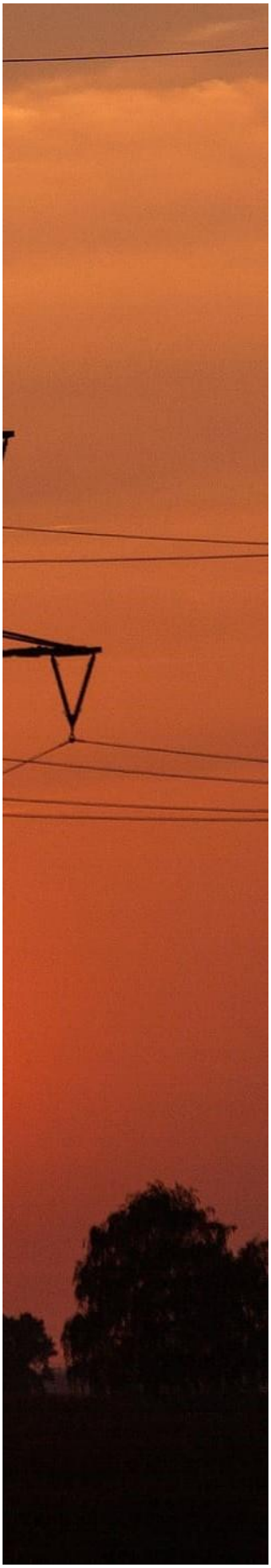
MEPCO
BUSINESS PLAN

2025-26 to 2029-30

MULTAN ELECTRIC POWER COMPANY



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INTRODUCTION

The Multan Electric Power Company (MEPCO), incorporated as a Public Limited Company, is tasked with the distribution of electricity to consumers across 13 districts in southern Punjab, as stipulated in its Distribution License No. 06/DL/2002, issued by the National Electric Power Regulatory Authority (NEPRA) under the NEPRA Act. MEPCO commenced its official operations on May 14, 1998, following the restructuring of the Power Wing of the Water and Power Development Authority (WAPDA). Since then, the company has been led by a Chief Executive Officer (CEO), supported by Executive Directors.

The primary business of MEPCO is to provide a public utility service by distributing electricity to consumers of various categories across 13 districts of Punjab Province, including Multan, Muzaffargarh, Layyah, Dera Ghazi Khan, Rajanpur, Lodhran, Bahawalpur, Rahim Yar Khan, Khanewal, Sahiwal, Pakpattan, Vehari, and Bahawalnagar.

As the largest electricity distribution company in the region, MEPCO serves 8.35 million consumers. It procures electricity from the Central Power Purchasing Agency (CPPA) or other sources on behalf of the CPPA and pays the power purchase price, which includes generation and transmission charges regulated by NEPRA.

The company's key objectives are to ensure an uninterrupted and stable power supply to all consumers, deliver state-of-the-art customer service, and establish and operate reliable electricity distribution networks.

EXECUTIVE SUMMARY

- Vision Mission Statement
- Purpose of Business Plan
- Key Performance Indicators

1. EXCEUTIVE SUMMARY

As the largest power distribution and supply licensee, MEPCO requires sufficient revenue to fulfill its regulatory obligations as prescribed by NEPRA and in alignment with the company's Vision and Mission statements. The company's primary objectives include ensuring an adequate, high-quality, uninterrupted, and stable power supply to all customers, alongside providing state-of-the-art customer service as well as establishing and operating reliable electricity distribution networks.

Company's Investment Plan

The Five-Year Investment Plan (FY 2025-26 to FY 2029-30) serves as a strategic reference for MEPCO management and the Planning, Strategy, and Monitoring (PSM) Committee of the Board of Directors for upgrading and operating MEPCO. This plan considers projected activities over the next five years. Although based on a five-year framework, the Investment Plan is designed as a living document, to be updated regularly to reflect changing requirements. The five years business plan reflects what MEPCO can fund, procure, and implement. MEPCO's Multi-Year Tariff (MYT) will be based on this plan.

Under this five-year plan, MEPCO will expand and rehabilitate its Transmission and Distribution (T&D) systems. Additionally, the plan outlines initiatives to enhance the company's financial, commercial, human resource, and communications functions, including IT systems that support the core T&D operations. The plan includes improvements ranging from new grid stations to Advanced Metering Infrastructure (AMRs) for commercial enhancements. These initiatives are aimed at improving the company's overall performance in a holistic and integrated manner. Detailed scope and costs for each department are outlined in sections VII and VIII.

Costs Summary:

Total Cost: PK**Rs. 119,466 million**.

Benefits Summary:

Savings of **1023.50 MkWh** of energy through loss reduction, smooth dispersal of power and other Projects.

Loss Reduction and Collections Targets:

MEPCO will reduce the losses from 13.40 % in FY 2025-26 to 10.04 % by FY 2029-30 with total reduction of 3.37%. It is achieved by reduction of 1.805% T&D and 1.56% commercial Loss in five years. Moreover, MEPCO has always attained the collection efficiency of 100% that will be maintained throughout the control period.

The major scope for the investment to strengthen the network is as under;

20 No.	New Grid Station
820 km	New Transmission Line
372 No.	11kV (HT) Proposals
2,400 No.	LT Proposals

Based on the historic data, MEPCO projected growth in No. of consumers (in Million) will be as under;

Description	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30
Projected No. of consumers	9.5	10.1	10.8	11.5	12.2

Table 1.2 MEPCO growth in No. of Consumers

Currently, MEPCO has 14,246 active employees, employed in nine directorates and are responsible for distributing electricity to approximately 8.35 million consumers. The consumer mix comprises approximately 89.57% domestic consumers (7.48 million) including residential consumers in both urban and rural areas, 7.84% commercial consumers (0.65 million) including business consumers such as commercial markets, plazas, and offices in both urban and rural areas, 0.73% industrial consumers (0.061 million) consisting of large and small industrial loads, 0.01% bulk consumers (473) consisting primarily of large societal consumers like housing societies, 1.29% agricultural consumers (0.107 million) including tube wells in rural areas, 0.54% General Services (45,437) and 0.02% other consumers (2,046).

1.1. VISION, MISSION AND CORE VALUES

VISION

To ensure the convenient availability of high-quality power in area of responsibility, in order to alleviate the poverty, improve quality of life and make the Industrial and Agriculture Sectors competitive in the world Market.

MISSION

Ensure convenient availability of high-quality electric power to the people at affordable price, retaining financial viability of the company.

CORE VALUES

- **Ethics:**
  We uphold high professional standards and personal integrity in all our endeavors.

- **Leadership:**
  Our seniors lead by example, empowering and guiding their teams toward success through encouragement and support.

- **Teamwork:**
  We value diverse talents working together toward common goals, emphasizing listening, understanding, and collaboration.

- **Culture of excellence:**
  We foster an environment where leadership, innovation, and achievements are recognized and rewarded, promoting trust, open dialogue, and mutual respect.

- **Courtesy:**
  We prioritize courteous communication with customers, stakeholders, and colleagues, fostering openness and transparency.

- **Responsibility:**
  We take individual and collective responsibility for our work and actions, welcoming accountability and scrutiny.

- **Integrity:**
  Our decisions are guided by honesty and fairness, ensuring integrity at all levels of our organization.

- **Safety:**
  Ensuring the safety of our employees, the public, and assets is paramount and non-negotiable.

- **Customer Service:**
  We provide quality service tailored to our customers' needs, enhancing satisfaction and creating value.

- **Innovation:**
  We support technological advancements to optimize electricity usage, protect the environment, and diversify our energy portfolio, mitigating risks and seizing opportunities.

1.2. PURPOSE AND GOALS OF THE BUSINESS PLAN

The Integrated Investment Plan outlines MEPCO's vision, mission, core values, stakeholder requirements, key performance indicators, sales and consumer forecasts, challenges related to power supply and limitations, human resources and organizational development strategies, financial projections, regulatory compliance requirements, including quality of service standards, subsidies, and legal constraints impacting the timely collection of overdue payments. It also includes performance indices, risk assessments, and initiatives. This plan will serve as a comprehensive reference for cross-functional planning, enabling MEPCO to make informed, and priority-based decisions.

The objective of the Investment Plan/Business Plan is to provide a strategic document for the CEO and senior management to guide the company's activities over the next five years. Its aim is to ensure MEPCO's financial sustainability by enhancing regulation and governance, introducing new technologies, upgrading existing systems and equipment, and aligning human resources with global best practices. Additionally, this plan will be used by the Strategic Planning Committee of the Board for continuous monitoring to ensure that the company meets its stated objectives.

This Investment Plan spans the five-year period from **FY 2025-26 to FY 2029-30**, covering the following key areas:

- Defining the activities and resources available to MEPCO under its incorporation agreements and applicable laws.
- Identifying projections of power demand, available power resources, and the population served during the **FY 2025-26 to FY 2029-30** periods.
- Outlining strategic objectives for **FY 2025-26 to FY 2029-30**, aligned with the optimally achievable scenario as defined by the regulator, with designated coordinators tasked with achieving the strategic goals within the five-year scope of the Investment Plan.
- Presenting both the best and optimally achievable scenarios, detailing the requirements and realistic outcomes based on resource constraints and on-the-ground conditions.
- Estimating the financial impact of implementing the project plans on MEPCO's financial performance

Major Planning Situation

MEPCO faces the following challenges that necessitate integrated cross-functional planning:

- **Technical challenges**: The need for network upgrades, including metering systems, to ensure continuous and accurate measurement of power flow.
- **Operational challenges**: Maintaining a reliable and uninterrupted power supply to meet customer expectations, particularly in a demand-driven and load-shedding-affected environment.
- **Institutional challenges**: Developing MEPCO's internal capacity to effectively manage and execute its operations.
- **Power evacuation**: Ensuring the smooth integration of variable renewable energy sources into the grid.
- **Regulatory compliance**: Adhering to all applicable laws and regulations governing MEPCO's operations.
- **Social responsibility**: Promoting energy conservation and contributing to social development initiatives.

1.2.1. LOSS REDUCTION

The recorded loss of MEPCO for Financial Year 23-24 is 15.2% and 1.8% reduction in loss is expected during current year i.e. 2023- 24. Therefore, 13.40% is taken as loss for the base year 2024-25. The further segregation of the 13.40% loss is worked out and considered as follows: -

a. Loss of STG system is taken as 1.05% (Expected Loss on the basis of metering data)
b. In house study of 11kV network carried out using GIS mapping & SynerGee Electric Software FY (2023-24) suggests 7.58% HT Technical Loss. The said loss will further decrease 0.195% hence 7.385% is expected to be the HT Technical loss FY (2024-25)
c. In house sample-based study of LT network carried out using GIS mapping & SynerGee Electric Software FY (2023-24) suggests 3.005 % LT Technical Loss. The said loss will further decrease 0.017% hence 2.988% is expected to be the LT Technical loss FY (2024-25)
d. Remaining Loss is considered to be the admin loss i.e. (13.4% – 1.05% -7.385% – 2.988% = 1.98%)

MEPCO has started the process to engaged the services of independent consultant to validate technical losses of HT and LT system which will be communicated to the authority in due course of time.In future scenarios, the investment aimed at enhancing the STG Network is expected to further reduce overall transmission losses, potentially lowering them from 1.05% to 0.98%. Additionally, HT and LT losses could decrease further, building on the current reductions from 7.385% and 2.988% to 6.27% and 2.37% through the ongoing expansion and rehabilitation of the 11kV distribution network. Administrative losses may also continue to decline, moving from 1.98% to 0.42% with the installation of scanning meters and the expansion of Advanced Metering Infrastructure (AMI) on distribution transformers. A detailed year-by-year breakdown of projected transmission and administrative losses is listed below;

Description	BASE YEAR: 2024-25	FY:2025-26	FY:2026-27	FY:2027-28	FY:2028-29	FY:2029-30	Total Reduction in Losses
Transmission Losses	1.05%	1.03%	1.02%	1.00%	0.99%	0.98%	0.98%
		-0.02%	-0.01%	-0.02%	-0.01%	-0.01%	-0.070%
HT-Loss	7.385%	7.175%	6.855%	6.565%	6.393%	6.268%	6.27%
		-0.210%	-0.320%	-0.290%	-0.172%	-0.125%	-1.117%
LT-Loss	2.988%	2.868%	2.744%	2.619%	2.492%	2.370%	2.37%
		-0.120%	-0.124%	-0.125%	-0.127%	-0.122%	-0.618%
Admin Loss	1.98%	1.12%	0.72%	0.62%	0.52%	0.42%	0.42%
		-0.860%	-0.400%	-0.100%	-0.100%	-0.100%	-1.560%
Total Loss Reduction (%age)	**13.40%**	**12.19%**	**11.34%**	**10.80%**	**10.40%**	**10.04%**	**10.04%**
%age Loss Reduction (Per Year)		**-1.21%**	**-0.85%**	**-0.54%**	**-0.41%**	**-0.36%**	**-3.37%**

Table 1.3 Loss Reductions

1.3. KEY PERFORMANCE INDICATORS (KPI)

1.3.1. FINANCIAL KPI

Description	FY 2025-26	FY 2026-27
Revenue Growth Rate	14.9%	9.6%
Profit Margin	1.9%	2.2%
Return on Investment	18.26%	19.25%
Operating Leverage/Financial Leverage*	5.18%	6.57%
Earnings Before Interest, Taxes, Depreciation & Amortization	29,871	36,708
Cash Flow From Operations	15,658	18,140
Financial Leverage	5.01	6.91
Return On Investment (ROI) – on ACC	12.03%	13.45%

Table 1.4 Financial – KPI

1.3.2. OPERATIONAL KPI

Op KPI	Description	FY: 25-26	FY: 26-27	FY: 27-28	FY: 28-29	FY: 29-30
Production Efficiency	T&D Loss Reduction	12.19%	11.34%	10.80%	10.40%	10.04%
	Voltage Profile at 132 KV	+5%, -5%	+5%, -5%	+5%, -5%	+5%, -5%	+5%, -5%
	HT/LT Ratio	1.66	1.69	1.69	1.70	1.71
	Avg. HT Length / Feeders (KM)	43.611	43.157	42.628	42.119	41.637
	Average Power Factor at 132 KV	0.95	0.95	0.95	0.95	0.95
	SAIFI	28.5	27.3	25.9	24.6	23.37
	SAIDI	3362.8	3194.6	3034.9	2883.2	2739
Customer Satisfaction Score	Reducing complaints related to billings to less than 0.1%	0.1%	<0.1%	<0.1%	<0.1%	<0.1%
On Time Delivery Rate	Minimize New Connections installation duration	To Comply with Consumer Service Manual				
	Minimize Reconnection installation duration	To Comply with Consumer Service Manual				
	Maximize the time between date of receipt of bill and payment date (10 days)	10	10	10	10	10
	Reduce Meter Reading to Bill Delivery Time	7	7	7	7	7
Employee Productivity	Performance Evaluation Reports, Recovery Position	97.5%	98%	98.5%	98.8%	99.2%

Inventory Turn Over Ratio	0.839	0.841	0.844	0.848	0.911

Table 1.5 Operational - KPI

1.3.3. INNOVATION & TECHNOLOGY KPI

Description	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY2029-30
SCADA Roll Out Plan	Execution of Pilot Project.		-	-	-
AMI expansion	46,727 Nos.	52,214 Nos.	-	-	-
P&E expansion to GIS Mapping - HT	960 Km	950 Km	790 Km	900 Km	900 Km
P&E expansion to GIS Mapping – LT	5140 Km	10801 Km	11003 Km	11204 Km	150 Km
IT Equipment for IT Directorate & Field Formations	1808 Nos.	1858 Nos.	355 Nos.	300 Nos.	1805 Nos.
Installation of APMS	4956 Nos.	4676 Nos.	-	-	-

Table 1.6 Innovation & Technology – KPI

1.3.4. MARKET EXPANSION AND DIVERSIFICATION- KPI

	Year	Energy Sale (GWh)	%age Growth	Peak Demand at 132 kV (MW)	%age Increase
ME&D-KPI	2023-24	16904		4436	
	2024-25	17038	0.8%	4295	-3.18%
	2025-26	17186	0.9%	4336	0.96%
	2026-27	17333	0.9%	4377	0.95%
	2027-28	17485	0.9%	4418	0.94%
	2028-29	17650	0.9%	4461	0.97%
	2029-30	17826	1.0%	4503	0.94%
Geographic Expansion Rate	MEPCO's service area comprises of 13 administrative districts of southern Punjab i.e. Multan, Muzaffargarh, Layyah, D.G.Khan, Rajanpur, Lodhran, Bahawalpur, R.Y.Khan, Khanewal, Sahiwal, Pakpattan, Vehari and Bahawalnagar, spanning a total service area of 1,05,505 sq.km and 8,356,421 consumers.				
Revenue Contribution from New Market	1. The competitive Trading Bilateral Contract Market (CTBCM) model provides a roadmap for opening Wholesale Electricity Market of Pakistan 2. CTBCM model is for establishing "Multiple Buyer Multiple Seller" Electricity Market 3. Any consumer having a demand 1MW or above (Bulk Power Consumer) can enter bilateral contracts with Generator (s) (or its representative supplier) of its own choice to purchase electric power 4. Distribution companies will procure electric power on least cost basis competitive bidding process and tariffs will be regulated by NEPRA 5. Distribution Companies will receive the Use of System Charges from Market Participants under Bilateral Contract in Wholesale Market.				

Product / Service Portfolio Diversity	1. Promotion of competitive environment - BPCs are not bound to procure electricity from DISCOs only. 2. Open access - Any market participant can use DISCO's wire network for transportation and sale of electricity. 3. Separation of wire and supply business of DISCOs by independent licenses. 4. Procurement of electric power for DISCOs by least cost based competitive bidding. 5. Support Integrated Planning. 6. Enhanced transparency of market transactions through development of Market Management System (MMS) by Market Operator (CPPA-G).

Table 1.7 Market Expansions and Diversification KPI

1.3.5. SUSTAINABILITY AND SOCIAL RESPONSIBILITY - KPI

S&SR-KPI	Net Metering (Progressive)			
	Year	Installed Capacity (MW)	Production GWH (UNITS)	Carbon Footprint Reduction (Metric Ton)
	2025-2026	971	1457	1019550
	2026-2027	1160	1740	1218000
	2027-2028	1349	2024	1416450
	2028-2029	1538	2307	1614900
	2029-2030	1727	2591	1813350

S&SR-KPI	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
Compliance with Environmental Regulation	Multan Electric Power Company (MEPCO) through Environment & Social Safeguard Section working under Chief Engineer (Development) PMU will ensure compliance with all Environment regulations, Nation/International laws and donor agency's i.e. EPA, NEPRA, WB & ADB Policy/Framework pertaining to environment and social safeguards standards.				

Employee Diversity Ratio	Male: - 97 Female: -03	Male: - 95 Female: -5	Male: - 94 Female: -6	Male: - 92 Female: -8	Male: - 90 Female: -10
Cooperate Governance Score	100%	100%	100%	100%	100%

Table 1.8 Sustainability and Social Responsibility – KPI

1.3.6. HUMAN CAPITAL DEVELOPMENT - KPI

HCD-KPI	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
Training Hours per Employee	61	63	65	67	70
Employee Satisfaction Index	0.75	0.80	0.85	0.90	0.95
Leadership Succession Planning Effectiveness	0.70	0.75	0.80	0.90	1
Employee Turn Over Ratio	0.08	0.1	0.07	0.06	0.05

Table 1.9 Human Capital Developments – KPI

1.3.7. STAKEHOLDER ENGAGEMENTS AND RELATIONS – KPI

SE&R-KPI	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
Stakeholder Satisfaction Survey Results	33.20%	33.70%	34.20%	34.70%	35.2%

Table 1.10 Stake holder Engagements and Relations – KPI

COMPANY OVERVIEW

- Existing Operation System
- Geographic Coverage
- Company Structure
- IT-MIS

2. COMPANY OVERVIEW

In the 1950s, the Government of Pakistan (GoP) made the decision to establish an independent and autonomous authority to manage the country's water resources and power system, including power generation, transmission, and distribution. This entity was named the Water and Power Development Authority (WAPDA). During the 1980s, WAPDA's power distribution network was subdivided into eight Area Electricity Boards (AEBs), tasked with managing the power distribution system in its designated area.

Company History

In 1998, WAPDA was restructured into two main entities: WAPDA and PEPCO. WAPDA's responsibilities were limited to managing water resources and hydropower generation, while PEPCO (Pakistan Electric Power Company) was established as the overarching authority responsible for thermal power generation (via GENCOs: Generation Companies), transmission (via NTDC: National Transmission and Dispatch Company), and distribution (via DISCOs: Distribution Companies). PEPCO was initially created as a temporary entity to oversee Pakistan's power sector reforms. It has since been renamed the Power Planning and Monitoring Company (PPMC) Pvt. Limited, now focusing on macro-level monitoring and planning, with the management and operations of individual companies left to their respective management teams and Boards of Directors. Under this restructuring, regional utility companies such as MEPCO (Multan Electric Power Company) were established to manage distribution in specific regions, with MEPCO serving the Multan area.

Markets and Services

Multan Electric Power Company Ltd. (MEPCO) is a Public Limited Utility Company responsible for the distribution of electric power to the population. MEPCO was incorporated in Pakistan under the Companies Ordinance of 1984 on May 14, 1998, in line with the government's policy of unbundling and corporatizing the power sector. This was a result of the restructuring of WAPDA's Power Wing following the enactment of the NEPRA Regulation of Generation, Transmission, and Distribution of Electric Power Act (Act XL of 1997). MEPCO was granted its Distribution License No. 06/DL/2002 by NEPRA on April 25, 2002, authorizing the sale of electricity.

2.1. EXISTING OPERATION SYSTEM

The existing operation of the Company comprises upon the following structure:

CIRCLES = 09 (OP) + 02 (GSO) + 01 (CONST) + 02 (M&T) + 01 (GSC)	15	No.
OPERATION DIVISIONS	66	No.
OPERATION SUB DIVISIONS	181	No.
CONSTRUCTION DIVISIONS	9	No.
CONSTRUCTION SUB DIVISIONS	19	No.
M & T DIVISIONS	9	No.

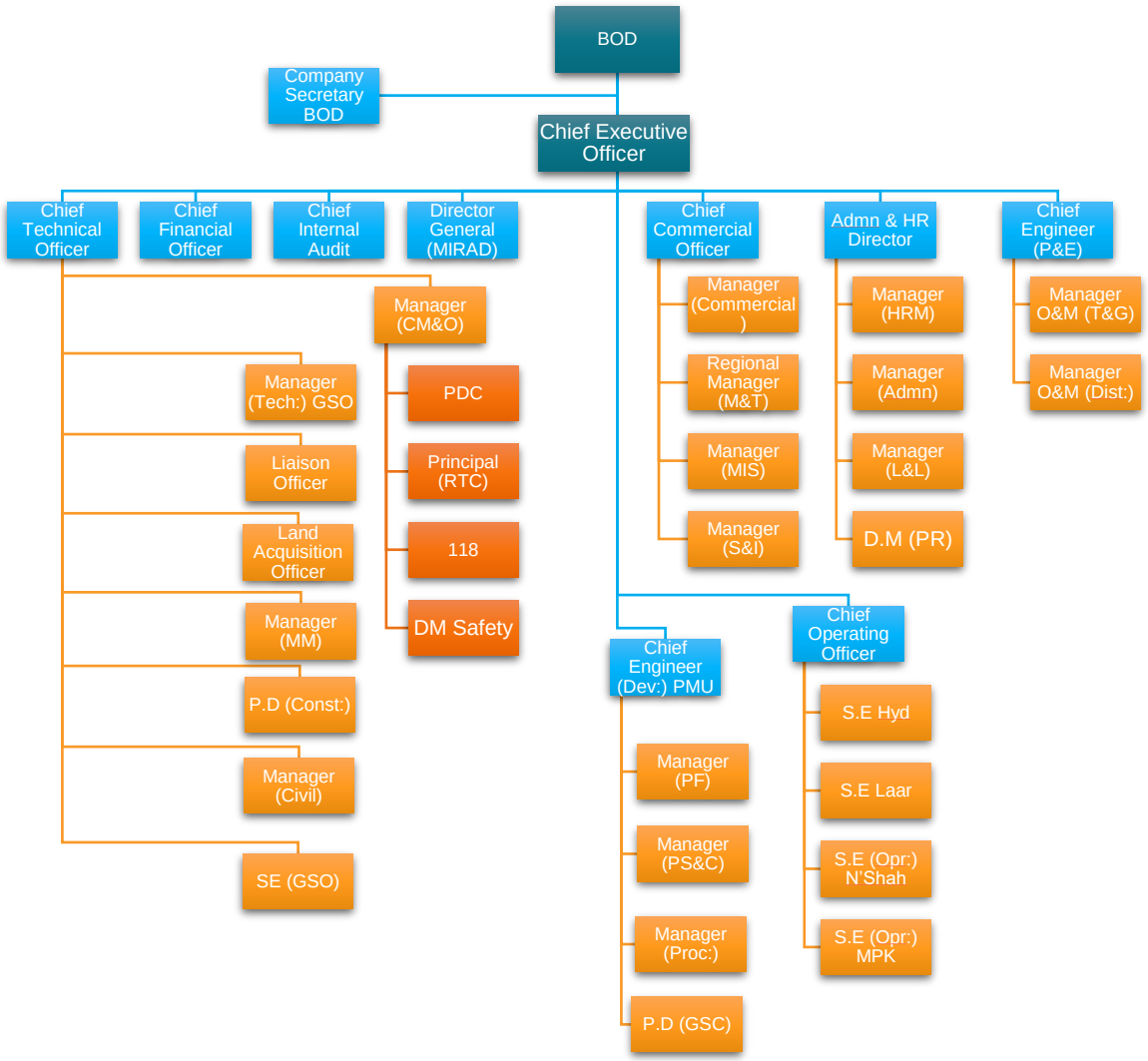
Table 2.1 Existing Operation System

2.2. GEOGRAPHIC COVERAGE

The network facilities of Multan Area Electricity Board (MAEB) of WAPDA were transferred to MEPCO after its incorporation. MEPCO's service area comprises of 13 administrative districts of southern Punjab i.e. Multan, Muzaffargarh, Layyah, D.G.Khan, Rajanpur, Lodhran, Bahawalpur, R.Y.Khan, Khanewal, Sahiwal, Pakpattan, Vehari and Bahawalnagar, spanning a total service area of 1,05,505 sq.km and 8,356,422 consumers.

2.3. COMPANY STRUCTURE

The Organizational structure of the Company under upcoming Wholesale (CTBCM) scenario is as under:

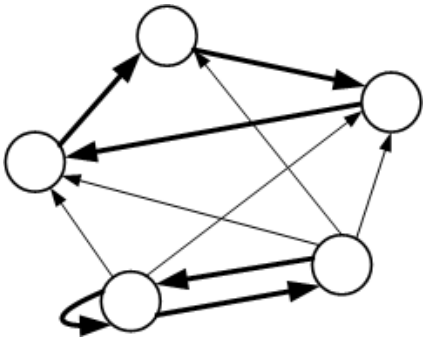


2.4. STRATEGIC POSITIONING

As the Pakistan Power Sector (PPS) undergoes a new phase of ongoing reforms, MEPCO is poised to contribute significantly to the development of the evolving wholesale competitive electricity market in accordance with the Competitive Trade & Bilateral Contracting Market (CTBCM) framework.

In this context, MEPCO is transitioning from being a single territorial electric power service provider to adopting a multi-role service model as both an "Electric Power Supplier" and a "Power Distributor." In accordance with regulatory requirements, MEPCO will also continue to serve as the "Supplier of Last Resort" to ensure a continuous, uninterrupted, reliable, and adequate power supply to all customers at all times within its service territory.

As Electric Power Distributor, specifically the Distribution Network Operator (DNO), MEPCO is committed to providing interconnection facilities and open access to its system for all prospective users (market participants). This includes, but is not limited to, eligible generation companies, bulk power consumers, traders, competitive electric power suppliers, and distributed generation, all at reasonable and affordable prices, without favoritism, discrimination, or restrictions. Acknowledging our role as a natural monopoly in the wire business, we understand the importance of upholding principles of impartiality, non-discrimination, and arm's length transactions, even in our dealings with the power supply divisions of our own company.



As Electric Power Supplier, MEPCO is prepared to undertake the significant challenge of competing in the wholesale market and is actively working to retain its base load Bulk Power Consumers (BPC). We also recognize that our commercial priorities must not compromise the rights of our embedded regulated customers.

License	License Granted / Submitted	License End	License No.
Distribution of Electric Power	9th May 2023	8th May 2043	DL/06/2023
Power Supplier	2nd December 2023	26th April 2043	SOLR/06/2023

Table 2.3 License of MEPCO

2.5. IT-MIS

An independent IT directorate operates at MEPCO to oversee the entire Management Information System (MIS) related to the company's operations. The primary functions of the Computer Centers include managing the complete billing process, providing updated lists of defaulters, managing the MEPCO website, and updating MIS operations concerning losses and recoveries. Additionally, the directorate is responsible for payroll management for employees, overseeing computer network management at the company level, and handling hardware and software development, maintenance, and services.

2.6. POWER SUPPLY BUSINESS- SECURITY OF SUPPLY INCLUDING FUTURE PROCUREMENT

MEPCO's security of Supply position for next three years (2024-25 to 2026-27) is summarized below;

Sr. No.	Description	Year	Current	Year-1	Year-2	Year-3	Year-4
		FY:	(2022-23)	(2023-24)	(2024-25)	(2025-26)	(2026-27)
1	MEPCO Share Firm Capacity	MW	5480	5198	5698	5835	6202
Power Acquisition Program							
2	Future Procurement	MW	94	431	297	312	241
3	Total MEPCO Capacity (1+2)	MW	5574	5628	5595	6147	6429
4	Capacity Obligation	MW	4849	4895	4942	4989	5036
5	Compliance with Capacity Obligation (3/ 1)	% age	115	115	113	123	128
6	Minimum Compliance Required as per performance standard of Electric Supplier Regulation 2022	% age	95	95	95	95	95

Table 2.4 Power Supply Business of MEPCO

COMPANY BASELINE

- Human Resource and Corporate Governance
- Man Power
- Capacity Building
- Allowed Level of T&D Losses
- Ratio Analysis
- Maximum Power Demand
- Consumer Mix

3. THE COMPANY'S BASELINE

3.1. HUMAN RESOURCE AND CORPORATE GOVERNANCE

Scope & Role:

- Manpower / Establishment
- Recruitment and Selection
- Appointment, Deployment, Re-deployment / Transfers
- Compensation and Benefits Administration
- Career Planning and Promotions
- Performance Management
- Incentives Administration
- Training and skill Development
- Supervision over Employees' Health, Welfare, Safety and Security
- Transportation
- Electronic Communication
- Custodial Services for Company records
- Correspondences and other Communication Services
- Office / Facilities Management
- Legal Matters
- Discipline / Enquiries
- PERs
- Labor Union / Labor Related Matters
- Sports
- Property Management

3.2. MAN POWER

As of June 2024, MEPCO is comprised of 14,246 skilled and dedicated professionals who are responsible for executing, controlling, and maintaining the network, ensuring the provision of superior services to our valued customers around the clock.

Sr. No.	Categories	Sanctioned Strength	Working Strength	Vacant
1	**Officers**	763	514	249
2	**Officials**	24883	13732	11151
Total		**25656**	**14246**	**11400**

Table 3.1 Man Power of MEPCO

3.3. CAPACITY BUILDING

Establishment and Operationalization of MIRAD

In accordance with NEPRA's approval of the Competitive Trading Bilateral Contract Market (CTBCM) and its associated roadmap, MEPCO has established the Market Implementation & Regulatory Affairs Department (MIRAD) to lead the MEPCO team in the effective and seamless implementation of CTBCM, serving as MEPCO's interface in this regard. The charter of MIRAD, as outlined by NEPRA and the Ministry of Energy (Power Division), encompasses the following functions:

- Bilateral power purchase contract agreement
- Legal and Regulatory affairs
- Billing and settlement with the market operator
- Financial Health Assessment / Security Cover
- Demand Forecasting
- Transmission Planning.
- Integrated Business Planning & Performance Monitoring

MEPCO has taken the initiative in hiring external employees and subsequently transferred qualified professionals, selected through an internal competitive process, to MIRAD. All sections of MIRAD at MEPCO are now fully operational with the required professionals in place. Additionally, a comprehensive, systematic, and ongoing training program for MIRAD professionals, including those from MEPCO, is being conducted, with sponsorship from NEPRA and CPPA-G.

3.4. INVESTMENTS MADE IN LAST FIVE YEARS

MEPCO's Distribution System Integrated Investment Plan, as outlined in the Multi-Year Tariff for the previous five years (FY 2020-21 to FY 2024-25), is summarized below:

Description	FY 21	FY 22	FY 23	FY 24	FY 25	TOTAL
A. CORE BUSINESS – CAPEX						
Transmission	2,370	4,372	4,106	4,453	4,529	19,830
Distribution without deposit	4576	5543	5793	6067	6337	28316
Linemen Safety	409	508	624	646	791	2978
GIS Mapping	1	27	19	3	3	52
Total A	7357	10449	10542	11170	11659	51176
B. SUPPORT BUSINESS- CAPEX (INCLUDES HR, COMMERCIAL, FINANCIAL, COMMUNICATION IMPROVEMENTS)						
Commercial Improvement	343	2165	3082	2389	1342	9321
HR Improvement	1044	1460	1713	1410	1570	7198
Communication Improvement	10	-	11	-	-	21
Financial Improvement	25	35	10	45	50	165
Total B	1422	3660	4816	3844	2962	16705
C. CORE BUSINESS – OPEX						
Transmission	95	175	164	178	181	793
Distribution	183	222	232	243	253	1133
Linemen Safety	18	42	74	105	146	385
Total C	296	439	470	526	581	2,311
D. SUPPORT BUSINESS- OPEX						
Commercial Improvement	18	141	310	290	255	1014
[illegible] Improvement	1784	2313	2298	2447	2672	11514
C[illegible]munication Im[illegible]ovement	29	30	45	48	50	202
Fi[illegible]cial [illegible]rovement	-	-	-	-	-	-
Total D	1,831	2,484	2,653	2,785	2,977	12,730
Sub Total CAPEX (A+B)	8,779	14,109	15,358	15,014	14,621	67,881
Sub Total OPEX (C+D)	2,127	2,923	3,123	3,310	3,558	15,040
Grand Total (A+B+C+D)	10,905	17,033	18,480	18,324	18,179	82,921

Table 3.2 Investment made in Last five years

3.5. ALLOWED LEVEL OF T&D LOSSES

The summary of the allowed level of T&D losses for MEPCO during the MYT period (FY 2020-21 to FY 2024-25) is as under;

Year	Transmission Losses (%)	Distribution Losses (%)	Total T&D Losses (%)
2020-21	1.37	11.75	13.12
2021-22	1.40	11.39	12.79
2022-23	1.34	11.00	12.34
2023-24	1.30	10.53	11.83
2024-25	1.30	10.04	11.34

Table 3.3 Allowed T&D Losses

3.6. TRANSMISSION & DISTRIBUTION NETWORK LOSSES DETAILS

Distribution Network Line Losses				
Period	Units (Millions)			% Losses
	Received	Billed	Lost	
Jul-23 to Jun-24	19,711.54	16,904.36	2806.46	14.2
Jul-22 to Jun-23	19,699.94	16,732.37	2,655.72	13.5
Jul-21 to Jun-22	22,350.05	19,202.42	2,962.42	13.3
Jul-20 to Jun-21	20,210.83	17,466.09	2,744.74	13.6
Jul-19 to Jun-20	19,032.61	16,381.95	2,650.66	13.9

Table 3.4 Distribution Network Line Losses

Transmission Network Line Losses				
Period	Units (Millions)			% Losses
	Units Received as Per CPPA	Units Sent Out	Lost	
Jul-23 to Jun-24	19,929.05	19,711.54	217.51	1.1
Jul-22 to Jun-23	19,506.16	19,699.94	118.51	0.6
Jul-21 to Jun-22	22,733.91	22,350.05	383.87	1.7
Jul-20 to Jun-21	20,541.48	20,210.83	330.65	1.6
Jul-19 to Jun-20	19,324.68	19,032.61	292.07	1.5

Table 3.5 Transmission Network Line Losses

Overall, Company T&D Line Losses					
Period	Units (Millions)			% Losses	% Inc/Dec
	Units Received as Per CPPA	Units Billed	Lost		
Jul-23 to Jun-24	19,929.05	16,904.36	3024.69	15.2	1.0
Jul-22 to Jun-23	19,506.16	16,732.37	2,773.79	14.2	-0.5
Jul-21 to Jun-22	22,733.91	19,202.42	3,346.28	14.7	-0.3
Jul-20 to Jun-21	20,541.48	17,466.09	3,075.39	15.0	-0.2
Jul-19 to Jun-20	19,324.68	16,381.95	2,942.73	15.2	-0.6

Table 3.6 Overall Company T&D Losses

3.7. ALLOWED REVENUE ALONG-WITH UPFRONT INDEXATION/ADJUSTMENT FOR THE FY-2020-21 TO 2022-23

Distribution of Power (DOP)

Description	Unit	FY 2020-21 DOP	FY 2021-22 DOP	FY 2022-23 DOP
Units Received	[MkWh]	19,570	19,570	21,897
Units Sold	[MkWh]	17,003	17,067	19,195
Units Lost	[MkWh]	2,568	2,503	2,702
Units Lost	[%]	13.12%	12.79%	12.34%
Investment	[Mln. Rs.]	8,369	13,602	14,734
Pay & Allowances		8,175	9,971.05	10,990.49
Post Retirement Benefits		7,252	7,977	8,663
Repair & Maintainance		1,257	1,416	1,537
Traveling allowance		815	918	996
Vehicle maintenance		419	472	513
Other expenses		590	664	721
O&M Cost	[Mln. Rs.]	18,507	21,418	23,421
Depriciation		5,435	5,799	6,214
RORB		3,970	4,542	5,198
O.Income		(3,576)	(3,706)	(3,706)
Margin	[Mln. Rs.]	24,336	28,053	31,126
Average Tariff	[Rs./kWh]	1.43	1.64	1.62

Supply of Power (SOP)

Description	Unit	FY 2020-21 SOP	FY 2021-22 SOP	FY 2022-23 SOP
Units Received	[MkWh]	19,570	19,570	21,897
Units Sold	[MkWh]	17,003	17,067	19,195
Units Lost	[MkWh]	2,568	2,503	2,702
Units Lost	[%]	13.12%	12.79%	12.34%
Energy Charge		113,849	113,849	197,666
Capacity Charge		132,654	132,654	210,743
Transmission Charge & Market Operation Fee		7,238	7,238	19,335
Power Purchase Price	[Mln. Rs.]	253,741	253,741	427,744
Wire Business Margin		24,336	28,053	31,126
Power Purchase Price with Wire Business	[Mln. Rs.]	278,077	281,794	458,870
Pay & Allowances		1,833	2,235	2,464
Post Retirement Benefits		1,625	1,788	1,941
Traveling allowance		185	208	226
Other expenses		1,207	1,359	1,476
O&M Cost	[Mln. Rs.]	4,849	5,590	6,107
O.Income		(1,672)	(1,732)	(1,732)
Margin	[Mln. Rs.]	3,177	3,858	4,375
Prior Year Adjustment		(332)	(332)	(332)
Revenue Requirement	[Mln. Rs.]	280,923	285,320	462,913
Average Tariff	[Rs./kWh]			
PPP with Wire Business Cost-Unadj.		14.21	14.40	20.96
PPP with Wire Business Cost-adj.		16.35	16.51	23.91
Distribution/Supply Margin		0.19	0.23	0.23
Distribution/Supply PYA		(0.02)	(0.02)	(0.02)
Average Tariff	[Rs./kWh]	16.52	16.72	24.12

Description	Unit	Allowed FY 2023-24 DOP	Allowed FY 2023-24 SOP
Units Received	[MkWh]	21,969	21,969
Units Sold	[MkWh]	19,370	19,370
Units Lost	[MkWh]	2,599	2,599
Units Lost	[%]	11.83%	11.83%
Energy Charge			148,909
Capacity Charge			334,552
Transmission Charge & Market Operation Fee			26,971
Power Purchase Price	[Mln. Rs.]	-	510,433
Wire Business Margin			41,669
Power Purchase Price with Wire Business	[Mln. Rs.]	-	552,102
Pay & Allowances		13,805	3,095
Post Retirement Benefits		8,256	1,850
Repair & Maintainance		1,801	-
Traveling allowance		1,167	264
Vehicle maintenance		601	-
Other expenses		868	1,777
O&M Cost	[Mln. Rs.]	26,497	6,986
Depriciation		6,208	-
RORB		13,808	-
O.Income		(4,844)	(2,264)
Margin	[Mln. Rs.]	41,669	4,722
Prior Year Adjustment			20,756
Revenue Requirement	[Mln. Rs.]	41,669	577,580
PPP with Wire Business Cost-Unadj.		-	25.13
PPP with Wire Business Cost-adj.		-	28.50
Distribution/Supply Margin		2.15	0.24
Distribution/Supply PYA		-	1.07
Average Tariff	[Rs./kWh]	2.15	29.82

3.8. THE OVERALL FINANCIAL PERFORMANCE (PROFIT / LOSS)

Income Statement MEPCO							
Description	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**
	Audited	**Audited**	**Audited**	**Audited**	**Audited**	**Audited**	**Audited**
Revenue							
Revenu from Consumers	107,599	139,972	165,348	199,343	216,781	345,844	372,963
Govt. Subsides (Gross)	31,086	40,265	69,965	93,131	72,383	70,284	77,811
Total Revenue	**138,685**	**180,237**	**235,312**	**292,474**	**289,163**	**416,128**	**450,775**
Electricity	**140,019**	**192,694**	**225,725**	**248,407**	**248,523**	**406,935**	**438,574**
Amortization of Deferred Credit	**2,214**	**2,490**	**2,759**	**2,952**	**3,148**	**3,366**	**3,660**
Gross Profit/(Loss)	**879**	**(9,967)**	**12,345**	**47,019**	**43,788**	**12,560**	**15,861**
Operating Expenses							
O&M Expenses	17,266	21,685	24,985	27,952	26,969	29,798	42,130
Provision of doubtful debts	-	190	6,955	584	1,039	421	5,904
Depreciation	3,735	4,276	4,710	5,131	5,457	5,702	6,182
Total	**21,001**	**26,152**	**36,651**	**33,667**	**33,465**	**35,920**	**54,216**
Operating Profit	**(20,122)**	**(36,118)**	**(24,305)**	**13,352**	**10,324**	**(23,361)**	**(38,356)**
Add Other Income	3,121	3,426	3,813	4,142	5,282	6,872	16,984
PBIT	**(17,000)**	**(32,692)**	**(20,492)**	**17,494**	**15,605**	**(16,488)**	**(21,372)**
Financial cost	934	1,133	2,290	2,212	1,601	1,999	1,064
WPPF	-	-	-	764	700	-	-
Profit/ (loss) before taxation	(17,935)	(33,825)	(22,782)	14,518	13,304	(18,487)	(22,436)
Taxation				1,276	3,256	4,328	937
Profit/ (loss) after tax	**(17,935)**	**(33,825)**	**(22,782)**	**13,242**	**10,048**	**(22,814)**	**(23,373)**

Table 3.7 Financial Performance of MEPCO

3.9. RATIO ANALYSIS

Description	FY 2022-23	FY 2023-24
Profitability Ratio		
Gross Profit Ratio - %	11.90%	2.71%
Net Profit Ratio-%	5.33%	-5.19%
Liquidity Ratio		
Current Ratio-%	1:1.20	1:1.03
Acid Test Ratio	1:1.14	1:0.99

Table 3.8 Ratio Analysis

3.10. MAXIMUM POWER DEMAND

During FY 2023-24, the maximum recorded demand was 4,387 MW in August 2023, while the maximum computed demand was 4,880 MW in July 2023.

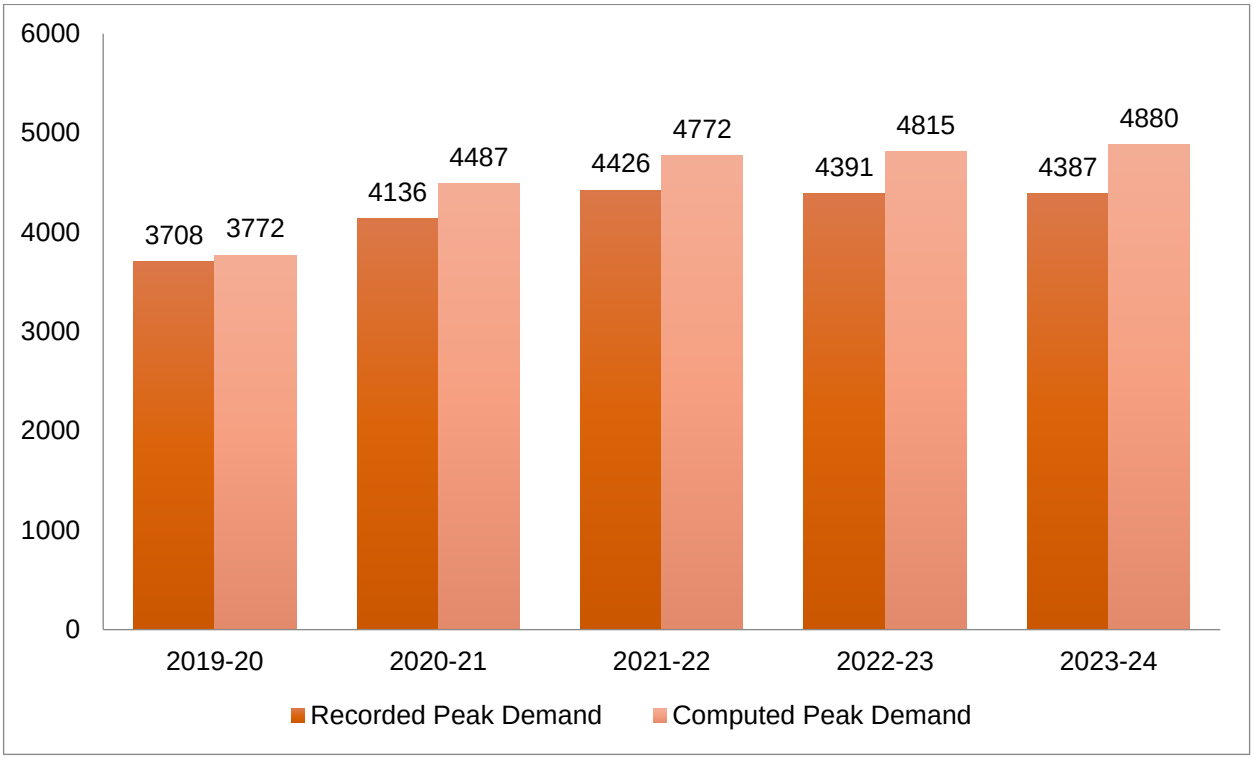


Table 3.9 Maximum Power Demand from FY 2019-20 to FY 2023-24

3.11. SECONDARY TRANSMISSION AND DISTRIBUTION NETWORK PROFILE

The secondary transmission and distribution network of MEPCO (June 2024) is as follows;

DISCO's Owned Grid Stations				131	Nos.
NTDC Grid Stations Feeding MEPCO's Power System				12	Nos.
Grid Stations Feeding Individual Consumers				13	Nos.
IPPs Feeding Disco's Power System				27	Nos.
No. Of 11 KV Feeders				1798	Nos.
Length of 132kV Transmission line				4849.65	km
Total MVA Capacity				9311.50	MVA
Length of HT Line				82661.061	km
Length of LT Line				50714.357	km
Total Installed Distribution Transformers				105967	Nos.
Transformer Installed During 2023-2024				2674	Nos.
Expenditure On Infrastructure Development				Rs. In Millions	
PROJECT	FY2022-23 (Rs Million)	FY2023-24 (Rs Million)	Total		
STG	1622	1243	2865		
ELR	3273	4271	7544		
DOP	1799	1343	3142		

Total	6694	6857	13551	

Table 3.10 MEPCO Network Profile

3.12. INTERNAL CONTROL

Investment Approval:

Investment approval is requested annually under various categories, including STG, ELR, DOP, and other network development programs.

Internal Audit:

The Internal Audit function serves as a component of MEPCO's internal control system, ensuring the efficient and effective utilization of funds. The scope of the internal audit includes:

- Reviewing major decisions to ensure economy, efficiency, and effectiveness.
- Assessing measures taken to safeguard assets, conducting physical verification of these assets, and analyzing actual versus budgeted income and expenses, with a focus on identifying significant variances and their causes.
- Evaluating the appropriateness of accounting policies and reviewing the accounting and internal control systems, including their design and operational monitoring.
- Presenting and analyzing key issues currently faced by the company.

Financial Issues:

The Company has the following financial issues:

- Tax Issues with FBR
- Subsidies

Investment Needs:

- STG head
- ELR head
- DOP head
- Other system development program

3.13. COMMERCIAL MANAGEMENT

Summary of Units Billed and Collection - June 2024:

Summary of units billed and collection during the periods FY 2023-24 are provided as below:

Description	FY 2023-24			
	Units (M kWh)			%age
	Received at 132 kV	Sold	Lost	Losses
T&D Losses	19929.04	16904.36	3024.68	15.20%

Description	FY 2023-24								
	Billing (Million)			Collection (Million)			%Age Collection		
	Govt.	Private	Total	Govt.	Private	Total	Govt.	Private	Total
Recovery against Total Billing (with Subsidy)	40141.01	636548.43	676689.44	35307.85	632056.15	667364.00	8796	99.29	98.62

Description	FY 2023-24		
	Government (Million)	Private (Million)	Total (Million)
Receivables	12,863.67	116,007.43	128871.10

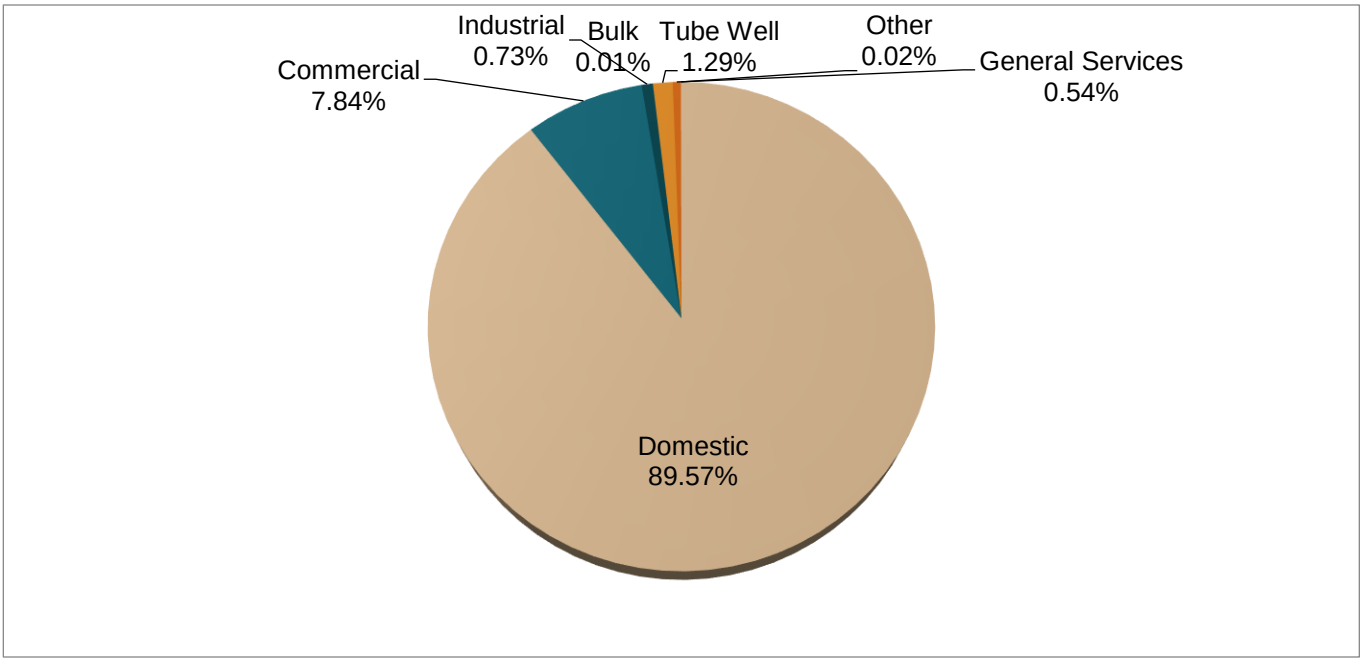
Table 3.11 Commercial Management of MEPCO

3.13. CONSUMER MIX

Numbers of Consumers as of June 2024 are as under;

Description	No. of Customers
Domestic	7,484,491 (89.57%)
Commercial	654,755 (7.84%)
Industrial	61,280 (0.73%)
Tube well	107,939 (1.29%)
Bulk Supply	473 (0.01%)
General Services	45,437 (0.54%)
Others	2,046 (0.02%)
TOTAL	8,356,422

Table 3.12 Consumer Mix

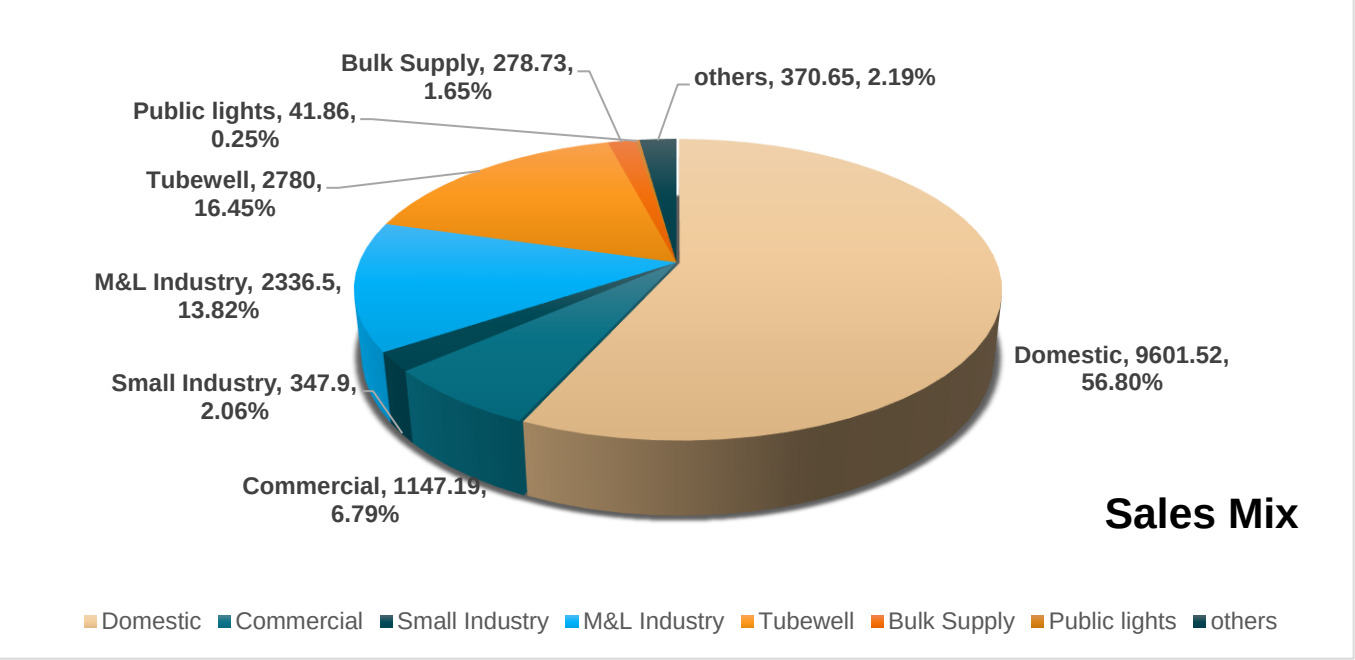


3.14. SALES MIX

Sale mix as of June 2024 is as under,

Description		Sale Mix (GWh)
Domestic		9601.52
Commercial		1147.19
Industrial	Small Industry	347.90
	Medium & Large Industry	2336.50
Tube well		2780.00
Bulk Supply		278.73
Public Lights		41.86
Others		370.65
TOTAL		**16904.35 GWh**

Table 3.13 Sale Mix of MEPCO



DEMAND FORECASTING DATA

- Actual number of Consumers in Past Years
- Projected Number of Consumers
- Demand Forecast 2025-2030
- Energy and Demand Forecasts (Recorded)
- Energy and Demand Forecasts (Computed)
- Category Wise Energy and Demand Forecasts (Computed)

4. DEMAND FORCASTING DATA INTRODUCTION

The Demand Forecast is based on the Power Market Survey (PMS) and is prepared by the MEPCO MIRAD team with the facilitation of NTDC. The report provides a detailed year-by-year forecast of MEPCO's energy sales and power demand, covering both the entire company and each sub-station within its distribution network. Additionally, the forecast includes projections for civil administrative areas, such as divisions and districts, served by the company's distribution network.

Load forecasting is a critical component of the power planning process, involving the prediction of future energy consumption and demand. This forecast forms the foundation for both demand- and supply-side planning. Utilities typically prepare load forecasts for various time frames, with the level of detail depending on the specific planning applications and operational requirements for which the forecast will be utilized.

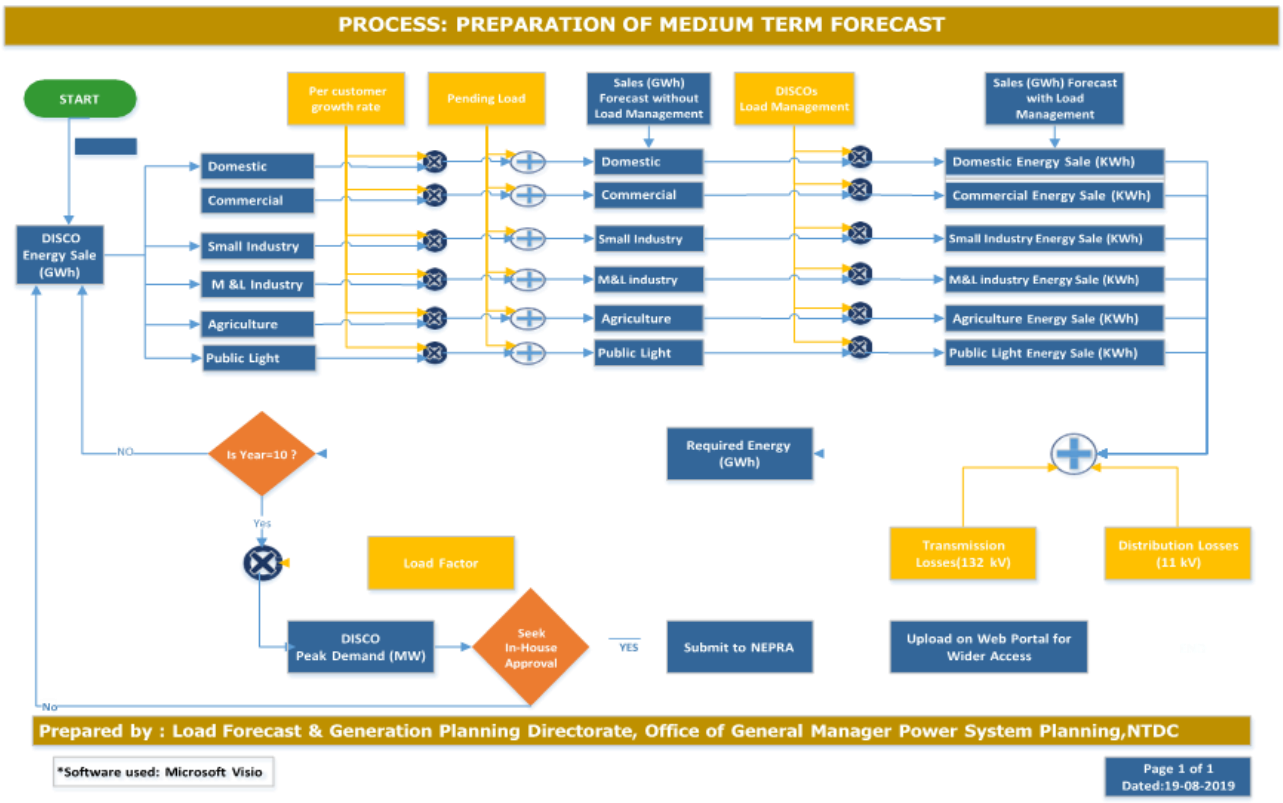


Table 4.1 Steps of Medium-Term Load Forecast

4.1. ACTUAL NUMBER OF CONSUMERS IN PAST YEARS

FY	Domestic	Commercial	Small Industry	Medium & Large Industry	Agriculture	Bulk	Public Lights	Other	Total
2019-20	6,090,985	579,011	46,905	10,636	93,884	457	1,592	37,840	6,861,310
2020-21	6,415,415	600,662	48,498	11,016	99,127	458	1,666	40,835	7,217,677
2021-22	6,788,616	618,271	49,465	11,252	102,709	463	1,742	42,434	7,614,952
2022-23	7,068,151	635,962	49,889	10,879	106,349	471	1,816	44,290	7,917,807
2023-24	7484491	654755	50289	10991	107939	473	1917	45566	8,356,421

Table 4.2 Historical Number of Consumers in MEPCO

4.2. PROJECTED NUMBER OF CONSUMERS

After analyzing previous trends and considering the potential growth in urbanization and the development of industrial estates in various cities within the MEPCO region, such as Multan, Bahawalpur, Muzaffargarh, and Vehari, as well as the rapid emergence of new housing societies, particularly in these cities and others, the following table has been formulated. It projects the approximate number of consumers over the next five years.

FY	Domestic	Commercial	Small Industry	Medium & Large Industry	Tubewell	Bulk Supply	Public Light	Other	Total
2025-26	7,999,100	681,302	51,431	11,245	114,632	497	2,114	50,250	8,910,572
2026-27	8,549,092	708,926	52,599	11,505	121,741	532	2,259	53,569	9,500,223
2027-28	9,136,899	737,670	53,794	11,770	129,290	568	2,415	57,107	10,129,513
2028-29	9,765,122	767,579	55,015	12,042	137,307	607	2,581	60,879	10,801,134
2029-30	10,436,540	798,701	56,265	12,321	145,822	649	2,758	64,901	11,517,956

Table 4.3 Projected Numbers of Consumers

4.3. DEMAND FORECAST 2025-26 TO 2029-2030

The Demand Forecast for the period FY 2023-24 to FY 2033-34 has been developed under two (2) scenarios, viz:

- Low Forecast (Recorded);
- Base Forecast (Computed)

The Base Forecast represents the total expected sales assuming no load shedding is implemented, i.e., the computed loads. The Low Forecast, on the other hand, represents only the loads served, i.e., the recorded loads. Accordingly, the projections for the next five-year period, FY 2025-26 to FY 2029-30, under both scenarios, are provided separately and are summarized as follows:

4.4. ENERGY AND DEMAND FORECASTS (COMPUTED)

As per Demand Forecast (PMS), following is the expected demand (GWh and MW) under base case (Computed) scenario over the plan horizon 2025-26 to 2029-30.

MEPCO PMS Forecast (Base Forecast)							
FY	Computed Sale	Distribution Losses	Energy Received at 11 kV	Peak Demand at 11 kV	Transmission Losses	Energy Sent out at 132 kV	Computed Peak Demand at 132 kV
		(GWh)	(GWh)	MW	(GWh)	(GWh)	(MW)
2024-25	17184	2463	19647	4567	208	19856	4616
2025-26	17331	2377	19708	4623	203	19911	4670
2026-27	17517	2309	19826	4686	190	20016	4730
2027-28	17706	2286	19992	4761	182	20174	4804
2028-29	17946	2268	20214	4854	174	20388	4896
2029-30	18198	2249	20447	4953	166	20612	4993

Table 4.4 MEPCO Energy and Demand Forecast (Computed)

Whereas, Category wise sale for the period from FY 2025-26 to 2029-30 is tabulated as below:

MEPCO Category Wise Sale- GWh (Base Forecast)								
FY	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
	(GWh)							
2024-25	10262	1184	43	354	2333	2707	301	17184
2025-26	10448	1209	43	358	2299	2609	365	17331
2026-27	10681	1239	44	364	2268	2521	400	17517
2027-28	10919	1270	45	370	2228	2434	440	17706
2028-29	11184	1304	45	378	2187	2356	492	17946
2029-30	11450	1339	46	386	2154	2280	542	18198

Table 4.5 MEPCO Category wise Energy Forecast (GWh) (Computed)

Category wise Demand Forecast for the period FY 2025-26 to FY 2029-30 in term of MW is tabulated as below;

MEPCO Category Wise Sale- MW (Base Forecast)								
FY	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
	MW	MW	MW	MW	MW	MW	MW	MW
2024-25	3205	351	15	48	494	659	78	3998
2025-26	3264	359	15	48	497	636	112	4071
2026-27	3337	368	15	49	503	614	131	4147
2027-28	3412	377	15	50	504	593	154	4226
2028-29	3496	388	15	51	504	574	186	4323
2029-30	3580	398	16	52	510	555	216	4424

Table 4.6 MEPCO Category wise Demand Forecast (MW) (Computed)

4.5. ENERGY AND DEMAND FORECASTS (RECORDED)

Demand Forecast – Low Case Forecast:

As per the Demand Forecast (PMS), the following table outlines the expected demand in both GWh and MW under the "load to be served" (recorded) scenario for the next five-year period, from FY 2025-26 to FY 2029-30.

MEPCO PMS Forecast (Low Forecast)							
FY	Recorded Sale	Distribution Losses	Energy Received at 11 kV	Peak Demand at 11 kV	Transmission Losses	Energy Sent out at 132 kV	Recorded Peak Demand at 132 kV
		(GWh)	(GWh)	MW	(GWh)	(GWh)	(MW)
2024-25	17038	2443	19481	4250	206	19688	4295
2025-26	17186	2357	19543	4292	201	19744	4336
2026-27	17333	2285	19618	4336	188	19807	4377
2027-28	17485	2258	19742	4379	180	19922	4418
2028-29	17650	2231	19881	4423	171	20052	4461
2029-30	17826	2203	20029	4467	162	20191	4503

Table 4.7 MEPCO Energy and Demand Forecast (Recorded)

4.6. CATEGORY WISE ENERGY AND DEMAND FORECASTS (RECORDED)

MEPCO Category Wise Sale- GWh (Low Forecast)								
FY	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
	(GWh)							
2024-25	10176	1174	43	351	2313	2684	299	17038
2025-26	10360	1199	43	355	2280	2587	362	17186
2026-27	10569	1226	43	360	2244	2494	396	17333
2027-28	10782	1254	44	366	2200	2404	434	17485
2028-29	10999	1283	45	372	2151	2317	484	17650
2029-30	11216	1312	45	378	2110	2233	531	17826

Table 4.8 Category wise Energy and Demand Forecasts (GWh) (Recorded)

MEPCO Category Wise Sale- MW (Low Forecast)								
FY	Domestic	Commercial	Public Light	Small Industries	M&L Industries	Tube Well	Bulk	Total
	MW	MW	MW	MW	MW	MW	MW	MW
2024-25	2982	327	14	45	459	613	73	3720
2025-26	3030	333	14	45	461	590	104	3780
2026-27	3088	340	14	46	465	568	121	3838
2027-28	3139	347	14	46	463	545	141	3887
2028-29	3185	353	14	47	459	523	169	3939
2029-30	3229	359	14	47	460	501	194	3990

Table 4.9 MEPCO Category wise Demand Forecast (MW) (Recorded)

POWER ACQUISITION PLAN

- Assessment for Supply
- Input for PAP
- Estimated Peak Demand
- Capacity Obligation
- Firm Capacities
- Power Procurement
- MEPCO Share In PAP

5. POWER ACQUISITION PROGRAM (PAP)

5.1. INTRODUCTION

The Multan Electric Power Company (MEPCO) is a Deemed Licensee for the supply of electric power in accordance with the proviso to Sub-Section (1) of Section 23E of the Regulation of Generation, Transmission, and Distribution of Electric Power (Amendment) Act, 2018 (published on May 02, 2018), for a period of three years, which expired on May 01, 2023.

Accordingly, in pursuance of Section-3(1) of NEPRA Licensing (Electric Power Supplier) Regulations, 2022 and in accordance with Section-3 of the NEPRA Licensing (Application, Modification, Extension, and Cancellation) Procedure Regulations, 2021, MEPCO vide letter 225-31 dated 06.02.2023 submitted an Application before NEPRA for Grant / Renewal of an Electric Power Supply License.

NEPRA has granted Electric power supply license No. SOLR 06/2023 dated 27-12-2023 to MEPCO vide letter No. NEPRA/DG (LIC)/LAS-11/38890-38911 dated 27-12-2023.

As per Regulation 4 of the Electric Power Procurement Regulations, 2022, an Electric Power Supplier shall be responsible for the following:

- Ensuring the security of supply for its consumers by planning power procurement in adequate quantities.
- Procuring sufficient electric power to meet its capacity obligations based on prudent spatial load forecasts, using the best available information to avoid under- or over-contracting.
- Adopting an efficient and effective power procurement strategy, along with risk mitigation mechanisms, while considering the approved IGCEP, TSEP, Network Expansion Plans, and Power Acquisition Program.
- Maintaining creditworthiness, financial health, and sufficient payment capacity, and complying with its electric power procurement and use of system charges payment obligations.

The Regulation 6 of the said Regulations requires that the supplier of last resort prepare a rolling five-year **Power Acquisition Program (PAP)** on an annual basis which shall include:

- Its requirements in terms of energy and peak demands.
- Existing contracted energy and capacity.
- Its capacity obligations as determined by the market operator in accordance with the Market Commercial Code.
- Proposed new and firm power procurement during the next three years and indicative procurement for the subsequent two years.

5.2. ASSESSMENT OF SUPPLY

Besides requirements of the Act, the Licensing Regulations, and the Procurement Regulations, PAP is based on Medium Term Load Forecasts (MTLFs) of each SOLR as already submitted with the Authority, the Indicative Generation Capacity Expansion Plan (IGCEP-2022) as approved by the Authority and the Report on Compliance with Capacity Obligations 2022-23, prepared by the CPPA-G (as designate Market Operator) under the provisions of the approved Market Commercial Code (MCC).

The above-mentioned Capacity Obligation Report 2022-23 provides systematic calculation of Capacity Obligation of each SOLR determined in accordance with the Market Commercial Code and valuation of existing and future contracted firm capacities of supply for assessment of compliance with the said Capacity Obligation.

5.3. INPUTS FOR PAP

The following data inputs have been used to determine the Capacity Obligations:

- Estimated Peak Demand.
- Capacity Obligations with Transmission Losses of NTDC & Reserve Margin.
- Existing Firm Capacities.
- Contracted Firm Capacities.
- Retirement Firm Capacities.
- Future Procurement.

5.4. ESTIMATED PEAK DEMAND

Year	Recorded Sale (GWh)	Energy Sent out at 132 kV (GWh)	Recorded Peak Demand at 132 kV (MW)
2024-25	17038	19688	4295
2025-26	17186	19744	4336
2026-27	17333	19807	4377
2027-28	17485	19922	4418

2028-29	17650	20052	4461
2029-30	17826	20191	4503

Table 5.1 Estimated Peak Demand of MEPCO

5.5. CAPACITY OBLIGATION

Sr. No.	Description	Year	Current	Year-1	Year-2	Year-3	Year-4
		FY	2024-25	2025-26	2026-27	2027-28	2028-29
1	Estimated Peak Demand as per demand forecast	MW	4295	4336	4377	4418	4461
2	Transmission Losses	%age	2.639	2.639	2.639	2.639	2.639
3	Adjusted Peak Demand as per demand forecast	MW	4408	4450	4493	4535	4579
4	Reserve Margin	%age	10	10	10	10	10
5	Capacity Obligation as per demand forecast	MW	4849	4895	4942	4989	5036

Table 5.2 Capacity Obligation

5.6. EXISTING FIRM CAPACITIES

Fuel	2022-23	2023-24	2024-25	2025-26	2026-27
	(MW)				
Imported Coal	3421	4028	4022	4022	4022
Local Coal	1134	2956	2956	2956	3232
RLNG	6264	5967	5967	5967	5967
Gas	2533	2533	2154	2154	2154
Nuclear	3223	3223	3223	3223	3223
Bagasse	244	244	244	259	259
Solar	144	177	184	184	184
Hydro	9416	9545	9813	12746	13282

SPP	127	127	127	117	84
Wind	751	751	766	766	766
RFO	3782	3782	3062	3063	3063
TOTAL	**31040**	**33324**	**32517**	**34602**	**35381**
Less: K-Electric Share	**1200**	**1200**	**2050**	**1200**	**1200**
Grand Total	**29840**	**32124**	**30467**	**33402**	**34181**

Table 5.3 Existing Firm Capacities

5.7. CONTRACTED FIRM CAPACITES

Fuel	2022-23	2023-24	2024-25	2025-26	2026-27
	(MW)				
Imported Coal	607	-	-	-	-
Local Coal	1822	-	-	276	-
RLNG	1162	-	-	-	-
Gas	-	-	-	-	-
Nuclear	-	-	-	-	-
Bagasse		-	15	-	-
Solar	33	7	-	-	-
Hydro	129	268	1930	536	2174
Cross Border	-	-	1000	-	-
Wind	-	15	-	-	-
RFO	-	-	-	-	-
TOTAL	**3743**	**290**	**2945**	**812**	**2174**
Less: K-Electric Share	**0**	**850**	**0**	**0**	**0**
Grand Total	**3743**	**-560**	**2945**	**812**	**2174**

Table 5.4 Contracted Firm Capacities

5.8. RETIREMENT FIRM CAPACITIES

Fuel	2022-23	2023-24	2024-25	2025-26	2026-27
	(MW)				
Imported Coal	-	-	-	-	-
Local Coal	-	-	-	-	-
RLNG	1458	-	-	-	-
Gas		379			
Nuclear	-	-	-	-	-
Bagasse	-	-	-	-	-
Solar	-	-	-	-	-
Hydro	-	-	-	-	-
SPP	-	-	10	33	19
Wind	-	-	-	-	-
RFO	-	719	-	-	-
TOTAL	**1458**	**1098**	**10**	**33**	**19**

Table 5.5 Retirement Firm Capacities

5.9. MEPCO SHARE IN FIRM CAPACITY

Sr. No.	Description	Year:	Current	Year-1	Year-2	Year-3	Year-4
		FY:	2022-23	2023-24	2024-25	2025-26	2026-27
1	Existing Firm Capacities	MW	29840	32124	30467	33402	34181
2	Committed/Contracted Firm Capacities	MW	3743	-560	2945	812	2174
3	Retirement Firm Capacities	MW	1458	1098	10	33	19
4	Total Firm Capacity (1+2+3)	MW	32124	30467	33401	34181	36336
5	MEPCO Share (as per Code)	% age	17.06	17.06	17.06	17.06	17.06
6	MEPCO Share Firm Capacity	MW	5480	5198	5698	5835	6202

Table 5.6 MEPCO Share in Firm Capacity

5.10. SECURITY OF SUPPLY POSITION IN MEPCO

The security of supply for regulated consumers is assessed based on MEPCO's Capacity Obligation and MEPCO's share in firm capacity. However, this assessment does not encompass any future procurement or individual procurement initiatives undertaken by MEPCO, whether conducted independently or under directives from the Government of Pakistan.

Sr. No.	Description	Year:	Current	Year-1	Year-2	Year-3	Year-4
		FY:	2024-25	2025-26	2026-27	2027-28	2028-29
1	Capacity Obligation	MW	4849	4895	4942	4989	5036
2	MEPCO Share Firm Capacity	MW	5480	5198	5698	5835	6202
3	Compliance with Capacity Obligation	%	113	106	115	117	123

Table 5.7 Security of supply position in MEPCO

5.11. POWER PROCUREMENT FY 2022-23 TO FY 2026-27

Fuel	2022-23	2023-24	2024-25	2025-26	2026-27
	(MW)				
Imported Coal	-	-	-	-	-
Local Coal	-	-	-	-	-
RLNG	500	500	500	500	-
Gas	-	-	-	-	-
Nuclear	-	-	-	-	-
Bagasse	-	-	-	-	-
Solar	81	492	573	929	1285
Hydro	-	98	169	178	-
SPP	-	9	9	9	9
Wind	-	15	15	15	15
RFO	-	-	-	-	-

TOTAL	581	1114	1266	1631	

Table 5.8 Power Procurement FY 2022-23 to 2026-27

5.12. MEPCO SHARE IN PAP FY-2022-23 TO FY 2026-27

Description	Year:	Current	Year-1	Year-2	Year-3	Year-4
	FY	2022-23	2023-24	2024-25	2025-26	2026-27
MEPCO Share in Future Procurement	MW	94	431	297	312	241

Table 5.9 MEPCO Share in PAP FY 2022-23 FY to 2026-27

5.13. MEPCO'S COMPLIANCE WITH CAPACITY OBLIGATION INCLUDING FUTURE PROCUREMENT

Sr. No.	Description	Year	Current	Year-1	Year-2	Year-3	Year-4
		FY:	2022-23	2023-24	2024-25	2025-26	2026-27
1	MEPCO Share Firm Capacity	MW	5480	5198	5698	5835	6202
Power Acquisition Program							
2	Future Procurement	MW	94	431	297	312	241
3	Total MEPCO Capacity (1+2)	MW	5574	5628	5595	6147	6429
4	Capacity Obligation	MW	4849	4895	4942	4989	5036
5	Compliance with Capacity Obligation (3 / 1)	% age	115	115	113	123	128
6	Minimum Compliance Required as per performance standard of Electric Supplier Regulation 2022	% age	95	95	95	95	95

Table 5.10 MEPCO's Compliance with capacity obligation including future procurement

COMPETITIVE TRADING BILATERAL CONTRACT MARKET & EFFECT OF NET METERING

- CTBCM
- Effect of BPCs on MEPCO Network
- Net Metering

6. COMPETITIVE TRADING BILATERAL CONTRACT MARKET

The Competitive Trading Bilateral Contract Market (CTBCM) is a regulatory framework designed to introduce competition into the electricity market by enabling direct bilateral trading of electricity contracts among producers, distributors, and consumers. This model aims to enhance market efficiency, transparency, and cost-effectiveness by fostering competition, reducing dependence on a single-buyer model, and stimulating investment in the power sector. Key elements of the CTBCM include market liberalization, the establishment of direct contracts, regulatory oversight, and mechanisms for risk management. While the framework presents advantages such as cost reductions, improved service quality, and greater consumer choice, its implementation also entails challenges, including necessary regulatory adjustments and the need to ensure a level playing field for all market participants.

Pakistan's electricity market is undergoing a significant transformation from a single-buyer model to CTBCM following NEPRA's approval in November 2020. This reform allows bulk power consumers (with a load of 1 MW or more) to choose between purchasing electricity from DISCOs or competitive suppliers. NEPRA has instituted comprehensive regulatory frameworks including licensing for Market Operators, Electric Power Traders, and Suppliers, alongside performance standards and consumer eligibility criteria. By May 2022, NEPRA had licensed a market operator and approved a Market Commercial Code (MCC), signaling the end of the single-buyer regime and enabling DISCOs to procure power through centralized auctions overseen by an Independent Auction Administrator (IAA). Institutional reforms, IT interventions like the Market Management System (MMS) and automation of dispatch processes, and the establishment of a Power Sector Centre of Excellence (PSCE) aim to enhance market transparency and professional capacity. A trial run of the market began in May 2022, aimed at refining operations before full implementation, ensuring competitive suppliers do not charge higher tariffs than regulated suppliers of last resort, thereby safeguarding consumer interests and promoting a more efficient and reliable electricity market.

6.1. PERCENTAGE SALE SHARE OF MEPCO BPCS HAVING LOAD >= 1MW

FY	MEPCO Annual Sale (GWh)	No. of BPCs (having load>= 1 MW)	BPCs Annual Sale(GWh)	%age Share in Annual Sale
2020-21	17466.11	195	1381.85	7.9%
2021-22	19202.00	203	1923.51	10.0%
2022-23	16732.37	203	1798.19	10.7%

Table 6.1 Percentage Sale Share of MEPCO BPCs having Load >= 1MW

6.2. IMPACT ON SALE IN THE SCENARIO BPCS LEAVE MEPCO

FY	Sale (GWh)	BPCs Consumption Projections (GWh)	MEPCO Sales to BPCs (leaving scenario) (GWh)	Sales in Case BPCs Leave MEPCO (GWh)
2023-24	16,904	1,821	1,821	16,904
2024-25	17,038	1,843	1,843	17,038
2025-26	17,186	1,866	1,659	16,978
2026-27	17,333	1,890	1,106	16,550
2027-28	17,485	1,913	553	16,124
2028-29	17,650	1,937	369	16,081
2029-30	17,826	1,962	184	16,049

Table 6.2 Impact on Sale in the Scenario BPCs leave MEPCO

6.3. MEPCO SALES TO BPCS & BPCS %AGE SALES SHARE

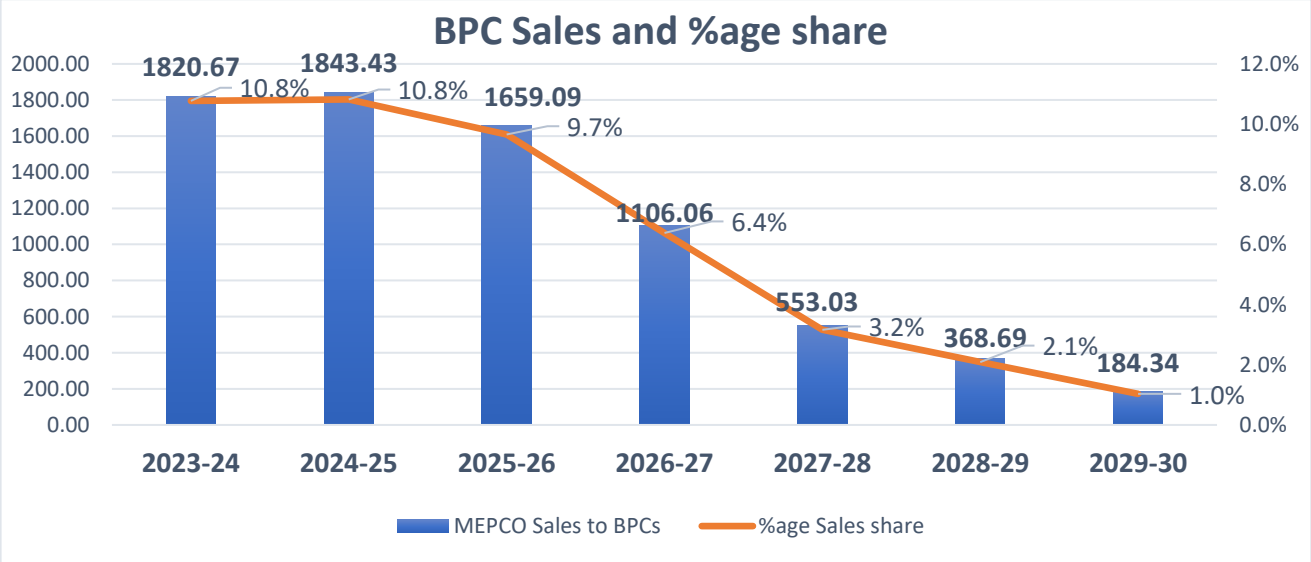


Table 6.3 MEPCO Sales to BPCs & BPCs %age Sales share

6.4. PERCENTAGE REVENUE SHARE OF MEPCO BPCS HAVING LOAD >= 1MW

FY	MEPCO Annual Revenue (Mil. Rs)	No. of BPCs (having load >= 1 MW)	BPCs Annual Revenue (Mil. Rs)	%age Share in Annual Revenue
2021-22	400711	203	53470	13.3%
2022-23	511324	203	68452	13.4%

Table 6.4 Percentage Revenue Share of MEPCO BPCs having Load >= 1MW

6.5. IMPACT ON REVENUE IN THE SCENARIO BPCS LEAVE MEPCO

FY	MEPCO Revenue Projection (Mil. Rs)	BPCs Revenue Projection (Mil. Rs)	BPCs Revenue Projection (Mil. Rs) leaving scenario	MEPCO Revenue in Case BPCs Leave MEPCO (Mil. Rs)	%age Share in Revenue (Leaving Scenario)
2023-24	686620	69308	69308	686620	10%
2024-25	700352	70174	70174	700352	10%
2025-26	714359	71052	63157	706464	9%
2026-27	728647	71940	42105	698812	6%
2027-28	743219	72839	21052	691432	3%
2028-29	758100	73750	14035	698385	2%
2029-30	773262	74671	7017	705608	1%

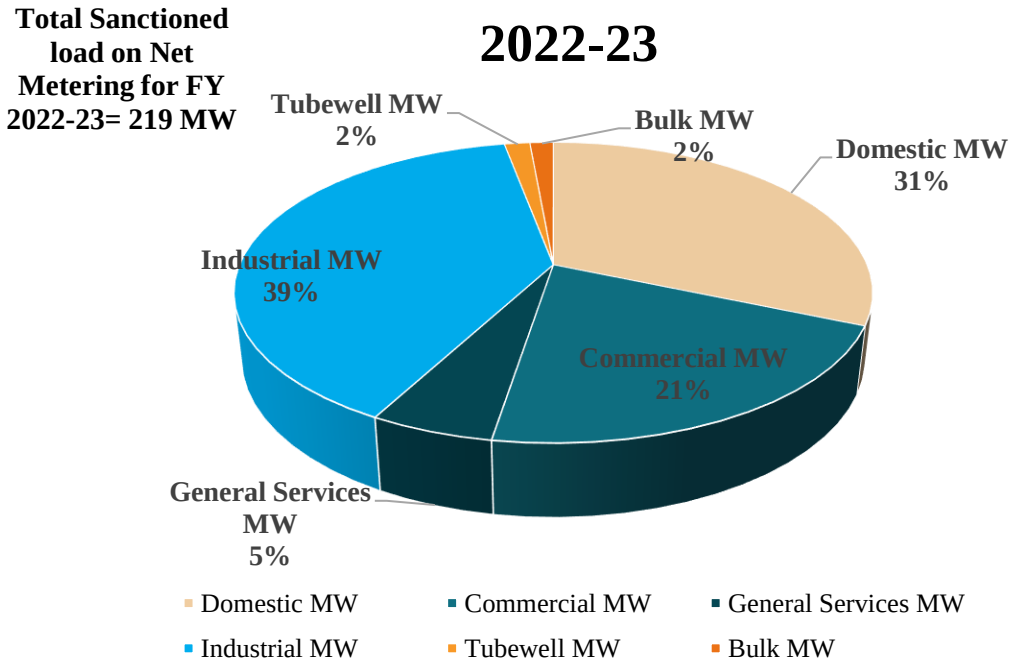
Table 6.5 Impact on Revenue in the Scenario BPCs leave MEPCO

6.6. NET METERING

Net metering significantly impacts MEPCO by altering its sales and therefore, revenue dynamics. Consumers, who generate their own power, reduce their reliance on purchased electricity. This shift can lead to a decrease in overall sales revenue, necessitating a reassessment of the utility's pricing structures. Moreover, the increase in distributed generation requires MEPCO to manage the grid more meticulously to ensure stability and reliability. While these changes present challenges, net metering also incentivizes the adoption of renewable energy sources, aligning with sustainability objectives.

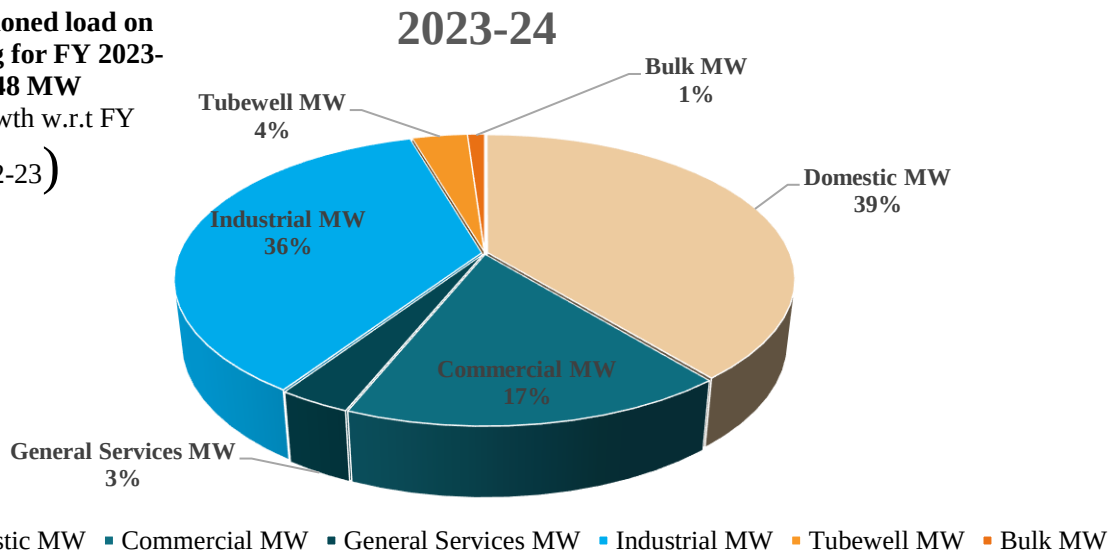
Furthermore, MEPCO may need to invest more in infrastructure upgrades and operational adjustments to accommodate the changes introduced by net metering. Ultimately, this approach can enhance customer engagement and satisfaction by providing consumers with greater control over their energy usage and efficient consumption.

Net Metering shares (FY 2022-23)



6.6.1. NET METERING SHARES (FY 2023-24)

Total Sanctioned load on Net Metering for FY 2023-24= 548 MW
(151% growth w.r.t FY 2022-23)



6.6.2. NET METERING PROJECTIONS

FY	Domestic		Commercial		General Services		Industrial		Tubewell		Bulk		Total	
	No.	MW	No.	MW	No.	MW	No.	MW	No.	MW	No.	MW	No.	MW
2023-24	24961	214.2	3057	93.6	379	17.6	2286	198.1	858	19.0	16	5.8	31557	548.3
2024-25	41759	359.6	4605	140.9	531	23.6	3804	310.5	1564	34.6	23	8.5	52286	877.8
2025-26	58557	505.1	6153	188.2	683	29.7	5322	422.9	2270	50.2	30	11.3	73015	1207.4
2026-27	75355	650.6	7701	235.5	835	35.7	6840	535.3	2976	65.9	37	14.0	93744	1536.9
2027-28	92153	796.1	9249	282.8	987	41.7	8358	647.7	3682	81.5	44	16.7	114473	1866.5
2028-29	108951	941.6	10797	330.1	1139	47.7	9876	760.2	4388	97.1	51	19.4	135202	2196.1
2029-30	125749	1086.6	12345	377.1	1291	53.7	11394	872.2	5094	113.1	58	22.4	155931	2526.1

Table 6.6 Net Metering Projections

PROJECTS & PROGRAM

- STG System.
- Plan for Expansion & Rehabilitation.
- Scope of Proposed Plan of each formation for next Five years.

7. PROJECTS AND PROGRAM

7.1. SECONDARY TRANSMISSION & GRID SYSTEM

This section outlines the scope for the expansion and rehabilitation of the secondary transmission and grid network (132 kV and/or 66 kV) of MEPCO.

MEPCO has developed a comprehensive plan for the five-year period from FY 2025-26 to FY 2029-30, which, if implemented, would completely revamp the transmission network and enable the DISCOs to achieve NEPRA's specified Performance Standards for Distribution, as well as comply with the provisions of the Distribution Code, particularly the Distribution Planning Code issued by NEPRA.

After reviewing the existing MEPCO network, the scope of work has been finalized to include the construction of new 132 kV grid stations and transmission lines, rehabilitation, augmentation, and extension of existing grid stations, as well as the conversion of existing 66 kV grid stations to the 132 kV voltage level. This planning has been undertaken with consideration of the anticipated future load demand in various geographical areas served by MEPCO.

The secondary transmission system will also incorporate Supervisory Control and Data Acquisition (SCADA). The implementation of SCADA within the power system enhances overall system efficiency by optimizing, supervising, and controlling the transmission network. SCADA functionality in the power system network offers increased reliability and stability for integrated grid operations. The following are the benefits of SCADA:

- Obtaining information that facilitates better process traceability.
- Storing performance data to address power quality issues.
- Establishing a smart maintenance regime and reducing downtime

Furthermore, the rehabilitation of the transmission system, sponsored by the World Bank, has also been incorporated into the plan. Should there be any revisions to the proposed plan for grid stations under World Bank financing, the proposed grid stations will be funded through MEPCO's own resources.

Project and Programs – Scope

Sr. No	Description	Total Nos.	Total Capacity (MVA)	Year 2025-26	Year 2026-27	Year 2027-28	Year 2028-29	Year 2029-30
1	New Grids	20	1560	5	5	6	2	2
2	Augmentations	2	28	1	0	1	0	0
3	Spare Transformer	5	200	1	1	1	1	1
4	Capacitors	1	0	0	1	0	0	0
5	Transmission Lines	50 (820Km)	0	16(274.5 Km)	11(163Km)	11(155Km)	10(202.5 Km)	2(25Km)
6	SCADA	-	-	Pilot Project		-	-	-

Table 7.1 Abstract of Proposed STG Plan

7.1.1. LOAD FLOW STUDIES FOR STG NETWORK

Load Flow Studies for Five Year Plan

This section addresses the load flow study of STG Network for the five-year period from FY 2025-26 to FY 2029-30. The assumptions and results of these studies are discussed herein. Special attention has been given to specific situations, such as the integration of large-scale solar power generation within MEPCO over a defined period.

The additional objectives of the studies include the identification of any reinforcements necessary for the proposed sub-projects, which encompass the installation of new transmission lines, construction of new substations, addition or augmentation of transformers, reactive power compensation, and the addition or replacement of switchgear at the substations, in addition to the projects that are already planned or under execution within MEPCO. The benefits of the proposed sub-projects to MEPCO's network have also been assessed through system studies, and the findings are discussed below. The detailed analysis of STG network on the account of upcoming project and smooth dispersal of power has been thoroughly analyzed.

Methodology of Analysis – Load Flow Studies

The methodology of system studies/analysis for these cases is given as under:

- MEPCO’s network expansion plan including already planned/under-execution projects has been included.
- The proposed sub-projects to be implemented have been identified through load flow studies and identified separately.
- The complete system model of the National Grid has been simulated, i.e., system network of not only the MEPCO but also of NTDC and the neighboring DISCOs have been simulated for the purpose of analysis.
- The assumptions on which the system studies are based have been mentioned with necessary details below.
- Two types of analysis, i.e., load flow and short circuit, have been carried out and their results have been presented in the report.
- Load flow analysis has been carried out for the steady state normal system operating condition in order to:
  i. Assess adequacy of the network to feed the proposed sub-projects.
  ii. Determine any additional transmission reinforcement and/or reactive power compensation requirement for the scope of work of sub-projects.
  iii. Justification of proposed projects.
  iv. Determine the benefits of the above proposed works at substations and transmission lines in terms of reduction in transmission losses, improvement in voltage profile, reduction in

loading of transmission lines or transformers, spare capacity margin in the transmission system.

v. Conclusions and recommendations on the basis of technical analysis have been presented at the end.

Assumptions – Load Flow Studies

The load flow studies are based on the following assumptions:

i. The diversified values of the peak projected loads on substations, existing and new, have been modeled as per latest PMS load forecast. The loads have been adjusted as per the ratio between MEPCO Peak including load shedding and the algebraic sum of recorded individual peaks of the substations of MEPCO. This diversified peak is modeled in the load flow cases for FY 2025-26 to FY 2029-30 that helps in identifying scope for transmission lines.

ii. The scope of substation is derived from their individual undiversified peaks separately in excel based models. This scope identified is then modeled in the load flow cases.

iii. All the existing as well as the proposed power plants, both in public and private sectors have been assumed in operation in all the study scenarios as per their expected commissioning schedules

iv. Latest MEPCO's planned/on-going transmission expansion/re-enforcement projects, including substations (extension, augmentation, conversion, new), transmission lines have also been simulated in the studies as per their expected commissioning schedules.

v. The existing and planned shunt capacitors at 11 kV and 132 kV have been modeled in the study scenarios. However, additional shunt capacitors have also been recommended to compensate the reactive power where net power factor at the substations have been found too low.

Study Criteria– Load Flow Studies

The load flow studies have been carried out keeping in view the following criteria in the MEPCO's network:

- Voltage Limits: ±5% under normal operating conditions.
- Loading of transmission lines and transformers have been kept within 100% of their capacities under normal operating conditions.
- N-1 contingency analysis has been carried out and additional scope to meet those criteria is also simulated.

Results of Load Flow Studies

Load flow studies have been carried out with already planned/on-going projects; and with & without proposed sub projects in 5-year plan to study their impact on the system network. The system scenarios of peak load conditions of years FY 2025-26 to FY 2029-30 have been simulated.

i. Year Wise Voltage Profile

It is evident from the study exhibits that voltage profile will improve and becomes within permissible limits.

ii. Results of Load Flow Studies

Load flow studies have been carried out with already planned/on-going projects; and with & without proposed subprojects in 5-year plan to study their impact on the system. The loss reduction over the five years is given below.

Fiscal Year	Computed Peak	Energy Sent out at 132 KV (MkWh)	Loss Reduction (MkWh) on STG	Loss Reduction (%)
2025-26	4670	19744	76	0.02
2026-27	4730	19807	68	0.01
2027-28	4804	19922	30	0.02
2028-29	4896	20051	22	0.01
2029-30	4993	20191	19	0.01
		120029	**215**	**0.07**

Table 7.2 Loss Reduction of STG Projects

7.1.2. PLAN FOR EXPANSION AND REHABILITATION OF TRANSMISSION SYSTEM - SCOPE

This section outlines the plan for the expansion and rehabilitation of the secondary transmission system, specifically focusing on the construction of new grids and transmission lines necessary to accommodate load growth and address issues related to loss reduction. The projects are categorized firstly as ongoing and carry forward projects then five-year plan for expansion and rehabilitation of transmission system.

A - Ongoing and Carry Forward Projects (FY 2024-25)

Ongoing Projects

Sr. No.	Name of Project	Scope of Work	Estimated Cost (in PKR Million)
A.	**New Grid**		
1	132KV Pakpattan-II	1 x 40MVA PTF Bay 1 x L/Bays 1 x PT Bay	600
B	**Conversion from 66KV to 132KV**		
1	66KV Dajal	1 x 13 MVA PTF Bay, 1 x L/Bays 1 x PT Bay	141.281
C	**ADDITION OF POWER TRANSFORMER BAY**		
1	132KV Batti Bunglow	10/13MVA PTF Bay	43.812
2	132KV Qasim Pur	1x26MVA PTF Bay	52.172
3	132KV Chunawala	10/13MVA PTF Bay	52.89
4	132KV Khanewal Road Multan	26 MVA PTF	140
5	132KV Vehari Road Multan	26 MVA PTF	160
6	132KV Jampur Dajal Road	13 MVA PTF	59
7	132V Fort Munro	6.3 MVA PTF	260.232
8	132KV Chobara	6.3 MVA PTF	116.752
D	**ADDITION OF LINE BAYS**		
1	132KV Haroonabad	2 x Line Bays	36.68
2	132KV Faqirwali	2 x Line Bays	24.249
3	132KV Noor Pur	1 x Line Bay	9.731
4	132KV Pakpattan	1 x Line Bay	10.433
5	132/66KV Jam Pur	2 x Line Bays	32.273
6	132KV Fort Abbas	1 x Line Bay	8.874
7	132KV Kabirwala	2 x Line Bays	56.873

8	132KV Noor Pur	1 x Line Bay	48.386
9	132KV Jampur	1 x Line Bay	22.98
10	132KV Vehari Road Multan	2 x Line Bays	39.5
E	**Augmentation of Power Transformer**		
1	132KV Vehari	From 26 MVA to 40 MVA	289
F	**Twin Bundle Bus Bar**		
1	132KV PGHS Multan	01-No.	7.824
2	132KV Vehari Road Multan	01-No.	7.068
3	132KV Qasim Pur Multan	01-No.	25
G	**Conversion of Iso Bay into Line Bay**		
1	132KV Fort Munro	01-No.	8.719
2	132KV Hota	01-No.	10.609
3	132KV Jatoi	02-No.	12.578
4	132KV Duniya Pur	01-No.	12.578
5	132KV Jalalpur Pirwala	01-No.	17.309
6	132KV Jamal Din Wali	01-No.	18.847
7	132KV Mianwali Qureshian	01-No.	18.847

Transmission lines

A	**New Transmission Lines**		
1	132KV T/Line Kot Addu - Kot Sultan	40-KM, D/C, Rail	600
2	132KV SDT Noor Pur - Pakpattan-I	Foundation, erection, stringing etc.	551
3	F/F 132KV PakPattan-2 (Noorpur - Pakpattan-2)	27KM,2nd Circuit Stringing, Rail and 4KM, SDT, Rail	419.797
4	F/F 132 KV Dajal (132 KV Jampur - 132 KV Dajal)	21.20KM, SDT, Lynx	419.943
B	**Re-conductoring of Transmission Lines**		
1	132KV Arifwala - Hota - Bahawal Nagar Line (River Zone)	6.7-KM, Re-conductoring from Coyote to Lynx, S/C	208.496
C	**In/Out Arrangements**		
1	Qabula In/out to 132KV G/S Bahawal Nagar old	2.3-KM, S/C, Lynx	59
D	**2nd Circuit Stringing**		

1	132KV Haroonabad - Faqirwali - Fort Abbas	57-KM, 2nd Circuit Stringing, Lynx,	96.579
2	132KV T/Line 500KV DG Khan to 132KV Choti	2nd Circuit Stringing, 22.5KM, Lynx	91

Table 7.3 Ongoing Projects

Carry Forward Projects

GRID STATION

Sr. No.	Name of Project	Scope of Work	Estimated Cost 2024-25 (in PKR Million)	Estimated Cost 2025-26 (in PKR Million)
A.	**New Grid**			
1	132KV Muhammad Pur Dewan	2 x 13MVA 2 x L/Bays 1 x PT Bay	210	269
C	**ADDITION OF POWER TRANSFORMER BAY**			
1	132KV Sadiqabad	20/26MVA PTF Bay	-	125
2	132KV Nawazabad	20/26MVA PTF Bay	-	125
3	132KV BTM Old Burewala	1x13MVA PTF Bay	-	30
4	132KV Ludden	26 MVA	-	120
5	132KV Karam Pur	26 MVA	-	120

TRANSMISSION LINES

A	New Transmission Lines			
1	132KV T/Line In/Out Kabirwala	14KM, D/C, Lynx	340.7	99.5
2	132KV T/Line F/F Muhammad Pur Dewan In/Out Jampur - Guddu	New, 2.0KM D/C Lynx	24.7	7.033
Re-conductoring of Transmission Lines				
1	Mian Channu-Kassowal	Reconductoring Lynx to Rail 18 KM	248.3	64.6

B - PLAN For Expansion and Rehabilitation of Transmission System (FY 2025-26 to FY 2029-30)

New Grid Stations

Sr. No.	Description	Total No.	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
1	New						
	132 kV Grid Stations	20	5	5	6	2	2

Name of Grid Stations

New Grid Stations			
Sr. No	Proposed Grid Station	Type	Proposed FY
1	Piran Gaib	New	2025-26
2	Chowk Marlay	New	2025-26
3	D.G Khan-III	New	2025-26
4	Shah Jamal	New	2025-26
5	Arifwala-II	New	2025-26
6	Zahir Pir	New	2026-27
7	157/9-L Chowk	New	2026-27
8	Khanewal-II	New	2026-27
9	RYK-III	New	2026-27
10	Layyah-II	New	2026-27
11	Gaggo Mandi	New	2027-28
12	Rawan Road	New	2027-28
13	Cholistan-I	New	2027-28
14	Cholistan-II	New	2027-28
15	Cholistan-III	New	2027-28
16	Head Islam	New	2027-28
17	Dhanot	New	2028-29
18	Machiwal	New	2028-29
19	Jalal Kot	New	2029-30
20	Qaim Pur	New	2029-30

- **New Transmission Lines & Reconductoring of existing T/Ls**

Sr. No	Description	Total No.	2025-26	2026-27	2027-28	2028-29	2029-30
1	Transmission Lines	50 (820 KM)	16 (274.5 KM)	11 (163 KM)	11 (155 KM)	10 (202.5 KM)	2 (25 KM)

Name of Transmission Lines

New Transmission Lines					
Sr. No	**Name of Transmission Line**	**Length**	**Type**	**Conductor**	**Proposed Fiscal Year**
1	500/220KV Yousaf Wala - 132KV Arifwala T/L	51	Re-conductoring	Rail	2025-26
2	500/220KV Yousaf Wala- 132KV kameer - 132KV Arifwala T/L	51	Re-conductoring	Rail	2025-26
3	500/220KV Yousaf Wala - 132KV Sahiwal Old T/L	13	Re-conductoring	Rail	2025-26
4	220/132KV Multan New - Qasim Pur T/L	18	Re-conductoring	HTLS	2025-26
5	132KV Ludden - 132KV Hasil Pur	27	2nd Circuit Stringing	Rail	2025-26
6	220KV Vehari - 132KV Ludden	33	2nd Circuit Stringing	Lynx	2025-26
7	220KV Bahawalpur - 132KV Yazman	27	2nd Circuit Stringing	Rail	2025-26
8	132KV PakPattan - 132KV Noor Pur	26	2nd Circuit Stringing	Lynx	2025-26
9	500/220KV Yousaf Wala - 132KV Sahiwal New DC T/L	5	Re-conductoring	Rail	2025-26
10	132KV Vehari Road - 132KV Qasim Pur	3	Re-conductoring	HTLS	2025-26
11	500/220KV Multan-N to 132KVKhanewal Road to 132KV PGHS DC	4	Re-conductoring	HTLS	2025-26
12	F/F 132KV Piran Gaib (I/O 220/132KV Multan New - 132KV Vehari Road)	2	DC	Rail	2025-26
13	F/F 132KV Chowk Maraly (I/O 132KV Qabula - 132KV Bahawal Nagar)	0.5	DC	Lynx	2025-26
14	F/F 132KV D.G Khan-III (I/O 132KV Shah Sadar Din - 500KV D.G Khan)	0.5	DC	Lynx	2025-26
15	F/F 132KV Shah Jamal (I/O 220KV Muzaffargarh - 132KV D.G Khan)	13	DC	Lynx	2025-26
16	F/F 132KV Arifwala-II (I/O 132KV Qabula - 132KV Arifwala)	0.5	DC	Lynx	2025-26
17	500KV D.G Khan New - MDC - D.G Khan-II - D.G Khan	26	Re-conductoring	Rail	2026-27
18	500KV D.G Khan New - CPC - D.G Khan	21	Re-conductoring	Rail	2026-27
19	132KV Arifwala - 132KV Hota New T/L	28	2nd Circuit Stringing	Rail	2026-27
20	132KV Arifwala-New - 132KV Arifwala T/Line	7	DC	Rail	2026-27

21	132KV Arifwala-New - 132KV Pakpattan T/Line	37	DC	Lynx	2026-27
22	I/O of 132KV Arifwala – Hota T/Line at Arifwala-New G/S	6.5	DC	Lynx	2026-27
23	F/F 132KV Zahir Pir (I/O 500KV Sardar Garh - 132KV Khan Pur)	6.5	DC	Lynx	2026-27
24	F/F 132KV 157/9-L Chak (I/O 132KV Shaikh Fazal - 132KV Chichawatni)	17.5	DC	Lynx	2026-27
25	F/F 132KV Khanewal-II (I/O 132KV Kabirwala - 132KV Khanewal)	2	DC	Lynx	2026-27
26	F/F 132KV RYK-III (I/O 132KV Qabula - 132KV Bahawal Nagar)	11	DC	Lynx	2026-27
27	F/F 132KV Layyah-II (I/O 132KV Layyah - 132KV Kotadu)	0.5	DC	Rail	2026-27
28	132KV Nagshah - 132KV MESCO T/L	26	SDT	Rail	2027-28
29	132KV Nagshah - 132KV Buch Villas T/L	30	SDT	Rail	2027-28
30	132KV Nagshah - 132KV Suraj Miani T/L	16	SDT	Rail	2027-28
31	132KV Nagshah - 132KV Jail Raod T/L	12	SDT	Rail	2027-28
32	Double I/O of 132KV Multan Industrial – Muzaffargarh-New T/Line at 132KV Nagshah G/S	2	DC	Rail	2027-28
33	F/F 132KV Cholistan-I (I/O 132KV Yazman - 132KV Cholistan-II)	20	DC	Rail	2027-28
34	F/F 132KV Cholistan-II (I/O 132KV Cholistan-I - 132KV Maroot)	15	DC	Rail	2027-28
35	F/F 132KV Cholistan-III (Radial with Maroot)	24	DC	Rail	2027-28
36	F/F 132KV Head Islam (I/O 132KV Ludden - 132KV Hasil Pur)	4	DC	Rail	2027-28
37	F/F 132KV Rawan Road (I/O 132KV PGHS - 132KV Maan Kot)	4	DC	Lynx	2027-28
38	F/F 132KV Gaggo Mandi (I/O 132KV Arifwala - 132KV Burewala)	1.5	DC	Lynx	2027-28
39	132KV A.P.East - RYK Sugar Mill -Feroza T/Line	69	Re-conductoring	Lynx	2028-29
40	132KV Feroza - Khan Pur T/Line	35	Re-conductoring	Lynx	2028-29
41	132KV Industrial Estate - Jail Road - MESCO T/line	17	Re-conductoring	HTLS	2028-29
42	132KV WAPDA Town - Bosan Road T/Line	6	Re-conductoring	HTLS	2028-29
43	132KV PGHS-Bosan Road	6	Re-conductoring	HTLS	2028-29
44	220/132KV Burewala New - 132KV SahukaT/L	35	SDT	Rail	2028-29
45	220/132KV Burewala New - 132KV Hota T/L DC	10	DC	Rail	2028-29

46	220/132KV Burewala New - 132KV Burewala T/L DC	10	DC	Rail	2028-29
47	F/F 132KV Dhanot (I/O 132KV Bahawalpur - 132KV Lodhran)	13.5	DC	Lynx	2028-29
48	F/F 132KV Machiwal (I/O 220/132KV Vehari - 132KV Burewala)	1	DC	Lynx	2028-29
49	F/F 132KV Jalal Kot (I/O 132KV BahawalNagar - 132KV Hota)	15	DC	Lynx	2029-30
50	F/F 132KV Qaim pur (I/O 132KV Hasil Pur - 132KV K.P Tamewali)	10	DC	Lynx	2029-30

- **Augmentations of Power Transformers**

Sr. No.	Description	Total No.	2025-26	2026-27	2027-28	2028-29	2029-30
1	Augmentations	2	1	0	1	0	0

Name of Transformers on which Augmentation is proposed

Sr. No	Grid Station	Type	Transformer Capacity	MVA Addition	Proposed Fiscal Year
1	Harrapa	AUG	40	14	2025-26
2	Shujabad	AUG	40	14	2027-28

- **Spare Transformers**

Sr. No.	Description	Total No.	2025-26	2026-27	2027-28	2028-29	2029-30
1	Spare Transformers	5	1	1	1	1	1

- **132KV Capacitors**

Sr. No.	Description	Total No.	2025-26	2026-27	2027-28	2028-29	2029-30
1	132KV Capacitors	1	0	1	0	0	0

Name of Grid Station on which 132KV Capacitor is Proposed

Sr.No	Grid Station	MVAR Proposed	Proposed Fiscal Year
1	Sahuka	36 MVAR	2026-27

Short Circuit Studies

The maximum short circuit levels have been computed with the following assumptions under IEC 909 standard by setting:

- Transformers tap ratio to unity
- Line charging to zero
- Shunt elements to zero under in positive sequence
- Voltage at 1.1 per unit.

As per above short circuit study results, following rating of switchgear is recommended while keeping margin for future network expansion:

- 40 kA for 132 kV
- 40 kA for 11 kV, especially for power transformers.

It has been found that the short circuit levels, as a result of the induction of the proposed subprojects, will not increase at the existing substations in their vicinity.

7.2. PLAN FOR EXPANSION AND REHABILITATION OF DISTRIBUTION SYSTEM – SCOPE

This section presents the Expansion and Rehabilitation of distribution system. Additionally, it discusses the status of study-based distribution system planning informed by GIS mapping and outlines the rollout plans. This section specifically addresses ongoing and carry forward projects (FY 2024-25) proceed to the expansion and rehabilitation of the distribution network operating at 11 kV and below within the distribution company for next five years (FY 2025-26 to FY 2029-30).

The plan is based on its procurement and execution capacity and the MYT determination will be done on this.

The proposed distribution works for MEPO also includes the scope for "Deposit Works" and "Village Electrification Works" and these works are separately identified in the formats below.

The ABC Cable proposals have also been implemented in MEPCO for the past three years and more proposals will be executed in future.

Below is the overall synopsis - HT/LT ratios of distribution system and length per feeder of

11kV lines comparison:

Existing HT/LT Ratios and length per feeder of 11 kV lines:

- Existing HT to LT Ratio = 1.63**:** 1
- Existing average length of 11-KV feeder = 44.270 Km

After completion of the 5-year plan (DIIP), the above parameters will be as under:

- HT to LT Ratio = 1.71: 1
- Average length of 11-KV feeder = 41.637 Km

Due to increased HT/LT ratio and decrease in HT average length per feeder, the technical loss of the distribution system will be decreased. This will further result in reduction of system outages making it more efficient and reliable.

A - Ongoing and Carry Forward Projects (FY 2024-25)

Sr. No	Circle Name	Division Name	Sub Division Name	Grid Station Name	Feeder Code	Feeder Name	Catgry	Receipt FY2023-24 (MkWh)	Peak load (Amp)	HT Length (km)	Max. VD (%)	Annual Energy Loss-HT (MkWh)	AEL %	F.Y	Amount in (M)
1	Sahiwal	Arifwala	Arifwala-II	132 kV Arif Wala	000503	Kalyana	R	19.523	370	65.90	15.01	1.153	5.90	2024-25	**42.035 Area Planning**
2	R.Y. Khan	Liaqat Pur	Khan Bela	132 kV Khan Bela	053309	City Khan Bela	R	13.353	240	50.80	5.22	0.609	4.56	2024-25	
3	B/Pur	Model Town	Shahdra	132 kV Bahawalpur	000824	Ghani Pur	M	18.606	310	51.10	5.72	0.726	3.90	2024-25	
4	R.Y. Khan	Sadiq-Abad	Jamal Din Wali	132 kV Jamal Din Wali	053122	Feeder No.12 Kacha Mianwali	R	2.286	60	39.00	4.93	0.078	3.41	2024-25	
5	Sahiwal	Pakpattan	Al-Farid	132 kV Pakpatan	015419	Sarwar Shaheed Proposed -02	U	11.061	260	56.20	13.10	0.656	5.93	2024-25	**96.2 Conn.**
6	Sahiwal	Pakpattan	Al-Farid	132 kV Pakpatan	015408	Sandhay Khan	R	16.717	290	29.10	5.78	0.663	3.96	2024-25	
7	D.G Khan	Rajanpur	Fazil Pur	132 kV Fazil Pur	027408	Adda Charagh Shah	R	3.427	90	159.00	7.17	0.133	3.87	2024-25	

8	Sahiwal	Pakpattan	Al-Farid	132 kV Pakpattan	015405	Malka Hanns	R	13.840	270	48.60	9.06	0.522	3.77	2024-25	
9	D.G Khan	Taunsa	Taunsa Rural	132KV Tounsa Sharif	021607	Mehmoodia			390				3.23	2024-25	**290 ELR Bif**
10	Sahiwal	Pakpattan	Power House	132KV Pak Pattan	015404	Hussain Abad (New)			390				3.67	2024-25	
11	Multan	B.Zakria(Musa Pak)	Hasanabad	132KV WAPDA Town	104103	Ahmad			390				0.896	2024-25	**342 DOP Bif**
12	Vehari	Vehari	Vehari City	132 kV Vehari	021902	Chak No 22/WB			380				1.726	2024-25	
13	Vehari	Vehari	Vehari City	220 kV Vehari	080603	Jungle Burali			380				1.418	2024-25	

Table 7.4 Expansion and Rehabilitation of Distribution Network – Ongoing and Carry Forward Projects

B – Expansion and Rehabilitation of Distribution System (FY 2025-26 to FY 2029-30)

11 kV and Below Rehabilitation (Bifurcation, Connectivity & Area Planning)								
A.	**Rehabilitation of HT Lines**	**Unit**	**Quantities**					
			2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**Total**
	Total Number of proposals	Nos.	108	112	57	54	41	**372**
Scope of Work for 11 kV Rehabilitation (Bifurcation)								
	Number of proposals	Nos.	61	61	26	25	21	**194**
1	New HT Lines	KM	761	761	310	305	253	**2390**

2	HT Line Reconductoring	KM	731	731	297	293	243	**2293**
3	11KV Capacitors	Nos.	122	122	52	50	42	**388**
4	11KV Panels	Nos.	61	61	26	25	21	**194**
5	Replacement of T/F Earthing	Nos.	9394	9526	6832	6871	6589	**39212**
6	11-kV Sectionalizers	Nos.	183	183	78	75	63	**582**
7	11-KV 500 MCM Cable	KM	18	18	8	8	6	**58**
Scope of Work for 11 kV Rehabilitation (Connectivity)								
	Number of proposals	Nos.	25	30	5	6	5	**71**
8	New HT Lines	KM	59	71	12	14	12	**168**
9	HT Line Reconductoring	KM	51	61	10	12	10	**144**
Scope of Work for 11 kV Rehabilitation (Area Planning)								
	Number of proposals	Nos.	22	21	26	23	15	**107**
10	New HT Lines	KM	29	27	34	30	20	**139**
11	HT Line Reconductoring	KM	19	18	22	20	13	**91**
Scope of Work for LT Rehabilitation								
B.	**Rehabilitation of LT Lines**							
	Number of proposals	Nos.	470	475	480	485	490	**2400**
12	New LT Lines	KM	141	143	144	146	147	**720**
13	LT Line Reconductoring	KM	56	57	58	58	59	**288**
14	New HT Lines (For New T/F Substations)	KM	47	48	48	49	49	**240**

15	**New Transformer Substations**							
	a. 25 KVA	Nos.	38	38	38	39	39	**192**
	b. 50 KVA	Nos.	141	143	144	146	147	**720**
	c. 100 KVA	Nos.	216	219	221	223	225	**1104**
	d. 200 KVA	Nos.	75	76	77	78	78	**384**
	Sub Total	Nos.	**470**	**475**	**480**	**485**	**490**	**2400**
16	**Augmentation / Addition of Overloaded Distribution Transformers**							
	a. 25 KVA	Nos.	192	196	200	204	208	**1000**
	b. 50 KVA	Nos.	288	294	300	306	312	**1500**
	c. 100 KVA	Nos.	456	466	475	485	494	**2375**
	d. 200 KVA	Nos.	264	270	275	281	286	**1375**
	Sub Total	Nos.	**1200**	**1225**	**1250**	**1275**	**1300**	**6250**
17	**ABC Cable & Accessories**							
	a. ABC 95 mm^2	KM	20	22	24	26	28	**120**
	b. ABC 50 mm^2	KM	18	20	22	24	26	**110**
	Sub Total	KM	**38**	**42**	**46**	**50**	**54**	**230**

Energy Meters (Replacement against defective)

Sr.	**Rehabilitation**	**Unit**	**Quantities**					
			2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**Total**
1	Meters	Nos.	400,000	375,456				**775,456**

Table 7.5 Expansion and Rehabilitation of Distribution Network – FY 2025-26 to FY 2029-30

Methodology:

In Optimally achievable case, **rehabilitation (Bifurcation) 194 Nos.**, **rehabilitation (Connectivity) 71 Nos. & rehabilitation (Area Planning) 107 Nos. Total rehabilitation (Bifurcation +Connectivity +Area Planning) 372 Nos.** 11-KV feeders have been proposed including connectivity proposals against new proposed Grid stations. Moreover, **2400 Nos.** LT- Proposals have been identified for rehabilitation in next five years.

The detail of expansion and rehabilitation is explained below;

New 11 kV Switchgear for Bifurcation

Panels for express feeders to be built for **bifurcation** of existing feeders= **194 Nos.**

ACSR Conductors for new express line construction (Bifurcation)

It is estimated that **194 Nos.** feeders will require construction of express lines for their **bifurcation**. On the basis on sample studies, **12.32 km** of 3-phase HT line will be constructed per feeder. The overall share of different ACSR conductors in the total of 194 x 12.32 = 2390 KM of lines is calculated as below:

KM Line			
Osprey	46%	2390 x 0.46	1099 KM
Dog	23%	2390 x 0.23	550 KM
Rabbit	31%	2390 x 0.31	741 KM
		Total	**2390 KM**

ACSR Conductors for new express line construction (Connectivity)

It is estimated that **71 Nos.** feeders will require construction of express lines for their **Connectivity**. On the basis on sample studies, **2.36 km** of 3-phase HT line will be constructed per feeder. The overall share of different ACSR conductors in the total of 71 x 2.36 = 168 KM of lines is calculated as below:

KM Line			
Osprey	38%	168 x 0.38	64 KM
Dog	21%	168 x 0.21	35 KM

Rabbit	41%	168 x 0.41	69 KM
		Total	**168 KM**

ACSR Conductors for new express line construction (Area Planning)

It is estimated that **107 Nos.** feeders will require construction of express lines for their **Area Planning**. On the basis on sample studies, **1.30 km** of 3-phase HT line will be constructed per feeder. The overall share of different ACSR conductors in the total of 107 x 1.30 = 139 KM of lines is calculated as below:

KM Line			
Osprey	31%	139 x 0.31	43 KM
Dog	23%	139 x 0.23	32 KM
Rabbit	46%	139 x 0.46	64 KM
		Total	**139 KM**

11 kV Line Re-conductoring (Bifurcation)

Estimated re-conductoring per feeder based on sample studies	11.82 KM
Number of feeders for rehabilitation **(Bifurcation)**	194 Nos
Therefore, total re-conductoring length (194 x 11.82)	2293 Km

The quantities of ACSR conductors required for re-conductoring are therefore:

KM Line			
Osprey	40%	2293 x 0.40	918KM
Dog	36%	2293 x 0.36	825 KM
Rabbit	24%	2293 x 0.24	550 KM
		Total	**2293 KM**

11 kV Line Re-conductoring (Connectivity)

Estimated re-conductoring per feeder based on sample studies=	2.02 KM
Number of feeders for rehabilitation **(Connectivity)**	71 Nos.
Therefore, total re-conductoring length (71 x 2.02) =	144 Km

The quantities of ACSR conductors required for re-conductoring are therefore:

KM Line			
Osprey	39%	144 x 0.39	56 KM
Dog	19%	144 x 0.19	27 KM
Rabbit	42%	144 x 0.42	61 KM
		Total	**144 KM**

11 kV Line Re-conductoring (Area Planning)

Estimated re-conductoring per feeder based on sample studies= 0.85 KM

Number of feeders for rehabilitation **(Area Planning)** 107 Nos.

Therefore, total re-conductoring length (107 x 0.85) = 91 Km

The quantities of ACSR conductors required for re-conductoring are therefore:

KM Line			
Osprey	24%	91 x 0.24	22 KM
Dog	18%	91 x 0.18	16 KM
Rabbit	58%	91 x 0.58	53 KM
		Total	**91 KM**

Capacitor Applications for Power Factor Improvement

The sample studies indicate that at an average, one capacitor bank of 450 kVAr is needed per feeder for improving the power factor to 95% from existing average power factor of 85% on the selected feeders. For **194 No. 11 kV feeders (Bifurcation)**, requirement of capacitor banks of 2 x 450 kVAr each.

Total capacitors required in bifurcation = 388 Nos.

Earthing

Total HT line Added.	= 2937 KM
Total HT poles required (Avg:11 Poles /KM)	= 32304 No
Total LT line added	= 720 KM
Total LT poles required (Avg:16 Poles /KM)	= 11520 No
Total HT/LT poles	= 43824 No
50% steel structure poles required	= 21912 No
Earthing for steel structure poles (1 x No. / Pole)	**= 21912 No**
Earthing for T/F (LTP & Aug.) (2 x No. / T.F)	**= 17300 No**
Total Earthing required (Poles & T/Fs)	**= 39212 No**

11 KV Sectionalizers for Bifurcation

In order to achieve isolation of faulty portions of feeders under fault conditions, sectionalization equipment is needed. A minimum of 3 sectionalizers per feeder **(Bifurcation)** are recommended for new locations as well as for replacement of damaged sectionalizers. The quantity is worked out as follows:

11 kV Sectionalizers required per feeder	3 Nos.
Total number of 11 kV sectionalizers required (3 x 194)	582 Nos.

Share

Sectionalizers 600 Amps 30 %	175 Nos.
Sectionalizers 200 Amps 70 %	407 Nos.
Total	**582 Nos.**

11 KV Cables for Bifurcation

11 KV cable is required for connecting the proposed new feeders **(Bifurcation)** as well as for adding/replacing the under-size/deteriorated cable. The quantity is worked out on the basis that an average length of 300 meters of 500 MCM cable is required for each feeder from the panel in the grid station to the first riser pole of the feeder.

Feeders selected for rehabilitation **(Bifurcation)**	194 Nos.

Average length of S/C cable per feeder		300 M
Therefore, length of cable required	0.3 x 194 =	**58 KM**

New LT Line

Average length of New LT Line per Proposal = 0.300 KM

The overall share of New LT Line in total LT Proposals are 2400 x 0.300 = 720 KM of lines is calculated as below:

KM Line			
Wasp	10%	720 x 0.10	72 KM
Ant	90%	720x 0.90	648 KM
		Total	**720 KM**

LT Line Reconductoring

Average length of LT Line Reconductoring per Proposal = 0.120 KM

The overall share of LT Line Reconductoring in total LT Proposals are 2400 x 0.120 = 288 KM of lines is calculated as below:

KM Line			
Wasp	31%	288 x 0.31	89 KM
Ant	69%	288 x 0.69	199 KM
		Total	**288 KM**

New 11 KV Line

Total number of LT proposals		2400 Nos.
Average length of 11 kV line extension per LT proposal		0.100 KM
Total length of new 11 kV line (Rabbit conductor)	2400 x 0.100	**240 KM**

New Transformer Sub-Stations

These will be required for installation after extension of HT lines to minimize the high loss LT lines or to install under the existing HT line to take up additional loads. The quantity required for 2400 Nos. LT Proposals are as under;

New transformer required per proposal. = 01 No.

New additional transformer sub-stations required: 2400 x 1 = 2400 Nos.

Share of Different Ratings of Transformers

25 kVA	8 %	2400 x 0.08	192 Nos.
50 kVA	30 %	2400 x 0.30	720 Nos.
100 kVA	46 %	2400 x 0.46	1104 Nos.
200 kVA	16 %	2400 x 0.16	384 Nos.
		Total:	**2400 Nos.**

Augmentation / Addition of Overloaded Transformers.

Augmentation / Addition of overloaded transformers = 6250 Nos.

Share of Different Ratings of Transformers

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25 kVA	16 %	6250 x 0.16	1000 Nos.
50 kVA	24 %	6250 x 0.24	1500 Nos.
100 kVA	38 %	6250 x 0.38	2375 Nos.
200 kVA	22 %	6250 x 0.22	1375 Nos
		Total:	**6250 Nos.**

ABC Cable

Proposed replacement of 230 KM bare conductor with ABC cable for high loss feeders especially in Kunda infested areas within the city as well as rural where higher rate of pilferage of electricity and it provide higher safety and reliability of the system.

ABC 95 mm^2 =	120 KM
` ABC 50 mm^2 =	110 KM
Total:	**230 KM**

Energy Meters

Replacement of 1-phase defective/damaged energy meters	=	1865000 Nos.
Replacement of 3-phase defective/damaged energy meters	=	60000 Nos.
Total		**1925000 Nos.**

7.3. PLAN FOR REPLACEMENT OF BARE CONDUCTORS WITH INSULATED CONDUCTORS – SCOPE

MEPCO operates in a vast and dispersed area characterized by lengthy radial distribution feeders that traverse remote rural regions, leading to a significant number of tripping incidents within the system network. One contributing factor to these tripping events is that many conductors cross through vegetated areas, particularly mango gardens, forests, and other tree-covered regions. This not only results in huge system tripping that adversely affects customer service but also contributes to energy loss.

In this context, a survey was conducted by the operation circles, which identified 48 feeders within their respective jurisdictions that pass-through gardens, forests, and trees. Consequently, it has been recommended that the bare conductors of these feeders be replaced with insulated conductors to mitigate these issues. A working plan has been developed in this regard, with further details provided below;

Replacement of all bare conductor with insulated conductor for 48 number 11KV Feeders those are passing through vegetated areas.

Total No. of Feeders	Total Tripping	Rabbit Conductor		Dog Conductor		Osprey Conductor		Total Conductor		20% Installation charges	Amount for Required Allied Accessories with 20%	Total Amount
	Below 20 minutes	Qty.	Amount (Mil)	Qty.	Amount (Mil)	Qty.	Amount (Mil)	Qty.	Amount (Mil)	Amount (Mil)	(Poles, X-arms, Steel pins, Pin insulators, _	Million
48		90	35.16	23.8	16.87	1.3	2.17	115.3	54.21	10.84	33.15	98.2

Sr. No	Description	Unit	In Million Rs.					
			2025-26	2026-27	2027-28	2028-29	2029-30	Total
1	Insulation of Bare Conductors	Nos.	-	98.2	-	-	-	**98.2**

Table 7.6 Plan for Insulation of Bare Conductors - Scope

7.4. PLAN FOR INSTALLATION OF APMS – SCOPE

In the context of rapid industrialization, MEPCO is leveraging automation, big data analytics, and the Internet of Things (IoT) to enhance the performance and reliability of its distribution transformers (DTs). These DTs are crucial to the distribution network, and their effective monitoring and management are essential for minimizing downtime and operational inefficiencies. The implementation of real-time monitoring systems will provide MEPCO with critical insights into DT performance, allowing for better planning and maintenance. This proactive approach aims to extend the lifespan of DTs and reduce the high costs associated with frequent burnouts, which have increased in recent years and threaten the company's financial stability.

Distribution transformers are integral components of electrical distribution networks, facilitating the efficient delivery of electricity to residential, commercial, and industrial consumers. However, it is imperative to maintain the health and reliability of these transformers to prevent costly disruptions and ensure an uninterrupted power supply.

To further enhance asset management, the project includes a load disconnection mechanism as part of an Advanced Power Management System (APMS) solution. This mechanism will protect DTs from overloads and fault currents on the low-tension side, thereby improving overall system reliability. Additionally, the APMS will facilitate energy accounting and localize losses, enabling MEPCO to identify and address issues at the transformer level. By optimizing operations and reducing administrative losses, the project aims to improve energy consumption and recovery rates, aligning with CDMP targets and ultimately fostering greater economic stability in the regions served by MEPCO.

The plan of installation of APMS is listed below;

Financial Head	FY (2024-25)	FY (2025-26)	FY (2026-27)	Total
ADB	3,691	4,956	4,676	13,323
Own Resources	1,002	4,430	4,710	10,143
World Bank	4,500	4,500	0	9,000
Total	**9,193**	**13,886**	**9,386**	**32,465**

Table 7.7 Plan for APMS Installation– Scope

7.5. PLAN FOR GIS MAPPING– SCOPE

GIS MAPPING AND THE TRANSITION PLAN – SCOPE

S#	Description	Unit	Mapped Ending June 2024	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
GIS Mapping HT									
1	No. of 11 kV Feeders (Total No of Feeders 1814*) *Including Sensitive Area Feeders	**Nos**	1740*	157	96	95	79	90	0
	Length of HT Lines to be mapped	**km**	86764	1570	960	950	790	900	0
GIS Mapping LT									
2	Total No. of LT Lines (105961 total distribution T/F having length of 50714 km)	**Nos**	27498**	9352	20560	43204	44012	44816	0
	Length of LT Lines to be mapped upto june 2028-29	**km**	10934	2338	5140	10801	11003	11204	0
*1814-1740 = 74 are sensitive areas Feeders **105961-27498 = 78463 are sensitive areas Feeders									

Table 7.8 Plan for GIS Mapping

TOOLS AND PLANTS REUIRED FOR MAPPING OF HT & LT NETWORK

Sr.#	Description	H/Q	Circle	Division	Sub Division	Quantity
1	GPS Sets	0	0	41 x 6	0	246
2	Printer B&W	0	0	41 x 1	0	41
3	Printer Colored A3 Size	1	0	41 x 1	0	42
4	Plotter Colored 42 Inch	1	0	0	0	1
5	Desktop Computer along with UPS	0	0	41 x 1	0	41
6	Laptop (32-GB RAM along with 2-GB Graphics Card)	4	0	0	0	4
7	SynerGEE Software License	0	0	41 x 1	0	41

Table 7.9 Tools and Plants for HT & LT

7.6. COMMERCIAL DIRECTORATE IMPROVEMENT PLAN - SCOPE

This plan encompasses a range of commercial improvement activities, including, but not limited to, metering initiatives such as Advanced Metering Infrastructure (AMRs) and mobile unit-based meter reading. It also includes enhancements to billing systems, anti-theft initiatives, updates to the consumer database, and improvements in customer service initiatives. The scope of activities to be undertaken during each of the five years encompassed by this business plan is detailed herein, and the narrative is supported by appropriate justifications.

The Integrated Commercial Improvement Plan (ICIP) primarily aims to illustrate reductions in commercial losses, enhancements in revenue, and improvements in customer service through the implementation of process automation, increased transparency, accountability, and improved productivity. These initiatives are designed to establish a foundation for sustainable commercial operations. Additional goals and objectives include:
Here are the highlights related to commercial interventions:

- DATA Improving MEPCO's operational efficiency through:
    - Reduced commercial losses by 1.56% progressively over the period of five years
    - Maintaining revenue recovery up to 100% in next five years
- Improving customer care and services:
    - Reducing complaints related to billings to less than 0.01%
    - Minimizing new connections installation duration to comply with NEPRA's requirements
    - Minimizing reconnection installation duration to comply with NEPRA's requirements
    - Maximizing the time between date of receipt of bill and due date (10 days)
- Improving MEPCO's infrastructure:
    - Expansion of AMI to reduce commercial losses at high-end customers, this contributes to reduction in commercial loss.

Other related objectives:

- Streamlined procedure without compromising system of internal controls
- Re-direction of documents on an efficient path to reduce revenue cycle and process cycle time
- Faster complaint resolution and timely availability of accurate information for better decision making
- Increased accuracy of billing through reduction of human interface in commercial processes
- Increased efficiency, easy access and administration through an online complaint system

Recovery Targets:

Rs. in Million				Plan to Reduce Receivables					
Sr. No.	**Category**	**Jun-24**	**%age Share of Total Receivables**	**Jun-25**	**Jun-26**	**Jun-27**	**Jun-28**	**Jun-29**	**%age Share of Total Receivables**
	Federal Govt.	2,189	1.7	1,970	1,773	1,596	1,436	1,292	1.14
	Prov. Govt	10,675	8.28	8,540	6,832	5,466	4,372	3,498	3.08
1-	Govt. (Total)	12,864	9.98	10,510	8,605	7,061	5,808	4,790	4.22
2-	Private	116,007	90.02	111,335	109,599	108,678	108,450	108,817	95.78
3-	G.Total	128,871	100	121,845	118,204	115,739	114,258	113,607	100

Category Wise Receivables

4-	**Break up of Private Receivable**		**%age Share of Pvt. Receivables**	**Break up of Private Receivable**					**%age Share of Pvt. Receivables**
a	Spill over	44,048	37.97	46,251	48,563	50,991	53,541	56,218	51.66
b	Agency Balance	39,896	34.39	39,896	39,896	39,896	39,896	39,896	36.66
	Sub Total	**83,945**	**72.36**	**86,147**	**88,460**	**90,888**	**93,437**	**96,114**	**88.33**
Private Arrears									
a	Deferred Amount	7,929	6.84	6,740	5,392	4,313	3,451	2,761	2.54
b	Unpaid Debt	908	0.78	182	182	182	182	182	0.17
c	P.Disc.	15,633	13.48	12,506	11,256	10,130	9,117	8,205	7.54
d	Running	9,684	8.35	7,747	6,198	4,958	3,966	3,173	2.92
Sub Total		**32,063**	**27.64**	**25,188**	**21,139**	**17,790**	**15,012**	**12,702**	**11.67**

Category wise Receivables

Smart Payment Integration:

Features	
Bill payment	The feature that will provide the online bill payment facility to consumers using existing payment methods i.e. Jazzcash, Easy paisa, online bank transfer.
Part payment	The feature that will provide user the facility to pay his partial electricity bill in advance.
DN payment	The feature that will provide functionality to pay the demand notices.
Misc. payment	The feature that will enable the user to pay any miscellaneous payments.

Smart Payment Integration: Features

Benefits:

- Ease of doing payment from single app for multiple Consumers.
- Immediate update of payment status to consumers.
- Acknowledgement of payment through SMS/email and mobile app push notification.
- Mobile app push notification of bill processed (immediate) to consumer for payment.

Plan for mitigation of overloaded, high loss and others 11kv feeders

F.Y Year	Overloaded	High Loss	Connectivity	High Voltage Drop	Total
2025-26	37	28	27	16	108
2026-27	23	25	44	20	112
2027-28	23	22	12	0	57
2028-29	25	16	13	0	54
2029-30	18	11	12	0	41
Total	126	102	108	36	372
Grand Total					372

Overloading of 132 KV T/L & PTF

F.Y Year	% age Loading		Completed during the Year	
	80% and above T/Ls	80% and Above PTFs	80% and above T/Ls	80% and Above PTFs
2024-25	6	6	1	4
2025-26	5	2	3	2
2026-27	2	0	2	0
2027-28	0	0	0	0
2028-29	0	0	0	0
2029-30	0	0	0	0

7.7. CUSTOMERS SERVICE CENTER (CSC) UP-GRADE AND COMPLAINTS MANAGEMENT SYSTEM (CMS)

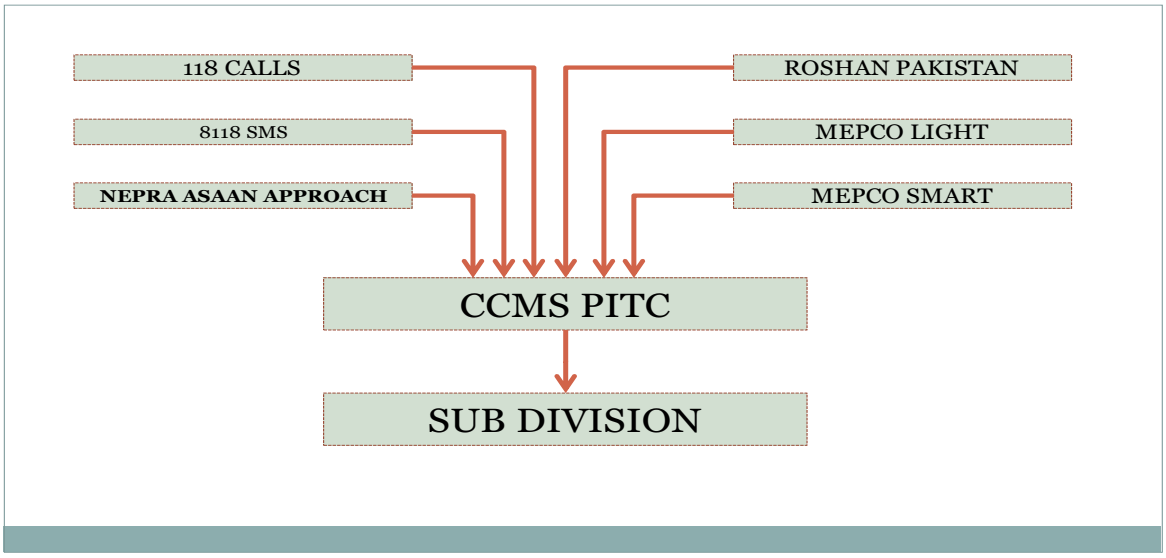
Efficient customer service is a critical success factor for MEPCO, which holds significant responsibility for delivering continuous and reliable services to its customers. Currently, the following services are offered at the Regional Customer Services Centre at MEPCO Headquarters in Multan:

The Regional Complaint Centre at MEPCO addresses complaints received from the following formations:

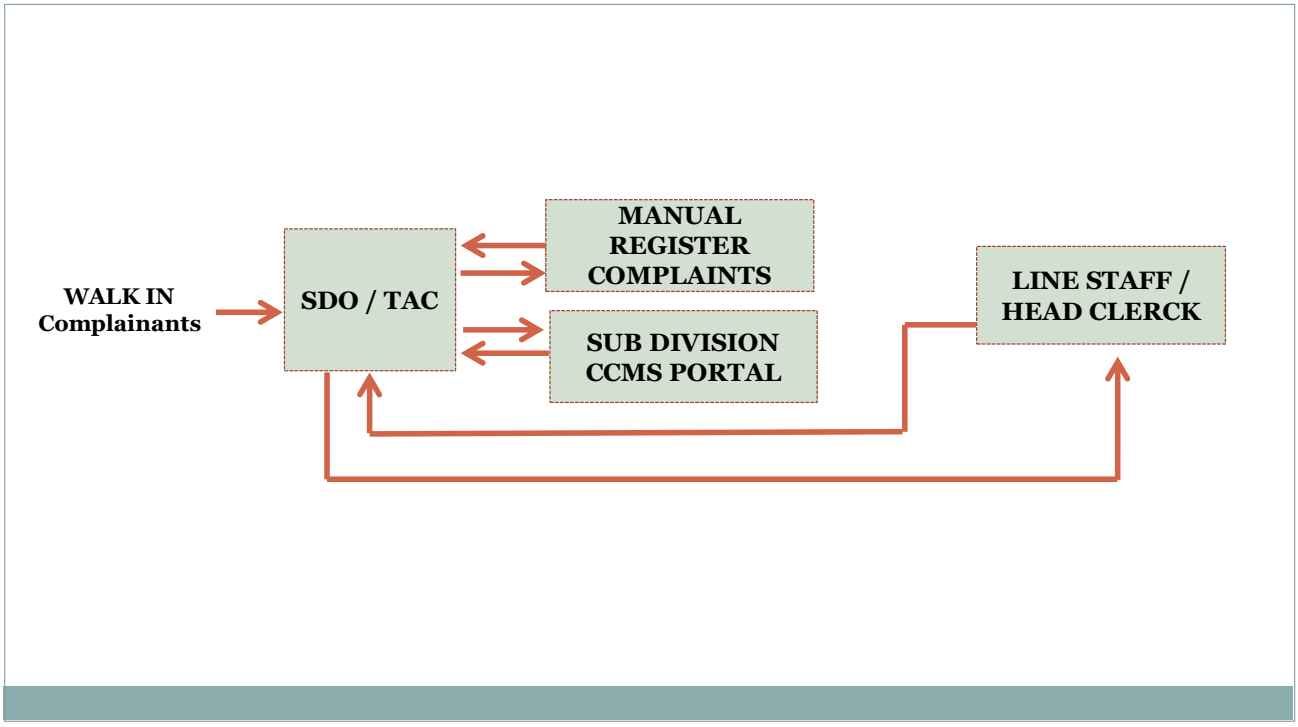
1. Complaints from the Prime Minister's Delivery Unit (PMDU), Islamabad.
2. Complaints from the Federal Complaint Cell (FCC), Ministry of Energy (Power Division), Islamabad.
3. Online complaints submitted through MEPCO's toll-free number, 0800-63726.
4. Walk-in customer complaints.

Customer – Centric Approach through established Facilitation Center

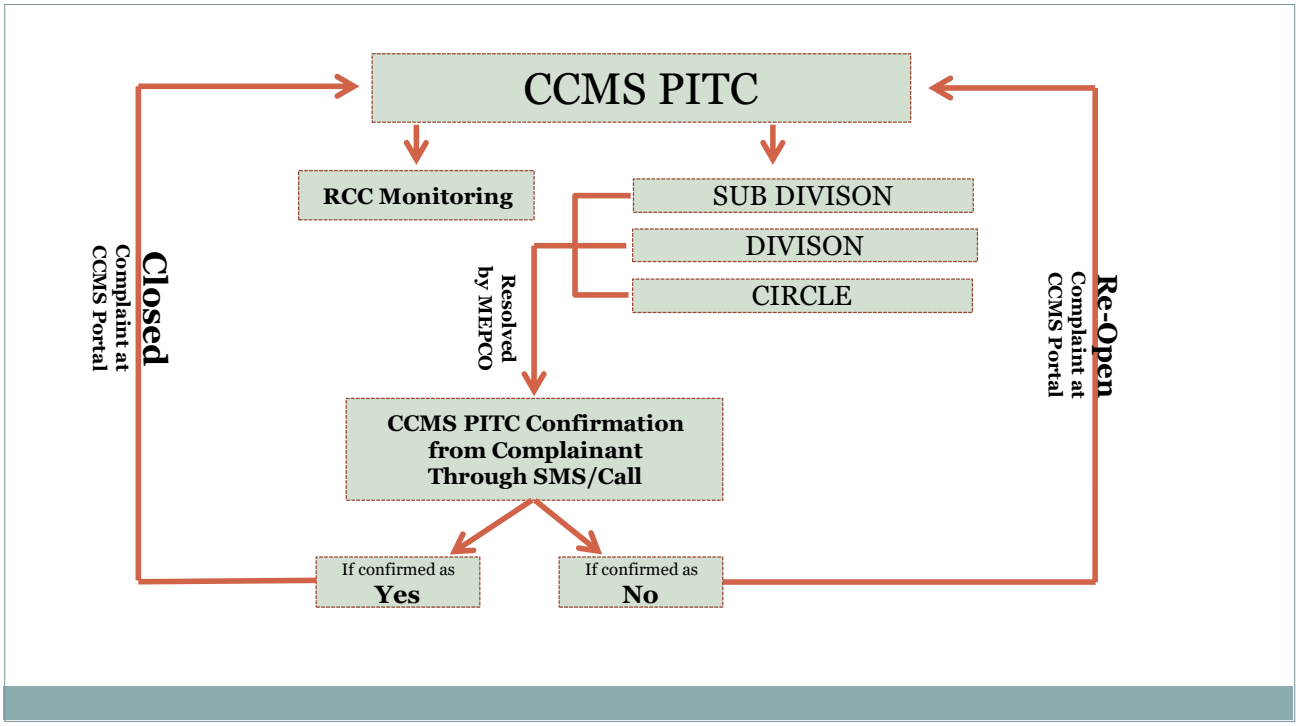
1. **Renovated Regional Complaint Centers (RCC)**:
   - MEPCO has revamped and enhanced its customer service infrastructure, specifically the Regional Complaint Centre at its headquarters in Multan.
   - These centers now feature upgraded facilities, ensuring an improved experience for consumers.
2. **Expansion in Multan**:
   - Two new Customer Facilitation Centers have been established in Multan.
   - These centers serve as accessible hubs for MEPCO customers, offering assistance, addressing inquiries, and managing complaints.
3. **Operation Circle-Level Centers**:
   - MEPCO is dedicated to facilitating its customers across all operational circles.
   - As part of this commitment, Customer Facilitation Centers will be developed in each operational circle.
   - These centers are designed to provide optimal customer service, ensuring timely and accurate billing, effectively addressing complaints, and enhancing convenience for consumers.
4. **Better Complaint Register Mechanism**
   - All complaints to be recorded in CCMS
   - Adoption of EOPs



Complaints recorded in CCMS



Walk in Complaints



Complaints at CCMS Portal

7.8. OTHER DEPARTMENTAL PLAN - SCOPE

7.8.1. IT DIRECTORATE PLAN – SCOPE

This plan encompasses improvement activities for the IT Directorate, including but not limited to IT equipment and field formalities, as well as the software necessary for the efficient operation of each department.

Sr.	Description	FY 2025-26 Qty	FY 2026-27 Qty	FY 2027-28 Qty	FY 2028-29 Qty	FY 2029-30 Qty	TOTAL
IT Equipment's for IT Directorate and Field Formations							
1	Computers	100	100	100	100	100	500
2	Laptops	50	100	100	50	50	350
3	Laser Printers	55	55	55	50	55	270
4	UPS 1KVA	100	100	100	100	100	500
5	Mobile Phones (Android)	1500	1500	0	0	1500	4500
6	Heavy duty laser printer	3	3	0	0	0	6

Table 7.10 IT Directorate Plan – Scope

AMIs Extension

Advanced Metering Infrastructure (AMI) technology has been specifically designed to assist MEPCO in achieving significant improvements in commercial performance through the integration of advanced metering processes. MEPCO, currently, operates an outdated metering system based on electro-mechanical meters, which are prone to inaccurate manual readings and field tampering. This situation has resulted in substantial revenue losses and increased opportunities for theft.

The project aims to enhance the AMI system to reduce distribution losses, improve load control and management, and provide automated consumption data for billing purposes. Additionally, the project seeks to improve revenue collection and customer service, decrease billing complaints, increase operational efficiency, reduce operating costs, and modernize electricity metering and billing operations. Furthermore, it will address AMI meter alerts and events effectively.

Under this initiative, MEPCO plans to implement a large-scale meter replacement program across its service territory, utilizing Automated Metering infrastructure (AMI) equipped with GSM/GPRS

technology for high-end customers. In the event of disconnection initiated by the backend system, these AMI meters will remain disconnected until a reconnection command is received. Additionally, these meters will have the capability to support two distinct load thresholds for different time slots (peak and off-peak), which will be programmed to enable automatic disconnection and reconnection based on the specified thresholds.

Furthermore, to effectively implement the AMI project and enable a smooth transition, an AMI Cell has been established with the help of USAID PDP within the existing DISCO IT department to undertake the responsibility of AMI system.

Plan of AMI Expansion - Scope

The existing status of AMI meters is as below;

Automated Metering Infrastructure (AMI) - Existing					
S/ No.	**Type of Meter**	**Total Number**	**AMI Installed**	**AMI to be install**	**2024-25**
1	**All three Phase**	215,914	63,259	152,655	53,714

AMI Expansion – Scope								
Sr. No	**Description**	**Units**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**Total**
1	AMI Expansion	Nos.	46,727	52,214	-	-	-	98,941

Table 7.11 AMI Expansions – Scope

7.8.2. ADOPTION OF NEW TECHNOLOGIES – SCOPE

A- Scanning Meters

Feeder Category	Transformer Count	Public Transformer				Time Lines								
						FY 25-26			FY 26-27			FY 27-28		
		10 KVA	15 KVA	25 KVA	50 KVA	Count	Total No. of Transformer	Cost (in million) @Per Unit Cost Rs. 60000	Count	Total No. of Transformer	Cost (in million) @Per Unit Cost Rs. 60000	Count	Total No. of Transformer	Cost (in million) @Per Unit Cost Rs. 60000
I	40856	1800	2665	21489	14902	0	25,930.00	1,555.80	16000	25,111.00	1,506.66	24856	24,856.00	1,491.36
II	26111	1295	2026	14172	8618	17000			9111			0		
III	6451	270	497	3720	1964	6451			0			0		
IV	2099	99	229	1212	559	2099			0			0		
V	240	1	23	147	69	240			0			0		
VI	140	1	21	79	39	140			0			0		
VII	0	0	0	0	0	0			0			0		
Total	75,897	3,466	5,461	40,819	26,151	25,930			25,111			24,856		

B- Pilot Project of All AMI Meters on Feeder

Description	2025-26	2026-27	2027-28	2028-29	2029-30	Total
11kV Feeder	Masoom Shah Feeder					
No of consumers	-	-	-	3830	-	3830
Technical losses	3%					
Total losses	20%					
Admin loss	17%					
Receipt of Masoom Shah Feeder	14,145,363					
Admin loss percentage of Masoom Shah Feeder	17%					
Admin loss KWh	2,404,712					
Saving kWh (70%)	1,683,298					
Rate/kwh	27.77					
Total Revenue/year	46,745,191					
Revenues in Mn Rs	47					
CAPEX	230					
Payback	**5**					
Existing level of Masoom Shah feeder Ending June 2024	**20% (3%,+17%)**					
Losses after Pilot project	**8% (3% ,+4%)**					

Table 7.12 Pilot Project of all AMI METERS ON FEEDER - APPRAISAL

C- SCADA

- The pilot project will be launched at 5 Nos. Grid stations
- CAPEX of the pilot project is expected to be 145 million PKR
- Pilot Project Execution Period will be FY 2025-26 & FY 2026-27
- After the lessons learnt from the pilot project, the SCADA expansion will be planned for the whole 132kV MEPCO Network.

D- Transformers Census

A contract will be heir to record following parameters of transformers:

- Name Plate Information.
- Make
- Status (Reclaimed or unopened)
- Year of Manufacturing.
- Earthing Status.
- Healthiness etc.

7.8.3. SAFETY IMPROVEMENT PLAN – SCOPE

1. The MEPCO Health, Safety, and Environment (H.S.E.) department is now managed by a designated Manager H.S.E., and nine Assistant Manager H.S.E. positions have been created at each Operation Circle.
2. Job-specific training is being conducted at the RTC and CTCs for employees across all levels.
3. H.S.E. awareness training is being delivered at the RTC and CTCs for both staff and officers.
4. Safety seminars are conducted monthly in each division.
5. Safety Committee meetings are held monthly at the sub-division, division, circle, and regional levels.
6. Hazard identification and mitigation are carried out by field formations.
7. Management H.S.E. walk-throughs and site tours are conducted regularly.
8. First aid facilities are provided.
9. A PPE parade is organized at the sub-divisional level on a monthly basis.
10. High-quality tools and PPE are provided to line staff, and inspectors are nominated for national and international material inspections to ensure quality assurance.
11. On a daily basis, SEs (OP) will report a summary of complaints related to high-tension lines and transformer substations, detailing actions taken with or without permit-to-work (PTW) and any measures against safety violations.
12. H.S.E. audits of each sub-division will be conducted quarterly by H.S.E. staff.

A- Safety Improvement Plan

Sr#	Description	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	Total (Units)
1	Bucket Mounted Trucks 01 per (OP) & (Const.) subdivision:	40 Units	40 Units	39 Units	-	-	119 Units
2	Android Mobile Phone in respect of LS/SDO/XEN & SE (as per Sanctioned seats for smart communication purpose in the light of NEPRA instructions.	508 Units	1324 Units	-	-	-	1832 Units
3	Tools & PPEs	List of T&P/PPE is attached					
4	Toyota Hilux (Double Cabin)	1 Unit	1 Unit	1 Unit	-	-	3 Units
5	Motor Bikes 150cc	12 Units	-	-	-	-	12 Units

Table 7.13 HSE Plan - Scope

B- Trainings for HSE

Sr. No.	Safety Courses	Cadre		2025-2026		2026-2027		2027-2028		2028-2029		2029-2030	
				No. of Courses	Participants	No. of Courses	Participants	No. of Courses	Participants	No. of Courses	Participants	No. of Courses	Participants
1	NEBOSH-Diploma	te (Director,	Private Training Centres	2	6	1	4	-	-	-	-	-	-
2	NEBOSH-IGC	(Direct or-DD		2	6	1	4	-	-	-	-	-	-
3	Lead Auditor ISO 45001	Staff (Director,D		2	6	1	4	-	-	-	-	-	-
4	Lead Auditor ISO 14001	D (Environme		1	3	1	2	-	-	-	-	-	-
6	IOSH-MS	SDO		5	130	5	128	-	-	-	-	-	-
7	Training (Publi	SDO	RTC & CTC MEPCO	9	258	9	258	9	258	9	258	9	258
8	S-100	M(OP) &		50	876	52	964	52	1060	55	1166	55	1283
9	Impact Trainings	M(OP) &		110	1314	121	1445	133	1590	146	1749	161	1924
10	Impact Trainings	M(OP) &		155	1681	171	1849	188	2034	206	2237	227	2461
11	Safety Seminar (1-	M(OP) &		9	1080	9	1080	9	1080	9	1080	9	1080

C- Hazard Point Removal

Sr. No.	Name of Circle	High Risk	Medium Risk	Low Risk	Illegal construction/ Encroachments	Total
1	Multan	200	94	35	13	**342**
2	Khanewal	77	74	163	104	**418**
3	Vehari	52	128	94	471	**745**
4	Sahiwal	348	550	137	395	**1430**
5	Muzaffar Garh	483	276	177	20	**956**
6	Dera Ghazi Khan	24	26	35	8	**93**
7	Bahawal Pur	567	65	219	300	**1151**
8	Bahawal Nagar	63	57	3	3	**126**
9	Rahim Yar Khan	25	86	103	1	**215**
TOTAL		**1839**	**1356**	**966**	**1315**	**5476**

Table 7.14 Safety Training Program - Scope

Table 7.15 Hazard Points Removal

D- Earthing of HT/LT PCC Poles & Structures

Sr. No.	Description	Quantity	Remarks
1	HT/LT Steel Structures	486,320	Completed

2	Spun Poles	220,130	Will be earthed in 2nd phase
3	Total	706,450	

Table 7.16 Earthing of HT/LT PCC Poles & Structure

7.8.4. FINANCIAL MANAGMENT IMPROVEMENT PLAN - SCOPE

Vision of SAP ERP in MEPCO

The ultimate vision of SAP ERP in MEPCO is to "Eliminate all IT Islands"

SAP System Upgrade and Integration with Non-SAP Systems

Upgrade SAP:

MEPCO is currently operating on the ECC6-EHP7 version of SAP-ERP, which has been outdated since 2015. Consequently, there is an imperative need to upgrade our SAP system to latest S/4 HANA addition along with the associated hardware infrastructure deployed at the Data Centre. This upgrade entails a comprehensive overhaul of the existing system configuration, mirroring the thoroughness with which the SAP system was initially implemented.

The total projected cost for this undertaking is estimated to be approximately PKR 70 million. We have devised a plan to commence this critical activity within the fiscal year 2024-25.

SAP Integration with IBS (ORACLE) and ENC: -

Currently, SAP ERP & IBS systems are running in isolation, MEPCO wants hand shake of these two systems for integrated real time component wise posting of all type of commercial data from IBS to SAP System. Furthermore, two-way integration of SAP MM module, IBS and ENC is also planned to build various controls and track and trace of consumer meters. In order to synchronize the meter issuance with billing so that meter issued to particular consumer should be installed to his premise this integration is necessary.

Deployment of New SAP ERP Modules

Project Systems: -

Project System is one of the key modules of SAP to perform project and portfolio management. It helps to manage the project life cycle starting from structuring to planning, execution, until the project completion. Project system is closely integrated with other SAP modules like logistics, material management, Sales and Distribution, Plant Maintenance, and Production planning module.

As per budget, projects can be categorized in the following categories,

- External Financed Projects
- Internal Financed Projects

Following are the key steps involved in Project process flow —

- Create Templates/WBS
- Create Project
- Project Planning
- Budgeting and Release

- Project Implementation
- Project Completion

Following are the key modules in which integration is performed with Project Systems

- Finance & Controlling
- Material Management
- Sales & Distribution
- Production Planning
- Personnel Management
- Plant Maintenance

Enhancements for the Existing SAP ERP System

Pension:

Pension process will be covered under FICO and HCM in SAP system, In this regard additional 25 blocks Of payroll are required from SAP for pension execution, where as we have already 36 Blocks for executing salary of employees. Complete implementation of this process will result in the distribution of centralized pension through SAP. Resultantly work burden will be reduced from field offices and pensioners will be benefited as well.

HCM Work Flows:

It has been decided to implement HCM work flows to get real benefits from HCM module. In this regard 52 work flows have been identified which will reduce the manual work. Resultantly efficiency of work will increase.

FICO Work Flows:

These workflows allow vendor invoices to be routed through a predefined approval process before they are posted in the system. It ensures that all vendor invoices are reviewed and approved by the appropriate approving authorities as per book of financial powers. It helps towards digitization of vendor invoices approval processes, track and trace approval processes etc.

Sr #	Project	Tentative Timeline	Remarks
1	SAP Upgradation from ECC 6.0 EHP 7 to SAP S/4 HANA	12 months	Upgradation and DR site activities are parallel
2	Disaster Recovery Site (DRS)	Parallel with upgradation	
3	Project System & SAP Analytics	6 months (After Upgradation Project)	Projects from serial number 3 to 5 are parallel and will take maximum of 8 months **after upgradation project**
4	Pension System	6 months (After Upgradation Project)	

5	Workflows (HCM-FICO) including Annual Confidential Report (ACR)	8 months (After Upgradation Project)	

Table 7.17 SAP Plan and Implementation

Multiyear Tariff (MYT) Petition

MEPCO will submit its Multi-Year Tariff Petition for the period 2025-26 to 2029-30 in accordance with the NEPRA Tariff Guidelines-2015. The objectives of Multi-Year Tariff Petition aim to increase the stability and predictability of future revenue chain of the licensee (MEPCO). It focuses on rationalized increase in the demand of electric power, expansion of facilities and expenditure on O&M (OPEX) and investment activities (CAPEX). Further the Multiyear Tariff Petition would minimize the risks of regulatory assessment by NEPRA and MEPCO would be in the better position for planning and strategic decision making.

Verification /Tagging & Revaluation of Fixed Assets

Fixed Assets of MEPCO other than meters will be verified, tagged and revalued as per tender floated on 24th March, 2024.

Activity	Duration	Current Status
Advertisement	March 24, 2024	Completed
Bid Opening	April 23, 2024	Completed
Technical & Financial Evaluation	June, 2024	Completed
Approval of Award	One Month	-
Award of Contract	One Week	-
Implementation	Two Years	-
Post Implementation Assessment	Two Months	-

Table 7.18 Verification / Tagging & Revaluation of Fixed Assets

7.8.5. TRANSPORT IMPROVEMENT PLAN – SCOPE

This business plan outlines the transportation strategy for officers categorized under BPS-18 and BPS-17, totaling 462 officers. To enhance operational efficiency, plan propose acquiring vehicles for FY 2025-26 (1,300 CC at a cost of 621.248 million) for both field and office and FY 2026-27 (1,000 CC at a cost of 1270.096 million), with a total projected expenditure of 1,891 million. This initiative not only improves mobility but also offers several key benefits, including a reduction in POL (Petrol, Oil, and Lubricants) costs due to the use of more fuel-efficient vehicles, leading to significant savings and a lower environmental impact. Furthermore, reliable transportation will enhance officer productivity by ensuring timely access to assignments, while newer vehicles will provide better safety features and comfort, contributing to officer well-being. Additionally, investing in efficient vehicles is expected to yield long-term cost savings through reduced maintenance expenses, resulting in a favorable return on investment.

Category	A		B		Total
Officer's BPS	BPS-18		BPS-17		
Posted in	Field	Office	Field	Office	
No. Of Officers	86	50	262	64	
Proposed FY	2025-26		2026-27		
Proposed Vehicle	1300 CC		1000 CC		
Cost Of Vehicle	392.848	228.4	1020.752	249.344	1,891

Table 7.19 Transport Improvement Plan - Scope

7.8.6. PUBLIC RELATION MANAGEMENT & IMAGE BUILDING PLAN - SCOPE

The establishment of production studio in MEPCO for its YouTube channel and other social media platforms.

INTRODUCTION

To enhance the digital presence of MEPCO it is proposed to establish a dedicated production studio. This facility will serve as the primary source for producing high-quality content for the Company's YouTube channel and other Social Media platforms like Face book, X, Instagram, and Tik tok.

OBJECTIVES

The primary objectives of setting up the production studio are:

To create engaging and informative content for MEPCO's digital audience.

To showcase the Company's activities, projects, and innovations.

To increase MEPCO's brand awareness and reach on multiple social media platforms.

To ensure consistent and professional video production that aligns with the company's vision.

SCOPE

The studio will be used for the following types of content:

Campaigns on different issues and department insights.

Promotional Content: Videos that promote the company achievements, events, and milestones.

Interviews & Podcasts: Sessions with key personalities.

Live Streams: For events, webinars or announcements.

Behind the Scenes: Showcasing the working environment of MEPCO.

REQUIREMENTS

Space & Location

A soundproof room of approx. 300-500 sq. ft. within the Headquarters.

Suitable lighting conditions and ventilation.

Equipment

Cameras: DSLR or mirror less cameras with 4K video capabilities.

Audio: High-quality microphones (lapel, boom, and handheld) with sound mixers.

Lighting: Soft box lighting kits, ring lights, and LED panels.

Editing Software: Adobe Premiere Pro, Final Cut Pro, or other suitable editing tools.

Green Screen: For virtual backgrounds.

Furniture & Setup: Desks, chairs, and a variety of background settings for different types of content.

Technical Staff

Videographers: To operate the camera and manage the technical setup.

Editors: To edit and finalize the content for publishing.

BUDGET ESTIMATION

As per current market rates mentioned in business plan 2025-26 to 2029-30.

Equipment

Software

Infrastructure, Human Resource & Setup

EXECUTION TIMELINE

Phase 1 (1 Month): Finalizing the location and purchasing equipment.

Phase 2 (2 Months): Studio setup, installation of equipment, and hiring of staff.

Phase 3 (Ongoing): Regular production of content and promotion on social media.

CONCLUSION

Establishing a dedicated production studio will significantly enhance MEPCO's ability to engage with its digital audience, providing a professional and consistent stream of content. This initiative will improve brand visibility, attract prospective students, and foster a stronger connection with the community through digital media.

This document provides a strategic blueprint for the establishment of a production studio at MEPCO. Further discussions on budget approval and resource allocation can follow.

7.8.7. TRANSFORMER WORKSHOP IMPROVEMENT PLAN - SCOPE

The plan for the next five years is establishment of 2 No, new transformer reclamation workshops for the Sahiwal and Bahawalnagar circles, detail of which is outlined below. Meanwhile, the existing transformer reclamation workshops are functioning effectively across five circles within MEPCO, namely Multan, Bahawalpur, Vehari, D.G. Khan, and R. Y. Khan.

Plan for existing TRW workshops & New TRWs at Sahiwal & Bahawalnagar Circles		
Sr.	**Description**	**FY**
1	Machinery & Testing Equipment for TRW (Multan, R.Y. Khan, Bahawalpur, Vehari & D.G. Khan)	2025-26
2	Construction of Building for Sahiwal	2025-26
3	Vehicle for Sahiwal	2025-26
4	Machinery & Testing Equipment's for Bahawalnagar	2026-27
5	Construction of Building for Bahawalnagar	2026-27
6	Vehicle for Bahawalnagar	2026-27

Table 7.20 Transformer Workshop Plan - Scope

Transformer Reclamation Workshops follow the WAPDA standard DDS-84 for reclamation of damage transformers and accordingly performing the below mentioned routine tests of reclaimed transformers.

1. Measurement of Winding Resistance.
2. Turn Ratio Measurement (TTR Test).
3. Polarity & Phase Relation Test (DY 11).
4. Load Losses (Copper losses), Short circuit test.
5. No-load Losses (Iron losses), Open Circuit test.
6. Separate Source Over-Voltage Withstand Test.
7. Dielectric strength of transformer oil.
8. Induced Voltage Test.

Benefit of Transformer Reclamation

- Saving in Term of POL per Anum = 12 million.
- Saving in Terms of TA/DA per Anum = 06 million.
- Saving in maintenance / ware tare of vehicles. = 02 million.
- Pay Back Time = 06 Years.
- Restoration of Electric Supply with in minimum possible Time

7.8.8. CIVIL PLAN -SCOPE

Sr.#	Circle	No. of works				
		FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
1	Operation Circle Multan	4	5	2	2	2
2	Operation Circle Khanewal	4	2	2	4	2
3	Operation Circle Bahawal Nagar	3	2	2	2	2
4	Operation Circle Sahiwal	3	5	2	2	2
5	Operation Circle Vehari	3	3	3	3	3
6	Operation Circle Bahawal Pur	3	3	3	6	3
7	Operation Circle DG. Khan	4	3	3	3	5
8	Operation Circle Muzaffar Garh	3	3	3	3	4
9	Operation Circle Rahim Yar Khan	6	5	5	5	5
10	GSO Circle Multan	19	18	17	17	17
11	GSO Circle Sahiwal	12	12	12	12	12
12	MEPCO Head Quarter	4	3	3	4	3

Table 7.21 Civil plan -SCOPE

7.8.9. ADEQUATE HUMAN RESOURCE MANAGEMENT

Five years (FY 2025-26 to FY 2029-30) Recruitment Plan

Sr.#	Nomenclature of the Post	BPS	2025-26	2026-27	2027-28	2028-29	2029-30
			No. of posts	No. of posts	No. of posts	No. of posts	No. of posts
1	Jr. Engineers/ SDOs	17	0	15	20	15	15
2	A.M (CS) / RO	17	0	2	2	1	2
3	A.M (MM) / FSM	17	0	2	2	1	2
4	A.M (P/SA) /Computer	17	0	2	2	2	2
5	A.M (HR / Admn)	17	4	3	3	2	3
6	AM (Finance)	17	0	2	2	2	2
7	Data Coder	15	4	4	3	2	2
8	Data Entry Operator	15	2	2	2	1	2
9	Office Assistant/Head Clerk	15	15	15	15	7	8
10	Audit Assistant	15	24	2	1	2	3
11	Accounts Assistant	15	30	2	3	2	3
12	Commercial Assistant	15	10	7	10	7	8
13	LS-I (Line Supptt-I)	15	10	15	10	7	8
14	SSO-I	15	15	25	15	10	8
15	Jr. Store Keeper	14	2	1	2	2	3
16	Lab Assistant/Test Assistant	14	5	10	6	5	6
17	LS-II (Line Supptt-II)	14	60	30	25	15	20
18	SSO-II	14	10	15	10	15	10
19	Jr. Clerk/LDC	9	102	70	50	60	40
20	Meter Reader	9	205	80	60	70	60
21	Driver	08-Sep	0	30	20	30	15
22	A.S.S.A	7	115	35	25	30	25
23	Assistant Linema(ALM)	5	474	70	60	70	50
TOTAL			**1087**	**439**	**348**	**358**	**297**

Table 7.22 HR Improvement Plan -SCOPE

Scope of HR Consultant

- To conduct a comprehensive review of the existing IIR manual, evaluating its clarity, structure, and relevance to current business operations.
- To ensure that the HR policies are in line with the company's mission, vision, and strategic goals.
- To identify gaps, inconsistencies, or areas where policies need to be developed or improved and propose amendments accordingly.
- To highlight potential risks or vulnerabilities within the existing JIR policies and propose amendments accordingly.
- To provide expert advice and recommendations on specific HR issues such as recruitment, employee relations, compensation and benefits, performance management, talent management, succession planning, training & development, career growth, workplace safety, diversity & inclusion etc.
- To propose changes to better align the policies with the company's long-term business objectives and culture.
- To ensure that the HR policies comply with relevant employment laws, including health and safety regulations, employee rights, anti-discrimination, and other legal requirements.
- To ensure that all policies are up-to-date and compliant with relevant labor laws and regulations.
- To suggest amendments where legal risks or compliance issues are identified.
- To align IIR policies with industry best practices and propose innovative HR solutions that can improve employee engagement, performance management, and organizational culture.
- To ensure that the language used in the policies is clear, professional, and easy to understand.
- To advise on the practical implementation of the revised HR policies.

Budget

- The budget for the consultancy service is Rs.30 (Million) Approx. The budget is made the part of OPEX.

7.8.9. RESEARCH AND DEVELOPMENT

Harmonics Study

- Reducing harmonics enhances the overall quality of the power supply
- By minimizing harmonics, energy losses in the system are decreased
- well-managed harmonics is less prone to malfunctions and outages
- Reduced wear and tear on equipment
- Reducing harmonics can minimize overheating and the risk of electrical fires

VAR Compensation Study

- Improved voltage stability and power quality.
- Enhanced capacity for transmission lines.
- Reduction in transmission losses.
- Identify areas with voltage stability issues or poor power factor.
- Calculate the necessary VAR support based on load conditions and performance goals
- Evaluate different VAR compensation technologies (e.g., capacitors, STATCOM, SVC).
- Consider factors like response time, efficiency, and cost.

E-office

- Streamlined Processes
- Quick Access to Information
- Real-Time Collaboration
- Trackable Workflows
- Reduced Carbon Footprint

Hosting capacity of Net Metering study, Right of Ways, solution Study etc.

8. COSTS AND FINANCING PLAN

8.1. COSTING DETAIL OF SECONDARY TRANSMISSION SYSTEM-CAPEX

Sr. No	Description	Year 2025-26	Year 2026-27	Year 2027-28	Year 2028-29	Year 2029-30	Total Cost (MRs.)
1	New Grids	2,392	2,154	2,805	2,796	2,975	**13,122**
2	Augmentation	308	-	349	-	-	**657**
4	Spare Transformer (40MVA)	308	328	349	372	396	**1,752**
5	T/L	5,870	7,138	3,019	4,399	717	**21,143**
6	132KV Caps	-	206	-	-	-	**206**
	Total Cost (MRs.)	**8,878**	**9,826**	**6,522**	**7,567**	**4,088**	**36,880**

Table 8.1 Expansions and Rehabilitation of Transmission System – Cost

8.2. COSTING DETAILS FOR DISTRIBUTION SYSTEM

Expansion and Rehabilitation of Distribution System – Cost

Scope of Work for 11 kV Rehabilitation (Bifurcation)							
A.		**Million Rs.**					
	Rehabilitation of HT Lines	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**	**FY 2028-29**	**FY 2029-30**	**Total**
1	New HT Lines	3295	3295	1341	1320	1095	**10345**
2	HT Line Reconductoring	2398	2398	987	966	803	**7552**
3	11KV Capacitors	34	34	14	14	12	**107**
4	11KV Panels	136	136	58	56	47	**433**
5	Replacement of T/F & Poles Earthing	16	16	12	12	11	**66**
6	11-kV Sectionalizers	218	218	93	89	75	**692**
7	11-KV 500 MCM Cable	64	64	27	26	22	**203**
Sub Total (1 to 7)		**6160**	**6160**	**2531**	**2482**	**2064**	**19398**
Scope of Work for 11 kV Rehabilitation (Connectivity)							
8	New HT Lines	236	283	47	57	47	**670**
9	HT Line Reconductoring	157	188	31	38	31	**445**
Sub Total (8 to 9)		**392**	**471**	**78**	**94**	**78**	**1115**
Scope of Work for 11 kV Rehabilitation (Area Planning)							
10	New HT Lines	106	102	126	111	73	**517**
11	HT Line Reconductoring	48	45	56	50	32	**231**

Sub Total (10 to 11)		**154**	**147**	**182**	**161**	**105**	**748**
Scope of Work for LT Rehabilitation							
B.	**LT Lines Rehabilitation**						
12	New LT Lines	238	241	243	246	248	**1217**
13	LT Line Reconductoring	80	81	81	82	83	**407**
14	New HT Lines (For New T/F Substations)	109	110	111	113	114	**557**
15	**New Transformer Substations**						
	a. 25 KVA	16	16	16	16	17	**81**
	b. 50 KVA	86	87	88	89	90	**441**
	c. 100 KVA	159	161	163	164	166	**813**
	d. 200 KVA	98	99	100	101	102	**498**
	Sub Total	**359**	**363**	**367**	**371**	**374**	**1834**
16	**Augmentation of Overloaded Transformers**						
	a. 25 KVA	116	118	121	123	125	**603**
	b. 50 KVA	228	233	238	243	248	**1190**
	c. 100 KVA	418	427	435	444	453	**2176**
	d. 200 KVA	390	398	407	415	423	**2033**
	Sub Total	**1152**	**1176**	**1200**	**1224**	**1248**	**6002**
17	**ABC Cable**						
	a. ABC 95 mm^2	41	45	49	53	57	246

	b. ABC 50 mm^2	22	25	27	30	32	137
	Sub Total	**64**	**70**	**77**	**83**	**90**	**384**
Total Cost of Distribution Rehabilitation (1 to 17)		**8,708**	**8,819**	**4,872**	**4,856**	**4,406**	**31,661**

Table 8.2 Expansions and Rehabilitation of Distribution System – Cost

YEAR WISE BREAK UP OF PROJECT COST (OPTIMALLY ACHIEVABLE CASE)							
Sr. No.	**Description**	**Year**					**Total (MRs.)**
		2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**	
1	Material Cost	**8,708**	**8,819**	**4,872**	**4,856**	**4,406**	**31,661**
2	Installation Charges @ 8% of Sr. # 1	697	706	390	389	352	2533
3	Store Charges @ 12% of Sr.# 1	1045	1058	585	583	529	3799
4	Estimated Cost (1+2+3)	10450	10583	5846	5828	5287	37994
5	Misc. Charges @ 1% Sr.# 4	104	106	58	58	53	380
6	Sub Total (4+5)	10554	10689	5905	5886	5340	38374
7	Authority Supervisory Charges @ 0.5 % of Sr. # 6	53	53	30	29	27	192
8	Contingencies (@ 1.5% of Sr.#6)	158	160	89	88	80	576
9	Total Project Cost (6+7+8)	10765	10902	6023	6004	5447	39141
10	**Total Material Cost (Escalated @ 6.5 % / Anum)**	**10,765**	**11,611**	**6,806**	**7,174**	**6,863**	**43,220**

Table 8.3 Year wise Breakup of Projected Cost

REPLACEMENT OF SLUGGISH ENERGY METERS (ACHIEVABLE CASE)							
Energy Meters (against defective)							
Sr.	**Rehabilitation.**	**Million Rs.**					
		2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**Total**
1	Single Phase	1651	1693	1734	1776	1818	**8672**
2	Three Phase	289	317	346	375	404	**1732**
Total Cost of Distribution Rehabilitation.		**1,939**	**2,010**	**2,081**	**2,151**	**2,222**	**10,404**

COST ABSTRACT OF SLUGGISH METERS							
Sr. No.	**Description**	**Year**					**Total (MRs.)**
		2025-26	**2026-27**	**2027-28**	**2028-29**	**2029-30**	
1	Material Cost	**1,939**	**2,010**	**2,081**	**2,151**	**2,222**	**10,404**
2	Installation Charges @ 8% of Sr. # 1	155	161	166	172	178	832
3	Store Charges @ 12% of Sr.# 1	233	241	250	258	267	1248
4	Estimated Cost (1+2+3)	2327	2412	2497	2582	2667	12485
5	Misc. Charges @ 1% Sr.# 4	23	24	25	26	27	125
6	Sub Total (4+5)	2350	2436	2522	2608	2693	12609
7	Authority Supervisory Charges @ 0.5 % of Sr. # 6	12	12	13	13	13	63
8	Contingencies (@ 1.5% of Sr.#6)	35	37	38	39	40	189
9	Total Project Cost (6+7+8)	2398	2485	2572	2660	2747	12862
10	**Total Material Cost (Escalated @ 6.5 % / Anum)**	**2,398**	**2,646**	**2,907**	**3,178**	**3,461**	**14,590**

Table 8.4 Year wise Breakup of Sluggish Meter Cost

8.3. PLAN FOR REPLACEMENT OF BARE CONDUCTORS WITH INSULATED CONDUCTORS– COST

The tentative cost of 11KV Insulated Conductors is listed below;

Sr. No	Description	Unit	In Million Rs.					
			2025-26	2026-27	2027-28	2028-29	2029-30	Total
1	Insulation of Bare Conductors	Nos.	-	98.2	-	-	-	**98.2**

Table 8.5 Plan for Installation of Bare Conductor – Cost

8.4. COSTING DETAIL OF APMS INSTALLATION

Financial Head	FY (2024-25)	FY (2025-26)	FY (2026-27)	Total (Rs. Mil)
ADB	1841.4	2579.3	2579.3	7000
Own Resources	500	2305.5	2598.6	5404.1
WB	1627.08	1627.08	0	3254.16
Total (Rs. Mil)	3968.48	6511.88	5177.9	15658.3

Table 8.6 Plan for Installation of APMS – Cost

8.5. COSTING DETAIL OF GIS MAPPING

The tentative costing of GIS mapping is listed below;

Sr. #	Description	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	Total Amount (in Million Rs)
1	GIS Mapping	102.5	19.03	-	-	-	**122**

Table 8.7 GIS Mapping Plan – Cost

8.6. COSTING DETAIL OF OTHER FUNCTIONAL IMPROVEMENT PLANS

8.6.1. IT DIRECTORATE IMPROVEMENT PLAN - COST

Sr.	Description	F.Y 2025-26	F.Y 2026-27	F.Y 2027-28	F.Y 2028-29	F.Y 2029-30	Total Amount (in million Rs.)
A	**IT Equipment's for IT Directorate and Field Formations**						
1	Computers	30	31	32	33	34	160
2	Laptops	14	29	29	15	15.5	102.5
3	Laser Printers	2.75	2.75	3.3	2.5	3.85	15.15
4	UPS 1KVA	2.5	3.5	3.5	4.5	4.5	18.5
5	Mobile Phones (Android)	67.5	75	0	0	90	232.5
6	Heavy duty laser printer	9	9	0	0	0	18
Sub Total (A)		**125.75**	**150.25**	**67.8**	**55**	**147.85**	**546.65**

Table 8.8 IT Directorate Improvement Plan – Cost

AMI Expansion:

Sr.No	Description	Unit	In Million Rs.					
			F.Y 2025-26	F.Y 2026-27	F.Y 2027-28	F.Y 2028-29	F.Y 2029-30	Total Amount (in million Rs.)
1.	**AMI Expansion**	**Nos.**	**2102.72**	**2349.63**	**-**	**-**	**-**	**4452.35**

Table 8.9 AMI Expansion - Cost

8.6.2. ADOPTATION OF NEW TECHNOLOGIES - COST

A- Scanning Meters – Cost

Plan of Scanning Meters on 10,15,25 and 50KVA Public Transformers	FY 25-26	FY 26-27	FY 27-28	Total Amount
	(Rs. Mil)			
SCOPE (Nos.)	25,930.00	25,111.00	24,856.00	75,897.00
COST (in Million Rs.) @60000 Per Unit Cost	1,656.93	1,708.89	1,801.49	5,167.30

B- Scanning Meters – Cost (Pilot Project)

Description	F.Y 2025-26	F.Y 2026-27	F.Y 2027-28	F.Y 2028-29	F.Y 2029-30	Total Amount (in million Rs.)
CAPEX IN (MRs)@RS.60000/MTR	1657	1709	1801	-	-	5167

Description	F.Y 2025-26	F.Y 2026-27	F.Y 2027-28	F.Y 2028-29	F.Y 2029-30	Total Amount (in million Rs.)
CAPEX IN (MRs)@RS.60000/MTR	-	-	-	**230**	-	**230**

Table 8.10 Scanning Meters – Cost

8.6.3. SAFETY IMPROVEMENT PLAN – COST

The cost of safety improvement plan of MEPCO is listed below;

Safety Improvement Plan – Own Resource

Sr#	Description	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	Total Cost (In Million Rs.)
1	Bucket Mounted Trucks 01 per (OP) & (Const.) subdivision:	PKR 675.00	PKR 675.00	PKR 675.00	-	-	PKR 2,025.00
2	Android Mobile Phone in respect of LS/SDO/XEN & SE	PKR 22.86	PKR 59.58	-	-	-	PKR 82.44
3	Tools & PPEs	PKR 318.06	PKR 384.86	PKR 465.70	PKR 563.50	PKR 681.70	PKR 2,413.82
4	Toyota Hilux (Double Cabin)	PKR 12.95	PKR 14.00	PKR 16.00	-	-	PKR 43.00
5	Motor Bikes 150cc	PKR 4.20	-	-	-	-	PKR 4.20
Total Capex Cost		PKR 1,033.07	PKR 1,133.44	PKR 1,156.70	PKR 563.50	PKR 681.70	PKR 4,568.41

Table 8.11 Safety Improvement Plan - Cost

8.6.4. FINANCIAL IMPROVEMENT PLAN – COST

The cost of ERP plan of MEPCO is listed below;

Sr #	Project	Estimated Cost
1	SAP Upgradation from ECC 6.0 EHP 7 to SAP S/4 HANA	300 million
2	Disaster Recovery Site (DRS)	100 million
3	Project System & SAP Analytics	40 million
4	Pension System	30 million
5	Workflows (HCM-FICO) including Annual Confidential Report (ACR)	45 million

Table 8.12 ERP Plan – Cost

8.6.5. TRANSPORT IMPROVEMENT PLAN – COST

The costing of Transport improvement plan is listed below;

Transport improvement Plan	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	Total CAPEX (million Rs.)
	621	1270	-	-	-	1,891

Table 8.13 Transport Improvement Plan – Cost

8.6.6. PUBLIC RELATION AND IMAGE BUILDING PLAN – COST

The costing of public relation and image building plan is listed below;

OutreaCH THROGH DIGITAL MEDIA	Units	Cost	FY 2025-26	FY 2026-27	FY 2027-28	FY 2027-28	FY 2027-28	Total Cost in Million in Rs
Production Studio for MEPCO YouTube Channel & Other Social Media Platforms								
DSLR camera for Video Shoot	**3**	1	3	0	0	0	0	**3**
Production Equipment (Different)		2	2	0	0	0	0	**2**
Studio Soundproof Set & Furniture		1.5	1.5	0	0	0	0	**1.5**
Computer desktop with 4 k Display	**2**	0.6	1.2	0	0	0	0	**1.2**
Colour Printer for Studio	**1**	0.2	0.2	0	0	0	0	**0.2**
Laptop	**2**	0.4	0.4	0	0	0.4	0	**0.8**
Computer desktop	**2**	0.3	0.6	0	0	0	0	**0.6**
For Office Use								
DSLR camera for Outdoor	**2**	0.5	0	0.25	0	0	0.25	**0.5**
Printer 3 in 1	**1**	0.2	0.2	0	0	0	0	**0.2**
Smart mobile	**2**	0.3	0	0.15	0	0	0.2	**0.35**
Laptop	**2**	0.4	0.4	0	0	0	0	**0.4**
Computer desktop	**2**	0.3	0.3	0	0	0	0	**0.3**
DSLR camera for Outdoor	**2**	0.5	0	0.25	0	0	0.25	**0.5**
Printer 3 in 1	**1**	0.2	0.2	0	0	0	0	**0.2**
Mass Media Campaigns								
Newspaper Campaigns	**12**	0	3	4	5	6	8	**26**
Public Service announcement on local Channels	**6**	0	4	4	5	6	6.5	**25**
Billboards & Street Pole Streamers	**5**	0	1	2	2.5	3	4	**13**
Design and printing of Customer Awareness Material	**10**	0	**5**	**6**	6.5	7	7.8	**32**
Monthly Newsletter	**12**	0	2	2	3	3.5	4	**15**
TOTAL Cost of Comm Improvement Plan (in Million Rs)			**24.3305**	**18.33**	**22**	**25.9**	**31**	**121.5605**

Table 8.14 Public Relation and Image Building Plan – Cost

8.6.7. TRANSFORMER WORKSHOP PLAN – COST

Plan for existing TRW workshops & New TRWs at Sahiwal & Bahawalnagar Circles						
Description	**FY 2025-26**	**FY 2026-27**	**FY 2027-28**	**FY 2028-29**	**FY 2029-30**	**Total Cost (in Million Rs.)**
Machinery & Testing Equipment for TRW (Multan, R.Y. Khan, Bahawalpur, Vehari & D.G. Khan)	5	0	0	0	0	5
Construction of Building for Sahiwal	0	100	0	0	0	100
Vehicle for Sahiwal	80	0	0	0	0	80
Machinery & Testing Equipment for Bahawalnagar	0	300	0	0	0	300
Construction of Building for Bahawalnagar	20	0	0	0	0	20
Vehicle for Bahawalnagar	0	40	0	0	0	40
Total Cost (in Million Rs.)	**105**	**440**	**0**	**0**	**0**	**545**

Table 8.15 Transformer Workshop Plan - Cost

8.6.8. CIVIL WORKS – COST

Sr.#	Description	(Rs. In Million		
		Operation Circle	GSO Circle	Total
1	F.Y (2025-26)	346	271	**617**
2	F.Y (2026-27)	443	248	**691**
3	F.Y (2027-28)	478	220	**698**
4	F.Y (2028-29)	406	293	**699**
5	F.Y (2029-30)	486	318	**804**
G. Total: -		**2159**	**1350**	**3509**

Table 8.16 Office Renovation and CFC Improvement Plan - Cost

8.6.9. RESEARCH AND DEVELOPMENT– COST

R&D Plan	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	Total Cost (in Million Rs.)
	30	30	30	30	30	150

Table 8.17 R&D Plan – Cost

8.7. DEPOSIT WORK – CAPEX

The detail of funds received against deposit work, capital, PMSDGS (FY 2025-26 to FY 2029-30) is as under;

FY	DEPOSIT WORK (Rs. Mil)
2025-26	9765
2026-27	7765
2027-28	10065
2028-29	9765
2029-30	7765
Total	45126

Table 8.18 Deposit Work – Cost

8.8. EXPENDITURE FOR OUTSOURCING

There are four sections working in Sub-Division level of MEPCO.

1. Maintenance
2. New Connection
3. D&R Section
4. Reading Section

Old line staff retiring every year. Fresh appointment is not allowed by Government. Existing technical staff is fully engaged in Anti-Theft Campaign / Recovery and attending consumer's complaints in 03-shifts. Required target of maintenance work may not be achieved in true letter and spirit. So, to achieve the target of SAIFI/SAIDI and other NEPRA targets regarding continuity of supply, it is necessary to outsource the maintenance of 11-KV feeders.

A - Outsourcing of Distribution Network Maintenance

Circle wise detail of Feeders in MEPCO		
Sr. No.	**Circle**	**No of Feeders**
1	Multan	344
2	D.G.Khan	145
3	Vehari	144
4	B/Pur	262
5	Sahiwal	237
6	R.Y.Khan	192
7	M/Garh	202
8	B/Nagar	129
9	Khanewal	144
Total		**1799**

MONETARY BENEFIT

Projected Enhancement in Revenue through Maintenance on Distribution System

Estimate Average Load Per Feeder	125 Amp		
Average Real Power / Feeder @ 80% Power Factor	11 x 1000 x 125 x 0.9 = **1237.5 KW**		
Average Duration for which outages occurred on each feeder per month	As per last NEPRA SAIDI Results (2023-24) = **5.10 Hours** (SAIDI = 3726.06 Minutes)		
Un-realized revenue per Feeder During One Year	5.10 x 12 x 1237.5 x 35.35 (Per Unit electricity Rate = 35.35)	Rs. Million	2.677
Total Un-realized Revenue for 1793 Nos. Feeders	2.67 x 1793		4800
Revenue Emerged after Reduction in Frequency of Interruptions / Outages (Duration = SAIDI)	3 x 12 x 1237.5 x 35.35		1.575
Revenue for One Whole Year For 1793 Feeders	1.575 x 1793		2824
Projected Increase in Revenue (4800 – 2824)			1976
This is the main difference which is kept in mind leading to importance of maintenance.			

SAVING BY REDUCTION IN DAMAGE OF TRANSFORMERS

Total install capacity of transformer upto 06/2024	105875
Damage ratio of transformer during 2023-24	5.29% (5605 Nos)
Total install capacity of transformer upto June-2025 (Proposed)	109219
Permissible damage ratio of transformer 2025-26	3% of install capacity

Permissible limit of damage transformer 2025-26	3276
After Outsourcing of preventive maintenance Saving by outsourcing	5605-3276 = 2329
Average rate of repaired transformers by TRW	230000
Projected Increase in Revenue due to reduction in damage transformers	**535.6 (M)**

EXPECTED SAVING / INCREASE IN REVENUE

Projected Revenue to be added (saved) due to sales of Power after Reduction based on 02.10-hours outages	1976 million
Saving due to 42% Reduction in Total Damaged Transformers	535.6 million
Total Expected Saving after complete maintenance of 1793 No. 11KV Feeders	2511.6 million

*NOTE:

(Budget required for complete maintenance of 1799 No. 11KV feeders = Rs.1232.07 million approximately)

Expected payback period after complete maintenance through outsource is **ONE YEAR**

IMPACT OF PREVENTIVE MAINTENANCE ON SAIFI / SAIDI

Description	F.Y 2023-24	F.Y 2024-25 (Tentative)	F.Y 2025-26 (Proposed 20% Reduction)
SAIFI	31.58	30	24
SAIDI	3726	3539.7	2831.7

Vacancy Statement of Technical Line Staff under (Op) Circles MEPCO is as under: -

Sr. No.	Post	BPS	Sanctioned	Working	Vacant	% age Shortage
1	Line Superintendent	15	1190	754	436	37%

3	Lineman-I	11	1694	1409	285	17%
4	Lineman-II	9	1681	1227	454	27%
5	Assistant Lineman	7	5489	3557	1932	35%
TOTAL			10054	6947	3107	

FINANCIAL IMPACT

Budget Provision against Vacancies for Maintenance by MEPCO

Sr. No.	Post	BPS	Sanctioned	Working	Vacant	Amount of Monthly Salary (Average) (Rs.)	Total amount of salary/ month (In Million)	Total amount of salary/ year (In Million)
1	Line superintendent	15	1190	754	436	120000	52.32	627.84
3	Lineman	11	1694	1409	285	110000	31.35	376.2
4	Lineman-ii	9	1681	1227	454	100000	45.4	544.8
5	Assistant Lineman	7	5489	3557	1932	40000	77.28	927.36
TOTAL			**10054**	**6947**	**3107**		**206.35**	**2476.2**
	Transport Outsourcing charges + POL Charges for Maintenance &Complaints	02-Vehicle /Sub Division Shehzore or Toyota or equivalent vehicles (150000/vehicle for oil & Maintenance 150000 x 2 = 300000 x 188 = 56.4 million/Month)					56.4	676.8
	Grand Total						**262.75**	**3153.00**

Budget Provision against Outsourcing Plan

Sr No.	Post	BPS	Labour/ Sub-Divn	Total Labour	Lump sum amount of Monthly Salary (Rs.)	Total amount of salary/ month (In Million)	Total amount of salary of 08 months (In Million)
1	Line Superintendent/Superviser		1	188	80000	15.04	120.32
3	Lineman		4	752	50000	37.6	300.8
5	Assistant Lineman		4	752	40000	30.08	240.64
TOTAL			**9**	**1692**		**82.72**	**661.76**
6	Transport Outsourcing charges + POL Charges for Maintenance &Complaints	02-Vehicle /Sub Division Shehzore or Toyota or equivalent vehicles (150000/vehicle 65000 for oil & 85000 Rent + Maintenance) 150000 x 2 = 300000 x 188 = 56.40 million/Month)				56.4	**451.2**
7	**PST 16%**						**105.88**
8	**Misc. charges 2%**						**13.23**
	Grand Total						**1232.07**

SAVING COST THROUGH OUTSOURCE OF PREVENTIVE MAINTENANCE

Project Cost by MEPCO level induction of vacant posts = 3153.00 million

Project Cost through outsourcing of preventive maintenance = 1232.07 million

Saving Amount = 1920.93 million

OUTSOURCE LABOR REQUIRED FOR MAINTENANCE OF FEEDERS					
Sr. No.	**ircle**	**No. of Sub Division**	**No. of Labour/ Sub Divn.**	**Cost of Labour/Sub-Divn (Million) C = B x 0.049 (Monthly exp / total labour = 48888)**	**Cost of Labor for 08-Months (Million)**
1	Multan	26	234	11.44	91.52
2	D.G.Khan	22	198	9.68	77.44
3	Vehari	13	117	5.72	45.76
4	B/Pur	31	279	13.64	109.12
5	Sahiwal	22	198	9.68	77.44
6	R.Y.Khan	19	171	8.36	66.88
7	M/Garh	24	216	10.56	84.48
8	B/Nagar	16	144	7.04	56.32
9	Khanewal	15	135	6.60	52.80
Total		**188**	**1692**	**82.72**	**661.76**
Transport Outsourcing charges + POL Charges for Maintenance & Complaints					**451.2**
PST 16%					**105.88**
Misc. charges 2%					**13.23**
Grand Total					**1232.07**

MAINTENANCE PLAN 2024-25

Following maintenance work on 11 kV feeders will be carried out through outsourcing by inviting experienced firms / companies via competitive biddings:

Maintenance of HT Lines Plan

- Tree trimming
- Replacement of deteriorated X-Arms
- Set right of Loose Sag / Tilted Poles / Structures / stay wires
- Replacement of broken Pin Insulators / Disc
- Mid Spanning of Lengthy Spans to maintain ground clearance.
- To remove critical hazard points in order to ensure safety for all.
- To replace broken and non-specified dropout cut outs (D-Sets)
- Deteriorated conductor will be replaced from the sites where hot spots are identified.
- Replacement of undersized / deteriorated jumpers of Lines

Maintenance of Transformer &LT Lines Plan

Scope

- All sort of T/F Maintenance and Replacement of HT/LT Lines Complaints
- Tree Trimming
- Replacement of broken Pin Insulators / Disc
- Set right of Loose Sag / Tilted Poles / Structures
- Deteriorated conductor will be replaced from the sites where hot spots are identified.
- Replacement of undersized / deteriorated jumpers of Lines
- Replacement of undersized / deteriorated jumpers of Transformers
- Replacement of deteriorated LT Jumpers of Distribution transformers & Bus Bars.
- To install / shift meters on racks / frames to be fixed on poles.
- To set right service cables properly.
- To install 4 Core / LT insulated conductor in the narrow streets and markets for elimination of unnecessary bunches of cables which are potential pockets regarding theft of energy and to ensure safety of human life etc.

- Checking and set right of Transformers' Earthing
- To carry out Load Balancing of distribution transformers at regular basis.
- To install Aerial Bundled Cable (ABC) in specified areas

Outsourcing Methodology

1. **Planning**

   Service provider company will;

   Preventive Maintenance
   - provide the plan of maintenance schedule of 11-KV feeders throughout the year.

   Risk Base Maintenance
   - Will also manage Risk Bases Maintenance during Flood, heavy rains, storms etc.
   - Transformer, pole, structure will be shifted by MEPCO Crane and buckets.

2. **Scheduling**

   Service provider company will;

   - identify the area for maintenance and the same will be checked by LS In charge of feeder.
   - Material regarding maintenance will be provided by MEPCO.

3. **Execution**

   - LS will assess the volume of maintenance work and arrange permit accordingly. SDO will assure the quality of work.
   - Proper record of maintenance work will be maintained at Sub-Division level, XEN (Op) will made counter check 50% of completed work.
   - Proper record for material consumption will be maintained in EMB.
   - Labour, T&P and PPE will be maintained by Contractor.

4. **Checking**

LS In charge	SDO	XEN	SE
100%	50%	25%	10%

BASIS FOR OUTSOURCING

- Tender will be called at Division level.
- Services will be provided through contractor at Division level separately.
- Labor criteria for providing services is
  - Technically skilled
  - Medically Fit
  - No criminal record.
- Contractor must be registered in FBR / filer

CONTROL OF SERVICE PROVIDER – TRIPPING REDUCTION

Performance	Penalty / Award
Tripping Reduced 50% & above	10% Award on billing amount
Tripping Reduced 50%	**No Penalty No Award, all bill will be paid.**
Tripping Reduced 40%	05% Deduction on billing amount
Tripping Reduced 30%	10% Deduction on billing amount
Tripping Reduced Below 30%	15% Deduction on billing amount

CONTROL OF SERVICE PROVIDER – T/F REDUCTION

Performance	Penalty / Award
TF Damage Reduced up to 2.5 % & below	10% Award on billing amount
TF Damage Reduced 3.0 %	**No Penalty No Award, all bill will be paid.**
TF Damage Reduced up to 3.5%	05% Deduction on billing amount
TF Damage Reduced up to 4%	10% Deduction on billing amount
TF Damage Reduced Above 4%	15% Deduction on billing amount

B - OUTSOURCING OF MEPCO TRANSPORT SERVICES (OPERATIONAL VEHICLES)

Description	Qty	Cost/Unit (Mln.) (With Ladder)	Total (Mln.)
Ladder Mounted Mini Truck 1. 2700 to 2800 CC 2. Loading Capacity minimum 3 ton 3. Deck size (Length 11 to 12 ft Width 6 to 6.7 ft) 4. Working Height of Ladder minimum 28 ft	50	6.425	321.25

OUTSOURCES VS PURCHASE PLAN (With LADDER)

EXPENDITURE ON NEW PURCHASE OF LADDER MOUNTED MINI TRUCK WITHOUT FUEL							Out-Sourcing of Ladder Mounted Mini Truck		Saving In case of Out-Sourcing
Period	Depreciation @ 10%	Opportunity Cost @17.50% & 15.50%	Driver Cost with 10% Increase / Per Annum (50 Nos.) 2 Shifts	Repair & Maintenance (10% increase per Annum)	Net Cost of Own Fleet		Rent/Month/ Vehicle with 10% Increase per Annum	Rent per Annum with 10% Increase	
Year 1	32	56	78	24	190		0.225	135	55
Year 2	32	45	86	26	189		0.248	149	41
Year 3	32	40	94	29	195		0.272	163	32
Year 4	32	35	104	32	203		0.299	180	23
Year 5	32	30	114	35	211		0.329	198	14
Year 6	32	25	126	39	221		0.362	217	4
Year 7	32	20	138	43	233		0.399	239	-6
Year 8	32	15	152	47	246		0.438	263	-17

Year 9	32	10	167	51	261		0.482	289	-29
Year 10	32	5	184	57	278		0.531	318	-41
Total	321	280	1243	382	2227		3.586	2152	76

OUTSOURCES VS PURCHASE PLAN (Without LADDER)

Description	Qty	Cost/Unit (Mln.)	Total (Mln.)
Mini Truck (without Ladder)	50	6	300
1. 2700 to 2800 CC			
2. Loading Capacity minimum 3 ton			
3. Deck size (Length 11 to 12 ft Width 6 to 6.7 ft)			

EXPENDITURE ON NEW PURCHASE OF MINI TRUCK (WITHOUT LADDER) WITHOUT FUEL							Out-Sourcing of Mini Truck (Without Ladder)			Saving In case of Out-Sourcing
Period	**Depreciation @ 10%**	**Opportunity Cost @17.50% & 15.50%**	**Driver Cost with 10% Increase / Per Annum (50 Nos.) 2 Shifts**	**Repair & Maintenance (10% increase per Annum)**	**Net Cost of Own Fleet**		**Rent/Month/ Vehicle with 10% Increase per Annum**	**Rent per Annum with 10% Increase**		
Year 1	30	53	78	24	185		0.205	123		62
Year 2	30	42	86	26	184		0.226	135		49
Year 3	30	37	94	29	191		0.248	149		42
Year 4	30	33	104	32	198		0.273	164		35
Year 5	30	28	114	35	207		0.3	180		27
Year 6	30	23	126	39	218		0.33	198		19
Year 7	30	19	138	43	229		0.363	218		11
Year 8	30	14	152	47	243		0.399	240		3
Year 9	30	9	167	51	258		0.439	264		-6
Year 10	30	5	184	57	275		0.483	290		-15
Total	**300**	**262**	**1243**	**382**	**2187**		**3.267**	**1960**		**227**

8.9. FINANCING PLAN

8.9.1. SOURCE OF FINANCING

Description	2025-26	2026-27	2027-28	2028-29	2029-30	Total Cost (in Million Rs.)
Own Resources	24,950	27,892	17,104	16,346	12,645	98,935
World Bank	6,273	4,646	-	-	-	10,919
ADB Finance	4,682	4,929	-	-	-	9,612
Total Finance (in Million Rs.)	**35,905**	**37,467**	**17,104**	**16,346**	**12,645**	**119,466**

Table 8.19 Source of Financing – Capex

In addition to above, Rs, 45,125 million & Rs. 13,700 million has been assessed through consumer funded/deposits works and Village Electrification respectively.

Detail scope, CAPEX, Targets for Loss reduction, recovery, new initiatives i.e. outsourcing of O&M functions etc. are also part of the Business Plan.
Moreover, Rs. 1,232 million, 4.414 million yearly and 692 million are expected to be spent in lieu of outsourcing of Feeder Maintenance, transportation facility and training, capacity building & procurement of Service Plan respectively.

The Distribution Company Integrated Investment Plan (DIIP) for MEPCO includes flexible investment allocations to account for ongoing STG (Secondary Transmission and Grid) and HT (High Tension) projects that carry forward from previous periods similarly some projects may carry forward to next years. Actual funding will be allocated according to a detailed table outlining these projects, ensuring an optimized use of resources keeping in view carry forward projects expected fund requirement under own resources are given below;

Description	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	Total
Requirement of CAPEX (own Resource)	21,970	23,677	22,332	18,204	12,752	98,935

Total Capex will be managed through own resources, WB and ADB Loan. However further office of Finance vide letter No. 70763, dated 01-10-2024 has also confirm that funds can be easily managed to carry out all the projects mentioned in this plan.

8.9.2. MEPCO'S INVESTMENT PLAN AND FINANCING

Description		2025-26	2026-27	2027-28	2028-29	2029-30	Total
Head Wise Capex	STG	8,878	9,826	6,522	7,567	4,088	**36,881**
	HT Plan	8,290	8,923	3,900	4,044	3,500	**28,657**
	LT Plan	5,180	5,380	2,906	3,131	3,362	**19,959**
	SCADA	10	135	-	-	-	**145**
	Earthing of Structure	216	-	-	-	-	**216**
	Insulation of Conductors	-	98	-	-	-	**98**
	GIS Mapping	103	19	-	-	-	**122**
	AMI Expansion	2,103	2,350	-	230	-	**4,683**
	IT Directorate	126	150	68	55	148	**547**
	Safety Improvement	1,033	1,133	1,157	564	682	**4,568**
	ERP	400	115	-	-	-	**515**
	Transport Directorate Plan	621	1,270	-	-	-	**1,891**
	Public Relation and Image Building	25	19	22	26	31	**123**
	Transformer Workshop	105	440	-	-	-	**545**
	Civil Works	617	691	698	699	804	**3,509**
	Installation of APMS	6,512	5,178	-	-	-	**11,690**
	Research and Development	30	30	30	30	30	**150**
	Installation of Scanning Meters	1,657	1,709	1,801	-	-	**5,167**
Total Finance (in million Rs.)		**35,905**	**37,467**	**17,104**	**16,346**	**12,645**	**119,466**

Table 8.20 Head Wise Financial Plan of MEPCO – Total Capex

Best Case – Projects & Programs

- STG
- Distribution Network
- Insulation of Bare Conductors

9. BEST CASE – PROJECTS & PROGRAMS

The best-case scenario is also proposed which is, if implemented would enable MEPCO to meet NEPRA's standards within five years, though at a higher cost. The proposed scenario covers the rehabilitation of MEPCO transmission and distribution networks.

MEPCO will reduce the losses from 13.40 % in FY 2025-26 to 8.44 % by FY 2029-30 with total reduction of 4.97%. It is achieved by reduction of 2.662% T&D and 1.70% commercial Loss in five years by implementing the best scenario. The Summary of Projects and Programs under best case scenario is listed below;

- STG Network: In addition to projects and program for the expansion and rehabilitation of transmission and Grid System mentioned at section VII, 1 No. 66kV to 132kV conversion, 15 Nos. addition of Transmission lines for contingency provision and system stability are proposed under best case scenario. The detail of the projects is attached as annexure.
- Distribution System: In addition to projects and program for the expansion and rehabilitation of distribution system mentioned at section VII, 159 Nos. HT proposals, 2230 Nos. LT proposals, inclusion of 2230 Nos. new distribution transformers, 2650 Nos. augmentation of distribution transformers of different category, 370 Nos. ABC accessories, 1269544 Nos. replacement of energy meters against defective meters to revamp the distribution network and enable the MEPCO to achieve the NEPRA's specified Performance Standards for Distribution and the provisions of the Distribution Code, especially the Distribution Planning Code issued by NEPRA. The detail of the projects is attached as annexure.
- Replacement of Bare Conductor with insulated conductors: In addition to insulation of 48 Nos. Feeders having the total length of 115.3Km, additional insulation of 243 Nos. Feeders having the length of 331Km is proposed under best case scenario to reduce the loss occurs due to tripping. The detail of the projects is attached as annexure.
- The overall cost of Business Plan increased from **119,446** million Rs. To **163,332** million Rs. under the best-case scenario with the total savings of **1267.20 MkWh** of energy through loss reduction, smooth dispersal of power and other Projects.

SWOT ANALYSIS

- Strength
- Weaknesses
- Opportunities
- Threads

10. SWOT ANALYSIS

A SWOT analysis is a strategic planning tool used to identify and assess the internal and external factors that influence an organization's performance. For MEPCO, conducting a SWOT analysis will provide valuable insights into its current standing, enabling the development of strategies that leverage strengths, address weaknesses, capitalize on opportunities, and counter potential threats. This analysis is essential for MEPCO to enhance its operational effectiveness and maintain competitiveness within the electricity distribution sector.

10.1 STRENGTHS

- NEPRA Distribution License in territory of South Punjab is up to May 08, 2043.
- As per NEPRA Act, deemed supplier of last resort; Supplier License up to April 26, 2043.
- NEPRA Tariff Model, Cost plus.
- State-owned enterprise with full backing from the Government of Pakistan (GoP).
- Power procurement on government guarantee.
- Extensive distribution network.
- Better HT/LT Ratio 1.62.
- Ability to draw power of 13,390 MVA and distribute.
- Substantial consumer base of 8.3 million consumers.
- Better recovery.
- Vibrant directorates supported by motivated and dedicated operational officers and staff.
- Low response time for complaint redressal.
- Well-structured rules for employees, consumers, suppliers, contractors, consultants, planning activities, and executing departments.
- Well-trained workforce of 14246 employees.
- Comprehensive employee welfare program.
- Dedicated office for employee safety.
- ERP system implemented for HR, Finance, Material Management, and Project Scheduling.
- Efficient billing collection mechanism.
- Mobile meter reading to overcome consumer complaints.
- Efficient cash collection system.
- Support services in IT (online bill, MEPCO light, Complaint Redressal System).
- Investment plan of 136,764 million PKR.
- Investment in the distribution system through various programs and government funding.
- Proper investment process under NEPRA rules.
- Central investment planning through Director General MIRAD.
- Proper maintenance system for grids, transmission lines, and transformers.
- Efficient cash collection through banks and non-conventional institutions.
- Multiple regional and field stores for material management.
- Proper procedures for metering and testing equipment.
- Detection of electricity theft through data retrieval.

- Active surveillance and vigilance office.
- Efficient distribution control center (DCC) for load management.
- 24/7 vigilance with online and one-window system for consumer complaints.
- Cost-effective building constructions and maintenance.
- Internal, government, statutory, and tax audits.
- Dedicated directorates for construction and grid system works.
- Efficient procurement processes under PPRA and WAPDA rules.
- Well-defined financial powers regime.
- Detailed HR rules ensuring quality services.
- Large pool of lawyers for legal matters.
- Dedicated office for regulatory affairs.
- Health Safety Environment Directorate at each Circle level.
- AMI setup with 63,259 meters installed.
- State-of-the-art data center.

10.2 WEAKNESSES

- Delay in decision-making as a state-owned enterprise.
- Discriminatory policies between DISCOs.
- Vertical integration issues.
- High repair and maintenance costs due to an aging system.
- Cumbersome procedures for new investments and maintenance.
- Un-electrified areas within MEPCO territories.
- High percentage (89%) of domestic consumers, including lifeline consumers.
- Regulated market and tariff constraints.
- Complex billing and recovery issues.
- Scattered consumer base.
- Execution delays due to excessive formalities.
- Lack of understanding and availability of complete rules.
- Staff shortage exceeding 33% of the approved yardstick.
- Need for employee capacity building.
- No progressive HR policy.
- Resistance to change.
- Recruitment restrictions imposed by the GoP.
- Paper-based working systems.
- Vacancy of key legal positions.
- Low lawyer fees and outdated legal policy.
- Lack of tech-savvy IT personnel.
- Non-recognition of email as official communication.
- No proper IT policy.
- Lack of resources for business processes.
- Investment caps per NEPRA rules.
- Delays due to legal and procedural issues.
- Delays in material procurement due to the bidding process.

- Limited financial power and state-bound procedures.
- Delays in approval processes.
- Outdated financial power delegation requiring revision.
- Communication issues like cellular signal problems and time delays.

10.3 OPPORTUNITIES

- New avenues for utilization of assets and capabilities.
- Planned system growth through regular load forecasting.
- Changing market environment with the bifurcation of distribution business.
- Adoption of new technologies (CRM, e-tendering, document management, etc.).
- Enhancement of company culture and HR policies.
- Digitalization of HR functions.
- Opening new recruitment channels.
- Robust training programs.
- Adoption of international engineering practices.

10.4 THREATS

- Delay in tariff determination and notification, causing tariff lag.
- Political intervention.
- Long-standing tax issues with FBR.
- Costly generation mix.
- Ambiguous directions from PEPCO, PPMC, GoP, NEPRA, MOE, and Government of Punjab.
- Theft of power and assets.
- Non-cooperation from district management.
- Constraints due to NTDC overloading.
- Quality and contractor interest issues.
- Data center security threats.
- Rapid workforce depletion and active CBA.
- Discouragement of employees through anonymous complaints.
- Old vehicles and outdated vehicle policy.

SUMMARY OF BENEFITS

- Tangible Benefits
- Non-Tangible Benefits
- Additional Energy available for Sale

11. SUMMARY OF BENEFITS

11.1. TANGIBLE BENEFITS

Description	BASE YEAR : 2024-25	FY:2025-26	FY:2026-27	FY:2027-28	FY:2028-29	FY:2029-30	Total Reduction In Losses
Transmission Losses	1.05%	1.03%	1.02%	1.00%	0.99%	0.98%	0.98%
		-0.02%	-0.01%	-0.02%	-0.01%	-0.01%	-0.070%
HT-Loss	7.385%	7.175%	6.855%	6.565%	6.393%	6.268%	6.27%
		-0.210%	-0.320%	-0.290%	-0.172%	-0.125%	-1.117%
LT-Loss	2.988%	2.868%	2.744%	2.619%	2.492%	2.370%	2.37%
		-0.120%	-0.124%	-0.125%	-0.127%	-0.122%	-0.618%
Admin Loss	1.98%	1.12%	0.72%	0.62%	0.52%	0.42%	0.42%
		-0.860%	-0.400%	-0.100%	-0.100%	-0.100%	-1.560%
Total Loss Reduction (%age)	**13.40 %**	**12.19%**	**11.34%**	**10.80%**	**10.40%**	**10.04%**	**10.04%**
Loss Reduction %age (per Year)		**-1.21%**	**-0.85%**	**-0.54%**	**-0.41%**	**-0.36%**	**-3.37%**

Table 10.1 Loss Reductions

11.2. NON-TANGIBLE BENEFITS

- Improvement in the quality of electricity supply to end consumers.
- Elimination of system constraints.
- Enhancement of system stability and reliability.
- Reduction in the loading of transmission lines and power transformers.
- Reduction and containment of losses, leading to cost savings.
- Minimization of unnecessary operation and maintenance (O&M) costs in the transmission and distribution network.
- Increase in available system capacity to accommodate future load growth in and around proposed projects.
- Prevention of damage or burnout of electrical equipment caused by system overloading.
- Elimination of hazards and ensuring the safety of personnel, the public, and property.

11.3. ADDITIONAL ENERGY AVAILABLE FOR SALES (ANTICIPATED)

FY	MVA ADDITION	MW	ADDITIONAL ENERGY AVAILABLE FOR SALE (IN MKWH)
2025-26	506	20.1	76
2026-27	400	18.0	68
2027-28	534	7.9	30
2028-29	200	5.8	22
2029-30	200	5	19
Total	1840	56.8	215

Table 10.2 Additional Energy available for Sale

FINANCIAL PROJECTION OF MEPCO

- Financial Statement
- Statement of Profit and Loss
- Statement of Comprehensive Income
- Horizontal & Vertical Analysis

12. FINANCIAL PROJECTIONS OF MEPCO

12.1. FINANCIAL STATEMENT AS JUNE 2024

MULTAN ELECTRIC POWER COMPANY LIMITED
STATEMENT OF FINANCIAL POSITION
AS AT JUNE 30, 2024

	Note	2024 Rupees	2023 Rupees
EQUITY AND LIABILITIES			
SHARE CAPITAL AND RESERVES			
Share capital	5	10,823,636,048.00	10,823,636,048
Deposit for shares	6	67,728,621,839.00	61,508,552,556
Accumulated loss		(173,710,979,275)	(190,836,566,413)
TOTAL EQUITY		(95,158,721,388)	(118,504,377,809)
LIABILITIES			
NON-CURRENT LIABILITIES			
Long term financing	7	5,181,109,625	5,751,926,806
Staff retirement benefits	8	163,919,560,657	137,742,128,574
Long term security deposits	9	14,604,383,158	13,593,750,786
Contract liabilities	10	33,002,564,555	38,552,737,052
Deferred credit	11	74,959,608,474	69,557,824,169
		291,667,226,469	265,198,367,387
CURRENT LIABILITIES			
Trade and other payables	12	172,766,037,908	168,917,291,956
Accrued mark-up	13	11,207,582,622	10,286,735,913
Current portion of long term financing	7	9,281,758,414	8,447,137,700
Provision for taxation		11,108,557,729	9,796,494,492
		204,363,936,673	197,447,660,061
TOTAL LIABILITIES		496,031,163,142	462,646,027,448
CONTINGENCIES AND COMMITMENTS	14		
TOTAL EQUITY AND LIABILITIES		400,872,441,754	344,141,649,639
NON-CURRENT ASSETS			
Property, plant and equipment	15	154,508,449,067	139,984,141,285
Intangible assets	16	-	-
Long term loans to employees	17	359,752,054	203,673,368
Long term deposits	18	49,185	49,185
		154,868,250,306	140,187,863,837
CURRENT ASSETS			
Stores and spare parts	19	14,014,535,977	8,463,443,060
Trade debts	20	90,595,322,059	65,069,311,455
Loans and advances	21	469,208,741	318,842,399
Other receivables	22	83,810,576,321	78,334,213,862
Advance income tax		13,680,508,804	7,757,132,820
Sales tax receivable	23	6,302,528,110	5,858,872,823
Accrued interest		1,926,004,515	295,721,200
Short term investments	24	14,060,000,000	13,100,000,000
Bank balances	25	21,145,506,921	24,756,248,184
		246,004,191,448	203,953,785,802
TOTAL ASSETS		400,872,441,754	344,141,649,639

The annexed notes from 1 to 43 form an integral part of these financial statements.

CHIEF EXECUTIVE OFFICER **DIRECTOR**

12.2. STATEMENT OF PROFIT AND LOSS AS JUNE 2024

MULTAN ELECTRIC POWER COMPANY LIMITED
STATEMENT OF PROFIT OR LOSS
FOR THE YEAR ENDED JUNE 30, 2024

	Note	2024 Rupees	2023 Rupees
Sale of electricity - net	26	522,892,543,049	372,963,168,220
Tariff differential subsidies	27	74,716,948,775	77,811,456,859
		597,609,491,824	450,774,625,079
Cost of electricity	28	(526,488,194,471)	(438,573,956,481)
Gross profit		71,121,297,353	12,200,668,598
Amortization of deferred credit	11	3,915,150,917	3,660,012,645
		75,036,448,270	15,860,681,243
Distribution cost excluding depreciation	29	(47,038,407,123)	(37,109,250,997)
Customer service cost	30	(6,016,528,378)	(5,020,542,839)
Depreciation on operating fixed assets	15	(6,609,793,844)	(6,182,414,130)
Allowance for expected credit losses	20.1	(2,770,015,384)	(5,903,781,369)
		(62,434,744,729)	(54,215,989,335)
Profit / (loss) from operations		12,601,703,541	(38,355,308,091)
Other income	31	21,514,284,976	16,983,603,455
Finance cost	32	(924,856,018)	(1,064,361,559)
Profit / (loss) before levies and income tax		33,191,132,499	(22,436,066,195)
Minimum tax differential	33	(1,312,063,237)	(937,059,499)
Profit / (loss) before income tax		31,879,069,262	(23,373,125,694)
Income tax	33	-	-
Profit / (loss) for the year		31,879,069,262	(23,373,125,694)

The annexed notes from 1 to 43 form an integral part of these financial statements.

CHIEF EXECUTIVE OFFICER

DIRECTOR

12.3. STATEMENT OF COMPREHENSIVE INCOME JUNE 2024

MULTAN ELECTRIC POWER COMPANY LIMITED
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED JUNE 30, 2024

	Note	2024 Rupees	2023 Rupees Restated
Profit / (loss) for the year		31,879,069,262	(23,373,125,694)
Other comprehensive income:			
Items that will not be reclassified subsequently to profit or loss:			
- Remeasurement of defined benefit obligations	8.3	(14,753,482,123)	(20,283,305,619)
Items that may be reclassified subsequently to profit or loss		-	-
		(14,753,482,123)	(20,283,305,619)
Total comprehensive income for the year		17,125,587,139	(43,656,431,313)

The annexed notes from 1 to 43 form an integral part of these financial statements.

CHIEF EXECUTIVE OFFICER **DIRECTOR**

12.4. STATEMENT OF CHANGES IN EQUITY JUNE 2024

MULTAN ELECTRIC POWER COMPANY LIMITED
STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED JUNE 30, 2024

	Note	SHARE CAPITAL	DEPOSIT FOR SHARES	ACCUMULATED LOSS	TOTAL EQUITY
		----------Rupees----------			
Balance as at June 30, 2022		10,823,636,048	49,639,659,930	(147,180,135,100)	(86,716,839,122)
Non-cash settlement against deposit for shares		-	11,868,892,626	-	11,868,892,626
Loss for the year - restated		-	-	(23,373,125,694)	(23,373,125,694)
Other comprehensive income for the year		-	-	(20,283,305,619)	(20,283,305,619)
Total comprehensive income for the year - restated		-	-	(43,656,431,313)	(43,656,431,313)
Balance as at June 30, 2023 - restated		10,823,636,048	61,508,552,556	(190,836,566,413)	(118,504,377,809)
Non-cash settlement against deposit for shares	6	-	6,220,069,283	-	6,220,069,283
Profit for the year		-	-	31,879,069,262	31,879,069,262
Other comprehensive income for the year		-	-	(14,753,482,123)	(14,753,482,123)
Total comprehensive income for the year		-	-	17,125,587,139	17,125,587,139
Balance as at June 30, 2024		10,823,636,048	67,728,621,839	(173,710,979,275)	(95,158,721,388)

The annexed notes from 1 to 43 form an integral part of these financial statements.

CHIEF EXECUTIVE OFFICER

DIRECTOR

12.5. RATIO ANALYSIS

Multan Electric Power Company Ltd.

Description	FY 2023-24	FY 2022-23
Profitability Ratio		
Gross Profit Ratio	11.90%	2.71%
Net Profit Ratio	5.33%	-5.19%
Liquidity Ratio		
Current Ratio	1: 1.20	1 :1.03
Acid Test Ratio	1 : 1.14	1 : 0.99

12.6. HORIZONTAL ANALYSIS – INCOME STATEMENT & BALANCE SHEET

Income Statement Horizontal Analysis

NOMENCLATURE	% age	30-06-2024	% age	30-06-2023	% age	30-06-2022
Electricity Sales	151%	522,892	108%	372,963	100%	345,844
Tariff Differential Subsidy (TDS)	106%	74,717	111%	77,811	100%	70,284
Total Sales	**144%**	**597,609**	**108%**	**450,774**	**100%**	**416,128**
Cost of Electricity	129%	526,488	108%	438,574	100%	406,935
Gross Profit/(Loss)	**774%**	**71,121**	**133%**	**12,200**	**100%**	**9,193**
Distribution Cost	184%	47,038	145%	37,109	100%	25,558
Customer Service Cost	189%	8,787	234%	10,925	100%	4,660
Depreciation	116%	6,610	108%	6,182	100%	5,702
Total Operating Expenses	174%	62,435	151%	54,216	100%	35,920
Operating Profit/(Loss)	**32%**	**8,686**	**157%**	**(42,016)**	**100%**	**(26,727)**
Other Income	248%	25,430	202%	20,644	100%	10,238
Profit/(Loss) Before Interest & Tax	**207%**	**34,116**	**130%**	**(21,372)**	**100%**	**(16,489)**
Interest Expense	46%	925	53%	1,064	100%	1,998
Net Profit/(Loss)	**180%**	**33,191**	**121%**	**(22,436)**	**100%**	**(18,487)**
Taxation	30%	1,312	22%	937	100%	4,327
Profit /(Loss) After Interest & Tax	**140%**	**31,879**	**102%**	**(23,373)**	**100%**	**(22,814)**

Balance Sheet Assets Horizontal Analysis

PROPERTY & ASSETS	% age	30-06-2024	% age	30-06-2023	% age	30-06-2022
Operating Fixed Assets	117%	128,240	107%	117,579	100%	109,659
Capital Work-in-Progress	133%	26,268	113%	22,405	100%	19,754
Long Term Advances	300%	360	170%	204	100%	120
	120%	**154,868**	**108%**	**140,188**	**100%**	**129,533**
Current Assets						
Stores & Spares	160%	14,015	96%	8,463	100%	8,778
Trade Debts	96%	90,595	69%	65,069	100%	94,418
Loans & Advances	161%	469	110%	319	100%	291
Others Receivables	109%	83,810	102%	78,334	100%	76,767
Advance Income Tax	435%	13,681	247%	7,757	100%	3,143
Sales Tax Receivable	86%	6,303	80%	5,859	100%	7,327
Accrued Interest	1800%	1,926	277%	296	100%	107
Short Term Investment		14,060		13,100	0%	-
Cash & Bank Balances	55%	21,145	65%	24,756	100%	38,220
	107%	**246,004**	**89%**	**203,953**	**100%**	**229,051**
TOTAL ASSETS	**112%**	**400,872**	**96%**	**344,142**	**100%**	**358,585**

EQUITY AND LIABILITIES	% age	30-06-2024	% age	30-06-2023	% age	30-06-2022
Share Capital	100%	10,824	100%	10,824	100%	10,824
Share deposit money	136%	67,729	124%	61,508	100%	49,640
Accumulated (Loss)	118%	(173,711)	130%	(190,837)	100%	(147,180)
	110%	**(95,158)**	**137%**	**(118,505)**	**100%**	**(86,716)**
Non Current liabilities						
Deferred Credits	114%	74,960	106%	69,558	100%	65,581
Long Term Loans	78%	5,181	87%	5,752	100%	6,634
Employees Retirement Benefits	151%	163,920	127%	137,742	100%	108,697
Security Deposits	117%	14,604	109%	13,594	100%	12,453
Receipt Against Deposit works	97%	33,002	114%	38,553	100%	33,955
	128%	**291,667**	**117%**	**265,199**	**100%**	**227,320**
Current Liabilities						
Creditor & Other Liabilities	94%	204,363	91%	197,448	100%	217,981
TOTAL EQUITY & LIABILITIES	**112%**	**400,872**	**96%**	**344,142**	**100%**	**358,585**

12.7. VERTICAL ANALYSIS – INCOME STATEMENT & BALANCE SHEET

Income Statement

Vertical Analysis

NOMENCLATURE	30-06-2024	% age	30-06-2023	% age	30-06-2022	% age
Electricity Sales	522,892	87.50%	372,963	82.74%	345,844	83.11%
Tariff Differential Subsidy (TDS)	74,717	12.50%	77,811	17.26%	70,284	16.89%
Total Sales	**597,609**	**100.00%**	**450,774**	**100%**	**416,128**	**100%**
Cost of Electricity	526,488	88.10%	438,574	97.29%	406,935	97.79%
Gross Profit/(Loss)	71,121	11.90%	12,200	2.71%	9,193	2.21%
Distribution Cost	47,038	7.87%	37,109	8.23%	25,558	6.14%
Customer Service Cost	8,787	1.47%	10,925	2.42%	4,660	1.12%
Depreciation	6,610	1.11%	6,182	1.37%	5,702	1.37%
Total Operating Expenses	62,435	10.45%	54,216	12.03%	35,920	8.63%
Operating Profit/(Loss)	**8,686**	**1.45%**	**(42,016)**	**-9.32%**	**(26,727)**	**-6.42%**
Other Income	25,430	4.26%	20,644	4.58%	10,238	2.46%
Loss Before Interest & Tax	34,116	5.71%	(21,372)	-4.74%	(16,489)	-3.96%
Interest Expense	925	0.15%	1,064	0.24%	1,998	0.48%
Net Profit/(Loss)	**33,191**	**5.55%**	**(22,436)**	**-4.98%**	**(18,487)**	**-4.44%**
Taxation	1,312	0.22%	937	0.21%	4,327	1.04%
Profit/(Loss) After Interest & Tax	**31,879**	**5.33%**	**(23,373)**	**-5.19%**	**(22,814)**	**-5.48%**

Balance Sheet Assets

Vertical Analysis

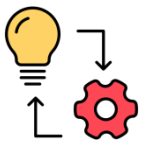
PROPERTY & ASSETS	30-06-2024	% age	30-06-2023	% age	30-06-2022	% age
Operating Fixed Assets	128,240	31.99%	117,579	34.17%	109,659	30.58%
Capital Work-in-Progress	26,268	6.55%	22,405	6.51%	19,754	5.51%
Long Term Advances	360	0.09%	204	0.06%	120	0.03%
	154,868	38.63%	140,188	40.74%	129,533	36.12%
Current Assets						
Stores & Spares	14,015	3.50%	8,463	2.46%	8,778	2.45%
Trade Debts	90,595	22.60%	65,069	18.91%	94,418	26.33%
Loans & Advances	469	0.12%	319	0.09%	291	0.08%
Others Receivables	83,810	20.91%	78,334	22.76%	76,767	21.41%
Advance Income Tax	13,681	3.41%	7,757	2.25%	3,143	0.88%
Sales Tax Receivable	6,303	1.57%	5,859	1.70%	7,327	2.04%
Accrued Interest	1,926	0.48%	296	0.09%	107	0.03%
Short Term Investment	14,060	3.51%	13,100	3.81%	-	0.00%
Cash & Bank Balances	21,145	5.27%	24,756	7.19%	38,220	10.66%
	246,004	61.37%	203,953	59.26%	229,051	63.88%
TOTAL ASSETS	400,872	100.00%	344,142	100.00%	358,585	100.00%

EQUITY AND LIABILITIES	30-06-2024	% age	30-06-2023	% age	30-06-2022	% age
Share Capital	10,824	2.70%	10,824	3.15%	10,824	3.02%
Share deposit money	67,729	16.90%	61,508	17.87%	49,640	13.84%
Accumulated (Loss)	(173,711)	-43.33%	(190,837)	-55.45%	(147,180)	-41.04%
	(95,158)	-23.74%	(118,505)	-34.43%	(86,716)	-24.18%
Non Current liabilities						
Deferred Credits	74,960	18.70%	69,558	20.21%	65,581	18.29%
Long Term Loans	5,181	1.29%	5,752	1.67%	6,634	1.85%
Employees Retirement Benefits	163,920	40.89%	137,742	40.02%	108,697	30.31%
Security Deposits	14,604	3.64%	13,594	3.95%	12,453	3.47%
Receipt Against Deposit works	33,002	8.23%	38,553	11.20%	33,955	9.47%
	291,667	72.76%	265,199	77.06%	227,320	63.39%
Current Liabilities					-	
Creditor & Other Liabilities	204,363	50.98%	197,448	57.37%	217,981	60.79%
TOTAL EQUITY & LIABILITIES	400,872	100.00%	344,142	100.00%	358,585	100.00%

Implementation, Monitoring Plan and Reporting

- Monitoring of Outcomes, Physical and Financial Progress
- Financial Analysis

13. IMPLEMENTATION, MONITORING PLAN AND REPORTING



13.1. MONITORING OF OUTCOMES, PHYSICAL AND FINANCIAL PROGRESS

13.1.1. PHYSICAL PROGRESS

STG Projects and Program - Profile

1. New Grid Stations

Sr.No	Proposed Grid Station	Type	Transformer Capacity	Proposed FY	Date of Completion
1	Piran Ghaib	New	2*40	2025-26	Dec-26
2	Chowk Marlay	New	2*40	2025-26	Dec-27
3	D.G Khan-III	New	2*40	2025-26	Dec-26
4	Shah Jamal	New	2*40	2025-26	Dec-26
5	Arifwala-II	New	2*40	2025-26	Dec-26
6	Khanewal-II	New	2*40	2026-27	Dec-26
7	RYK-III	New	2*40	2026-27	Dec-26
8	Layyah-II	New	2*40	2026-27	Dec-26
9	Zahir Pir	New	2*40	2026-27	Dec-26
10	157/9-L Chowk	New	1*40	2026-27	Dec-27
11	Gaggo Mandi	New	2*40	2027-28	Dec-28
12	Rawan Road	New	2*40	2027-28	Jun-29
13	Cholistan-I	New	2*40	2027-28	Dec-26
14	Cholistan-II	New	2*40	2027-28	Dec-26
15	Cholistan-III	New	2*40	2027-28	Dec-26
16	Head Islam	New	2*40	2027-28	Dec-26
17	Dhanot	New	2*40	2028-29	Mar-30

18	Machiwal	New	2*40	2028-29	Apr-30
19	Jalal Kot	New	2*40	2029-30	May-30
20	Qaim Pur	New	2*40	2029-30	May-30

2. Augmentation

Sr.No	Grid Station	Type	Transformer Capacity	Proposed Fiscal Year	Date of Completion
1	Harrapa	AUG	40	2025-26	Apr-26
2	Shujabad	AUG	40	2027-28	May-28

3. 132KV Capacitors

Sr.No	Grid Station	MVAR Proposed	Proposed Fiscal Year	Date of Completion
1	Sahuka	36 MVAR	2026-27	Dec-27

4. Transmission Lines

New Transmission Lines						
Sr. No	**Name of Transmission Line**	**Length**	**Type**	**Conductor**	**Proposed Fiscal Year**	**Date of Completion**
1	500/220KV Yousaf Wala - 132KV Arifwala T/L	51	Re-conductoring	Rail	2025-26	Mar-28
2	500/220KV Yousaf Wala- 132KV kameer - 132KV Arifwala T/L	51	Re-conductoring	Rail	2025-26	Apr-28
3	500/220KV Yousaf Wala - 132KV Sahiwal Old T/L	13	Re-conductoring	Rail	2025-26	Dec-27
4	220/132KV Multan New - Qasim Pur T/L	18	Re-conductoring	HTLS	2025-26	Dec-26
5	132KV Ludden - 132KV Hasil Pur	27	2nd Circuit Stringing	Rail	2025-26	Dec-26
6	220KV Vehari - 132KV Ludden	33	2nd Circuit Stringing	Lynx	2025-26	Mar-27
7	220KV Bahawalpur - 132KV Yazman	27	2nd Circuit Stringing	Rail	2025-26	Already DC line
8	132KV PakPattan - 132KV Noor Pur	26	2nd Circuit Stringing	Lynx	2025-26	Dec-26
9	500/220KV Yousaf Wala - 132KV Sahiwal New DC T/L	5	Re-conductoring	Rail	2025-26	Mar-27
10	132KV Vehari Road - 132KV Qasim Pur	3	Re-conductoring	HTLS	2025-26	May-26

11	500/220KV Multan-N to 132KVKhanewal Road to 132KV PGHS DC	4	Re-conductoring	HTLS	2025-26	May-27
12	F/F 132KV Piran Gaib (I/O 220/132KV Multan New - 132KV Vehari Road)	2	DC	Rail	2025-26	Dec-26
13	F/F 132KV Chowk Maraly (I/O 132KV Qabula - 132KV Bahawal Nagar)	0.5	DC	Lynx	2025-26	Dec-27
14	F/F 132KV D.G Khan-III (I/O 132KV Shah Sadar Din - 500KV D.G Khan)	0.5	DC	Lynx	2025-26	Dec-26
15	F/F 132KV Shah Jamal (I/O 220KV Muzaffargarh - 132KV D.G Khan)	13	DC	Lynx	2025-26	Dec-26
16	F/F 132KV Arifwala-II (I/O 132KV Qabula - 132KV Arifwala)	0.5	DC	Lynx	2025-26	Dec-26
17	500KV D.G Khan New - MDC - D.G Khan-II - D.G Khan	26	Re-conductoring	Rail	2026-27	Apr-28
18	500KV D.G Khan New - CPC - D.G Khan	21	Re-conductoring	Rail	2026-27	Mar-28
19	132KV Arifwala - 132KV Hota New T/L	28	2nd Circuit Stringing	Rail	2026-27	Mar-29
20	132KV Arifwala-New - 132KV Arifwala T/Line	7	DC	Rail	2026-27	Dec-29
21	132KV Arifwala-New - 132KV Pakpattan T/Line	37	DC	Lynx	2026-27	Mar-30
22	I/O of 132KV Arifwala – Hota T/Line at Arifwala-New G/S	6.5	DC	Lynx	2026-27	Mar-29
23	F/F 132KV Zahir Pir (I/O 500KV Sardar Garh - 132KV Khan Pur)	6.5	DC	Lynx	2026-27	Dec-26
24	F/F 132KV 157/9-L Chak (I/O 132KV Shaikh Fazal - 132KV Chichawatni)	17.5	DC	Lynx	2026-27	Dec-27
25	F/F 132KV Khanewal-II (I/O 132KV Kabirwala - 132KV Khanewal)	2	DC	Lynx	2026-27	Dec-26
26	F/F 132KV RYK-III (I/O 132KV Qabula - 132KV Bahawal Nagar)	11	DC	Lynx	2026-27	Dec-26
27	F/F 132KV Layyah-II (I/O 132KV Layyah - 132KV Kotadu)	0.5	DC	Rail	2026-27	Dec-26
28	132KV Nagshah - 132KV MESCO T/L	26	SDT	Rail	2027-28	May-30
29	132KV Nagshah - 132KV Buch Villas T/L	30	SDT	Rail	2027-28	May-30
30	132KV Nagshah - 132KV Suraj Miani T/L	16	SDT	Rail	2027-28	Mar-30
31	132KV Nagshah - 132KV Jail Raod T/L	12	SDT	Rail	2027-28	Mar-30
32	Double I/O of 132KV Multan Industrial – Muzaffargarh-New T/Line at 132KV Nagshah G/S	2	DC	Rail	2027-28	Dec-29
33	F/F 132KV Cholistan-I (I/O 132KV Yazman - 132KV Cholistan-II)	20	DC	Rail	2027-28	Dec-27

34	F/F 132KV Cholistan-II (I/O 132KV Cholistan-I - 132KV Maroot)	15	DC	Rail	2027-28	Dec-27
35	F/F 132KV Cholistan-III (Radial with Maroot)	24	DC	Rail	2027-28	Dec-27
36	F/F 132KV Head Islam (I/O 132KV Ludden - 132KV Hasil Pur)	4	DC	Rail	2027-28	Dec-27
37	F/F 132KV Rawan Road (I/O 132KV PGHS - 132KV Maan Kot)	4	DC	Lynx	2027-28	Dec-27
38	F/F 132KV Gaggo Mandi (I/O 132KV Arifwala - 132KV Burewala)	1.5	DC	Lynx	2027-28	Dec-28
39	132KV A.P.East - RYK Sugar Mill -Feroza T/Line	69	Re-conductoring	Lynx	2028-29	May-29
40	132KV Feroza - Khan Pur T/Line	35	Re-conductoring	Lynx	2028-29	May-28
41	132KV Industrial Estate - Jail Road - MESCO T/line	17	Re-conductoring	HTLS	2028-29	May-27
42	132KV WAPDA Town - Bosan Road T/Line	6	Re-conductoring	HTLS	2028-29	May-27
43	132KV PGHS-Bosan Road	6	Re-conductoring	HTLS	2028-29	May-27
44	220/132KV Burewala New - 132KV SahukaT/L	35	SDT	Rail	2028-29	May-30
45	220/132KV Burewala New - 132KV Hota T/L DC	10	DC	Rail	2028-29	May-30
46	220/132KV Burewala New - 132KV Burewala T/L DC	10	DC	Rail	2028-29	May-30
47	F/F 132KV Dhanot (I/O 132KV Bahawalpur - 132KV Lodhran)	13.5	DC	Lynx	2028-29	Mar-30
48	F/F 132KV Machiwal (I/O 220/132KV Vehari - 132KV Burewala)	1	DC	Lynx	2028-29	May-30
49	F/F 132KV Jalal Kot (I/O 132KV BahawalNagar - 132KV Hota)	15	DC	Lynx	2029-30	Apr-30
50	F/F 132KV Qaim pur (I/O 132KV Hasil Pur - 132KV K.P Tamewali)	10	DC	Lynx	2029-30	Apr-30

Table 12.1 STG Profile

AMI Expansion – Profile

AMR /AMI Proposals							
Sr. No.	**Description**	**Unit**	**Quantities**				**Total**
			Year 2025-26	**Year 2026-27**	**Year 2027-28**	**Year 2028-29**	**Year 2029-30**	
1	AMI Expansion	Nos.	46,727 Nos.	52,214 Nos.	--	--	--	**98,941 Nos.**

No. of HT / LT Proposals								
Sr. No.	Description	Unit	Quantities					Total
			2025-26	2026-27	2027-28	2028-29	2029-30	
1	Number of HT Proposals	Nos.	108	112	57	54	41	**372**
2	Number of LT Proposals	Nos.	470	475	480	485	490	**2,400**

Table 12.2 AMR/AMI meters and HT/LT Proposals - Profile

13.1.2. FINANCIAL PROGRESS

Financial Analysis - ELR

Financial Analysis @ Discount Rate	21.14%	16.32%	19.32%
Benefit/ Cost Ratio (B/C Ratio)	2.212	2.71	2.374
Net Present Value of Benefits (Rs. In Million)	23,918	37,026	28,061
FIRR	65.45%		
Payback Period (Years)	6 years 9 months		

Financial Analysis - DOP

Financial Analysis @ Discount Rate	21.14%	16.32%	19.32%
Benefit/ Cost Ratio (B/C Ratio)	1.219	1.479	1.304
Net Present Value of Benefits (Rs. In Million)	1,500	3,670	2,169
FIRR	27.71%		
Payback Period (Years)	11 years 9 months		

Financial Analysis - STG

Financial Analysis @ Discount Rate	21.14%	15.95%	18.95%

Benefit/ Cost Ratio (B/C Ratio)	1.050	1.281	1.134
Net Present Value of Benefits (Rs. In Million)	1,172	7,352	3,286
FIRR	22.67%		
Payback Period (Years)	7 years 2 months		

Financial Analysis - AMI

Financial Analysis @ Discount Rate	**21.14%**	**16.32%**	**19.32%**
Benefit/ Cost Ratio (B/C Ratio)	1.364	1.565	1.444
Net Present Value of Benefits (Rs. In Million)	1,214	2,016	1,524
FIRR	36.47%		
Payback Period (Years)	4 years 1 months		

Financial Analysis - DIIP

Financial Analysis @ Discount Rate	**21.14%**	**15.95%**	**18.95%**
Benefit/ Cost Ratio (B/C Ratio)	1.343	1.671	1.462
Net Present Value of Benefits (Rs. In Million)	29,589	63,842	41,500
FIRR	31.22%		
Payback Period (Years)	5 years 9 months		

ENVIRONMENTAL & SOCIAL ASSESSMENT & MITIGATION PLAN

- Noise
- Waste water
- Air Pollution
- Waste Disposal
- Safety Control
- Fire Hazards

14. ENVIRONMENTAL & SOCIAL ASSESSMENT & MITIGATION PLANS

ENVIRONMENTAL AND SOCIAL ASSESSMENT AND MITIGATION PLANS

The following are some of the environmental and social impacts, along with their corresponding mitigation measures. However, the specific details of these impacts and mitigation strategies will be determined after conducting comprehensive environmental and social assessment(s).

Environmental impacts	Mitigating measures
Noise	1. The project proponent shall ensure compliance with the National Environmental Quality Standards (NEQS), specifically maintaining noise levels below 85 dB (A) for a duration of eight hours during operations. 2. The provision of silencers or mufflers for construction equipment that produces excessive noise is required. 3. Acoustic methods and a mitigation plan should be adopted to minimize noise impact. 4. Transformers must not be overloaded, and the power factor should be appropriately maintained. 5. Hammer-type percussive piling shall be conducted during daylight hours only. 6. The use of well-maintained trucks and machinery, with proper alignment and lubrication, must be ensured.
Waste Water/ Drainage	1. Proper installation of temporary drainage and erosion control measures, such as septic tanks and soak pits, shall be implemented prior to the commencement of work. Direct discharge of wastewater into water bodies is prohibited, and compliance with the NEQS must be ensured. 2. Construction materials and chemicals must be adequately covered to minimize loss and prevent spillage into water bodies. 3. Lubricants, fuels, and chemicals should be stored in self-contained, dedicated enclosures to prevent spillage or leakage into water bodies
Air Pollution	1. Spraying of exposed areas with water or employing sprinkling methods shall be conducted. 2. Stockpiled soil and sand must be lightly moistened prior to loading, especially under windy conditions. 3. Trucks and machinery should be well maintained, ensuring proper alignment and lubrication. 4. Vehicles transporting soil, sand, and construction materials must be adequately covered. 5. Transportation through densely populated areas should be minimized. 6. Upon completion of the project, all debris and waste must be removed and not incinerated. Landscaping, tree planting, and restoration of road verges should be undertaken following completion.

Waste Disposal	1. Develop a comprehensive waste management plan to identify appropriate locations for the storage and reuse of transformers, recycling of breaker oils, and the disposal of soils contaminated with residual transformer oil, as well as scrap metal. The "Cradle to Grave" approach may be implemented. 2. Designate specific disposal sites within the contract and establish corresponding disposal rates. 3. Conduct regular monitoring of transformer seals and transformer oil. A gravel base should be maintained in the switchyard, and transformers may be repaired on-site or sent to a workshop as needed. 4. Ensure the proper operation and maintenance (O&M) of transformers
Safety Control Measures	5. Provide comprehensive safety induction training and capacity building for all staff (GSC/GSO), including contractor labor, on health and safety protocols. This should include the use of adequate warning signs and the Permit to Work (PTW) system for high-tension (HT) lines of 11kV and above. Ensure strict adherence to the use of personal protective equipment (PPE) such as hard hats, steel-toed shoes, rubber gloves, ladder gloves, safety belts, safety ladders, and ear protection (ear plugs/muffs). 6. To mitigate the risk of spreading vector-borne and communicable diseases such as AIDS, Hepatitis, Tuberculosis, Smallpox, and Influenza from labor camps to the local community, contractors must ensure medical screening and vaccination of workers prior to the commencement of the project. 7. Prevent unauthorized access or illegal encroachments by irrelevant personnel, particularly children, beggars, and other non-authorized individuals. 8. Transportation routes in the vicinity of sensitive areas such as schools, hospitals, and colleges should be avoided to minimize disturbances. 9. Address and respond promptly to grievances from the local community regarding construction nuisances, damage to agricultural land, access to agricultural land, hospitals, schools near the right-of-way (ROW), as well as concerns about air/noise pollution and high-speed transportation activities
Fire Hazard	1. Continuous operation of transformers over extended periods should be avoided to prevent seal degradation or melting. Ensure proper O&M of transformers to prevent oil spillage or leakage. Transformers must not be overloaded, and the power factor should be consistently maintained. 2. Prevent short-circuiting of the system. 3. Equip each sub-project site with appropriate firefighting equipment, including CO2 extinguishers, foam-type extinguishers, and sand containers. Additionally, provide a landline or power line carrier telephone to enable quick contact with the nearest fire brigade or Rescue 1122 in case of emergencies.
Public Complaints	1. Public complaints related to delays in civil works, ROW issues, and delayed compensation for damages to seasonal crops, tree removal, and similar concerns should be addressed. A Grievance Redressal Committee should be established to resolve these issues at project sites.