Chhattisgarh State Electricity Regulatory Commission
Irrigation Colony, Shanti Nagar, Raipur – 492001
Tel: 0771-73555, Fax-4073553
Website: www.cserc.gov.in, E-mail: cserc.sec.cg@nic.in

Suo-Motu Petition No. 34 of 2024

In the matter of-

Determination of generic preferential tariff for FY 2024-25 for Renewable Energy Sources based plants under Regulation 8.6 of the Chhattisgarh State Electricity Regulatory Commission (Terms and conditions for determination of generation tariff and related matters for electricity generated by plants based on renewable energy sources) Regulations, 2022

and

Energy charges for FY 2024-25 for existing biomass power plants.

and

Fixed charges for the existing biomass based power plants achieved CoD during Year 2008-09

Present : Hemant Verma, Chairman
: Pramod Kumar Gupta, Member

DRAFT ORDER

(May 15, 2024)

Regulation 8.6 of Chhattisgarh State Electricity Regulatory Commission (Terms and conditions for determination of generation tariff and related matters for electricity generated by plants based renewable

energy sources) Regulations, 2022, (hereinafter referred to as "the RE Tariff Regulations 2022") mandates the Commission to determine the generic tariff on the basis of the Suo-motu petition, for the following renewable energy technologies (RE technologies) for which norms have been specified in the RE Tariff Regulations 2022;

(a) Small Hydro Projects;

(b) Non-fossil fuel-based co-generation Plants;

(c) Solar PV power project for 0.5 MW to 2 MW capacity; and

(d) Biogas based power project.

2. Generic tariff of the RE projects achieving COD during the third year of control period (i.e., FY 2024-25) has been determined through this order. Tariff proposals are enclosed herewith this Order. Also, Energy charges for FY 2024-25 for existing biomass power plants has also been determined through this order.

3. Fixed charges for the existing biomass-based power plants achieved COD during 2008-09

The Commission vide order dated 09.04.2024 in petition No. 25 of 2024 has decided to initiate suo-motu proceedings for determination of fixed charges for the existing biomass plants who have achieved COD during the year 2008-09. Therefore, fixed charge for these plants for period 2019-20 onwards is required to be determined.

The Commission vide order dated 13.07.2018 passed in suo-motu petition No. 39 of 2018(T) has determined fixed charges for the biomass power plants achieved CoD during the year 2005-06, 2006-07 & 2007-08. In this order fixed charges for the plants achieved CoD during FY 2008-09 was not determined. Further, the Commission vide order dated 20.11.2017 passed in petition No. 23 of 2017 in the matter of M/s Indra Powergen Pvt. Ltd., has held that biomass power plants who has achieved COD during 2009-10 should be dealt at par with power plants

who have achieved COD during 2008-09. Relevant para of the order dated 20.11.2017 is reproduced below:-

> *"8. We have reached to the conclusion that the petitioner should be dealt at par with power plants who have achieved COD during FY 2008-09 from COD of its power plant till the entire period of present agreement."*

Subsequently, M/s Mahavir Energy & Coal Benefication Ltd. filed petition No. 13 of 2018 before the Commission related to payment of generic tariff, the Commission vide order dated 02.07.2018 held that M/s Mahavir Energy & Coal Benefication Ltd. should also be dealt at par with power plants who have achieved COD during 2008-09. Relevant para of the order dated 02.07.2018 is reproduced below:-

> *"22. xxxxxxxxxxxx*
> *Xxxxxxxx*
> *xxxxxxxxx*
> *Therefore, we are of the opinion that in this case also petitioner should be dealt at par with power plants who have achieved COD during FY 2008-09 from COD of its power plant till the entire period of present agreement."*

It is pertinent to mention here that these two plants i.e., M/s Indra Powergen Pvt. Ltd. and M/s Mahavir Energy & Coal Benefication Ltd. achieved COD during 2009-10 and the Commission, vide respective orders for these plants, has held that plants should be dealt at par with power plants who have achieved COD during 2008-09. The tariff determined in petition No. 39/2018(T) vide order dated 13.07.2018 is not covering the plants who has achieved COD during 2008-09. Hence, the fixed charges from has been determined in Annexure

4. Comments /suggestions of the stakeholders on the above proposal are invited by Jun 05, 2024 and hearing will be held on Jun 07, 2024 at 12:30 PM at the Commission's courtroom.

Generic levellised generation tariff for various renewable energy technologies, for FY 2024-25

1. The generic generation tariff for various renewable energy technologies are discussed below:

1.1 **Useful Life:** Regulation 2.1(ll) of the RE Tariff Regulations 2022 defines 'useful life' in relation to a unit of a generating station as per following from the date of commercial operation (COD) of such generation facility:

Renewable Energy Projects	Years
Small Hydro Plant	40
Non-fossil fuel-based co-generation Plants	25
Solar PV power projects	25
Biogas based power projects	25

1.2 **Tariff Period:** As per Regulation 6 of RE Tariff Regulations 2022, the tariff period, in respect of the RE projects, shall be considered from the COD of the renewable energy generating stations and shall be considered as useful life of the RE Projects.

1.3 **Tariff Structure:** As per Regulation 9.1 of the RE Tariff Regulations 2022, the tariff for RE projects shall be single part tariff consisting of the following fixed cost components:

(a) Return on equity;

(b) Interest on loan capital;

(c) Depreciation;

(d) Interest on working capital;
(e) Operation and maintenance expenses.

For renewable energy technologies having fuel cost component, like biomass power projects, biogas based power project and non-fossil fuel based co-generation projects, single-part tariff with two components, viz., fixed cost component and fuel cost component, shall be determined.

1.4 **Tariff Design:** As per para 10.1 in RE Tariff Regulations 2022, the generic tariff shall be determined on levellised basis for the Tariff Period from COD and levellisation of tariff is considered for useful life of the project.

2. Parameters for tariff determination

2.1 **Capital Cost:** Regulation 12 of the RE Tariff Regulations 2022 stipulates that the norms for the capital cost as specified in the technology specific chapter shall be inclusive of all capital works like plant and machinery, civil works, erection and commissioning, financing and interest during construction, and evacuation infrastructure up to inter-connection point.
The Commission has specified the normative capital cost for first year of control period i.e., FY 2022-23 for various RE technologies viz Small Hydro Power, Non-Fossil Fuel based Cogeneration, Solar PV Projects for 0.5 MW to 2 MW capacity and Biogas based power project. Technology specific capital cost of RE projects is discussed herein under:

A. **Capital cost of Small Hydro Projects:**

Regulation 28.1 of the RE Tariff Regulation 2022, specify normative capital cost for small hydro projects for FY 2022-23.

Regulation 12.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2024-25 shall be as follows:

Project Size	**Capital Cost (Rs. Lakh/MW)**
Up to 5 MW	970.20
Above 5 MW to 25 MW	882.00

B. **Capital Cost of Non-fossil fuel based Co-generation Projects:**

Regulation 46.1 of the RE Tariff Regulation 2022, specify normative capital cost for non-fossil fuel based co-generations for FY 2022-23.
Regulation 12.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2024-25 shall be Rs. 492 Lakh/MW.

C. **Capital Cost of Solar PV power project for 0.5 MW to 2 MW capacity:**

Regulation 54.1 of the RE Tariff Regulation 2022, specify normative capital cost for Solar PV power project for 0.5 MW to 2 MW capacity for FY 2022-23.
Regulation 12.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2024-25 shall be Rs. 4.5 Cr/MW.

D. **Capital Cost of Biogas based power project:**

Regulation 74.1 of the RE Tariff Regulation 2022, specify normative capital cost for Biogas based power project FY 2022-23.
Regulation 12.2 specifies that the capital cost for RE projects as specified for first year of control period shall remain valid for the entire duration of the control period unless reviewed by the Commission. Accordingly capital cost for FY 2024-25 shall be Rs. 1186 Lakh/MW and after taking into account of capital subsidy net project cost for FY 2024-25 shall be Rs. 886 Lakh/MW.

2.2 **Debt-Equity Ratio:** Regulation 13.1 of the RE Tariff Regulations 2022 provides that the debt equity ratio of 70:30 is to be considered for determination of generic tariff based on Suo-motu petition.

2.3 **Loan and Finance Charges:** As per regulation 14 of the RE tariff Regulations 2022, for the purpose of determination of tariff, loan tenure of 15 years shall be considered. The normative interest rate shall be considered as two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one year tenor) prevalent during the last available six months shall be considered. Since, tariff will be applicable from 1st April of the respective years, State Bank of India MCLR, for period prior to six month from the 1st April has been considered. State Bank of India MCLR and average MCLR is shown below.

FY 2024-25	
Month	**One year tenor MCLR Rate, % (SBI)**
15th Oct 2023	8.55
15th Nov 2023	8.55
15th Dec 2023	8.65
15th Jan 2024	8.65

FY 2024-25	
Month	**One year tenor MCLR Rate, % (SBI)**
15th Feb 2024	8.65
15th Mar 2024	8.65
Average	8.62

In terms of the above, the computations of interest on loan comes out as 10.62% for FY 2024-25.

2.4 **Depreciation:** As specified in regulation 15 of the RE tariff Regulations 2022, value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset. The depreciation rate for the first 15 years of the Tariff Period shall be 4.67% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 16th year onwards on 'Straight Line Method'.

2.5 **Return on Equity:** Regulation 16.1 of the RE Tariff Regulations 2022 provides that the value base for the equity shall be 30% of the capital cost for generic tariff determination. Further regulation 16.2 stipulates the normative return on equity 14%, to be grossed up by prevailing MAT rate as on 1st April of the previous year. Average of MAT rate, as on 1st April 2023, (for companies having profit less than Rs. 1 Cr, between Rs. 1 Cr & 10 Cr and above Rs. 10 Cr are 15.6%, 16.69% and 17.47% respectively) is 16.59%. Accordingly, RoE for entire useful life of the project comes out to be 16.78% for FY 2024-25.

2.6 **Interest on Working Capital:** As per regulation 17 of the RE tariff Regulations 2022, working capital requirement in respect of small hydro power, solar PV power projects shall be computed as per following:

I. Operation & Maintenance expenses for one month;

II. Receivables equivalent to 45 days of energy charges for sale of electricity calculated on the normative CUF;

III. Maintenance spare @ 15% of operation and maintenance expenses

The Working Capital requirement in respect of non-fossil fuel based co-generation projects and biogas based power project shall be computed as per following:

I. Fuel costs for four months equivalent to normative PLF;

II. Operation & Maintenance expense for one month;

III. Receivables equivalent to 45 days of fixed and variable charges for sale of electricity calculated on the target PLF;

IV. Maintenance spare @ 15% of operation and maintenance expenses

Interest on Working Capital shall be at interest rate equivalent to normative interest rate of three hundred fifty (350) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff. Accordingly, interest rate comes out as 12.12% for FY 2024-25.

2.7 **Operation & Maintenance Expenses:** As per provisions in RE Tariff Regulations 2022, O&M expenses shall be determined for the Tariff Period based on normative O&M expenses specified by the Commission for first year of the Control Period and shall be escalated at the rate of 3.84% per annum over the Tariff Period.

A. **O& M Expenses for Small Hydro Projects:**

As per regulation 31.1 & 31.2 of the RE Tariff Regulation 2022, O & M expenses for small hydro projects for FY 2024-25 shall be as follows;

Project Size	**O& M Expenses (Rs. Lakh/MW)**
Up to 5 MW	40.55
Above 5 MW to 10 MW	35.55
Above 10 MW to 25 MW	29.38

B. **O & M Expenses for Non-fossil fuel based Cogeneration Projects:**

As per regulations 52.1 & 52.2 of the RE Tariff Regulations 2022, normative O & M expenses for the Non-fossil fuel based Cogeneration Projects for the year 2024-25 shall be Rs. 29.54 Lakh/MW.

C. **O& M Expenses for Solar PV power project:**

As per regulations 56.1 & 56.2 of the RE Tariff Regulations 2022, normative O & M expenses for Solar Photovoltaic Power Project shall be Rs. 8.75 Lakh/MW for FY 2024-25.

D. **O& M Expenses for Biogas based power project:**

As per regulations 77.1 & 77.2 of the RE Tariff Regulations 2022, normative O & M expenses for Biogas based power project shall be Rs. 71.26 Lakh/MW for FY 2024-25.

2.8 **Capacity Utilisation Factor (CUF):** Regulations 29 and 55 of the RE Tariff Regulations 2022 specify the norms for Capacity Utilization Factor (CUF) in respect of the Small Hydro and Solar PV based power generating stations as per the details given in the table below which has been considered for determination of tariff.

RE Projects	CUF
Small Hydro projects	30%
Solar PV	19%

2.9 **Plant Load Factor (PLF):** Regulations 35, 47 and 75 of the RE Tariff Regulations 2022 specify the plant load factor for Biomass based power projects, Non fossil Fuel based Co-generation projects and Biogas based power project as given in the table below which has been considered for determination of fixed charges.

RE Projects	PLF
Biomass based power projects	80%
Non fossil Fuel based Co-generation projects	38%
Biogas based power projects	90%

2.10 **Auxiliary Power Consumption:** Regulations 30, 36, 48, 57 and 76 of the RE Tariff Regulations 2022 stipulate the auxiliary power consumption as under which has been considered for determination of tariff of the RE projects.

RE Projects	Aux Cons
Small Hydro projects	1.5%
Biomass based power projects	10%
Non fossil Fuel based Co-generation projects	8.5%
Solar PV	0.25%
Biogas based power projects	12%

2.11 **Station Heat Rate:** The Station Heat Rates (SHR) specified under Regulations 37 and 49 of the RE Tariff Regulations 2022 for biomass and non-fossil fuel based co-generation projects are as under:

RE Projects	SHR (Kcal/kWh)
Biomass based power projects	4000
Non fossil Fuel based Co-generation projects	3600

2.12 **Calorific Value:** In terms of Regulation 43 and 50 of the RE Tariff Regulations 2022 the calorific value of biomass and bagasse for determination of tariff is 3100 and 2250 Kcal/kg respectively.

2.13 **Fuel Cost:** The Commission, in terms of Regulation 44, 51 and 79 of the RE Regulations 2022, has specified the biomass, bagasse and feed stock price applicable during the period 2022-23 as Rs. 3922, Rs. 2507 and Rs. 2000 per MT respectively. Further, as per regulations 44.2, 51.3 and 79.1 these costs shall be escalated by 5% to arrive at price for subsequent years. Therefore, for FY 2024-25, biomass, bagasse and feed stock price shall be Rs. 4324, Rs. 2763.97 and Rs. 2205 per MT respectively.

2.14 **Specific Fuel Consumption:** The Specific Fuel Consumption specified under Regulations 78 of the RE Tariff Regulations 2022 for biogas based power projects shall be 3 kg of substrate mix per kWh.

2.15 **Discount Factor:** The discount factor considered for the purpose of tariff levellisation is equal to the Post Tax weighted average cost of the capital on the basis of normative debt: equity ratio (70:30) specified in the RE Tariff Regulations 2022. Considering the normative debt equity ratio and weighted average of the post tax rates for interest and equity component, the discount factor is calculated.

Interest Rate considered for the loan component (i.e.70%) of Capital Cost is 10.62%. For equity component (i.e. 30%) rate of Return on

Equity (ROE) considered at Post Tax ROE of 14% considering the IT rate of 29.12%. The discount rate derived by this method for all RE technologies is 9.47%.

3. Generic Levellised Tariff FY 2024-25

In the light of the discussion made in the preceding paragraphs, the generic levellised tariffs of the following RE projects achieving COD during the financial year 2024-25 have been determined as under.

RE Projects	**Levellised Tariff, Rs/kWh**
Small Hydro projects below 5 MW	7.05
Small Hydro projects 5 MW to 10 MW	6.33
Small Hydro projects 10 MW to 25 MW	5.97
Mini/Micro Hydro projects (upto 2 MW)	7.55
Biomass based projects – energy charges	6.20
Non fossil Fuel based Co-generation projects– Fixed Cost	3.89
Non fossil Fuel based Co-generation projects– Variable Cost	4.83
Solar PV projects 0.5 MW to 2 MW	4.34
Biogas based power projects (without capital subsidy) – Fixed Charges	4.27
Biogas based power projects (with capital subsidy) – Fixed Charges	3.70
Biogas based power projects – Energy Charges	7.52

The detailed computations for the generic tariff for various RE technologies have been enclosed to this Order as per the details given hereunder;

RE Projects	FY 2024-25
Small Hydro projects below 5 MW	Annexure: 1A
Small Hydro projects 5 MW to 10 MW	Annexure: 1B
Small Hydro projects 10 MW to 25 MW	Annexure: 1C
Mini/Micro Hydro projects (upto2 MW)	Annexure: 1D
Biomass based projects – energy charges	Annexure: 2
Non fossil Fuel based Co-generation projects	Annexure: 3
Solar PV projects 0.5 MW to 2 MW	Annexure: 4
Biogas based power projects	Annexure: 5
Fixed charges for biomass plants achieved CoD during year 2008-09	Annexure: 6

Above generic levellised tariff has been determined for the RE power projects (considering entire useful life and levellisation of tariff for the entire useful life), which are achieving COD during the FY 2024-25 having long term PPA for useful life with distribution companies in the State. Tariff period shall be considered as useful life of the project and shall be considered from the COD of the renewable energy generating stations. Energy charges as determined in this Order shall be applicable for existing biomass based plants for FY 2024-25.

We order accordingly.

Member **Chairman**

Parameters for determination of tariff for Hydel plant less than 5 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.5%
			Useful Life	Years	40
			Gross Generation	MU	2.628
			Auxiliary consumption	MU	0.03942
			Net generation	MU	2.58858
2	Project cost	Capital cost/MW		Rs Cr/MW	9.702
		Power Plant Cost		Rs. Cr	9.702
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.7914
			Total equity amount	Rs Cr.	2.9106
		Debt component	Loan amount	Rs Cr	6.7914
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	2.9106
			RoE	%	16.78%
			RoE Period	Year	40
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.39
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.01%

Determination of tariff for Hydel plant less than 5 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11
O & M expenses	Rs Lakh	39.05	40.55	42.11	43.72	45.40	47.15	48.96	50.84	52.79	54.82	56.92
Depreciation	Rs Lakh	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31
Interest on term loan	Rs Lakh	69.72	64.91	60.10	55.30	50.49	45.68	40.87	36.06	31.25	26.45	21.64
Interest on Working Capital	Rs Lakh	4.24	4.24	4.23	4.23	4.23	4.23	4.24	4.25	4.26	4.27	4.29
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	207.17	203.86	200.60	197.41	194.28	191.22	188.22	185.30	182.46	179.69	177.01
Tariff	Rs/kWh	8.00	7.88	7.75	7.63	7.51	7.39	7.27	7.16	7.05	6.94	6.84

O & M expenses	Rs/kWh	1.51	1.57	1.63	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20
Depreciation	Rs/kWh	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Interest on term loan	Rs/kWh	2.69	2.51	2.32	2.14	1.95	1.76	1.58	1.39	1.21	1.02	0.84
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	8.00	7.88	7.75	7.63	7.51	7.39	7.27	7.16	7.05	6.94	6.84
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405
Levellised Tariff	Rs/kWh	**7.05**										

Determination of tariff for Hydel plant less

Particulars	Year	12	13	14	15	16	17	18	19	20	21	22
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	12	13	14	15	16	17	18	19	20	21	22
O & M expenses	Rs Lakh	59.11	61.38	63.73	66.18	68.72	71.36	74.10	76.95	79.90	82.97	86.15
Depreciation	Rs Lakh	45.31	45.31	45.31	45.31	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	16.83	12.02	7.21	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.31	4.34	4.37	4.40	3.90	4.02	4.14	4.26	4.39	4.53	4.67
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	174.41	171.90	169.48	167.15	129.22	131.97	134.83	137.80	140.89	144.09	147.42
Tariff	Rs/kWh	6.74	6.64	6.55	6.46	4.99	5.10	5.21	5.32	5.44	5.57	5.69

O & M expenses	Rs/kWh	2.28	2.37	2.46	2.56	2.65	2.76	2.86	2.97	3.09	3.21	3.33
Depreciation	Rs/kWh	1.75	1.75	1.75	1.75	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.65	0.46	0.28	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.17	0.17	0.17	0.17	0.15	0.16	0.16	0.16	0.17	0.17	0.18
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	6.74	6.64	6.55	6.46	4.99	5.10	5.21	5.32	5.44	5.57	5.69
Discount Factor		0.370	0.338	0.308	0.282	0.257	0.235	0.215	0.196	0.179	0.164	0.150

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant less

Particulars	Year	23	24	25	26	27	28	29	30	31	32	33
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	23	24	25	26	27	28	29	30	31	32	33
O & M expenses	Rs Lakh	89.46	92.90	96.47	100.17	104.02	108.01	112.16	116.47	120.94	125.58	130.40
Depreciation	Rs Lakh	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.82	4.97	5.12	5.29	5.46	5.63	5.82	6.01	6.20	6.41	6.62
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	150.87	154.46	158.18	162.05	166.07	170.24	174.57	179.07	183.74	188.58	193.62
Tariff	Rs/kWh	5.83	5.97	6.11	6.26	6.42	6.58	6.74	6.92	7.10	7.29	7.48

O & M expenses	Rs/kWh	3.46	3.59	3.73	3.87	4.02	4.17	4.33	4.50	4.67	4.85	5.04
Depreciation	Rs/kWh	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.19	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.26
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	5.83	5.97	6.11	6.26	6.42	6.58	6.74	6.92	7.10	7.29	7.48
Discount Factor		0.137	0.125	0.114	0.104	0.095	0.087	0.079	0.073	0.066	0.061	0.055

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant less

Particulars	Year	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	135.41	140.61	146.01	151.62	157.44	163.49	169.76
Depreciation	Rs Lakh	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	6.84	7.07	7.31	7.56	7.81	8.08	8.36
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	198.85	204.28	209.91	215.77	221.85	228.16	234.71
Tariff	Rs/kWh	7.68	7.89	8.11	8.34	8.57	8.81	9.07

O & M expenses	Rs/kWh	5.23	5.43	5.64	5.86	6.08	6.32	6.56
Depreciation	Rs/kWh	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.26	0.27	0.28	0.29	0.30	0.31	0.32
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	7.68	7.89	8.11	8.34	8.57	8.81	9.07
Discount Factor		0.051	0.046	0.042	0.039	0.035	0.032	0.029

Levellised Tariff Rs/kWh

Parameters for determination of tariff for Hydel plant 5 MW to 10 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.5%
			Useful Life	Years	40
			Gross Generation	MU	2.628
			Auxiliary consumption	MU	0.03942
			Net generation	MU	2.58858
2	Project cost	Capital cost/MW		Rs Cr/MW	8.820
		Power Plant Cost		Rs. Cr	8.82
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.174
			Total equity amount	Rs Cr.	2.646
		Debt component	Loan amount	Rs Cr	6.174
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	2.646
			RoE	%	16.78%
			RoE Period	Year	40
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.34
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.12%

Determination of tariff for Hydel plant 5 MW to 10 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11
O & M expenses	Rs Lakh	34.24	35.55	36.92	38.34	39.81	41.34	42.93	44.57	46.29	48.06	49.91
Depreciation	Rs Lakh	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19
Interest on term loan	Rs Lakh	63.38	59.01	54.64	50.27	45.90	41.53	37.16	32.78	28.41	24.04	19.67
Interest on Working Capital	Rs Lakh	3.80	3.79	3.79	3.78	3.78	3.78	3.78	3.79	3.79	3.81	3.82
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	187.02	183.96	180.95	177.99	175.09	172.24	169.46	166.75	164.09	161.51	159.00
Tariff	Rs/kWh	7.22	7.11	6.99	6.88	6.76	6.65	6.55	6.44	6.34	6.24	6.14

O & M expenses	Rs/kWh	1.32	1.37	1.43	1.48	1.54	1.60	1.66	1.72	1.79	1.86	1.93
Depreciation	Rs/kWh	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
Interest on term loan	Rs/kWh	2.45	2.28	2.11	1.94	1.77	1.60	1.44	1.27	1.10	0.93	0.76
Interest on Working Capital	Rs/kWh	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	7.22	7.11	6.99	6.88	6.76	6.65	6.55	6.44	6.34	6.24	6.14
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405
Levellised Tariff	Rs/kWh	**6.33**										

Determination of tariff for Hydel plant 5 M

Particulars	Year	12	13	14	15	16	17	18	19	20	21	22
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	12	13	14	15	16	17	18	19	20	21	22
O & M expenses	Rs Lakh	51.83	53.82	55.88	58.03	60.26	62.57	64.97	67.47	70.06	72.75	75.54
Depreciation	Rs Lakh	41.19	41.19	41.19	41.19	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	15.30	10.93	6.56	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	3.84	3.86	3.88	3.91	3.45	3.55	3.66	3.77	3.88	4.00	4.12
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	156.56	154.20	151.92	149.72	115.15	117.57	120.08	122.68	125.39	128.20	131.11
Tariff	Rs/kWh	6.05	5.96	5.87	5.78	4.45	4.54	4.64	4.74	4.84	4.95	5.07

O & M expenses	Rs/kWh	2.00	2.08	2.16	2.24	2.33	2.42	2.51	2.61	2.71	2.81	2.92
Depreciation	Rs/kWh	1.59	1.59	1.59	1.59	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.59	0.42	0.25	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.15	0.15	0.15	0.15	0.13	0.14	0.14	0.15	0.15	0.15	0.16
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	6.05	5.96	5.87	5.78	4.45	4.54	4.64	4.74	4.84	4.95	5.07
Discount Factor		0.370	0.338	0.308	0.282	0.257	0.235	0.215	0.196	0.179	0.164	0.150

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant 5 M

Particulars	Year	23	24	25	26	27	28	29	30	31	32	33
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	23	24	25	26	27	28	29	30	31	32	33
O & M expenses	Rs Lakh	78.44	81.46	84.58	87.83	91.20	94.71	98.34	102.12	106.04	110.11	114.34
Depreciation	Rs Lakh	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.25	4.38	4.52	4.66	4.81	4.97	5.13	5.29	5.47	5.65	5.83
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	134.14	137.29	140.55	143.95	147.47	151.12	154.92	158.86	162.96	167.21	171.62
Tariff	Rs/kWh	5.18	5.30	5.43	5.56	5.70	5.84	5.98	6.14	6.30	6.46	6.63

O & M expenses	Rs/kWh	3.03	3.15	3.27	3.39	3.52	3.66	3.80	3.95	4.10	4.25	4.42
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.23
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	5.18	5.30	5.43	5.56	5.70	5.84	5.98	6.14	6.30	6.46	6.63
Discount Factor		0.137	0.125	0.114	0.104	0.095	0.087	0.079	0.073	0.066	0.061	0.055

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant 5 M

Particulars	Year	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	118.73	123.29	128.03	132.94	138.05	143.35	148.85
Depreciation	Rs Lakh	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	6.03	6.23	6.44	6.65	6.88	7.11	7.36
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	176.21	180.97	185.91	191.05	196.38	201.91	207.66
Tariff	Rs/kWh	6.81	6.99	7.18	7.38	7.59	7.80	8.02

O & M expenses	Rs/kWh	4.59	4.76	4.95	5.14	5.33	5.54	5.75
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.23	0.24	0.25	0.26	0.27	0.27	0.28
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	6.81	6.99	7.18	7.38	7.59	7.80	8.02
Discount Factor		0.051	0.046	0.042	0.039	0.035	0.032	0.029
Levellised Tariff	Rs/kWh							

Parameters for determination of tariff for Hydel plant above 10 MW to 25 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.5%
			Useful Life	Years	40
			Gross Generation	MU	2.628
			Auxiliary consumption	MU	0.03942
			Net generation	MU	2.58858
2	Project cost	Capital cost/MW		Rs Cr/MW	8.820
		Power Plant Cost		Rs. Cr	8.82
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.174
			Total equity amount	Rs Cr.	2.646
		Debt component	Loan amount	Rs Cr	6.174
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	2.646
			RoE	%	16.78%
			RoE Period	Year	40
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.28
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.12%

Determination of tariff for Hydel plant above 10 MW to 25 MW

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11
O & M expenses	Rs Lakh	28.29	29.38	30.50	31.68	32.89	34.16	35.47	36.83	38.24	39.71	41.24
Depreciation	Rs Lakh	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19	41.19
Interest on term loan	Rs Lakh	63.38	59.01	54.64	50.27	45.90	41.53	37.16	32.78	28.41	24.04	19.67
Interest on Working Capital	Rs Lakh	3.54	3.52	3.50	3.49	3.47	3.46	3.45	3.45	3.44	3.44	3.44
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	180.81	177.51	174.25	171.03	167.86	164.74	161.67	158.66	155.70	152.79	149.94
Tariff	Rs/kWh	6.98	6.86	6.73	6.61	6.48	6.36	6.25	6.13	6.01	5.90	5.79

O & M expenses	Rs/kWh	1.09	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.53	1.59
Depreciation	Rs/kWh	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
Interest on term loan	Rs/kWh	2.45	2.28	2.11	1.94	1.77	1.60	1.44	1.27	1.10	0.93	0.76
Interest on Working Capital	Rs/kWh	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	6.98	6.86	6.73	6.61	6.48	6.36	6.25	6.13	6.01	5.90	5.79
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405
Levellised Tariff	Rs/kWh	**5.97**										

Determination of tariff for Hydel plant abc

Particulars	Year	12	13	14	15	16	17	18	19	20	21	22
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	12	13	14	15	16	17	18	19	20	21	22
O & M expenses	Rs Lakh	42.82	44.46	46.17	47.94	49.79	51.70	53.68	55.74	57.88	60.11	62.42
Depreciation	Rs Lakh	41.19	41.19	41.19	41.19	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	15.30	10.93	6.56	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	3.44	3.45	3.45	3.46	2.99	3.07	3.16	3.25	3.34	3.44	3.54
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	147.16	144.44	141.78	139.20	104.22	106.22	108.29	110.44	112.68	115.00	117.41
Tariff	Rs/kWh	5.68	5.58	5.48	5.38	4.03	4.10	4.18	4.27	4.35	4.44	4.54

O & M expenses	Rs/kWh	1.65	1.72	1.78	1.85	1.92	2.00	2.07	2.15	2.24	2.32	2.41
Depreciation	Rs/kWh	1.59	1.59	1.59	1.59	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.59	0.42	0.25	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.13	0.14
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	5.68	5.58	5.48	5.38	4.03	4.10	4.18	4.27	4.35	4.44	4.54
Discount Factor		0.370	0.338	0.308	0.282	0.257	0.235	0.215	0.196	0.179	0.164	0.150

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant abc

Particulars	Year	23	24	25	26	27	28	29	30	31	32	33
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	23	24	25	26	27	28	29	30	31	32	33
O & M expenses	Rs Lakh	64.81	67.30	69.89	72.57	75.36	78.25	81.25	84.37	87.61	90.98	94.47
Depreciation	Rs Lakh	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	3.65	3.76	3.87	3.99	4.11	4.24	4.37	4.51	4.66	4.80	4.96
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	119.91	122.51	125.21	128.01	130.92	133.94	137.08	140.34	143.72	147.23	150.88
Tariff	Rs/kWh	4.63	4.73	4.84	4.95	5.06	5.17	5.30	5.42	5.55	5.69	5.83

O & M expenses	Rs/kWh	2.50	2.60	2.70	2.80	2.91	3.02	3.14	3.26	3.38	3.51	3.65
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.14	0.15	0.15	0.15	0.16	0.16	0.17	0.17	0.18	0.19	0.19
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	4.63	4.73	4.84	4.95	5.06	5.17	5.30	5.42	5.55	5.69	5.83
Discount Factor		0.137	0.125	0.114	0.104	0.095	0.087	0.079	0.073	0.066	0.061	0.055

Levellised Tariff Rs/kWh

Determination of tariff for Hydel plant abc

Particulars	Year	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	98.10	101.87	105.78	109.84	114.06	118.44	122.99
Depreciation	Rs Lakh	7.04	7.04	7.04	7.04	7.04	7.04	7.04
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	5.12	5.28	5.46	5.64	5.82	6.01	6.21
Return on Equity	Rs Lakh	44.41	44.41	44.41	44.41	44.41	44.41	44.41
Total Fixed Cost	Rs Lakh	154.67	158.60	162.68	166.92	171.33	175.90	180.65
Tariff	Rs/kWh	5.97	6.13	6.28	6.45	6.62	6.80	6.98

O & M expenses	Rs/kWh	3.79	3.94	4.09	4.24	4.41	4.58	4.75
Depreciation	Rs/kWh	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.20	0.20	0.21	0.22	0.22	0.23	0.24
Return on Equity	Rs/kWh	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Total CoG	Rs/kWh	5.97	6.13	6.28	6.45	6.62	6.80	6.98
Discount Factor		0.051	0.046	0.042	0.039	0.035	0.032	0.029
Levellised Tariff	Rs/kWh							

Parameters for determination of tariff for Mini/Micro Hydel plant (upto 2 MW)					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	30%
			Auxiliary consumption	%	1.5%
			Useful Life	Years	40
			Gross Generation	MU	2.628
			Auxiliary consumption	MU	0.03942
			Net generation	MU	2.58858
2	Project cost	Capital cost/MW		Rs Cr/MW	9.702
		Power Plant Cost		Rs. Cr	9.702
3	Financial parameters	Debt/equity	Tariff period	Year	40
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.7914
			Total equity amount	Rs Cr.	2.9106
		Debt component	Loan amount	Rs Cr	6.7914
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	2.9106
			RoE	%	16.78%
			RoE Period	Year	40
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	0.80%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.39
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.12%

Determination of tariff for Mini/Micro Hydel plant (upto 2 MW)

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11
O & M expenses	Rs Lakh	39.05	40.55	42.11	43.72	45.40	47.15	48.96	50.84	52.79	54.82	56.92
Depreciation	Rs Lakh	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31	45.31
Interest on term loan	Rs Lakh	69.72	64.91	60.10	55.30	50.49	45.68	40.87	36.06	31.25	26.45	21.64
Interest on Working Capital	Rs Lakh	4.24	4.24	4.23	4.23	4.23	4.23	4.24	4.25	4.26	4.27	4.29
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	207.17	203.86	200.60	197.41	194.28	191.22	188.22	185.30	182.46	179.69	177.01
Tariff	Rs/kWh	8.00	7.88	7.75	7.63	7.51	7.39	7.27	7.16	7.05	6.94	6.84

O & M expenses	Rs/kWh	1.51	1.57	1.63	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20
Depreciation	Rs/kWh	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Interest on term loan	Rs/kWh	2.69	2.51	2.32	2.14	1.95	1.76	1.58	1.39	1.21	1.02	0.84
Interest on Working Capital	Rs/kWh	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	8.00	7.88	7.75	7.63	7.51	7.39	7.27	7.16	7.05	6.94	6.84
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405
Levellised Tariff	Rs/kWh	**7.55**										

Determination of tariff for Mini/Micro Hyd

Particulars	Year	12	13	14	15	16	17	18	19	20	21	22
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	12	13	14	15	16	17	18	19	20	21	22
O & M expenses	Rs Lakh	59.11	61.38	63.73	66.18	68.72	71.36	74.10	76.95	79.90	82.97	86.15
Depreciation	Rs Lakh	45.31	45.31	45.31	45.31	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	16.83	12.02	7.21	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.31	4.34	4.37	4.40	3.90	4.02	4.14	4.26	4.39	4.53	4.67
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	174.41	171.90	169.48	167.15	129.22	131.97	134.83	137.80	140.89	144.09	147.42
Tariff	Rs/kWh	6.74	6.64	6.55	6.46	4.99	5.10	5.21	5.32	5.44	5.57	5.69

O & M expenses	Rs/kWh	2.28	2.37	2.46	2.56	2.65	2.76	2.86	2.97	3.09	3.21	3.33
Depreciation	Rs/kWh	1.75	1.75	1.75	1.75	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.65	0.46	0.28	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.17	0.17	0.17	0.17	0.15	0.16	0.16	0.16	0.17	0.17	0.18
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	6.74	6.64	6.55	6.46	4.99	5.10	5.21	5.32	5.44	5.57	5.69
Discount Factor		0.370	0.338	0.308	0.282	0.257	0.235	0.215	0.196	0.179	0.164	0.150

Levellised Tariff Rs/kWh

Determination of tariff for Mini/Micro Hyd

Particulars	Year	23	24	25	26	27	28	29	30	31	32	33
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	23	24	25	26	27	28	29	30	31	32	33
O & M expenses	Rs Lakh	89.46	92.90	96.47	100.17	104.02	108.01	112.16	116.47	120.94	125.58	130.40
Depreciation	Rs Lakh	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	4.82	4.97	5.12	5.29	5.46	5.63	5.82	6.01	6.20	6.41	6.62
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	150.87	154.46	158.18	162.05	166.07	170.24	174.57	179.07	183.74	188.58	193.62
Tariff	Rs/kWh	5.83	5.97	6.11	6.26	6.42	6.58	6.74	6.92	7.10	7.29	7.48

O & M expenses	Rs/kWh	3.46	3.59	3.73	3.87	4.02	4.17	4.33	4.50	4.67	4.85	5.04
Depreciation	Rs/kWh	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.19	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.26
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	5.83	5.97	6.11	6.26	6.42	6.58	6.74	6.92	7.10	7.29	7.48
Discount Factor		0.137	0.125	0.114	0.104	0.095	0.087	0.079	0.073	0.066	0.061	0.055

Levellised Tariff Rs/kWh

Determination of tariff for Mini/Micro Hyd

Particulars	Year	34	35	36	37	38	39	40
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	2.59	2.59	2.59	2.59	2.59	2.59	2.59
Fixed Cost	Year	34	35	35	35	35	35	35
O & M expenses	Rs Lakh	135.41	140.61	146.01	151.62	157.44	163.49	169.76
Depreciation	Rs Lakh	7.74	7.74	7.74	7.74	7.74	7.74	7.74
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	6.84	7.07	7.31	7.56	7.81	8.08	8.36
Return on Equity	Rs Lakh	48.85	48.85	48.85	48.85	48.85	48.85	48.85
Total Fixed Cost	Rs Lakh	198.85	204.28	209.91	215.77	221.85	228.16	234.71
Tariff	Rs/kWh	7.68	7.89	8.11	8.34	8.57	8.81	9.07

O & M expenses	Rs/kWh	5.23	5.43	5.64	5.86	6.08	6.32	6.56
Depreciation	Rs/kWh	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.26	0.27	0.28	0.29	0.30	0.31	0.32
Return on Equity	Rs/kWh	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Total CoG	Rs/kWh	7.68	7.89	8.11	8.34	8.57	8.81	9.07
Discount Factor		0.051	0.046	0.042	0.039	0.035	0.032	0.029

Levellised Tariff Rs/kWh

Annexure 2

Energy Charge for FY 2024-25

Particulars	Unit	Parameters
SHR	kCal/kWh	4000
GCV	kCal/kg	3100
Aux. Cons. Factor	%	10%
Biomass fuel Price	Rs./MT	4324
Variable Cost (Energy Charges)	Rs./kWh	6.20

As per the regulations energy charges is determined following the formula as under:-

*Energy charges = (SHR/GCV) * [1/(1-auxiliary consumption)] * biomass price*

Parameters for determination of tariff for Co-Generation plants					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Values**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	38%
			Auxiliary consumption	%	8.5%
			Useful Life	Years	25
			Gross Generation	MU	3.3288
			Auxiliary consumption	MU	0.282948
			Net generation	MU	3.045852
2	Project cost	Capital cost/MW		Rs Cr/MW	4.92
		Power Plant Cost		Rs. Cr	4.92
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	3.44
			Total equity amount	Rs Cr.	1.48
		Debt component	Loan amount	Rs Cr	3.44
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	1.476
			RoE for 25 years	%	16.78%
			RoE Period	Year	25
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.28
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Bagasse Stock	Months	4
			Receivable	Months	1.5
			Interest on WC	%	12.12%
6	Fuel related assumptions		Heat rate	KCal/kWh	3600
			Calorific value of bagasse	KCal/kg	2250
			Base price of bagasse	Rs/MT	2764.0
			bagasse price escalation factor	%	5%

Determination of tariff for Co-Generation plants

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Variable Cost	Rs Lakh	147.21	154.57	162.30	170.42	178.94	187.88	197.28	207.14	217.50	228.37	239.79	251.78	264.37	277.59	291.47	306.04	321.34	337.41
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
O & M expenses	Rs Lakh	28.45	29.54	30.68	31.85	33.08	34.35	35.67	37.04	38.46	39.94	41.47	43.06	44.72	46.43	48.22	50.07	51.99	53.99
Depreciation	Rs Lakh	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	22.98	9.82	9.82	9.82
Interest on term loan	Rs Lakh	35.36	32.92	30.48	28.04	25.60	23.16	20.73	18.29	15.85	13.41	10.97	8.53	6.10	3.66	1.22	0.00	0.00	0.00
Interest on Working Cap	Rs Lakh	10.84	11.26	11.71	12.18	12.68	13.20	13.75	14.33	14.94	15.58	16.26	16.97	17.71	18.50	19.32	20.00	20.95	21.94
Return on Equity	Rs Lakh	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77	24.77
Total Fixed Cost	Rs Lakh	122.39	121.47	120.62	119.83	119.11	118.47	117.90	117.41	117.00	116.68	116.45	116.31	116.27	116.34	116.50	104.66	107.53	110.52
Tariff	Rs/kWh	4.02	3.99	3.96	3.93	3.91	3.89	3.87	3.85	3.84	3.83	3.82	3.82	3.82	3.82	3.83	3.44	3.53	3.63

O & M expenses	Rs/kWh	0.93	0.97	1.01	1.05	1.09	1.13	1.17	1.22	1.26	1.31	1.36	1.41	1.47	1.52	1.58	1.64	1.71	1.77
Depreciation	Rs/kWh	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.32	0.32	0.32
Interest on term loan	Rs/kWh	1.16	1.08	1.00	0.92	0.84	0.76	0.68	0.60	0.52	0.44	0.36	0.28	0.20	0.12	0.04	0.00	0.00	0.00
Interest on Working Cap	Rs/kWh	0.36	0.37	0.38	0.40	0.42	0.43	0.45	0.47	0.49	0.51	0.53	0.56	0.58	0.61	0.63	0.66	0.69	0.72
Return on Equity	Rs/kWh	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Total Fixed Cost	Rs/kWh	4.02	3.99	3.96	3.93	3.91	3.89	3.87	3.85	3.84	3.83	3.82	3.82	3.82	3.82	3.83	3.44	3.53	3.63
Veriable COG	Rs/kWh	4.83	5.07	5.33	5.60	5.87	6.17	6.48	6.80	7.14	7.50	7.87	8.27	8.68	9.11	9.57	10.05	10.55	11.08
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405	0.370	0.338	0.308	0.282	0.257	0.235	0.215
Levellised Tariff	Rs/kWh	**3.89**																	

Determination of tariff for Co-Ge

Particulars	Year	19	20	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Variable Cost	Rs Lakh	354.28	372.00	390.60	410.13	430.63	452.16	474.77
Fixed Cost	Year	19	20	20	20	20	20	20
O & M expenses	Rs Lakh	56.06	58.21	60.45	62.77	65.18	67.68	70.28
Depreciation	Rs Lakh	9.82	9.82	9.82	9.82	9.82	9.82	9.82
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs Lakh	22.99	24.08	25.23	26.43	27.70	29.02	30.41
Return on Equity	Rs Lakh	24.77	24.77	24.77	24.77	24.77	24.77	24.77
Total Fixed Cost	Rs Lakh	113.64	116.88	120.26	123.79	127.46	131.29	135.28
Tariff	Rs/kWh	3.73	3.84	3.95	4.06	4.18	4.31	4.44

O & M expenses	Rs/kWh	1.84	1.91	1.98	2.06	2.14	2.22	2.31
Depreciation	Rs/kWh	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs/kWh	0.75	0.79	0.83	0.87	0.91	0.95	1.00
Return on Equity	Rs/kWh	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Total Fixed Cost	Rs/kWh	3.73	3.84	3.95	4.06	4.18	4.31	4.44
Veriable COG	Rs/kWh	11.63	12.21	12.82	13.47	14.14	14.85	15.59
Discount Factor		0.196	0.179	0.164	0.150	0.137	0.125	0.114

Levellised Tariff Rs/kWh

Parameters for determination of tariff for Solar PV plant (0.5 MW to 2 MW					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Value**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	19%
			Auxiliary consumption	%	0.25%
			Useful Life	Years	25
			Gross Generation	MU	1.6644
			Auxiliary consumption	MU	0.004161
			Net generation	MU	1.660239
2	Project cost	Capital cost/MW		Rs Cr/MW	4.50
		Power Plant Cost		Rs. Cr	4.5
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	3.15
			Total equity amount	Rs Cr.	1.35
		Debt component	Loan amount	Rs Cr	3.15
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	1.35
			RoE for 25 years	%	16.78%
			RoE Period	Year	25
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate (first 10 years)	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.088
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Receivable	Days	45
			Interest on WC	%	12.12%

Determination of tariff for Solar PV plant (above 0.5 MW to 2 MW)

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11
O & M expenses	Rs Lakh	8.75	9.09	9.43	9.80	10.17	10.56	10.97	11.39	11.83	12.28	12.75
Depreciation	Rs Lakh	21.02	21.02	21.02	21.02	21.02	21.02	21.02	21.02	21.02	21.02	21.02
Interest on term loan	Rs Lakh	32.34	30.11	27.88	25.65	23.42	21.19	18.96	16.73	14.50	12.27	10.04
Interest on Working Capital	Rs Lakh	1.56	1.54	1.52	1.50	1.48	1.46	1.45	1.43	1.42	1.40	1.39
Return on Equity	Rs Lakh	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66
Total Fixed Cost	Rs Lakh	86.32	84.40	82.50	80.62	78.74	76.89	75.05	73.22	71.41	69.62	67.85
Tariff	Rs/kWh	5.20	5.08	4.97	4.86	4.74	4.63	4.52	4.41	4.30	4.19	4.09

O & M expenses	Rs/kWh	0.53	0.55	0.57	0.59	0.61	0.64	0.66	0.69	0.71	0.74	0.77
Depreciation	Rs/kWh	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Interest on term loan	Rs/kWh	1.95	1.81	1.68	1.54	1.41	1.28	1.14	1.01	0.87	0.74	0.60
Interest on Working Capital	Rs/kWh	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08
Return on Equity	Rs/kWh	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
Total CoG	Rs/kWh	5.20	5.08	4.97	4.86	4.74	4.63	4.52	4.41	4.30	4.19	4.09
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405
Levellised Tariff	Rs/kWh	**4.34**										

Determination of tariff for Solar PV plant (

Particulars	Year	12	13	14	15	16	17	18	19	20	21	22
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Fixed Cost	Year	12	13	14	15	16	17	18	19	20	21	22
O & M expenses	Rs Lakh	13.24	13.75	14.28	14.83	15.40	15.99	16.60	17.24	17.90	18.59	19.30
Depreciation	Rs Lakh	21.02	21.02	21.02	21.02	8.98	8.98	8.98	8.98	8.98	8.98	8.98
Interest on term loan	Rs Lakh	7.81	5.58	3.35	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.38	1.36	1.35	1.34	1.17	1.19	1.22	1.25	1.28	1.31	1.34
Return on Equity	Rs Lakh	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66
Total Fixed Cost	Rs Lakh	66.10	64.37	62.65	60.96	48.20	48.82	49.46	50.12	50.82	51.53	52.28
Tariff	Rs/kWh	3.98	3.88	3.77	3.67	2.90	2.94	2.98	3.02	3.06	3.10	3.15

O & M expenses	Rs/kWh	0.80	0.83	0.86	0.89	0.93	0.96	1.00	1.04	1.08	1.12	1.16
Depreciation	Rs/kWh	1.27	1.27	1.27	1.27	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Interest on term loan	Rs/kWh	0.47	0.34	0.20	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.08	0.08	0.08	0.08
Return on Equity	Rs/kWh	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
Total CoG	Rs/kWh	3.98	3.88	3.77	3.67	2.90	2.94	2.98	3.02	3.06	3.10	3.15
Discount Factor		0.370	0.338	0.308	0.282	0.257	0.235	0.215	0.196	0.179	0.164	0.150

Levellised Tariff Rs/kWh

Determination of tariff for Solar PV plant (

Particulars	Year	23	24	25
Installed Capacity	MW	1	1	1
Net Power Generation	MU	1.66	1.66	1.66
Fixed Cost	Year	23	24	24
O & M expenses	Rs Lakh	20.05	20.82	21.62
Depreciation	Rs Lakh	8.98	8.98	8.98
Interest on term loan	Rs Lakh	0.00	0.00	0.00
Interest on Working Capital	Rs Lakh	1.37	1.40	1.44
Return on Equity	Rs Lakh	22.66	22.66	22.66
Total Fixed Cost	Rs Lakh	53.05	53.86	54.69
Tariff	Rs/kWh	3.20	3.24	3.29

O & M expenses	Rs/kWh	1.21	1.25	1.30
Depreciation	Rs/kWh	0.54	0.54	0.54
Interest on term loan	Rs/kWh	0.00	0.00	0.00
Interest on Working Capital	Rs/kWh	0.08	0.08	0.09
Return on Equity	Rs/kWh	1.36	1.36	1.36
Total CoG	Rs/kWh	3.20	3.24	3.29
Discount Factor		0.137	0.125	0.114

Levellised Tariff Rs/kWh

Parameters for determination of tariff for Biogas based power projects with subsidy					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Values**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	90%
			Auxiliary consumption	%	12.0%
			Useful Life	Years	25
			Gross Generation	MU	7.884
			Auxiliary consumption	MU	0.94608
			Net generation	MU	6.93792
2	Project cost	Capital cost/MW		Rs Cr/MW	8.86
		Power Plant Cost		Rs. Cr	8.86
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	6.20
			Total equity amount	Rs Cr.	2.66
		Debt component	Loan amount	Rs Cr	6.20
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	2.658
			RoE for 25 years	%	16.78%
			RoE Period	Year	25
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.66
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Bagasse Stock	Months	4
			Receivable	Days	45
			Interest on WC	%	12.12%
6	Fuel related assumptions		Specific Fuel Consumption	kg/kWh	3
			Base price of feedstock	Rs/MT	2205.0
			bagasse price escalation factor	%	5%

Determination of tariff for Biogas based power projects with subsidy

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Variable Cost	Rs Lakh	521.53	547.60	574.98	603.73	633.92	665.61	698.90	733.84	770.53	809.06	849.51	891.99	936.59	983.42	1032.59	1084.22	1138.43
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
O & M expenses	Rs Lakh	66.10	68.64	71.27	74.01	76.85	79.80	82.87	86.05	89.36	92.79	96.35	100.05	103.89	107.88	112.02	116.32	120.79
Depreciation	Rs Lakh	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	41.38	17.68	17.68
Interest on term loan	Rs Lakh	63.67	59.28	54.89	50.50	46.11	41.71	37.32	32.93	28.54	24.15	19.76	15.37	10.98	6.59	2.20	0.00	0.00
Interest on Working Cap	Rs Lakh	34.63	36.15	37.74	39.42	41.18	43.03	44.97	47.02	49.16	51.42	53.79	56.28	58.90	61.65	64.54	67.24	70.50
Return on Equity	Rs Lakh	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61
Total Fixed Cost	Rs Lakh	250.39	250.05	249.89	249.91	250.12	250.53	251.15	251.99	253.05	254.35	255.89	257.69	259.76	262.11	264.75	245.86	253.58
Tariff	Rs/kWh	3.61	3.60	3.60	3.60	3.61	3.61	3.62	3.63	3.65	3.67	3.69	3.71	3.74	3.78	3.82	3.54	3.65

O & M expenses	Rs/kWh	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.24	1.29	1.34	1.39	1.44	1.50	1.55	1.61	1.68	1.74
Depreciation	Rs/kWh	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.25	0.25
Interest on term loan	Rs/kWh	0.92	0.85	0.79	0.73	0.66	0.60	0.54	0.47	0.41	0.35	0.28	0.22	0.16	0.09	0.03	0.00	0.00
Interest on Working Cap	Rs/kWh	0.50	0.52	0.54	0.57	0.59	0.62	0.65	0.68	0.71	0.74	0.78	0.81	0.85	0.89	0.93	0.97	1.02
Return on Equity	Rs/kWh	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Total Fixed Cost	Rs/kWh	3.61	3.60	3.60	3.60	3.61	3.61	3.62	3.63	3.65	3.67	3.69	3.71	3.74	3.78	3.82	3.54	3.65
Veriable COG	Rs/kWh	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.24	12.86	13.50	14.17	14.88	15.63	16.41
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405	0.370	0.338	0.308	0.282	0.257	0.235
Levellised Tariff	Rs/kWh	**3.70**																

Determination of tariff for Bioga

Particulars	Year	18	19	20	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Variable Cost	Rs Lakh	1195.35	1255.12	1317.87	1383.77	1452.95	1525.60	1601.88	1681.98
Fixed Cost	Year	18	19	20	20	20	20	20	20
O & M expenses	Rs Lakh	125.43	130.25	135.25	140.44	145.83	151.43	157.25	163.29
Depreciation	Rs Lakh	17.68	17.68	17.68	17.68	17.68	17.68	17.68	17.68
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs Lakh	73.91	77.50	81.26	85.20	89.34	93.69	98.25	103.03
Return on Equity	Rs Lakh	44.61	44.61	44.61	44.61	44.61	44.61	44.61	44.61
Total Fixed Cost	Rs Lakh	261.63	270.03	278.79	287.93	297.46	307.41	317.78	328.61
Tariff	Rs/kWh	3.77	3.89	4.02	4.15	4.29	4.43	4.58	4.74

O & M expenses	Rs/kWh	1.81	1.88	1.95	2.02	2.10	2.18	2.27	2.35
Depreciation	Rs/kWh	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs/kWh	1.07	1.12	1.17	1.23	1.29	1.35	1.42	1.49
Return on Equity	Rs/kWh	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Total Fixed Cost	Rs/kWh	3.77	3.89	4.02	4.15	4.29	4.43	4.58	4.74
Veriable COG	Rs/kWh	17.23	18.09	19.00	19.94	20.94	21.99	23.09	24.24
Discount Factor		0.215	0.196	0.179	0.164	0.150	0.137	0.125	0.114

Levellised Tariff Rs/kWh

Parameters for determination of tariff for Biogas based power projects without subsidy					
S No	**Assumption Head**	**Sub-head**	**Sub-head 2**	**Unit**	**Values**
1	Power generation	Capacity	Installed Capacity	MW	1
			Capacity Utilisation Factor	%	90%
			Auxiliary consumption	%	12.0%
			Useful Life	Years	25
			Gross Generation	MU	7.884
			Auxiliary consumption	MU	0.94608
			Net generation	MU	6.93792
2	Project cost	Capital cost/MW		Rs Cr/MW	11.86
		Power Plant Cost		Rs. Cr	11.86
3	Financial parameters	Debt/equity	Tariff period	Year	25
			Debt	%	70%
			Equity	%	30%
			Total debt amount	Rs Cr.	8.30
			Total equity amount	Rs Cr.	3.56
		Debt component	Loan amount	Rs Cr	8.30
			Repayment Period	Year	15
			Interest rate	%	10.62%
		Equity Component	Equity Amount	Rs Cr	3.558
			RoE for 25 years	%	16.78%
			RoE Period	Year	25
			Discount Rate	%	9.47%
		Fiscal assumptions	Income Tax	%	29.12%
			MAT Rate	%	16.59%
		Depreciation	Depreciation rate for first 15 years	%	4.67%
			Depreciation rate 16 year onwards	%	2.00%
			Years for 4.67% rate	Year	15
4	Operation and maintenance	O & M expenses	O & M expenses	Rs Cr/MW	0.66
			Escalation factor	%	3.84%
5	Working Capital	For fixed charges	O & M expenses	Month	1
			Maintenance Spare @ % of O & M expenses	%	15%
			Bagasse Stock	Months	4
			Receivable	Days	45
			Interest on WC	%	12.12%
6	Fuel related assumptions		Specific Fuel Consumption	kg/kWh	3
			Base price of feedstock	Rs/MT	2205.0
			bagasse price escalation factor	%	5%

Determination of tariff for Biogas based power projects without subsidy

Particulars	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Installed Capacity	MW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Variable Cost	Rs Lakh	521.53	547.60	574.98	603.73	633.92	665.61	698.90	733.84	770.53	809.06	849.51	891.99	936.59	983.42	1032.59	1084.22	1138.43	1195.35
Fixed Cost	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
O & M expenses	Rs Lakh	66.10	68.64	71.27	74.01	76.85	79.80	82.87	86.05	89.36	92.79	96.35	100.05	103.89	107.88	112.02	116.32	120.79	125.43
Depreciation	Rs Lakh	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	55.39	23.66	23.66	23.66
Interest on term loan	Rs Lakh	85.23	79.35	73.47	67.59	61.72	55.84	49.96	44.08	38.21	32.33	26.45	20.57	14.69	8.82	2.94	0.00	0.00	0.00
Interest on Working Cap	Rs Lakh	35.41	36.91	38.48	40.13	41.87	43.69	45.61	47.64	49.76	51.99	54.34	56.81	59.41	62.13	65.00	67.57	70.82	74.24
Return on Equity	Rs Lakh	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72	59.72
Total Fixed Cost	Rs Lakh	301.85	300.00	298.33	296.84	295.54	294.44	293.55	292.87	292.43	292.21	292.25	292.54	293.10	293.93	295.06	267.27	274.99	283.05
Tariff	Rs/kWh	4.35	4.32	4.30	4.28	4.26	4.24	4.23	4.22	4.21	4.21	4.21	4.22	4.22	4.24	4.25	3.85	3.96	4.08

O & M expenses	Rs/kWh	0.95	0.99	1.03	1.07	1.11	1.15	1.19	1.24	1.29	1.34	1.39	1.44	1.50	1.55	1.61	1.68	1.74	1.81
Depreciation	Rs/kWh	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.34	0.34	0.34
Interest on term loan	Rs/kWh	1.23	1.14	1.06	0.97	0.89	0.80	0.72	0.64	0.55	0.47	0.38	0.30	0.21	0.13	0.04	0.00	0.00	0.00
Interest on Working Cap	Rs/kWh	0.51	0.53	0.55	0.58	0.60	0.63	0.66	0.69	0.72	0.75	0.78	0.82	0.86	0.90	0.94	0.97	1.02	1.07
Return on Equity	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Total Fixed Cost	Rs/kWh	4.35	4.32	4.30	4.28	4.26	4.24	4.23	4.22	4.21	4.21	4.21	4.22	4.22	4.24	4.25	3.85	3.96	4.08
Veriable COG	Rs/kWh	7.52	7.89	8.29	8.70	9.14	9.59	10.07	10.58	11.11	11.66	12.24	12.86	13.50	14.17	14.88	15.63	16.41	17.23
Discount Factor		1	0.913	0.834	0.762	0.696	0.636	0.581	0.531	0.485	0.443	0.405	0.370	0.338	0.308	0.282	0.257	0.235	0.215
Levellised Tariff	Rs/kWh	**4.27**																	

Determination of tariff for Biogas

Particulars	Year	19	20	21	22	23	24	25
Installed Capacity	MW	1	1	1	1	1	1	1
Net Power Generation	MU	6.94	6.94	6.94	6.94	6.94	6.94	6.94
Variable Cost	Rs Lakh	1255.12	1317.87	1383.77	1452.95	1525.60	1601.88	1681.98
Fixed Cost	Year	19	20	20	20	20	20	20
O & M expenses	Rs Lakh	130.25	135.25	140.44	145.83	151.43	157.25	163.29
Depreciation	Rs Lakh	23.66	23.66	23.66	23.66	23.66	23.66	23.66
Interest on term loan	Rs Lakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs Lakh	77.82	81.58	85.53	89.67	94.01	98.57	103.35
Return on Equity	Rs Lakh	59.72	59.72	59.72	59.72	59.72	59.72	59.72
Total Fixed Cost	Rs Lakh	291.45	300.21	309.35	318.88	328.82	339.20	350.02
Tariff	Rs/kWh	4.20	4.33	4.46	4.60	4.74	4.89	5.05

O & M expenses	Rs/kWh	1.88	1.95	2.02	2.10	2.18	2.27	2.35
Depreciation	Rs/kWh	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Interest on term loan	Rs/kWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Cap	Rs/kWh	1.12	1.18	1.23	1.29	1.36	1.42	1.49
Return on Equity	Rs/kWh	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Total Fixed Cost	Rs/kWh	4.20	4.33	4.46	4.60	4.74	4.89	5.05
Veriable COG	Rs/kWh	18.09	19.00	19.94	20.94	21.99	23.09	24.24
Discount Factor		0.196	0.179	0.164	0.150	0.137	0.125	0.114

Levellised Tariff Rs/kWh

Fixed charges for the biomass plants achieved CoD during years 2008-09

Details of Fixed charges determined by the Commission for the plants achieved CoD during in years 2008-09 starting from first year of their CoD is as per following paragraphs.

The Commission vide Order dated December 28, 2011 in P No 22 of 2011 (T) filed by CREDA and other three Sudha Agro Oil & Chemical Industries Limited, Neeraj Power (P) Limited, Shivalik Power & Steel (P) Limited for revision and determination of tariff for power purchase by distribution licensees in Chhattisgarh from biomass-based power generating plants situated in Chhattisgarh. Fixed charges determined by the Commission for the plants achieved CoD during the FY 2008-09 was upto FY 2017-18 i.e., March 2018.

Relevant para of the Order is reproduced below;

"Fixed Cost : *Considering the revised parameters the Commission has decided fixed cost for the plants achieved CoD in years 2005-06, 2006-07 and 2007-08 and 2008-09 and is enclosed at Annexure 2. Following table shows the summary of fixed charge for the plants achieved CoD in years 2005-06, 2006-07 and 2007-08 and 2008-09 starting from first year of their CoD:*

	Fixed Charges in Rs/kWh as par year of commercial operation (nth year)									
Year of CoD	1	2	3	4	5	6	7	8	9	10
Year 2005-06	1.78	1.75	1.73	1.68	1.63	1.58	**1.62**	**1.59**	**1.57**	**1.55**
Year 2006-07	1.78	1.75	1.73	1.68	1.63	**1.67**	**1.65**	**1.63**	**1.61**	**1.59**
Year 2007-08	1.78	1.75	1.73	1.68	**1.72**	**1.70**	**1.68**	**1.66**	**1.64**	**1.63**
Year 2008-09	1.78	1.75	1.73	**1.77**	**1.75**	**1.73**	**1.71**	**1.69**	**1.68**	**1.66**

For payment purpose, above revised fixed charge shall be applicable from FY 2011-12 onwards. The Commission shall review the fixed charges after the year 2014-15, 2015-16, 2016-17 and 2017-18 for the plants achieved CoD during the year 2005-06, 2006-07, 2007-08 and 2008-09 respectively.

Illustrations:-

(1) For the plant "A" which achieved CoD in FY 2005-06 in the month June 2005:-

Since July 2011 to June 2012 is the 7th year of operation of plant "A", the fixed charge for the plant "A" shall be Rs. 1.62/kWh from July 2011 to June 2012. As per order dated January 15, 2008 fixed charge for plant "A" for the period July 2011 to June 2012 was Rs. 1.53/kWh. The fixed charge already paid to plant "A" shall be adjusted accordingly. For the period April 2011 to June 2011, the fixed charge shall be Rs. 1.53/kWh as per the previous order. For 8th year of operation of plant "A" i.e. for period from July 2012 to June 2013 fixed charge shall be Rs. 1.59/kWh as per this order.

XXXXXXXXXXX

XXXXXXXXXXXXX"

Fixed charges for renewable energy plants achieving CoD after April01, 2012 are financial year basis as per the provisions in the CSERC RE Tariff Regulations 2012. However, tariff for the plants achieved CoD before April01, 2012 are from month of operation to 12th month. Therefore, the Commission aligned the fixed charges applicability for plants achieved CoD before April01, 2012 with the financial year as per CSERC RE Tariff Regulations 2012 (in order dated December 28, 2011 in P No 22 of 2011). Accordingly, the fixed charges for the existing biomass power plants, achieved COD during the year 2008-09 having 10th year of operation, would be Rs. 1.66/kWh up to the 31st March 2019. Fixed charges for FY 2019-20 onwards are being determined herein under appropriate applicable regulations and its subsequent amendments.

Illustrations:-

For the plant "A" which achieved CoD in FY 2008-09 in the month June 2008:-

Since July 2018 to June 2019 is the 10th year of operation of plant "A", the fixed charge for the plant "A" shall be Rs. 1.66/kWh from July 2018 to June 2019.

Now as per this order fixed charge Rs. 1.66 per kWh will be applicable till March 2019.

Accordingly, as per orders issued by the Commission in the Matter of M/s Indra Powergen and M/s Mahavir Energy and Coal Benification, till March 2019, fixed charges would be Rs. 1.66 per kWh.

2. Fixed charges from FY 2019-20 onwards: The Fixed Cost of a bio mass based power generating plant consist of the following components –

a. Depreciation;
b. Operation and maintenance expenses
c. Interest on loan capital;
d. Interest on working capital;
e. Return on equity;

a. **Depreciation:**

In order dated January 15, 2008 the Commission has considered depreciation at the rate of 7% for first 10 years. The rate of depreciation, for calculation of tariff is therefore considered at 2% annually from 11th year onwards.

b. Operation and maintenance expenses:

For the FY 2017-18, O & M expenses have been considered as Rs. 40 lakh/MW (i.e., Rs. 3.00 Crore for 7.5 MW) and applying escalation of 5.72% per annum for subsequent years, Rs. 44.70 lakh/MW has been fixed for FY 2019-20. And for subsequent years escalation of 5.72% per annum has been applied.

c. Interest on loan capital:

The interest rate approved vide order dated January 15, 2008 i.e. 11.75% has been considered.

d. Interest on working capital:

Interest rate on working capital has been considered as 12.75% for FY 2019-20 onwards.

e. Return on equity:

The Commission has considered Pre-Tax ROE of 17.56% for FY 2019-20 onwards.

Considering the revised parameters the Commission has determined fixed cost for the plants achieved CoD in year 2008-09 as follows.

Particulars	Year	11	12	13	14	15	16	17	18	19	20
		Upto Mar-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Net Power Generation	MU	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**	**47.30**
Components of Fixed Cost											
O & M expenses	Rs Cr	2.37	3.35	3.54	3.75	3.96	4.19	4.43	4.68	4.95	5.23
Depreciation	Rs Cr	21.00	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Interest on term loan	Rs Cr	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	Rs Cr	1.35	1.64	1.72	1.80	1.88	1.97	2.06	2.16	2.26	2.37
Return on Equity	Rs Cr	1.80	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
Total Fixed Cost	Rs Cr	7.87	7.18	7.44	7.72	8.02	8.34	8.67	9.02	9.39	9.78
Fixed Cost	**Rs/kWh**	1.66	1.52	1.57	1.63	1.70	1.76	1.83	1.91	1.99	2.07