



**GENERIC TARIFF ORDER FOR RENEWABLE ENERGY SOURCES FOR
FY 2019-2020**

Coram

**Shri M.K Goel, Chairperson
Smt. Neerja Mathur, Member**

Suo-moto Petition No.: JERC/LEGAL/MISC. P/12/2019

Order

Dated: 2nd September, 2019

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Abbreviations

| Acronyms | Expanded Form |
|-----------------|------------------------------------|
| CUF | Capacity Utilisation Factor |
| COD | Commercial Operation Date |
| CPI | Consumer Price Index |
| FY | Financial Year |
| GW | Gigawatt |
| IT Act | Income Tax Act |
| kWh | kilowatt hour |
| MW | Megawatt |
| MAT | Minimum Alternative Tax |
| MNRE | Ministry of New & Renewable Energy |
| O&M | Operation and Maintenance |
| PV | Photo Voltaic |
| PLF | Plant Load Factor |
| RE | Renewable Energy |
| RoE | Return on Equity |
| SHP | Small Hydro Plant |
| WPI | Wholesale Price Index |

1 BACKGROUND

1.1.1 The Commission has notified the Joint Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2019 (Renewable Energy Tariff Regulations, 2019) for determination of Tariff of eligible RE Projects selling electricity to Distribution Licensees, on 25th July, 2019. The Regulations specify the terms and conditions and the procedure for determination of Generic Tariff in respect of the following types of Renewable Energy (RE) Generation Projects:

- (a) Solar PV (for Gross Metering);
- (b) Wind Energy based projects;
- (c) Small hydro based projects:

1.1.2 Regulation 9.1 of the Renewable Energy Tariff Regulations, 2019 requires the Commission to determine the Generic Tariffs for RE Technologies for which the norms have been specified in the Regulations:

“9.1 The Commission shall determine the generic tariff at the beginning of each year of the Control Period for Renewable Energy technologies mentioned at Regulation 7 for projects to be commissioned in that year”

1.1.3 In discharge of its mandate under Regulation 9.1, the Commission determines the Generic Tariff for RE Technologies for FY 2019-20 to be applicable for the RE Projects, which would be commissioned during the year after the issuance of this order.

1.1.4 The Ministry of New & Renewable Energy (MNRE), Government of India has set an ambitious target of achieving 175 GW target for installed grid connected RE capacity by 2022. Guidelines have been issued for carrying out competitive bidding for various RE projects and Tariffs discovered by competitive bidding are considerably lower than the RE Generic Tariffs. Over the years, maturing RE Technologies achieving higher CUF at lower costs and innovative financial engineering in project costing have reduced the gap between Tariffs of conventional power projects and RE projects.

- 1.1.5 It has been observed that since the rates discovered by competitive bidding process are considerably lower than the Generic Tariffs determined in the earlier years, many of the Distribution Companies have been procuring RE power by way of competitive bidding rather than power purchase at RE Generic Tariff.
- 1.1.6 In this regard, second proviso to Regulation 10.1 of Renewable Energy Tariff Regulations, 2019 specifies as follows:
- 1.1.7 *“Provided further that in case the Distribution Licensee opts to procure power from Renewable Energy Projects through competitive bidding process in accordance with the guidelines issued by the central government, the Generic Tariff determined by the Commission shall act as a ceiling tariff and for such procurement of power, the Distribution Licensee shall file the Petition for adoption of tariff under Section 63 of the Act;”*The Commission issued the Draft Order on “Determination of Generic Tariff for FY 2019-20” under Regulation 9 of the Joint Electricity Regulatory Commission (Terms & conditions for Renewable Energy Tariff regulations, 2019) on 2nd August 2019 and invited comments/suggestions/objections from the stakeholders. A Public Notice was issued on 2nd August 2019 inviting comments/suggestions/objections from stakeholders by 20th August 2019.
- 1.1.8 In response, comments were received from stakeholders i.e., M/s Amplus Energy Solution Pvt. Ltd. (Amplus) and Electricity department Government of Goa. The comments received from the stakeholder and Commission’s views on the same are discussed in Section 2 of the Order.
- 1.1.9 The Commission after following the due public process is issuing this Order on Generic Tariff Determination for Renewable Energy Sources for FY 2019-20.

2 STAKEHOLDER CONSULTATION

The details of issues raised by the Stakeholders and the views of the Commission on the same are as follows:

2.1 Exemption from Open Access Charges

Stakeholder Comments

Amplus Energy Solutions Pvt. Ltd. suggested to include the Exemption from open Access Charges such as Transmission, wheeling, Cross Subsidy Surcharge, additional Surcharge and Scheduling & system operation charges for lifetime of the project i.e. 25 Years as a promotional measure in the RE Tariff Order 2019.

Commission's View:

The Commission clarifies that the Renewable Energy Tariff Order, 2019 is for determination of generic tariff for supply of power by Renewable Energy projects to the Distribution Licensee. The issues pertaining to exemption from open access charges as suggested by the stakeholder does not relate to RE Tariff Order for FY 2019-20.

2.2 Banking of Solar Energy and Settlement

Stakeholder Comments

Amplus Energy Solutions Pvt. Ltd. submitted that the Regulation does not mention anything on Banking of Solar Energy and its settlement mechanism and requested the Commission to allow banking facility for solar and specify the banking norms in the final RE Tariff Order 2019

Commission's View

The Commission clarifies that the Renewable Energy Tariff Order, 2019 is for determination of generic tariff for supply of power by Renewable Energy projects to the Distribution Licensee. The issues pertaining to Banking as suggested by the stakeholder does not relate to RE Tariff Order for FY 2019-20 as the entire energy generation from Renewable Energy project will be supplied to Distribution Licensee.

2.3 Must Run Status

Stakeholder Comments

Amplus Energy Solutions Pvt Ltd. submitted that the Commission in its 2015 RE Regulation had specified that “All grid connected solar power plants shall be treated as “MUST RUN” power plants and shall not be subjected to “merit order dispatch” principles.” However, the same has not been mentioned in the draft RE Tariff Order. They submitted that the Solar Projects should have “MUST RUN” status due to dependency on solar irradiation and hence, requested the Commission to include this clause in the final Renewable Energy Tariff Order.

Commission’s Views

As regards the suggestion for including a clause about Must Run status of Solar power plants, the Commission clarifies that the same is included in Regulation 10.3 of Renewable Energy Tariff Regulations, 2019 and there is no need to again mention the same in Renewable Energy Tariff Order as the supply of power by Renewable Energy project to the Distribution Licensee will be governed by the provisions of Renewable Energy Tariff Regulations, 2019.

2.4 Return on Equity

Stakeholder Comments

Electricity department, Government of Goa submitted that under present scenario, market is matured enough for renewable energy whereby the project risk has been mitigated to a large extent and hence the Return on equity may be reduced.

Commission’s Views

The Commission clarifies that the RE Generic Tariff Order is governed by the provisions of Renewable Energy Tariff Regulations, 2019. The Commission has finalised the Renewable Energy Tariff Regulations, 2019 after following the due public process and it will not be appropriate to deviate from the Renewable Energy Tariff Regulations, 2019.

2.5 Competitive bidding mechanism

Stakeholder Comments

Electricity department Government of Goasubmitted that the as per competitive bidding mechanism, tariff of Solar and Wind projects discovered are comparatively lower than the generic tariff determined by the Commission in the Draft Tariff. They further suggested that the tariff of respective RE technologies should be determined considering current competitive bidding tariffs discovered across country.

Commission's Views

The Commission clarifies that it is not mandatory for Distribution Licensee to procure the power from Renewable Energy sources at Generic Tariff determined by the Commission, As per the provisions of RE Tariff Regulations, 2019, the Distribution Licensee can procure from Renewable Energy Technologies, for which Generic Tariff is determined by the Commission either at the Generic Tariff approved by the Commission or through the competitive bidding process. In case the Distribution Licensee opts to procure renewable power through competitive bidding process, the generic tariff determined in the RE Tariff order will act as a ceiling tariff as per Regulation 10.1 of the Renewable Energy Tariff Regulations, 2019, in this regard stipulates as follows: -

“For Renewable Energy Technologies, for which Generic Tariff is determined by the Commission, the Distribution Licensee may procure power from such projects either at the Generic Tariff approved by the Commission or through the competitive bidding process

Provided further that in case the Distribution Licensee opts to procure power from Renewable Energy Projects through competitive bidding process in accordance with the guidelines issued by the central government, the Generic Tariff determined by the Commission shall act as a ceiling tariff and for such procurement of power, the Distribution Licensee shall file the Petition for adoption of tariff under Section 63 of the Act.”

2.6 Generic tariff for Solar-Wind Hybrid Power Project Stakeholder Comments

Electricity department Government of Goasubmitted that the Government of Goa is interested in development of Solar-wind Hybrid project with storage technology in the state. They suggestedto determine generic tariff for Solar-Wind power with Storage technology for different range of MW projects.

Commission's Views

The Commission clarifies that the RE Tariff Regulation, 2019 provides for project specific tariff determination of the Renewable energy Technologies that are approved by the Ministry of New and Renewable Energy. Electricity department Government of Goa can file a separate petition for the tariff determination of Solar-Wind Hybrid project as a project specific tariff.

3 GENERAL PRINCIPLES

3.1 Tariff Structure

3.1.1 Regulation 11 of Renewable Energy Tariff Regulations, 2019 specifies that the tariff for Renewable Energy technologies shall be single-part tariff consisting of the following fixed cost components:

"a) Operation and maintenance expenses;

b) Interest on loan capital;

c) Depreciation;

d) Interest on working capital;

e) Return on equity;

Provided that for Renewable Energy technologies like biomass power projects having fuel cost component, single-part tariff with two components, fixed cost component and fuel cost component, shall be determined."

3.2 Tariff Design

3.2.1 As per Regulation 12 of Renewable Energy Tariff Regulations, 2019, the Tariff Design for RE Generating Stations is as under:

"12.1 The generic tariff shall be determined considering the year of commissioning of the project, on levelized basis for the Tariff Period"

Provided that for Renewable Energy technologies having single-part tariff with two components, tariff shall be determined on levelized basis considering the year of commissioning of the project for fixed cost component while the fuel cost component shall be determined on the basis of year of operation.

12.2 For the purpose of levelized tariff computation, the discount factor equivalent to Post Tax weighted average cost of capital shall be considered.

12.3 Levelization shall be carried out for the 'useful life' of the Renewable Energy project."

3.2.2 Accordingly, the Commission has computed the Generic Tariff in this Order for Projects to be commissioned after the date of issuance of this order in FY 2019-20, which will be applicable for the entire useful life of the Project.

4 FINANCIAL PRINCIPLES(RENEWABLE ENERGY TARIFF REGULATIONS, 2019)

4.1 Debt Equity Ratio

4.1.1 As per Regulation 14 of Renewable Energy Tariff Regulations, 2019, the Debt Equity ratio shall be as under, for tariff determination

“14.1 Debt Equity ratio of 70:30 shall be considered”

4.2 Loan and Finance Charges

4.2.1 Regulation 15.1 of Renewable Energy Tariff Regulations, 2019 specifies loan tenure of 12 years for determination of the Generic Tariff for RE Projects. Regulation 15.2 provides for consideration of the rate of interest on loan as follows:

- **Mainland-** SBI MCLR (One-year tenor) prevailing during the last available six months + 200 basis points, which works out to $8.51\% + 2\% = 10.51\%$
- **Island-** SBI MCLR (One-year tenor) prevailing during the last available six months + 300 basis points, which works out to $8.51\% + 3\% = 11.51\%$

4.3 Depreciation

4.3.1 Regulation 16.3 of Renewable Energy Tariff Regulations, 2019 specifies that rate of depreciation of 5.83% per annum shall be considered for first 12 years and remaining depreciation shall be spread during remaining useful life of the RE projects considering the salvage value of the project as 10% of project cost. The Commission has computed the depreciation in accordance with the said provisions of Regulations.

4.4 Return on Equity

4.4.1 Regulation 17.2 of Renewable Energy Tariff Regulations, 2019 specifies the normative Return on Equity of 14% for Mainland areas and 16% for Island areas, to be grossed up by prevailing Minimum Alternate Tax (MAT) rate as on 1st April of applicable year at the time of determination of tariff for the entire useful life of the project. The Effective MAT rate as on 1st April of 2019 is 21.55%, as shown in the Table below:

Table 1: MAT Rate

| Particulars | | MAT |
|-------------------------|-----|--------|
| Base Tax Rate | | 18.50% |
| Surcharge | 12% | 2.22% |
| Tax Rate + surcharge | | 20.72% |
| Health & Education Cess | 4% | 0.83% |
| Effective Tax Rate | | 21.55% |

4.4.2 Accordingly, the Commission has computed the RoE in accordance with the provisions of Regulations by grossing up the normative rate of RoE with effective MAT rate of 21.55%.

4.5 Rate of Interest for Interest on Working Capital

4.5.1 Regarding Interest Rate for Interest on Working Capital, Regulation 18.3 specifies as follows:

“18.3 Normative Rate of Interest on Working Capital shall be considered as follows:

Normative Working Capital Interest Rate

| <i>Particulars</i> | <i>Interest Rates</i> |
|--------------------|--|
| <i>Mainland</i> | <i>State Bank of India MCLR (One-Year Tenor) prevalent during the last available six months + 300 basis points</i> |
| <i>Island</i> | <i>State Bank of India MCLR (One-Year Tenor) prevalent during the last available six months + 400 basis points</i> |

4.5.2 Accordingly, the Commission has considered the normative rate of Interest on Working Capital considering the MCLR as 8.51%, as follows:

- Mainland Areas- $8.51\% + 3\% = 11.51\%$
- Island Areas- $8.51\% + 4\% = 12.51\%$

4.6 Levelized Tariff

4.6.1 In accordance with the provisions of Renewable Energy Tariff Regulations, 2019, the Levelized Tariff is computed by undertaking levelization over the Useful Life of each RE technology considering a discount factor equivalent to the normative post-tax weighted average cost of capital, to represent the time value of money.

4.7 Discount Factor

4.7.1 The discount factor considered is 9.41% for Mainland Areas and 10.51% for island Areas, which is equal to the normative post-tax weighted average cost of capital on the basis of the normative debt-equity ratio of 70:30 specified in the Regulations, and the weighted average rates for the debt and equity components.

4.7.2 The Interest Rates considered for the loan component (i.e., 70%) of Capital Cost for mainland areas and Island Areas are 10.51% and 11.51%, respectively. For the equity component (i.e., 30%), the rate of RoE is considered is 14% for mainland areas and 16% for Island Areas.

4.8 Escalation Rate for O&M Expenses

4.8.1 As per Regulation 20.3 of Renewable Energy Tariff Regulations, 2019, Normative O&M expenses allowed during first year of the Control Period (i.e., FY 2019-20) under these Regulations shall be escalated at average inflation factor of previous three years considering 60% weightage for the actual point to point inflation over Wholesale Price Index (WPI) numbers as per the Office of Economic Advisor, Ministry of Commerce and Industry, Government of India and 40% weightage for the actual Consumer Price Index (CPI) for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous three years. Accordingly, the escalation rate has been computed considering the WPI and CPI inflation for FY 2016-17, FY 2017-18 and FY 2018-19 in the ratio of 60:40, which works out to 3.72%.

4.9 Accelerated Depreciation

4.9.1 Regulation 24.1 of Renewable Energy Tariff Regulations, 2019 specifies as follows:
"The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation benefit if availed by the generating company, for the renewable energy power plants while determining the tariff under these Regulations:

Provided that the following principles shall be considered for ascertaining Income Tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:

- *Assessment of benefit shall be based on normative Capital Cost, accelerated depreciation rate as per relevant provisions under Income Tax Act and corporate Income Tax rate;*
- *Capitalization of RE project during second half of the fiscal year;*
- *Per unit benefit shall be derived on levelized basis at discount factor equivalent to weighted average cost of capital."*

- 4.9.2 Accordingly, for Projects availing the benefit of accelerated depreciation, the applicable Corporate Income Tax rate of 29.12% (25% Income Tax rate + 12% surcharge + 4% Health & Education Cess) has been considered. As per the Circular dated 7 November, 2016 of the Income Tax Department, the accelerated depreciation rates have been revised to 40% from FY 2017-18. Moreover, additional 20% depreciation in the initial year is proposed to be extended to new assets acquired by Generation Companies vide the amendment to Section 32 (1) (ii a) of the Income Tax Act.
- 4.9.3 For determining the net depreciation benefits, depreciation @ 5.28% as per the StraightLine Method (book depreciation as per the Companies Act, 2013) has been compared with depreciation as per the Income Tax Act, i.e., 40% under the Written Down Value method. The tax benefit has been worked out as per the Corporate Income Tax rate on the net depreciation benefit. The 'per unit levelized accelerated depreciation benefit has been computed considering the weighted average cost of capital as per the discounting, as detailed in para. 3.7.1 of this Order.

4.10 Applicability of Tariff Order

- 4.10.1 This Order shall be applicable from the date of issuance of Order to 31st March 2020. The tariff determined under this Order shall be applicable for Renewable Energy Projects commissioned after the issuance of this Order in FY 2019-20 for the entire duration of the Tariff Period.
- 4.10.2 The following Sections of this Order outline the technology-wise norms and corresponding Generic Tariffs for RE Projects to be commissioned in FY 2019-20 based on following RE Technologies:
- Solar PV
 - Wind Energy
 - Small Hydro

5 GENERIC TARIFF FOR SOLAR PV POWER PROJECTS (FOR GROSS METERING)

5.1.1 The Generic Tariff for Solar PV Power Projects (for Gross Metering) has been computed for FY 2019-20 based on General and Financial principles as discussed above and Technology Specific parameters for Solar PV Power Projects.

5.2 Useful Life

5.2.1 The Useful Life specified for Solar Photo Voltaic Based Projects under Regulation 2.4 (44) of the RE Tariff Regulations, 2019 is 25 Years from COD.

5.3 Tariff Period

5.3.1 As per Regulation 6.1, the Tariff Period for Solar PV power project is same as Useful Life of the project, i.e., 25 Years from COD.

5.4 Capital Cost

5.4.1 The Commission has considered the normative Capital Cost for Solar PV Power Projects (for Gross Metering) as specified in Regulation 35.1 of Renewable Energy Tariff Regulations, 2019, as follows:-

a) Solar PV Projects in Mainland Areas: Rs.5.00 Crore/MW (without capital Subsidy);

b) Solar PV Projects in Island Areas: Rs. 6.00 Crore/MW (without capital Subsidy).

5.5 Debt: Equity Ratio

Mainland Areas

5.5.1 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019, the debt and equity components for Solar PV Power Projects (for Gross Metering) work out to Rs. 350 lakh per MW and Rs. 150 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively.

Island Areas

5.5.2 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019 , the debt and equity components for Solar PV Power Projects (for Gross Metering) for Island Area work out to Rs. 420 lakh per MW and Rs. 180 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively.

5.6 Return on Equity

5.6.1 In accordance with Regulation 17.2 of Renewable Energy Tariff Regulations, 2019, the RoE works out as shown in the Table below:

Table 2 Return on Equity for Solar PV (Mainland Areas)

| Particulars | Solar PV Power Projects (for Gross Metering) of 1MW |
|--|---|
| Opening Equity (in Rs lakh per MW) | 150.00 |
| Return on Equity @14% grossing up with MAT rate of 21.55% (Rs lakh per MW) | 26.77 |

Table 3 Return on Equity for Solar PV (Island Areas)

| Particulars | Solar PV Power Projects (for Gross Metering) of 1MW |
|--|---|
| Opening Equity (in Rs lakh per MW) | 180.00 |
| Return on Equity @16% grossing up with MAT rate of 21.55% (Rs lakh per MW) | 36.71 |

5.7 Interest on loan**Mainland Areas**

5.7.1 The interest rate of 10.51% has been taken for Solar PV Power Projects (for Gross Metering), with a gross opening loan amount of Rs. 350 lakh per MW for Projects in Mainland Areas.

Island Areas

5.7.2 The interest rate of 11.51% has been taken for Solar PV Power Projects (for Gross Metering), with a gross opening loan amount of Rs. 420 lakh per MW for projects in Island Areas.

5.8 Depreciation

5.8.1 In accordance with Regulation 16.3 of Renewable Energy Tariff Regulations, 2019, the depreciation for Solar PV Power Projects (for Gross Metering) has been worked out at rate of 5.83% for the first 12 years and at rate of 1.54% thereafter for the remaining Useful Life of 13 years.

5.9 Operation and Maintenance Expenses

5.9.1 As regards Operation and Maintenance Expenses, Regulation 37.1 of Renewable Energy Tariff Regulations, 2019 specifies as follows:

“The normative O&M expenses for the first year of the Control Period, i.e., FY 2019-20, shall be:

- a) 1.5% of Capital Cost for first year, for Solar PV Projects in Mainland Areas;*
- b) 2.0% of Capital Cost for first year, for Solar PV Projects in Island Areas.”*

5.9.2 The Commission has accordingly worked out the O&M Expenses for FY 2019-20 as follows:

Table 4 O&M Expenses for Mainland Areas (Rs. Lakh/MW)

| Solar PV | O&M Expenses FY 2019-20 |
|-------------------|-------------------------|
| Solar PV Projects | 7.50 |

Table 5 O&M Expenses for Island Areas (Rs. Lakh/MW)

| Solar PV | O&M Expenses FY 2019-20 |
|-------------------|-------------------------|
| Solar PV Projects | 12.00 |

5.9.3 As discussed earlier, the escalation rate for projecting O&M expenses for subsequent years work out to 3.72% and the same has been considered for projecting the O&M Expenses for subsequent years till the useful life of the Project.

5.10 Interest on Working Capital

5.10.1 The year-wise Working Capital Requirement has been computed in accordance with Regulation 18.1 of Renewable Energy Tariff Regulations, 2019, which specifies as follows:

“The Working Capital requirement in respect of Wind energy projects, Small Hydro Power, Solar PV and Solar thermal power projects shall be computed in accordance with the following:

- a) Operation & Maintenance expenses for one month;*
- b) Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative Capacity Utilisation Factor (CUF / PLF) as applicable;*
- c) Maintenance spares @ 15% of Operation and Maintenance expenses.”*

5.10.2 As discussed earlier, as per Regulation 18.3, the Commission has considered the normative interest rate on working capital as 11.51% for Mainland Areas and 12.51% for Island Areas for working out the year-wise Interest on Working Capital.

5.11 Capacity Utilization Factor

5.11.1 In accordance with Regulation 36, CUF considered for determination of Tariff for Solar PV Power Projects is as follows:

Table 6 CUF for Solar PV

| State / Union Territory | CUF % |
|--------------------------------|--------------|
| Puducherry | 18% |
| Dadra & Nagar Haveli | 18% |
| Lakshadweep | 17% |
| Andaman & Nicobar Islands | 17% |
| Daman | 18% |
| Diu | 18% |
| Chandigarh | 17% |
| Goa | 18% |

5.12 Auxiliary Power Consumption

5.12.1 In accordance with Regulation 38 of Renewable Energy Tariff Regulations, 2019, Normative Auxiliary Consumption of 0.25% of the gross generation has been considered for determination of Tariff.

5.13 Generic Tariff for Solar PV Power Projects (for Gross Metering)

5.13.1 Considering the above parameters and the discount factor of 9.41% for Mainland Areas and 10.51% for Island Areas for levelization of Tariff, Tariffs during the applicable period of this Order for Solar PV Power Projects (Gross Metering) commissioned between the date of issuance of this Order to 31 March, 2020 have been determined as under:

Table 7 Generic Tariff for Solar PV Power Projects (Rs./kWh)

| States/Union Territories | Tariff Period (Years) | Levelized Tariff | Benefit of Accelerated Depreciation (if availed) | Net Levelized Tariff (upon adjusting for accelerated depreciation benefit, if availed) |
|--------------------------|-----------------------|------------------|--|--|
| Goa | 25 | 4.98 | 0.37 | 4.61 |
| Chandigarh | 25 | 5.27 | 0.39 | 4.88 |
| Dadra & Nagar Haveli | 25 | 4.98 | 0.37 | 4.61 |
| Daman | 25 | 4.98 | 0.37 | 4.61 |
| Puducherry | 25 | 4.98 | 0.37 | 4.61 |
| Diu | 25 | 4.98 | 0.37 | 4.61 |
| Andaman & Nicobar Island | 25 | 7.16 | 0.53 | 6.63 |
| Lakshadweep | 25 | 7.16 | 0.53 | 6.63 |

6 GENERIC TARIFF FOR WIND ENERGY BASED PROJECTS

6.1.1 The Generic Tariff for Wind Energy Based Projects has been computed for FY 2019-20 based on General and Financial principles as discussed above and Technology Specific parameters for Wind Energy Based Projects.

6.2 Useful Life

6.2.1 The Useful Life specified for Wind Energy Based Projects under Regulation 2.4 (44 a) of the RE Tariff Regulations is 25 Years from COD.

6.3 Tariff Period

6.3.1 As per Regulation 6.1 the Tariff Period is equal to the Useful Life of the project, i.e., 25 Years from COD.

6.4 Capital Cost

6.4.1 The Commission has considered the normative Capital Cost for Wind Energy Based Projects as specified in Regulation 26.2 of Renewable Energy Tariff Regulations, 2019, as follows:-

- a) Mainland area: Rs. 5.25 Crore/MW;
- b) Island areas (Andaman & Nicobar): Rs. 6.25 Crore/MW;
- c) Island areas (Lakshadweep): Rs. 7.00 Crore/MW;

6.5 Debt: Equity Ratio

Mainland Areas

6.5.1 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019 the debt and equity components for Wind Energy Based Projects work out to Rs. 367.50 lakh per MW and Rs. 157.50 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively.

Island Areas (Andaman & Nicobar)

6.5.2 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019, the debt and equity components for Wind Energy Based Projects work out to Rs. 437.50 lakh per MW and Rs. 187.50 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively.

Island Areas (Lakshadweep)

6.5.3 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019, the debt and equity components for Wind Energy projects work out to Rs. 490 lakh per MW and Rs. 210 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively.

6.6 Return on Equity

6.6.1 In accordance with Regulation 17.2 of Renewable Energy Tariff Regulations, 2019, the RoE works out as shown in the Table below:

Table 8 RoE for Mainland Areas

| Particulars | Wind Energy |
|--|-------------|
| Opening Equity (in Rs lakh per MW) | 157.50 |
| Return on Equity @14% after grossing up with MAT rate of 21.55% (Rs lakh per MW) | 28.11 |

Table 9 RoE for Island Areas (Andaman & Nicobar)

| Particulars | Wind Energy |
|--|-------------|
| Opening Equity (in Rs lakh per MW) | 187.50 |
| Return on Equity @16% after grossing up with MAT rate of 21.55% (Rs lakh per MW) | 38.24 |

Table 10 RoE for Island Areas (Lakshadweep)

| Particulars | Wind Energy |
|--|-------------|
| Opening Equity (in Rs lakh per MW) | 210.00 |
| Return on Equity @16% after grossing up with MAT rate of 21.55% (Rs lakh per MW) | 42.83 |

6.7 Interest on loan

Mainland Areas

6.7.1 The interest rate of 10.51% has been taken for Wind Energy Power Projects, with a gross opening loan amount of Rs. 367.50 lakh per MW for Projects in Mainland Areas.

Island Areas (Andaman & Nicobar)

6.7.2 The interest rate of 11.51% has been taken for Wind Energy Power Projects, with a gross opening loan amount of Rs. 437.50 lakh per MW for Projects in Island Areas (Andaman & Nicobar).

Island Areas (Lakshadweep)

6.7.3 The interest rate of 11.51% has been taken for Wind Energy Power Projects, with a gross opening loan amount of Rs. 490.00 lakh per MW for Projects in Island Areas(Lakshadweep).

6.8 Depreciation

6.8.1 In accordance with Regulation 16.3 of Renewable Energy Tariff Regulations,2019, the depreciation for Wind Energy Based Projects has been worked out at rate of 5.83% for the first 12 years and at rate of 1.54% thereafter for the remaining Useful Life of 13 years.

6.9 Operation and Maintenance Expenses

6.9.1 As regards Operation and Maintenance Expenses, Regulation 28.1 of Renewable Energy Tariff Regulations, 2019 specifies as follows:

“The normative O&M expenses for the first year of the Control Period, i.e., FY 2019-20, shall be:

- a) 1.5% of Capital Cost for Wind Energy Projects in Mainland Areas;*
- b) 2.0% of Capital Cost for Wind Energy Projects in Island Areas.”*

6.9.2 The Commission has accordingly worked out the O&M Expenses for FY 2019-20 as follows:

Table 11O &M Expenses for Mainland Areas (Rs. Lakh/MW)

| Particulars | O&M Expenses FY 2019-20 |
|----------------------|-------------------------|
| Wind Energy Projects | 7.88 |

Table 12 O&M Expenses for Island Areas Andaman & Nicobar (Rs. Lakh/MW)

| Particulars | O&M Expenses FY 2019-20 |
|----------------------|-------------------------|
| Wind Energy Projects | 12.50 |

Table 13 O&M Expenses for Island Areas Lakshadweep (Rs. Lakh/MW)

| Particulars | O&M Expenses FY 2019-20 |
|----------------------|-------------------------|
| Wind Energy Projects | 14.00 |

6.9.3 As discussed earlier, the escalation rate for projecting O&M expenses for subsequent years works out to 3.72%, and the same has been considered for projecting the O&M Expenses for subsequent years till the Useful Life of the Project.

6.10 Interest on Working Capital

6.10.1 The year-wise Working Capital Requirement has been computed in accordance with Regulation 18.1 of Renewable Energy Tariff Regulations, 2019, which specifies as follows:

“The Working Capital requirement in respect of Wind energy projects, Small Hydro Power, Solar PV and Solar thermal power projects shall be computed in accordance with the following:

- a) Operation & Maintenance expenses for one month;
- b) Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative Capacity Utilisation Factor (CUF / PLF) as applicable;
- c) Maintenance spares @ 15% of Operation and Maintenance expenses.”

6.10.2 As discussed earlier, as Per Regulation 18.3, the Commission has considered the normative interest rate on working capital as 11.51% for Mainland Areas and 12.51% for Island Areas for working out the year-wise Interest on Working Capital.

6.11 Capacity Utilization Factor

6.11.1 In accordance with Regulation 27, CUF considered for determination of Tariff for Wind Energy Projects is as follows:

Table 14 CUF for Wind Energy Projects

| State / Union Territory | CUF % |
|---------------------------|-------|
| Goa | 18% |
| Andaman & Nicobar Islands | 18% |
| Puducherry | 21% |
| Lakshadweep | 20% |
| Daman | 19% |
| Chandigarh | 18% |
| Dadra & Nagar Haveli | 18% |
| Diu | 26% |

6.12 Auxiliary Power Consumption

6.12.1 In accordance with Regulation 29 of Renewable Energy Tariff Regulations, 2019, Normative Auxiliary Consumption of 0.25% of the gross generation has been considered for determination of Tariff.

6.13 Generic Tariff for Wind Energy Based Projects

6.13.1 Considering the above parameters and the discount factor of 9.41% for Mainland Areas and 10.51% for Island areas for levelization of Tariff, tariffs during the applicable period of this Order for Wind Energy Power Projects commissioned between the date of issuance of this Order to 31 March, 2020 have been determined as under:

Table 15 Generic Tariff for Wind Energy Power Projects (Rs./kWh)

| States/Union Territories | Tariff Period (Years) | Levelized Tariff | Benefit of Accelerated Depreciation (if availed) | Net Levelized Tariff (upon adjusting for accelerated depreciation benefit, if availed) |
|--------------------------|-----------------------|------------------|--|--|
| Goa | 25 | 5.22 | 0.40 | 4.82 |
| Chandigarh | 25 | 5.22 | 0.40 | 4.82 |
| Dadra & Nagar Haveli | 25 | 5.22 | 0.40 | 4.82 |
| Daman | 25 | 4.95 | 0.38 | 4.57 |

| States/Union Territories | Tariff Period (Years) | Levelized Tariff | Benefit of Accelerated Depreciation (if availed) | Net Levelized Tariff (upon adjusting for accelerated depreciation benefit, if availed) |
|--------------------------|-----------------------|------------------|--|--|
| Puducherry | 25 | 4.48 | 0.34 | 4.14 |
| Diu | 25 | 3.62 | 0.28 | 3.34 |
| Andaman & Nicobar Island | 25 | 7.04 | 0.53 | 6.51 |
| Lakshadweep | 25 | 7.10 | 0.54 | 6.56 |

7 SMALL (INCLUDING MINI/MICRO) HYDRO POWER PROJECTS

7.1.1 The Generic Tariff for Small Hydro Projects has been computed for FY 2019-20 based on General and Financial principles as discussed above and Technology Specific parameters for Small Hydro Projects.

7.2 Useful Life

7.2.1 The Useful Life specified for Small Hydro Projects, under Regulation 2.4 (44) of the RE Tariff Regulations, 2019, is 35 years from COD.

7.3 Tariff Period

7.3.1 As per Regulation 6.1, the Tariff Period is equal to Useful Life of the project, i.e., 35 years from COD.

7.4 Capital Cost of Small Hydro Projects

7.4.1 The Commission has considered the normative Capital Cost for Small Hydro Projects as specified in Regulation 30.1 of Renewable Energy Tariff Regulations, 2019, as follows:

Projects in Mainland Areas:

- a. Below or equal to 5 MW: Rs. 7.79 Cr/MW,
- b. Above 5 MW and below or equal to 25 MW: Rs. 7.07 Cr/MW

Projects in Island Areas:

- a. Below or equal to 5 MW: Rs. 10.50 Cr/MW,
- b. Above 5 MW and below or equal to 25 MW: Rs. 9.00 Cr/MW

7.5 DEBT-EQUITY RATIO

Mainland Areas

7.5.1 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019, the debt and equity components for SHPs with capacities below or equal to 5 MW work out to Rs. 545.30 lakh per MW and Rs.233.70 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively. For Projects of capacities above 5 MW and lower than or equal to 25 MW, the debt and equity components work out to Rs.494.90 lakh per MW and Rs. 212.10 lakh per MW, respectively.

Island Areas

7.5.2 In accordance with Regulation 14.1 of Renewable Energy Tariff Regulations, 2019, the debt and equity components for SHPs with capacities below or equal to 5 MW work out to Rs. 735.00 lakh per MW and Rs. 315.00 lakh per MW (i.e., 70% and 30% of the Capital Cost), respectively. For Projects of capacities above 5 MW and lower than or equal to 25 MW, the debt and equity components work out to Rs.630.00 lakh per MW and Rs. 270.00 lakh per MW, respectively.

7.6 Return on Equity

7.6.1 In accordance with Regulation 17.2 of Renewable Energy Tariff Regulations, 2019, the RoE works out as shown in the Table below:

Table 16RoE for Mainland Areas

| Particulars | below or equal to 5 MW | > 5 MW and lower than or equal to 25 MW |
|--|------------------------|---|
| Opening Equity (in Rs lakh per MW) | 233.70 | 212.10 |
| Return on Equity @14% grossing up with MAT rate of 21.55% (Rs lakh per MW) | 41.70 | 37.85 |

Table 17RoE for Island Areas

| Particulars | below or equal to 5 MW | > 5 MW and lower than or equal to 25 MW |
|--|------------------------|---|
| Opening Equity (in Rs lakh per MW) | 315.00 | 270.00 |
| Return on Equity @16% grossing up with MAT rate of 21.55% (Rs lakh per MW) | 64.24 | 55.07 |

7.7 INTEREST ON LOAN

Mainland Areas

7.7.1 The interest rate of 10.51% has been taken for SHPs with capacities lower than or equal to 5 MW, with a gross opening loan amount of Rs. 545.30 lakh per MW; and for SHPs above 5 MW and lower than or equal to 25 MW, with a gross opening loan amount of Rs. 494.90 lakh per MW for Projects in Mainland Areas.

Island Areas

7.7.2 The interest rate of 11.51% has been taken for SHPs with capacities lower than or equal to 5 MW, with a gross opening loan amount of Rs. 735.00 lakh per MW; and for SHPs above 5 MW and lower than or equal to 25 MW, with a gross opening loan amount of Rs. 630.00 lakh per MW for Projects in Island Areas.

7.8 Depreciation

7.8.1 In accordance with Regulation 16.3 of Renewable Energy Tariff Regulations, 2019, the depreciation for Small Hydro Projects has been worked out at rate of 5.83% for the first 12 years and at rate of 0.87% thereafter for the remaining Useful Life of 23 years.

7.9 Operation and Maintenance Expenses

7.9.1 As regards Operation and Maintenance Expenses, Regulation 33.1 of Renewable Energy Tariff Regulations, 2019 specifies as follows:

“The normative O&M expenses for the first year of the Control Period, i.e., FY 2019-20, shall be:

- a) 2% of Capital Cost for Small hydro Projects, in Mainland Areas;*
- b) 2.5% of Capital Cost for Projects in Island Areas.”*

7.9.2 The Commission has accordingly worked out the O&M Expenses for FY 2019-20 as follows:

Table 18 O&M Expenses for Mainland Areas

| Project Size | O&M Expense Norm | O&M Expenses (Rs. lakh/MW) |
|---------------------------------|------------------------|----------------------------|
| Lower than or equal to 5 MW | 2% of the Capital Cost | 15.58 |
| 5MW lower than or equal to 25MW | 2% of the Capital Cost | 14.14 |

Table 19 O&M Expenses for Island Areas

| Project Size | O&M Expense Norm | O&M Expenses (Rs. lakh/MW) |
|---------------------------------|--------------------------|----------------------------|
| Lower than or equal to 5 MW | 2.5% of the Capital Cost | 26.25 |
| 5MW lower than or equal to 25MW | 2.5% of the Capital Cost | 22.50 |

7.9.3 As discussed earlier, the escalation rate for projecting O&M expenses for subsequent years works out to 3.72%, and the same has been considered for projecting the O&M Expenses for subsequent years till the useful life of the Project.

7.10 Interest on Working Capital

7.10.1 The year-wise Working Capital Requirement has been computed in accordance with Regulation 18.1 of Renewable Energy Tariff Regulations, 2019, which specifies as follows:

“The Working Capital requirement in respect of Wind energy projects, Small Hydro Power, Solar PV and Solar thermal power projects shall be computed in accordance with the following:

- d) Operation & Maintenance expenses for one month;*
- e) Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative Capacity Utilisation Factor (CUF / PLF) as applicable;*
- f) Maintenance spares @ 15% of Operation and Maintenance expenses.”*

7.10.2 As discussed earlier, as Per Regulation 18.3, the Commission has considered the normative interest rate on working capital as 11.51% for mainland Areas and 12.51% for Island Areas for working out the year-wise Interest on Working Capital.

7.11 Capacity Utilization Factor

7.11.1 In Accordance with Regulation 31, a CUF of 30% has been considered for determination of Tariff for Small Hydro Based Projects.

7.12 Auxiliary Power Consumption

7.12.1 In accordance with Regulation 32 of Renewable Energy Tariff Regulations, 2019, normative Auxiliary Consumption of 1.0% of the gross generation has been considered for determination of Tariff.

7.13 Generic Tariff for Small Hydro Projects

7.13.1 Considering the above parameters and the discount factor of 9.41% for Mainland Areas and 10.41% for Island Areas for levelization of Tariff, Tariffs during the applicable period of this Order for Small Hydro Projects (Mainland Areas & Island Areas) commissioned between the date of issuance of this Order to 31 March, 2020 have been determined as under:

Table 20 Generic Tariff for Mainland Area (Rs./kWh)

| Type of SHP | Tariff Period (Years) | Levelized Tariff | Benefit of Accelerated Depreciation (if availed) | Net Levelized Tariff (upon adjusting for accelerated depreciation benefit, if availed) |
|---|-----------------------|------------------|--|--|
| Lower than or equal to 5 MW | 35 | 4.77 | 0.32 | 4.45 |
| Above 5MW and lower than or equal to 25MW | 35 | 4.33 | 0.29 | 4.04 |

Table 21 Generic Tariff for Island Areas (Rs./kWh)

| Type of SHP | Tariff Period (Years) | Levelized Tariff | Benefit of Accelerated Depreciation (if availed) | Net Levelized Tariff (upon adjusting for accelerated depreciation benefit, if availed) |
|---|-----------------------|------------------|--|--|
| Lower than or equal to 5 MW | 35 | 7.29 | 0.50 | 6.79 |
| Above 5MW and lower than or equal to 25MW | 35 | 6.25 | 0.43 | 5.82 |

8 DETAILS OF ANNEXURE

8.1.1 The detailed computation of the Generic Tariff for various Renewable Energy Technologies are set out in the following Annexures to this Order

Table 22 List of Annexures

| S. No. | RE Projects | Remark |
|--------|-----------------------------------|-------------|
| 1 | Solar PV (for Gross Metering) | Annexure -1 |
| 2 | Wind Energy Power Project | Annexure-2 |
| 3 | Small Hydro Project- Mainland | Annexure-3 |
| 4 | Small Hydro Project- Island Areas | Annexure-3A |

Sd/-

(NEERJA MATHUR)
MEMBER

Sd/-

(M.K. GOEL)
CHAIRPERSON

Annexure-1Solar PV

(For Gross Metering) - Assumptions and Parameters for Tariff Determination

| S. No. | Assumption Head | Sub-Head | Sub-Head (2) | Unit | Mainland | Island | |
|-------------------------------------|-------------------------|---------------------------|---|---------------------|----------|--------|--|
| 1 | Power Generation | Capacity | Installed Power Generation Capacity | MW | 1 | 1 | |
| | | | Auxiliary Consumption | % | 0.25% | 0.25% | |
| | | | Useful Life | Years | 25 | 25 | |
| 2 | Project Cost | Capital Cost/MW | Power Plant Cost | Rs Lakh/MW | 500 | 600 | |
| 3 | Sources of Fund | | Tariff Period | Years | 25 | 25 | |
| | | | <u>Debt: Equity</u> | | | | |
| | | | Debt | % | 70% | 70% | |
| | | | Equity | % | 30% | 30% | |
| | | | Total Debt Amount | Rs Lakh | 350 | 420 | |
| | | | Total Equity Amout | Rs Lakh | 150 | 180 | |
| | | | <u>Debt Component</u> | | | | |
| | | | Repayment Period | years | 12 | 12 | |
| | | | Interest Rate | % | 10.51% | 11.51% | |
| | | | <u>Equity Component</u> | | | | |
| Equity amount | Rs Lacs | 150.0 | 180.0 | | | | |
| Return on Equity | % p.a | 17.85% | 20.39% | | | | |
| Discount Rate | | 9.41% | 10.51% | | | | |
| 4 | Financial Assumptions | <u>Fiscal Assumptions</u> | Income Tax | % | 29.12% | 29.12% | |
| | | | MAT Rate | % | 21.55% | 21.55% | |
| | | | <u>Depreciation</u> | | | | |
| | | | Depreciation Rate for first 12 years | % | 5.83% | 5.83% | |
| Depreciation Rate 13th year onwards | % | 1.54% | 1.54% | | | | |
| 5 | Working Capital | <u>For Fixed Charges</u> | O&M Charges | Months | 1 | 1 | |
| | | | Maintenance Spare | (% of O&M expenses) | 15.00% | 15.00% | |
| | | | Receivables for Debtors | Months | 2 | 2 | |
| | | | Interest On Working Capital | % | 11.51% | 12.51% | |
| 6 | Operation & Maintenance | | O&M Cost for First Year power plant (FY19-20) | % of Project Cos | 1.50% | 2.00% | |
| | | | O & M Expenses Escalation | Rs Lakh | 7.50 | 12.00 | |
| | | | | % | 3.72% | 3.72% | |

Solar PV Projects : Determination of Tariff Component Goa, Dadar & Nagar Haveli, Daman, Puducherry and DIU

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|--------------------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Net Generation | MU | | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 |

| Fixed Cost | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|----------------|---------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| O&M Expenses | Rs Lakh | | 7.50 | 7.78 | 8.07 | 8.37 | 8.68 | 9.00 | 9.34 | 9.69 | 10.05 | 10.42 | 10.81 | 11.21 | 11.63 | 12.06 | 12.51 | 12.97 | 13.46 | 13.96 | 14.48 | 15.01 | 15.57 | 16.15 | 16.75 | 17.38 | 18.02 |
| Depreciation | Rs Lakh | | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 | 7.71 |
| Interest on term loan | Rs Lakh | | 35.25 | 32.18 | 29.12 | 26.06 | 22.99 | 19.93 | 16.87 | 13.80 | 10.74 | 7.68 | 4.62 | 1.55 | 0.01 | 0.00 | 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 | | 2.13 | 2.09 | 2.04 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.69 | 1.65 | 1.22 | 1.24 | 1.26 | 1.28 | 1.31 | 1.33 | 1.35 | 1.38 | 1.41 | 1.43 | 1.46 | 1.49 | 1.52 |
| Return on Equity | Rs Lakh | | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 |
| Total Fixed Cost | Rs Lakh | | 100.80 | 97.97 | 95.15 | 92.34 | 89.54 | 86.76 | 83.99 | 81.23 | 78.48 | 75.75 | 73.03 | 70.33 | 47.33 | 47.78 | 48.24 | 48.73 | 49.24 | 49.76 | 50.31 | 50.87 | 51.45 | 52.06 | 52.69 | 53.34 | 54.02 |
| Total COG | Rs/kWh | | 6.41 | 6.23 | 6.05 | 5.87 | 5.69 | 5.52 | 5.34 | 5.16 | 4.99 | 4.82 | 4.64 | 4.47 | 3.01 | 3.04 | 3.07 | 3.10 | 3.13 | 3.16 | 3.20 | 3.23 | 3.27 | 3.31 | 3.35 | 3.39 | 3.43 |
| Discount Factor | | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 |
| Levellised Tariff without Acc. Depn Benefit | 4.98 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levellised Acc Dep. Benefit | 0.37 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levellised Tariff wuth Acc. Depn Benefit | 4.61 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | |

Solar PV: Determination of Tariff component for Chandigarh

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|--------------------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Net Generation | MU | | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 |

| Fixed Cost | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
|---|----------------|---------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| O&M Expenses | Rs Lakh | | 7.50 | 7.78 | 8.07 | 8.37 | 8.68 | 9.00 | 9.34 | 9.69 | 10.05 | 10.42 | 10.81 | 11.21 | 11.63 | 12.06 | 12.51 | 12.97 | 13.46 | 13.96 | 14.48 | 15.01 | 15.57 | 16.15 | 16.75 | 17.38 | 18.02 | |
| Depreciation | Rs Lakh | | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 | 29.15 |
| Interest on term loan | Rs Lakh | | 35.25 | 32.18 | 29.12 | 26.06 | 22.99 | 19.93 | 16.87 | 13.80 | 10.74 | 7.68 | 4.62 | 1.55 | 0.01 | 0.00 | 0.00 | 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 | | 2.13 | 2.09 | 2.04 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.69 | 1.65 | 1.22 | 1.24 | 1.26 | 1.28 | 1.31 | 1.33 | 1.35 | 1.38 | 1.41 | 1.43 | 1.46 | 1.49 | 1.52 | |
| Return on Equity | Rs Lakh | | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 | 26.77 |
| Total Fixed Cost | Rs Lakh | | 100.80 | 97.97 | 95.15 | 92.34 | 89.54 | 86.76 | 83.99 | 81.23 | 78.48 | 75.75 | 73.03 | 70.33 | 47.33 | 47.78 | 48.24 | 48.73 | 49.24 | 49.76 | 50.31 | 50.87 | 51.45 | 52.06 | 52.69 | 53.34 | 54.02 | |
| Total COG | Rs/kWh | | 6.79 | 6.60 | 6.41 | 6.22 | 6.03 | 5.84 | 5.65 | 5.47 | 5.28 | 5.10 | 4.92 | 4.73 | 3.19 | 3.22 | 3.25 | 3.28 | 3.31 | 3.35 | 3.39 | 3.42 | 3.46 | 3.50 | 3.55 | 3.59 | 3.64 | |
| Discount Factor | | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | |
| Levelling Tariff without Acc. Depn Bene | 5.27 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelling Acc Dep. Benefit | 0.39 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelling Tariff wuth Acc. Depn Benefit | 4.88 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |

Solar PV: Determination of Tariff, component for Andaman & Nicobar Island/Lakshadweep

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|--------------------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Net Generation | MU | | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 |

| Fixed Cost | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
|--|----------------|---------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| O&M Expenses | Rs Lakh | | 12.00 | 12.45 | 12.91 | 13.39 | 13.89 | 14.40 | 14.94 | 15.50 | 16.07 | 16.67 | 17.29 | 17.94 | 18.60 | 19.29 | 20.01 | 20.76 | 21.53 | 22.33 | 23.16 | 24.02 | 24.92 | 25.84 | 26.81 | 27.80 | 28.84 | |
| Depreciation | Rs Lakh | | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 34.98 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 | 9.25 |
| Interest on term loan | Rs Lakh | | 46.32 | 42.30 | 38.27 | 34.24 | 30.22 | 26.19 | 22.17 | 18.14 | 14.12 | 10.09 | 6.07 | 2.04 | 0.01 | 0.00 | 0.00 | 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 | | 3.13 | 3.06 | 3.00 | 2.94 | 2.88 | 2.82 | 2.76 | 2.70 | 2.65 | 2.59 | 2.54 | 2.49 | 1.93 | 1.96 | 2.00 | 2.04 | 2.08 | 2.12 | 2.16 | 2.21 | 2.25 | 2.30 | 2.35 | 2.40 | 2.45 | |
| Return on Equity | Rs Lakh | | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 | 36.71 |
| Total Fixed Cost | Rs Lakh | | 133.14 | 129.50 | 125.87 | 122.26 | 118.68 | 115.11 | 111.56 | 108.03 | 104.53 | 101.05 | 97.59 | 94.15 | 66.51 | 67.22 | 67.97 | 68.76 | 69.57 | 70.41 | 71.28 | 72.19 | 73.13 | 74.10 | 75.11 | 76.16 | 77.25 | |
| Total COG | Rs/kWh | | 8.96 | 8.72 | 8.47 | 8.23 | 7.99 | 7.75 | 7.51 | 7.27 | 7.04 | 6.80 | 6.57 | 6.34 | 4.48 | 4.53 | 4.58 | 4.63 | 4.68 | 4.74 | 4.80 | 4.86 | 4.92 | 4.99 | 5.06 | 5.13 | 5.20 | |
| Discount Factor | | | 1 | 0.90 | 0.82 | 0.74 | 0.67 | 0.61 | 0.55 | 0.50 | 0.45 | 0.41 | 0.37 | 0.33 | 0.30 | 0.27 | 0.25 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | |
| Levelling Tariff without Acc. Depn Benefit | 7.16 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelling Acc Dep. Benefit | 0.53 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelling Tariff with Acc. Depn Benefit | 6.63 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | |

Wind Energy Based Projects- Assumptions and Parameters for Tariff Determination

| S. No. | Assumption Head | Sub-Head | Sub-Head (2) | Unit | Mainland | Island Andaman & Nicobar Island | Island Lakshadweep |
|--------|-------------------------|--|---|----------------------------|------------------|--|-----------------------|
| 1 | Power Generation | Capacity | Installed Power Generation Capacity Auxiliary Consumption Useful Life | MW % Years | 1 0.25% 25 | 1 0.25% 25 | 1 0.25% 25 |
| 2 | Project Cost | Capital Cost/MW | Power Plant Cost | Rs Lakh/MW | 525 | 625 | 700 |
| 3 | Sources of Fund | Debt: Equity | Tariff Period | Years | 25 | 25 | 25 |
| | | | Debt | % | 70% | 70% | 70% |
| | | | Equity | % | 30% | 30% | 30% |
| | | | Total Debt Amount | Rs Lakh | 367.5 | 437.5 | 490 |
| | | | Total Equity Amount | Rs Lakh | 157.5 | 187.5 | 210 |
| | | Debt Component | Repayment Period | years | 12 | 12 | 12 |
| | | | Interest Rate | % | 10.51% | 11.51% | 11.51% |
| | | Equity Component | Equity amount | Rs Lacs | 157.5 | 187.5 | 210 |
| | | | Return on Equity | % p.a | 17.85% | 20.39% | 20.39% |
| | | | Discount Rate | | 9.41% | 10.51% | 10.51% |
| 4 | Financial Assumptions | Fiscal Assumptions | Income Tax | % | 29.12% | 29.12% | 29.12% |
| | | | MAT Rate | % | 21.55% | 21.55% | 21.55% |
| | | Depreciation | Depreciation Rate for first 12 years | % | 5.83% | 5.83% | 5.83% |
| | | | Depreciation Rate 13th year onwards | % | 1.54% | 1.54% | 1.54% |
| 5 | Working Capital | For Fixed Charges | | Months | 1 | 1 | 1 |
| | | O&M Charges | (% of O&M exepenses) | | 15% | 15% | 15% |
| | | Maintenance Spare | | Months | 2 | 2 | 2 |
| | | Receivables for Debtors | | % | 11.51% | 12.51% | 12.51% |
| | | Interest On Working Capital | | | | | |
| 6 | Operation & Maintenance | O&M Cost for First Year power plant (FY19-20) | | % of Project Co Rs Lakh | 1.50% 7.88 | 2.00% 12.5 | 2.00% 14 |
| | | O & M Expenses Escalation | | % | 3.72% | 3.72% | 3.72% |

Wind energy Based Projects: Determination of Tariff, component for Goa/Chandigarh/DNH

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
|---|-------------|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Net Generation | Rs Lakh kWh | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | |
| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| O&M Expenses | (Rs. Lakh) | 7.88 | 8.17 | 8.47 | 8.79 | 9.11 | 9.45 | 9.80 | 10.17 | 10.55 | 10.94 | 11.35 | 11.77 | 12.21 | 12.66 | 13.13 | 13.62 | 14.13 | 14.65 | 15.20 | 15.77 | 16.35 | 16.96 | 17.59 | 18.25 | 18.92 | |
| Depreciation | (Rs. Lakh) | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 |
| Interest on Working Capital | (Rs. Lakh) | 2.24 | 2.19 | 2.14 | 2.10 | 2.05 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.28 | 1.30 | 1.32 | 1.35 | 1.37 | 1.40 | 1.42 | 1.45 | 1.47 | 1.50 | 1.53 | 1.56 | 1.60 | |
| Interest on Loan | (Rs. Lakh) | 37.01 | 33.79 | 30.57 | 27.35 | 24.14 | 20.92 | 17.70 | 14.48 | 11.26 | 8.05 | 4.83 | 1.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 |
| Tax on ROE | (Rs. Lakh) | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 |
| Total | (Rs. Lakh) | 105.86 | 102.88 | 99.92 | 96.97 | 94.03 | 91.10 | 88.19 | 85.29 | 82.41 | 79.54 | 76.68 | 73.84 | 49.67 | 50.15 | 50.64 | 51.15 | 51.68 | 52.23 | 52.80 | 53.40 | 54.01 | 54.65 | 55.31 | 55.99 | 56.70 | |
| Total COG | Rs./kWh | 6.73 | 6.54 | 6.35 | 6.17 | 5.98 | 5.79 | 5.61 | 5.42 | 5.24 | 5.06 | 4.88 | 4.69 | 3.16 | 3.19 | 3.22 | 3.25 | 3.29 | 3.32 | 3.36 | 3.39 | 3.43 | 3.47 | 3.52 | 3.56 | 3.61 | |
| Discount factor | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | |
| Levelised Tariff | | 5.22 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | | 0.40 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | | 4.82 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |

Wind energy Based Projects: Determination of Tariff, component for Daman

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|-------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Net Generation | Rs Lakh kWh | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 | 16.60 |
| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| O&M Expenses | (Rs. Lakh) | 7.88 | 8.17 | 8.47 | 8.79 | 9.11 | 9.45 | 9.80 | 10.17 | 10.55 | 10.94 | 11.35 | 11.77 | 12.21 | 12.66 | 13.13 | 13.62 | 14.13 | 14.65 | 15.20 | 15.77 | 16.35 | 16.96 | 17.59 | 18.25 | 18.92 |
| Depreciation | (Rs. Lakh) | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 |
| Interest on Working Capital | (Rs. Lakh) | 2.24 | 2.19 | 2.14 | 2.10 | 2.05 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.28 | 1.30 | 1.32 | 1.35 | 1.37 | 1.40 | 1.42 | 1.45 | 1.48 | 1.50 | 1.53 | 1.56 | 1.60 |
| Interest on Loan | (Rs. Lakh) | 37.01 | 33.79 | 30.57 | 27.35 | 24.14 | 20.92 | 17.70 | 14.48 | 11.26 | 8.05 | 4.83 | 1.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 |
| Tax on ROE | (Rs. Lakh) | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 |
| Total | (Rs. Lakh) | 105.86 | 102.88 | 99.92 | 96.97 | 94.03 | 91.10 | 88.19 | 85.29 | 82.41 | 79.54 | 76.68 | 73.84 | 49.67 | 50.15 | 50.64 | 51.15 | 51.68 | 52.23 | 52.80 | 53.40 | 54.01 | 54.65 | 55.31 | 55.99 | 56.70 |
| Total COG | Rs./kWh | 6.38 | 6.20 | 6.02 | 5.84 | 5.66 | 5.49 | 5.31 | 5.14 | 4.96 | 4.79 | 4.62 | 4.45 | 2.99 | 3.02 | 3.05 | 3.08 | 3.11 | 3.15 | 3.18 | 3.22 | 3.25 | 3.29 | 3.33 | 3.37 | 3.42 |
| Discount factor | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 |
| Levelised Tariff | 4.95 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | 0.38 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 4.57 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |

Wind energy Based Projects: Determination of Tariff, component for Puducherry

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|-------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Net Generation | Rs Lakh kWh | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 | 18.35 |
| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| O&M Expenses | (Rs. Lakh) | 7.88 | 8.17 | 8.47 | 8.79 | 9.11 | 9.45 | 9.80 | 10.17 | 10.55 | 10.94 | 11.35 | 11.77 | 12.21 | 12.66 | 13.13 | 13.62 | 14.13 | 14.65 | 15.20 | 15.77 | 16.35 | 16.96 | 17.59 | 18.25 | 18.92 |
| Depreciation | (Rs. Lakh) | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 |
| Interest on Working Capital | (Rs. Lakh) | 2.24 | 2.19 | 2.14 | 2.10 | 2.05 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.28 | 1.30 | 1.32 | 1.35 | 1.37 | 1.40 | 1.42 | 1.45 | 1.48 | 1.50 | 1.53 | 1.56 | 1.60 |
| Interest on Loan | (Rs. Lakh) | 37.01 | 33.79 | 30.57 | 27.35 | 24.14 | 20.92 | 17.70 | 14.48 | 11.26 | 8.05 | 4.83 | 1.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 |
| Tax on ROE | (Rs. Lakh) | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 |
| Total | (Rs. Lakh) | 105.86 | 102.88 | 99.92 | 96.97 | 94.03 | 91.10 | 88.19 | 85.29 | 82.41 | 79.54 | 76.68 | 73.84 | 49.67 | 50.15 | 50.64 | 51.15 | 51.68 | 52.23 | 52.80 | 53.40 | 54.01 | 54.65 | 55.31 | 55.99 | 56.70 |
| Total COG | Rs./kWh | 5.77 | 5.61 | 5.45 | 5.28 | 5.12 | 4.96 | 4.81 | 4.65 | 4.49 | 4.33 | 4.18 | 4.02 | 2.71 | 2.73 | 2.76 | 2.79 | 2.82 | 2.85 | 2.88 | 2.91 | 2.94 | 2.98 | 3.01 | 3.05 | 3.09 |
| Discount factor | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 |
| Levelised Tariff | 4.48 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | 0.34 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 4.14 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |

Wind energy Based Projects: Determination of Tariff, component for DIU

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|-------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Net Generation | Rs Lakh kWh | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 | 22.72 |
| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| O&M Expenses | (Rs. Lakh) | 7.88 | 8.17 | 8.47 | 8.79 | 9.11 | 9.45 | 9.80 | 10.17 | 10.55 | 10.94 | 11.35 | 11.77 | 12.21 | 12.66 | 13.13 | 13.62 | 14.13 | 14.65 | 15.20 | 15.77 | 16.35 | 16.96 | 17.59 | 18.25 | 18.92 |
| Depreciation | (Rs. Lakh) | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 30.63 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 | 8.08 |
| Interest on Working Capital | (Rs. Lakh) | 2.24 | 2.19 | 2.14 | 2.10 | 2.05 | 2.00 | 1.95 | 1.91 | 1.86 | 1.82 | 1.78 | 1.73 | 1.28 | 1.30 | 1.32 | 1.35 | 1.37 | 1.40 | 1.42 | 1.45 | 1.47 | 1.50 | 1.53 | 1.56 | 1.60 |
| Interest on Loan | (Rs. Lakh) | 37.01 | 33.79 | 30.57 | 27.35 | 24.14 | 20.92 | 17.70 | 14.48 | 11.26 | 8.05 | 4.83 | 1.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 | 22.05 |
| Tax on ROE | (Rs. Lakh) | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 | 6.06 |
| Total | (Rs. Lakh) | 105.86 | 102.88 | 99.92 | 96.97 | 94.03 | 91.10 | 88.19 | 85.29 | 82.41 | 79.54 | 76.68 | 73.84 | 49.67 | 50.15 | 50.64 | 51.15 | 51.68 | 52.23 | 52.80 | 53.40 | 54.01 | 54.65 | 55.31 | 55.99 | 56.70 |
| Total COG | Rs./kWh | 4.66 | 4.53 | 4.40 | 4.27 | 4.14 | 4.01 | 3.88 | 3.75 | 3.63 | 3.50 | 3.38 | 3.25 | 2.19 | 2.21 | 2.23 | 2.25 | 2.27 | 2.30 | 2.32 | 2.35 | 2.38 | 2.41 | 2.43 | 2.46 | 2.50 |
| Discount factor | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 |
| Levelised Tariff | 3.62 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | 0.28 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 3.34 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |

Wind energy Based Projects: Determination of Tariff, component for Andaman & Nicobar Island

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
|---|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Net Generation | Rs Lakh kWh | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | 15.73 | |
| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| O&M Expenses | (Rs. Lakh) | 12.50 | 12.97 | 13.45 | 13.95 | 14.47 | 15.01 | 15.56 | 16.14 | 16.74 | 17.37 | 18.01 | 18.68 | 19.38 | 20.10 | 20.85 | 21.62 | 22.43 | 23.26 | 24.13 | 25.02 | 25.96 | 26.92 | 27.92 | 28.96 | 30.04 | |
| Depreciation | (Rs. Lakh) | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 36.46 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 | 9.62 |
| Interest on Working Capital | (Rs. Lakh) | 3.26 | 3.19 | 3.13 | 3.06 | 3.00 | 2.94 | 2.88 | 2.82 | 2.76 | 2.70 | 2.64 | 2.59 | 2.01 | 2.05 | 2.08 | 2.12 | 2.16 | 2.21 | 2.25 | 2.30 | 2.35 | 2.39 | 2.45 | 2.50 | 2.55 | |
| Interest on Loan | (Rs. Lakh) | 48.25 | 44.05 | 39.86 | 35.66 | 31.47 | 27.27 | 23.08 | 18.88 | 14.68 | 10.49 | 6.29 | 2.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Tax on ROE | (Rs. Lakh) | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 | 8.24 |
| Total | (Rs. Lakh) | 138.70 | 134.91 | 131.13 | 127.37 | 123.63 | 119.91 | 116.21 | 112.54 | 108.89 | 105.25 | 101.65 | 98.07 | 69.24 | 70.00 | 70.79 | 71.60 | 72.45 | 73.32 | 74.23 | 75.18 | 76.16 | 77.17 | 78.22 | 79.32 | 80.45 | |
| Total COG | Rs./kWh | 8.82 | 8.58 | 8.34 | 8.10 | 7.86 | 7.62 | 7.39 | 7.16 | 6.92 | 6.69 | 6.46 | 6.24 | 4.40 | 4.45 | 4.50 | 4.55 | 4.61 | 4.66 | 4.72 | 4.78 | 4.84 | 4.91 | 4.97 | 5.04 | 5.11 | |
| Discount factor | | 1 | 0.90 | 0.82 | 0.74 | 0.67 | 0.61 | 0.55 | 0.50 | 0.45 | 0.41 | 0.37 | 0.33 | 0.30 | 0.27 | 0.25 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | |
| Levelised Tariff | 7.04 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | 0.53 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 6.51 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | | |

Wind energy Based Projects: Determination of Tariff, component for Lakshadweep

| Units Generation | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Net Generation | Rs Lakh kWh | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 | 17.48 |

| Fixed Cost | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|-------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| O&M Expenses | (Rs. Lakh) | 14.00 | 14.52 | 15.06 | 15.62 | 16.20 | 16.81 | 17.43 | 18.08 | 18.75 | 19.45 | 20.17 | 20.92 | 21.70 | 22.51 | 23.35 | 24.22 | 25.12 | 26.05 | 27.02 | 28.03 | 29.07 | 30.15 | 31.27 | 32.44 | 33.64 |
| Depreciation | (Rs. Lakh) | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 40.83 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 | 10.77 |
| Interest on Working Capital | (Rs. Lakh) | 3.65 | 3.57 | 3.50 | 3.43 | 3.36 | 3.29 | 3.22 | 3.16 | 3.09 | 3.03 | 2.96 | 2.90 | 2.25 | 2.29 | 2.33 | 2.38 | 2.42 | 2.47 | 2.52 | 2.57 | 2.63 | 2.68 | 2.74 | 2.80 | 2.86 |
| Interest on Loan | (Rs. Lakh) | 54.04 | 49.34 | 44.64 | 39.94 | 35.24 | 30.54 | 25.85 | 21.15 | 16.45 | 11.75 | 7.05 | 2.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ROE | (Rs. Lakh) | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 | 33.60 |
| Tax on ROE | (Rs. Lakh) | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 | 9.23 |
| Total | (Rs. Lakh) | 155.35 | 151.10 | 146.87 | 142.66 | 138.47 | 134.30 | 130.16 | 126.04 | 121.95 | 117.89 | 113.85 | 109.84 | 77.55 | 78.40 | 79.28 | 80.19 | 81.14 | 82.12 | 83.14 | 84.20 | 85.29 | 86.43 | 87.61 | 88.83 | 90.10 |
| Total COG | Rs./kWh | 8.89 | 8.65 | 8.40 | 8.16 | 7.92 | 7.68 | 7.45 | 7.21 | 6.98 | 6.75 | 6.51 | 6.28 | 4.44 | 4.49 | 4.54 | 4.59 | 4.64 | 4.70 | 4.76 | 4.82 | 4.88 | 4.95 | 5.01 | 5.08 | 5.16 |
| Discount factor | | 1 | 0.90 | 0.82 | 0.74 | 0.67 | 0.61 | 0.55 | 0.50 | 0.45 | 0.41 | 0.37 | 0.33 | 0.30 | 0.27 | 0.25 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 |
| Levelised Tariff | 7.10 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc. Depreciation benefit | 0.54 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 6.56 | Rs/unit | | | | | | | | | | | | | | | | | | | | | | | | |

Annexure-3**Small Hydro Projects (Mainland) -Assumptions and Parameters for Tariff Determination**

| S. No. | Assumption Head | Sub-Head | Sub-Head (2) | Unit | <=5 MW | >5 up to 25 MW | |
|-------------------------------------|-------------------------|--------------------|--------------------------------------|---------------------|---------|----------------|--|
| 1 | Power Generation | Capacity | Installed Power Generation Capacity | MW | 1 | 1 | |
| | | | Capacity Utilization Factor | % | 30% | 30% | |
| | | | Auxilliary Consumption | % | 1% | 1% | |
| | | | Useful Life | Years | 35 | 35 | |
| 2 | Project Cost | Capital Cost/MW | Power Plant Cost | Rs Lacs/MW | 779.00 | 707.00 | |
| 3 | Sources of Fund | | Tariff Period | Years | 35 | 35 | |
| | | | Debt: Equity | | | | |
| | | | Debt | % | 70% | 70% | |
| | | | Equity | % | 30% | 30% | |
| | | | Total Debt Amount | Rs Lacs | 545.30 | 494.90 | |
| | | | Total Equity Amout | Rs Lacs | 233.70 | 212.10 | |
| | | | Debt Component | | | | |
| | | | Repayment Period | years | 12 | 12 | |
| | | | Interest Rate | % | 10.51% | 10.51% | |
| | | | Equity Component | | | | |
| Equity amount | Rs Lacs | 233.70 | 212.10 | | | | |
| Return on Equity Grossed up | % p.a | 17.85% | 17.85% | | | | |
| Discount Rate | % | 9.41% | 9.41% | | | | |
| 4 | Financial Assumptions | Fiscal Assumptions | Income Tax | % | 29.120% | 29.120% | |
| | | | MAT Rate | % | 21.549% | 21.549% | |
| | | | Depreciation | | | | |
| | | | Depreciation Rate for first 12 years | % | 5.83% | 5.83% | |
| Depreciation Rate 13th year onwards | % | 0.87% | 0.87% | | | | |
| 5 | Working Capital | For Fixed Charges | O&M Charges | Months | 1 | 1 | |
| | | | Maintenance Spare | (% of O&M expenses) | 15% | 15% | |
| | | | Receivables for Debtors | Months | 2 | 2 | |
| | | | Interest On Working Capital | % | 11.51% | 11.51% | |
| 6 | Operation & Maintenance | | O&M Cost for first Year | % of Project cost | 2.00% | 2.00% | |
| | | | Power Plant FY19-20 | Rs Lakh | 15.58 | 14.14 | |
| | | | Total O & M Expenses Escalation | % | 3.72% | 3.72% | |

Small Hydro Project (Mainland): Determination of Tariff, component for Below or equal to 5 MW

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | |
|---|----------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Net Generation | MU | | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | |
| Fixed Cost | Unit | Year--> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O&M Expenses | Rs Lakh | | 15.58 | 16.16 | 16.76 | 17.38 | 18.03 | 18.70 | 19.40 | 20.12 | 20.87 | 21.65 | 22.45 | 23.29 | 24.15 | 25.05 | 25.98 | 26.95 | 27.95 | 28.99 | 30.07 | 31.19 | 32.35 | 33.55 | 34.80 | 36.10 | 37.44 | 38.83 | 40.28 | 41.78 | 43.33 | 44.94 | 46.62 | 48.35 | 50.15 | 52.02 | 53.95 | |
| Depreciation | Rs Lakh | | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 45.42 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | |
| Interest on term loan | Rs Lakh | | 54.91 | 50.14 | 45.37 | 40.60 | 35.82 | 31.05 | 26.28 | 21.51 | 16.74 | 11.96 | 7.19 | 2.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | | 3.51 | 3.44 | 3.38 | 3.31 | 3.25 | 3.19 | 3.13 | 3.07 | 3.01 | 2.95 | 2.90 | 2.84 | 2.08 | 2.12 | 2.17 | 2.21 | 2.26 | 2.31 | 2.36 | 2.41 | 2.47 | 2.52 | 2.58 | 2.64 | 2.71 | 2.77 | 2.84 | 2.91 | 2.98 | 3.06 | 3.14 | 3.22 | 3.30 | 3.39 | 3.48 | |
| Return on Equity | Rs Lakh | | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | 41.70 | |
| Total Fixed Cost | Rs Lakh | | 161.1 | 156.9 | 152.6 | 148.4 | 144.2 | 140.1 | 135.9 | 131.8 | 127.7 | 123.7 | 119.7 | 115.7 | 74.73 | 75.67 | 76.64 | 77.66 | 78.7 | 79.79 | 80.92 | 82.09 | 83.31 | 84.57 | 85.88 | 87.23 | 88.64 | 90.1 | 91.61 | 93.18 | 94.81 | 96.49 | 98.24 | 100.1 | 101.9 | 103.9 | 105.9 | |
| Per unit Fixed Cost | Rs/kWh | 4.77 | 6.19 | 6.03 | 5.87 | 5.70 | 5.54 | 5.38 | 5.22 | 5.07 | 4.91 | 4.75 | 4.60 | 4.45 | 2.87 | 2.91 | 2.95 | 2.98 | 3.03 | 3.07 | 3.11 | 3.16 | 3.20 | 3.25 | 3.30 | 3.35 | 3.41 | 3.46 | 3.52 | 3.58 | 3.64 | 3.71 | 3.78 | 3.85 | 3.92 | 3.99 | 4.07 | |
| Discount Factor | | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 | |
| Levelised Tariff | 4.77 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc Dep. Benefit | 0.32 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 4.45 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Small Hydro Project (Mainland): Determination of Tariff, component for Above 5 MW and below or equal to 25 MW

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | |
|---|----------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Net Generation | MU | | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | |
| Fixed Cost | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | |
| O&M Expenses | Rs Lakh | | 14.14 | 14.67 | 15.21 | 15.78 | 16.36 | 16.97 | 17.61 | 18.26 | 18.94 | 19.64 | 20.38 | 21.13 | 21.92 | 22.74 | 23.58 | 24.46 | 25.37 | 26.31 | 27.29 | 28.31 | 29.36 | 30.45 | 31.59 | 32.76 | 33.98 | 35.24 | 36.56 | 37.92 | 39.33 | 40.79 | 42.31 | 43.88 | 45.51 | 47.21 | 48.96 | |
| Depreciation | Rs Lakh | | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 41.22 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | |
| Interest on term loan | Rs Lakh | | 49.84 | 45.51 | 41.18 | 36.84 | 32.51 | 28.18 | 23.85 | 19.52 | 15.19 | 10.86 | 6.53 | 2.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | | 3.18 | 3.12 | 3.07 | 3.01 | 2.95 | 2.89 | 2.84 | 2.78 | 2.73 | 2.68 | 2.63 | 2.58 | 1.89 | 1.93 | 1.97 | 2.01 | 2.05 | 2.10 | 2.14 | 2.19 | 2.24 | 2.29 | 2.34 | 2.40 | 2.46 | 2.51 | 2.58 | 2.64 | 2.71 | 2.78 | 2.85 | 2.92 | 3.00 | 3.08 | 3.16 | |
| Return on Equity | Rs Lakh | | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | 37.85 | |
| Total Fixed Cost | Rs Lakh | | 146.2 | 142.4 | 138.5 | 134.7 | 130.9 | 127.1 | 123.4 | 119.6 | 115.9 | 112.3 | 108.6 | 105 | 67.82 | 68.67 | 69.56 | 70.48 | 71.43 | 72.42 | 73.44 | 74.51 | 75.61 | 76.75 | 77.94 | 79.17 | 80.45 | 81.77 | 83.14 | 84.57 | 86.04 | 87.58 | 89.16 | 90.81 | 92.52 | 94.29 | 96.13 | |
| Per unit Fixed Cost | Rs/kWh | 4.33 | 5.62 | 5.47 | 5.32 | 5.18 | 5.03 | 4.89 | 4.74 | 4.60 | 4.46 | 4.31 | 4.17 | 4.03 | 2.61 | 2.64 | 2.67 | 2.71 | 2.75 | 2.78 | 2.82 | 2.86 | 2.91 | 2.95 | 3.00 | 3.04 | 3.09 | 3.14 | 3.20 | 3.25 | 3.31 | 3.37 | 3.43 | 3.49 | 3.56 | 3.62 | 3.70 | |
| Discount Factor | | | 1 | 0.91 | 0.84 | 0.76 | 0.70 | 0.64 | 0.58 | 0.53 | 0.49 | 0.44 | 0.41 | 0.37 | 0.34 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 | |
| Levelised Tariff | 4.33 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc Dep. Benefit | 0.29 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Benefit | 4.04 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Annexure-3A**Small Hydro Projects (Island) -Assumptions and Parameters for Tariff Determination**

| S. No. | Assumption Head | Sub-Head | Sub-Head (2) | Unit | <=5 MW | >5 up to 25 MW |
|---------------------------------|-----------------------|---------------------------|--------------------------------------|-------------------------|---------|-------------------------|
| 1 | Power Generation | Capacity | Installed Power Generation | MW | 1 | 1 |
| | | | Auxilliary Consumption | | 1% | 1% |
| | | | Useful Life | Years | 35 | 35 |
| 2 | Project Cost | Capital Cost/MW | Power Plant Cost | Rs Lacs/MW | 1,050 | 900 |
| 3 | Sources of Fund | <u>Debt: Equity</u> | Tariff Period | Years | 35 | 35 |
| | | | Debt | % | 70% | 70% |
| | | | Equity | % | 30% | 30% |
| | | | Total Debt Amount | Rs Lacs | 735.00 | 630.00 |
| | | | Total Equity Amout | Rs Lacs | 315.00 | 270.00 |
| | | | <u>Debt Component</u> | | | |
| | | | Repayment Period | years | 12 | 12 |
| | | | Interest Rate | % | 11.51% | 11.51% |
| | | | <u>Equity Component</u> | | | |
| | | | Equity amount | Rs Lacs | 315.00 | 270.00 |
| Return on Equity | % p.a | 20.39% | 20.39% | | | |
| Discount Rate | | 10.51% | 10.51% | | | |
| 4 | Financial Assumptions | <u>Fiscal Assumptions</u> | Income Tax | % | 29.120% | 29.120% |
| | | | MAT Rate | % | 21.55% | 21.55% |
| | | | <u>Depreciation</u> | | | |
| | | | Depreciation Rate for first 12 years | % | 5.83% | 5.83% |
| | | | Depreciation Rate 13th year onwards | % | 0.87% | 0.87% |
| 5 | Working Capital | <u>For Fixed Charges</u> | O&M Charges | Months | 1 | 1 |
| | | | Maintenance Spare | (% of O&M expenses) | 15% | 15% |
| | | | Receivables for Debtors | Months | 2 | 2 |
| | | | Interest On Working Capital | % | 12.51% | 12.51% |
| | | | 6 | Operation & Maintenance | | O&M Cost for first year |
| Power Plant | Rs Lakh | 26.25 | | | | 22.50 |
| Total O & M Expenses Escalation | % | 3.72% | | | | 3.72% |

Small Hydro Project (Island): Determination of Tariff, component for Below or equal to 5 MW

| Units Generation | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|--------------------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Net Generation | MU | | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |

| Fixed Cost | Unit | Year--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|--------------------------------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| O&M Expenses | Rs Lakh | | 26.25 | 27.23 | 28.24 | 29.29 | 30.38 | 31.51 | 32.68 | 33.90 | 35.16 | 36.47 | 37.83 | 39.23 | 40.69 | 42.21 | 43.78 | 45.41 | 47.10 | 48.85 | 50.67 | 52.55 | 54.51 | 56.53 | 58.64 | 60.82 | 63.08 | 65.43 | 67.86 | 70.39 | 73.01 | 75.72 | 78.54 | 81.46 | 84.50 | 87.64 | 90.90 |
| Depreciation | Rs Lakh | | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 61.22 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 |
| Interest on loan | Rs Lakh | | 81.06 | 74.02 | 66.97 | 59.93 | 52.88 | 45.84 | 38.79 | 31.75 | 24.70 | 17.66 | 10.62 | 3.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | | 5.74 | 5.64 | 5.54 | 5.44 | 5.35 | 5.26 | 5.17 | 5.08 | 4.99 | 4.91 | 4.83 | 4.75 | 3.64 | 3.72 | 3.80 | 3.88 | 3.97 | 4.06 | 4.15 | 4.25 | 4.35 | 4.45 | 4.56 | 4.67 | 4.79 | 4.91 | 5.03 | 5.16 | 5.29 | 5.43 | 5.58 | 5.73 | 5.88 | 6.04 | 6.21 |
| Return on Equity | Rs Lakh | | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 | 64.24 |
| Total Fixed Cost | Rs Lakh | | 238.51 | 232.34 | 226.21 | 220.12 | 214.07 | 208.07 | 202.10 | 196.19 | 190.32 | 184.50 | 178.73 | 173.01 | 117.73 | 119.32 | 120.97 | 122.68 | 124.46 | 126.30 | 128.21 | 130.19 | 132.25 | 134.38 | 136.59 | 138.88 | 141.26 | 143.73 | 146.29 | 148.94 | 151.69 | 154.55 | 157.51 | 160.58 | 163.77 | 167.07 | 170.50 |
| Per unit Fixed Cost | Rs/kWh | 7.29 | 9.17 | 8.93 | 8.69 | 8.46 | 8.23 | 8.00 | 7.77 | 7.54 | 7.32 | 7.09 | 6.87 | 6.65 | 4.52 | 4.59 | 4.65 | 4.72 | 4.78 | 4.85 | 4.93 | 5.00 | 5.08 | 5.16 | 5.25 | 5.34 | 5.43 | 5.52 | 5.62 | 5.72 | 5.83 | 5.94 | 6.05 | 6.17 | 6.29 | 6.42 | 6.55 |
| Discount Factor | | | 1 | 0.90 | 0.82 | 0.74 | 0.67 | 0.61 | 0.55 | 0.50 | 0.45 | 0.41 | 0.37 | 0.33 | 0.30 | 0.27 | 0.25 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 |
| Levelised Tariff | 7.29 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc Dep. Benefit | 0.50 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Bene | 6.79 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Small Hydro Project (Island): Determination of Tariff, component for Above 5 MW and below or equal to 25 MW

| Units Generation | Unit | Year→ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|--------------------------------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Installed Capacity | MW | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Net Generation | MU | | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| Fixed Cost | Unit | Year→ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| O&M Expenses | Rs Lakh | | 22.50 | 23.34 | 24.21 | 25.11 | 26.04 | 27.01 | 28.01 | 29.06 | 30.14 | 31.26 | 32.42 | 33.63 | 34.88 | 36.18 | 37.52 | 38.92 | 40.37 | 41.87 | 43.43 | 45.04 | 46.72 | 48.46 | 50.26 | 52.13 | 54.07 | 56.08 | 58.17 | 60.33 | 62.58 | 64.91 | 67.32 | 69.83 | 72.42 | 75.12 | 77.91 |
| Depreciation | Rs Lakh | | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 52.47 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 | 7.84 |
| Interest on loan | Rs Lakh | | 69.48 | 63.44 | 57.40 | 51.37 | 45.33 | 39.29 | 33.25 | 27.21 | 21.18 | 15.14 | 9.10 | 3.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | | 4.92 | 4.83 | 4.75 | 4.67 | 4.59 | 4.51 | 4.43 | 4.35 | 4.28 | 4.21 | 4.14 | 4.07 | 3.12 | 3.19 | 3.26 | 3.33 | 3.40 | 3.48 | 3.56 | 3.64 | 3.73 | 3.82 | 3.91 | 4.00 | 4.10 | 4.20 | 4.31 | 4.42 | 4.54 | 4.66 | 4.78 | 4.91 | 5.04 | 5.18 | 5.32 |
| Return on Equity | Rs Lakh | | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 | 55.07 |
| Total Fixed Cost | Rs Lakh | | 204.44 | 199.15 | 193.89 | 188.67 | 183.49 | 178.34 | 173.23 | 168.16 | 163.13 | 158.14 | 153.20 | 148.30 | 100.91 | 102.27 | 103.69 | 105.16 | 106.68 | 108.26 | 109.89 | 111.59 | 113.35 | 115.18 | 117.08 | 119.04 | 121.08 | 123.20 | 125.39 | 127.66 | 130.02 | 132.47 | 135.01 | 137.64 | 140.37 | 143.20 | 146.14 |
| Per unit Fixed Cost | Rs/kWh | 6.25 | 7.86 | 7.65 | 7.45 | 7.25 | 7.05 | 6.85 | 6.66 | 6.46 | 6.27 | 6.08 | 5.89 | 5.70 | 3.88 | 3.93 | 3.99 | 4.04 | 4.10 | 4.16 | 4.22 | 4.29 | 4.36 | 4.43 | 4.50 | 4.58 | 4.65 | 4.74 | 4.82 | 4.91 | 5.00 | 5.09 | 5.19 | 5.29 | 5.40 | 5.50 | 5.62 |
| Discount Factor | | | 1 | 0.90 | 0.82 | 0.74 | 0.67 | 0.61 | 0.55 | 0.50 | 0.45 | 0.41 | 0.37 | 0.33 | 0.30 | 0.27 | 0.25 | 0.22 | 0.20 | 0.18 | 0.17 | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.06 | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 |
| Levelised Tariff | 6.25 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Acc Dep. Benefit | 0.43 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Levelised Tariff with AD Bene | 5.82 | Rs/Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |