

Procedure for Calculation of Transmission System Availability Factor for a Month

1. Transmission system availability factor for a calendar month (TAFM) shall be calculated by the respective transmission licensee, got verified by the concerned RLDC and certified by the Member-Secretary, Regional Power Committee of the region concerned, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges.
2. TAFM, in percent, shall be equal to $(100 - 100 \times \text{NAFM})$, where NAFM is the non-availability factor in per unit for the month, for the transmission system / sub-system.
3. NAFM for A.C. systems / sub-systems shall be calculated as follows :

$$\text{NAFM} = \left[\sum_{l=1}^L (\text{OH}_l \times \text{Ckt km}_l \times \text{NSC}_l) + \sum_{t=1}^T (\text{OH}_t \times \text{MVA}_t \times 2.5) \right. \\ \left. + \sum_{r=1}^R (\text{OH}_r \times \text{MVAR}_r \times 4) \right] \div \text{THM} \times \left[\sum_{l=1}^L (\text{Ckt km}_l \times \text{NSC}_l) + \sum_{t=1}^T (\text{MVA}_t \times 2.5) + \sum_{r=1}^R (\text{MVAR}_r \times 4) \right]$$

Where

l identifies a transmission line circuit

t identifies a transformer / ICT

r identifies a bus reactor, switchable line reactor or SVC

L = total number of line circuits

T = total number of transformers and ICTs

R = total number of bus reactors, switchable line reactors and SVCs

OH = Outage hours or hours of non-availability in the month, excluding the duration of outages not attributable to the transmission licensee, if any, as per clause (5).

Cktkm = Length of a transmission line circuit in km

NSC = Number of sub-conductors per phase

MVA = MVA rating of a transformer / ICT

MVAR = MVAR rating of a bus reactor, switchable line reactor or an SVC (in

which case it would be the sum of inductive and capacitive capabilities).

THM = Total hours in the month.

4. NAFM for each HVDC system shall be calculated separately, as follows :

$$\text{NAFM} = [\Sigma (\text{TCR} \times \text{hours})] \div [\text{THM} \times \text{RC}]$$

Where

TCR = Transmission capability reduction of the system in MW

RC = Rated capacity of the system in MW.

For the above purpose, the HVDC terminals and directly associated EHV / HVDC lines of an HVDC system shall be taken as one integrated system.

5. The transmission elements under outage due to following reasons shall be deemed to be available:
- i) Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the transmission licensee, the Member-Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work involved.
 - ii) Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of RLDC.
6. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
- i) Outage of elements due to acts of God and force majeure events beyond the control of the transmission licensee. However, onus of satisfying the Member Secretary, RPC that element outage was due to aforesaid events and not due to design failure shall rest with the transmission licensee. A reasonable restoration time for the element shall be considered by Member Secretary, RPC and any additional time taken by the transmission licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Member Secretary, RPC may consult the transmission licensee or any expert for estimation of reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.
 - ii) Outage caused by grid incident/disturbance not attributable to the transmission licensee, e.g. faults in substation or bays owned by other

agency causing outage of the transmission licensee's elements, and tripping of lines, ICTs, HVDC, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from RLDC while normalizing the system following grid incident/disturbance within reasonable time, the element will be considered not available for the period of outage after issuance of RLDC's direction for restoration.

Appendix-A

Formats to be filled by Generating Company

(A) Thermal Generation

for the year _____

TARIFF NORMS FOR ENERGY / VARIABLE CHARGES

Name of the Applicant	
Name of the Generating Station	
Special features of the plant	
a) Basic Characteristics ¹ & Site Specific Features ²	
b) Environmental Regulation related Features ³	
c) Any other special features	
d) Date of Commercial Operation (COD)	
e) Type of Cooling System ⁵	

Fuel Details ⁴	Primary Fuel	Secondary Fuel	Alternate Fuel
Mention type of fuel			

S. No	Particulars	Unit	Ref	Derivation	Previous Year (Actual)	Current year (Estimated)	Ensuing year (Projected)
1	2	3	4	5	6	7	8
1	Installed Capacity	MW					
2	PLF	%					
3	Generation	MU	A	A			
4	Auxillary Consumption	% MU	B	B			
5	Generation (Ex-bus)	MU	C	(A-B)			
6	Station Heat Rate	Kcal / Kwh	D	Derivation			
7	Specific Oil Consumption	ML / KWH	E	E			
8	Calorific Value of Fuel Oil	Kcal / Litre	F	F			
9	Calorific Value of Coal	Kcal / Kg	G	G			
10	Overall Heat rate	Gcal	H	(AXD)			
11	Heat from oil	Gcal	I	(AXEXF)			
12	Heat from coal	Gcal	J	(H-I)			
13	Actual oil consumption	KL	K	(IX1000 / F) OR (AXE)			
14	Actual Coal consumption	MT	L	(JX1000 / G) / 0.992			
15	Cost of Oil per KL	Rs. / KL	M	M			
16	Cost of Coal per MT (incl. LADT)	Rs. / MT	N	N			
17	Total Cost of Oil	Rs. Million	O	(MXK / 10) ^{^6}			
18	Total Cost of Coal	Rs. Million	P	(NXL / 10) ^{^6}			
19	Total Fuel Cost	Rs. Million	Q	(O+P)			
20	Fuel Cost / KWH	Rs. / KWH	R	(Q/C)			

- 1 Describe the basic characteristics of the plant e.g. in the case of a coal based plant whether it is conventional steam generator or circulating fluidized bed combustion generator or sub-critical once through steam generator etc.
- 2 Any site specific feature such as Merry-Go-Round, Vicinity to sea, Intake/makeup water systems etc. scrubbers etc. Specify all such features.
- 3 Environmental regulation related features like FGD, ESP etc.
- 4 Coal or natural gas or naphtha or lignite etc.
- 5 Closed circuit cooling, once through cooling, sea cooling etc.

Note: Separate statements to be furnished for each stations

Name of the Generating Company: _____

STATEMENT SHOWING THE CALCULATION OF TOTAL COST OF COAL (PRIMARY FUEL) FOR THERMAL GENERATING STATIONS

S.No	Name of the Station	Capacity	PLF	Generation in MU	Heat Rate K.Cal / kwh	(GCV) K.Cal / Kg.	Specific consumption of Coal (Kg / kwh)	Qty. of coal in lakh Tonns	Basic Cost Rs. / MT	Railway Frieght Rs. / MT	Ocean Freight Rs. / MT	Handling Charges Rs. / MT	Total Rs. / MT	Total Cost Rs. in Lakhs

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Generating Company: _____

CALCULATION OF COST OF SECONDARY FUEL (OIL) FOR THERMAL STATIONS

S.No	Name of the Station	Generation in MU	HFO				HSD / LDO				Total Cost Rs. in Lakhs (7+11)
			Specific oil consumption (ml / kwh)	Qty (KL)	Rate (Rs. / KL)	Cost Rs. / Lakhs	Specific consumption (ml / kwh)	Qty (KL)	Rate (Rs. / KL)	Cost Rs. / Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12

Note:
 Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Generating Company: _____

Calculation of Total Cost of Gas in Gas based Thermal Generating Station

Sl.No	Name of the Station	Capacity (MW)	PLF (%)	Generation (MU)	Heat Rate (Kcal/kWH)	Gross Calorific Value (Kcal /SCM)	Specific gas consumption (SCM / kWh)	Quantity of Gas (MMSCM)	Rate (Rs / 1000 SCM)	Cost of Gas (Rs in Lakhs)

Name of the Generating Company: _____

TOTAL FUEL COST OF ALL GENERATING STATIONS

Rs. Lakhs

S.No	Name of the Station	Coal	Gas	Oil	Lubricants	Others	Total costs
1							
2							
3							
4							
5							
6							
7							

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of Generating Company : _____

ANNUAL REVENUE REQUIREMENT

S.No	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Gross Generation (MU)			
2	Auxiliary Consumption (MU)			
3	Net Generation (MU)			
4	Fuel Costs (Total)			
5	Fixed Charges			
	a) Interest on Loan capital			
	b) Depreciation			
	c) Advance against depreciation			
	d) O&M Expenses			
	e) Interest on working capital			
	f) Foreign exchange Rate			
	g) Return on Equity			
	h) Taxes			
	Total fixed charges			
6	Less other income			
7	Total Expenses (4+5)			

Formats to be filled by Generating Company

(B) Hydel Generation

For the year _____

Name of the Hydro Generating Station: _____

DETAILS OF COD, TYPE OF HYDRO STATIONS, NORMATIVE ANNUAL PLANT, AVAILABILITY FACTOR (NAPAF) & OTHER NORMATIVE PARAMETERS CONSIDERED FOR TARIFF CALCULATION

Sl. No.	Description	Unit	Previous year (Actuals)	Current year (Estimated)	Ensuing Year (Projected)
1	Installed Capacity	MW			
2	Free power to home state	%			
3	Date of commercial operation				
		Unit-1			
		Unit-2			
		Unit-3			
4	Type of Station				
	a) Surface/underground				
	b) Purely ROR/ Pondage/Storage				
	c) Peaking/non-peaking				
	d) No. of hours of peaking				
	e) Overload capacity(MW) & period				
5	Type of excitation				
	a) Rotaing exciters on generator				
	b) Static excitation				
6	Design Energy (Annual) ¹	Gwh			
7	Auxiliary Consumption including Transformation losses	%			
8	Normative Plant Availability Factor (NAPAF)	%			
9.1	Maintenance Spares for WC	Rs. Lakh			
9.2	Receivable for WC	Rs. Lakh			
9.3	Base Rate of retuen on equity	%			
9.4	Tax Rate ²	%			
9.5	Prime lending Rate of SBI as on _____				

¹ Monthwise Design energy figures to be given separately with the petition.

2. Tax rate applicable to the company for the year FY 2008-09 should also be furnished.

3. Mention relevant date

Name of the Hydro Generating Station: _____

SALIENT FEATURES OF HYDROELECTRIC PROJECT

1. Location	
State/Distt.	
River	
2. Diversion Tunnel	
Size, shape	
Length	
3. Dam	
Type	
Maximum dam height	
4. Spillway	
Type	
Crest level of spillway	
5. Reservoir	
Full Reservoir Level (FRL)	
Minimum Draw Down Level (MDDL)	
Live storage (MCM)	
6. Desilting Arrangement	
Type	
Number and Size	
Particle size to be removed(mm)	
7. Head Race Tunnel	
Size and type	
Length	
Design discharge(Cumecs)	
8. Surge Shaft	
Type	
Diameter	
Height	
9. Penstock/Pressure shafts	
Type	
Diameter & Length	
10. Power House	
Type	
Installed capacity (No of units x MW)	
Peaking capacity during lean period (MW)	
Type of turbine	
Rated Head(M)	
Rated Discharge(Cumecs)	
11. Tail Race Tunnel	
Diameter, shape	
Length	
Minimum tail water level	
12. Switchyard	
Type of Switch gear	
No. of generator bays	
No. of Bus coupler bays	
No. of line bays	

Note: Specify limitations on generation, if any, during specific time period on water use due to irrigation, drinking water, industrial, environmental considerations etc.

Name of the Hydro Generating Station: _____

DESIGN ENERGY AND MW CONTINUOUS (monthwise)- RUN OF RIVER TYPE STATIONS

Installed Capacity: No. of Units X. MW =
 Year _____

S.No	Month	Design Energy (MUs)	MW Continuous*
1	April	I	
		II	
		III	
2	May	I	
		II	
		III	
3	June	I	
		II	
		III	
4	July	I	
		II	
		III	
5	August	I	
		II	
		III	
6	September	I	
		II	
		III	
7	October	I	
		II	
		III	
8	November	I	
		II	
		III	
9	December	I	
		II	
		III	
10	January	I	
		II	
		III	
11	February	I	
		II	
		III	
12	March	I	
		II	
		III	
	Total		

Note:
 Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and
 Ensuing year (Projected)

Name of the Hydro Generating Station: _____

**DESIGN ENERGY AND PEAKING CAPABILITY (monthwise) -
PONDAGE / STORAGE TYPE STATIONS**

Installed Capacity: No. of Units X. MW =

S.No	Month	Design Energy (MUs)	MW Continuous*
1	April	I	
		II	
		III	
2	May	I	
		II	
		III	
3	June	I	
		II	
		III	
4	July	I	
		II	
		III	
5	August	I	
		II	
		III	
6	September	I	
		II	
		III	
7	October	I	
		II	
		III	
8	November	I	
		II	
		III	
9	December	I	
		II	
		III	
10	January	I	
		II	
		III	
11	February	I	
		II	
		III	
12	March	I	
		II	
		III	
	Total		

Note:

Specify the number of peaking hours for which station has been designed.
Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of Generating Company : _____

ANNUAL REVENUE REQUIREMENT

S.No	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Gross Generation (MU)			
2	Auxiliary Consumption (MU)			
3	Net Generation (MU)			
4	Free Energy to home state (MU)			
5	Royalty (Rs.)			
6	Water Charges (Rs.)			
7	Capacity Charges (Rs.)			
	a) Interest on Loan capital (Rs.)			
	b) Depreciation (Rs.)			
	c) Advance against depreciation (Rs.)			
	d) O&M Expenses (Rs.)			
	e) Interest on working capital (Rs.)			
	f) Foreign exchange Rate (%)			
	g) Return on Equity (%)			
	h) Income Taxes (Rs.)			
	Total fixed expenses (5+6+7)			

Appendix- B

Formats to be filled by

TRANSMISSION LICENSEE

For the year _____

Format- T1 (A)

Name of the Transmission Licensee: _____

DETAILS OF TRANSMISSION LINES

(A) Transmission Lines

S.NO		S/C or D/C	Voltage level kV	Line Length Ckt.-km	Date of Commerical Operation
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Format- T1 (B)

Name of the Transmission Licensee: _____

DETAILS OF SUB-STATIONS

(B) Sub-Stations

S.NO	Name of Sub-Station	Type of Sub-station Conventional / GIS	Voltage Ratio	No. of Transformers (with capacity)	Date of Commerical Operation
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Format- T2 (A)

Name of the Transmission Licensee: _____

TRANSMISSION LINES (WORK IN PROGRESS)

S.NO	Name of Line	Voltage level kV	Ckt.-kM	Approved Cost (Rs. in crores)	Financing Pattern (Grant: loan)	Year of Commencement	Schedule Date of Commissioning
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Format- T2 (B)

Name of the Transmission Licensee: _____

SUB-STATION (WORK IN PROGRESS)

S.NO	Name of Sub-station	Capacity MVA	No. of Units	Total MVA	Approved Cost (Rs. in Crores)	Financing Pattern	Year of Commencement	Schedule Date of Commissioning
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Name of the Transmission Licensee: _____

NORMATIVE PARAMETERS TO BE CONSIDERED FOR TARIFF CALCULATIONS

S.No	Particulars	Unit	Previous Year (actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Target Availability	%			
2	Normative Operation and Maintenance per Ckt. Km	Rs. lakhs			
3	Normative Operation and Maintenance per bay	Rs. lakhs			
4	Spares for working capital as % of O&M	%			
5	Receivables in Months for working capital	months			
6	Rate of Return on Equity (%)	%			

Format - T4 (A)

Name of the Transmission Licensee: _____

ENERGY BALANCE

(A) Energy Received

S.No	Name of the Generating Station	Units Received (MU)
	Total Energy Received	

Format - T4 (B)

Name of the Transmission Licensee: _____

(B) Energy Sent Out

S.No	Name of the licensee	Units Sent Out (MU)
	Auxiliary Consumption	
	Gross Energy Sent Out	

Format - T4 (C)

Name of the Transmission Licensee: _____

(C) Transmission Losses

S.No	Name of the licensee	Units Sent Out (MU)
1	Total Energy Received	
2	Gross energy sent out	
3	Transmission loss (1-2)	
4	% Transmission losses ((3/1)x100)	

Format - T5 (A)

Name of the Transmission Licensee: _____

TRANSMISSION LOSSES

(A) Historical Data of Transmission Losses

S.No	Year	T ₁₋₄	T ₁₋₃	T ₁₋₂	T ₁₋₁	T ₁
1	% Transmission Losses					

Note: T₁ is previous year, T₁₋₁ is pre-previous year and so on.....

Format - T5 (B)

Name of the Transmission Licensee: _____

(B) Proposed Transmission Loss Trajectory

S.No	Year	Current Year (T)	T ₊₁	T ₊₂	T ₊₃	T ₊₄
1	% Transmission Loss Trajectory					

T+1 = Ensuing year and so on

Name of the Transmission Licensee: _____

OTHER INCOME DETAILS

Rs. Lakhs

S.No	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Interest on Staff Loans and Advances			
2	Income from investments deposits			
3	Interest on Advances to Others			
4	Interest from Banks (other than on Fixed Deposits)			
5	Income from Trading-Stores, Scrap etc.			
6	Income from staff welfare Activities			
7	Gain on sale of Fixed Assets			
8	Miscellaneous Receipts			
9	Contribution & Grants towards cost of capital Assets			
10	Total			

Name of the Transmission Licensee: _____

ANNUAL TRANSMISSION CHARGES

(Rs. in Lakhs)

S.No	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Employees Cost			
2	Repairs & Maintenance			
3	Admin & General Expenses			
4	Depreciation			
5	Advance Against Depreciation			
6	Interest and Finance Charges			
7	Interest on Working Capital			
8	Return on Equity			
9	Income Tax			
10	Others (including ULDC charges)			
11	Total Fixed Costs			
12	Less: Expenses Capitalised			
13	Total Transmission Charges			
14	Less: Other Income			
15	Net Annual Transmission Charges			

Name of the Transmission Licensee: _____

PROPOSED TRANSMISSION TARIFF

S.No	Particulars	Rs. in lakhs		
		Previous year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	Annual Transmission Charges (Rs. Lakhs)			
2	Total MW Allocation (MW)			
3	Transmission Tariff (Rs / MW / Day)			
4	Energy Transferred (MU)			
5	Transmission Tariff (Paise / Unit)			

Appendix-C

**Formats to be filled by
DISTRIBUTION LICENSEE**

For the year _____

Name of the Distribution Licensee: _____

CONSUMER CATEGORY-WISE ENERGY SALES

S.N	Category of Consumers	Previous Year (Actuals)		Current Year (Estimated)		Ensuing Year (Projected)	
		No. of Consumers at the end of the year (Nos.)	Energy Sale / Demand (MU)	No. of Consumers at the end of the year (Nos.)	Energy Sale / Demand (MU)	No. of Consumers at the end of the year (Nos.)	Energy Sale / Demand (MU)
1	2	3	4	5	6	7	8
	LT CATEGORY						
1	Domestic (DLT)						
2	Commercial (CLT)						
3	Industrial (ILT)						
4	Agriculture (Ap)						
5	Public Lighting (PL)						
6	Water Supply (WSLT)						
7	General Purpose						
8	Kutir Jyoti						
	HT CATEGORY						
9	Water Supply (WS HT)						
10	Industrial (IHT)						
11	General Purpose including Domestic (DHT)						
12	Bulk Supply (HT)						
13	Commercial (CHT)						
	EHT CATEGORY						
14	Industrial						

Note: Consumer category classification may be suitably modified, if those in existence are different from the ones listed in the above format.

Name of the Distribution Licensee: _____

ENERGY BALANCE**(MU)**

S.N.	Item	Previous year (Actuals)	Current Year (Estimated)	Ensuing year (Projected)
A)	ENERGY REQUIREMENT			
1	Energy sales within the State			
2	Sales to common pool consumers			
3	Sales outside State			
4	Sales to electricity traders			
5	Sales to other distribution licensees			
6	Total Sales			
7	Distribution Losses			
(i)	MU			
(ii)	%			
8	Total energy requirement (6+7(i))			
B	ENERGY AVAILABILITY			
1	Net thermal generation (own)			
2	Net hydel generation (own)			
3	Power Purchase from			
	a) Central Stations			
	b) Traders			
	c) Power Exchange			
	d) Others			
4	Net Power Purchase (1+2+3)			
5	Total energy availability			

Information regarding Distribution Loss and AT & C Loss of Licensee

S.No	Particulars	Claculation	Unit	Previous Years (Actuals)		Current Year (R.E)	Ensuing Year (Projection)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM	A	MU				
2	Input energy (metered Import) received at interface points of DISCOM network	B	MU				
3	Input energy (metered Export) by the DISCOM at interface point of DISCOM network	C	MU				
4	Total energy available for sale within the licensed area to the consumers of the DISCOM	$D=A+B-C$	MU				
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU				
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU				
7	Total energy billed	$G=E+F$	MU				
8	Amount billed to consumer within the licensed area of DISCOM	H	Rs.				
9	amount realized by the DISCOM out of the amount Billed at H#	I	Rs.Lakhs				
10	Collection efficiency (%) (=Revenue realized / Amount billed)	$J=(I/H) \times 100$	%				
11	Energy realised by the DISCOM	$K=J \times G$	MU				
12	Distribution Loss (%)	$L=\{(D-G)/D\} \times 100$	%				
13	AT&C Loss (%)	$M=\{(D-K)/D\} \times 100$	%				

Amount received in the current year for the amount billed in the previous years should not be excluded in this head. However, subsidy received against the current years sale of electricity should be considered in this head.
 @ norms for determining the energy billed to un-metered consumers may be specified. This should be only for two categories i.e., agricultural consumers and the households below poverty line. The norms could be on the basis of sample metering incase of the agricultural consumers which could be further refined on the basis of the results of the consultancy study on cost of supply to agricultural consumers

Note: Audited figures must be taken from the commercial Department of the Utility (Billing and Revenue Section) for computing the AT&C Losses.

Name of the Distribution Licensee: _____

**ENTITLEMENT FROM CENTRAL GENERATING STATIONS AND ENERGY PURCHASED
FOR THE YEAR _____**

(MU)

S.N.	Station	Capacity (MW)	Firm allocation to		Gen. (MU)	PLF %	Aux. Cons.		Energy sent out	Firm Energy entitlement	Actual Utilised
			4	5			8	9			
1	2	3	4	5	6	7	8	9	10	11	12
1	NTPC										
	a)										
	b)										
	c)										
	d)										
	e)										
2	NHPC										
	a)										
	b)										
	c)										
	d)										
	e)										
3	NEPCO										
	a)										
	b)										
	c)										
	d)										
	e)										
4	PTC										
	a)										
	b)										
	c)										
	d)										
	e)										
5	Other sources										
	a)										
	b)										
	c)										
	d)										
	e)										

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Distribution Licensee: _____

**POWER PURCHASE COST
FOR THE YEAR _____**

(Rs. in Crores)

S.N	Source	Energy received (MU)	Variable Cost (Ps. / Unit)	Total Variable Cost	Total Fixed Cost	Others	Total Cost (5+6+7)	Unit Cost (Rs. / KWH)
1	2	3	4	5	6	7	8	9
1	NTPC							
	a)							
	b)							
	c)							
	d)							
	e)							
2	NHPC							
	a)							
	b)							
	c)							
	d)							
	e)							
3	NEEPCO							
	a)							
	b)							
	c)							
	d)							
	e)							
4	Other sources	(Details to be furnished)						
	a)							
	b)							
	c)							
	d)							
	e)							
5	Other Charges	(Details to be furnished)						
	a)							
	b)							
	c)							
	d)							
	e)							

Note:
Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Format - D4 (a)

Name of the Licensee:

**UI POWER PURCHASE CHARGES
For the PREVIOUS YEAR**

S.N	Month	Quantum of Energy Received (MU)	Per unit cost (Rs / kWh)	Cost of Energy Purchase (Rs.Crores)
1	2	3	4	5
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
13	Total			

Format - D4 (b)

Name of the Licensee:

**UI POWER PURCHASE CHARGES
For the ENSUING YEAR**

S.N	Month	Quantum of Energy Proposed to be purchased (MU)	Per unit cost (Rs / kWh)	Cost of Energy Purchase (Rs.Crores)
1	2	3	4	5
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
13	Total			

Format - D4 (c)

Name of the Licensee:

UI POWER SALE CHARGES
For the PREVIOUS YEAR

S.N	Month	Quantum of Energy Sold (MU)	Per unit cost (Rs / kWh)	Cost of Energy Sold (Rs.Crores)
1	2	3	4	5
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
13	Total			

Format - D4 (d)

Name of the Licensee:

UI POWER SALE CHARGES
For the ENSUING YEAR

S.N	Month	Quantum of Energy Sold (MU)	Per unit cost (Rs / kWh)	Cost of Energy Sold (Rs.Crores)
1	2	3	4	5
1	April			
2	May			
3	June			
4	July			
5	August			
6	September			
7	October			
8	November			
9	December			
10	January			
11	February			
12	March			
13	Total			

Name of the Distribution Licensee: _____
NON TARIFF INCOME

(Rs. in crores)

S.N.	Source of loan	Previous year (Actuals)	Current year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	Meter / Service rent			
2	Late payment surcharge			
3	Theft / pilferage of energy charges			
4	Misc. receipts			
5	Misc. charges			
6	Wheeling charges			
7	Interest on staff loans & advance			
8	Income from trading			
9	Income from welfare activities			
10	Excess on verification			
11	Investments & bank balances			
12	Total Income			
13	Add Prior period income *			
14	Total			

* Year wise details of prior period income may be provided

Name of the Distribution Licensee: _____

BAD AND DOUBTFUL DEBTS

For the year _____

(Rs. in Crores)

S.N	Particulars	Amount
1	2	3
1	Amount of receivable bad and doubtful debts (audited)	
2	Provision made for debts in ARR	

Name of the Distribution Licensee: _____

ANNUAL REVENUE REQUIREMENT

(Rs. in Crores)

S.N	Item of expenditure	Previous Year (Actuals)	Current year (Estimated)	Ensuing Year (Projected)
1	2	3	4	5
1	Cost of Power Purchase			
2	Employee costs			
3	O&M expenses			
4	Adm. & Gen. Expenses			
5	Depreciation			
6	Interest charges			
7	Return on equity			
8	Income Tax			
9	Total revenue requirement			
10	Less: Non tariff income			
11	Net revenue requirement (9-10)			
12	Revenue from tariff			
13	Gap (11 - 12)			
14	Gap for FY _____			
15	Total gap (13+14)			
16	Revenue surplus carried over			
17	Additional revenue from proposed tariff			
18	Regulatory asset			
19	Energy sales (MU)			

Appendix - D

ADDITIONAL COMMON FORMATS TO BE FILLED BY

- (1) GENERATING COMPANY**
 - (a) THERMAL GENERATION**
 - (b) HYDEL GENERATION**
- (2) TRANSMISSION LICENSEE**
- (3) DISTRIBUTION LICENCEE**

For the year _____

Name of the Licensee or: _____
 Name of the Generating Company: _____
 Name of the Generating Station: _____

EMPLOYEE COST

FOR THE YEAR _____

(Rs. in Crores)

S.N	Particulars	Previous Year (Actuals)	Current Year (Estimated)	Ensuing Year (Projected)
1	2	3	4	5
	SALARIES & ALLOWANCES			
1	Basic Pay			
2	Dearness Pay			
3	Dearness Allowance			
4	House rent Allowance			
5	Fixed medical allowance			
6	Medical reimbursement charges			
7	Over time payment			
8	Other allowances (detailed list to be attached)			
9	Generation incentive			
10	Bonus			
11	Sub-Total			
	Terminal Benefits			
12	Leave encashment			
13	Gratuity			
14	Commutation of Pension			
15	Workman compensation			
16	Ex- gratia			
17	Sub-Total			
	Pension Payment			
18	Basic Pension			
19	Dearness Pension			
20	Dearness allowance			
21	Any other expenses			
22	Sub-Total			
23	Total (11+17+22)			
24	Amount capitalised			
25	Net amount			
26	Add prior period expenses *			
27	Grand Total			

* Year - wise details of prior period employees cost, if any, may be provided

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Licensee: _____

TOTAL NUMBER OF EMPLOYEES

S.N	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	Number of employees as on 1st April			
2	Number of employees on deputation / foreign service as on 1st April			
3	Total Number of employees (1+2)			
4	Number of employees retired / retiring during the year			
5	Number of employees at the end of the year (3-4)			

Name of the Licensee: _____

EMPLOYEES PRODUCTIVE PARAMETERS

S.N	Particulars	Previous year (Actuals)	Current Year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	Number of consumers in million			
2	Connected load in kW			
3	Line circuit in KM (LT+HT)			
4	Energy sold in MU			
5	Employees per MU of energy sold			
6	Employees per 1000 consumers			
7	Share of employees cost in total expenses			
8	Employees cost in paise / kWh of energy sold			
9	Line circuit KM (EHT Lines)			
10	Employees per KM of EHT line (Transmission related)			
11	Power station installed capacity own generation (MW)			
12	Employees per MW of capacity For generating company			

Name of the Licensee: _____

REPAIRS AND MAINTENANCE EXPENSES**(Rs. in Crores)**

S.No	Particulars	Previous year (Actual)	Current year (Estimated)	Ensuing Year (Projected)
1	2	3	4	5
1	Plant & Machinery			
	-Plant and Apparatus			
	-EHV Sub-stations			
	- 33 kV Sub-stations			
	- 11 kV Sub-stations			
	-Switch gear and cable connections			
	- Others			
	Total			
2	Building			
3	Hydraulic works & Civil Works			
4	Line cable & Network			
	- EHV Lines			
	-33 kV Lines			
	-11 kV Lines			
	-LT Lines			
	-Meters and metering equipment			
	-Others			
	Total			
5	Vehicles			
6	Furniture & Fixtures			
7	Office equipments			
8	Operating expenses			
9	Total			
10	Add / Deduct share of other (To be specified)			
11	Total expenses			
12	Less capitalized			
13	Net expenses			
14	Add prior period *			
15	Total expenses charges to revenue as R&M expenses			

* Year - wise details of these charges may be provided.

Name of the Licensee: _____

ADMINISTRATION AND GENERAL EXPENSES**(Rs. in Crores)**

S.N	Particulars	Previous year (Actuals)	Current year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	Rent, rates & taxes			
2	Insurance			
3	Telephone, postage & Telegrams			
4	Consultancy fees			
5	Technical fees			
6	Other professional charges			
7	Conveyance & travel expenses			
8	Electricity & Water charges			
9	Others			
10	Freight			
11	Other material related expenses			
12	Total expenses			
13	Less Capitalised			
14	Net expenses			
15	Add Prior period*			
16	Total expenses charged to revenue			

* Year-wise details of these charges may be provided.

Name of the Licensee: _____

VALUE ASSETS AND DEPRECIATION

(Rs. Crores)

S.No	Name of the Asset	Value of Assets at the beginning of the year	Addition during the year	Withdrawn during the year	Value of Assets at the year	Rate of Depreciation (%)	Depreciation charges for the year
1	2	3	4	5	6	7	8

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Licensee: _____

DETAILS OF LOANS FOR THE YEAR

(Rs. in lakhs)

S.N	Particulars	Opening balance	Rate of Interest	Addition during the year	Repayment during the year	Closing balance	Amount of interest paid
1	2	3	4	5	6	7	8
1	SLR Bonds						
2	Non SLR Bonds						
3	LIC						
4	REC						
5	Commercial Banks						
6	Bills discounting						
7	Lease rental						
8	PFC						
9	GPF						
10	CSS						
11	Working capital loan						
12	Others (details to be given)						
13	Total						
14	Add State Govt. Loan						
15	Total (13 +14)						
16	Less capitalisation						
17	Net Interest						
18	Add prior period						
19	Total Interest						
20	Finance charges						
21	Total Interest and finance charges						

Note:

Separate statement to be furnished for Previous year (Actuals), Current year (Estimated) and Ensuing year (Projected)

Name of the Licensee: _____

INTEREST CAPITALISED

				(Rs. in lakhs)
S.N.	Interest capitalized	Previous year (Actuals)	Current year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	WIP			
2	GFA at the end of the year			
3	WIP+GFA at the end of the year			
4	Interest (Excluding interest on WCL)			
5	Interest Capitalised			

WIP=Work -in - Progress
 GFA=Gross Fixed Assets
 WCL=Working Capital Loan

Name of the Licensee: _____

INFORMATION REGARDING RESTRUCTURING OF OUTSTANDING LOANS DURING THE YEAR

(Rs. in lakhs)

S.N	Source of loan	Amount of original loan	Old rate of interest (%)	Amount already restructured	Revised rate of interest (%)	Amount now being restructured	New rate of interest (%)
1	2	3	4	5	6	7	8

Format- 10

Name of the Licensee: _____

INFORMATION REGARDING REVENUE FROM OTHER BUSINESS

(Rs. in lakhs)

S.N	Particulars	Amount
1	2	3
1	Total Revenue from other business	
2	Income from other business to be considered for licenses business as per regulations	

Format- 11

Name of the Licensee: _____

INFORMATION REGARDING WORKING CAPITAL FOR THE CURRENT AND ENSURING YEAR

(Rs. in lakhs)

S.N	Particulars	Amount
1	2	3
1	Fuel cost	
2	Power Purchase Cost	
3	One month employees cost and adm.& Gen. Expenses	
4	One month R&M Cost	
5	Two Months Receivables	
6	Total	

Format- 12

Name of the Licensee: _____

INFORMATION REGARDING FOREIGN EXCHANGE RATE VARIATION (FERV)

(Rs. in lakhs)

S.N	Particulars	Amount
1	2	3
1	Amount of liability provided	
2	Amount recovered	
3	Amount adjusted	

Format- 13

Name of the Licensee: _____

INFORMATION REGARDING WHOLESALE PRICE INDEX (ALL COMMODITIES)
(to be supplied with documentary evidence)

(Rs. in lakhs)

S.N	Period	WPI	Increase over
1	2	3	4
1	As on April 1 of previous year		
2	As on April 1 of current year		
3	As on April 1 of ensuing year		

Name of the Licensee: _____

A. ESTIMATED REVENUE AT EXISTING TARIFF (LT)

S.No	Category	Connected Load (KW)	Fixed Charges per KW (Rs.)	Total Fixed Charges (Rs. in Lakhs)	Slab in the Category	Sale in each Slab (MU)	Existing Tariff Rate (paise per Kwh)	Amount (in lakh)	Total amount for the category (lakh)	Average tariff for the year (paise per Kwhr)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11	Total (LT)									

Name of the Licensee: _____

B. ESTIMATED REVENUE AT EXISTING TARIFF (HT)

S.No	Category	Contract Demand (kVA)	Billing Demand (KVA)	Sale of Energy (MU)	Fixed Charge (Rs / kVA)	Energy Charges (Ps / kWh)	Total Fixed Charges (Rs. Lakhs)	Total Energy Charges (Rs. lakhs)	Grand Total amount for the category (Lakh)	Average tariff for the year (paise per Kwh)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10	Total (HT)									
11	Total (LT)									
12	Total (LT+HT)									

Format- 14 (c)

Name of the Licensee: _____

C. ESTIMATED REVENUE AT EXISTING TARIFF

S.No	Category	Contract Demand (KVA)	Billing Demand (KVA)	Sale of Energy (MU)	Existing Tariff	Total amount for the year (lakh)	Total amount for the category (Lakh)	Average tariff for the year (Paise per kwhr)
1					FC in Rs. per KVA			
2					EC in paise per Kwhr			
3								
4								
5								
6	Total (LT+HT+ EHT)							

Format- 14 (d)

Name of the Licensee: _____

D. ESTIMATED REVENUE AT EXISTING TARIFF

S.No	Category	Contract Demand (KVA)	Billing Demand (KVA)	Sale of Energy (MU)	Existing Tariff	Total amount for the year (lakh)	Total amount for the category (Lakh)	Average tariff for the year (Paise per kwhr)
1					FC in Rs. per KVA			
2					EC in paise per Kwhr			
3								
4								
5								
6	Grand Total							

Name of the Licensee: _____

Investment Plan (Scheme - wise)

(Rs. in lakhs)						
S.N	Name of Scheme/ Project	Approved Outlay	Previous Year (Actuals)	Current Year (RE)	Ensuing Year (Projections	Progressive Expenditure upto Ensuing Year
1	2	3	4	5	6	7

Note: I) Information for previous year to be given in columns 1 to 7

Note: ii) Information for the current year to be given in columns 1 to 5

iii) Schemes costing Rs. Ten lakhs are above to be shown.

For others lumpsum provision may be indicated.

Name of the Licensee: _____

Investment Plan (Year - wise)

(Rs. in lakhs)

S.N	Year	Originally proposed by the Utility	Approved by the Commission	Revised by the Utility	Revised approval by the Commission in review	Actual expenditure
1	2	3	4	5	6	7

Note: I) Information for previous year to be given in columns 1 to 7

Note: ii) Information for the current year to be given in columns 1 to 5

Name of the Distribution Licensee: _____

WORKS-IN-PROGRESS**(Rs. in lakhs)**

S.N	Particulars	Previous year (Actuals)	Current year (Estimated)	Ensuing year (Projected)
1	2	3	4	5
1	Opening balance			
2	Add: New investments			
3	Total			
4	Less investment capitalised			
5	Closing balance			