



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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Vice Chairman

No. NEPRA/TRF-24/HESCO-2003/10870-72
July 14, 2004

Subject: Determination of Tariff in respect of M/s. Hyderabad Electric Supply Company Ltd. (HESCO) (Case No. NEPRA/TRF-24/HESCO-2003)
Intimation of Determination of Tariff pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)

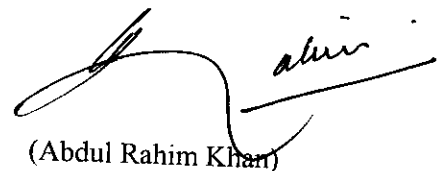
My dear Secretary,

Please find enclosed the determination of the Authority (32 pages) along with 10 Annexes thereto (25 pages) in Case No. NEPRA/TRF-24/HESCO-2003.

2. The determination is being intimated to the Federal Government for the purpose of notification of the approved tariff in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997) and Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.
3. Please note that only Order of the Authority at para 79 of the determination needs to be notified in the official gazette. The Order along with the Schedule of tariff, Annex:A and the terms and conditions thereof, Annex:B are reproduced for the purpose of clarity and are attached herewith.
4. The new schedule will be applicable to the consumers within the territorial jurisdiction of HESCO.

DA/As above.

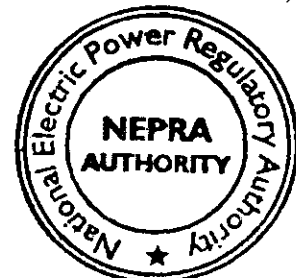
Yours sincerely,


(Abdul Rahim Khan)

The Secretary,
Cabinet Division,
Government of Pakistan
Cabinet Secretariat,
Islamabad

CC:

1. Secretary, Ministry of Water & Power, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.



ORDER OF THE AUTHORITY
IN CASE NO. NEPRA/TRF-24/HESCO-2003
TO BE NOTIFIED IN THE OFFICIAL GAZETTE

I. HESCO is allowed to charge its consumers such tariff as is indicated in the schedule of tariff for HESCO annexed to this determination as Annex-A.

II. The indexation factors to vary the consumer-end tariff on account of variation in Power Purchase Price shall be:

$$\Delta PP_1 = \frac{(PP_{a1} - PP_{e1})}{(1 - L_1)(1 + G_1)}$$

Where:

PP_{e1} is the estimated average PPP for year 1

PP_{a1} is the actual average PPP for year 1

L₁ is the target of average annual losses during year 1

G₁ is the targeted load growth for the year 1

Δ PP₁ is the variation in average sale rate due to change in Power Purchase price in year 1 to be indexed.

Average sale rate in year 2 (R_{t2}) would be equal to average sale rate in year 1 (R_{t1}) plus Δ PP₁. R_{t2} = R_{t1} + Δ PP₁

Average sales rate on 1st July 2004 as R_{t1} will be considered as Rs.4.0586 per kWh

Average sale rate on 1st July 2005 will be R_{t2} = R_{t1} + Δ PP₁

III. The break-up of Average Sales Rate attributable to various elements of the assessed revenue requirement during FY 05 is as under:-

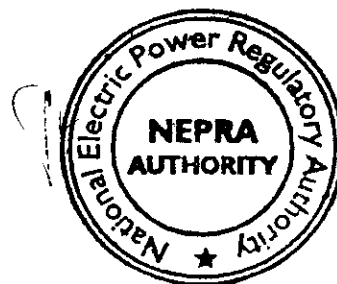
#	Description	Paisa / kWh
1.	Power Purchase Price (PPP)/(1-L*)	317.0720
2.	Distribution Charges	88.5135
	Average Sales Rate**	405.5855

* L = % Losses

** Net of subsidy from Government

IV. The annual adjustment on account of II above shall normally be made in the month of July. HESCO will submit its calculation for adjustment in average sale rate due to variation in PPP by 10th of July each year along with the proposed adjustment in

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consumer class rate. The Authority will determine the revised tariff within one week of receipt of information from HESCO. The variation in average sale rate will be distributed between the various consumer classes such that cross-subsidization is minimized as far as possible. Any tariff adjustment so determined by the Authority shall be deemed to have been notified by the Federal Government through the notification of this order.

V. The terms and conditions related to the schedule of tariff shall be those as attached to this determination as Annex-B.

VI. HESCO is allowed to charge the users of its system a use of system charge (UOSC) equal to:

i) Where only 132kVsystem is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.06)} \text{ paisa/kWh}$$

ii) Where only 11 kV distribution System is involved considering 9% distribution technical losses

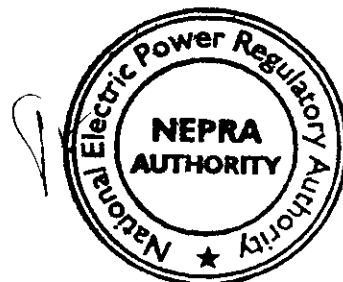
$$UOSC = \frac{DM * (1 - L)}{(1 - 0.09)} \text{ paisa/kWh}$$

iii) Where both 132 kV system and 11 kV distribution system is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.15)} \text{ paisa/kWh}$$

The use of system charges will be reset of each year by the Authority in the first week of July (starting July 2005) on the basis of revised targets for technical losses and overall losses.

VII. HESCO may file a tariff petition under the TS&P Rules at any time if it desires to readjust its base tariff in addition to the yearly adjustment on account of PPP mentioned in para II above.



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

A-1 GENERAL SUPPLY TARIFF - RESIDENTIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
a)	For Peak load requirement up to 20 kW			
i	Up to 50 Units	-		1.40 *
	For Consumption exceeding 50 Units			
ii	For first 100 Units	-		2.57 *
iii	For next 200 Units	-		3.47 *
iv	Above 300 Units	-		5.75 *
b)	For peak load requirement exceeding 20 kW			
	i) Two-part Regular	240.00		4.17 *
			Peak	Off-Peak
	ii) Time Of Day (Optional)	240.00	4.50 *	3.25 *

Under this tariff, there shall be minimum monthly charges at the following rates even if no energy is consumed.

- a) Single Phase Connections: Rs. 45/-
b) Three Phase Connections: Rs. 100/-

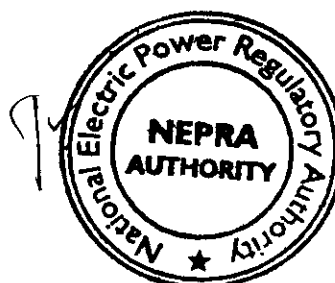
A-2 GENERAL SUPPLY TARIFF - COMMERCIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
a)	For peak load requirement of up to 20 kW			6.80 *
b)	For peak load requirement exceeding 20 kW			
	i) Regular	240.00		4.17 *
			Peak	Off-Peak
	ii) Time Of Day (Optional)	240.00	4.50 *	3.25 *

Under this tariff, there shall be minimum monthly charges at the following rates even if no energy is consumed.

- a) Single Phase Connections; Rs. 150/-
b) Three Phase Connections: Rs. 300/-

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

B - INDUSTRIAL SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
B1	UP TO 20 kW (at 400 Volts)	-	4.10 *	
B2	21-500 kW (at 400 Volts)	330.00	3.00 *	
B3	UP TO 5000 kW (at 11,33 kV) #	320.00	2.75 *	
B4	For all Loads (at 66 kV and above) #	310.00	2.50 *	
	Time Of Day		Peak	Off-Peak
B2	21-500 kW (at 400 Volts) (Optional)	330.00	4.50 *	2.75 *
B3	UP TO 5000 kW (at 11,33 kV)	320.00	4.00 *	2.50 *
B4	For all Loads (at 66 kV and above)	310.00	3.50 *	2.00 *

Note: # Must be converted to Time of Day Tariff.

For the B1 consumers there shall be minimum monthly charges of Rs. 70/kW of sanctioned load.

C - SINGLE POINT SUPPLY / FOR PURCHASE IN BULK BY A DISTRIBUTION LICENSEE

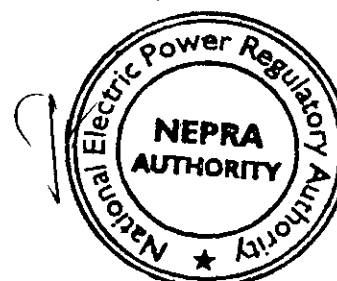
Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
C -1	For supply at 400/230 Volts	-	5.16 *	
a)	Peak load requirement of up to 20 kW	-	5.16 *	
b)	Peak load requirement above 20 kW	243.00	4.79 *	
C -2	For supply at 11,33 kV	238.00	4.51 *	
C -3	For supply at 66 kV and above (For all loads)	236.00	4.42 *	
	Time-Of-Day (Optional)		Peak	Off-Peak
C -1(b)	For supply at 400/230 Volts (Peak load requirement above 20 kW)	243.00	5.25 *	2.75 *
C -2	For supply at 11,33 kV	238.00	5.00 *	2.50 *
C -3	For supply at 66 kV and above (For all loads)	236.00	4.75 *	2.00 *

D - AGRICULTURE TARIFF

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
D-1	SCARP	-	5.06 *
D-2	Agricultural Tube Wells	70.00	2.75 *

The fixed charges under this tariff shall be recovered on the basis of sanctioned load in kilowatt.

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

E - TEMPORARY SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
E-1(i)	Residential Supply	-	5.75 *
E-1(ii)	Commercial Supply	-	5.75 *
E-2	Industrial Supply	-	5.50 *

For the categories of E-1(i&ii) above, the minimum bill of the consumers shall be Rs. 50/- per day subject to a minimum of Rs.500/- for the entire period of supply, even if no energy is consumed.

F - SEASONAL INDUSTRIAL SUPPLY TARIFF

125% of relevant industrial tariff

Note:

Tariff-F consumers will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of a new connection or at the beginning of the season. Once exercised, the option remains in force for at least one year.

G - PUBLIC LIGHTING

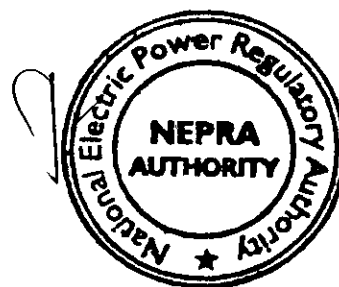
Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Street Lighting		6.58 *

There shall be a minimum monthly charge of Rs.500/- per month per kW of lamp capacity installed.

H - RESIDENTIAL COLONIES ATTACHED TO INDUSTRIAL PREMISES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Residential Colonies attached to industrial premises	-	6.19 *

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



TERMS AND CONDITIONS

(FOR SUPPLY OF POWER TO CONSUMERS)

PART - I

GENERAL DEFINITIONS

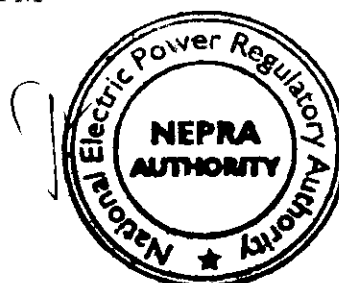
1. The Company, for the purposes of these terms and conditions means Hyderabad Electric Supply Company (HESCO) engaged in the business of distribution of electricity within the territory mentioned in the licence granted to it for this purpose.
2. "Month", unless otherwise defined for any particular tariff category, means a billing month of 30 days or less reckoned from the date of last meter reading.
3. "Minimum Charge", means a charge to recover the costs for providing service to consumers even if no energy is consumed during the month.
4. "Fixed Charge" means the part of sale rate in a two part tariff to be recovered on the basis of "Maximum Demand" in kilowatt on monthly basis except in the case of Agriculture tariff D where Fixed Charge shall be recovered on the basis of sanctioned load.
5. "Variable Charge" means the sale rate per kilowatt-hour as a single rate or part of a two-part tariff applicable to the actual units consumed by the consumer during a billing period.
6. "Maximum Demand" where applicable, means the maximum of the demand recorded in any month measured over successive periods each of 30 minutes duration except in the case of consumption related to Arc Furnaces where "Maximum Demand" shall mean the maximum of the demand recorded in any month measured over successive periods each of 15 minutes duration.
7. "Sanctioned Load" where applicable means the installed load in kilowatt as applied for by the consumer and allowed/authorized by the Company for usage by the consumer.
8. "Power Factor" where applicable means the ratio expressed as a percentage of the kilowatt-hours to the kilovolt ampere-hours consumed during the month. Power Factor shall be the ratio of kWh to kVAh recorded during the month or the ratio of kWh to the square root of sum of square of kWh and kVARh, i.e

$$P.F = \frac{kWh}{kVAh} = \frac{kWh}{\sqrt{(kWh)^2 + (kVARh)^2}}$$

9. Peak and Off Peak hours for the application of Time Of Day (TOD) Tariff shall be the following timings:

<u>DURATION</u>	<u>PEAK TIMING</u>	<u>OFF-PEAK TIMING</u>
Dec. to Feb (inclusive)	5 PM to 9 PM	Remaining 20 hours of the day
March to May (inclusive)	6 PM to 10 PM	-do-
June to Aug. (inclusive)	7 PM to 11 PM	-do-

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10. NTDC means the National Transmission and Dispatch Company.
11. The Authority means National Electric Power Regulatory Authority (NEPRA) constituted under the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

GENERAL CONDITIONS

Surcharge For Part Payment Or Late Payment Of Electricity Bills

“The Company shall, ordinarily, render bills to the consumers on a monthly basis for payment by the due date. The company shall ensure that bills are delivered to consumers at least seven days before the due date. If any bill is not paid by the consumer in full within the due date, a Late Payment Surcharge of 10% (ten percent) shall be levied on the amount billed excluding Govt. tax and duties etc.

PART – II

(Definitions and Conditions for supply of power specific to each consumer category)

A. GENERAL SUPPLY

Definitions and General Conditions

“General Supply”, for the application of this Tariff, means a supply for single-phase/three-phase appliances inclusive of both general and motive loads subject to the following:

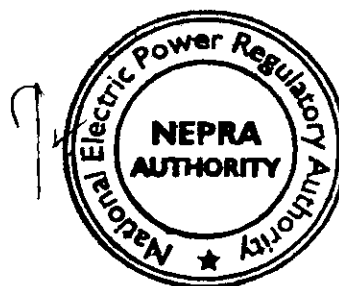
1. Single-Phase supply shall be given for loads up to 4 kW of sanctioned load.
2. In premises having a connected or sanctioned load exceeding 4 kilowatts supply shall be given at 3-phase 400 volts and above to allow a balanced distribution of load on the three phases.
3. In the event of a bill being rendered for consumption accumulated over a number of months, the average monthly consumption of the consumer, for the purpose of application of the notified rates shall be determined, by dividing the total consumption by the number of months to which the accumulated consumption relates.
4. The supply under this Tariff shall not be available for resale.

A-1 RESIDENTIAL

Special Conditions Of Supply

1. This Tariff is applicable for supply to residences, places of worship, approved religious and charitable institutions; and Government-sponsored educational institutions, educational institutions set up under public/private partnership, hospitals and dispensaries, etc., where,

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“Charitable Institution” for the purpose of application of this Tariff, is an institution, which works for the general welfare of the public on no profit basis and is registered with the Federal or Financial Government as such.

2. The General Supply consumers governed by tariff A-1 having peak load requirement exceeding 20 kW shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff of A-1(b).

A-2 COMMERCIAL

Special Conditions Of Supply

1. This tariff is applicable, for supply to all government and semi government offices and institutions, commercial offices and commercial establishments such as Shops, Hotels, Restaurants, Petrol Pumps, Service Stations, compressed natural gas filling stations, Private Hospitals, Clinics, Dispensaries, places of Entertainment like Cinemas, Theaters and Clubs; Rest Houses and Government Lodges, Private Educational Institutions, office of Lawyers, Solicitors, Law Associates and Consultants etc.
2. For consumers having peak load requirement of up to 20 kW and below, supply to three phase, 400 volts compressor and pump motors of the air conditioning equipment installed in centrally air conditioned premises and other three-phase, 400 volts apparatus of general utility in the premises mentioned above under this Tariff, shall be governed by the Industrial Tariff B-1. This condition shall not apply to consumers having a peak load requirement in excess of 20 kW.
3. Supply to motors operating projectors and sound apparatus in cinemas shall be charged at the Industrial Tariff B-1.
4. The General Supply consumers governed by tariff A-2 having peak load requirement exceeding 20 kW shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff of A-2(b).

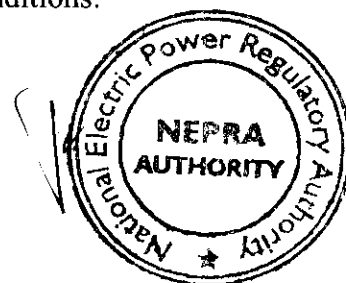
B INDUSTRIAL SUPPLY

General Definitions

1. “Industrial Supply”, means a supply for bona fide industrial purposes in factories including the supply required for the offices and for normal working of the industry and also for water pumps and tube-wells operating on three phase 400 volts, other than those meant for the irrigation or reclamation of agricultural land.
2. For the purposes of application of this tariff an “Industry” means a bona fide undertaking or establishment engaged in manufacturing and/or processing of goods.

General Conditions

This Tariff shall be applicable subject to the following conditions:



- i) Where applicable, the average Power Factor of a consumer at the point of supply shall not be less than 90 percent. In the event of the said Power factor falling below 90 percent, the consumer shall pay a penalty of two percent increase in the fixed charges corresponding to one percent decrease in the power factor below 90 percent. The fixed charges for the purpose of calculating the penalty for low power factor shall, however, be determined with reference to maximum demand during the month.
- ii) An industrial consumer shall have the option, to switch over to seasonal tariff-F, provided his connection is seasonal in nature as defined under tariff-F, and he undertakes to abide by the terms and conditions of tariff-F and pays the difference of security deposit rates previously deposited and those applicable to tariff-F at the time of acceptance of option for seasonal tariff. Seasonal tariff will be applicable from the date of commencement of the season, as specified by the customers at the time of submitting the option for Tariff-F. Tariff-F consumers will have the option to convert to corresponding Regular industrial Tariff category and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.
- iii) The supply under this Tariff shall not be available for resale.

B – 1 SUPPLY AT 400 VOLTS THREE-PHASE AND/OR 230 VOLTS SINGLE PHASE

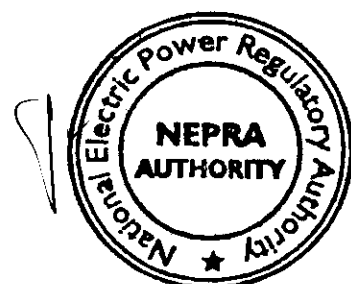
Special Conditions

1. This tariff is applicable for supply to Industries having sanctioned load up to and including 20 kilowatts.
2. The supply at one point under this Tariff shall also be available to Poultry Farms, Hatcheries and Breeding Farms.

B – 2 SUPPLY AT 400 VOLTS

Special Conditions

1. This tariff is applicable for supply to Industries having sanctioned load from 21 to 500 kW.
2. The supply under this tariff shall also be available to Poultry Farms, Hatcheries and Breeding Farms.



3. The Industrial consumers governed by tariff B-2 shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff.

B-3 SUPPLY AT 11 kV AND 33 kV

Special Conditions Of Supply

1. This tariff is applicable for supply to Industries having sanctioned load up to 5000 kW.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the remaining cost of service connection shall be regulated by the NEPRA eligibility criteria. In case of supply through an independent feeder drawn directly from the Grid Station, the cost of outgoing 11 kV Circuit Breakers in the Grid Station as a dedicated system under the eligibility criteria shall also have to be paid for by the prospective consumer.
4. All industrial supply consumers governed by Tariff B-3 shall be converted to two-part Time Of Day (T.O.D) tariff.

B-4 SUPPLY AT 66 kV and Above

Special Conditions Of Supply

1. This tariff is applicable for supply to Industries for all loads.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. In case the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus for receiving and controlling the supply, or, alternatively,

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pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of remaining cost of service connection shall be regulated by NEPRA Eligibility Criteria.

4. All industrial supply consumers governed by Tariff B-4 shall be converted to two-part Time Of Day (T.O.D) tariff.

C SINGLE-POINT SUPPLY FOR PURCHASE IN BULK BY A DISTRIBUTION LICENSEE

“Single-Point Supply” for the purpose of this Tariff, means a supply given at one point to a licensee for the purpose of further distribution within its respective exclusive territory and jurisdiction.

General Conditions

1. Average Power Factor of the consumer governed by this tariff, at the point of supply shall not be less than 90 percent. In the event of the said power factor falling below 90 percent, the consumer shall pay a penalty of two percent increase in the fixed charges corresponding to one percent decrease in the power factor below 90 percent.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice will be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days the fixed charges shall be assessed on proportionate basis for actual number of days between the date of old reading and the new reading.

Single-Point Supply consumers governed by Tariff C having peak load requirement exceeding 20 kW shall have the option to convert to Time-of-Day (TOD) Tariff under the respective category till 30th June 2007, thereafter conversion to T.O.D metering would become mandatory.

C-1 SUPPLY AT 400 VOLTS

Special Conditions

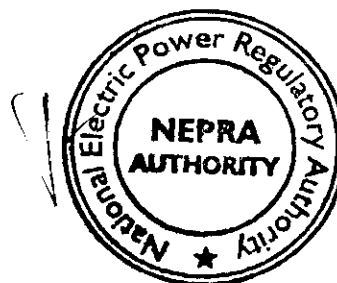
1. This Tariff is applicable to purchase of bulk supply at 400 volts.
2. Single-point supply consumers governed by Tariff C-1 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

C-2 SUPPLY AT 11 kV AND 33 kV

Special Conditions Of Supply

1. This tariff is applicable to purchase of bulk supply at 11kV and 33kV.

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2. The supply under this Tariff shall not be available to a consumer unless he, provides, to the satisfaction and approval of the Company, his own Transformer, 11/33 kV Circuit Breakers and other necessary equipment for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the remaining cost of service connection shall be regulated by the Company's Abridged Conditions of Supply in force from time to time.
3. Single-point supply consumers governed by Tariff C-2 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

C-3 SUPPLY AT 66 kV, 132 kV

Special Conditions Of Supply

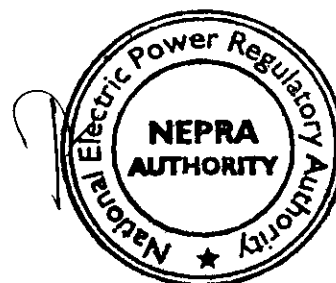
1. This Tariff is applicable to purchase of bulk supply at 66kV and 132kV.
2. In case the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of remaining cost of service connection shall be regulated by NEPRA Eligibility Criteria.
3. Single-point supply consumers governed by Tariff C-3 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

D AGRICULTURAL SUPPLY

"Agricultural Supply" means a supply for Lift Irrigation Pumps and/or Tube-wells intended solely for irrigation or reclamation of agricultural land or forests, and include supply for lighting of the tube-well chamber.

Special Conditions Of Supply

1. This tariff shall apply to:
 - i) Reclamation and Drainage Scheme Tube-wells under Salinity Control and Reclamation Projects (SCARP),
 - ii) bonafide forests, agricultural tube-wells and lift irrigation pumps for the irrigation of agricultural land.
 - iii) Tube-wells meant for aqua-culture, viz. fish farms, fish hatcheries and fish nurseries.



- iv) Tube-wells installed in a dairy farm meant for cultivating crops as fodder and for upkeep of cattle.
3. The fixed charges under this Tariff shall be recovered on the basis of sanctioned load in kilowatt.
 4. The fixed charge will represent the minimum monthly charge under this Tariff even if no energy is consumed during a month.
 5. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
 6. The lamps and fans consumption in the residential quarters if any attached to the tube-wells shall be charged entirely under General Supply at Tariff A-1.
 7. The supply under this Tariff shall not be available to consumer using pumps for the irrigation of parks, meadows, gardens, orchards, attached to and forming part of the residential, commercial or industrial premises in which case the corresponding General Supply Tariff A-1, A-2 or Industrial Tariff B-1, B-2 shall be respectively applicable.
 8. The supply under this tariff shall not be available for resale.

E – 1 TEMPORARY GENERAL SUPPLY

Temporary General Supply means a supply given to persons temporarily on special occasions such as ceremonial, religious gatherings, festivals, fairs, marriages and other civil or military functions. This also includes supply to touring cinemas and persons engaged in construction works for all kinds of single phase loads. For connected load exceeding 4 kW, supply may be given at 400 volts (3 phase) to allow a balanced distribution of load on the 3 phases. Normally, temporary connections shall be allowed for a period of 3 months however this can be extended on three months basis subject to clearance of outstanding dues.

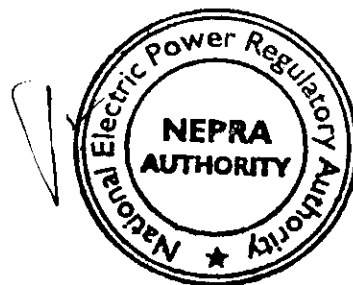
Special Conditions Of Supply

1. This tariff shall apply to Residential and Commercial consumers for temporary supply.
2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.
3. The supply under this Tariff shall not be available for resale.

E 2 TEMPORARY INDUSTRIAL SUPPLY

“Temporary Industrial Supply” means a supply given to an Industry for the bonafide purposes mentioned under the respective definitions of “Industrial Supply”.

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Special Conditions Of Supply

1. This Tariff is applicable to consumers who have been granted distribution licence for the purpose of further distribution within their respective jurisdiction.
2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.
3. Normally, temporary connections shall be allowed for a period of 3 months, however this may be extended on three months basis subject to clearance of outstanding dues.
4. The supply under this Tariff shall not be available for sale.

F SEASONAL INDUSTRIAL SUPPLY

“Seasonal Industry” for the purpose of application of this Tariff, means an industry which works only for part of the year to meet demand for goods or services arising during a particular season of the year. However, any seasonal industry running in combination with one or more seasonal industries, against one connection, in a manner that the former works in one season while the latter works in the other season, thus running throughout the year, will not be classified as a seasonal industry for the purpose of the application of this Tariff.

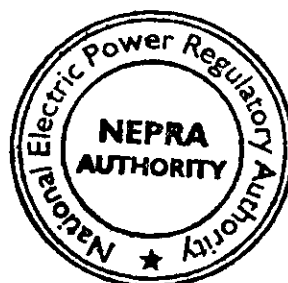
Definitions

1. “Year” means any period comprising twelve consecutive months.
2. All “Definitions” and “Special Conditions of Supply” as laid down under the corresponding Industrial Tariffs shall also form part of this Tariff so far as they may be relevant.

Special Conditions Of Supply

1. This tariff is applicable to seasonal industry.
2. Fixed Charges per kilowatt per month under this tariff shall be levied at the rate of 125% of the corresponding regular Industrial Supply Tariff Rates and shall be recovered only for the period seasonal industry actually runs subject to minimum period of six consecutive months during any twelve consecutive months. The condition for recovery of Fixed Charges for a minimum period of six months shall not, however, apply to the seasonal industries, which are connected to the Company’s Supply System for the first time during the course of a season.
3. The consumers falling within the purview of this Tariff shall have the option to change over to the corresponding Industrial Supply Tariff, provided they undertake to abide by all the conditions and restrictions, which may, from time to time, be prescribed as an integral part of those Tariffs. The consumers under this Tariff will have the option to convert to Regular Tariff and vice versa. This option can

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be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.

4. All seasonal loads shall be disconnected from the Company's Supply System at the end of the season, specified by the consumer at the time of getting connection, for which the supply is given. In case, however, a consumer requires running the non-seasonal part of his load (e.g., lights, fans, tube-wells, etc.) throughout the year, he shall have to bring out separate circuits for such load so as to enable installation of separate meters for each type of load and charging the same at the relevant Tariff.
5. Where a "Seasonal Supply" consumer does not come forward to have his seasonal industry re-connected with the Company's Supply System in any ensuing season, the service line and equipment belonging to the Company and installed at his premises shall be removed after expiry of 60 days of the date of commencement of the season previously specified by the consumer at the time of his obtaining new connection/re-connection. However, at least ten clear days notice in writing under registered post shall be necessary to be given to the consumer before removal of service line and equipment from his premises as aforesaid, to enable him to decide about the retention of connection or otherwise. No Supply Charges shall be recovered from a disconnected seasonal consumer for any season during which he does not come forward to have his seasonal industry re-connected with the Company's Supply System.

G PUBLIC LIGHTING SUPPLY

"Public Lighting Supply", means a supply for the purpose of illuminating public lamps.

Definitions

"Month" means a calendar month or a part thereof in excess of 15 days.

Special Conditions Of Supply

The supply under this Tariff shall be used exclusively for public lighting.

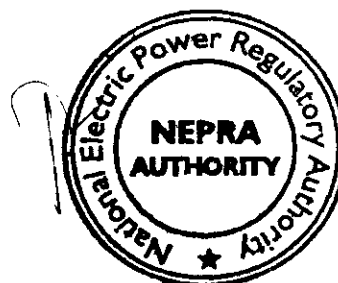
H RESIDENTIAL COLONIES ATTACHED TO INDUSTRIES

This tariff is applicable for one point supply to residential colonies attached to the industrial supply consumers having their own distribution facilities.

Definitions

1. "One Point Supply", for the purpose of this Tariff, means the supply given at one point to Industrial Supply Consumers for general and domestic consumption in the residential colonies attached to their factory premises, for a load of 5 kilowatts and above, for the purpose of further distribution to various persons residing in the attached residential colonies and also for the purpose of perimeter lighting in the attached residential colonies.

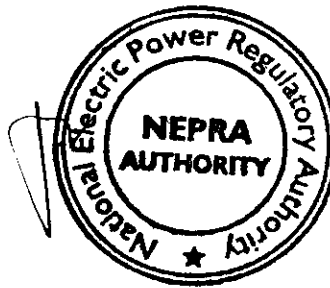
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2. "General and Domestic Consumption", for the purpose of this Tariff, means consumption for lamps, fans, domestic applications, including heaters, cookers, radiators, air-conditioners, refrigerators and domestic tube-wells.
3. "Residential Colony" attached to the Industrial Supply Consumer, means a group of houses annexed with the factory premises constructed solely for residential purpose of the bonafide employees of the factory, the establishment or the factory owners or partners, etc.

Special Conditions Of Supply

1. The supply under this Tariff shall not be available to persons who meet a part of their requirements from a separate source of supply at their premises.
2. The supply under this Tariff shall not be available for resale to any other person.



NATIONAL ELECTRIC POWER REGULATORY AUTHORITY

Wednesday, July 14, 2004

Case No. NEPRA/TRF-24/HESCO-2003

Petitioner

Hyderabad Electric Supply Company Limited
Old State Bank Building, Thandi Sarak, Hyderabad

Intervenors

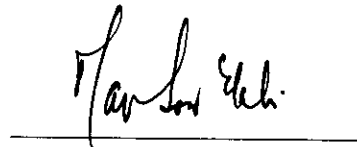
1. Consumer Rights Commission of Pakistan, # 270, Street # 37,
G-9/1, Islamabad.

Authority

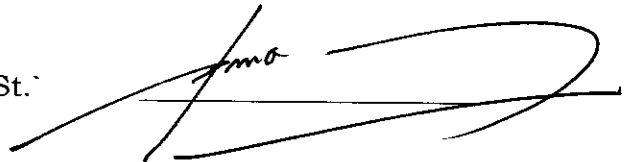
Fazlullah Qureshi
Member



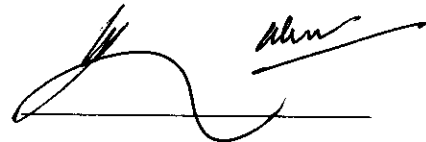
Mansoor Elahi
Member



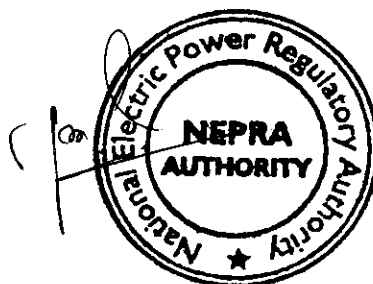
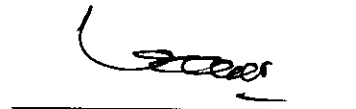
Sardar Muhammad Sharif Khan, 'T.St.'
Member



Abdul Rahim Khan
Member / Vice Chairman



Lt. General (R) Saeed uz Zafar
Chairman

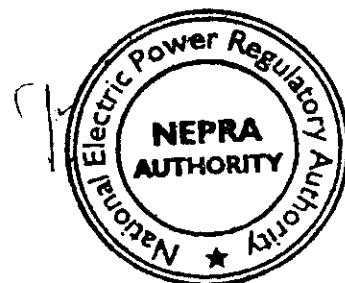


BACKGROUND

Hyderabad Electric Supply Company Limited (HESCO) a public limited company was granted Distribution Licence No. 05/DL/2002 on April 23, 2002 by National Electric Power Regulatory Authority (the "Authority") to engage in distribution of electric power in its service territory as set out in the Distribution Licence for a term of 25 years. HESCO has been organised to take over all the properties, rights, assets, obligations and liabilities of area of its operation as set out in the Distribution Licence. In accordance with the terms of its licence, HESCO filed a tariff petition with NEPRA under Tariff Standards and Procedure Rules 1998 (TS&PR) for the determination of its tariff as an independent distribution company consequent to the unbundling of WAPDA. The petition was registered as Case No. NEPRA/TRF-24/HESCO-2003.

2. The Authority admitted the petition on July 28, 2003. Salient features of the petition were advertised in the newspapers to seek the views and comments of all interested persons and stakeholders in the tariff-setting process. Persons desirous of seeking a more active participation were invited to become parties to the proceedings as intervenors. In addition individual invitations were sent to the Federal and Provincial Government functionaries, Chambers of Commerce, Industries and Agriculture, Representatives of Professional bodies and Experts in the fields for soliciting their views on the petition. In response thereof, one communication and four requests for leave to intervene were received which were accepted by the Authority. A public hearing was conducted on December 08, 2003 at Islamabad in which an opportunity was given to all the parties and interested persons to be heard in person.

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SUBMISSIONS OF HESCO

3. HESCO's in its tariff petition sets out the tariff methodology and requests for a level of required revenues and timetable for readjustment of consumer-end tariffs to achieve a cost reflective design.

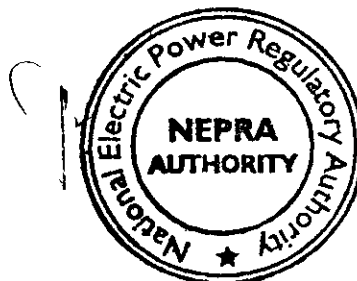
4. HESCO submitted that since WAPDA, IPPs and ex-WAPDA entities have not been paying income tax to the government, HESCO has (after privatization) assumed *tax exemption status* in its submission. HESCO however, clarified that if the government decides to impose taxes in future then this assumption would need to be revisited.

5. HESCO sought an *average increase of 171 Paisa (38.8%)* based on a number of assumptions, the most significant among those is related to the power purchase price. The inflation rate has been assumed as 4%. It was further submitted that the tariff Petition is based on recovery of HESCO's revenue requirement that essentially comprises of:

- i). Prudently incurred Operations and Maintenance cost;
- ii). Depreciation; and
- iii). A reasonable Return on Assets (ROA).

Note: -HESCO has assumed a 4.71% *pre-tax rate of return* on fixed assets with the assumption that the company will not be paying any income taxes.

6. HESCO submitted that *cost reflective tariffs* (both at an aggregate level and by consumer category or class) will benefit both, the consumers and HESCO as it will result in getting the funding for investments required to improve service quality & reliability, network expansion of HESCO's distribution network and promote the financial sustainability of HESCO to the ultimate benefit of consumers.



7. HESCO has requested that the average distribution margin for the first year and the subsequent years within the control period be *based on a formula*. The suggested formula is reproduced as Annex-1.

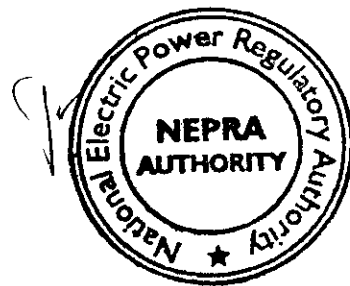
8. HESCO has further requested that to make the tariff structure simple and transparent, there should be a transparent and predictable formula for setting and revising tariffs. It has further requested that HESCO be allowed to readjust consumer-end tariff to *eliminate cross-subsidies* between various consumers' categories for the provision of incentives for HESCO to bring in the operating efficiencies, reduce commercial losses and to procure electricity efficiently from generators within the constraints of the Single Buyer Plus Model as approved by the Authority.

SUBMISSIONS OF INTERVENORS

Consumer Rights Commission of Pakistan (CRCP)

9. CRCP was of the view that the determination of distribution margin and consumer-end tariff for distribution companies has direct impact on its consumers. CRCP stated that tariff formula proposed for determination of distribution margin and consumer-end tariff includes Power Purchase Price (PPP) i.e., the cost of WAPDA generation companies and NTDC. It was therefore suggested that the Authority should not determine tariff of GEPCO without determining the tariff of GENCOs and NTDC.

10. CRCP further observed that HESCO's tariff petition sets out a formula based methodology for determination of tariff, however, it is silent regarding the inclusion or exclusion of cost of inefficiencies in the tariff leaving an impression that cost reflective tariff may include cost of inefficiency in the tariff as well. CRCP also inquired



about the cost reflective nature of Petition and requested the Authority to make sure that costs of inefficiencies of HESCO are not passed on to the consumers under the cover of cost reflective tariff.

11. CRCP submitted that the quality of service is also an important parameter, which should be kept in view while determining the tariff of the Distribution companies. CRCP also pointed out that the determination of distribution margin is a regulatory decision which should be decided in such a manner that the consumers' interest is protected.

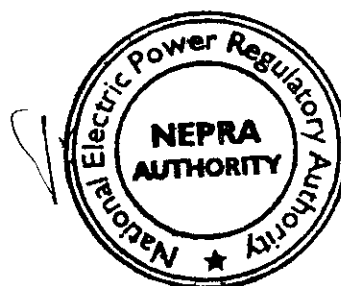
SUBMISSIONS OF COMMENTATORS:

Hyderabad Chamber of Commerce & Industry (HCCI)

12. Hyderabad Chamber of Commerce & Industry strongly opposed any increase in the electricity rates, which in its opinion were already very high as compared to the rates in other countries. According to HCCI the existing industrial rates being charged from the industrial consumer is about 10 to 12 cents per unit as against 2 cents in other Islamic countries i.e. Dubai/Sharja. Such a high tariff would make the local industry uncompetitive in the forthcoming W.T.O regime. HCCI suggested decreasing industrial tariff by 20%.

The Sukkur Chamber of Commerce & Industry (SCCI)

13. SCCI opposed the increase in tariff of electric power which in its opinion was against government's policies. According to SCCI due to the highest rate of electricity in Pakistan the prices of consumer item were very high. SCCI requested NEPRA to keep in view the W.T.O regime while deciding the petition of HESCO and further requested to reduce 20% electricity rate for industrial consumers.



Ministry of Water and Power

14. Ministry of Water and Power showed its concerns over high distribution losses. It also suggested for the revision of distribution margin and stated that although it has a very close relation with the capital investment cost but the same may not be more than 7% to 8% in the near future.


Liberal Forum

15. Liberal Forum in its observations submitted that up till now there has been uniformity in tariff among all the eight DISCOs and different kinds of subsidies were available in the tariff. Liberal Forum suggested that these subsidies should be very clearly shown as a part of the tariff which may create a difference in the way people use electricity and an appreciation of what is being done for everybody. Liberal Forum further stated that after determination of separate tariff petitions, there may be serious repercussions of different tariffs for people living in different areas of the country. It is therefore suggested that the Government needs to have some sort of a policy to address this issue.

Energy Wing

16. Energy Wing Planning and Development Division has referred to the tariff petitions of 8 distribution companies and pointed out that there was disparity among the DISCOs with regard to sale price/tariff of electricity that ranged between Rs. 4.21/kWh to Rs. 5.93/kWh. Although each of the DISCO purchased power from NTDC at uniform rate but the level of losses made different sale rates for different companies.

17. According to Energy Wing in the absence of appropriate metering at 132 kV and 11 kV systems it was difficult to identify the



quantum of losses at 132 kV and 11 kV systems with respect to technical and non-technical losses. In order to give a meaningful target for loss reduction to various discos there was need to determine the losses at various levels, which would meet a massive metering system to be introduced at every Pole Mounted Transformers (PMT) and at every grid station.

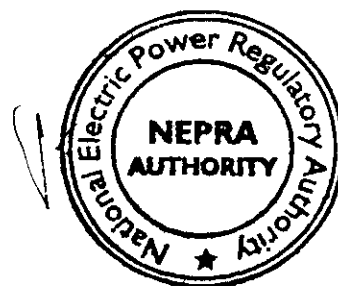
18. In Energy Wing's opinion different tariffs for different regions would create socio-economic and political problems, therefore, a uniform tariff is needed to remain at least for a transition period of 7-10 years.

19. The Energy Wing has proposed that the capability in capacity to utilize the proposed quantum of investment by the DISCOs needs to be looked into before NEPA approves it. Furthermore, NEPA should take a principle decision regarding Rate of Return on investment/assets in consultation with various stakeholders.

ISSUES ARISING OUT OF THE PROCEEDINGS

20. The following main issues arising out of the proceedings as well as those considered relevant to the determination of HESCO are discussed in the succeeding paragraphs:

- I. Distribution Charge
 - a) Sales Growth
 - b) Distribution Losses
 - c) Distribution Margin
- II. Power Purchase Price (PPP)
- III. Revenue Accrual and Average Sale Rate
- IV. The use of system charges/wheeling charges.
- V. Tariff Structure



I. **Distribution Charge**

a) Sales Growth

21. HESCO has forecasted its annual sales growth as 1.47% during FY 04 to FY 08. The growth rate assumed by HESCO is on the lower side and needs to be corrected. In view of expected higher growth rate in GDP and improvement in losses the sale for FY 05 is being estimated on the basis of 5.6% growth.

b) Distribution Losses

22. HESCO had proposed distribution losses target of 32% for the year (FY 04). This target was based on the estimates of previous year FY 03 as 33.4%. The actual losses for FY 03 were however, recorded as 34.9%. The Authority is aware of the fact that due to inadequate investment in capacity expansion of the distribution system infrastructure the envisaged improvement in the losses was not fully realized in FY 04. The Authority considers that a two percent reduction during FY 03 and FY 04 taken together would be realistic, therefore the target for the FY 05 is set as 32.9%. HESCO has not included the losses of 132 kV system. Presently detailed information regarding losses at 132 kV system has not been provided, therefore, an accurate assessment of losses in the split up 132 kV system is not possible. Considering the comparative configuration of 132 kV HESCO system the losses for this part of the distribution system are estimated as 6%. As such an overall loss level of 38.9% is set as target for FY 05.

c) Distribution Margin

23. HESCO has claimed Distribution Margin (DM) to be calculated on the basis of forecasted sales for the year to cover its O&M costs, Depreciation, and Return on Rate Base as per the following formula:



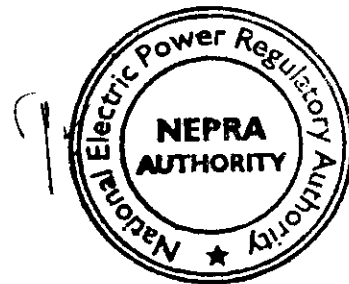
$$\text{Avg. Margin}_i (\text{Rs per kWh}) = \frac{\text{O \& M}_i + \text{Depreciation}_i + \text{ROA}_i}{\text{Total Unit Sales}_i}$$

24. The cost components and return comprising of the revenue requirement relating to distribution margin are analyzed in the following paragraphs to assess the DM for FY 05.

- i) O & M Cost
- ii) Depreciation
- iii) Other Income
- iv) Investment Program
- v) Rate Base
- vi) Return on Return Base

i) O&M Cost

25. The actual O&M expenses inclusive of post retirement benefits and bad debts written off excluding depreciation during the previous three years FY 01, FY 02 and FY 03 are Rs. 6,707 million, Rs. 3,952 million and Rs.5,269 million respectively. The post retirement benefits for the employees on the strength of HESCO as an independent company have been based on the actuarial study carried out by the Company. The O&M costs excluding the write offs, subsidy for agriculture and cost of abandonment of project for FY 04 and FY 05 are projected on the basis of actual trend of the past years. The O&M costs estimated by HESCO do not include the increase in salaries & wages recently announced by the Federal Government which will be applicable to the employees of HESCO. The provision for salaries wages and other benefits estimated for FY 04 have been increased by 15% in order to incorporate the increase announced in June 2004 with respect to the National Budget 2005. Consequently, the O&M costs for FY 05 have been assessed as Rs. 2,632 million as a cost element of the RR.

ii) Depreciation

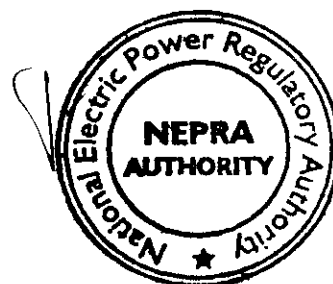
26. The assets of HESCO have been financed mainly through equity, debt and deferred credit (Consumers' capital contribution/Deposit works). The deferred credit is amortized over the life of the assets and this amortization is recognized as other income. HESCO has not made such a provision in its petition. The depreciation (net of amortization) for the FY 05 is estimated as Rs.672 million.

iii) Other Income

27. Other income includes: i) Other income from operations including income from meter rentals and late payment surcharge; ii) Other income from non-operating activities that includes profit on bank deposit, sale of scrap, and any income, which is not covered under aforementioned heads.

28. During the last three years FY 01, FY 02 and FY 03 the income from non-operating activities recorded in the financial statements is Rs.150 million, Rs.156 million and Rs.70 million respectively. HESCO has however not accounted for such income in the calculation of its distribution margin. Based on the analysis of each item of income, the Authority considers Rs. 100 million as a reasonable estimate of income from non-operating activities for FY 05.

29. The annual accounts indicate no clear trend of variation in late payment surcharge (LPS) during the past few years or a linkage with other factors. The LPS in FY 01, FY 02 and FY 03 was Rs.638 million, Rs.470 million and Rs.493 million respectively. The LPS should normally correlate to the amount billed, however, in the instant case a direct relationship cannot be established. The Authority considers Rs. 500 million as a reasonable estimate of income from late



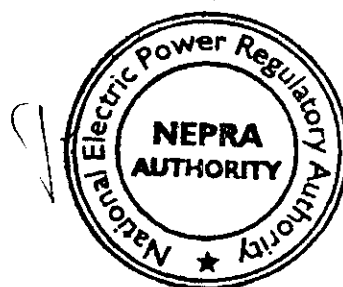
payment surcharge For FY 05. As regards the income from meter rentals and services during the past three years it remained in the range of Rs.32 million to Rs.55 million. The Authority considers Rs.60 million as a reasonable assessment of other income from meter rental and services during FY 05.

iv) Investment Program

30. HESCO has proposed an investment program of Rs. 6,748 over the next five years. HESCO intends to finance its investment programme to the extent of Rs. 3,411 million through consumer contribution and remaining Rs.3,337 million through borrowing. HESCO has not provided the corresponding financing plan for its estimated investment. The Authority is constrained to assume that the investment program envisaged by HESCO will be financed through borrowing. Considering, this investment to be financed through loans, only Rs. 3,337 million is relevant for the assessment of Revenue Requirement. HESCO intended to initiate its proposed investment programme from the beginning of FY 04. The Authority considers the estimated investment level is reasonable and within the capacity of HESCO. The Authority is of the view that HESCO has carried out its investment according to its programme. The year wise investment program proposed by HESCO is as under:

Description	FY 04	FY 05	FY 06	FY 07	FY 08
Expansion	376	402	428	455	484
Distribution Rehabilitation	184	262	290	258	198
Total	560	664	718	713	682
Consumers Contribution	599	638	679	724	771
	1159	1302	1397	1437	1453

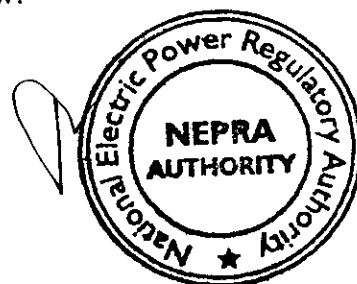
31. The Authority is however aware that HESCO under the control of integrated WAPDA was not able to carry out the extension or augmentation of its system capacity commensurate with its load growth. Moreover in order to upgrade its distribution system for the



purpose of achieving the performance standards prescribed by NEPRA, HESCO will have to carry out an extensive program of refurbishment, expansion and augmentation of its 132 kV sub-transmission and 11 kV/400 volts distribution system.

32. The Authority has examined the investment program details (Annex-2) as provided by HESCO in its petition. HESCO in its petition has submitted that the total investment inclusive of consumers' contribution credits is expected to be Rs.6,748 million over the next 5 years. Out of this amount the portion that HESCO would have to finance (and therefore relevant to tariff-setting) is Rs.3,337 million which would be funded through borrowing, new connections amounting to Rs.3,411 million through consumers' deposits.

33. However due to the prescription of the "eligibility criteria" for consumers of distribution companies notified vide SRO 743(I)/2003 dated July 26, 2003, prospective consumers will be required to pay the initial cost relating to installation and connection charges of the dedicated distribution system only. Development of the Common Distribution System (CDS), or reinforcement of the existing CDS is required to accommodate the prospective consumers into the Distribution system. Therefore investment in such extension or reinforcement of Distribution system would have to be financed either by the concerned Distribution Company or in the case of initial cost deposit by the consumer will have to be returned to the consumer treating it as an agreed financial arrangement. On an overall basis for the 5 years, the estimated expansion programme is reasonable within the HESCO's capability to carry it out. Therefore, the proposed investment program of Rs.1,302 million for FY 05 is being allowed as such. The tariff being allowed to the company can be adjusted on the basis of actual investment during the next review.



v) Rate Base (RB)

34. The assets of HESCO have been financed mainly from Equity, Long terms Loans, Deferred Credits (Consumer's Capital Contribution), security deposits by consumers and provision of employees' retirement benefits. HESCO is not entitled to a return on the portion of assets which were previously financed by the consumers' contribution, consumers' security deposits and provision of employees' retirement benefits. HESCO however, has demanded the return on the total net fixed assets including those contributed by the consumers and the provision of employees' retirement benefits. The Authority determines that the Rate Base for HESCO would be the net average fixed assets in operation (excluding deferred credits) less security deposits and provision for employees' retirement benefit during FY 05 as Rs.8,070 million.

vi) Return on Rate Base (RORB)

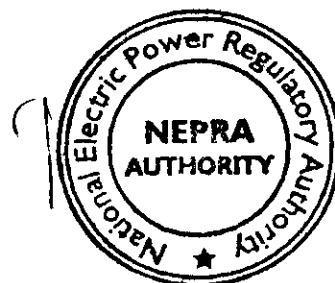
35. HESCO has requested for a 3.45% return on profit rate base to meet its cash flow requirement. The rate base has been proposed to be worked out according to the following formula:

$$ROA_t = \text{Profit Rate Base}_t \times \text{Average Rate of Return}$$

Where:

Profit Rate Base_t is defined for year as the sum of (i) the value of Old Asset Base and New Asset Base (net of accumulated depreciation at the beginning of the year; and (ii) the capital expenditures for the year (New Investments), in accordance with the approved investment programme.

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.



36. The Authority has allowed a level of return in the recently determined tariff for FESCO as a distribution utility unbundled from WAPDA. The Authority considers that the operating environment and risks faced by HESCO and FESCO are similar therefore the same methodology is being adopted in the case of HESCO (Annex-3). Using a cost of debt as 8.7%, cost of equity as 14.95% and Debt-Equity ratio of 60:40, in a tax-exempt scenario, the Weighted Average Cost of Capital (WACC) is calculated according to the following formula:

$$WACC = \{k_e \times (E / V)\} + \{k_d \times (1-T_c) (D / V)\}$$

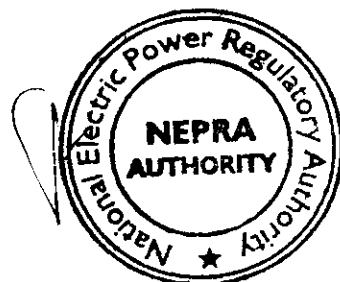
where K_e and K_d are cost of equity and debt, E/V and D/V are equity and debt ratios respectively, and T_c is the tax rate.

Therefore for the purpose of estimation of Revenue Requirement a WACC of 11.06% is being used and taxes if any that HESCO may be required to pay in the future will be considered as a pass-through item. The WAAC rate is applied to an asset base of Rs. 8,070 million to arrive at a Return on assets of Rs. 893 million.

37. According to the costs and returns allowed in the preceding paragraphs, the Revenue Requirement for calculating Distribution Margin for the test year i.e. FY 05 is estimated as under:

	<u>Million Rs</u>
General Establishment & Admin.	1753
Repair Maintenance & Other Misc.	878
Depreciation	673
Other income	(660)
Return on Rate Base (RORB)	893
	<hr/>
Distribution Margin	= 3537

The Distribution Revenue Requirement per unit sold or
distribution Margin = Paisa 88.5135/kWh for FY 05.



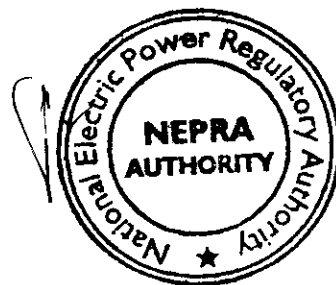
II. **Power Purchase Price (PPP)**

38. The eight DISCOs unbundled out of WAPDA distribution system (Ex-WAPDA DISCO) will purchase power from the Central Power Purchase Agency (CPPA) established within NTDC. The Power Purchase Price (PPP) will be computed as a transfer price in accordance with the mechanism laid down in the determination of the Authority dated April 13, 2004 with respect to tariff for NTDC reproduced as Annex-4 to this determination. The Power Purchase Price in accordance with the aforesaid mechanism shall include wheeling charges i.e. cost of transportation of power by NTDC to various DISCOs in addition to the weighted average cost of power purchased from the specified generation companies, which are authorized to sell power to NTDC.

39. According to the information provided by HESCO and NTDC in their respective tariff petitions and after adjustment for reasonability of cost, the transfer price is estimated for FY 05 as a two part charge varying for each billing period. Applying the transfer charge price to units consumed and peak load recorded with respect to purchase by HESCO in each month the expected purchase cost is calculated for the year, which divided by the total units expected to be purchased during the year calculates to the estimated annual average power purchase price of HESCO for FY 05 as Rs. 2.811/kWh. This rate is considered for estimating the power purchase price to be incorporated in calculation of Revenue Requirement as well as the base for future annual indexation of PPP. Estimation attached as Annex-5.

Indexation for PPP

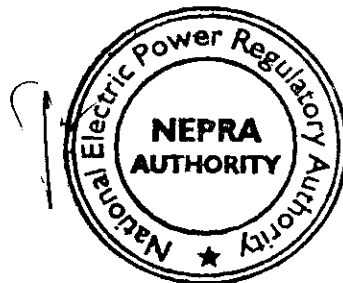
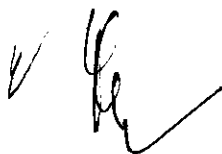
40. It is observed that the monthly energy component of the PPP would be lower during the period May to October due to



availability of more hydel power and consequent lower requirement of thermal generation. On the other hand the PPP would be comparatively higher during the period November to April, when there is low hydel power generation and lower availability of gas for power generation.

41. Under normal fuel price conditions and past trend of sales mix the variation in monthly PPP due to Generation Source Mix (GSM) variation would result in surplus revenue during the early five months of the financial year July to November and last month i.e. June, whereas during the other months of the financial year i.e. December to May, there would be a deficit. The surplus in the early part of the FY would be adequate to compensate for the later months. As such, HESCO is financially better placed to deal with the power purchase price fluctuation due to variation in GSM during the year. Allowing the consumer-end sale price to fluctuate on account of variation in PPP due to GSM changes would create unnecessary volatility in the consumer-end rates and at the same time deny the utility the surplus in the early months of the FY to compensate for increased expense during the later year. Such variation would create an unnecessary burden on the consumer without giving any advantage to the utility.

42. Based on the rationale explained in detail in its determination dated June 9, 2004 for tariff of unbundled FESCO, the Authority considers that power purchase variation on account of fuel price variations during the year will not have a significant adverse impact to the extent that would require an immediate corresponding indexation of the consumer-end tariff. However the Authority is convinced that in case of a difference between the power purchase price estimated in the revenue requirement and the actual PPP experienced, the tariff for the next year needs to be adjusted to cater



for any variation in Power Purchase cost arising out of variations in PPP during the year. A surplus in revenue on account of lower annual power purchase cost of HESCO needs to be transferred to the consumer in the shape of a reduction in consumer-end tariff (CET) for the next year while HESCO has to be compensated for any deficit in revenue on account of higher annual power purchase cost through corresponding increase in CET for the next year. The power purchase price will be indexed annually according to the mechanism discussed in the succeeding paragraphs after taking into consideration any adjustment made during the year in the base tariff consequent to a tariff revision made pursuant to the Tariff Standards and Procedure Rules 1998.

43. The indexation mechanism for variation in power purchase price will be applied as follows:

Variation in cost for year 1 due to PPP variation:

$$\Delta CP_1 = UPe_1 * (PPa_1 - PPe_1)$$

Indexation in sale rate due to PPP, applicable at the beginning of year 2:

$$\Delta PP_1 = \frac{\Delta CP_1}{USe_2} = \frac{UPe_1 (PPa_1 - PPe_1)}{USe_2}$$

Where:

UPe_1 is the estimated annual units to be purchased in year 1

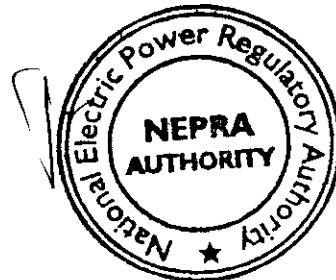
PPe_1 is the estimated weighted average power purchase price for year 1

PPa_1 is the actual weighted average power purchased price for year 1

USe_1 is the estimated annual units sold in year 1

UPe_2, PPe_2, PPa_2 , and USe_2 , would denote the same parameters as above for the year 2.

44. On the basis of available information the weighted average price (PPP) inclusive of the wheeling charges and the weighted average charge for generation by all the existing power producers, selling their electricity to CPPA as faced by HESCO is estimated as Rs.2.811/kWh for the FY 05 and the same has been used for



assessing the Revenue Requirement for FY 05 and determining the consumer-end tariff.

45. The aforesaid mechanism is further simplified as under:-

Variation in sale rate due to change in Power Purchase Price

$$\Delta PP_1 = \frac{\Delta CP_1}{USe_2} = \frac{UPe_1(PPa_1 - PPe_1)}{USe_2}$$

Replacing USe_2 with $USe_1 (1+G)$, where G is the annual growth rate in units sale estimated for year 2 over year 1.

$$\Delta PP_1 = \frac{UPe_1(PPa_1 - PPe_1)}{USe_1(1+G_1)}$$

Replacing USe_1 with $Upe_1 (1 - \% \text{ of losses})$

$$\Delta PP_1 = \frac{UPe_1(PPa_1 - PPe_1)}{Upe_1(1-L_1)(1+G_1)}$$

Where $L_1 = \% \text{ losses for the year 1}$

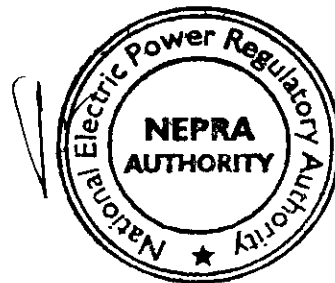
$$\Delta PP_1 = \frac{PPa_1 - PPe_1}{(1-L_1)(1+G_1)}$$

46. Average sale rate in year 2, Rt_2 would be equal to average sale rate in year 1, Rt_1 plus ΔPP_1 or $Rt_2 = Rt_1 + \Delta PP_1$

Average sale rate on 1st July 2004 Rt_1 will be considered as Rs.4.0586/kWh based on an overall revenue assessment of Rs.16,217 million and expected units sold as 3,996 million kWh for FY 05.

Average sale rate on 1st July 2005 will be $Rt_2 = Rt_1 + \Delta PP_1$

ΔPP_1 can be either positive or negative depending on whether on an annual bases the power purchase price has increased or decreased during the related year.



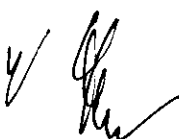
47. The target of losses for the next year i.e. FY 06 shall be set at the time of review for allowing adjustment on account of variation in Power Purchase Price to vary the consumer-end tariff.

III. Revenue Accrual and Average Sale Rate

48. The overall revenue requirement would be equal to the annual power purchase cost expected to be incurred by HESCO and the Distribution Revenue Requirement (DRR). This overall Revenue Requirement is equal to Rs. 21,921 million; comprising of Rs.18,384 million as power purchase cost inclusive of transmission charge, (Annex 5) plus Rs.3,537 million as distribution margin cost or DRR.

49. The revenue accruing to HESCO on the prevailing rates is estimated as Rs.17,510 (Annex-6) against the estimated revenue requirement of Rs.21,921 million for FY 05. The annual revenue shortfall arising from the application of prevailing sale rates has to be met through either an increase in sale rate or a direct subsidy from the Government if the financial viability of HESCO is to be maintained. The ability of a DISCO to pay its Power Purchase charges to NTDC on a regular basis and meeting with its operating costs has a direct bearing on the ability of NTDC to completely and timely pay its charges to generation companies. Therefore a perpetual default in payment obligation to NTDC by a DISCO can lead to a disruption of the billing and payment arrangement envisaged between generation companies, NTDC and distribution companies. This can not only lead to a discontinuance of service to the consumers fed by the defaulting DISCOs but can also disturb the transitional arrangement to move towards competition under the single buyer plus period.

50. To restore and maintain the financial viability of the deficient distribution companies, tariff reform must be accompanied by financial support from the Government to bridge the Revenue Gap

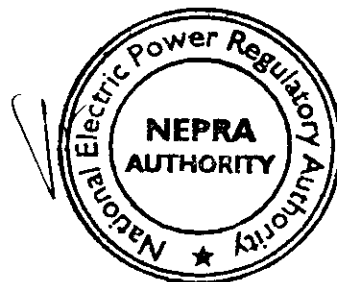
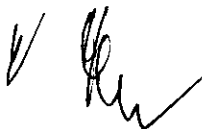


during the transition period of reformation. Such support is essential if the efficient restructuring of the utilities along the lines of corporatization, commercialization, privatization and introduction of possible competition as envisaged in the reform is to be achieved without a major disturbance in provision of electricity services in the country.

51. The revenue short fall can be met from internal cost generation by **increasing the rates of consumers** or by means of financial support **through a direct subsidy from the Government**. Before making a choice it would be appropriate to examine the reasons leading to the mismatch between revenues and cost. Such an analysis is particularly important in view of the revenue mismatch for the same tariff being positive and leading to a reduction in rates in the case of five DISCOs unbundled from WAPDA for which consumer-end tariffs have been determined recently by the Authority; namely, FESCO, IESCO, GEPCO, MEPCO and LESCO.

52. The four main factors leading to inadequacy of revenue accrual to meet costs within the prevailing tariff in the instant case are:

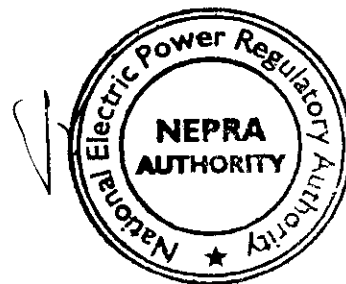
- (a) High percentage of consumption in the cross-subsidized category such as the residential consumers consuming less than 300 units a month and inadequate compensation from the cross-subsidizing consumers such as commercial and industrial consumers.
- (b) Low load density requiring extensive distribution system. The existing distribution system needs to be reinforced with respect to augmentation of capacity of sub transmission lines, grid stations, distribution lines and distribution transformers. The distribution system in its



present state is contributing towards high technical losses as compared to other distribution companies.

- (c) Major portions of consumers are located in remote rural areas. With the existing resources HESCO is not able to effectively check and monitor metering, prevent pilferage and ensure disconnection of defaulting consumers. Consequently there is a higher level of overall losses as compared to other DISCOs.
- (d) Compared with other DISCOs the law and order situation within the territorial boundary of HESCO makes it difficult to avail of effective and timely assistance from the local administration to achieve proper metering, prevent pilferage and ensure disconnection of defaulting consumers who have been permanently disconnected. Consequently there is a higher level of overall losses as compared to other DISCOs where the law and order situation is much better and consumers generally have a better sense of civic responsibility such as in IESCO and FESCO.

53. The Authority is of the view that it would not be realistic to expect HESCO to eliminate in a short period of one or two years, all the causes leading to a financial inadequacy which are in its control. It is observed that HESCO will not be able to meet its costs through the existing tariff even if costs and revenue assessment is based on a 10% overall losses (the level achieved by the best DISCO in this context i.e. IESCO) and 100% recovery of bills is made. The Authority therefore considers that for the year 2004-05, the shortage between the revenue accrual and the costs faced by the company will have to be met from outside sources to maintain the capability of HESCO to pay its power purchase liability and meet operating costs. For the ensuing years HESCO will have to be provided with adequate

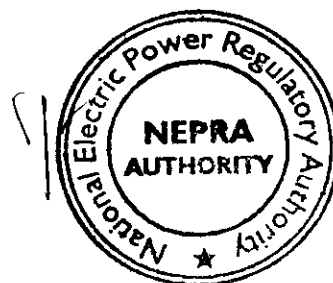
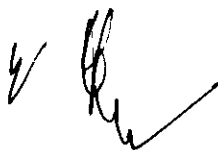


investment to upgrade its technical system. It will also require administrative support to reduce its controllable costs and gradually narrow down the revenue gap only to the extent of subsidization of the residential and agricultural consumers.

54. As regards the question of meeting the revenue gap through an increase in rates, the Authority observes that the only consumer category where an increase in rates is advisable (so as to avoid further distortion in rates and reduce cross-subsidies as much as possible) would be residential consumers consuming less than 300 units a month and the agricultural consumers. However keeping in view the economic and social policy objectives of the Government an abrupt increase in the rates of the aforementioned consumer classes may not be desirable.

55. The Authority has been trying to reduce cross-subsidization during periodic tariff adjustments on account of fuel price variations and revision of base tariff but the GOP has on several occasions attenuated the impact of an increase in rates of low-income residential and agriculture consumers by providing a direct subsidy to compensate for a part of the increase.

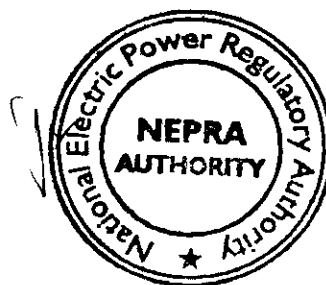
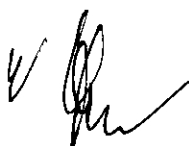
56. The Authority is also aware that (a) an increase in the rates of agriculture consumers beyond a certain level is not advisable as such rates may lead to a shift to diesel operated pumps and thereby further exacerbate the revenue accrual of a DISCO having substantial consumption in agriculture usage; (b) the increase in rates of consumers falling below the poverty line, consuming up to 100 units a month is not advisable because such increase has a direct effect of further reducing the income of low income groups thereby vitiating the efforts of GOP towards poverty reduction. (c) the consumers consuming up to 300 units a month falling in the middle



income group are already paying up to Rs. 3.47 per kWh which at the moment, is quite close to the average sale rate. Further abrupt substantial increase in the rates of such consumers is not advisable till a proper cost of service study is made and the burden gradually reduced and equitably distributed to reflect the respective cost.

57. The Authority has allowed the rates of residential consumer consuming less than 300 units per month to remain the same in the case of five other DISCOs unbundled from WAPDA while determining their independent tariff. If the rates of residential consumers in this category have to be increased for HESCO it will have to be 102 percent more than the existing rate for lifeline consumers, 56 percent more for consumer consuming up to 100 units/month and 41 percent more for consumers consuming up to 300 units/month. The Authority is of the view that tariff adjustments should be gradual, because an abrupt increase in applicable tariff to different consumer categories, particularly residential and agriculture, would create difficulty in maintaining public support for the power sector reform. Therefore during the initial phases of independent functioning, the restructured Ex-WAPDA Distribution companies should be financially supported by the Government. The rates of the residential and agricultural consumers of HESCO are therefore not being increased and the deficit in revenue is expected to be made good through a direct subsidy from the government.

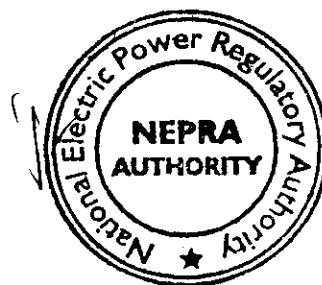
58. The Authority considers that instead of increasing the consumer end rates and then reducing the same through a Government subsidy a better alternative would be to provide a subsidy from the Government through a direct payment to NTDC on behalf of the affected DISCO to the tune of estimated annual shortage in Revenue. In this manner the subsidy will be transparent and its quantum known in advance so that timely adjustment in the



Government budget can be made. Moreover such an action would avoid delay in actual realization of the power supply charges due to NTDC.

59. The Authority has made a reduction in the sale rates of Industrial Consumers class for the five DISCOs in the province of Punjab. HESCO is serving a major portion of the consumers of the province of Sindh. If the rates of the industrial consumer class in HESCO are increased it will create a differential in rates which may not only lead to a shift of manufacturing industrial establishments and business within provinces but also to a shift towards self generation. Thus an adverse effect on the Revenues of the DISCO is expected in addition to the undesirable adverse impact on the economic activity in the province of Sindh excluding the area of Karachi city served by KESC already having a comparative lower level of industrial and business activity. The rates of the industrial consumer classes of HESCO are therefore being maintained at the same level as for similar consumer classes in the service area of Punjab.

60. Similarly with respect to Agriculture consumers the rates of Agriculture (private tubewell) usage in the province of Punjab have been lowered to remove the disparity in the agriculture consumer rates between the different provinces. The rates for agriculture consumer class of HESCO can therefore not be maintained at a level higher than that of similar consumers in Punjab. In case the rates of Agriculture consumers of HESCO are further increased the agriculture consumers of HESCO may resort to Diesel operated pumps or self generation. This will not only adversely affect the revenues of HESCO but create further economic distortion due to uneconomic diesel usage. The private agriculture consumer class rates in HESCO are



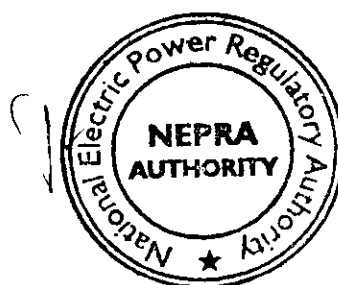
therefore, being maintained at the same level as that allowed to similar consumers in Punjab.

61. The Authority therefore decides to allow the rates as indicated at Annex-9. The Revenue accrual from these rates expected during the year FY 05 is Rs.16,217 million (Annex-7).

62. The difference of Rs.5,704 million between Revenue requirement of Rs.21,921 and Revenue accrual Rs.16,217 million equals to Rs.1.4275/kWh sold.

63. This deficit is required to be provided as subsidy by the Federal Government either (a) to HESCO directly at the rate of Rs.1.4275/kWh sold at consumer-end or (b) to NTDC at the rate of Rs.475.33 million per month as part payment of Power Purchase Charges on behalf of HESCO. This subsidy should be mentioned directly in the bills of the consumers as *"each kWh consumed is being subsidized by the Federal Government to the extent of Rs. 1.4275/kWh"*.

64. The Authority recommends that the subsidy payment be made to NTDC on behalf of HESCO as monthly payment of capacity charges to the extent of Rs.475.33 million per month. The Authority also recommends to the Government that 50% of the estimated annual subsidy on behalf of the three DISCOs HESCO, QESCO and PESCO be placed at the disposal of NTDC in the beginning of the year as a fund to be used for initiating the transfer pricing arrangement during the single buyer plus model as prescribed in the tariff determination for NTDC (Annex-4). The remaining 50% may be paid to NTDC in 3 quarterly installments on 1st October 04, 1st January 05 and 1st April 05.



65. The revised consumer class wise rates are compared with the existing rates in Annex-8. The revenue accruing to HESCO on the existing and proposed rates is given as per Annex-6 and Annex-7 respectively.

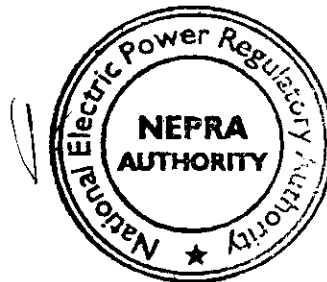
IV. **The use of system charges/wheeling charges.**

66. HESCO may be required to transport power to bulk power consumers (BPCs) purchasing power from generating companies, selling outside the CPPA single buyer arrangement or from other distribution companies. In such cases HESCO will be allowed to charge for the cost incurred on transportation of power involved and billing / retail sale service provided to the BPC or another Distribution company.

67. The distribution charge which HESCO is allowed to charge its own consumers on average, however also includes pilferage losses being caused due to inefficiency of the host DISCO or the DISCO providing the transportation service through its distribution system. This charge can not be imposed on the consumer who is buying power from some other source therefore the distribution charge has to be adjusted to exclude pilferage losses. The revenue requirement leading to distribution charge should therefore be divided on expected units sold based on technical losses only. Correcting for technical losses instead of overall losses the distribution charge is adjusted to arrive at the use of system charge (UOSC).

$$UOSC = DM \times \frac{(1 - \% \text{ overall losses})}{(1 - \% \text{ technical losses})}$$

68. The technical losses relating to transportation of bulk power over 132 kV system are estimated as 6%, and within the distribution system as 9% for FY 05. Therefore Distribution charge

would be adjusted for each case depending on which part of HESCO system is involved as under:

- i) Where only 132kV system is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.06)} \text{ paisa/kWh}$$

- ii) Where only 11 kV distribution System is involved considering 9% distribution technical losses

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.09)} \text{ paisa/kWh}$$

- iii) Where both 132 kV system and 11 kV distribution system is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.15)} \text{ paisa/kWh}$$

Where Distribution charge for the year FY 05 is set as paisa 88.5135/kWh. 'L' is the overall percentage losses target for the year as 38.9% for FY 05.

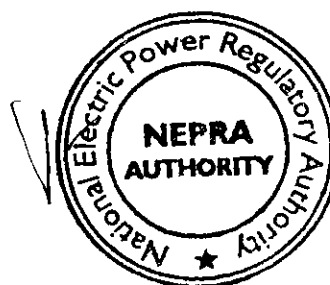
V. Tariff Structure

69. Existing tariff structure for various categories of consumers in the HESCO distribution area is as follows:

Fixed Charge	Sales of Power	Fuel Adjustment Surcharge	Hydel Surcharge	Additional Surcharge
Rs. / kW/ Month	Ps. / kWh	Ps. / kWh	Ps. / kWh	Ps. / kWh

70. HESCO has proposed the following consumer-end tariff structure without providing the corresponding terms and conditions of tariff: -

Consumer Category-Specific Tariff = PPP + Category Specific Distribution Margin

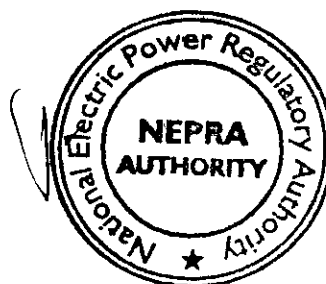


71. The Authority considers that a radical revision of the existing tariff pattern without carrying out a detailed study may not be fair to the consumers consuming less units per month. Till such a study is carried out by HESCO and the matter examined in detail, the existing pattern is allowed to continue with respect to the lower consumption class. However for simplicity and reduction of intra class subsidization one consumption slab of residential consumers i.e. above 1000 units is being eliminated. Thus all of the consumption above 300 units per month will be charged at a uniform rate. For the higher consumption residential class i.e. having peak load requirement of above 20 KW, a two part tariff is being introduced. Also for this class of consumer an optional tariff based on time of day metering is being allowed i.e. residential consumers having peak load requirement of above 20 kW is being given the option to shift to time of day tariff.

72. Similarly the commercial consumer class consuming up to and above 100 units per month are being combined into one class and an option for shifting to time of day metering is being allowed to commercial consumers having peak load requirement of above 20 KW.

73. With respect to elimination of all the surcharges viz., fuel adjustment surcharge, hydel surcharge and Additional surcharge, these are being merged into one component of tariff i.e., Variable Charge whereas the Fixed Charge a component is being retained, thus the tariff rates as appearing in the bill of consumers are simplified to contain only fixed charges (where applicable) and variable charges.

74. With respect to elimination of all the surcharges viz., fuel adjustment surcharge, hydel surcharge and Additional surcharge, these are being merged into one component of tariff i.e., Variable Charge whereas the Fixed Charge a component is being retained, thus



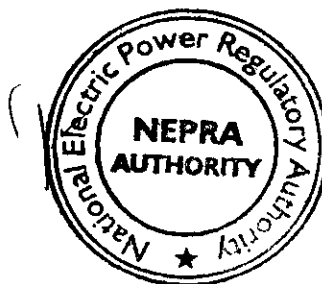
the tariff rates as appearing in the bill of consumers are simplified to contain only fixed charges (where applicable) and variable charges.

75. Moreover in view of the non-licensee status being no longer allowed to distribute or sell power under the NEPRA Act the definition of Bulk supply tariff needs to be changed. Any person who purchases power from the DISCO in bulk and resells to its consumers (e.g. Housing Colonies and MES installations) will require a Distribution Licence. The definition and categorization has therefore been changed as single point supply for further resale by a Distribution Licensee. The terms and conditions of tariff have also been revised to accommodate the above mentioned changes.

76. HESCO is however directed to undertake a study for the assessment of the cost of service to each consumer category and consumption class separately and to submit a proposal for a revision of the tariff structure and the associated terms and conditions of tariff on the basis of the study. The revised structure shall be considered by the Authority for approval and applicability.

VI. **Period of Multi-Year Tariff**

77. HESCO has proposed a Multi-year Tariff (MYT), for five years starting from FY 04 to remain effective till June 08. The Authority considers that a multi-years price cap incentive tariff (MYT) regime is not appropriate for distribution companies which are expected to remain in Government ownership and management for a considerable period of time. The MYT can be considered for those distribution companies which are expected to be partially divested and handed over to private management in the near future. Therefore the matter of MYT for HESCO will be considered when HESCO



becomes a priority for privatization. HESCO's request for a Multi-year Tariff is therefore, not accepted.

VII. Formula for Tariff setting and its revision.

78. Based upon the discussion and analysis in the preceding paras the break-up of Average Sales Rate attributable to various elements of the assessed revenue requirement during FY 05 is as under:-

#	Description	Paisa / kWh
1.	Power Purchase Price (PPP)/(1-L*)	317.0720
2.	Distribution Charges	88.5135
	Average Sales Rate**	405.5855

* L = % Losses

** Net of subsidy from Government

Order

79.

I. HESCO is allowed to charge its consumers such tariff as is indicated in the schedule of tariff for HESCO annexed to this determination as Annex-9.

II. The indexation factors to vary the consumer-end tariff on account of variation in Power Purchase Price shall be:

$$\Delta PP_1 = \frac{(PP_{a1} - PP_{e1})}{(1 - L_1)(1 + G_1)}$$

Where:

PPe1 is the estimated average PPP for year 1

PPa1 is the actual average PPP for year 1

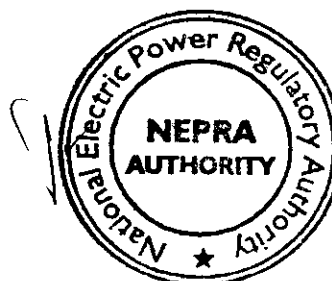
L1 is the target of average annual losses during year 1

G1 is the targeted load growth for the year 1

Δ PP1 is the variation in average sale rate due to change in Power Purchase price in year 1 to be indexed.

Average sale rate in year 2 (Rt2) would be equal to average sale rate in year 1 (Rt1) plus Δ PP1.

$$Rt2 = Rt1 + \Delta PP1$$



Average sales rate on 1st July 2004 as Rt1 will be considered as Rs.4.0586 per kWh

Average sale rate on 1st July 2005 will be Rt2 = Rt1 + Δ PP1

III. The break-up of Average Sales Rate attributable to various elements of the assessed revenue requirement during FY 05 is as under:-

#	Description	Paisa / kWh
1.	Power Purchase Price (PPP)/(1-L*)	317.0720
2.	Distribution Charges	88.5135
	Average Sales Rate**	405.5855

* L = % Losses

** Net of subsidy from Government

IV. The annual adjustment on account of II above shall normally be made in the month of July. HESCO will submit its calculation for adjustment in average sale rate due to variation in PPP by 10th of July each year along with the proposed adjustment in consumer class rate. The Authority will determine the revised tariff within one week of receipt of information from HESCO. The variation in average sale rate will be distributed between the various consumer classes such that cross-subsidization is minimized as far as possible. Any tariff adjustment so determined by the Authority shall be deemed to have been notified by the Federal Government through the notification of this order.

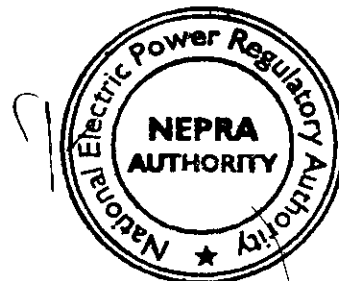
V. The terms and conditions related to the schedule of tariff shall be those as attached to this determination as Annex-10.

VI. HESCO is allowed to charge the users of its system a use of system charge (UOSC) equal to:

i) Where only 132kV system is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.06)} \text{ paisa/kWh}$$

V



- ii) Where only 11 kV distribution System is involved considering 9% distribution technical losses

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.09)} \text{ paisa/kWh}$$

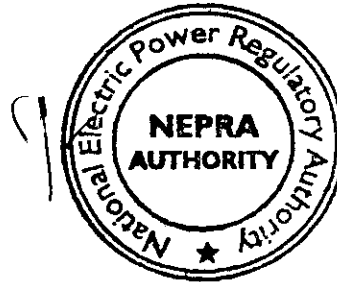
- iii) Where both 132 kV system and 11 kV distribution system is involved

$$UOSC = \frac{DM * (1 - L)}{(1 - 0.15)} \text{ paisa/kWh}$$

The use of system charges will be reset of each year by the Authority in the first week of July (starting July 2005) on the basis of revised targets for technical losses and overall losses.

VII. HESCO may file a tariff petition under the TS&P Rules at any time if it desires to readjust its base tariff in addition to the yearly adjustment on account of PPP mentioned in para II above.

VIII. The tariff set out as per Annex-9 and terms and conditions thereof (Annex-10) and the mechanisms for adjustment of average sale rate on account of variation in power purchase price as prescribed in this determination be sent to the Federal Government for notification under Section 31(4) of the Act.



DISTRIBUTION MARGIN FORMULA

(Proposed by the petitioner)

The average distribution margin for each year within the control period would be set in accordance with HESCO's expected revenue requirements, based on the following formula:

$$Avg. Margin_t = O \& M_t + \frac{Depreciation_t + ROA_t}{TotalUnitSales_t}$$

Where:

O&M_t 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, salary, mandatory social insurance payments, administration, management and other operating costs related to HESCO's distribution and supply business. The O&M components for the first year of the control period would be established on the basis of forecast demand and inflation. In subsequent years, the O&M components would be determined in the following manner:

$$O \& M_t = (1 + \frac{CPI_t - X_t}{100}) * O \& M_{t-1}$$

Where:

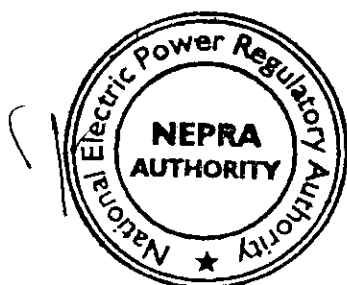
CPI_t is the forecasted increase or decrease in Consumer Price Index during year t;

X_t is the efficiency factor for year t;

O&M_{t-1} is the O&M component for the previous year (t-1)

Within the rebase period, this component would be automatically adjusted for the inflation expected in the subsequent year.

Depreciation_t; The depreciation (for year t) will be calculated based on; (i) the value of assets existing prior to the privatization, set at a fixed amount (Old Asset Base); plus (ii) new assets invested by HESCO (New Asset Base, as



specified within an investment programme approved by NEPRA). The assets will be depreciated for a specified number of years based on a straight-line method.

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

$$ROA_t = ProfitRateBase_t * Rateof Return$$

Where:

Profit Rate Base_t is defined for year t as the sum of (i) the value of Old Asset Base and New Asset Base (net of accumulated depreciation at the beginning of the year; and (ii) the capital expenditures for the year (New Investments), in accordance with the approved investment programme.

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 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 kWh) of HESCO across all customer categories is forecast for each year of the price control. This forecast will be used to determine the average distribution margin per unit (Rs/kWh) needed to cover the revenue requirement expected for each year.



(Annexure -3)

INVESTMENT PROGRAMME

To improve the system quality and reliability and to extend the distribution network to prospective consumers HYDERABAD ELECTRIC SUPPLY COMPANY LIMITED has plan to execute two type of Five-year investment plan. These are as follows:

- DISTRIBUTION EXPANSION PLAN (2004-2008)
- DISTRIBUTION REHABILITATION PLAN (2004-2008)

DISTRIBUTION EXPANSION (2004-08)

The objective of this project is to extend the power system to prospective industrial, commercial, domestic and agriculture customers during the five-year period (2004-8), which in turn increases the socio economic developments.

Total number of consumers to be connected during the period (2004-08) both in urban and rural.	151,584 Nos.
Amount required for the project	Rs. 5,556.040 Million
Consumers' Capital Contribution	Rs. 3,410.703 Million
Net cost of the project (Finance through Borrowing)	Rs. 2,145.337 Million

DISTRIBUTION REHABILITATION (ELR) (2004-8)

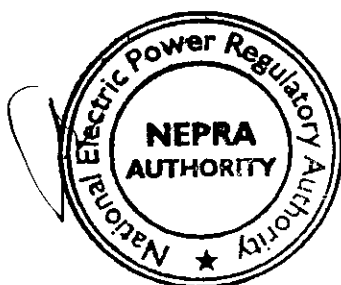
The objective of the ELR project is to reduce system technical losses, reduction in these losses will release additional power to the distribution system. It also improve the distribution system reliability, continuity of the supply is also to be maintained.

In this investment plan it as also plan that the over loaded existing HT/LT feeder will be rehabilitated, load reduction measures includes replacement of conductors, bifurcation of feeders, installation of capacitors and load balancing of transformers. Salient feature are as follows:

Total number of HT feeder selected during (2004-08)	100 Nos.
Total number of LT feeder selected during (2004-08)	2000 Nos.
Cost of the project (Finance through borrowing)	Rs. 1,192.294 Million

Break down of year wise Capital Cost of DOP & ELR is as follows:

<u>INVESTMENT PLAN</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>TOTAL</u>
Development Of Power	376.000	402.000	428.000	455.000	484.337	2,145.337
Consumers' Capital Contribution	599.000	638.000	679.000	724.000	770.703	3,410.703
	975.000	1,040.000	1,107.000	1,179.000	1,255.040	5,556.040
Distribution Rehabilitation	184.000	262.000	290.000	258.000	198.294	1,192.294
TOTAL	1,159.000	1,302.000	1,397.000	1,437.000	1,453.334	6,748.334



Methodology for Calculating Return on Assets

For assessing the Cost of Equity, the US market has been used as a developed market, as it is the market whose data is most widely available and considered most reliable. Because of using foreign market data, a country risk premium is added in the Cost of Equity calculations. The Authority considers the following values as reasonable for the different parameters used in the calculation of cost of equity.

- The country risk premium of 6.05% has been used, being the product of US equity market risk premium and relative volatility of Pakistani market to the US market.
- The risk free rate used is 4.5% on the basis of the 45 day current average yield on 10 years' US treasury bonds.
- Market risk premium is taken as 5.5% which is the mean of historic and expected premiums in the US market.
- Using proxy companies approach, the equity beta comes out to be 1.23
- Based on the extent of HESCO's exposure to Country Risk and dependent on sources of revenues, risk management opportunities, the value of Lambda is taken as 0.55.

As the data from developed foreign market has been used which is adjusted to reflect the local investment environment, a country premium is added in the Cost of Equity calculations, modifying the basic CAPM formula as under:

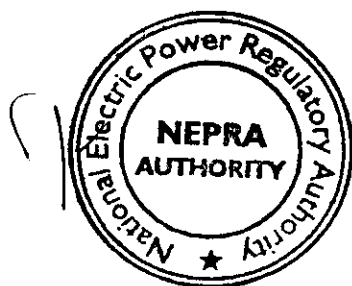
$$R_E = R_F + (R_M - R_F) \times \beta + (\lambda \times \text{country risk premium})$$

where,

R_E = Return on equity or cost of equity.

R_F = Risk-free rate of return

R_M = Market rate of return, also $(R_M - R_F)$ is called market risk premium



β = Beta, the measure of systematic risk

λ = Lambda, sensitivity of HESCO to country risk

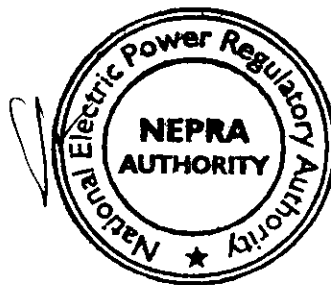
WACC Calculations

Using the figures of cost of debt as 8.7%, cost of equity as 14.59% and Debt-Equity ratio of 60:40, in a tax-exempt scenario, WACC is calculated as under:

$$WACC = \{k_e \times (E / V)\} + \{k_d \times (1-T_c) (D / V)\}$$

where K_e and K_d are cost of equity and debt, E/V and D/V are equity and debt ratios respectively, and T_c is the tax rate.

WACC accordingly calculates to 11.06% which is being used to calculate the returns in the estimation of Revenue Requirement. In case HESCO has to pay taxes, the taxes will be deemed as pass-through.



Transfer Price or Transfer Charge to XWDISCOS

NTDC shall charge the DISCOS formed consequent to the unbundling of WAPDA (termed as XWDISCOS), a transfer charge for procuring power from approved generating companies (termed as CPGENCOS) and its delivery to XWDISCOS for a billing period as under:

$$XTC = XCTC + XETC$$

where:

$$\begin{aligned} XTC &= \text{Transfer charge to XWDISCOS} \\ XCTC &= \text{Capacity Transfer Charge to XWDISCOS} \\ XETC &= \text{Energy Transfer Charge to XWDISCOS} \\ XCTC &= \frac{\text{CpGenCap} + \text{USCF}}{\text{XWD}} \end{aligned}$$

where:

(i) CPGenCap = the summation of the capacity cost in respect of all CPGencos in Rs for a billing period minus the amount of liquidated damages received during the month.

(ii) XWD = the sum of the maximum demand of the XWDISCOS in kW recorded during a billing period at all the delivery metering points at which power is received by the XWDISCOS.

(iii) USCF = the fixed charge part of the use of system charges in Rs per kW per month.

$$XETC = \frac{\text{CpGenE (Rs)} - \text{Us}_{\text{KESC}} \times \text{ERt}_{\text{KESC}}}{\text{XWUs (kWh)}}$$

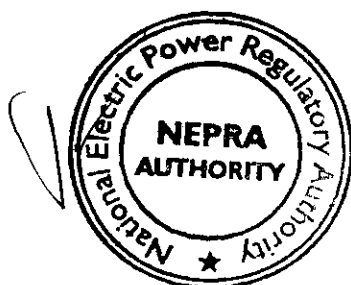
where:

(i) CPGenE = the summation of the variable charge rate (Rs per kWh) approved for each of the CPGenCOs times the energy in kWh procured from the respective CPGENCO during the billing period.

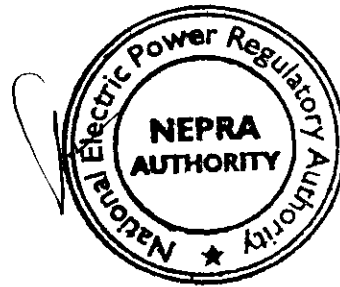
(ii) ERt_{KESC} = The marginal generation energy charge established during the billing period.

(iii) Us_{KESC} = Units (kWh) delivered to KESC by NTDC.

(iv) XWUs = the summation of the energy units (kWh) recorded at the delivery metering point of all the XWDISCOS during a billing period.



The transfer charge is inclusive of the transmission loss charge as the same is rolled in on account of the costs divided on units delivered basis to arrive at the Transfer Charge, therefore NTDC shall, for the purpose of clarity intimate to all DISCOs the generation part of the Transfer Charge during a billing period by deducting from the Transfer Charge the Transmission Charge or Use of System Charges.

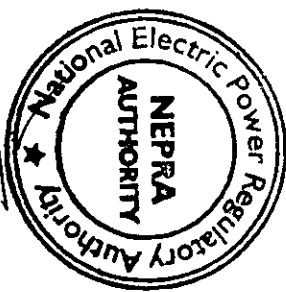


Hyderabad Electric Supply Company (HESCO)

Estimated Monthly Power Purchase Cost - FY 05

Description	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	Total
Units Purchased	648	618	600	544	478	423	400	385	585	585	655	645	8541
Energy Power Purchase Cost Rs./kWh	1.0489	0.9093	0.8955	1.2386	1.2640	1.7143	2.0448	1.6187	1.6583	1.6827	1.3226	1.2084	1.3444
Capacity Power Purchase Cost Rs. Million	846	808	784	711	624	552	522	500	735	764	855	840	8,543
Energy Power Purchase Cost Rs. Million	680	563	537	674	604	725	818	620	934	984	866	777	8,782
Transmission Charge Rs. Million	105	100	97	88	77	68	65	62	91	95	106	104	1,059
Total Power Purchase Cost - Rs. Million	1,861	1,412	1,418	1,472	1,306	1,346	1,405	1,302	1,760	1,843	1,828	1,721	19,344

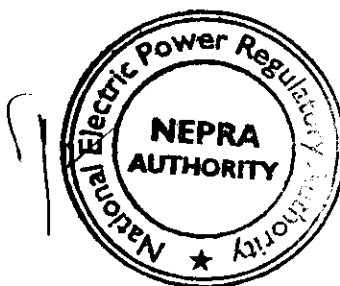
Estimated Average Power Purchase Price (Rs./kWh) = Total Power Purchase Cost / Total Units Purchased = 2.2618



Hyderabad Electric Supply Company (HESCO)

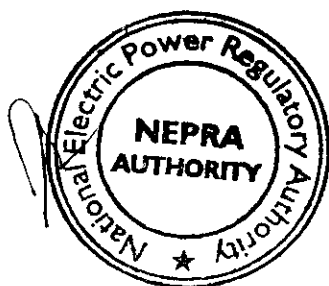
Estimated sales revenue on the basis of existing tariff for FY 05

Description	Sales GWh	Sales Mix	Existing Tariff		Revenue		
			Fixed Charge	Variable	Fixed Charge	Variable	Total
			Rs. per kW per Month	Rs. per kWh	Rs. Million	Rs. Million	Rs. Million
Residential - A1							
Up to 50 Units	86	2.14%		1.40	-	120	120
Consumption Exceeding 50 Units							
01-100 Units	780	19.51%		2.57	-	2,007	2,007
101-300 Units	524	13.12%		3.47	-	1,820	1,820
301 - 1000 Units	198	4.96%		5.76	-	1,141	1,141
Above 1000 Units	103	2.57%		6.90	-	708	708
Total Residential	1,690	42.30%			-	5,796	5,796
Commercial - A2							
For peak load requirement up to 20 kW	68	1.70%		6.80	-	462	462
	171	4.29%		7.17	-	1,228	1,228
For peak load requirement exceeding 20 kW	-	0.00%	242.88	4.17	-	-	-
Total Commercial	239	5.99%			-	1,690	1,690
Industrial							
B1	198	4.97%		5.21	-	1,035	1,035
B2	323	8.08%	331.20	3.67	431	1,184	1,615
B2 - TOD (Peak)	-	0.00%	331.20	5.11	-	-	-
B2 - TOD (Off-peak)	1	0.03%	331.20	3.54	1	4	5
B3	117	2.93%	320.16	3.58	128	419	547
B3 - TOD (Peak)	46	1.16%	320.16	4.58	29	212	241
B3 - TOD (Off-peak)	417	10.42%	320.16	3.01	261	1,255	1,516
B4	-	0.00%	309.12	3.37	-	-	-
B4 - TOD (Peak)	7	0.17%	309.12	4.41	5	30	35
B4 - TOD (Off-peak)	62	1.55%	309.12	2.86	44	177	221
Total Industrial	1,171	29.31%			899	4,316	5,215
Single Point Supply for further distribution							
C1(a) Supply at 400 Volts - Peak load requirement up to 20 kW	5	0.13%		5.16	-	27	27
C1(b) Supply at 400 Volts - Peak load requirement exceeding 20 kW	83	2.07%	242.88	4.79	69	395	464
C2 Supply at 11 kV	87	2.17%	238.46	4.51	47	391	438
C3 Supply above 11 kV	-	0.00%	236.26	4.42	-	-	-
Total Single Point Supply	174	4.37%			116	813	929
Agricultural Tube-wells - Tariff D							
Scarp	378	9.46%		5.06	-	1,914	1,914
Agricultural Tube-wells	289	7.24%	90.53	3.12	718	904	1,622
Total Agricultural	668	16.71%			718	2,819	3,536
Public Lighting - Tariff G	44	1.10%		6.58	-	290	290
Tariff H - Residential Colonies attached to industries	9	0.23%		6.19	-	56	56
Total	3,996	100%			1,733	15,778	17,510



Hyderabad Electric Supply Company (HESCO)
Estimated sales revenue on the basis of new tariff for FY 05

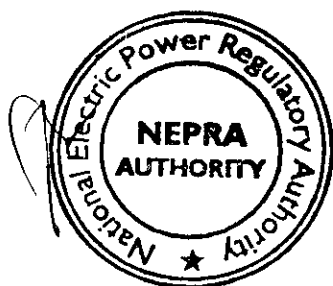
Description	Sales GWh	Sales Mix	New Tariff		Revenue		
			Fixed Charge	Variable	Fixed Charge	Variable	Total
			Rs. per kW per Month	Charge Rs./ kWh	Rs.Million	Charge Rs.Million	Rs.Million
Residential - A1							
Up to 50 Units	86	2.14%		1.40	-	120	120
Consumption Exceeding 50 Units							
01-100 Units	780	19.51%		2.57	-	2,004	2,004
101-300 Units	524	13.12%		3.47	-	1,819	1,819
301 - 1000 Units	198	4.96%		5.75	-	1,140	1,140
Above 1000 Units	103	2.57%		5.75	-	590	590
Total Residential	1,690	42.30%			-	5,672	5,672
Commercial - A2							
For peak load requirement up to 20 kW	68	1.70%		6.80	-	462	462
	171	4.29%		6.80	-	1,165	1,165
For peak load requirement exceeding 20 kW	-	0.00%	240.00	4.17	-	-	-
Total Commercial	239	5.99%			-	1,627	1,627
Industrial							
B1	198	4.97%		4.10	-	814	814
B2	323	8.08%	330.00	3.00	429	968	1,398
B2 - TOD (Peak)	-	0.00%	330.00	4.50	-	-	-
B2 - TOD (Off-peak)	1	0.03%	330.00	2.75	1	3	4
B3	117	2.93%	320.00	2.75	128	322	450
B3 - TOD (Peak)	46	1.16%	320.00	4.00	29	185	214
B3 - TOD (Off-peak)	417	10.42%	320.00	2.50	261	1,041	1,302
B4	-	0.00%	310.00	2.50	-	-	-
B4 - TOD (Peak)	7	0.17%	310.00	3.50	5	24	29
B4 - TOD (Off-peak)	62	1.55%	310.00	2.00	44	124	168
Total Industrial	1,171	29.31%			897	3,481	4,379
Single Point Supply for further distribution							
C1(a) Supply at 400 Volts - Peak load requirement up to 20 kW	5	0.13%		5.16	-	27	27
C1(b) Supply at 400 Volts - Peak load requirement exceeding 20 kW	83	2.07%	243.00	4.79	69	395	464
C2 Supply at 11 kV	87	2.17%	238.00	4.51	47	391	438
C3 Supply above 11 kV	-	0.00%	236.00	4.42	-	-	-
Total Single Point Supply	174	4.37%			116	813	929
Agricultural Tube-wells - Tariff D							
Scarp	378	9.46%		5.06	-	1,914	1,914
Agricultural Tube-wells	289	7.24%	70.00	2.75	555	796	1,351
Total Agricultural	668	16.71%			555	2,709	3,264
Public Lighting - Tariff G	44	1.10%		6.58	-	290	290
Tariff H - Residential Colonies attached to Industries	9	0.23%		6.19	-	56	56
Total	3,996	100%			1,568	14,649	16,217



Hyderabad Electric Supply Company (HESCO)

Comparison of new and existing tariff for FY 05

Description	New Tariff		Existing Tariff	
	Fixed Charge	Variable	Fixed Charge	Variable
	Rs. per kW per Month	Charge Rs./ kWh	Rs. per kW per Month	Charge Rs. per kWh
Residential - A1				
Up to 50 Units		1.40		1.40
Consumption Exceeding 50 Units				
01-100 Units		2.57		2.57
101-300 Units		3.47		3.47
301 - 1000 Units		5.75		5.76
Above 1000 Units		5.75		6.90
Commercial - A2				
For peak load requirement up to 20 kW		6.80		6.80
		6.80		7.17
For peak load requirement exceeding 20 kW	240.00	4.17	242.88	4.17
Industrial				
B1		4.10		5.21
B2	330.00	3.00	331.20	3.67
B2 - TOD (Peak)	330.00	4.50	331.20	5.11
B2 - TOD (Off-peak)	330.00	2.75	331.20	3.54
B3	320.00	2.75	320.16	3.58
B3 - TOD (Peak)	320.00	4.00	320.16	4.58
B3 - TOD (Off-peak)	320.00	2.50	320.16	3.01
B4	310.00	2.50	309.12	3.37
B4 - TOD (Peak)	310.00	3.50	309.12	4.41
B4 - TOD (Off-peak)	310.00	2.00	309.12	2.86
Single Point Supply for further distribution				
C1(a) Supply at 400 Volts - Peak load requirement up to 20 kW		5.16		5.16
C1(b) Supply at 400 Volts - Peak load requirement exceeding 20 kW	243.00	4.79	242.88	4.79
C2 Supply at 11 kV	238.00	4.51	238.46	4.51
C3 Supply above 11 kV	236.00	4.42	236.26	4.42
Agricultural Tube-wells - Tariff D				
Scarp		5.06		5.06
Agricultural Tube-wells	70.00	2.75	90.53	3.12
Public Lighting - Tariff G		6.58		6.58
Tariff H - Residential Colonies attached to industries		6.19		6.19



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

A-1 GENERAL SUPPLY TARIFF - RESIDENTIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
			Peak	Off-Peak
a)	For Peak load requirement up to 20 kW			
i	Up to 50 Units	-		1.40 *
	For Consumption exceeding 50 Units			
ii	For first 100 Units	-		2.57 *
iii	For next 200 Units	-		3.47 *
iv	Above 300 Units	-		5.75 *
b)	For peak load requirement exceeding 20 kW			
	i) Two-part Regular	240.00		4.17 *
	ii) Time Of Day (Optional)	240.00	4.50 *	3.25 *

Under this tariff, there shall be minimum monthly charges at the following rates even if no energy is consumed.

- a) Single Phase Connections: Rs. 45/-
b) Three Phase Connections: Rs. 100/-

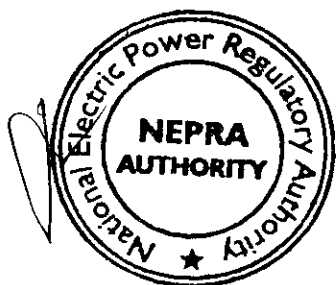
A-2 GENERAL SUPPLY TARIFF - COMMERCIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
			Peak	Off-Peak
a)	For peak load requirement of up to 20 kW			6.80 *
b)	For peak load requirement exceeding 20 kW			
	i) Regular	240.00		4.17 *
	ii) Time Of Day (Optional)	240.00	4.50 *	3.25 *

Under this tariff, there shall be minimum monthly charges at the following rates even if no energy is consumed.

- a) Single Phase Connections: Rs. 150/-
b) Three Phase Connections: Rs. 300/-

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

B - INDUSTRIAL SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
B1	UP TO 20 kW (at 400 Volts)	-	4.10 *	
B2	21-500 kW (at 400 Volts)	330.00	3.00 *	
B3	UP TO 5000 kW (at 11,33 kV) #	320.00	2.75 *	
B4	For all Loads (at 66 kV and above) #	310.00	2.50 *	
	Time Of Day		Peak	Off-Peak
B2	21-500 kW (at 400 Volts) (Optional)	330.00	4.50 *	2.75 *
B3	UP TO 5000 kW (at 11,33 kV)	320.00	4.00 *	2.50 *
B4	For all Loads (at 66 kV and above)	310.00	3.50 *	2.00 *

Note: # Must be converted to Time of Day Tariff.

For the B1 consumers there shall be minimum monthly charges of Rs. 70/kW of sanctioned load.

C - SINGLE POINT SUPPLY FOR PURCHASE IN BULK BY A DISTRIBUTION LICENSEE

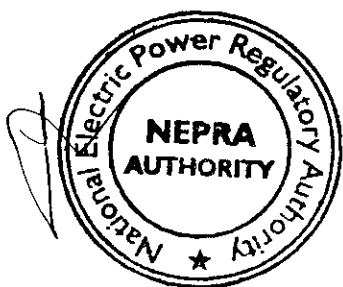
Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
C -1	For supply at 400/230 Volts			
a)	Peak load requirement of up to 20 kW	-	5.16 *	
b)	Peak load requirement above 20 kW	243.00	4.79 *	
C -2	For supply at 11,33 kV	238.00	4.51 *	
C -3	For supply at 66 kV and above (For all loads)	236.00	4.42 *	
	Time-Of-Day (Optional)		Peak	Off-Peak
C -1(b)	For supply at 400/230 Volts (Peak load requirement above 20 kW)	243.00	5.25 *	2.75 *
C -2	For supply at 11,33 kV	238.00	5.00 *	2.50 *
C -3	For supply at 66 kV and above (For all loads)	236.00	4.75 *	2.00 *

D - AGRICULTURE TARIFF

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
D-1	SCARP	-	5.06 *	
D-2	Agricultural Tube Wells	70.00	2.75 *	

The fixed charges under this tariff shall be recovered on the basis of sanctioned load in kilowatt.

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



**SCHEDULE OF ELECTRICITY TARIFFS
FOR HYDERABAD ELECTRIC SUPPLY COMPANY (HESCO)**

E - TEMPORARY SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
E-1(i)	Residential Supply	-	5.75 *
E-1(ii)	Commercial Supply	-	5.75 *
E-2	Industrial Supply	-	5.50 *

For the categories of E-1(i&ii) above, the minimum bill of the consumers shall be Rs. 50/- per day subject to a minimum of Rs.500/- for the entire period of supply, even if no energy is consumed.

F - SEASONAL INDUSTRIAL SUPPLY TARIFF

125% of relevant industrial tariff

Note:

Tariff-F consumers will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of a new connection or at the beginning of the season. Once exercised, the option remains in force for at least one year.

G - PUBLIC LIGHTING

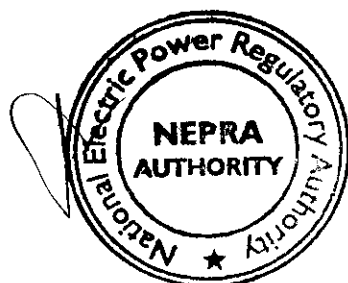
Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Street Lighting		6.58 *

There shall be a minimum monthly charge of Rs.500/- per month per kW of lamp capacity installed.

H - RESIDENTIAL COLONIES ATTACHED TO INDUSTRIAL PREMISES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Residential Colonies attached to industrial premises	-	6.19 *

Note: * Equivalent of addition of Rs.1.4275 per kWh to be provided by the Federal Government as subsidy.



TERMS AND CONDITIONS

(FOR SUPPLY OF POWER TO CONSUMERS)

PART - I

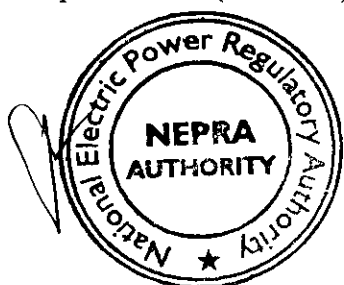
GENERAL DEFINITIONS

1. The Company, for the purposes of these terms and conditions means Hyderabad Electric Supply Company (HESCO) engaged in the business of distribution of electricity within the territory mentioned in the licence granted to it for this purpose.
2. "Month", unless otherwise defined for any particular tariff category, means a billing month of 30 days or less reckoned from the date of last meter reading.
3. "Minimum Charge", means a charge to recover the costs for providing service to consumers even if no energy is consumed during the month.
4. "Fixed Charge" means the part of sale rate in a two part tariff to be recovered on the basis of "Maximum Demand" in kilowatt on monthly basis except in the case of Agriculture tariff D where Fixed Charge shall be recovered on the basis of sanctioned load.
5. "Variable Charge" means the sale rate per kilowatt-hour as a single rate or part of a two-part tariff applicable to the actual units consumed by the consumer during a billing period.
6. "Maximum Demand" where applicable, means the maximum of the demand recorded in any month measured over successive periods each of 30 minutes duration except in the case of consumption related to Arc Furnaces where "Maximum Demand" shall mean the maximum of the demand recorded in any month measured over successive periods each of 15 minutes duration.
7. "Sanctioned Load" where applicable means the installed load in kilowatt as applied for by the consumer and allowed/authorized by the Company for usage by the consumer.
8. "Power Factor" where applicable means the ratio expressed as a percentage of the kilowatt-hours to the kilovolt ampere-hours consumed during the month. Power Factor shall be the ratio of kWh to kVAh recorded during the month or the ratio of kWh to the square root of sum of square of kWh and kVARh, i.e

$$P.F = \frac{kWh}{kVAh} = \frac{kWh}{\sqrt{(kWh)^2 + (kVARh)^2}}$$

9. Peak and Off Peak hours for the application of Time Of Day (TOD) Tariff shall be the following timings:

<u>DURATION</u>	<u>PEAK TIMING</u>	<u>OFF-PEAK TIMING</u>
Dec. to Feb (inclusive)	5 PM to 9 PM	Remaining 20 hours of the day
March to May (inclusive)	6 PM to 10 PM	-do-
June to Aug. (inclusive)	7 PM to 11 PM	-do-
Sept. to Nov. (inclusive)	6 PM to 10 PM	-do-



10. NTDC means the National Transmission and Dispatch Company.
11. The Authority means National Electric Power Regulatory Authority (NEPRA) constituted under the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

GENERAL CONDITIONS

Surcharge For Part Payment Or Late Payment Of Electricity Bills

“The Company shall, ordinarily, render bills to the consumers on a monthly basis for payment by the due date. The company shall ensure that bills are delivered to consumers at least seven days before the due date. If any bill is not paid by the consumer in full within the due date, a Late Payment Surcharge of 10% (ten percent) shall be levied on the amount billed excluding Govt. tax and duties etc.

PART – II

(Definitions and Conditions for supply of power specific to each consumer category)

A. GENERAL SUPPLY

Definitions and General Conditions

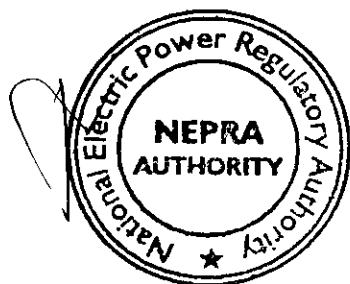
“General Supply”, for the application of this Tariff, means a supply for single-phase/three-phase appliances inclusive of both general and motive loads subject to the following:

1. Single-Phase supply shall be given for loads up to 4 kW of sanctioned load.
2. In premises having a connected or sanctioned load exceeding 4 kilowatts supply shall be given at 3-phase 400 volts and above to allow a balanced distribution of load on the three phases.
3. In the event of a bill being rendered for consumption accumulated over a number of months, the average monthly consumption of the consumer, for the purpose of application of the notified rates shall be determined, by dividing the total consumption by the number of months to which the accumulated consumption relates.
4. The supply under this Tariff shall not be available for resale.

A-1 RESIDENTIAL

Special Conditions Of Supply

1. This Tariff is applicable for supply to residences, places of worship, approved religious and charitable institutions; and Government-sponsored educational institutions, educational institutions set up under public/private partnership, hospitals and dispensaries, etc., where,



“Charitable Institution” for the purpose of application of this Tariff, is an institution, which works for the general welfare of the public on no profit basis and is registered with the Federal or Financial Government as such.

2. The General Supply consumers governed by tariff A-1 having peak load requirement exceeding 20 kW shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff of A-1(b).

A-2 COMMERCIAL

Special Conditions Of Supply

1. This tariff is applicable, for supply to all government and semi government offices and institutions, commercial offices and commercial establishments such as Shops, Hotels, Restaurants, Petrol Pumps, Service Stations, compressed natural gas filling stations, Private Hospitals, Clinics, Dispensaries, places of Entertainment like Cinemas, Theaters and Clubs; Rest Houses and Government Lodges, Private Educational Institutions, office of Lawyers, Solicitors, Law Associates and Consultants etc.
2. For consumers having peak load requirement of up to 20 kW and below, supply to three phase, 400 volts compressor and pump motors of the air conditioning equipment installed in centrally air conditioned premises and other three-phase, 400 volts apparatus of general utility in the premises mentioned above under this Tariff, shall be governed by the Industrial Tariff B-1. This condition shall not apply to consumers having a peak load requirement in excess of 20 kW.
3. Supply to motors operating projectors and sound apparatus in cinemas shall be charged at the Industrial Tariff B-1.
4. The General Supply consumers governed by tariff A-2 having peak load requirement exceeding 20 kW shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff of A-2(b).

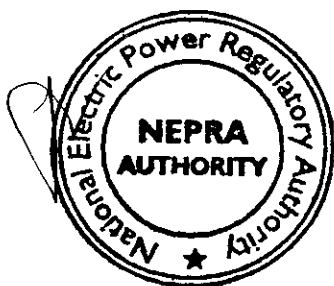
B INDUSTRIAL SUPPLY

General Definitions

1. “Industrial Supply”, means a supply for bona fide industrial purposes in factories including the supply required for the offices and for normal working of the industry and also for water pumps and tube-wells operating on three phase 400 volts, other than those meant for the irrigation or reclamation of agricultural land.
2. For the purposes of application of this tariff an “Industry” means a bona fide undertaking or establishment engaged in manufacturing and/or processing of goods.

General Conditions

This Tariff shall be applicable subject to the following conditions:



- i) Where applicable, the average Power Factor of a consumer at the point of supply shall not be less than 90 percent. In the event of the said Power factor falling below 90 percent, the consumer shall pay a penalty of two percent increase in the fixed charges corresponding to one percent decrease in the power factor below 90 percent. The fixed charges for the purpose of calculating the penalty for low power factor shall, however, be determined with reference to maximum demand during the month.
- ii) An industrial consumer shall have the option, to switch over to seasonal tariff-F, provided his connection is seasonal in nature as defined under tariff-F, and he undertakes to abide by the terms and conditions of tariff-F and pays the difference of security deposit rates previously deposited and those applicable to tariff-F at the time of acceptance of option for seasonal tariff. Seasonal tariff will be applicable from the date of commencement of the season, as specified by the customers at the time of submitting the option for Tariff-F. Tariff-F consumers will have the option to convert to corresponding Regular industrial Tariff category and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.
- iii) The supply under this Tariff shall not be available for resale.

B – 1 SUPPLY AT 400 VOLTS THREE-PHASE AND/OR 230 VOLTS SINGLE PHASE

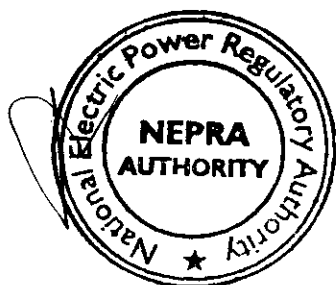
Special Conditions

1. This tariff is applicable for supply to Industries having sanctioned load up to and including 20 kilowatts.
2. The supply at one point under this Tariff shall also be available to Poultry Farms, Hatcheries and Breeding Farms.

B – 2 SUPPLY AT 400 VOLTS

Special Conditions

1. This tariff is applicable for supply to Industries having sanctioned load from 21 to 500 kW.
2. The supply under this tariff shall also be available to Poultry Farms, Hatcheries and Breeding Farms.



3. The Industrial consumers governed by tariff B-2 shall have the option to convert to a two-part Time Of Day (T.O.D) Tariff.

B-3 SUPPLY AT 11 kV AND 33 kV

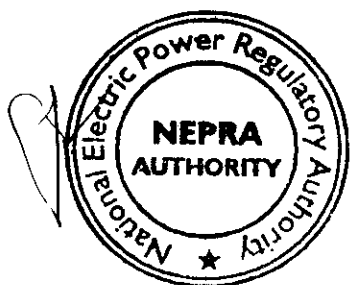
Special Conditions Of Supply

1. This tariff is applicable for supply to Industries having sanctioned load up to 5000 kW.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the remaining cost of service connection shall be regulated by the NEPRA eligibility criteria. In case of supply through an independent feeder drawn directly from the Grid Station, the cost of outgoing 11 kV Circuit Breakers in the Grid Station as a dedicated system under the eligibility criteria shall also have to be paid for by the prospective consumer.
4. All industrial supply consumers governed by Tariff B-3 shall be converted to two-part Time Of Day (T.O.D) tariff.

B-4 SUPPLY AT 66 kV and Above

Special Conditions Of Supply

1. This tariff is applicable for supply to Industries for all loads.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. In case the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus for receiving and controlling the supply, or, alternatively,



pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of remaining cost of service connection shall be regulated by NEPRA Eligibility Criteria.

4. All industrial supply consumers governed by Tariff B-4 shall be converted to two-part Time Of Day (T.O.D) tariff.

C SINGLE-POINT SUPPLY FOR PURCHASE IN BULK BY A DISTRIBUTION LICENSEE

“Single-Point Supply” for the purpose of this Tariff, means a supply given at one point to a licensee for the purpose of further distribution within its respective exclusive territory and jurisdiction.

General Conditions

1. Average Power Factor of the consumer governed by this tariff, at the point of supply shall not be less than 90 percent. In the event of the said power factor falling below 90 percent, the consumer shall pay a penalty of two percent increase in the fixed charges corresponding to one percent decrease in the power factor below 90 percent.
2. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice will be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days the fixed charges shall be assessed on proportionate basis for actual number of days between the date of old reading and the new reading.

Single-Point Supply consumers governed by Tariff C having peak load requirement exceeding 20 kW shall have the option to convert to Time-of-Day (TOD) Tariff under the respective category till 30th June 2007, thereafter conversion to T.O.D metering would become mandatory.

C-1 SUPPLY AT 400 VOLTS

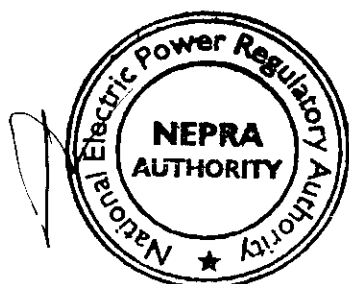
Special Conditions

1. This Tariff is applicable to purchase of bulk supply at 400 volts.
2. Single-point supply consumers governed by Tariff C-1 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

C-2 SUPPLY AT 11 kV AND 33 kV

Special Conditions Of Supply

1. This tariff is applicable to purchase of bulk supply at 11kV and 33kV.



2. The supply under this Tariff shall not be available to a consumer unless he, provides, to the satisfaction and approval of the Company, his own Transformer, 11/33 kV Circuit Breakers and other necessary equipment for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the remaining cost of service connection shall be regulated by the Company's Abridged Conditions of Supply in force from time to time.
3. Single-point supply consumers governed by Tariff C-2 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

C-3 SUPPLY AT 66 kV, 132 kV

Special Conditions Of Supply

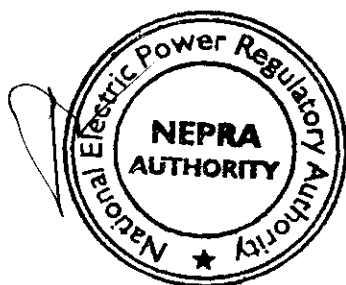
1. This Tariff is applicable to purchase of bulk supply at 66kV and 132kV.
2. In case the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of remaining cost of service connection shall be regulated by NEPRA Eligibility Criteria.
3. Single-point supply consumers governed by Tariff C-3 shall be converted to two-part Time Of Day (T.O.D) tariff by June 30th 2007.

D AGRICULTURAL SUPPLY

"Agricultural Supply" means a supply for Lift Irrigation Pumps and/or Tube-wells intended solely for irrigation or reclamation of agricultural land or forests, and include supply for lighting of the tube-well chamber.

Special Conditions Of Supply

1. This tariff shall apply to:
 - i) Reclamation and Drainage Scheme Tube-wells under Salinity Control and Reclamation Projects (SCARP),
 - ii) bonafide forests, agricultural tube-wells and lift irrigation pumps for the irrigation of agricultural land.
 - iii) Tube-wells meant for aqua-culture, viz. fish farms, fish hatcheries and fish nurseries.



- iv) Tube-wells installed in a dairy farm meant for cultivating crops as fodder and for upkeep of cattle.
- 3. The fixed charges under this Tariff shall be recovered on the basis of sanctioned load in kilowatt.
- 4. The fixed charge will represent the minimum monthly charge under this Tariff even if no energy is consumed during a month.
- 5. If for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
- 6. The lamps and fans consumption in the residential quarters if any attached to the tube-wells shall be charged entirely under General Supply at Tariff A-1.
- 7. The supply under this Tariff shall not be available to consumer using pumps for the irrigation of parks, meadows, gardens, orchards, attached to and forming part of the residential, commercial or industrial premises in which case the corresponding General Supply Tariff A-1, A-2 or Industrial Tariff B-1, B-2 shall be respectively applicable.
- 8. The supply under this tariff shall not be available for resale.

E – 1 TEMPORARY GENERAL SUPPLY

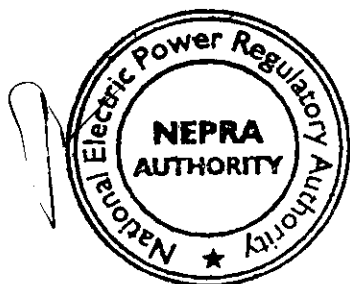
Temporary General Supply means a supply given to persons temporarily on special occasions such as ceremonial, religious gatherings, festivals, fairs, marriages and other civil or military functions. This also includes supply to touring cinemas and persons engaged in construction works for all kinds of single phase loads. For connected load exceeding 4 kW, supply may be given at 400 volts (3 phase) to allow a balanced distribution of load on the 3 phases. Normally, temporary connections shall be allowed for a period of 3 months however this can be extended on three months basis subject to clearance of outstanding dues.

Special Conditions Of Supply

- 1. This tariff shall apply to Residential and Commercial consumers for temporary supply.
- 2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.
- 3. The supply under this Tariff shall not be available for resale.

E 2 TEMPORARY INDUSTRIAL SUPPLY

“Temporary Industrial Supply” means a supply given to an Industry for the bonafide purposes mentioned under the respective definitions of “Industrial Supply”.



Special Conditions Of Supply

1. This Tariff is applicable to consumers who have been granted distribution licence for the purpose of further distribution within their respective jurisdiction.
2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.
3. Normally, temporary connections shall be allowed for a period of 3 months, however this may be extended on three months basis subject to clearance of outstanding dues.
4. The supply under this Tariff shall not be available for sale.

F SEASONAL INDUSTRIAL SUPPLY

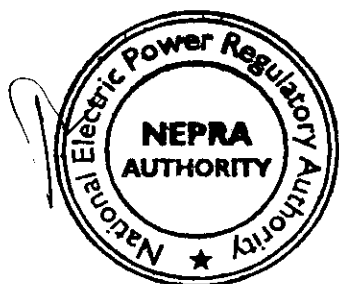
“Seasonal Industry” for the purpose of application of this Tariff, means an industry which works only for part of the year to meet demand for goods or services arising during a particular season of the year. However, any seasonal industry running in combination with one or more seasonal industries, against one connection, in a manner that the former works in one season while the latter works in the other season, thus running throughout the year, will not be classified as a seasonal industry for the purpose of the application of this Tariff.

Definitions

1. “Year” means any period comprising twelve consecutive months.
2. All “Definitions” and “Special Conditions of Supply” as laid down under the corresponding Industrial Tariffs shall also form part of this Tariff so far as they may be relevant.

Special Conditions Of Supply

1. This tariff is applicable to seasonal industry.
2. Fixed Charges per kilowatt per month under this tariff shall be levied at the rate of 125% of the corresponding regular Industrial Supply Tariff Rates and shall be recovered only for the period seasonal industry actually runs subject to minimum period of six consecutive months during any twelve consecutive months. The condition for recovery of Fixed Charges for a minimum period of six months shall not, however, apply to the seasonal industries, which are connected to the Company’s Supply System for the first time during the course of a season.
3. The consumers falling within the purview of this Tariff shall have the option to change over to the corresponding Industrial Supply Tariff, provided they undertake to abide by all the conditions and restrictions, which may, from time to time, be prescribed as an integral part of those Tariffs. The consumers under this Tariff will have the option to convert to Regular Tariff and vice versa. This option can



be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.

4. All seasonal loads shall be disconnected from the Company's Supply System at the end of the season, specified by the consumer at the time of getting connection, for which the supply is given. In case, however, a consumer requires running the non-seasonal part of his load (e.g., lights, fans, tube-wells, etc.) throughout the year, he shall have to bring out separate circuits for such load so as to enable installation of separate meters for each type of load and charging the same at the relevant Tariff.
5. Where a "Seasonal Supply" consumer does not come forward to have his seasonal industry re-connected with the Company's Supply System in any ensuing season, the service line and equipment belonging to the Company and installed at his premises shall be removed after expiry of 60 days of the date of commencement of the season previously specified by the consumer at the time of his obtaining new connection/re-connection. However, at least ten clear days notice in writing under registered post shall be necessary to be given to the consumer before removal of service line and equipment from his premises as aforesaid, to enable him to decide about the retention of connection or otherwise. No Supply Charges shall be recovered from a disconnected seasonal consumer for any season during which he does not come forward to have his seasonal industry re-connected with the Company's Supply System.

G PUBLIC LIGHTING SUPPLY

"Public Lighting Supply", means a supply for the purpose of illuminating public lamps.

Definitions

"Month" means a calendar month or a part thereof in excess of 15 days.

Special Conditions Of Supply

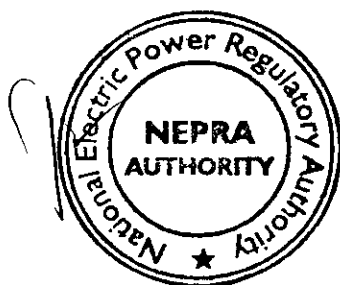
The supply under this Tariff shall be used exclusively for public lighting.

H RESIDENTIAL COLONIES ATTACHED TO INDUSTRIES

This tariff is applicable for one point supply to residential colonies attached to the industrial supply consumers having their own distribution facilities.

Definitions

1. "One Point Supply", for the purpose of this Tariff, means the supply given at one point to Industrial Supply Consumers for general and domestic consumption in the residential colonies attached to their factory premises, for a load of 5 kilowatts and above, for the purpose of further distribution to various persons residing in the attached residential colonies and also for the purpose of perimeter lighting in the attached residential colonies.



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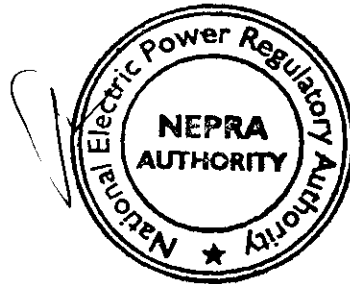
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2. "General and Domestic Consumption", for the purpose of this Tariff, means consumption for lamps, fans, domestic applications, including heaters, cookers, radiators, air-conditioners, refrigerators and domestic tube-wells.
3. "Residential Colony" attached to the Industrial Supply Consumer, means a group of houses annexed with the factory premises constructed solely for residential purpose of the bonafide employees of the factory, the establishment or the factory owners or partners, etc.

Special Conditions Of Supply

1. The supply under this Tariff shall not be available to persons who meet a part of their requirements from a separate source of supply at their premises.
2. The supply under this Tariff shall not be available for resale to any other person.



1/10/04
2004/08/05

**NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)**


Decision of the Authority Regulatory Meeting R 04-109
Held on August 5, 2004


The Authority considered the motion for leave for review filed by M/s Hyderabad Electric Supply Company (HESCO) (Case No. NEPRA/TRF-24/HESCO-2003) in terms of Tariff determination of dated July 14, 2004 and decided to accept the motion for leave for review filed by HESCO ("review motion").

The Authority decided that a copy of review motion be sent to the intervenors as per Rule 16 sub rule (7) of NEPRA Tariff Standards and Procedure Rules 1998, so as to respond in writing to the review motion within 14 days of receipt of the copy of the motion. The petitioner and intervenors may be notified accordingly.


(Fazlullah Qureshi)
Member


(Mansoor Elahi)
Member


(Sardar Muhammad Sharif Khan)
Member


(Abdul Rahim Khan)
Vice Chairman

