



MULTAN ELECTRIC POWER COMPANY LIMITED

TARIFF PETITION

DISTRIBUTION LICENSE NO.06/DL/2002

31st May 2008

Registrar
Dy. No. S.206
Dated. 22.06.08



MULTAN ELECTRIC POWER COMPANY LIMITED

TARIFF PETITION

DISTRIBUTION LICENSE NO.06/DL/2002

31st May 2008

Original



MULTAN ELECTRIC POWER COMPANY LIMITED (WAPDA)

OFFICE OF THE CHIEF EXECUTIVE

NO. 13944/FDM/Tariff

DATE: 31/05/2008

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

Subject: - TARIFF PETITION – MEPCO (LICENSE # 06/DL/2002)

We are enclosing Tariff Petition for the year 2008-09. It is therefore, requested to admit attached petition for determination of Tariff for the year 2008-09 as detailed in petition.

It may please be acknowledged.

[Signature] 31/5/08
Muhammad Amin Sahl
Chief Executive Officer.

DA/

- 1. Affidavit in Original (One page)
- 2. Tariff Petition (19 pages)
- 3. Tariff Petition Fee amounting to Rs 1831050/- has been deposited in nepra account NO 750116500465

at Ashari Bank by on line banking dt 2-6-2008.

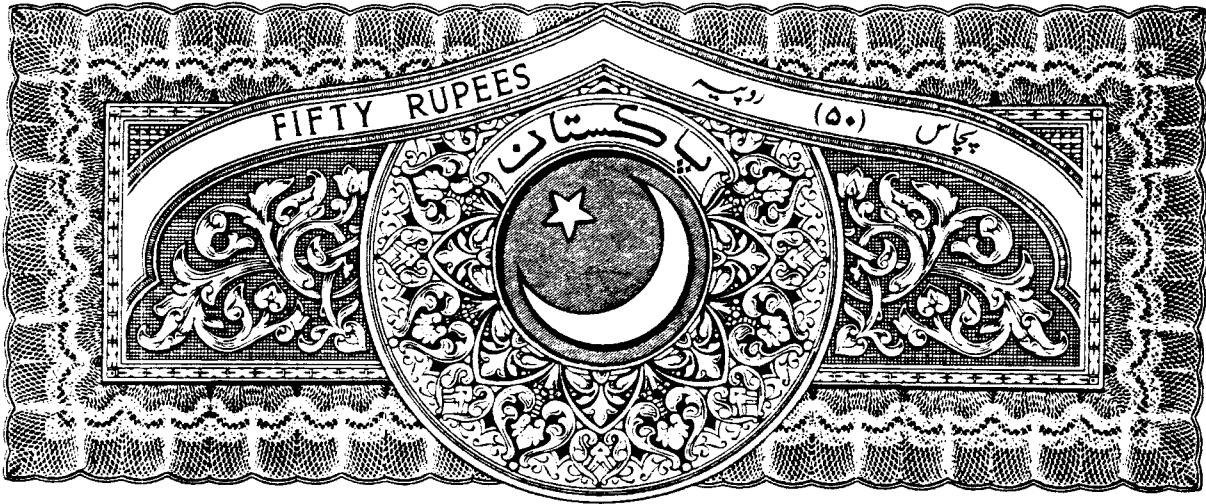
Registrar
Dy. No. 5806
Dated 02.06.08

DIR(F): Please confirm receipt of Rs. 1831050/- in NEPRA account from MEPCO as tariff petition fee. A/officer mepc

[Signature] 2/6/08
Ch. Zafar
2.06.08

- cc
- 1. chairman.
- 2. v. chairman (MT).

Received along with 04 copies



Before the National Electric Power Regulatory Authority

Affidavit

I, Muhammad Amin Sahi, Chief Executive Officer, Multan Electric Power Company Limited (Distribution License # 06/DL/2002) being duly authorized representative/ attorney of Multan Electric Power Company Limited, hereby solemnly affirm and declare that the contents of the accompanying petition/ application No.13944/FDM/Tariff dated 31st May, 2008 including all supporting documents are true and correct to the best of my knowledge and belief and that nothing has been concealed. I also affirm that all further documentation and information to be provided by me in connection with the accompanying petition shall be true to the best of my knowledge and belief.

DEPONENT

MUHAMMAD AMIN SAHI
Chief Executive Officer,
Multan Electric Power Company Limited
(MEPCO)

Verified on oath this 31st May, 2008 that the contents hereof are true and correct to the best of my knowledge and belief and nothing has been concealed.

DEPONENT

MUHAMMAD AMIN SAHI
Chief Executive Officer,
Multan Electric Power Company Limited
(MEPCO)

Multan Electric Power Company Limited

Tariff Petition – 31st. May, 2008

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**MULTAN ELECTRIC POWER COMPANY LIMITED (MEPCO)
TARIFF PETITION
UNDER SECTION 3(1) OF PART II OF
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(TARIFF STANDARDS AND PROCEDURE) 1998**

1. PETITION SUMMARY

1.1 The Petitioner

Multan Electric Power Company Limited (MEPCO)

Multan Electric Power Company Limited, hereinafter referred to as MEPCO or Company, is a public limited company having its registered office at 414- Wapda House, Lahore and principal office at MEPCO Head Quarter, Khanewal Road , Multan. MEPCO as a public utility is engaged in distribution/supply of electric power in its licensed service territory comprising of 13 Administrative Districts of Southern Punjab.

1.1.1 MEPCO is Represented by:

- | | |
|---------------------------------|-----------------------------|
| • Mr. Muhammad Amin Sahi. | Chief Executive Officer |
| • Syed Mushtaq Hussain Bokhari. | Finance Director. |
| • Hafiz Ashraf Ali | Customer Services Director |
| • Mr. Mehmood Shah | Technical Director |
| • Mr. Rana Akhtar Hussain | Manager, Marketing & Tariff |
| • Mr. Shahbaz Ahmad Khan | Company Secretary |

1.1.3 Basis of 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, laid down by the Federal Government. NEPRA is also responsible for determining the process and procedures for reviewing tariffs and recommending tariff adjustments.

MEPCO is a licensee public utility responsible to distribute/supply electricity to its service area, as set out in MEPCO's Distribution license No. 06/DL/2002, granted by

the NEPRA under the NEPRA Act. In accordance with the requirements of the license, MEPCO is hereby submitting a petition to revise tariffs in its license area for the fiscal year 2008-09.

This petition is, therefore, being filed in accordance with the NEPRA Tariff Standards and Procedure Rules 1998 under Part II Section 3 (1).

1.2 Grounds of Petition

The length of the review period is important for determining the size of the incentive for MEPCO to improve its efficiency. The longer the period of review, the larger the incentive to make efficiency gains, reduce losses or achieve cost efficiencies in stable economic conditions. Rapidly changing external environment has also changed the fundamentals and assumptions forming the basis of tariff setting, revising and its application mechanism.

- Continuously upsurge in the fuel cost is setting and breaking the records every day with shrinking Hydel component
- Rapid increase in O&M cost due to high Inflation.
- Diversions in sales mix resulting increase in sale to subsidized categories and decreased sale to those providing cross subsidy.
- No or negative growth in sales due to power shortage.
- Delayed adjustment of PPP.
- Irregular/delayed payment of tariff subsidy and non payment of agriculture subsidy.

These have been exposed the company to severe liquidity risks:

- Increase in the fuel cost is passed to the company instantly by CPPA/NTDC through monthly invoice. However, under the existing tariff mechanism MEPCO is allowed to pass on the same to end users after a lapse of 6 months which is too long a period in the present circumstances and already weak financial position of the company can't absorb this shock for that long.
- Though the Authority acceded to our submission of quarterly adjustment of PPP, to provide at least partial relief to the company, when the price of fuel was relatively stable. However, quarterly adjustment of PPP has yet to be implemented. The situation has changed drastically, so even quarterly adjustment of PPP will not address fastly deteriorating financial conditions and poor cash flow of the company.
- MEPCO has to earn a minimum distribution margin and resultant cash flow to maintain its system, discharge its financial obligations and invest on the up keeping and expansion of its network. On the contrary increase in sale to cross subsidized domestic and agriculture categories and decrease of sale to those categories providing cross subsidy has made it virtually impossible to realize the notified average tariff rate and earn bear minimum distribution margin to honour its internal and external commitments.
- Irregular /delayed payment of tariff subsidy and non payment of agriculture subsidy has further aggravated the liquidity crunch

Relief sought

We, therefore, submit to the Authority to seek the following relief.

- Monthly adjustment of PPP in end user tariff.
- MEPCO's Distribution Margin should be based on actual sale of 2007-08 as the company can experience nil or negative growth due to power shortage.
- Allowing MEPCO to charge full determined tariff, adjusted from time to time on account of change in PPP, to the end users in case of delay in payment of subsidy by more than one month.
- Resetting of tariff formula ensuring minimum distribution margin to the company irrespective of decrease in sale volume and / or divergence of sale mix.
- Increase in the tariff rate of cross subsidized categories of customers thereby ensuring efficient use of electricity and retaining the industry on the system and making it viable.

1.3 Key Aims and Features of the Petition

1.3.1 Aims of the Petition

This tariff petition sets out the tariff methodology, required revenues and timetable for rebalancing tariffs in MEPCO's distribution area for the year 2008-09. The aim of this petition is to obtain approval for the immediate implementation of cost reflective tariffs to yield MEPCO's required revenues so that the tariffs for each customer category reflect the cost of serving that customer category. The implementation of cost reflective tariffs will benefit consumers and MEPCO as it will:

1. Enable the company to arrange funding to improve service quality and reliability.
2. Enable the company to arrange funds for its network expansion.
3. Provide signals for efficient usage of distribution network and investment
4. Give message for efficient use of electricity.
5. Promote financial sustainability of the company.

1.3.2 Features of the Petition

The purpose of petition is as follows:

- To modify existing formula for setting and revising tariffs in MEPCO's license area on monthly basis.
- Sufficient average tariff to enable MEPCO to recover prudently incurred operating costs and earn a reasonable return on its regulatory asset base to meet with its cash flow requirements.
- Incentives for MEPCO to make operating efficiencies and reduce commercial losses.

1.3.3 Structure of the Petition

This petition has three distinct components. The first part deals with the tariff methodology. This is the formula that will be used to determine MEPCO's distribution margin for the year 2008-09 and the years to follow unless there is a fundamental change in the assumptions made. The second part covers the calculation of MEPCO's required revenues during the period. It explains the different components of required revenues including pass through costs (PPP, Income tax etc), operating costs, investment costs and rate of return.

2. Tariff Review Formula and Process

The tariff formula provides a transparent and predictable way of determining MEPCO's distribution margin on an annual basis. A formula is advantageous as it reduces uncertainty for the utility and for customers. It also provides a simple way for NEPRA to provide incentive to the company to reduce losses and/or make operating efficiencies as required.

2.1 Tariff Methodology

2.1.1 MEPCO's Margin

The formula calculates MEPCO's distribution margin based on forecast unit sales, operating expenses, depreciation, investment and return on investment (cost of capital). Generation and transmission cost, built in the invoice from CPPA/NTDC, are treated as pass-through. The formula determines revenues for the year 2008-09. The profits or losses that arise from changes in efficiency or demand would, however, be retained by MEPCO.

At the end of the year period, the formula would be reapplied to determine the distribution margin for subsequent years. Operating expenditure will be subject to an efficiency requirement so that MEPCO 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), which would be passed through to the end users in the retail tariff, and (ii) the average distribution margin, which would be set on the formula-based methodology.

2.2.1 Power Purchase Price (PPP)

MEPCO pays a Power Purchase Price (in Rs/kWh) for the electricity it procures from NTDC/CPPA or other sources, which would include the generation and transmission charges (regulated by NEPRA). This Power Purchase Price, adjusted for MEPCO's distribution losses, would then be simply added to MEPCO's overall distribution margin to work out retail tariffs. Thus, the cost of the purchased electricity would be "passed through" to consumers through the retail tariff, *without affecting MEPCO's distribution margin.*

While passing through the PPP, it is recognized that all distribution companies experience some level of distribution 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 MEPCO would be compensated for some losses, without hindering the incentive to eliminate the total losses.

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

Where;

- Unadjusted PPP is the cost of electricity supply charged by NTDC/CPPA or any other source at any given time;
- L is the target distribution losses at year, defined as a percentage of purchased units, in accordance with a schedule established for the control period.

The schedule of losses (Transmission & Distribution) are set to decrease from the current level of 18.5% to 18% by the end of 2008-09. Thereafter, the target losses will be reset to account for any further improvements that may be deemed achievable in subsequent years through investment in the system and other measures.

Based on the above formula, the compensation for T&D losses would be automatically adjusted for any changes in the power purchase cost. The schedule of target losses, however, would be maintained for the year 2008-09, regardless of the actual T&D losses incurred by MEPCO. Thus, if MEPCO were not able to meet the target loss reduction, it would be penalized by not being able to recover the cost of extra units lost from the retail tariffs. If, on the other hand, MEPCO's actual loss reduction outperformed the target level, it would be able to gain extra revenues from the loss adjustments to the PPP.

2.3 Distribution Margin Formula

The average distribution margin for the year 2008-09 would be set in accordance with MEPCO's expected revenue requirements, based on the following formula:

$$\text{Avg. Margin} = \frac{\text{O\&M} + \text{Depreciation} + \text{RORB} - (\text{Amortization} + \text{Other Income})}{\text{Total Unit Sales}}$$

Where:

O&M is the expected operating and maintenance cost per kWh (for year t), which includes the estimated cost of technical service and repair, necessary materials for operation, employees cost, mandatory social insurance payments, administration, management and other operating costs related to MEPCO's distribution and supply business. The O&M component for the year 2008-09 would be established on the basis of forecast demand and inflation.

Depreciation. Depreciation is provided in accordance with the company's policy.

Profit Rate Base: Profit Rate Base is defined as sum of existing fixed assets plus work-in-progress, new investment and working capital reduced by accumulated depreciation and deferred credit.

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

Total Unit Sales: A schedule of the total unit sales (in M/KWh) of MEPCO across all customer categories is forecast for the year 2008-09. This forecast is used to determine the average distribution margin per unit (Rs/kWh) needed to cover the revenue requirement expected for the year.

Customer-specific retail tariffs will be set as follows:

$$\begin{array}{l} \text{Category-specific} \\ \text{Retail} \\ \text{Tariff} \end{array} = \text{PPP} + \begin{array}{l} \text{Category-specific} \\ \text{Distribution} \\ \text{Margin} \end{array}$$

The PPP is the power purchase price. It reflects the amount paid by MEPCO to NTDC/CPPA. Since it is difficult to estimate future PPP with precision, Increase in PPP is based on increase the same in the first 6 months of current year over same period last year.

2.4 Revision of Retail Tariff

While it is important for MEPCO to have certainty about the period of the review, of greater importance is the existence of clear rules about the procedures for re-setting tariffs.

Based on the methodology discussed above, possible adjustments to retail tariffs are strictly limited to the following items:

Scheduled Change in Distribution Margins: The retail tariff will be revised after every month to ensure required revenue in case of fundamental changes in the basic assumptions formulating tariff formula.

Changes in PPP: At any point in time, changes in the Power Purchase Price (e.g. due to fuel cost adjustments) would automatically result in a corresponding change in retail tariffs on monthly basis.

Inflation Adjustments: The O&M component of the distribution margin would be automatically adjusted for exceptional inflation.

Extraordinary Adjustments: Any justified losses and/or additional expenses incurred by MEPCO due to changes in legislation, legal acts, technical regulation, or other special events that are beyond its control would be reimbursed by adjusting the distribution margin, subject to NEPRA's approval.

3. CALCULATING MEPCO'S REVENUE REQUIREMENT

3.1 Current Tariffs

Presently, the consumer-end tariff is based on a highly cross-subsidized structure (which the GOP wants to rationalize over a period of time). This essentially means that whilst some customers are paying substantially less than their cost of service, industrial and commercial customers pay higher prices. Thus, consumers that are paying in excess of their cost of service are effectively subsidizing other categories especially lifeline customers of domestic category.

3.2 Trends in Customers Numbers and Consumptions

Annex-1 provides information about demand, customer numbers and tariffs in the MEPCO's service area. As would be observed, consumptions by the subsidized categories generally outpaced others, which has been a major pressure on the tariffs.

The increase in domestic and agriculture consumption relative to industrial consumption has worrying implications for MEPCO's revenues and profitability, especially since domestic customers cost more to serve. As domestic and agriculture

consumption increases, and in the absence of cost reflective tariffs, MEPCO's overall costs rise whilst its revenues remain decreases. Meanwhile, industrial customers (the most profitable for MEPCO, as they are more economical to serve) are reducing their consumption (by installing captive generation) resulting in lower revenues for MEPCO.

Table-1 is presented at next page showing the consumption for MEPCO's customers.

MULTAN ELECTRIC POWER COMPANY LIMITED
CATEGORYWISE UNIT SOLD ACTUAL & PROJECTED

Table - I
 Fig. In Million

| CATEGORIES | Actual Unit Sold | | | | | | EST. ACTUAL | | Projected | |
|--------------------------|------------------|--------------|----------------|---------------|----------------|---------------|-----------------|--------------|-----------------|---------------|
| | 2004-05 | | 2005-06 | | 2006-07 | | 2007-08 | | 2008-09 | |
| | Units | Growth % | Units | Growth % | Units | Growth % | Units | Growth % | Units | Growth % |
| DOMESTIC (0-50) | 204.45 | 24.13 | 243.04 | 18.875 | 299.81 | 23.358 | 373.62 | 24.62 | 380.09 | 1.73 |
| DOMESTIC (1-100) | 480.76 | 10.06 | 524.19 | 9.034 | 568.32 | 8.419 | 792.545 | 39.45 | 810.47 | 2.261758 |
| DOMESTIC(101-300) | 1895.33 | 6.55 | 2091.63 | 10.357 | 2283.04 | 9.151 | 2091.427 | -8.39 | 2135.19 | 2 |
| DOMESTIC (301-1000) | 929.85 | 0.92 | 1130.30 | 21.557 | 1282.88 | 13.499 | 1099.79 | -14.27 | 1174.00 | 6.75 |
| DOMESTIC (ABOVE 1000) | 116.73 | 2.18 | 160.17 | 37.214 | 189.43 | 18.268 | 190.755 | 0.70 | 248.03 | 30.02315 |
| DOMESTIC (TEMPORARY) | 0.07 | -1.41 | 0.13 | 85.714 | 0.12 | -7.692 | 0.216 | 80.00 | 2.02 | 833.8333 |
| DOMESTIC TOD | | | | | | | 0.96 | | | |
| | 3627.19 | 6.18 | 4149.46 | 14.399 | 4623.60 | 11.427 | 4549.313 | -1.61 | 4749.795 | 4.41 |
| UPTO 100 UNITS | 95.15 | 4.08 | 99.08 | 4.130 | 102.58 | 3.532 | 104.328 | 1.70 | 81.52 | -21.86 |
| ABOVE 100 UNITS | 276.67 | 5.29 | 319.01 | 15.303 | 359.05 | 12.551 | 344.32 | -4.10 | 242.19 | -29.66 |
| < 20 KW | 29.89 | 55.75 | 50.20 | 67.949 | 73.98 | 47.371 | 98.556 | 33.22 | 67.24 | -31.77 |
| TEMP COMMERCIAL | 0.57 | 133.61 | 0.92 | 61.404 | 0.97 | 5.435 | 1.884 | 94.23 | 1.90 | 1.00 |
| Commercial TOD | | | | | | | 0 | | 0.00 | |
| COMMERCIAL | 402.28 | 7.67 | 469.21 | 16.638 | 536.58 | 14.358 | 549.088 | 2.33 | 392.857 | -28.45 |
| INDUSTRIAL (B-1) | 231.41 | 4.47 | 255.75 | 10.518 | 279.81 | 9.408 | 285.156 | 1.91 | 287.15 | 0.70 |
| INDUSTRIAL (B-2) | 668.8 | 20.71 | 675.21 | 0.958 | 719.76 | 6.598 | 716.44 | -0.46 | 720.02 | 0.50 |
| INDUSTRIAL (B-2) TOD | 2.84 | 226.06 | 5.84 | 105.634 | 10.02 | 71.575 | 10.98 | 9.58 | 11.09 | 1.00 |
| INDUSTRIAL (B-3) | 25.82 | -76.09 | 30.40 | 17.738 | 12.1 | -60.197 | 6.996 | -42.18 | 7.07 | 1.00 |
| INDUSTRIAL (B-3) TOD | 913.5 | 7.72 | 994.72 | 8.891 | 988.12 | -0.664 | 1026.644 | 3.90 | 1031.78 | 0.50 |
| INDUSTRIAL (B-4) | 468.71 | 32.69 | 534.42 | 14.019 | 411.73 | -22.958 | 400.12 | -2.82 | 403.32 | 0.80 |
| INDUSTRIAL TOTAL | 2311.08 | 10.81 | 2496.34 | 8.016 | 2421.54 | -2.996 | 2446.336 | | 2460.428 | 0.58 |
| C-1 (A) | 2.3 | -94.76 | 2.47 | 7.391 | 2.1 | -14.980 | 1.884 | | 1.91 | 1.50 |
| C-1 (B) | 30.35 | | 31.29 | | 33.47 | 6.967 | 33.108 | | 33.44 | 1.00 |
| C-2 11/33 KV | 83.06 | 19.79 | 89.33 | 7.549 | 95.76 | 7.198 | 91.02 | | 91.48 | 0.50 |
| C-3 | | | | | 0.89 | | 2.22 | | 2.25 | 1.50 |
| C-1 TOD | | | | | | | | | 0.00 | |
| C-2 TOD | | | | | | | 0.96 | | 0.97 | 1.50 |
| C-3 TOD | | | | | | | | | 0.00 | |
| Temporary | | | | | | | | | 0.00 | |
| BULK SUPPLY TOTAL | 115.71 | 2.20 | 123.09 | 6.378 | 132.22 | 7.417 | 129.192 | -2.29 | 130.05 | 0.67 |
| AGRICULTURE (SCARP) | 196.28 | -6.62 | 199.07 | 1.421 | 201.88 | 1.412 | 126.552 | -37.31 | 127.818 | 1.00 |
| AGRICULTURE (PRIVATE) | 1173.93 | 16.12 | 1459.74 | 24.346 | 1607.95 | 10.153 | 1726.628 | 7.38 | 1743.894 | 1.00 |
| AGRICULTURE (TOD) | | | | | | | | | | #DIV/0! |
| AGRICULTURE (T/WELL) | 1370.21 | 12.21 | 1658.81 | 21.062 | 1809.83 | 9.104 | 1853.18 | 2.40 | 1871.712 | 1.00 |
| PUBLIC LIGHTING - G | 22.71 | 10.72 | 26.85 | 18.230 | 30.74 | 14.488 | 30.66 | -0.26 | 32.971 | 7.54 |
| RES. COLONIES - H | 12.33 | -0.84 | 12.56 | 1.865 | 10.42 | -17.038 | 8.436 | -19.04 | 8.520 | 1.00 |
| RLY. TRACTION - I | 5.02 | 15.22 | 3.66 | -27.092 | 4.32 | 18.033 | 2.76 | -36.11 | 2.7876 | 1.00 |
| MEPCO | 7867.73 | 8.55 | 8941.22 | 13.644 | 9570.64 | 7.039 | 9570.81 | 0.00 | 9649.126 | 1 |

Based on tariff methodology described in the previous section, the average tariff for fiscal year 2008-09 have been calculated using the following parameters.

Total Unit Sales: Projected unit sales are 9745 M/kwh for the year 2008-09 which is based on actual sales in 2007-08. No growth has been accounted for because of power shortage in the country.

-
- **Projected Line Losses & Tech: Losses:** The level of losses (Distribution & Technical) is set at 18% for the FY 2008. These projected losses are quite realistic and achievable. The company will endeavor to meet the target losses.
- **Village Electrification & Tube well Connections:** MEPCO has to electrify huge number of villages and tube well connections which can adversely affect our targets of reduction in Line Losses. Moreover, it has been assumed that village electrification will be financed by grants from sponsors otherwise consumer end tariff will increase because of interest on loans in case village electrification is to be financed from loans. Village Electrification schemes mostly increase life line consumers and revenue from this category neither justify any loan repayment nor interest thereon.
- **Power Purchase Price (PPP):** PPP of the current year is based on the invoice raised by NTDC/CPPA for the first 10 months up to April 30, 2008 i.e. Rs.4.376/kWh. However, 10% increase in PPP has been projected for the next year. It has also been assumed that any increase in PPP will be passed on to the end consumers instantly because any delay in passing on increase in PPP will expose the company to a big liquidity risk.
- Consumer end tariff of life line consumers i.e. Domestic (0-50 units) has also been increased by paisas 50 based about 30% of Average increase in sales rate.
- **Purchase Costs:** The cost of electricity purchased by MEPCO has been calculated as the PPP (unadjusted for distribution losses) times the units of electricity purchased. This is also the equivalent of the units of electricity sold times the PPP adjusted for distribution losses (PPP divided by 1 minus the percentage of allowed losses).
- **O&M expenses** are directly related with the network and MEPCO has the largest network among all the distribution companies in the country. The increase in O&M for 2008-09 has taken is 20% by taking into account the expected increase in Salaries & Wages, Fuel cost, electricity rate, material rates etc.
- **Old Asset Base:** The value of the Old Asset Base at the beginning of the first year (2008-09) has been set as the book value of MEPCO's fixed assets (net fixed assets plus capital work in progress), taken from the latest available audited financial statements (2006-07) provided in Annex-2.
- **New Investments:** New investments will be made as per the investment plan duly approved by the ECNEC as provided in Annex-3.
- **Depreciation:** The depreciation is computed as per policy of MEPCO.

- **Profit Base:** The Profit Rate Base is calculated as sum of existing fixed assets (Less Accumulated Depreciation) new investments, work-in-progress and working capital minus deferred credit.
- **Average Rate of Return:** Average ROR has been estimated to meet cash flow requirements of the MEPCO, which works out to be 20.00 % for the year.
- **Distribution Revenue:** The sum of the O&M, Depreciation, RORB less amortization and other income result in MEPCO's revenue. Dividing this by the total units sold yields the average distribution margin (per kWh).

The results of the calculations are summarized on the next page as Table-II.

MULTAN ELECTRIC POWER COMPANY LIMITED

Table - II

STATEMENT SHOWING THE SUMMARY OF TARIFF CALCULATIONS

| Sr. No. | EXISTING 2007-08 | PROPOSED 2008-09 |
|-----------------------------|---------------------|---------------------|
| 1 | 0 | 1 |
| 2 | | |
| | 9571 | 9649 |
| | 14.50 | 14.10 |
| 3 | 4.00 | 3.90 |
| 4 | 18.5 | 18.00 |
| | 11743.329 | 11767.226 |
| 5 | | |
| 6 | 4.3829 | 4.8212 |
| 7 | 5.378 | 5.880 |
| | 51469.836 | 56732.035 |
| 8 | | |
| 9 | 0.4362 | 0.5182 |
| | 4174.828 | 4999.908 |
| 10 | | |
| 11 | 38717.050 | 45552.054 |
| 12 | 6835.004 | 6526.060 |
| 13 | 14141.997 | 16014.215 |
| 14 | 4674.000 | 4487.000 |
| 16 | 18383.548 | 19969.132 |
| 17 | | 2000.000 |
| | 17700.509 | 22581.766 |
| DISTRIBUTION REVENUE | | |
| 16 | | |
| 17 | -6603 | 4516.353 |
| 18 | 1593.605 | 1872.219 |
| 19 | 4174.828 | 4999.908 |
| | -834.567 | 11388.480 |
| | 826.755 | 914.476 |
| | 1352.837 | 1250.809 |
| 20 | 2091.592 | 2165.285 |
| | -2926.158 | 9223.195 |
| 21 | | |
| 22 | 537.779 | 587.950 |
| 23 | -30.574 | 95.586 |
| 24 | 507.205 | 683.536 |
| 25 | 507.205 | 683.536 |
| | -0.060 | 0.140 |

3.4 **Income Tax**

Income tax being pass through is the part of RORB. Income tax has therefore been calculated on projected net profit and included in the average and consumer end tariff.

4. Estimated Sales Revenue on the basis of proposed tariff for FY 2008-09 is presented on Annex-4.

➤ The category-wise tariffs proposed for FY 2008-09 are presented in Annex-5.

MULTAN ELECTRIC POWER COMPANY MULTAN

DEMAND ANALYSIS HISTORICAL CONSUMPTION AND FORECAST

Fig. In Million

| CATEGORIES | ACTUAL | | | | Projected |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
| DOMESTIC | 3627.19 | 4149.46 | 4623.6 | 4549.313 | 4749.795 |
| COMMERCIAL | 402.28 | 469.21 | 536.58 | 549.088 | 392.857 |
| INDUSTRIAL | 2311.08 | 2496.34 | 2421.54 | 2446.336 | 2460.428 |
| BULK SUPPLY | 115.71 | 123.09 | 132.22 | 129.192 | 130.05 |
| AGRICULTURE (T/WELL) | 1370.21 | 1658.81 | 1809.83 | 1853.18 | 1871.712 |
| PUBLIC LIGHTING - G-1 | 22.71 | 26.85 | 30.74 | 30.66 | 32.971 |
| RES. COLONIES - H-1 | 12.33 | 12.56 | 10.42 | 8.436 | 8.52 |
| RLY. TRACTION - I | 5.02 | 3.66 | 4.32 | 2.76 | 2.787 |
| CO-GENERATION - J | 1.2 | 1.24 | 1.39 | 1.845 | |
| TOTAL:- | 7867.73 | 8941.22 | 9570.64 | 9570.81 | 9649.12 |

Inputs from MEPCO's Financial Statements audited for the year 2006-2007 and projected for the year 2008-09.

Table below shows MEPCO's operating results, for the last two financial years ended 30th June.

| | Rs. in Million | |
|--------------------------------------|-----------------------------------|-------------------------------|
| | <u>Provisional</u> <u>2008</u> | <u>Audited</u> <u>2007</u> |
| REVENUE | | |
| Energy Sale | 45495 | 41447 |
| Other Income | 2091 | 1866 |
| TOTAL REVENUE | <u>47586</u> | <u>43313</u> |
| EXPENDITURE | | |
| Cost of Sales | 48423 | 40962 |
| O&M Cost | 4174 | 3688 |
| Depreciation | 1593 | 1258 |
| | <u>54190</u> | <u>45908</u> |
| NET INCOME before Tax | (6604) | (2595) |
| INTEREST | (747) | (703) |
| Provision for Income Tax | (193) | (65) |
| LOSS for the Year | <u>(7544)</u> | <u>(3363)</u> |
| Average Tariff (Rs./Kwh sold) | <u>4.95</u> | <u>4.33</u> |

MEPCO Balance Sheet for the financial years as at 30th June 2007 (Audited) and 2008 (Projected) is shown below: -

| | Rs. in Million | |
|--|-----------------------------------|-------------------------------|
| | <u>Provisional</u> <u>2008</u> | <u>Audited</u> <u>2007</u> |
| Authorized Share Capital | 50,000 | 50000 |
| Share Capital & Deposit for shares | 10824 | 10824 |
| Accumulated (Losses) | (21030) | (13489) |
| | <u>(10207)</u> | <u>(2665)</u> |
| Deferred Credit | 18389 | 15549 |
| Long term borrowings | 4645 | 4975 |
| Employees retirement benefits | 4033 | 3555 |
| Consumer Security Deposits | 2197 | 1687 |
| Assets Subject to finance lease | 9 | 18 |
| Receipts against deposit works | 7084 | 7777 |
| Creditors & other Liabilities | 22743 | 15228 |
| | <u>48893</u> | <u>46124</u> |
| Tangible Fixed Assets & Work in Progress | 35695 | 30557 |
| Long Term Advances & Deposits | 25 | 17 |
| Stores & Spares | 2025 | 2274 |
| Trade Debtors | 4626 | 3822 |
| Other receivables | 4609 | 5919 |
| Cash and Bank Balances | 1913 | 3535 |
| | <u>48893</u> | <u>46124</u> |

INVESTMENT

Rs. Million

| YEAR | 2005-06 | 2006-07 | 2007-08 | 2008-09 |
|-------------------------|-----------------|-----------------|-----------------|-----------------|
| DOP | 183.689 | 175.612 | 470.000 | 587.000 |
| STG | | 242.000 | 2000.000 | 2839.000 |
| ELR | 490.225 | 316.096 | 400.000 | 374.000 |
| SUB TOTAL | 673.914 | 733.708 | 2870.000 | 3800.000 |
| VILLAGE ELECTRIFICATION | 1407.063 | 2422.141 | 2065.000 | 500.000 |
| SUB TOTAL | 2080.977 | 3155.849 | 4935.000 | 4300.000 |
| CAPITAL CONTRIBUTION | 1904.207 | 1933.758 | 1600.004 | 1000.000 |
| GRAND TOTAL | 3985.184 | 5089.607 | 6535.004 | 5300.000 |

MEPCO has planned to invest Rs.587 million in Development of Power, Rs.2839 million in STG Programme to improve Grid System, Rs.600 million in Energy Loss Reduction Programme, Rs 1000 million in Village Electrification Programme and Rs.1500 million of Capital Contribution in the year 2008-09.

GENERAL

MEPCO strongly recommends for the application of the billing demand on domestic and commercial consumers having load above 20-Kw and amendments in Industrial supply under tariff B-2,B-3 and B-4 connections viz fixed charges are to be levied @ relevant tariff whichever higher of the following.

- a) Actual recorded maximum demand.
- b) 20-KW in domestic commercial and Industrial B-2 Tariff 501-KW of tariff B-3 and 5001-KW against the tariff B-4.

REASON FOR THE BILLING DEMAND

- a) Application of minimum/fix charges to the domestic and commercial consumers above 20-KW parallel to below 20-KW consumers of said tariff is unjustified. There should be different treatment for the higher load consumers having installed the TOU meter.
- b) There are huge numbers of seasonal connections in MEPCO which are switching to permanent tariff just to avail the relief of present clause of minimum fixed

charges. The instant clause for fixed charges is insufficient to meet the cross subsidy and loss for reservation of power for the Industrial consumers.

MULTAN ELECTRIC POWER COMPANY LIMITED
ESTIMATED SALES REVENUE ON THE BASIS OF PROPOSED TARIFF FOR FY 2008- 09

| CATEGORIES | SALES M.KWH | % to Total | Load Factor % | PROPOSED TARIFF | | REVENUE | | |
|---------------------------------------|-----------------|---------------|------------------|--------------------|---------------------|------------------|---------------------|----------------------|
| | | | | Fixed Charges | Variable Charges | Fixed Charges | Variable Charges | Total RS. MILLION |
| DOMESTIC (0-50) | 380.092 | 3.938 | | | | | | |
| DOMESTIC (1-100) | 810.470 | 8.398 | | | 2.10 | | 798.194 | 798.194 |
| DOMESTIC(101-300) | 2135.191 | 22.124 | | | 5.63 | | 4564.779 | 4564.779 |
| DOMESTIC (301-1000) | 1173.999 | 12.185 | | | 6.52 | | 13926.269 | 13926.269 |
| DOMESTIC (ABOVE 1000) | 248.026 | 2.570 | | | 8.96 | | 10521.678 | 10521.678 |
| SANCTIONED LOAD >20KW | | 0.000 | | | 9.96 | | 2470.896 | 2470.896 |
| TOD (PEAK) | | 0.000 | | | | | 0.000 | 0.000 |
| TOD (OFF PEAK) | | 0.000 | | | 365 | 9.21 | 0.000 | 0.000 |
| TEMP | | 0.000 | | | 365 | 5.86 | 0.000 | 0.000 |
| DOMESTIC | 4747.778 | 49.195 | | | | 9.96 | 0.000 | 0.000 |
| UPTO 100 UNITS | 81.521 | 0.845 | | | | | 32281.815 | 32281.815 |
| ABOVE 100 UNITS | 242.192 | 2.510 | | | 10.18 | | 830.071 | 830.071 |
| > 20 KW | 69.144 | | | | 10.33 | | 2502.386 | 2502.386 |
| > 20 KW TOD (PEAK) | 0.000 | 0.000 | 9.7 | 365 | 6.93 | 30.715 | 479.327 | 510.042 |
| > 20 KW TOD (OFF PEAK) | | 0.000 | 9.7 | 365 | 9.18 | 0.000 | 0.000 | 0.000 |
| TEMP | | 0.000 | | 365 | 5.83 | | | |
| COMMERCIAL | 392.857 | 4.071 | | | | 10.33 | 0.000 | 0.000 |
| INDUSTRIAL (B-1) UPTO 20 KW | 287.152 | 2.975 | | | | 30.715 | 3811.784 | 3842.499 |
| INDUSTRIAL (B-2 A) 21 KW500 KW | 720.022 | 7.461 | 26 | 365 | 8.43 | | 2421.341 | 2421.341 |
| INDUSTRIAL (B-2) TOD (PEAK) | 1.848 | 0.019 | 27.6 | 365 | 6.43 | 945.876 | 4631.369 | 5577.244 |
| INDUSTRIAL (B-2) TOD (OFF PEAK) | 9.242 | 0.096 | 27.6 | 365 | 9.18 | 4.987 | 16.972 | 21.959 |
| INDUSTRIAL (B-3) TOD (PEAK) | 173.141 | 1.794 | 64.9 | 355 | 5.83 | 0.000 | 53.900 | 53.900 |
| INDUSTRIAL (B-3) TOD (OFF PEAK) | 865.703 | 8.970 | 64.9 | 355 | 8.93 | 68.327 | 1546.536 | 1614.863 |
| INDUSTRIAL (B-4) TOD (PEAK) | 67.220 | 0.697 | 66.2 | 340 | 5.18 | 723.205 | 4486.295 | 5209.500 |
| INDUSTRIAL (B-4) TOD (OFF PEAK) | 336.101 | 3.483 | 66.2 | 340 | 8.68 | 350.012 | 583.623 | 933.635 |
| TEMP | | 0.000 | | 340 | 5.18 | 0.000 | 1741.761 | 1741.761 |
| INDUSTRIAL TOTAL | 2460.428 | 25.494 | | | | 0.00 | | |
| C-1 (A) | 1.912 | 0.020 | | | | 2092.407 | 15481.795 | 17574.202 |
| C-1 (B) | 33.439 | 0.346 | | | 8.43 | | 16.125 | 16.125 |
| C-1 (C) > <20Kw (PEAK) | 0.000 | 0.000 | 53 | 360 | 7.67 | | 256.553 | 256.553 |
| C-1 (C) >20Kw (OFF PEAK) | | 0.000 | | 360 | 9.17 | | 0.000 | 0.000 |
| C-2 11/33 KV (A) | 91.475 | 0.948 | 54.38 | 355 | 5.83 | | 0.000 | 0.000 |
| C-2 (B) > 20Kw & 5000 Kw (PEAK) | 0.974 | 0.010 | 58 | 355 | 7.35 | 70.237 | 672.549 | 742.785 |
| C-2 (B) < 20Kw & 5000 Kw (OFF PEAK) | | 0.000 | | 355 | 8.93 | 0.000 | 8.704 | 8.704 |
| C-3 | 0.776 | 0.008 | 0 | 355 | 5.45 | 0.000 | 0.000 | 0.000 |
| C-3 (B) > 5000Kw (PEAK) | 1.878 | 0.019 | | 340 | 7.18 | 0.000 | 5.570 | 5.570 |
| C-3 (B) > 5000 Kw (OFF PEAK) | 0.376 | 0.004 | | 325 | 8.68 | 0.000 | 16.301 | 16.301 |
| BULK SUPPLY TOTAL | 130.829 | 1.356 | | | | 5.18 | 0.000 | 1.946 |
| AGRICULTURE (SCARP) < 20 KW | 127.818 | 1.324 | | | | 70.237 | 945.226 | 1015.463 |
| AGRICULTURE (PRIVATE) | 1743.894 | 18.070 | 41.5 | 110 | 7.95 | 0.000 | 1016.438 | 1016.438 |
| AGRICULTURAL/SCARP > 20 KW (PEAK) | | 0.000 | | 355 | 5.30 | 537.248 | 9246.578 | 9783.825 |
| AGRICULTURAL/SCARP > 20 KW (OFF PEAK) | | 0.000 | | 355 | 9.20 | 0.000 | 0.000 | 0.000 |
| AGRICULTURAL D- (2)II | | 0.000 | | | 4.70 | 0.000 | 0.000 | 0.000 |
| AGRICULTURE (T/WELL) | 1871.712 | 19.394 | | | | 0.000 | 0.000 | 0.000 |
| PUBLIC LIGHTING - G | 32.971 | 0.342 | | | | 537.248 | 10263.016 | 10800.263 |
| RES. COLONIES - H | 11.602 | 0.120 | | | 9.95 | 0 | 328.135 | 328.135 |
| RLY. TRACTION - I | 2.788 | 0.029 | | | 9.20 | 0 | 106.768 | 106.768 |
| | 9650.966 | | | | 7.94 | 0 | 22.140 | 22.140 |
| | | | | | | 2730.607 | 63240.679 | 65971.285 |

MULTAN ELECTRIC POWER COMPANY LIMITED

PROPOSED TARIFF PER UNIT CATEGORY-WISE
TO MEET THE REVENUE REQUIREMENTS
FOR THE YEAR 2008-09

| TARIFF CATEGORY | BASE YEAR | PROPOSED TARIFF (Rs. Per kwh) |
|---------------------------------------|---------------|-------------------------------|
| | 2007-08 | 2008-09 |
| DOMESTIC | | |
| DOMESTIC (0-50) | | |
| DOMESTIC (1-100) | 1.6 | 2.1 |
| DOMESTIC (101-300) | 4.14 | 5.63 |
| DOMESTIC (301-1000) | 5.03 | 6.52 |
| DOMESTIC (ABOVE 1000) | 7.48 | 8.96 |
| FOR SANCTIONED LOAD < 20KW | 8.48 | 9.96 |
| TOD (PEAK) | | |
| TOD (OFF PEAK) | 7.73 | 9.21 |
| DOMESTIC TEMPORARY | 4.38 | 5.86 |
| | 8.48 | 9.96 |
| COMMERCIAL | | |
| UPTO 100 UNITS | | |
| ABOVE 100 UNITS | 8.73 | 10.18 |
| Above 20kw | 8.88 | 10.33 |
| TOD (PEAK) | 5.48 | 6.93 |
| TOD (OFF PEAK) | 7.73 | 9.18 |
| TEMPORARY | 4.38 | 5.83 |
| | 8.88 | 10.33 |
| INDUSTRIAL | | |
| INDUSTRIAL (B-1) | | |
| INDUSTRIAL (B-2) | 6.98 | 8.43 |
| INDUSTRIAL (B-2) TOD (PEAK) | 4.98 | 6.43 |
| INDUSTRIAL (B-2) TOD (OFF PEAK) | 7.73 | 9.18 |
| INDUSTRIAL (B-3) TOD (PEAK) | 4.38 | 5.83 |
| INDUSTRIAL (B-3) TOD (OFF PEAK) | 7.48 | 8.93 |
| INDUSTRIAL (B-4) TOD (PEAK) | 3.98 | 5.43 |
| INDUSTRIAL (B-4) TOD (OFF PEAK) | 7.23 | 8.68 |
| BULK SUPPLY | 3.73 | 5.18 |
| C-1 (A) | | |
| C-1 (B) | 6.98 | 8.43 |
| C-1 (C) < 20KW (PEAK) | 6.23 | 7.67 |
| C-1 (C) < 20KW (OFF PEAK) | 7.73 | 9.17 |
| C-2 (A) | 4.38 | 5.83 |
| C-2 (B) < 20KW & 5000 KW (PEAK) | 5.88 | 7.35 |
| C-2 (B) < 20KW & 5000 KW (OFF PEAK) | 7.48 | 8.93 |
| C-3 (A) | 3.98 | 5.45 |
| C-3 (B) < 5000KW (PEAK) | 5.73 | 7.18 |
| C-3 (B) < 5000KW (OFF PEAK) | 7.23 | 8.68 |
| | 3.73 | 5.18 |
| AGRICULTURE | | |
| AGRICULTURE (SCARP)>20KW | | |
| AGRICULTURE (PRIVATE) | 6.48 | 7.95 |
| SCARP AND AGRICULTURAL <20KW PEAK | 3.83 | 5.30 |
| SCARP AND AGRICULTURAL <20KW OFF PEAK | 7.73 | 9.20 |
| PUBLIC LIGHTING - G-1 | 3.23 | 4.70 |
| RES. COLONIES - H-1 | 8.48 | 9.95 |
| RLY. TRACTION - I | 7.73 | 9.20 |
| | 6.48 | 7.94 |
| MEPCO AV. TARIFF | 5.3631 | 6.8357 |

بہاول چلفی (58)

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