PKR Mn bu 43 26 25 27 21 Addition to CWIP PKR Mn bv bu + bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn b bw + bw 26 25 27 21 17 Closing PKR Mn b by = bw + bw 26 25 27 21 17 Capitalization % bz = bx / bw 69% <td></td>													
Capitalization % as per financial statements Opening CWIP PKR Mn bu 43 26 25 27 21 Addition to CWIP PKR Mn bv bu + bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn b bw + bw 26 25 27 21 17 Closing PKR Mn b by = bw + bw 26 25 27 21 17 Capitalization % bz = bx / bw 69% <td></td>													
Opening CWIP PKR Mn bu 43 26 25 27 21 Addition to CWIP PKR Mn bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn bw by = bw + bx 26 25 27 21 17 Cobing PKR Mn by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 314 367 424 468 Capitalization % PKR Mn ca 260 314 367 424 468 Addition PKR Mn cc 33 33 33 33 43 43	Formulas for percentag	ges											
Opening CWIP PKR Mn bu 43 26 25 27 21 Addition to CWIP PKR Mn bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn bw by = bw + bx 26 25 27 21 17 Cobing PKR Mn by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 25 27 21 17 Capitalization % by = bw + bx 26 314 367 424 468 Capitalization % PKR Mn ca 260 314 367 424 468 Addition PKR Mn cc 33 33 33 33 43 43	Capitalization % as nor	financial statements											
Addition to CWIP PKR Mn bv 40 55 62 42 35 Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn bx (57) (56) (60) (48) (39) Closing PKR Mn by = bw + bw 26 25 27 21 17 Capitalization % W bz = bx / bw 69%		illianciai statements	DVP Mn	hu				12	26	25	27	21	
Available for capitalization PKR Mn bw = bu + bv 83 81 87 69 56 Capitalization PKR Mn bx (57) (56) (60) (48) (39) Closing PKR Mn by = bw + bx 26 25 27 21 17 Capitalization 50 69% </td <td></td>													
Capitalization PKR Mn bx (57) (56) (60) (48) (39) Closing PKR Mn by = bw + bx 26 25 27 21 17 Capitalization % 69% <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>													
Closing		ion											
Capitalization % % bz = bx / bw 69% 40% 40% 69% 40% 69%													
Disposal Cost % as per financial statements Opening PPE PKR Mn ca 260 314 367 424 468 Addition PKR Mn cb 57 56 60 48 39 Disposal PKR Mn cc (3) (3) (3) (3) (4) Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Cost% ce = cc / ca 1% 2 2 2 </td <td>-</td> <td></td> <td></td> <td>,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td>	-			,									_
Opening PPE PKR Mn ca 260 314 367 424 468 Addition PKR Mn cb 57 56 60 48 39 Disposal PKR Mn cc (3) (3) (3) (3) (4) Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Cost% m ce = cc / ca	Capitalization %		%	bz = bx / bw				69%	69%	69%	69%	69%	_
Opening PPE PKR Mn ca 260 314 367 424 468 Addition PKR Mn cb 57 56 60 48 39 Disposal PKR Mn cc (3) (3) (3) (3) (4) Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Cost% m ce = cc / ca													
Addition PKR Mn cb 57 56 60 48 39 Disposal PKR Mn cc (3) (3) (3) (3) (4) Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Cost% % ce = cc / ca 1% 3 3 3 3 3		financial statements											
Disposal PKR Mn cc (3) (3) (3) (3) (4) Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Cost% 1% <													
Closing PKR Mn cd = ca + cb + cc 314 367 424 468 503 Disposal Acc. Dep. % as per financial statements Opening PPE PKR Mn cf 260 281 304 329 355 Depreciation PKR Mn cg 24 26 28 30 30 Disposal PKR Mn ch (3) (3) (3) (3) (3) Closing PKR Mn ci = cf + cg + ch 281 304 329 355 382	Addition		PKR Mn	cb				57	56	60	48	39	
Disposal Cost% % ce = cc / ca 1% 2 35 30 30 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 <td>Disposal</td> <td></td> <td>PKR Mn</td> <td>cc</td> <td></td> <td></td> <td></td> <td>(3)</td> <td>(3)</td> <td>(3)</td> <td>(3)</td> <td>(4)</td> <td></td>	Disposal		PKR Mn	cc				(3)	(3)	(3)	(3)	(4)	
Disposal Cost% % ce = cc / ca 1% 2 355 355 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 4 4 2 2 3 </td <td>Closing</td> <td></td> <td>PKR Mn</td> <td>cd = ca + cb + cc</td> <td></td> <td></td> <td></td> <td>314</td> <td>367</td> <td>424</td> <td>468</td> <td>503</td> <td></td>	Closing		PKR Mn	cd = ca + cb + cc				314	367	424	468	503	
Opening PPE PKR Mn cf 260 281 304 329 355 Depreciation PKR Mn cg 24 26 28 30 30 Disposal PKR Mn ch (3) (3) (3) (3) (4) Closing PKR Mn ci = cf + cg + ch 281 304 329 355 382	Disposal Cost%		%	ce = cc / ca				1%	1%	1%	1%		
Opening PPE PKR Mn cf 260 281 304 329 355 Depreciation PKR Mn cg 24 26 28 30 30 Disposal PKR Mn ch (3) (3) (3) (3) (4) Closing PKR Mn ci = cf + cg + ch 281 304 329 355 382													-
Depreciation PKR Mn cg 24 26 28 30 30 Disposal PKR Mn ch (3) (3) (3) (3) (4) Closing PKR Mn ci = cf + cg + ch 281 304 329 355 382	Disposal Acc. Dep. % a	s per financial statements											
Disposal PKR Mn ch (3) (3) (3) (3) (3) (4) Closing PKR Mn ci = cf + cg + ch	Opening PPE		PKR Mn	cf				260	281	304	329	355	
Disposal PKR Mn ch (3) (3) (3) (3) (4) Closing PKR Mn ci = cf + cg + ch	Depreciation		PKR Mn	cg				24	26	28	30	30	
Closing PKR Mn ci = cf + cg + ch 281 304 329 355 382	Disposal		PKR Mn					(3)	(3)	(3)	(3)	(4)	
			PKR Mn	ci = cf + cg +ch									
	Disposal Acc. Dep.%			cj = ch / cf									-

Form 3.2

Biennial Complete Investment review - updated RAB & Return - Support

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RAB movement											
Assumptions											
Capitalization %	%	a		69.0%	52.8%	69.0%	69.0%	69.0%	69.0%	69.0%	
Disposal Cost %	%	b		10.0%	13.0%	1.0%	0.9%	0.9%	0.8%	0.8%	FY 2024 & FY 2025 %ages are actualized. Onward years as per revised plan.
Disposal Acc. Dep%	%	С		18.0%	34.3%	1.0%	1.2%	1.5%	2.0%	2.6%	reviseu piari .
Depreciation rate %	%	d		14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	As per initial estimate.
Amortization of deferred revenue %	%	e		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	As per initial estimate.
Exchange rate - average	PKR/USD	f		236	241	241	241	241	241	241	FY 2024 & FY 2025 %ages are actualized. Onward years as pe
Pak CPI	No.	g		173	191	191	191	191	191	191	revised plan .
US CPI	No.	h		292	321	321	321	321	321	321	.cersee plan.
PKR Based Working											
Capital Work in Progress											
Opening	PKR Mn	i	-	1,274	4,382	4,556	4,771	4,137	4,491	4,055	
Addition	PKR Mn	j	-	3,987	2,487	2,784	3,160	3,528	2,898	2,939	Revised amounts as per Form 3.2 including additional items requested in Form 3.1
Capitalization	PKR Mn	k = i x a	-	(879)	(2,314)	(3,144)	(3,292)	(2,855)	(3,099)	(2,798)	
Closing	PKR Mn	I	1,274	4,382	4,556	4,197	4,639	4,810	4,291	4,196	
Operating Fixed Assets (without revaluation)											
Opening	PKR Mn	m	-	4,966	5,349	6,966	9,316	11,966	13,920	16,810	
Capitalization	PKR Mn	n	-	879	2,314	3,144	3,292	2,855	3,099	2,798	
Disposal	PKR Mn	o = m x b	-	(497)	(697)	(70)	(86)	(103)	(114)	(129)	
Closing	PKR Mn	р	4,966	5,349	6,966	10,040	12,522	14,718	16,905	19,478	
Accumulated Depreciation											
Opening	PKR Mn	q	-	1,814	2,238	2,366	3,420	4,660	6,010	7,759	
Depreciation for the year	PKR Mn	$r = (m,p)/2 \times d$	-	750	896	1,237	1,589	1,941	2,242	2,640	
Depreciation - Disposal	PKR Mn	s = q x c		(326)	(767)	(24)	(43)	(72)	(120)	(199)	
Closing	PKR Mn	t	1,814	2,238	2,366	3,579	4,966	6,529	8,133	10,200	
CWIP + Fixed assets	PKR Mn	u = I + p - t	4,427	7,494	9,156	10,657	12,195	12,999	13,063	13,475	
Average RAB - Excl. Deferred Revenue		v		5,960	8,325	9,907	11,426	12,597	13,031	13,269	
Support RAB Allocation on Generation, Distributi	ion & Distribution										
CAPEX Allocation Percentages	%	w		81%	81%	81%	81%	81%	81%	81%	As per initial estimate.
Net RAB	PKR Mn	x = u x w		6,049	7,391	8,603	9,844	10,494	10,545	10,877	·
NEL RAD	1 100 14111	x = u x w	-	6,049	7,591	6,003	9,844	10,494	10,545	10,6//	

Biennial Complete Investment review - updated RAB & Return - Support

Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	Comments
Updated RoRB %											
Cost of Debt - Foreign											
LIBOR / SOFR	%			2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Spread	%			4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	As per initial estimate.
Hedging cost	%			15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
CoD - Foreign	%	У		23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	
Hedging cost											
KIBOR	%	z		16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
LIBOR / SOFR	%	aa		2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	2.79%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Hedging spread	%	ab		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
Hedging cost	%	ac = z - aa + ab		15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	15.91%	
Cost of Debt - Local											
KIBOR	%			16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	16.20%	FY 2024 & FY 2025 - average of 4 quarters; remaining same as FY 2025
Spread	%			2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	As per initial estimate.
CoD - Local	%	ad		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	
Foreign Debt %	%	ae		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	Actualized every year and update forecast for future years
Local Debt %	%	af		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	Actualized every year and update forecast for future years
Weighted average cost of debt		ag = y x ae + ad x af		21.40%	21.40%	21.40%	21.40%	21.40%	21.40%	21.40%	
Cost of Equity - Base	%	ah		16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	
Cost of Equity - Indexation	%	ai		58.7%	45.1%	37.4%	32.2%	29.1%	26.5%	24.7%	
Cost of Equity - indexed	%	aj		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
Debt %	%	ak		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
Equity %	%	al		30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	
Return on Regulatory Asset Base - Revised	%	am = ag x ak + aj x al		22.92%	22.24%	21.85%	21.59%	21.43%	21.31%	21.21%	
Updated RoRB amount											
Average RAB	PKR Mn	an		3,025	6,720	7,997	9,223	10,169	10,519	10,711	
Total Debt %	%	ao		70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	

Biennial Complete Investment review - updated RAB & Return - Support

ritter completion of											
Description	Unit	Reference	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	
Foreign Debt %	%	ар		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	
Cost of Debt - Foreign	%	aq		23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	23.20%	_
CoD - Foreign - support	PKR Mn	ar = an x ao x ap x aq		295	655	779	899	991	1,025	1,044	ŀ
Local Debt %	%	as		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	6
Cost of Debt - Local	%	at		18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	18.70%	6
CoD - Local - support	PKR Mn	au = an x ao x as x at		158	352	419	483	532	551	561	
Equity %	%	av		30%	30%	30%	30%	30%	30%	30%	6
Cost of Equity - Indexed	%	aw		26.5%	24.2%	22.9%	22.0%	21.5%	21.1%	20.8%	
RoE - support	PKR Mn	ax = an x av x aw		240	488	550	610	656	666	668	
Depreciation on support assets	PKR Mn			750	896	1,237	1,589	1,941	2,242	2,640)
otal depreciation	PKR Mn	ay		750	896	1,237	1,589	1,941	2,242	2,640	_
		-,			030	1,207	2,505	2,5 .2	_,	2,0.0	
ormulas for percentages											
Capitalization % as per financial statements											
Opening CWIP	PKR Mn	az				43	26	25	27	21	
Addition to CWIP	PKR Mn	ba				40	55	62	42	35	
Available for capitalization	PKR Mn	bb = az + ba				83	81	87	69	56	
Capitalization	PKR Mn	bc				(57)	(56)	(60)	(48)	(39)))
Closing	PKR Mn	bd = az + ba + bc				26	25	27	21	17	
Capitalization %	%	be			_	69%	69%	69%	69%	69%	6
standard C-st 2/					_						-
Disposal Cost % as per financial statements	PKR Mn	bf				260	214	367	424	468	,
Opening PPE Addition	PKR IVIN					260 57	314 56	60	424	468 39	
Disposal	PKR IVIN	bg bh				(3)	(3)	(3)	(3)	(4)	
Closing	PKR Mn	bi = bf + bg + bh				314	367	(3) 424	(5) 468	503	
Disposal Cost%	%	bj = bh / bf			_	1%	1%	1%	1%	1%	
213p0301 C031/8	/0	bj - bii / bi			-	1/0	1/6	1/0	1/6	1/0	_
Disposal Acc. Dep. % as per financial statements											
Opening PPE	PKR Mn	bk				260	234	205	173	140	
Depreciation	PKR Mn	bl				(24)	(26)	(28)	(30)	(30)	
Disposal	PKR Mn	bm				(3)	(3)	(3)	(3)	(4)	
Closing	PKR Mn	bn = bk + bl + bm			_	234	205	173	140	107	_
Disposal Acc. Dep.%	%	bo = bm / bk			_	1%	1%	2%	2%	3%	6

Integrated Investment Plan - FY 2024 to FY 2030

Assumptions

revenue

Revenue has been worked out on a projected tariff keeping in view the Investment Plan formulated, proposed targets for losses, collections and the proposed tariff structure including:

O&M expenses

O&M expenses per unit have been based on FY 22 and revenue has been computed keeping in view projected units

Regulatory Asset Base

RAB is based on cost (w/o revaluation) accounting for the proposed investment plan.

Return

Return on Regulatory asset is based on Notional debt to equity ratio (note 1), USD based RoE of 15% as allowed in current MYT and cost of debt given below

Cost of debt

Cost of debt includes local and foreign cost of debt, including hedging cost, as explained in Financing section in the KIIP

Working capital cost

Working Capital Component similar to NTDC has been used and the same has been incorporated in the projected Profit & Loss & Balance Sheet calculations, comprising of:

- Stores & Spares at 3% of the Gross Investment in Fixed Assets (i.e. Cost).
- Trade Receivables equating to 30 days of sales
- Cash & Bank Balances at 1/6th of O&M expenses.
- Current Liabilities taken at 2/3rd of the above mentioned assets.

Consequently, the remaining amount of assets are to be financed by borrowings for which cost has been computed at the reference KIBOR Rates with spread of 2% (for short term borrowing). The same has been considered for both Revenue & Finance Cost computations.

Pass through cost

Other pass through costs including Tax and WPPF pass through

Tariff petition will include detailed discussion on the Tariff workings and related adjustment mechanisms, and we understand that Tariff workings and related adjustment mechanism will be discussed in separate proceedings.

Projected Financials have been based on the following reference macro-economic conditions:

- PKR/ USD Exchange Rate of 206, as of June 2022.
- KIBOR & LIBOR of 15.16% & 2.29% respectively, as of June 2022.
- USCPI & Pak CPI of 282.03 & 158.48 respectively, average for FY22.

This will be subject to indexation based on actual

An Investment plan revision mechanism has been proposed for accounting for the variations in aforementioned macro-economic assumptions as well as changes in scope of Investment plan and their consequent impacts on the projected investment plan and the projected tariff components, which has been discussed in detail in section VI (8).

Projected Profit and loss account, Balance sheet and cash flow statements have been worked out keeping in view above assumptions, tariff components and working capital requirements and cost of assets w/o revaluation for the purpose of tariff.

Note: 1 The issue of applying notional 70:30 debt to equity ratio for the purpose of determining KE's Return on Regulatory Asset Base and non-consideration of actual invested equity is taken up in the Appeal filed before the NEPRA Appellate Tribunal under the applicable laws. Accordingly KE's proposed investment plan and projected Financial statements are without prejudice to the Appeal and subject to final outcome of such Appeal, any relief granted by the NEPRA Appellate Tribunal in such proceedings, the impact of the same shall be incorporated in this plan accordingly.

The projections and forecasts contained in this investment plan and projected financial statements are only intended for NEPRA for the purposes of evaluating and determining KE's MYT for Transmission & Distribution segment. The plan contained in this investment plan is based on expectations, estimates and projections at the time of filing of the same that could differ from actual results or events owing to business and operational risks and change in scope and circumstances. The information contained in this plant is not intended as a solicitation or recommendation of investments. Under no circumstances should this information be relied on or treated as legal or other professional advice. Although KE has taken the greatest possible care in compiling this information, it assumes no responsibilities for any reliance for investment decisions placed thereon.

Integrated Investment Plan - FY 2024 to FY 2030 Projected Income Statement - Transmission

						PKF	in million
Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenue	44,846	54,927	65,427	75,763	84,834	90,623	93,678
Expenses							
O&M Expenses - Net	5,361	5,529	5,662	5,776	5,876	5,973	6,062
Depreciation	5,001	6,136	7,437	8,781	10,144	11,183	11,999
Amortization of deferred revenue	(237)	(225)	(213)	(202)	(191)	(182)	(172)
WPPF	501	601	704	806	893	949	974
Total expenses	10,626	12,042	13,590	15,161	16,722	17,923	18,863
Operating Profit	34,220	42,886	51,837	60,602	68,112	72,700	74,816
Finance cost	23,695	30,261	37,044	43,677	49,349	52,767	54,369
Profit before tax	10,525	12,624	14,793	16,924	18,763	19,933	20,447
Tax expense	547	671	799	925	1,036	1,107	1,145
Profit after tax	9,977	11,954	13,994	15,999	17,727	18,826	19,302

Annexure O

Integrated Investment Plan - FY 2024 to FY 2030 Projected Balance Sheet - Transmission

PKR in million

Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
ASSETS							
Property, plant and equipment	179,448	222,757	267,518	308,819	340,824	352,601	360,836
Stores and spares	6,046	7,278	8,850	10,179	11,809	12,417	13,550
Trade Debts	3,600	4,410	5,254	6,085	6,814	7,279	7,525
Cash and bank	893	921	944	963	979	995	1,010
Total Assets	189,987	235,367	282,565	326,045	360,426	373,293	382,921
LIABILITIES & EQUITY							
Long term loans	126,094	157,258	189,552	219,330	242,660	251,394	257,743
Deferred revenue	4,333	4,108	3,895	3,693	3,501	3,320	3,148
Other Current Liabilities	7,026	8,407	10,032	11,485	13,068	13,795	14,724
Total liabilities	137,452	169,772	203,479	234,508	259,229	268,508	275,615
Equity & Intercompany Balance	52,535	65,595	79,087	91,538	101,197	104,784	107,306
Total Liabilities & Equity	189,987	235,367	282,565	326,045	360,426	373,293	382,921

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Projected Cash Flow Statement - Tranmission

Closing Balance

•						PKR	in million
Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Cash flows from Operating Activities							
Profit after tax	9,977	11,954	13,994	15,999	17,727	18,826	19,302
Depreciation	5,001	6,136	7,437	8,781	10,144	11,183	11,999
Amortisation of deferred revenue	(237)	(225)	(213)	(202)	(191)	(182)	(172)
Finance Cost	23,695	30,261	37,044	43,677	49,349	52,767	54,369
Tax Adjustment	-	-	-	-	-	-	-
Sub Total	38,437	48,126	58,261	68,255	77,028	82,594	85,498
(Increase) /Decrease in Working Capital Assets	(1,228)	(2,043)	(2,415)	(2,160)	(2,359)	(1,073)	(1,379)
(Increase) /Decrease in Working Capital Liabilities	842	1,381	1,625	1,453	1,584	726	929
Change in Working Capital	(386)	(662)	(790)	(707)	(775)	(347)	(450)
Net Cash Flow from Operating Activities	38,051	47,464	57,471	67,548	76,253	82,247	85,049
Cash Flows from Investing Activities							
Investment in Fixed Assets	(47,319)	(49,446)	(52,197)	(50,082)	(42,149)	(22,960)	(20,234)
Net Cash Flow from Investing Activities	(47,319)	(49,446)	(52,197)	(50,082)	(42,149)	(22,960)	(20,234)
Cash Flows from Financing Activities							
Drawdown/(Repayment) of Long Term Debt	30,210	31,164	32,294	29,778	23,329	8,734	6,349
Finance Cost Paid	(23,695)	(30,261)	(37,044)	(43,677)	(49,349)	(52,767)	(54,369)
Intercompany balance Drawdown / (repayment)	2,789	1,107	(502)	(3,548)	(8,068)	(15,238)	(16,780)
Net Cash Flow from Financing Activities	9,304	2,010	(5,252)	(17,447)	(34,087)	(59,271)	(64,800)
Net Cash Generated	35	28	22	19	17	16	15
Opening Balance	858	893	921	944	963	979	995

893

921

944

963

979

995

1,010

Integrated Investment Plan - FY 2024 to FY 2030

Assumptions

revenue

Revenue has been worked out on a projected tariff keeping in view the Investment Plan formulated, proposed targets for losses, collections and the proposed tariff structure including:

O&M expenses

O&M expenses per unit have been based on FY 22 and revenue has been computed keeping in view projected units

Regulatory Asset Base

RAB is based on cost (w/o revaluation) accounting for the proposed investment plan.

Return

Return on Regulatory asset is based on Notional debt to equity ratio (note 1), USD based RoE of 15% as allowed in current MYT and cost of debt given below

Cost of debt

Cost of debt includes local and foreign cost of debt, including hedging cost, as explained in Financing section in the KIIP

Working capital cost

Working Capital Component similar to NTDC has been used and the same has been incorporated in the projected Profit & Loss & Balance Sheet calculations, comprising of:

- Stores & Spares at 3% of the Gross Investment in Fixed Assets (i.e. Cost).
- Trade Receivables equating to 30 days of sales
- Cash & Bank Balances at 1/6th of O&M expenses.
- Current Liabilities taken at 2/3rd of the above mentioned assets.

Consequently, the remaining amount of assets are to be financed by borrowings for which cost has been computed at the reference KIBOR Rates with spread of 2% (for short term borrowing). The same has been considered for both Revenue & Finance Cost computations.

Pass through cost

Other pass through costs including Tax and WPPF pass through

Tariff petition will include detailed discussion on the Tariff workings and related adjustment mechanisms, and we understand that Tariff workings and related adjustment mechanism will be discussed in separate proceedings.

Projected Financials have been based on the following reference macro-economic conditions:

- PKR/ USD Exchange Rate of 206, as of June 2022.
- KIBOR & LIBOR of 15.16% & 2.29% respectively, as of June 2022.
- USCPI & Pak CPI of 282.03 & 158.48 respectively, average for FY22.

This will be subject to indexation based on actual

An Investment plan revision mechanism has been proposed for accounting for the variations in aforementioned macro-economic assumptions as well as changes in scope of Investment plan and their consequent impacts on the projected investment plan and the projected tariff components, which has been discussed in detail in section VI (8).

Projected Profit and loss account, Balance sheet and cash flow statements have been worked out keeping in view above assumptions, tariff components and working capital requirements and cost of assets w/o revaluation for the purpose of tariff.

Note: 1 The issue of applying notional 70:30 debt to equity ratio for the purpose of determining KE's Return on Regulatory Asset Base and non-consideration of actual invested equity is taken up in the Appeal filed before the NEPRA Appellate Tribunal under the applicable laws. Accordingly KE's proposed investment plan and projected Financial statements are without prejudice to the Appeal and subject to final outcome of such Appeal, any relief granted by the NEPRA Appellate Tribunal in such proceedings, the impact of the same shall be incorporated in this plan accordingly.

The projections and forecasts contained in this investment plan and projected financial statements are only intended for NEPRA for the purposes of evaluating and determining KE's MYT for Transmission & Distribution segment. The plan contained in this investment plan is based on expectations, estimates and projections at the time of filing of the same that could differ from actual results or events owing to business and operational risks and change in scope and circumstances. The information contained in this plant is not intended as a solicitation or recommendation of investments. Under no circumstances should this information be relied on or treated as legal or other professional advice. Although KE has taken the greatest possible care in compiling this information, it assumes no responsibilities for any reliance for investment decisions placed thereon.

Projected Income Statement - Distribution

PKR in million

Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenue	46,765	53,370	60,226	66,627	72,058	76,626	80,678
Expenses							
O&M Expenses - Net	17,881	18,442	18,885	19,267	19,599	19,922	20,219
Depreciation	7,690	8,723	9,950	11,199	12,329	13,344	14,286
Amortization of deferred revenue	(2,781)	(2,606)	(2,441)	(2,287)	(2,142)	(2,007)	(1,880)
WPPF	383	444	509	568	618	657	692
Total expenses	23,172	25,003	26,903	28,748	30,404	31,917	33,317
Operating Profit	23,593	28,366	33,323	37,878	41,654	44,709	47,361
Finance cost	15,557	19,049	22,642	25,950	28,680	30,907	32,832
Profit before tax	8,036	9,317	10,681	11,928	12,974	13,803	14,529
Tax expense	585	667	753	833	901	958	1,008
Profit after tax	7,451	8,650	9,928	11,095	12,073	12,845	13,521

Projected Balance Sheet - Distribution

Annexure P

PKR in million							? in million
Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
ASSETS							
Property, plant and equipment	156,847	179,785	201,083	220,338	233,920	246,537	256,244
Stores and spares	5,743	6,516	7,354	8,159	8,859	9,491	10,081
Trade Debts	3,764	4,295	4,846	5,361	5,798	6,165	6,491
Cash and bank	2,980	3,074	3,148	3,211	3,267	3,320	3,370
Total Assets	169,334	193,671	216,431	237,069	251,843	265,513	276,186
LIABILITIES & EQUITY							
Long term loans	85,077	103,424	120,528	136,069	147,473	158,061	166,494
Deferred revenue	41,255	38,649	36,208	33,922	31,779	29,772	27,892
Other current liabilities	8,325	9,257	10,232	11,154	11,949	12,651	13,294
Total liabilities	134,656	151,330	166,968	181,144	191,201	200,484	207,680
Equity & Intercompany Balances	34,678	42,341	49,462	55,925	60,642	65,029	68,506
Total Liabilities & Equity	169,334	193,671	216,431	237,069	251,843	265,513	276,186

K-Electric Limited Integrated Investment Plan - FY 2024 to FY 2030 Projected Cash Flow Statement - Distribution

						PKR	in million
Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Cook Flavor from Operating Astivities							
Cash Flows from Operating Activities Profit after tax	7.451	8,650	9,928	11,095	12.072	12.045	13,521
	7,451	-			12,073	12,845	
Depreciation	7,690	8,723	9,950	11,199	12,329	13,344	14,286
Amortisation of deferred revenue	(2,781)	(2,606)	(2,441)	(2,287)	(2,142)	(2,007)	(1,880)
Finance Cost	15,557	19,049	22,642	25,950	28,680	30,907	32,832
Sub Total	27,917	33,817	40,080	45,958	50,940	55,089	58,758
(Increase) / decrease in Working Capital Assets	(608)	(1,305)	(1,389)	(1,319)	(1,137)	(999)	(916)
Increase / (decrease) Working Capital Liabilities	514	932	975	922	795	702	644
Change in working capital	(94)	(373)	(414)	(397)	(342)	(297)	(272)
Net Cash Flow from Operating Activities	27,822	33,444	39,666	45,561	50,598	54,791	58,486
Cash Flows from Investing Activities							
Investment in Fixed Assets	(27,784)	(31,994)	(31,626)	(30,876)	(26,369)	(26,445)	(24,501)
Disposal Proceeds	289	333	378	421	458	483	507
Net Cash Flow from Investing Activities	(27,495)	(31,661)	(31,248)	(30,455)	(25,911)	(25,962)	(23,993)
Cash Flows from Financing Activities							
Drawdown/(Repayment) of Long Term Debt	15,810	17,881	16,617	15,079	11,007	10,237	8,112
Finance Cost Paid	(15,557)	(19,049)	(22,642)	(25,950)	(28,680)	(30,907)	(32,832)
Intercompany Balance	(675)	(987)	(2,806)	(4,633)	(7,356)	(8,457)	(10,044)
Drawdown/(Repayment) of Short Term Debt	257	466	488	461	397	351	322
Net Cash Flow from Financing Activities	(165)	(1,689)	(8,344)	(15,042)	(24,632)	(28,776)	(34,443)
Net Cash Generated	163	94	74	64	55	54	49
Opening Balance	2,818	2,980	3,074	3,148	3,211	3,267	3,320
Closing Balance	2,980	3,074	3,148	3,211	3,267	3,320	3,370

Transmission Projects

Introduction Annexure Q

As mentioned in Section VI of **KIIP**, KE plans to invest **PKR 280,915** million for expanding and improving the performance of the transmission infrastructure during the proposed control period of FY 2024 to FY 2030 (projected at current macro-economic factors i.e., exchange rate of PKR 206 / USD at June 30, 2022 and CPI of FY 22 and is proposed to be adjusted through an indexation mechanism included in **Section VI (8) of the KIIP)** is primarily divided into five categories: (i) Growth Projects, (ii) Interconnection for off take from NTDC (iii) Interconnection for off take from IPPs (iv) System Improvement / Reliability; and (v) Reactive Power Management and Loss Reduction Projects which are discussed in detail in the subsequent sections.

S.No.	Projects	Expected	Expected	PKR in Million	
5.NO.	Projects	Project Start	Project End	Till FY231	FY24-30
A	Growth				
1	Auto Transformers	Multiple	Multiple	1	5,245
2	DHA-4	Jul-27	Jun-30	1	9,053
3	GSMO/TRN Special Projects	Multiple	Multiple	1	1,268
4	HOSPITAL - 2	Jan-27	Jun-29	ī	7,681
5	HVUB	Jul-23	Jun-25	31	21,734
6	K. CENTRAL - 1	Jul-24	Jun-26	-	8,068
7	220kV/132kV KKI	Jul-25	Jun-27	-	8,441
8	Landhi	Jan-24	Jun-26	-	19,653
9	LILO STDC Interconnection	Jul-23	Jun-24	-	594
10	MALIR - 2	Jan-27	Jun-29	-	5,160
11	MAYMAR - 2	Jul-27	Dec-29	-	4,572
12	Power Transformers	Multiple	Multiple	-	4,743
13	SITE - 2	Jul-24	Jun-26		7.10 6
13a	SITE-2 PTR addition	Jul-29	Jun-30	_	7,186
14	Ziauddin	Jul-25	Jun-28	-	37,353
В	Interconnection	T 1	T		
15	Interconnection 350MW renewable	Jul-23	Jun-25	-	7,523
16	Interconnection 500kV KKI GS	Feb-22	Jun-24	8,856	17,618
17	Interconnection 600MW Step up Grid	Jul-24	Jun-27	-	14,962
18	Interconnection Dhabeji and KKI	Mar-23	Jun-24	241	4,584
19	Interconnection NKI Augmentation	Jul-24	Jun-26	-	7,604
20	IPP Interconnection Metering	Multiple	Multiple	-	568
C	Reactive Power Management and Los	s Reduction			
21	Capacitor Bank	Multiple	Multiple	-	3,171
	-		_		
D	System Improvement / Reliability				
22	N-1 Transmission Lines Rehabilitation	Multiple	Multiple	-	21,953
23	N-1 New Transmission Lines	Multiple	Multiple	-	9,342
24	N-1 others	Multiple	Multiple	-	13,886
25	Routine Maintenance and Improvement	Multiple	Multiple	-	24,039
26	Safety	Multiple	Multiple	-	3,859
27	SCADA and Other Automation Equipment	Jul-28	Jun-30	-	9,682

¹ Forecasted

S.No.	Projects	Expected	Expected	PKR in Million		
S.No.		Project Start	Project End	Till FY23 ¹	FY24-30	
28	Short Circuit control	Jul-24	Jun-25	-	1,373	
	Total			9,082	280,915	

Transmission Projects

Section A: Growth Projects

Proje	Project Number 1				
1.	Name of Project	Additional Auto Transformer			
2.	Location	Multiple			
3.	Scope in Brief / Objectives	 Addition of 220/132kV 1x250 MVA auto transformer at 220kV Surjani Grid Station in year 2025. Addition of 220/132kV 1x250 MVA auto transformer at 220kV Gulshan Grid Station in year 2026. Addition of 220/132kV 1x250 MVA auto transformer at 220kV Maripur Grid Station in year 2027. 			
		As a result, additional 750 MVA capacity will be added in the system at 3 existing grid stations which will help to meet increasing power demand.			
4.	Category	Growth Project			
5.	Туре	Extension (ATR addition at existing grids)			
6.	Funding Source	Please refer KIIP Section VI			
7.	Cost as per Approved Estimate	PKR 5,245 million			
8.	Commencement Date	July 2024 (expected)			
9.	Completion date	June 2027 (expected)			
	Physical progress:	Not yet started			
10.	Physical progress (major works done):	Not Applicable			
	Physical completion (in %age terms):	Not Applicable			
	Financial Progress %	Not yet started			
11	Total Cost Incurred till Jun 2022 million Rupees	Zero			
12.	Outcomes of the project after completion /Benefits	The addition of Auto Transformer will enable to cater new load growth near respective load centers alongside increasing reliability of power system. This will also help in optimal management of network, loss reduction and voltage regulation.			

Proje	Project Number 2				
1.	Name of Project	DHA – 4 220/132KV Grid Station			
2.	Location	Defence Housing Society			
3.	Scope in Brief / Objectives	 01 x 250 MVA 220/132kV Auto Transformer. 220kV K. Creek – CCP Transmission line in/out at 220KV DHA – 4 Grid Station of 5km length 			
		New 220kV Grid Station is required to meet the increasing demand growth in developing sectors of DHA area			
4.	Category	Growth Project			
5.	Туре	New Grid			
6.	Funding Source	Please refer KIIP Section VI			
7.	Cost as per Approved Estimate	PKR 9,053 million			
8.	Commencement Date	July 2027 (expected)			
9.	Completion date	June 2030 (expected)			
	Physical progress:	Not yet started			
10.	Physical progress (major works done):	Not Applicable			
	Physical completion (in %age terms):	Not Applicable			
	Financial Progress %	Not yet started			
11	Total Cost Incurred till Jun 2022 million Rupees	Zero			
12.	Outcomes of the project after completion / Benefits	The project will enable to cater the upcoming load growth in DHA area. This will enable maintaining adequate load profile on existing Auto transformers of this island whilst having N-1 contingency provision			

Proje	Project Number 3				
1.	Name of Project	GSMO/TRN Special project			
2.	Location	Multiple			
3.	Scope in Brief / Objectives	Rehabilitation of 3x 132kV Transmission Lines o 132kV Surjani- Valika o 132kV KDA – Memon Goth o 132kV Pipri- KEPZ Addition of Switchgears at Port Qasim and North Nazimabad. RTV Coating and Tower rehabilitations Line Diversion of 132kV Pipri - Port Qasim - Landhi.			
4.	Category	Growth Project			
5.	Туре	Augmentation / Extension			
6.	Funding Source	Please refer KIIP Section VI			
7.	Cost as per Approved Estimate	PKR 1,268 million			
8.	Commencement Date	July 2024 (expected)			
9.	Completion date	June 2025 (expected)			
	Physical progress:	Not yet started			
10.	Physical progress (major works done):	Not Applicable			
	Physical completion (in %age terms):	Not Applicable			
	Financial Progress %	Not yet started			
11	Total Cost Incurred till Jun 2022 million Rupees	Zero			

Proje	Project Number 3				
1.	Name of Project	GSMO/TRN Special project			
	Outcomes of the project	Rehabilitation of 3x 132kV Transmission Lines:			
		Upgradation of existing Transmission lines is planned to avoid Transmission congestion and for increasing reliability by replacement of aged / deteriorated conductor.			
		Addition of Switchgears at Port Qasim and North Nazimabad:			
		This project will enable to cater new load growth in Port Qasim industrial area and upcoming residential load growth in Nazimabad.			
12.	after completion /	RTV Coating:			
	Benefits	This project will help increasing system stability and reduce Transient Trips of Transmission line. RTV coated insulators will be deployed on Transmission lines near coastal belt which are more prone to trips.			
		Tower rehabilitations & Line diversion:			
		This project is for safety perspective for diversion of lines from encroached areas and to increase mechanical strength by rehabilitation of existing Transmission towers that will result in increased reliability			

Proje	Project Number 4				
1.	Name of Project	Hospital-2 132/11KV Grid Station			
2.	Location	Gulistan-e-Johar			
3.	Scope in Brief / Objectives	 01 x 40 MVA 132/11kV Power Transformer. 132kV S/C T/Line from Existing 132kV Hospital Grid Station. (3 KM) 132kV S/C T/Line from Existing 132kV KDA Grid Station. (10 KM) New 132kV Grid Station is required to meet the demand growth in Johar area providing relief to existing Hospital Grid Station. 			
4.	Category	Growth Project			
5.	Туре	New Grid			
6.	Funding Source	Please refer KIIP Section VI			
7.	Cost as per Approved Estimate	PKR 7,681 million			
8.	Commencement Date	Jan 2027 (expected)			
9.	Completion date	June 2029 (expected)			
	Physical progress:	Not yet started			
10.	Physical progress (major works done):	Not Applicable			
	Physical completion (in %age terms):	Not Applicable			
	Financial Progress %	Not yet started			
11	Total Cost Incurred till Jun 2022 million Rupees	Zero			
12.	Outcomes of the project after completion / Benefits	The new grid station will enable to serve the upcoming load growth in Johar area.			

Proje	ect Number 5	
1.	Name of Project	Hub Vinder Uthal Bela
2.	Location	Hub, Vinder, Uthal and Bela
		To further strengthen the network, KE has planned rehabilitation of existing transmission lines from Hub-Chowki to Bela grid and enhancement of grids in Vinder, Uthal & Bela which includes upgradation of 66 kV to 132 kV level.
3.	Scope in Brief / Objectives	Scope: Upgradation of 66 kV to 132kV Grid stations along with 132kV Transmission Lines. Summary of major scope of works is mentioned below: • 3x40MVA Power Transformers and 132kV Bays in three Grids
		150KM 132KV double circuit Transmission Line
4.	Category	Growth Project
5.	Type	3 New Grid stations and complete replacement of transmission line.
6.	Funding Source	Please refer KIIP Section VI
7.	Cost as per Approved Estimate	PKR 21,764 million
8.	Commencement Date	July 2023 (expected)
9.	Completion date	June 2025 (expected)
	Physical progress:	Not yet started
10.	Physical progress (major works done):	Tender preparation is under final stages.
	Physical completion (in %age terms):	Not Applicable
	Financial Progress %	Not yet started
11	Total Cost Incurred till Jun 2022 million Rupees	31 million
12.	Outcomes of the project after completion / Benefits	Upgradation of 66 kV to 132kV Grid stations along with 132kV Transmission Lines will improve the power quality and reduce losses alongside enhancing capacity of grids. Further, this will also enable evacuation of 150MW power from Solar projects at Vinder and Bela.

Proje	Project Number 6			
1.	Name of Project	K-Central 132/11KV Grid Station		
2.	Location	Korangi Industrial Area		
3.	Scope in Brief / Objectives	 02 x 40 MVA 132/11kV Power Transformer. 132kV Qayyumabad - K. East T/Line & 132kV Qayummabad - K. South T/Line in/out at new 132KV K-Central Grid Station (8 KM). New 132kV Grid Station is required to meet the upcoming industrial load growth in KATI area. 		
4.	Category	Growth Project		
5.	Туре	New Grid		
6.	Funding Source	Please refer KIIP Section VI		
7.	Cost as per Approved Estimate	PKR 8,068 million		
8.	Commencement Date	July 2024 (expected)		
9.	Completion date	June 2026 (expected)		
	Physical progress:	Not yet started		
10.	Physical progress (major works done):	Not Applicable		
	Physical completion (in %age terms):	Not Applicable		
	Financial Progress %	Not yet started		
11	Total Cost Incurred till Jun 2022 million Rupees	Zero		
12.	Outcomes of the project after completion /Benefits	The new grid station will enable to serve the upcoming industrial load growth relieving the existing feeding grids.		

Proje	Project Number 7				
1.	Name of Project	KKI 220kV/132KV Grid Station			
2.	Location	KDA Scheme 42 Road, Hawksbay Town			
3.	Scope in Brief / Objectives	 01 x 250 MVA 220/132kV Auto Transformer. 132kV D/C T/Line from existing 132KV HUB Chowki Grid Station. (18 KM). New 132kV Grid Station is required to meet the increasing demand growth in developing sectors of baldia and adjoining areas. 			
4.	Category	Growth Project			
5.	Туре	New Grid			
6.	Funding Source	Please refer KIIP Section VI			
7.	Cost as per Approved Estimate	PKR 8,441 million			
8.	Commencement Date	July 2025 (expected)			
9.	Completion date	June 2027 (expected)			
	Physical progress:	Not yet started			
10.	Physical progress (major works done):	Not Applicable			
	Physical completion (in %age terms):	Not Applicable			
	Financial Progress %	Not yet started			
11	Total Cost Incurred till Jun 2022 million Rupees	Zero			
12.	Outcomes of the project after completion / Benefits	The project will enable to cater the upcoming load growth in Baldia and adjoining areas. This will enable maintaining adequate load profile on existing Auto transformers of this island whilst having N-1 contingency provision.			

Proje	Project Number 8		
1.	Name of Project	Landhi 220kV Grid Station	
2.	Location	Landhi	
3.	Scope in Brief / Objectives	 01 x 250 MVA 220/132kV Auto Transformer. 220kV D/C T/Line from existing 220kV BQPS – 3 Grid Station. (30 KM). New 220kV Grid Station is required to meet the increasing industrial & residential demand growth in developing sectors of Landhi and adjoining area. 	
4.	Category	Growth Project	
5.	Туре	New Grid	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 19,653 million	
8.	Commencement Date	Jan 2024 (expected)	
9.	Completion date	June 2026 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The project will enable to cater the upcoming load growth in Landhi and adjoining areas. This will enable maintaining adequate load profile on existing Auto transformers of this island whilst having N-1 contingency provision. and provide relief to Pipri West Island.	

Proje	Project Number 9		
1.	Name of Project	LILO STDC Interconnection	
2.	Location	Gadap Town	
3.	Scope in Brief / Objectives	132kV KDA – SNPC Transmission Line in/out at 132KV Gadap Grid Station	
4.	Category	Growth Project	
5.	Туре	New Transmission Line (LILO)	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 594 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2024 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	This project will allow to improve the power quality and reduce losses alongside serving increased demand in the Gadap area. Energization of 132kV Gadap Grid will support to serve additional load of consumer in Gadap Town area	

Proje	Project Number 10		
1.	Name of Project	Malir – 2 132/11KV Grid Station	
2.	Location	Malir Cantt	
3.	Scope in Brief / Objectives	 01 x 40 MVA 132/11kV Power Transformer. 132kV Landhi – Johar T/Line in/out at 132kV Malir – 2 Grid Station (3 KM). New 132kV Grid Station is required to meet the demand growth in Malir and adjoining areas. 	
4.	Category	Growth Project	
5.	Туре	New Grid	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 5,160 million	
8.	Commencement Date	Jan 2027 (expected)	
9.	Completion date	June 2029 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The new grid station will enable to serve the upcoming load growth relieving the existing feeding grids.	

Proje	Project Number 11		
1.	Name of Project	Maymar – 2 132/11KV Grid Station	
2.	Location	Gulshan-e-Maymar	
3.	Scope in Brief / Objectives	 01 x 40 MVA 132/11kV Power Transformer. 132kV Maymar – Surjani T/Line in/out at 132kV Maymar – 2 Grid Station (3 KM). 	
		New 132kV Grid Station is required to meet the upcoming demand growth in Maymar & adjoining areas.	
4.	Category	Growth Project	
5.	Type	New Grid	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 4,572 million	
8.	Commencement Date	Jul 2027 (expected)	
9.	Completion date	Dec 2029 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The new grid station will enable to serve the upcoming load growth relieving the existing feeding grids.	

Proje	Project Number 12		
1.	Name of Project	Addition & Augmentation of Power Transformer	
2.	Location	Multiple	
3.	Scope in Brief / Objectives	 Addition of 132/11kV 01x67 MVA transformer at 132kV Jail Grid Station in year 2024. Addition of 132/11kV 01x67 MVA transformer at 132kV KESC Hospital Grid Station in year 2024. Addition of 132/11kV 01x40 MVA transformer at 132kV Port Qasim Grid Station in year 2028. Augmentation of 132/11kV transformer from 01x26 MVA to 01x67MVA capacity at 132kV KEPZ Grid Station in year 2030. 	
		This will help to meet increasing power demand alongside enhancing capacity of grids. The project will help in reduction of overloading of existing transformer and will help enhance the power transformers capacity to cater the increasing demand growth.	
4.	Category	Growth Project	
5.	Туре	Augmentation & Extension	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 4,743 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
11	Financial Progress %	Not yet started	
	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The addition & enhancement of power transformer will enable to cater new industrial & residential load growth in respective areas alongside increasing the capacity of grids. This will provide relieve to existing feeding grids thereby enhancing overall system efficiency.	

Proje	Project Number 13		
1.	Name of Project	Site – 2 132/11kV Grid Station	
2.	Location	Site Industrial Area	
3.	Scope in Brief / Objectives	 O1 x 40 MVA 132/11kV Power Transformer in Jun 26 and O1 40 MVA 132/11kV Power Transformer in FY 2030 132kV Valika - Nazimabad T/Line in/out at 132kV Site – 2 Grid Station (3 KM). New 132kV Grid Station is required to meet the upcoming industrial load growth in SITE area and residential load in adjoining areas. 	
4.	Category	Growth Project	
5.	Туре	New Grid	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 7,186 million	
8.	Commencement Date	July 2024 (expected) – New Grid July 2029 (expected) – PTR Addition	
9.	Completion date	June 2026 (expected) – New Grid June 2030 (expected) – PTR Addition	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion/ Benefits	The new grid station will enable to serve the upcoming industrial & residential load growth relieving the existing feeding grids.	

Proje	Project Number 14		
1.	Name of Project	Ziauddin 220/132KV Grid Station	
2.	Location	North Nazimabad	
3.	Scope in Brief / Objectives	 02 x 250 MVA 220/132kV Auto Transformer. 220kV D/C T/Line from existing 220kV Surjani Grid Station. (20 KM). 132kV Valika - Nazimabad T/Line in/out at 132kV Ziauddin Grid Station. (4 KM) 	
		New 220kV Grid Station is required to meet the increasing demand growth in developing sectors of KDA and Surjani area.	
4.	Category	Growth Project	
5.	Туре	New Grid	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 37,353 million	
8.	Commencement Date	July 2025 (expected)	
9.	Completion date	June 2028 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion/ Benefits	The project will enable to cater the upcoming load growth in KDA & Surjani area. This will enable maintaining adequate load profile on existing Auto transformers of this island whilst having N-1 contingency provision.	

Transmission Projects

Section B:

Interconnection Forms

Proje	Project Number 15		
1.	Name of Project	Addition of Transmission line for 350MW renewable power plants	
2.	Location	Gharo corridor	
3.	Scope in Brief / Objectives	Scope: 220kV Baldia – Surjani T/Line in/out at 220kV 350MW Surjani Solar Grid Station. (20 KM)	
		Objective: For evacuation of power from 350MW Surjani Solar Projects.	
4.	Category	Interconnection Project (IPP)	
5.	Туре	New Line	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 7,523 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2025 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The project will enable to evacuate the power from upcoming generation from renewables alongside managing Demand / Supply gap. This will also improvise the load flow of 220kV network and enable to increase quantum of clean and cheaper energy in KE fleet which is in line with NEP guidelines. It will also result in reducing KE's reliance on imported fuel and will decrease its generation cost due to induction of cheaper solar energy. The Inter connection is required for connecting GoS 350 MW solar power projects (being done in co-ordination with World Bank) where KE will be acting as Power Purchaser.	

Proje	Project Number 16		
1.	Name of Project	500 kV KKI Grid station	
2.	Location	KKI Hawksbay Scheme 42 Hawksbay Town	
3.	Scope in Brief / Objectives	Scope: Construction of New Grid Station with 3x600MVA ATR, 500kV & 220kV bays and 220kV Transmission Line Objective: To off-take additional power from the National grid	
4.	Category	Interconnection Project (NTDC)	
5.	Туре	New Grid Station and Transmission Line	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 26,428 million	
8.	Commencement Date	February 2022	
9.	Completion date	June 2024	
	Physical progress:		
10.	Physical progress (major works done):	Land allotted to KE in Dec 2021 Construction of 500kV and 220kV GIS building and control house building is in progress. Design of major long lead items has been approved and manufacturing go-ahead has been granted for 500kV GIS, 220kV GIS, 200MVA ATR, CCVT, Power VT.	
	Physical completion (in %age terms):	14% (Transmission) & 10% (Grid)	
4.4	Financial Progress till June 2022 (in %)	5%	
11	Total Cost Incurred till Jun 2022 million Rupees	PKR 1,383 million	
12.	Outcomes of the project after completion / Benefits	This project will aid in evacuation of power from National grid alongside enhancing the network capacity and reliability of power system. This will also help in optimal management of network, loss reduction and voltage regulation. It will further help KE in utilizing cheaper energy available in National Grid and in meeting the future increase in KE demand.	

Proje	Project Number 17		
1.	Name of Project	Step up 220KV Grid for 600MW WPP-Solar Power Plant	
2.	Location	Gharo corridor	
3.	Scope in Brief / Objectives	Scope: Construction of New step up 220KV Grid Station and 220KV D/C T/L from Dhabeji to WPP- Solar Power Plant. Major scope consist of following: • 3x 250MVA Auto Transformers • 6x 220kV GIS Bays and 3x 132kV GIS bays • 20KM 220kV D/C Transmission Line	
		Objective: Evacuation of Power from 600MW renewable power projects to 220kV Circuit.	
4.	Category	Interconnection Project (IPP)	
5.	Туре	New Grid Station and Transmission Line	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 14,962 million	
8.	Commencement Date	July 2024 (expected)	
9.	Completion date	June 2027 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The project will enable to evacuate the power from upcoming generation from renewables alongside managing Demand / Supply gap. This will also improvise the load flow of 220kV network and enable to increase quantum of clean and cheaper energy in KE fleet which is in line with NEP guidelines. It will also result in reducing KE's reliance on imported fuel and will also decrease its generation cost due to induction of cheaper renewable energy.	

Proje	Project Number 18		
1.	Name of Project	NTDC Interconnection Transmission Lines – 500KV KKI and 220KV Dhabeji	
2.	Location	Dhabeji and KKI grid stations	
3.	Scope in Brief / Objectives	Scope: Construction of New Transmission Lines: ■ looping In /Out of Jhimpir-2 - Jhimpir/DSEZ (Gharo) single circuit at 220 kV Dhabeji grid station (3.04KM) ■ 500 kV double circuit transmission line for looping in/out of the planned 500 kV (K2/K3) plant to Port Qasim coal fired power plant single circuit at KKI grid station (4.428KM)	
		Objective: These lines are required for interconnection of KE network with NTDC which will enable KE to Import additional power from National Grid.	
4.	Category	Interconnection Project (NTDC)	
5.	Туре	New Line	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 4,825 million	
8.	Commencement Date	Mar 2023 (expected)	
9.	Completion date	June 2024 (expected)	
	Physical progress:		
10	Physical progress (major works done):	<u>220kV Dhabeji Interconnection</u> : Bids have been received and KE has requested Authority for the approval of project cost, the response to which is awaited.	
10.		550kV KKI Interconnection: Bids have been received which are currently under evaluation.	
	Physical completion (in %age terms):	Zero	
	Financial Progress %	Not applicable	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	This project will aid in evacuation of power from National grid alongside enhancing the network capacity and reliability of power system. This will also help in optimal management of network, loss reduction and voltage regulation. This will help KE in utilizing cheaper energy available in National Grid and in meeting the future increase in KE demand.	

Proje	Project Number 19		
1.	Name of Project	Augmentation at NKI	
2.	Location	NKI Grid	
3.	Scope in Brief / Objectives	Scope: Installation of 600MVA ATR, construction of 220KV LILO Baldia - Surjani Solar T/L at 220KV NKI Grid Station and metering. Objective: The project is required for the evacuation of increased power from NTDC network through wheeling from upcoming coal generation projects in Thar area.	
4.	Category	Interconnection Project (NTDC)	
5.	Туре	Extension in NKI Grid and New Transmission Line	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 7,604 million	
8.	Commencement Date	July 2024 (expected)	
9.	Completion date	June 2026 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	The addition of 600MVA ATR and LILO of NKI between Baldia – Surjani will help evacuate increased power from NTDC while ensuring reliability of the network. This will also help in optimal management of network, loss reduction, voltage regulation and N-1 contingency This is necessary for KE as it will result in additional drawl from NTDC after commissioning of over 400 MW Thar coal and hydel power plants which will result in reducing KE's reliance on imported fuel and meeting the future increase in KE demand.	

Proje	Project Number 20		
1.	Name of Project	IPPs Interconnection Metering	
2.	Location	Multiple	
3.	Scope in Brief / Objectives	Scope: Installation of IPPs interconnection metering at multiple locations.	
4.	Category	Interconnection Project (IPPs)	
5.	Туре	IPPs Interconnection Metering	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 568 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2029 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	To measure use of energy for billing and load at new proposed IPPs.	

K-Electric Limited Integrated Investment Plan (FY24-FY30)
Transmission Projects
Section C:
Reactive Power Management and Loss Reduction

Proje	Project Number 21		
1.	Name of Project	Capacitor Bank	
2.	Location	Multiple	
	Scope in Brief / Objectives	Additional Capacitor banks at 11 kV level is to maintain the power factor of 0.95 or higher at the interconnection points with NTDC and optimization of transmission loss profile.	
3.		Objective: To manage the reactive power demand of the system while upkeeping and improving the power quality parameter and transmission loss profile.	
4.	Category	Reactive power management and Loss Reduction	
5.	Туре	Capacitor Bank	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 3,171 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till Jun 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	Addition of capacitors will help to upkeep and improve/ maintain the power factor and voltage profile of the system as per grid code guidelines. Moreover, this will help reduce the transmission losses and increase the active power transfer capability of the system.	

Transmission Projects

Section D:

System Improvement and Reliability Forms

Proje	Project Number 22		
1.	Name of Project	Rehabilitation of Transmission lines	
2.	Location	Multiple	
3.	Scope in Brief / Objectives	Scope: Rehabilitation of different lines is planned from FY 2025 to 2029 with an estimated capex of 21,952 million. Rehabilitation of aged/ deteriorated transmission lines to increase the power transmission capacity of the system in order to cater increase demand alongside improving reliability of network.	
4.	Category	System Improvement and Reliability	
5.	Туре	Rehabilitation	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 21,952 million	
8.	Commencement Date	July 2024 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till June 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	Upgradation of existing Transmission lines is planned to avoid Transmission congestion and for increasing reliability by replacement of aged / deteriorated conductor.	

Proje	Project Number 23		
1.	Name of Project	N-1 Addition of New transmission Lines	
2.	Location	Multiple	
3.	Scope in Brief / Objectives	 Construction of New 132KV T/L from Landhi to K-South Grid Station in FY 2030 with an estimated capex of 2,882 million. Construction of 132kV S/C T/L from KTPS to Korangi South G/S in FY 2025 with an estimated capex of 797 million. 	
J.		 Construction of New 220KV LILO Dhabeji – New Port Qasim at Thermal Power Plant in FY 2027 with an estimated capex of 4,162 million. 	
		 Taking over 132kV KTPS / Qayyumabad from NTDC for reliable evacuation of 200MW power from KTPS. 	
4.	Category	Addition – System Improvement and reliability	
5.	Туре	N-1	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 9,342 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till June 2022 million Rupees	Zero	

Project Number 23		
1.	Name of Project	N-1 Addition of New transmission Lines
13.		New 132KV T/L from Landhi to K-South Grid: This line will help reduce congestion on existing alternate serving transmission lines. Moreover, it will increase the reliability of network whilst providing provision of load transfer among islands.
	Outcomes of the project	New 132kV S/C T/L from KTPS to Korangi South G/S: This line will help reduce congestion on existing alternate serving transmission lines. Moreover, it will increase the reliability of network whilst having N-1 contingency provision.
	after completion / Benefits Construction of No. This will help to evacuate	Construction of New 220KV LILO Dhabeji – New Port Qasim: This will help to evacuate power with reliability from Thermal power plant for meeting the increased demand growth of the system.
		Taking over of 132kV KTPS / Qayyumabad circuits from NTDC: The line is currently in use by KE for evacuation of 200MW power from KTPS while ensuring increased efficiency and provision of N-1 contingency. NTDC has submitted a request to KE to purchase the linfor which verification of cost is currently being done by KE.

Proje	Project Number 24		
1.	Name of Project	N-1 Other projects	
2.	Location	Multiple	
	Scope in Brief / Objectives	Scope: • 132KV Jacob Baloch transmission line project is under execution and is expected to be completed by June 2023. However, SCADA integration works is planned in FY 2024 with an estimated capex of PKR 158million.	
3.		 132 KV bay replacement is planned in FY 2028, 2029 and 2030 with an estimated capex of PKR 2,490million. 	
J.		 Auto transformer replacement is planned in FY 2029 and 2030 with an estimated capex of PKR 2,336million. 	
		• Fire Sprinkling System for 130 Power transformer is planned in FY 2026 to 2028 with an estimated capex of 3,600million.	
		 Replacement of OFC cable is planned in FY 2028 to 2030 with an estimated capex of PKR 5,301million. 	
4.	Category	System Improvement and reliability	
5.	Туре	Other	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 13,886 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till June 2022 million Rupees	Zero	

Project Number 24		
1.	Name of Project	N-1 Other projects
		132KV Jacob Baloch Telecom network installation: This will help in integration of grids for remote monitoring and control thereby enhancing quality and control.
		132 KV Bay Replacement: Replacement of aged/ deteriorated equipment will improve system reliability.
12.	Outcomes of the project after completion / Benefits	Auto Transformer Replacement: Replacement of aged/ deteriorated Auto Transformer will increase the power transformation capability while increasing the reliability of power system. This will also help in optimal management of network, loss reduction and voltage regulation.
		Fire Sprinkling System for 130 Power transformer: This will enhance safety and security of grid equipment and surrounding ensuring reliability of supply.
		Replacement of OFC cable: Replacement of old deteriorated and technologically obsolete circuits will improve the reliability of the system whilst enhancing power transfer capacity.

Proje	Project Number 25		
1.	Name of Project	Routine Maintenance and Improvement	
2.	Location	Multiple	
		 Routine Grid Station Maintenance, Protection and Operations (GSMPO) Scope covers: Addition of Switchgear, Overhauling of GIS bays, Power Transformer, Relays and allied equipment's and services, Repair and maintenance of transformers, Capacitor, Analyzer etc. Routine Overhead Lines Scope covers: RTV coating Supply & Services, Strengthening of Tower Structure & HT Poles, Replacement/Installation by Composite Insulators on 132KV, Damper Spacer / Vibration, Li-Dar Survey etc. 	
3.	Scope in Brief / Objectives	 Routine SCADA Scope covers: Addition of Cards / Switches / Boards / RTU Racks / Gateway / Modules, Marshalling system, Rehab of Grid Automation System, Barco Wall for LDC & DRC with Spares, Long Term Load Forecast – application, Complete Station Data monitoring and EHT & HT Bays Control etc. 	
		Routine Telecom Scope covers: • SDH/PDH System Installation/Services/Spares, OPGW Cable / Services, Line Trap Current Circuit enhancement etc.	
		 Routine Underground Lines Scope Covers: Cable / Termination / Joint & Accessories, Cable Replacement Project, Solid / Cross Link etc. 	
		The routine maintenance and improvement capex is planned for each year under above mention categories.	
4.	Category	System Improvement and reliability	
5.	Туре	Routine Maintenance Capex	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 24,039 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not Applicable	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
11	Financial Progress %	Not yet started	

Proje	Project Number 25		
1.	Name of Project	Routine Maintenance and Improvement	
	Total Cost Incurred till June 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	Routine maintenance of system will improve the overall reliability and security of the system. This will also ensure uninterrupted and secure transition of data/ information over telecom network. Moreover, the visibility of network on SCADA system will be secured allowing efficient remote monitoring and control. The overall system will be less prone to failure of equipment.	

Proje	Project Number 26		
1.	Name of Project	Civil work with Yard Extension and relocation of Overhead transmission lines.	
2.	Location	Multiple	
		Scope of safety works mainly includes:	
3.	Scope in Brief / Objectives	 Relocation of OHTL is also planned at different locations with estimated capex of PKR 828 million in FY 2029 and 2,381 million in FY 2030. 	
		Civil work with yard extension at Site, North Karachi, KEPZ, KDA and Johar Grids with estimated capex of PKR 650 million.	
4.	Category	System Improvement and reliability	
5.	Туре	Other	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 3,859 million	
8.	Commencement Date	July 2023 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not Applicable	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till June 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	Relocation of Transmission lines from encroached areas is for safety perspective. Civil work at grid stations will enable to extend the existing facilities for better load management and this will also strengthen the infrastructure of grid stations.	

Proje	Project Number 27		
1.	Name of Project	SCADA and Other Automation Equipment	
2.	Location	Multiple	
	Scope in Brief /	Upgradation of Telecom network:	
		 Oracle Server upgradation is planned in FY 2029 and 2030 with an estimated total capex of PKR 1,433 million. 	
3.	Objectives	• SCADA upgradation is planned in FY 2029 and 2030 with an estimated total capex of PKR 7,477 million.	
		SCADA server for DRC Redundancy is planned in FY 2029 and 2030 with an estimated total capex of PKR 771 million.	
4.	Category	System Improvement and reliability	
5.	Type	SCADA and other Automation Equipment	
6.	Funding Source	Please refer KIIP Section VI	
7.	Cost as per Approved Estimate	PKR 9,682 million	
8.	Commencement Date	July 2028 (expected)	
9.	Completion date	June 2030 (expected)	
	Physical progress:	Not yet started	
10.	Physical progress (major works done):	Not Applicable	
	Physical completion (in %age terms):	Not Applicable	
	Financial Progress %	Not yet started	
11	Total Cost Incurred till June 2022 million Rupees	Zero	
12.	Outcomes of the project after completion / Benefits	Supervisory Control and Data Acquisition (SCADA) system is operational since 2009. Further, KE has upgraded the SCADA SINUAT spectrum from 4.5 to 4.7 in 2019. Subsequent upgradation of SCADA (hardware & software) is critical which is planned in 2030. Upgraded version is required to ensure visibility of network allowing effective monitoring and control of the system for efficient management of real time operations.	

Project Number 28		
1.	Name of Project	Installation of Current Limiting Reactor (CLR)
2.	Location	CLR between 220kV NPQ buses
3.	Scope in Brief / Objectives	 Scope of work: Addition of current limiting reactor_at 220kV busbar of NPQ is planned in FY 2025. Objective: To restrict the magnitude of short circuit limit within permissible limits.
4.	Category	System Improvement and reliability
5.	Type	Short circuit control
6.	Funding Source	Please refer KIIP Section VI
7.	Cost as per Approved Estimate	PKR 1,373million
8.	Commencement Date	July 2024 (expected)
9.	Completion date	June 2025 (expected)
10.	Physical progress:	Not yet started
	Physical progress (major works done):	Not Applicable
	Physical completion (in %age terms):	Not Applicable
11	Financial Progress %	Not yet started
	Total Cost Incurred till June 2022 million Rupees	Zero
12.	Outcomes of the project after completion / Benefits	The proposed Current limiting reactor between the 220 kV Bus Bars of New Port Qasim Grid Station will help in mitigating the fault level. Furthermore, this shall also reduce the risk of equipment damage . It is important to limit short circuit value within permissible range to ensure the safety of grid and working staff.