

F/A TRF-162



حیدرآباد الیکٹرک سپلائی کمپنی

HYDERABAD ELECTRIC SUPPLY COMPANY

OFFICE OF THE CHIEF EXECUTIVE OFFICER

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No: CEO/FD/HESCO/CPC/15700-702		Dated: 10 /05/2010

The Registrar,
National Electric Power Regulatory Authority,
2nd Floor, OPF Building,
Sector G-5/2
Islamabad.

Registrar
Dy. No. 2924
Dated: 13.05.2010

Sub: TARIFF PETITION FY 2010-11 -HYDERABAD ELECTRIC SUPPLY COMPANY LIMITED (LICENSE # 05/DL/2002)

Tariff Petition for FY 2010 – 11 in accordance with rule 3 (1) of NEPRA-Tariff Standards & Procedures Rules 1998 is submitted for determination by the Authority.

Following documents for determination of tariff are attached.

- Tariff Petition for the FY 2010 – 11.
- Summary of evidences
- Affidavit on judicial stamp paper
- A cheque # 6735423 dated 10-05-2010, for Rs 1,401,240 being Authority fee.

Therefore, Tariff Petition for the FY 2010 – 11 may be admitted for determination.

Kindly acknowledge and issue official receipt.

Encl: As above.

Original Cheque is sent
herewith fee n.g. W.

Dis (F) cc: Chairman (P) (SHAIKH NAZEER AHMED)
M (T) CHIEF EXECUTIVE OFFICER

C.C. to:

- C.F.O PEPCO, Wapda House Lahore.
- General Manager Finance PEPCO, Wapda House Lahore.

AD (MR) to process

TARIFF PETITION

1. PETITION SUMMARY

1.1 Details of the Petitioner:

1.1.1 Name and Address:

Hyderabad Electric Supply Company Limited (hereinafter referred to as HESCO)
WAPDA OFFICES COMPLEX, HUSSAINABAD HYDERABAD.

1.1.2 Representatives of HESCO:

Mr. Shaikh Nazeer Ahmed	Chief Executive Officer.
Mr. Deep Chand.	Chief Engineer/Technical Director.
Mr. Muhammad Moosa Mir Bhar.	Chief Engineer/Operation Director.
Mr. Khursheed Ahmed Shah.	Chief Engineer/Customer Services Director.
Mr. Muhammad Aftab Alam Khan.	Finance Director.

1.1.3 Grounds for Petition:

Under the 1997 NEPRA Act, NEPRA is responsible for determining tariffs and other terms and conditions for the supply of electricity by the generation, transmission and distribution companies and to recommend these to the Federal Government, subject to the need to comply with guidelines, not inconsistent with the provisions of the NEPRA Act, as laid down by the Federal Government. NEPRA is responsible for determining the process and procedures for reviewing tariffs and recommending tariff adjustments.

Amendments of section 31, Act of 1997, in the Regulation Generation, Transmission and Distribution of Electric Power Acts 1997(XI of 1997), in section 31, "Provided that the Authority shall, on quarterly basis, determine overall electricity tariff and intimate the same to the federal Govt for notification in the official gazette".

HYDERABAD ELECTRIC SUPPLY COMPANY LIMITED (HESCO) is a licensed public limited company providing utility service to distribute and supply electricity to the area of Hyderabad Electric Supply Company Limited, as set out in HESCO's license, granted by the Government of Pakistan under the NEPRA Act. In accordance with the requirements of the Company, HESCO is hereby submitting a petition to revise tariffs in its license area for the fiscal year 2010-11.

This petition is filed in accordance with the NEPRA Tariff Standards and Procedure Rules 1998 Part II Section 3.

1.2 Key Aims and Features of the Petition:

1.2.1 Aims of the Petition:

This tariff petition sets out the tariff methodology, for the required revenues and timetable for rebalancing tariffs in HESCO's distribution area for the FY 2010-11. The aim of this petition is to obtain approval for the implementation of cost reflective

determines revenues for the period of the tariff control period. Revisions may be made to revenues within that period if actual inflation is different from forecast. The profits or losses that arise from changes in efficiency or demand would, however, be retained by HESCO for the duration of the revenue control period.

At the end of the period, the formula would be reapplied to determine the distribution margin for each year in the subsequent period of control. Operating expenditures will be subject to an efficiency requirement so that HESCO will be required to ensure that its increase in costs is below the rate of inflation by an efficiency factor (X) to be determined by NEPRA.

Under the proposed tariff-setting methodology, the average retail tariff would consist of (i) the Power Purchase Price (PPP) adjusted on T & D Losses and (ii) the average distribution margin, which would be set on the formula-based methodology of NEPRA.

2.1.2 Power Purchase Price (PPP):

Hyderabad Electric Supply Company Limited pay a Power Purchase Price (Rs./kWh) for the electricity which it procures from CPPA-NTDC or other sources, that include the generation and transmission charges (regulated by NEPRA) and distribution by HESCO. This Power Purchase Price, adjusted for HESCO's Transmission and distribution losses, would then be simply added to HESCO's overall distribution margin to workout the retail tariffs. Thus, the cost of the purchased electricity would be "passed through" to consumers through the retail tariff, without affecting HESCO's distribution margin.

While passing through the PPP, it is recognized that distribution companies experience some level of T & D losses, defined as the percentage of the difference between the units received by the Company and the units invoiced to the consumers. The PPP should thus be adjusted such that HESCO would be compensated for some losses, without hindering the incentive to eliminate the total losses.

$$\text{Adjusted PPP} = \frac{\text{PPP}}{1 - L}$$

Where:

- PPP is the actual cost of electricity supply per unit charged by CPPA or any other source at any given time;
- L is the Transmission and distribution losses defined as a percentage of purchased units, in accordance with a schedule established for the control period.

The schedule of T&D losses 33.49% is set for F.Y. 2010-11 from the current target level 34.50% as revised by HESCO for FY 2009-10. However, NEPRA has determined 28% losses for the FY 2009-10. HESCO filed review request in 2nd Quarter and subsequently in 3rd quarter tariff petition that the target is not realistic.

2.2 Distribution Margin Formula:

The average Distribution Margin (DM) for the F.Y 2010-11 is based on the following formula, keeping in view of the actual results up to 3rd quarter and provision for the 4th quarter, where ever required.

$$\text{Avg. D. Margin} = \frac{\text{O\&M} + \text{Provision for Bad Debts} + \text{Depreciation} + \text{RORB (Other income)}}{\text{Total Unit Sales}}$$

Where:

O&M is the expected operating and maintenance cost per kWh, which includes the estimated cost of technical service and repair, necessary materials for operation, salary, mandatory social insurance payments, administration, management and other operating costs related to HESCO's distribution and supply business. The O&M component for the F.Y. 2010-11 is estimated on the basis of inflation adjustments to HESCO's operating expenses from the latest available data for the 09 months actual and 03-months projected for the F.Y. 2009-10.

2.2.1 Provision for Bad Debts:

The socio-economic condition of the consumers of HESCO's area of service is very poor. The capability of payment utility bills is weak. Therefore 3.0% of the sales revenue is provided for the bad debts.

2.2.2 Depreciation:

The depreciation of the Company is provided in accordance with the accounting policy.

2.2.3 Average Rate of Return (ROR):

The return on investment on the (cost of capital) will be calculated as follows:

$$\text{ROR} = \text{Profit Rate Base} \times \text{Rate of Return}$$

Where:

Profit Rate Base is defined for the F.Y. 2010-11 as the sum of (i) Gross Fixed Assets in Operation beginning of the year (ii) The capital expenditures for the year (New Investments), in accordance with the proposed investment programme (iii.) Less Cumulative Depreciation & Differed Credit (iv) Plus Closing Capital Work in Progress (v) Less: Differed Credit.

Annual Rate of Return is a pre-tax return on the Profit Rate Base. Because the investment is typically financed with a combination of debt equity, the appropriate rate of return would be a market-based weighed average of the cost of capital.

2.2.4 Total Unit Sales

a schedule of the total unit sales (in kWh) of HESCO across all customer categories is forecast for the F.Y. 2010-11. This forecast is used to determine the average distribution margin per unit (Rs/kWh) needed to cover the revenue requirement expected for the year.

2.3 Consumer-end Tariff-Setting:

During the projected year, Company's tariff is revised so that total margin is recovered from customers, as per following format.

$$\text{Consumer-end Tariff} = \text{Adjusted PPP} + \text{Distribution Margin} + \text{Prior Period Adjustment (if any)}$$

The PPP is the power purchase price. It reflects the amount paid by HESCO to CPPA and may also be termed the CPPA transfer price. Since it is difficult to estimate future PPP with precision, we have assumed PPP according to latest available average per unit. In the absence of customer load data, we cannot calculate marginal generation costs; therefore, PPP cost has been averaged across all units sold by HESCO.

2.4 Revision of Consumer End Tariffs:

Based on the methodology discussed above, possible quarterly adjustments to consumer end tariffs within a re-base or revenue control period are strictly limited to the following items:

2.5 Scheduled Change in Tariff:

The retail tariff may be revised monthly / quarterly, as the case may be, to ensure required revenue due to changes in the basic assumptions formulating tariff design.

2.6 Changes in PPP:

At any point in time, any changes in the Power Purchase Price (e.g. due to fuel cost adjustments) would result in a corresponding change in retail tariffs (i.e., the change would be passed through immediately) on monthly basis.

2.7 Inflation Adjustments:

The O&M component of the distribution margin is adjusted for expected inflation of control period.

2.8 Extra ordinary Adjustments:

Any justified losses and/or additional expenses incurred by HESCO due to changes in legislation month tariff adjustment determined but not notified, legal acts, technical regulation, or other special events that are beyond its control would be reimbursed by adjusting the Tariff, subject to NEPRA's approval:

3. CALCULATING HESCO'S REVENUE REQUIREMENT:

3.1 Trends in Customers Numbers and Consumptions:

It is observed that domestic and life line consumers dominated the consumers number in HESCO as per Annex-I. The subsidized categories generally outpaced others, which has been a major pressure on the tariffs.

The increase in domestic consumption relative to industrial consumption i.e. sales mix is poor indicative for HESCO's revenues and profitability. Meanwhile, industrial customers (the most profitable for HESCO, as they are more economical to serve) are reducing their consumption (by installing captive generation) resulting in lower revenues for the Company.

3.2 Calculating HESCO's Revenue Requirement:

Based on the tariff methodology described in the previous section, the average tariff for fiscal years 2010-11 has been calculated using the following parameters:

3.3.1 Total Unit Sales:

Unit Sales for FY 2010-11 is projected keeping in view the availability of electricity in the system and reduction in T&D Losses by 1.01% from the current year target losses i.e. 34.5%. The quarterly sale volume is projected considering the seasonal effect keeping the overall target of 33.49 %.

Description	FY 2010-11						
	Unit	1 st Qtr.	2 nd Qtr.	3 rd Qtr.	4 th Qtr.	Total	Growth Rate %age
Units Purchase	Mkwh	2,678.71	2,100.98	1,600.25	2,355.93	8,735.87	5.43
Units Sold	Mkwh	1,640.10	1,525.82	1,120.43	1,523.76	5,810.11	7.06
T&D Losses	%age	38.77	27.38	29.98	35.32	33.49	(1.01)

The detail of category wise projected sale volume is as per Table I

3.3.2 Projected Transmission and Distribution Losses:

The T&D Losses for the FY 2010-11 are projected 33.49% i.e. reduction of 1.01% against the current year target losses 34.50%. The month wise losses are projected as per Annex-II

3.3.3 Power Purchase Price (PPP):

The PPP for the FY 2010-11 is based on the actual power purchase price up to the 3rd quarter of FY 2009-10 i.e Rs. 6.96/kwh. Any change in the PPP will be adjusted on monthly basis its energy charges components and capacity and system charges will be adjusted on quarterly basis that is treated as pass through to the ultimate consumers.

3.3.4 Inflation:

The CPI is expected to increase annually by the historical average inflation rate of 15%.

3.3.5 O&M COST:

Based on inflation adjustments to HESCO'S operating expenses from the latest available actual data up to 3rd quarter of FY-2009-10 and the impact of induction of new employees and expected increase in salaries in the FY 2010-11, the O & M per unit has been projected at around Rs.1.26/Kwh in the following major heads.

- **Pay and Allowances:**

The pay and allowances includes salaries of regular and contract employees, wages of daily wages, which includes all benefits such as house rent and acquisitions allowances, medical allowances and facilities, free electricity and pension contribution. Considering the impact of increase in salaries by the Govt in the coming finance bill, annual increment etc.

- **Repair and Maintenance:**

The repair and maintenance expenditures pertain to the maintenance of 132 & 66 grid stations and allied transmission lines, 11 kv distribution lines and maintenance of transformers. The distribution system of HESCO is spread in far flung areas which require regular and constant maintenance. Due to over loaded system the maintenance cost is high.

- **Travelling Allowance:**

The travelling expenses mostly related with the operation staff. The distribution system of HESCO is deteriorated, which requires regular maintenance resulting increase in travelling allowance.

- **Transportation Charges :**

The transportation charges include repair and maintenance of vehicles, POI, and annual renewal of registration fees. The utility vehicles are very old they have almost utilized their age. Due to old and deteriorated distribution net work of HESCO which is spread in scattered areas and highly overloaded ,expenditures in this head are increasing day by day.

- **Other Miscellaneous Expenditures:**

Other miscellaneous expenditures, includes repair of furniture and office equipments, stationery and Photostat charges, postage and telecommunications, Management fee to PEPCO, Authority over head to WAPDA, NEPRA licence and petitions fee, insurance charges etc, which are important for the operation. Major expenditures under this head re related to fee an overhead and thus no control on it .Whereas, other expenditures have been increased due to future inflation.

3.3.6 New Investments:

New investments will be made as per the investment plan duly approved by the management of the Company as per Annex-III.

3.3.7 Depreciation:

The depreciation is charged as per accounting policy of the Company.

3.3.8 Profit Base:

The Profit Rate Base is calculated as (i) the sum of the existing assets Base (less accumulated depreciation), plus (ii) New investment during the projected period and (iii) Work in Progress minus (-) deferred credit.

CATEGORY WISE SALES VOLUME PROJECTED

Table-1

		GWH		
Particulars		Actual	Projected	
		FY 2008-09	FY 2009-10	FY 2010-11
1	Residential - A1			
	For load upto 5 Kw			
	Upto - 50 Units			
	For consumption exceeding 50 Units	45.19	47.83	51.20
	1 - 100 Units per Month			
	101 - 300 Units per Month	928.60	982.71	1052.07
	301 - 700 Units per Month	824.88	872.95	934.56
	Above 700 Units	356.01	376.95	403.34
	For load exceeding 5 Kw on Non-TOU meter	412.66	436.71	467.53
	E-1 (1)			
	Time of Use (TOU) Peak	0.04	0.04	0.04
	Time of Use (TOU) Off Peak	0.11	0.11	0.12
		0.51	0.54	0.60
2	Commercial - A2			
	For load upto 5 Kw			
	Commercial - A2			
	E-1 (2)	246.60	260.97	279.39
	For load exceeding 5 Kw	0.27	0.28	0.30
	Regular - Non TOU meter			
	Time of Use (TOU) Peak	79.42	84.05	89.98
	Time of Use (TOU) Off Peak	1.84	1.95	2.09
		5.78	6.11	6.55
3	Industrial			
	B-1 load upto 5 Kw			
	B-2 above 5 Kw Non-TOU	397.41	420.57	450.25
	B-2 Time of Use (TOU) Peak	327.93	347.04	371.53
	B-2 Time of Use (TOU) Off Peak	3.76	3.98	4.26
	B-3 Time of Use (TOU) Peak	22.10	23.39	25.04
	B-3 Time of Use (TOU) Off Peak	35.64	37.71	40.37
	B-4 Time of Use (TOU) Peak	167.63	177.40	189.92
	B-4 Time of Use (TOU) Off Peak	30.23	31.99	34.25
	TMP E-2 (1)	203.98	215.86	231.10
		0.15	0.17	0.18
4	Single Point Supply for Further Distribution			
	C-1(a) Supply at 400 Volts upto 5 KW	8.97	9.49	10.16
	C-1(b) Supply at 400 Volts upto 5 KW and upto 500 Kw	115.08	121.78	130.38
	Time of Use (TOU) Peak		0.00	0.00
	Time of Use (TOU) Off Peak		0.00	0.00
	C-2 (a) Supply at 11 KV, 33KV Non-TOU above 5 Kw and upto 500 Kw	85.54	90.52	96.91
	Time of Use (TOU) Peak at 11, 33, above 5 Kw and upto 500 Kw	0.26	0.28	0.30
	Time of Use (TOU) Off Peak	1.13	1.20	1.28
	C-3 Supply at 66 KV and above		0.00	0.00
	Time of Use (TOU) Peak		0.00	0.00
	Time of Use (TOU) Off Peak		0.00	0.00
5	Agriculture Tube well - Tariff D			
	D-1 (a) Scarp load upto 5 Kw	397.32	420.47	450.15
	D-1 (b) Time of Use (TOU) Peak	83.32	88.64	94.90
	D-1 (b) Time of Use (TOU) Off Peak	0.40	0.42	0.45
	D-2 (1)	244.27	257.07	275.21
	D-2 (2) (TOU) Peak		0.21	0.23
	D-2 (2) (TOU) Off Peak		1.22	1.31
6	Public Lighting - Tariff - G	94.99	100.53	107.62
7	Residential Colonies - Tariff - H	5.77	6.11	6.54
	Grand Total	5,128.24	5,427.08	5,810.10

3.3.9 Average Rate of Return (ROR):

Average ROR is kept at 17% as cost of capital on relents of the World Bank & Asian Development Bank Loans and equity that is treated as cost of capital.

3.3.10 Distribution Margin:

The sum of the O&M, Depreciation, and provision for bad debt and ROR less Amortization and Other Income result in HESCO's distribution revenue is divided by the total units sold yields the average distribution margin Rs.2.09/Kwh worked out as under:

Sr. No.	Description	Amount (Rs. in M)
1	Return on Net Fixed Assets in Operation (RRB * Profit Rate Base) @17%	4,137
2	O&M (Million Rs.)	7304
3	Depreciation	1,584
4	Provision for bad debts	2,188
5	Other Income	(3,084)
6	Distribution Margin Cost	12,129
7	Sales Volume (Gwh)	5,810
8	Average Distribution Margin (6/7) Rs./Kwh	2.09

3.4 Tariff F.Y. 2010-11:

The Tariff based on the methodology discussed above comes to Rs. 12.55/Kwh detail working as per Table-2.

3.5 Prior Period Adjustment:

The prior period adjustment will be claimed subsequently after determination of tariff for 3rd and 4th quarter's availability of actual data considering the following factors:

- i. T&D Losses.
- ii. Capacity and Use of System Charges.
- iii. Sales Mix Variance.
- iv. DM for change in Sales Volume (estimated vs. actual).

3.6 Net Average Tariff FY 2010-11:

Therefore, the average tariff rate for the FY 2010-11 will be Rs. 12.55/Kwh

3.7 Income Tax:

Income Tax on the profit @ 35% has been provided for the F.Y. 2010-11.

3.8 Estimated Sales Revenue for the F.Y 2010-11:

Estimated Sales Revenue on the basis of proposed Tariff for the F.Y. 2010-11 is as under. Detail as per Annex-IV.

Power Purchase Cost (8,736 Gwh X Rs.6.96/kwh)	Rs.60, 802 (M)
Distribution Margin (5,810 Gwh X Rs.2.09/kwh)	Rs.12, 129 (M)
Total:	Rs.72, 931 (M)

3.9 Comparison of Current Tariff and Proposed Tariff F.Y. 2010-11:

The Category wise comparison of determined Tariff and Proposed Tariff F.Y. 2010-11 is as Annex-V

3.10 Financial Statement:

The Financial Projection of the Company on the basis of proposed Tariff is as under:

Particulars	Units	Actual		Provisional	Projected
		2007-08	2008-09	2009-10	2010-11
Average Sale Rate	Rs/KWh	7.26	10.70	11.38	12.55
Sales	Rs. in Mln	38,224	56,424	63,716	74,961
Cost of sales	Rs. in Mln	37,187	45,425	57,276	60,802
Operating Expenses	Rs. in Mln	7,219	8,651	9,545	11,172
Other Income	Rs. in Mln	962	956	1,004	1,054
Financial Charges	Rs. in Mln	1,992	1,145	1,174	1,194
Tax for the year	Rs. in Mln	44	-	-	1,028
Profit/(Loss) for the year	Rs. in Mln	(7,169)	2,159	(3,275)	1,817

DETAILED WORKINGS ARE ATTACHED AS:

- Profit & Loss Account Annex- VI
- Balance Sheet Annex- VII
- Cases Flow Statement Annex- VIII
- Quantitative Data Annex- IX
- Notes

Table-2

HESCO'S REVENUE REQUIREMENT

Sr. No.	Description	Unit	NEPRA FY 2010	Projected	
				FY 2010	FY 2011
iii	Total Units Purchased	MKwh	8676.00	8,582.65	8,735.86
i	Total Unit Sales	MKwh	6247.00	5,427.08	5,810.10
ii	Losses	%age	28.00	34.50	33.49
iv.	PPP (Un-adjusted)	Rs./Kwh	6.78	6.91	6.96
v	PPP (adjusted)	Rs./Kwh	9.42	10.55	10.46
	Regulatory Assets Base (RAB)				
	Gross Fixed Assets in Operation				
1	Opening Fixed Asset in operation	Mln.Rs.	3,5156	35,155.63	39,009.96
2	Transferred during the year	Mln.Rs.	3,429	3,854.33	5,258.54
3	Closing Fixed Assets in operation (1+2)	Mln.Rs.	38,585	39,009.96	44,268.50
4	Less : Cumulative Depreciation	Mln.Rs.	16,335	16,507.44	18,070.98
5	Net Fixed Assets in Operation (3-4)	Mln.Rs.	22,250	22,508.53	26,197.52
6	Closing Capital Work in Progress	Mln.Rs.	7,272	5,781.50	7,887.80
7	Total Assets (5+6)	Mln.Rs.	29,522	28,290.03	34,085.32
8	Deferred Credit	Mln.Rs.	8,270	8,635.43	9,748.92
9	Regulatory Rate Base (7-8)	Mln.Rs.	21,252	19,654.60	24,336.40
10	<u>Average ROR</u>	Mln.Rs.	19,404	18,605.69	22,002.49
	Distribution Revenue				
11	Return on Net Fixed Assets in Operation (RRB * Profit Rate Base) @17%	Mln.Rs.	2,983	3,146.22	4,137.19
12	O&M (Million Rs.)	Mln.Rs.	5,793	5,990.23	7,303.91
13	Depreciation	Mln.Rs.	1,225	1,392.39	1,584.32
14	Provision for bad debts	Mln.Rs.	1,308	2,162.39	2,187.93
15	Other Income	Mln.Rs.	(2,489)	(2,937.20)	(3,084.01)
16	Distribution Margin Cost	Mln.Rs.	8,820	9,754.04	12,129.35
17	PPP (Adjusted)	Rs./Kwh	9.42	10.56	10.46
18	Distribution Margin (16/1)	Rs./Kwh	1.42	1.80	2.09
19	Prior Year adjustment	Rs./Kwh	0.54	0.54	-
19	Average Nominal Tariff	Rs./Kwh	11.39	12.35	12.55
20	Distribution Margin %age of Av: sale rate	%age	12.47	14.55	16.63

4. TARIFF DESIGN / ELIMINATION OF CROSS-SUBSIDIES:

As indicated in the preceding paragraphs, industrial customers that are paying in excess of their cost of service are effectively subsidizing domestic customers, thus encouraging such customers to bypass distribution network through the installation of captive generation. Many domestic customers can not afford what would amount to a doubling of tariffs. We therefore propose the consumer category wise tariff considering the following:

- (a) HESCO is design the category wise tariff in such a way that life line consumers be kept at minimum for reducing to burden of higher tariff on poor consumers as per policy of Govt.
- (b) The cross subsidy will be reduced over a period of proportionately for improving the efficiency of the Company.

5. PRAY:

- **Consumer End Tariff:**

It is prayed that the average tariff rate for the FY 2010-11 Rs.12.55/Kwh category wise details as per Annex-IV may be allowed w.e.f 1st July 2010.

Annex-I**DEMAND ANALYSIS****DEMAND FORECAST-HYDERABAD ELECTRIC SUPPLY COMPANY LIMITED**

(Million KWII)

	Particulars	No. of Consumers	Actual	Projected	
		FY 2008-09	FY 2008-09	FY 2009-10	FY 2010-11
1	Residential - A1				
	For load upto 5 Kw				
	Upto - 50 Units	365,931	45.19	47.83	51.20
	For consumption exceeding 50 Units	208,295			
	1 - 100 Units per Month	440,651	928.60	982.71	1052.07
	101 - 300 Units per Month	132,098	824.88	872.95	934.56
	301 - 700 Units per Month	47,740	356.01	376.95	403.34
	Above 700 Units		412.66	436.71	467.53
	For load exceeding 5 Kw on Non-TOU meter				
	E-1 (1)	9	0.04	0.04	0.04
	Time of Use (TOU) Peak	34	0.11	0.11	0.12
	Time of Use (TOU) Off Peak		0.51	0.54	0.60
2	Commercial - A2				
	For load upto 5 Kw				
	Commercial - A2	239,541	246.60	260.97	279.39
	E-1 (2)	308	0.27	0.28	0.30
	For load exceeding 5 Kw				
	Regular - Non TOU meter	568	79.42	84.05	89.98
	Time of Use (TOU) Peak	48	1.84	1.95	2.09
	Time of Use (TOU) Off Peak		5.78	6.11	6.55
3	Industrial				
	B-1 load upto 5 Kw	18,329	397.41	420.57	450.25
	B-2 above 5 Kw Non-TOU		327.93	347.04	371.53
	B-2 Time of Use (TOU) Peak	3,127	3.76	3.98	4.26
	B-2 Time of Use (TOU) Off Peak	256	22.10	23.39	25.01
	B-3 Time of Use (TOU) Peak	76	35.64	37.71	40.37
	B-3 Time of Use (TOU) Off Peak	129	167.63	177.40	189.92
	B-4 Time of Use (TOU) Peak	1	30.23	31.99	34.25
	B-4 Time of Use (TOU) Off Peak	7	203.98	215.86	231.10
	TMP E-2 (1)	38	0.15	0.17	0.18
4	Single Point Supply for Further Distribution				
	C-1(a) Supply at 400 Volts upto 5 KW	275	8.97	9.49	10.16
	C-1(b) Supply at 400 Volts upto 5 KW and upto 500 Kw	439	115.08	121.78	130.38
	Time of Use (TOU) Peak			0.00	0.00
	Time of Use (TOU) Off Peak			0.00	0.00
	C-2 (a) Supply at 11 KV, 33KV Non-TOU above 5 Kw and upto 500 Kw	41	85.54	90.52	96.91
	Time of Use (TOU) Peak at 11, 33, above 5 Kw and upto 500 Kw		0.26	0.28	0.30
	Time of Use (TOU) Off Peak		1.13	1.20	1.28
	C-3 Supply at 66 KV and above			0.00	0.00
	Time of Use (TOU) Peak			0.00	0.00
	Time of Use (TOU) Off Peak			0.00	0.00
5	Agriculture Tube well - Tariff D				
	D-1 (a) Scarp load upto 5 Kw	7,948	397.32	420.47	450.15
	D-1 (b) Time of Use (TOU) Peak	8,807	83.32	88.64	94.90
	D-1 (b) Time of Use (TOU) Off Peak		0.40	0.42	0.45
	D-2 (1)	8,104	244.27	257.07	275.21
	D-2 (2) (TOU) Peak			0.21	0.23
	D-2 (2) (TOU) Off Peak			1.22	1.31
6	Public Lighting - Tariff - G	824	94.99	100.53	107.62
7	Residential Colonies - Tariff - H	105	5.77	6.11	6.54
	Grand Total	1,483,724	5,128.24	5,427.08	5,810.10

Annex- iii

INVESTMENT PROGRAM

The investment programme of the Company in the 6th STG, ELR and DOP.

Table -3

(Rs. In Million)

Project	Actual		Projected	
Category	2007-08	2008-09	2009-10	2010-11
6 th STG	1,189	1,104	1,338	2,977
ELR	166	139	1,571	2,317
DOP	202	439	275	428
Capacitors , Energy Efficiency & TA	-	-	336	176
Total:	1,557	1,682	3,520	5,898

Table -3 (A) PSDP

((Rs. In Million)

Project	Actual		Projected	Projected
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
6 th STG	878	891	605	1,589
ELR	166	139	277	328
DOP	202	439	275	428
Capacitors	-	-	260	-
Total:	1,246	1,469	1,417	2,345

Table -3 (B) WORLD BANK

(Rs. In Million)

Project	FY 2008-09	FY 2009-10	FY 2010-11
6 th STG	213	563	720
ELR	--	940	1,002
Energy Efficiency & TA	--	37	86
Technical Assistant	--	39	90
Total:	213	1,579	1,898

Table -3 (C) ASIAN DEVELOPMENT BANK

(Rs. In Million)

Project	FY 2009-10	FY 2010-11
6 th STG	170	668
ELR	354	987
Total:	524	1,655

A) PSDP:**6th SECONDARY TRANSMISSION LINE AND GRID STATION (6th STG):**

The 6th STG development plan prepared by HESCO for system expansion and up gradation of 132/66 KV system. PC-I of this project has been approved by ECNEC. This plan is based on historical load data and load forecast. New lines, re-conducting of existing lines, grids extension and augmentation has been justified with load flow studies.

OBJECTIVES OF 6TH STG PROJECT:

The objectives of this project is to give relief to the existing overloaded system and to meet future expansion in HESCO area.

SCOPE OF WORK FOR FY-2010-11.

(Rs. in Million)

Voltage	Numbers	Cost for the FY 2010-11		
		Local	FEC	Total
New	3	951	637	1,589
Rehabilitation for 66 KV to 132 KV	26			
Extension	9			
Augmentation	6			
New 132 – KV T/L (Km)	27			
Rehabilitation 132 – KV T/L (Km)	586			
Total	13	951	637	1,589

ENERGY LOSS REDUCTION (ELR) PROJECT:**Objectives of Distribution Rehabilitation Project:**

The objectives of the Distribution Rehabilitation Project are as under:

- Energy loss Reduction
- Improvement in Quality of Supply
- Improvement in Reliability
- Improvement in Safety
- Release of Generation, Transmission and Distribution Capacity.
- Improve Customer Service and Reduce Complaints
- Reduce Cost of Operation and Maintenance
- Improve Life of Equipment

Scope of Work for FY-2010-11:

- Construction of 254 Km of New 11 KV lines.
- Re-Construction of 278 Km HT lines.
- Construction of 64 Km LT lines.
- Re-Construction of 57 Km LT lines.
- Addition of 258 Nos. Distribution Transformers of various capacities.

DISTRIBUTION OF POWER (DOP) PROJECT:**Objectives of DOP Project:**

The objectives of this Distribution of Power Expansion Project are to improve the:

- Reliability of the system
- Stability of power supply
- Overloaded system
- Quality and safety of the system

Scope of Work for FY-2010-11:

- Providing 11,813 new electricity connections to the prospective customers.
- Construction of 315 Km of 11 KV lines.
- Construction of 83 Km LT lines.
- Addition of 320 Nos. Distribution Transformers of various capacities.

B) THE WORLD BANK**6th SECONDARY TRANSMISSION LINE AND GRID STATION (6th STG)****Scope of Work for FY-2010-11:****ELR:**

- Installation of Aerial Bundle Cable 445 Km.
- Installation of Solid State Meters 90,780 Nos.
- Installation of Meters on 200 Kv & 100 Kv Transformer 1,134 Nos.

STG:

- New Grid Station 04 Nos.
- Conversion of Grid Station 04 Nos.
- Extension of Grid Station 01 Nos.
- Augmentation of Grid Station 04 Nos.
- New Transmission Line 117.24 Km.

Addition of 320 Nos. Distribution Transformers of various

ENERGY EFFICIENCY IMPROVEMENT PROJECT:

An amount of US \$ 2.2 M (Rs.147 M) has been allocated to HESCO being its shares from total amount of US \$ 15 M by World Bank for Energy Efficiency Improvement. PC 1 has been prepared and submitted to Ministry of Water and Power for approval from planning commission. The Project will improve the energy conservation and customer satisfaction.

TECHNICAL ASSISTANT:

The World Bank has agreed to finance an amount of US \$ 1.90 Million (Rs. 119.05 M) for capacity Building under the following major areas:

- i) Revamping of In-house Training Centers.
- ii) Capacity Buildings.
- iii) Specialize Studies.
- iv) Project Management/ Offices Automation.

C) ASIAN DEVELOPMENT BANK

Scope of Work for FY-2010-11:

ELR:

- Installation of Aerial Bundle Cable 606 Km.
- Installation of Solid State Meters 1,21,200 Nos.
- 11 Kv 450 KVAR Capacitor Bank 100 Sets.

STG:

- Extension of Grid Station 03 Nos.
- Augmentation of Grid Station 07 Nos.
- Rehabilitation of Grid Station 35 Nos.

BENEFITS OF INVESTMENT:

Name of Project	Loss Reduction (%age)	Units Saved (Mkwh)	Financial Benefit (Rs. in M)
<u>The World Bank:-</u>			
ELR	1.330	105.180	863.5278
STG	3.256	257.280	2,112.2787
<u>Asian Development Bank :-</u>			
ELR	2.083	164.570	1,351.1197
STG	208.05	132 MVA additional capacity will be added through this project	

HYDERABD ELECTRIC SUPPLY COMPANY LTD.

Monthly Unit Purchased, Sold & Losses

Month	FY 2010-11 (Projected)			FY 2009-10 (Provisional)*			%age Inc/(Dec)
	Units Purchased (Mkwh)	Units Sold (Mkw/h)	Monthly Losses (T&D) (%age)	Units Purchased (Mkwh)	Units Sold (Mkw/h)	Monthly Losses (T&D) (%age)	
Jul	813.17	507.60	37.58%	793.64	488.08	38.50%	-0.92%
Aug	992.91	584.56	41.13%	868.94	503.93	42.01%	-0.88%
Sep	872.63	547.93	37.21%	868.46	537.19	38.14%	-0.94%
1st Qtr	2,678.71	1,640.09	38.77%	2,531.04	1,529.20	39.58%	-0.81%
Oct	756.10	505.32	33.17%	717.89	473.15	34.09%	-0.92%
Nov	635.60	486.64	23.44%	618.95	467.92	24.40%	-0.96%
Dec	709.28	533.86	24.73%	553.46	410.66	25.80%	-1.07%
2nd Qtr	2,100.98	1,525.82	27.38%	1,890.29	1,351.73	28.49%	-1.12%
Jan	502.19	372.10	25.90%	464.29	339.20	26.94%	-1.04%
Feb	488.29	381.15	21.94%	498.76	385.01	22.81%	-0.87%
Mar	609.77	367.18	39.78%	610.70	361.75	40.76%	-0.98%
3rd Qtr	1,600.25	1,120.43	29.98%	1,573.75	1,085.95	31.00%	-1.01%
Apr	744.78	478.19	35.79%	709.31	449.00	36.70%	-0.90%
May	819.06	515.95	37.01%	804.30	498.50	38.02%	-1.01%
Jun	792.09	529.62	33.14%	776.92	512.70	34.01%	-0.87%
4th Qtr	2,355.93	1,523.76	35.32%	2,290.53	1,460.20	36.25%	-0.93%
Total	8,735.87	5,810.10	33.49%	8,285.62	5,427.08	34.50%	-1.01%

* Upto March 2010 are actual and Apr-Jun-10 are projected

HYDERABAD ELECTRIC SUPPLY COMPANY LIMITED

Annex-IV

Category wise Sales Revenue for the FY 2010-11

Slab	Load Charged (Kw)	Net Sales (kwh)	Sales Mix	Tariff Determined By NEPRA				Proposed Tariff				Revenue as per NEPRA Tariff [Rs. in Mill]				Revenue as per Proposed Tariff [Rs. in Mill]				Average Sale Rate [Rs./kwh]	
				Fixed Charges Rs./kwh	Variable Charges Rs./kwh	Fixed Charges Rs./kwh	Variable Charges Rs./kwh	Fixed Charges	Variable Charges	Total	Fixed Charges	Variable Charges	Total	NEPRA	Proposed						

Category wise Proposed Tariff Per Unit

FY 2010-11

Categories		Determined Tariff		Proposed Tariff		%age Increased	
		Fixed Charges Rs./kw/M	Variable Charges (Rs. /Kwh)	Fixed Charges Rs./kw/M	Variable Charges (Rs. /Kwh)	Fixed Charges	Variable Charges
A1-	<u>Residential-</u>						
a)	For Sanctioned Load Less than 5 Kw						
i	Upto - 50 Units		2.00		2.00		0.00%
	For consumption exceeding 50 Units						
ii	01 - 100 Units		9.75	10	11.12		14.00%
iii	101 - 300 Units		13.00		14.82		14.00%
iv	301 - 700 Units		14.00		15.96		14.00%
v	Above 700 Units		15.50		17.67		14.00%
	For Sanctioned Load 5 Kw & above						
	Time of Use (TOU) Peak		15.50		17.67		14.00%
	Time of Use (TOU) Off Peak		8.50		9.69		14.00%
A-2	<u>Commercial</u>						
a)	For Sanctioned Load Less than 5 Kw		15.50		17.67		14.00%
b)	For Sanctioned Load 5 Kw & above	400.00	14.00	400.00	15.96	0.00%	14.00%
	Time of Use (TOU) Peak	400.00	15.50	400.00	17.67	0.00%	14.00%
	Time of Use (TOU) Off Peak	400.00	8.00	400.00	9.12	0.00%	14.00%
B-	<u>Industrial</u>						
B-1	Less than 5 Kw (at 400 / 230 Volts)		11.00		12.54		14.00%
B-2(a)	5-500 Kw (at 400 Volts)	400.00	10.00	400.00	11.40	0.00%	14.00%
	Time of Use (TOU) Peak	400.00	15.50	400.00	17.67	0.00%	14.00%
B-2(b)	Time of Use (TOU) Off Peak	400.00	8.00	400.00	9.12	0.00%	14.00%
B-3	For All Loads upto 5000 Kw (at 11,33 KV)						
	Time of Use (TOU) Peak	380.00	15.40	380.00	17.56	0.00%	14.00%
	Time of Use (TOU) Off Peak	380.00	7.90	380.00	9.01	0.00%	14.00%
B-4	For All Loads (at 66,132 KV & above)						
	Time of Use (TOU) Peak	360.00	15.30	360.00	17.44	0.00%	14.00%
	Time of Use (TOU) Off Peak	360.00	7.80	360.00	8.89	0.00%	14.00%
C-	<u>Single Point Supply for Further Distribution</u>						
C-1	For supply at 400 / 230 Volts						
a)	Sanctioned Load Less than 5 Kw		11.50		13.11	0.00%	14.00%
b)	Sanctioned Load 5 Kw & upto 500 Kw	400.00	10.50	400.00	11.97	0.00%	14.00%
	Time of Use (TOU) Peak	400.00	15.50	400.00	17.67	0.00%	14.00%
	Time of Use (TOU) Off Peak	400.00	8.00	400.00	9.12	0.00%	14.00%
C-2 (a)	For Supply at 11, 33 KV upto and including 5000 Kw	380.00	10.40	380.00	11.86	0.00%	14.00%
	Time of Use (TOU) Peak	380.00	15.40	380.00	17.56	0.00%	14.00%
	Time of Use (TOU) Off Peak	380.00	7.90	380.00	9.01	0.00%	14.00%
C-3 (a)	For Supply at 66 KV & above and sanctioned load above 5000 Kw	360.00	10.30	360.00	11.74	0.00%	14.00%
	Time of Use (TOU) Peak	360.00	15.30	360.00	17.44	0.00%	14.00%
	Time of Use (TOU) Off Peak	360.00	7.80	360.00	8.89	0.00%	14.00%
D-	<u>Agriculture Tube well - Tariff</u>						
D-1 (a)	Scarp Less than 5 Kw		12.00		13.68		14.00%
D-1 (b)	Time of Use (TOU) Peak	200.00	15.50	200.00	17.67	0.00%	14.00%
	Time of Use (TOU) Off Peak	200.00	5.00	200.00	5.70	0.00%	14.00%
D-2	Agriculture Tube wells	200.00	7.50	200.00	8.55	0.00%	14.00%
G-	<u>Public Lighting - Tariff</u>		13.00		14.82		14.00%
H-	<u>Residential Colonies - Tariff</u>		13.00		14.82		14.00%
	E-1 (1)		15.50		17.67		14.00%
	E-1 (2)		15.50		17.67		14.00%
	TMP E-2 (1)		11.00		12.54		14.00%

HYDERABAD ELECTRIC SUPPLY COMPANY LTD.**Quantitative Data**

Description	Unit	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11
		Actual		Provisional	Projected
Units Sold	MlnkWh	5,104.57	5,128.11	5,427.08	5,810.10
Growth in Sales Volume	%age	5.41%	0.46%	5.83%	7.06%
Average Sales Tariff	Rs./kWh	7.26	10.70	11.38	12.55
Average Sales Tariff (GOP)	Rs./kWh	4.91	5.84	6.56	7.87
Subsidy	Rs./kWh	2.33	4.37	4.83	4.69
No. of Consumers	Mln.	1.45	1.48	1.52	1.58
Growth in Consumers	%	2.84%	2.07%	3.00%	3.50%
Distribution Lossess	%	32.20%	31.49%	31.11%	30.00%
Transmission Losess	%	3.66%	3.64%	3.39%	3.49%
System Losses (T & D)	%	35.86%	35.13%	34.50%	33.49%
Reduction /Increase in T & D Losses	%	-1.09%	-0.73%	-0.63%	-1.01%
Units Purchased	MlnkWh	7,958.44	7,905.05	8,285.62	8,735.86
Units lost	MlnkWh	2,853.87	2,776.94	2,858.54	2,925.76
Growth in Units Purchased	%	3.62%	-0.67%	4.81%	5.43%
Purchase Price (un-adjusted)	Rs./kWh	4.67	5.75	6.91	6.96
Purchase Price (Adjusted)	Rs./kWh	7.29	8.86	10.55	10.46