

No./N/139/140/141/142/143 of 2019

**BEFORE THE KARNATAKA ELECTRICITY REGULATORY COMMISSION,
No.16, C-1, Millers Tank Bed Area, Vasanth Nagar, Bengaluru-560 052.**

Dated: 29.06.2021

Present

Shri Shambhu Dayal Meena : Chairman
Shri H.M. Manjunatha : Member
Shri M.D. Ravi : Member

1. OP No.48/2019

BETWEEN:

M/s Fortum Solar India Private Limited,
1A, Vandana Building,
11, Tolstoy Marg,
Adani House, Nr. Mithkhali Six Roads,
New Delhi-110 001.

.... PETITIONER

[Petitioner represented by Sri Basava Prabhu Patil,
Senior Advocate for M/s HAS Advocates]

AND:

Bangalore Electricity Supply Company Limited,
Office at K.R. Circle,
Bengaluru-560 001.

.... RESPONDENT

[Respondent represented by Sri Sriranga, Advocate
for M/s Just Law Advocates]

2. OP No.49/2019

BETWEEN:

M/s Fortum Solar India Private Limited,
1A, Vandana Building,
11, Tolstoy Marg,
New Delhi-110 001.

.... PETITIONER

[Petitioner represented by Sri Basava Prabhu Patil,
Senior Advocate for M/s HAS Advocates]

AND:

Hubli Electricity Supply Company Limited,
P.B. Road,
Navangar,
Hubballi .

.... RESPONDENT

[Respondent represented by Sri Shahbaaz Hussain, Advocate]

3. OP No.50/2019

BETWEEN:

M/s Fortum Solar India Private Limited,
1A, Vandana Buliding,
11, Tolstoy Marg,
New Delhi-110 001.

.... PETITIONER

[Petitioner represented by Sri Basava Prabhu Patil,
Senior Advocate for M/s HAS Advocates]

AND:

Chamundeshwari Electricity Supply Company Limited,
No.29, Vijayanagara, 2nd Stage,
Mysore-570 017.

.... RESPONDENT

[Respondent represented by Sri Sriranga, Advocate
for M/s Just Law Advocates]

4. OP No.51/2019

BETWEEN:

M/s Fortum Solar India Private Limited,
1A, Vandana Buliding,
11, Tolstoy Marg,
New Delhi-110 001.

.... PETITIONER

[Respondent represented by Sri Basava Prabhu Patil,
Senior Advocate for M/s HAS Advocates]

AND:

Bangalore Electricity Supply Company Limited,
Office at K.R. Circle,
Bengaluru-560 001.

.... RESPONDENT

[Respondent represented by Sri Sriranga, Advocate
for M/s Just Law, Advocates]

5. OP No.52/2019

BETWEEN:

M/s Fortum Solar India Private Limited,
1A, Vandana Building,
11, Tolstoy Marg,
New Delhi-110001.

.... PETITIONER

[Respondent represented by Sri Basava Prabhu Patil,
Senior Advocate for M/s HAS Advocates]

AND:

Mangalore Electricity Supply Company Limited,
MESCOM Bhavana,
Kavoor Cross Road, Bejai,
Mangalore-575 004.

.... RESPONDENT

[Respondent represented by Sri Shahbaaz Hussain, Advocate]

FURTHER COMMON ORDERS ON REMAND

1. Common Orders dated 31.12.2020 passed in the above cases were challenged before the Hon'ble ATE in Appeal Nos.APL-104/2021, APL-105/2021, APL-108/2021, APL-111/2-2021 & APL-112/2021. The Hon'ble ATE by the common judgment dated 21.05.2021 disposed of the above appeals setting aside the observations made in para 55 and also the operative part of the impugned order and directing the Commission to take up further exercise of the determination of incremental tariff

consequent to the determination already done by the Commission on the quantum of compensation to which the appellant in each case is entitled to, as a result of Change in Law event and that such exercise must be completed within two months from the date of judgment.

2. The Petitioner M/s Fortum Solar India Private Limited had filed the above petitions against BESCO, HESCO, CESC, BESCO and MESCOM respectively, claiming reimbursement of certain Safeguard Duty and IGST incurred by it on the import of solar panels, as per the relevant provisions of the PPAs executed with those distribution licensees. For better understanding of the reliefs claimed in the petitions, the same is extracted as follows:

"a) To declare, acknowledge and hold that the imposition of Safeguard Duty on the import of Solar Modules pursuant to the SGD Notification issued by the Department of Revenue, Ministry of Finance, amounts to a Change in Law Event as per the PPA dated 24.04.2018 with effect from 30.07.2018;

b) To determine the appropriate and proportionate increase in tariff due to imposition of Safeguard Duty and, accordingly, amend the tariff specified in the PPA dated 24.07.2018;

c) To direct the respondents (BESCO/HESCO/CESC/MESCOM) to reimburse the Petitioner for the actual additional expenditures incurred by it as set out in detail under paragraphs 10 and 26, read with the other relevant submission, of the present petition along with carrying cost from the date of incurring the expense to the date of actual payment by BESCO/HESCO/CESC/MESCOM and other associated costs;

d) Pass such other or further orders as the Commission may deem fit in the interest of Justice."

3. The respondents-distribution companies appeared and contested the claims of the petitioner. From the rival pleadings and contentions raised by the parties, the following issues had been framed for consideration:

Issue No.1: Whether it would be necessary for this Commission not to proceed with the present petitions till the disposal of the SLP No.24009-24010/2018 pending before the Hon'ble Supreme Court of India?

Issue No.2: Whether the Petitioner proves that the imposition of Safeguard Duty vide Notification No.01/2018 Custom-(SG) dated 30.07.2018 issued by the Government of India, on import of Solar Modules amounts to 'Change in Law' as per Article 15 of PPA?

Issue No.3: Whether the Respondents (BESCOM, HESCOM, CESC, MESCOM) are liable to reimburse the Petitioner for the actual additional expenditure incurred by it as set out in paragraph 10 and 26 of the petition along with carrying cost from the date of incurring expenses to the date of actual payment?

Issue No.4: Whether the Respondent proves that the Petitioner has imported excess Solar Modules and claim is excessive?

Issue No.5: Whether the Petitioner is entitled for appropriate and proportionate increase in Tariff due to imposition of Safeguard Duty and consequently amend Tariff specified in the PPAs dated 24.07.2018 (25.07.2018 and 27.07.2018)?

Issue No.6: What order? "

4. After considering the rival submissions and the pleadings, this Commission held Issue No.1 in negative, Issue No.2 in affirmative and on Issue No.3, the claim made for grant of carrying cost was rejected and on the claim for the additional expenditure as mentioned in paras 10 & 26 of the petitions were not fully accepted and on Issue No.4, the said claim for additional expenditure was limited to the amount shown in paragraph 48 of the Order. Further, Issue No.5 was held in affirmative and accordingly, the following Order was passed:

ORDER

- a) *The petition is partly allowed.*
- b) *The petitioner and the respondent in each of the cases shall verify the amount payable to the petitioner in the respective cases after examining the documents and other directions given in para 48 & 54 above. This process shall be completed within a period of two months from date of this order. If the above process is not completed within the stipulated time stated above due to the fault of the respondent, the defaulting respondent shall be liable to pay interest at the rate of 8% per annum from the date of default to the date of completion of the process of verification, on the amount payable to the concerned petitioner.*
- c) *The amount found to be due and payable to the petitioners shall be spread over for the remaining period of the PPA from the date of this order and shall be reimbursed by appropriate increase in tariff per unit taking into consideration the minimum contracted energy as per provisions of the PPA for the respective Solar Power Projects.*
- d) *The petitioners are not entitled to any of the carrying cost.*

- e) The petitioners shall abide by the undertaking as per the Affidavit dated 19.09.2020 to reimburse the amount received from the respondents, if any, in the event of the Hon'ble Supreme Court of India, in SLP No.24009-24010/2018 setting aside the Safeguard Duty Notification No.01/2018 Custom (SG) dated 30.07.2018, issued by Ministry of Finance, Government of India. In case, the petitioners failed to repay the amount received from the respondents, then the respondents are at liberty to adjust the amount due to them in the monthly tariff bills.
- f) Accordingly, the petitioners and respondents shall submit the Supplementary Power Purchase Agreements for the approval of the Commission.
- g) The original Order shall be kept in OP No.48/2019 and copies, thereof, in OP Nos.49/2019, 50/2019, 51/2019 and 52/2019."

5. The additional expenditures claimed as set out in paragraphs 10 & 26 of the petitions and the claim allowed on this head by the Commission in different cases as noted in para 48 of the Orders may be extracted as follows:

OP No.	Additional expenditure claimed in para 10 & 26 of the petitions (Amount in Rs.)	Additional expenditure allowed by the Commission as noted in para 48 of the Orders (Amount in Rs.)
48/2019	28,79,95,571.00	20,82,06,371.00
49/2019	29,09,70,940.00	20,64,71,037.15
50/2019	29,22,99,717.00	20,82,06,371.00
51/2019	27,72,44,397.00	20,82,06,371.00
52/2019	31,70,06,245.00	21,34,77,393.69

6. The Hon'ble ATE in the above appeals has directed the Commission to take up further exercise of the determination of incremental tariff

consequent on the determination already done by this Commission on the quantum of compensation to which the appellant (petitioner) is entitled to as a result of Change in Law event. Therefore, in effect the operative part of the impugned order dated 31.12.2020 was set aside and there is a direction to take up further exercise of determination of incremental tariff to compensate the amounts in different cases as determined by this Commission in para 48 of the orders.

7. The copy of the judgment dated 21.05.2021 in the above appeals are obtained by down-loading from the official website of the Hon'ble ATE. Thereafter, this Commission issued notices dated 25.05.2021 to the parties intimating that the cases would be taken up for hearing on 04.06.2021 through Video-Conferencing and the parties could submit their views on the said date of hearing on the question of determination of incremental tariff. Accordingly, the petitioner and the respondents appeared through their Counsels and they were heard on 04.06.2021 and on 11.06.2021. They also filed their proposal as to how the incremental tariff is to be determined on the quantum of compensation to which the petitioner was found to be entitled to as a result of Change in Law event.

8. The submission of the petitioner and the respondents may be stated as follows:

a) Submission of the petitioner: The petitioner has relied upon the financial and technical parameters as considered in the Generic Tariff Order dated 01.08.2019 relating to the determination of tariff in respect of

Solar Power Projects (including Solar Roof-top Photovoltaic) for the FY20. Out of those parameters, the petitioner has not claimed any amount towards the land cost and O&M expenses but has considered the remaining parameters and taking into account the remaining term of the PPAs from the order dated 31.12.2020, has determined the levelled tariff per unit. The particulars of the calculations are shown at Annexure-I to the memo filed by the petitioner in each case. Accordingly, the petitioner has arrived at 36 paise per unit towards levelled incremental tariff in OP No.48 of 2019, OP No.49 of 2019, OP No.50 & in OP No.51 of 2019 and has arrived at 37 paise per unit towards levelled incremental tariff in OP No.52 of 2019.

b) Submission of the respondent (BESCOM) in OP No.48 of 2019 & 51 of 2019: The learned counsel appearing for Respondent (BESCOM) in these two cases has filed the memo dated 09.06.2021 urging his views to arrive at the incremental tariff. According to the learned counsel, the minimum energy that could be generated for the balance term of the PPAs in these cases, considering 18% CUF works out to 1,785,348 MU as per calculations enclosed to the Memo 09.06.2021 and the amount approved by the Commission for reimbursement in each cases is Rs.20,82,06,371. Thereby the incremental tariff per unit for the balance term of the PPA is arrived at 11.661 paise per unit.

- c) Submission of the respondent (CESC) in OP No.50 of 2019: The learned counsel appearing for the respondent (CESC) in this case filed the memo dated 09.06.2021 contending that the petitioner is eligible for an increase in tariff of 8 paise per unit for the remaining period of PPA from this Commission's Order dated 31.12.2020 as per calculation sheet produced as Annexure-1. In the calculation sheet, the average annual energy injected into the grid from the project is arrived at 113.66 MUs and the average energy for balance term of the PPA is arrived at 2610.742934 MU. The amount for reimbursement was taken as Rs.20,82,06,371 as per the Order dated 31.12.2020 of this Commission. Therefore, the increase in tariff per unit of energy supplied for the balance term of the PPA is arrived at 7.975 paise per unit, which is rounded off to 8 paise per unit.
- d) Submission of the respondent (HESCOM) in OP No.49 of 2019: The learned counsel for the respondent (HESCOM) filed the written submission dated 08.06.2021 in which he refuted the claim of the petitioner to consider the parameters like depreciation, interest on working capital, degradation and discounting factor and contended that considering 18% CUF, the total generation of energy per annum would be 7,88,40,000 units and the total energy for the remaining term of the PPA would be 178,17,84,000 units. The amount for reimbursement was taken at Rs.20,64,71,037 as per the Order dated 31.12.2020 of this

Commission. Therefore, the increase in tariff per unit of energy supplied for the balance term of the PPA is arrived at 12 paise per unit.

e) Submission of the respondent (MESCOM) in OP No.52 of 2019: The learned counsel appearing for the respondent (MESCOM) in this case filed the memo dated 08.06.2021 in which he refuted the claim of the petitioner to consider the parameters like depreciation, interest on working capital, degradation and discounting factors to arrive at the incremental tariff per unit. In the calculation sheet produced at Annexure-R5, considering the CUF at 18%, the average energy per month injected into the grid from the project is arrived at 65,70,000 units and the average energy for balance term of the PPA is arrived at 178,71,84,000 units. The amount for reimbursement was taken at Rs.21,34,77,393.69 as per the Order dated 31.12.2020 of this Commission. Therefore, the increase in tariff per unit of energy for the balance term of the PPA is arrived at 11.94 paise.

9. We have heard the learned counsel for the parties. They reiterated that their contentions urged in the memo/written submissions.

10. After considering the rival submissions and the proposals made by the learned counsel for the parties, the following issues arise for our consideration:

Issue No.1: What should be the methodology for determination of incremental tariff for reimbursement of the quantum of additional expenditure to which the petitioner is found to be entitled to in different petitions, as a result of CIL event?

Issue No.2: What Order?

11. After considering the submission of the learned counsel for the parties and the pleadings and documents produced by them, our findings on the above issues are as follows:

12. Issue No.1: What should be the methodology for determination of incremental tariff for reimbursement of the quantum of additional expenditure to which the petitioner is found to be entitled to in different petitions, as a result of CIL event?

a) The learned counsel for the petitioner contended that the petitioner has already incurred additional expenditure consequent to imposition of Safeguard Duty & IGST on the solar panels. He further submitted that if the respondents are ready to pay the additional expenditure in a lump-sum with reasonable interest, the petitioner is ready to accept the said amount. Further, he submitted that, as the petitioner has to receive the said additional amount incurred spreading over the term of the PPA by way of incremental tariff, the additional expenditure should be reimbursed by way of incremental tariff considering all the relevant financial and technical parameters for determination of tariff. Therefore, the petitioner submitted that the adoption of norms specified for determination of tariff as laid down in the Generic Tariff Order dated 01.08.2019, is proper. On the other hand, the learned

counsels for the respondents submitted that the additional amount now incurred is to be compensated just by spreading over the remaining period of the PPA considering the quantum generation of energy during that period as suggested by them.

- b) Though the word 'tariff' is not defined in the Electricity Act, 2003, the Guidelines for determination of tariff as stated in Section 61 of the Electricity Act, 2003, would throw light, on the meaning of the word 'tariff'. One of the guidelines is that the generation of electricity is conducted on commercial principles. The tariff regulations specified by Central Regulatory Electricity Commission (CERC) and also the parameters for determination of tariff stated in the Generic Tariff Orders passed by this Commission for different periods essentially cover the guidelines stated in Section 61 of the Electricity Act, 2003. If one goes through these principles, it can be said that the capital expenditure incurred by the generator is reimbursed by way of tariff per unit of the energy supplied taking care of the interest on capital expenditure and also the time value of the money and other relevant parameters. No commercial principle supports the repayment of mere capital cost spreading over of the life of the power plant. Therefore, this Commission is of the considered view that the incremental tariff is to be determined by applying the parameters as per the Generic Tariff Order relating to solar project.

- c) In the present cases, the PPAs have been executed in the last week of July 2018 and those PPAs were approved by this Commission on 27.08.2018 and the period allowed for achieving the Scheduled Commissioning Date was 12 (twelve) months from the date of approval of the PPA i.e., by 26.08.2019. Based on this, the Petitioners have procured the solar panels for commissioning the project.
- d) Originally the tariff in these cases have been discovered through competitive bidding process, as per guidelines issued by the Central Government under Section 63 of the Electricity Act, 2003. The tariff quoted by the petitioner in the above cases being the lowest tariff, have been accepted and the petitioner was declared as successful bidder. The petitioner was not required to disclose the financial and technical parameters while quoting the tariff in the bidding documents. However, one can safely assume that the petitioner had taken into consideration all relevant parameters including the return on equity and the cost of borrowing, before quoting the tariff in the bidding documents.
- e) Consequent on imposition of Safeguard Duty and IGST on the imported solar panels subsequent to the last day of submission of bid, the petitioner had to incur additional expenditure which could not be factored while quoting tariff in the bidding process. Therefore, this additional expenditure has to be reimbursed by way of incremental tariff as ordered by the Hon'ble ATE.

f) In determination of incremental tariff now, on the amount of safeguard duty and IGST thereon, as approved in the Commission's Order dated 31.12.2020 in OP No.48 to 52 of 2019, and as per the directions of the Hon'ble ATE in para 14 of its Order dated 21st May, 2021, the Commission has considered the parameters as per the generic tariff orders as applicable on the basis of Bill of Entry raised and submitted for having paid the amounts. While doing so, it is seen that the payment of safeguard duty and the IGST is spread over different dates covering two generic tariff orders dated 18.05.2018 (for FY18-19) and 01.08.2019 (for FY19-20). In cases where the payments are spread over two financial years covering two generic tariff orders, the Commission has considered the applicable parameters on the basis of payment of majority of the Bill of Entry raised and payments made. On this basis, the Commission has considered the parameters applicable for determining the incremental tariff as under:

O.P. No.	Period w/r to Date of Bill of Entry (BoE)	Parameters considered as per Generic Tariff Order dated....
48/2019	January, 2019 to June, 2019	18.05.2018 for FY18-19
49/2019	March,2019 to May,2019	01.08.2019 for FY19-20
50/2019	March,2019 to April, 2019	18.05.2018 for FY18-19
51/2019	January, 2019 to June, 2019	01.08.2019 for FY19-20
52/2019	April,2019 to June, 2019	01.08.2019 for FY19-20

g) The following are parameters considered for determination of incremental tariff:

Sl. No.	Parameters	Normative Values Adopted as per Generic Tariff Order dated 18.05.2018 (for FY18-19)	Normative Values Adopted as per Generic Tariff Order dated 01.08..2019 (for FY19-20)
1	Debt: Equity Ratio	70:30	70:30
2	Debt Repayment in years	13	13
3	Interest on capital loan	10% per annum	10.5% per annum
4	Return on Equity	14% per annum	14% per annum
5	Depreciation	5.38% for first 13 year and meaning Depreciation spread equally over the balance years of the useful life of the plant	5.38% for first 13 year and meaning Depreciation spread equally over the balance years of the useful life of the plant (5.81% without land cost as per generic tariff Order)
6	Interest of working capital on two month's receivables	11% per annum	11.50% per annum
7	Discount Rate to arrive at time value of Money	11.20% per annum (Weighted Average Cost of Capital)	11.55% per annum (Weighted Average Cost of Capital)

h) While considering the above parameters, the Commission has not reckoned the following parameters for the reasons explained against each:

- (i) Degradation factor & Auxiliary Consumption: While computing minimum contracted energy in a contract year as per the PPA, the degradation factor and Auxiliary Consumption has been considered for the life of the project and hence the same has not been factored in for determining the incremental tariff.

- (ii) As per the norms, the O & M expenses are linked to the capacity of the plant in MW and not dependent on the capital cost of the project. Hence the same has not been factored in for determining the incremental tariff.
- i) The incremental tariff has been determined by this Commission, on the basis of the above parameters. The Commission has arrived at an average tariff for 25 years of life of the project. Considering the Discount Rate being the Weighted Average Capital Cost (WACC), the levelled tariff is determined and indicated in the following Table:

OP No.	Additional Capital Cost (Amount of Safeguard Duty & IGST allowed. Amount in Rs.	Minimum Contracted Energy @ minimum CUF as per PPA, in MU	Average Tariff- Paise per Unit	Discount Rate - Weighted Avg. Cost of Capital (WACC) %	Levelled Incremental Tariff Paise Per unit
(1)	(2)	(3)	(4)	(5)	(6)
48/2019	20,82,06,371	79.056	26	11.20	33
49/2019	20,64,71,037	78.84	26	11.55	33
50/2019	20,82,06,371	78.84	26	11.20	33
51/2019	20,82,06,371	79.056	26	11.55	34
52/2019	21,34,77,394	78.84	27	11.55	35

- j) On the basis of Minimum CUF, the generation of minimum contracted energy as indicated in Article 5.6 of the PPA, of each of solar power project is reckoned. The petitioner is allowed reimbursement of additional capital cost as shown above, during the period of PPA, as per the above parameters by way of incremental tariff, on the minimum contracted energy per year and is limited to the minimum

contracted energy only. Therefore, in any contract year, if the petitioner supplies more than the minimum contracted energy, it would not be entitled to the incremental tariff.

The computation sheet for the incremental tariff in respect of each of case is annexed to this Order.

k) Hence, Issue No.1 is held accordingly.

13. Issue No.2: What Order?

For the above reasons, we proceed to pass the following:

ORDER

- a) The levelled incremental tariff per unit in each of the cases is determined as noted in Column (6) of the Table in para 12(i) of this Order.
- b) The incremental tariff so determined shall be applicable on the quantum of minimum contracted energy as indicated in Column (6) of the Table in para 12(i) of this Order, in addition to the tariff per unit stated in Article 12 of the respective PPAs.
- c) It is made clear that for the energy supplied exceeding the minimum contracted energy as indicated in Column (3) of the Table in para 12(i), in any contract year, the petitioner is not entitled to the incremental tariff.
- d) The petitioner is entitled to raise the supplementary bill in each of the cases for the arrears of the incremental tariff at the rate and the minimum contracted energy as ordered

above, from the Commercial Operation Date till the date of this Order. The amount so found to be due under the supplementary bill shall be paid by the respective respondents in three equal monthly instalments with single default clause.

- e) The petitioner is not entitled to any other carrying cost.
- f) The petitioner shall, in each of the cases abide by the undertaking as per the Affidavit dated 19.09.2020 to reimburse the amount received from the respondents, if any, in the event of the Hon'ble Supreme Court of India, in SLP No.24009-24010/2018 setting aside the Safeguard Duty Notification No.01/2018 Custom (SG) dated 30.07.2018, issued by Ministry of Finance, Government of India. In case, the petitioner fails to repay the amount received from the respondents, then the respondents are at liberty to adjust the amount due to them in the monthly tariff bills.
- g) Accordingly, the petitioner and respondents shall submit the Supplementary Power Purchase Agreements for the approval of the Commission.
- h) The original Order be kept in OP No.48/2019 and copies, thereof, in OP Nos.49/2019, 50/2019, 51/2019 and 52/2019.

sd/-
(SHAMBHU DAYAL MEENA)
Chairman

sd/-
(H.M. MANJUNATHA)
Member

sd/-
(M.D. RAVI)
Member

Annexure

Determination of Incremental Tariff for 50 MW (OP 48/2019)

Assumptions for Financial Parameters		Tariff Calculations (All amounts in Rs. Lakhs)																											
		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			
Cost/50 MW. Rs. Lakhs	2012.06																												
Debt Equity Ratio	70:30																												
Debt-Rs. Lakhs	1407.445																												
Interest charges on Debt-% per annum	10.00%																												
Debt Repayment in Yrs.	13																												
CLF	18.00%																												
Equity-Rs. Lakhs	624.619																												
ROE-%	14.95																												
Auxiliary consumption	0.00%																												
O & M Expenses in Rs. /MWh	0.000																												
O & M Expenditure in Rs. /MWh	0.000%																												
WACC Interest @ 11.00% on 2 months bill	13.00																												
Depreciation @ 5.38% p.a for 13 Yrs	5.38%																												
Particulars		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			
Outstanding Debt at beginning		1457.445	1365.833	1233.222	1121.111	1029.000	946.889	784.778	672.667	560.556	448.444	336.333	224.222	112.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Debt Repayment		312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311	312.311			
Outstanding Debt at end		1345.134	1253.522	1121.111	1029.000	946.889	864.778	784.778	702.667	620.556	538.444	456.333	374.222	292.111	210.000	127.889	45.778	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Average Debt for the year		1407.489	1345.134	1253.522	1121.111	1029.000	946.889	864.778	784.778	702.667	620.556	538.444	456.333	374.222	292.111	210.000	127.889	45.778	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Equity		624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619			
Interest charges on debt		140.745	134.513	125.352	112.111	102.900	94.689	86.478	78.267	70.056	61.845	53.634	45.423	37.212	29.001	20.790	12.579	4.368	0.157	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
ROE		18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447	18.447			
Depreciation		132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311	132.311			
Working Capital		57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68	57.68			
Interest on W.C.		6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34	6.34			
Total Expenditure		346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04	346.04			
Generation in MW for minimum contracted energy		79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056			
Net Generation units		79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056	79.056			
Tariff, Rs./kWh		0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442			
Cost/unit		0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442	0.442			
Discount rate		1.000	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999			
Discounted tariff		0.442	0.438	0.433	0.429	0.425	0.421	0.417	0.413	0.409	0.405	0.401	0.397	0.393	0.389	0.385	0.381	0.377	0.373	0.369	0.365	0.361	0.357	0.353	0.349	0.345			
Cumulative tariff for 5 Yrs		0.333																											

Self-
SHAMBHU DAYAL MEENA
Chairman

Self-
H.M. MANJUNATHA
Member

Self-
M.D. RAVI
Member

6.45
0.25
9.23
3.05

Annexure

Determination of Incremental Tariff for 50 MW (OP 49/2019)

Assumptions for Financial parameters	Tariff Calculations (All amounts in Rs. Lakhs)																									
	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	
Cost/50 MW Rs. Lakhs	2054.71																									
Debt: Equity Ratio	70:30																									
Debt: Rs. Lakhs	1445.297																									
Interest charges on Debt % per annum	10.50%																									
Debt Repayment in Yrs.	13																									
CLF																										
Equity: Rs. Lakhs	809.414																									
ROE-%	18%																									
Auxiliary consumption	0.00%																									
O & M expenses in Rs. in/MW	0.00%																									
O & M Escalation p.a.	0.00%																									
WC Interest @ 13.00% on 2 months bill	11.50																									
Depreciation @ 5.38% p.a. for 13 Yrs.	4.38%																									
Tariff Calculations																										
Outstanding Debt at beginning	1445.297	1334.121	1222.844	1111.777	1000.590	889.414	778.237	667.060	555.884	444.707	333.530	222.353	111.177	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Loan repayment	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	
Outstanding Debt at end	1334.121	1222.844	1111.777	1000.590	889.414	778.237	667.060	555.884	444.707	333.530	222.353	111.177	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Average Debt for the year	1389.709	1278.533	1167.355	1056.179	945.002	833.825	722.649	611.472	500.295	389.118	277.942	166.765	55.588	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Equity	639.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	619.413	
Interest charges on debt	145.919	134.246	122.572	110.899	99.225	87.552	75.878	64.205	52.531	40.857	29.184	17.510	5.837	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
ROE	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	66.718	
Depreciation	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	111.177	
Working Capital	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	58.42	
Interest on WC	6.72	6.40	6.08	5.76	5.44	5.12	4.80	4.48	4.16	3.84	3.52	3.20	2.88	2.56	2.24	1.92	1.60	1.28	1.00	0.72	0.44	0.16	0.00	0.00	0.00	
Total Expenditure	350.53	334.61	318.70	302.79	286.88	270.97	255.06	239.15	223.24	207.33	191.42	175.51	159.60	143.69	127.78	111.87	95.96	80.05	64.14	48.23	32.32	16.41	0.50	0.00	0.00	
Generation in MW for minimum contracted	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	
SNOW	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	
Net Generation-unit	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	
Tariff /MWh	0.44	0.42	0.41	0.40	0.39	0.37	0.35	0.34	0.32	0.31	0.29	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.04	0.02	
Cost/unit	0.44	0.42	0.41	0.40	0.39	0.37	0.35	0.34	0.32	0.31	0.29	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.04	0.02	
Discount rate	1.00%	0.99%	0.98%	0.97%	0.96%	0.95%	0.94%	0.93%	0.92%	0.91%	0.90%	0.89%	0.88%	0.87%	0.86%	0.85%	0.84%	0.83%	0.82%	0.81%	0.80%	0.79%	0.78%	0.77%	0.76%	
Discounted tariff	0.44	0.39	0.38	0.37	0.36	0.34	0.32	0.31	0.29	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.04	0.02	0.01	0.01	
Levelised tariff for 25 Yrs	0.26																									

Sh/-
(SHAMBHU DAYAL MEENA)
Chairman

Sh/-
(H.M. MANJUNATHA)
Member

Sh/-
(M.D. RAVI)
Member

Annexure

Determination of Incremental Tariff for 50 MW (OP 50/2019)

Particulars	(All amounts in Rs. Lakhs)																									
	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	
Assumptions for financial parameters																										
Cost/50 MW- R. Laks	2082.06																									
Debt Equity (R210)	70:30																									
Debt- R. Laks	1457.445																									
Interest charge on Debt- % per annum	10.00%																									
Debt Repayment in Yrs.	11																									
CUF	11																									
Equity- R. Laks	18.00%																									
ROE-%	624.619																									
Warranty commission	1%																									
Op & M Expenses- R. Laks	0.00%																									
O & M Expenditure P.A.	0.00%																									
W.C interest @ 11.00% on 2 months bill	31.00%																									
Depreciation @ 5.50% p.a. for 10 yrs	5.50%																									
Tariff Calculations																										
Outstanding Debt at Beginning	1457.445	1465.133	1218.222	1121.111	1029.000	966.889	784.778	677.667	566.556	448.444	336.333	224.222	112.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Loan repayment	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	
Outstanding Debt at end	1465.333	1218.222	1121.111	1029.000	966.889	784.778	677.667	566.556	448.444	336.333	224.222	112.111	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Average Debt for the year	1461.843	1215.278	1117.167	1025.054	962.943	780.722	673.611	562.500	444.389	332.278	220.167	108.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Equity	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	624.619	
Interest charge on debt	140.139	139.978	117.217	106.598	95.294	84.083	72.872	61.661	50.450	39.239	28.028	16.817	5.606	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
ROE	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	67.447	
Depreciation	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	112.111	
Working Capital	57.67	58.77	59.87	60.96	62.05	63.14	64.23	65.32	66.41	67.50	68.59	69.68	70.77	71.86	72.95	74.04	75.13	76.22	77.31	78.40	79.49	80.58	81.67	82.76	83.85	
Interest on WC	6.34	6.33	6.32	6.31	6.30	6.29	6.28	6.27	6.26	6.25	6.24	6.23	6.22	6.21	6.20	6.19	6.18	6.17	6.16	6.15	6.14	6.13	6.12	6.11	6.10	
Total Expenditure	366.04	334.62	323.29	311.78	300.46	288.94	277.52	266.10	254.68	243.26	231.84	220.42	208.99	197.57	186.15	174.73	163.31	151.89	140.47	129.05	117.63	106.21	94.79	83.37	71.95	
Generation in MW for minimum contracted																										
Energy	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	
Net Generation- units	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	
Tariff- Rs/Unit	0.44	0.42	0.41	0.40	0.38	0.37	0.35	0.34	0.32	0.31	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15	
Cost/unit	0.44	0.42	0.41	0.40	0.38	0.37	0.35	0.34	0.32	0.31	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15	
Debt/Unit	1.050	0.899	0.849	0.797	0.754	0.708	0.659	0.607	0.552	0.494	0.434	0.371	0.306	0.238	0.168	0.095	0.020	0.044	0.068	0.092	0.116	0.140	0.164	0.188		
Debt/Unit Tariff	0.44	0.39	0.35	0.29	0.25	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.07	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
Debt/Unit Tariff (at 25%)	0.35																									

Sd/-
(SHAMBU DAYAL MEENA)
Chairman

Sd/-
(H.M. MANJUNATHA)
Member

Sd/-
(M.D. RAVI)
Member

Annexure

Determination of Incremental Tariff for 50 MW (OP-51/2019)

Assumptions for Financial parameters	2019.06	Tariff Calculations (All amounts in Rs. Lakhs)																								
		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
Construc Debt at beginning	1457.445	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222	133.222
Debt Equity Ratio	70340																									
Debt-Rs. Lakhs	1457.445																									
Interest charged on Debt-% pcr annum	10.50%																									
Debt Repayment in Yrs.	13																									
CUF	13																									
Equity-Rs. Lakhs	151.025																									
ROE-%	14%																									
Auditory consumption	0.00%																									
D.S.M expenses in Rs. lakhs	0.00%																									
D.S.M Expenses in Rs. lakhs	0.00%																									
W.C Interest @ 11.00% on 2 months bill	11.50																									
Depreciation @ 5.28% pcr for first 13 yrs.	5.28%																									
Tariff Calculations																										
Generation in MW for minimum contracted	79.056																									
Best Generation Unit	79.056																									
Tariff -M/R	79.056																									
Cost/Unit	0.43																									
Discount rate	1.00%																									
Discounted tariff	0.45																									
Levelised tariff for 25 yrs	0.34																									

56/-
SHAMBHU DAYAL MEENA
Chairman

56/-
H.M. MANJUNATHA
Member

56/-
M.D. RAVI
Member

6.52
0.216
9.03
3.04
0.000

Determination of Incremental Tariff for 50 MW (OP 52/2019)

Annexure

Assumptions for Financial Parameters	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
Cost/50 MW in Rs. Lakhs	2184.77																								
Debt Equity Ratio	70:30																								
Debt Rs. Lakhs	1042.385																								
Interest charge on Debt @ 5% per annum	52.119																								
Debt Redemption in Yrs.	13																								
Equity Rs. Lakhs	1142.385																								
ROE-%	14.5%																								
Auxiliary consumption	0.00%																								
O & M expenses in Rs. Lakhs	0.00%																								
O & M Escalation p.a.	0.00%																								
Wt. Interest @ 11.00% on 2 months bill	11.50%																								
Depreciation @ 5.38% p.a. for first 13 yrs.	5.38%																								
Tariff Calculations																									
Particulars																									
Outstanding Debt at beginning	1042.385	1284.443	1149.894	1024.844	904.846	804.846	724.846	664.846	624.846	594.846	574.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846
Loan repayment	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	
Outstanding Debt at end	1379.392	1269.494	1134.945	1019.896	904.846	804.846	724.846	664.846	624.846	594.846	574.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846	564.846
Average Debt for the year	1498.897	1371.818	1256.869	1141.820	1026.771	911.722	806.673	711.624	626.575	551.526	486.477	431.428	386.379	341.330	306.281	271.232	236.183	201.134	166.085	131.036	95.987	60.938	25.889	0.000	0.000
Equity	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432	640.432
Interest charges on debt	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021	32.021
ROE	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%	14.5%
Depreciation	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949	114.949
Working Capital	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30	56.30
Interest on WCC	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
Total Breakeven	350.17	337.82	325.51	313.21	300.90	288.59	276.28	263.97	251.66	239.35	227.04	214.73	202.42	190.11	177.80	165.49	153.18	140.87	128.56	116.25	103.94	91.63	79.32	67.01	54.70
Generation in MW for minimum contracted capacity	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840
Net Generation- units	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840	78.840
Tariff-₹/kWh	0.45	0.44	0.43	0.42	0.41	0.40	0.39	0.38	0.37	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21
Contribution	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48	35.48
Discount rate	10.00%	0.98%	0.96%	0.94%	0.92%	0.90%	0.88%	0.86%	0.84%	0.82%	0.80%	0.78%	0.76%	0.74%	0.72%	0.70%	0.68%	0.66%	0.64%	0.62%	0.60%	0.58%	0.56%	0.54%	0.52%
Discounted tariff	0.46	0.40	0.34	0.28	0.22	0.16	0.10	0.04	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
Incremental tariff for 50 MW	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27

54/-
CHAMBHU DAYAL MEEVA
Chairman

54/-
H.M. MANJUNATHA
Member

54/-
M.D. RAVI
Member