

**KERALA STATE ELECTRICITY REGULATORY COMMISSION**  
**THIRUVANANTHAPURAM**

**Present: Shri. Preman Dinaraj, Chairman**  
**Adv. A.J Wilson, Member (Law)**

**OP No 26/2020**

In the matter of : Petition filed by M/s THDC India Ltd., for the approval of the procurement of power including price at which electricity to be purchased by KSEB Ltd., from THDC India Ltd's solar PV Project of 50MW capacity established at Kasargod District.

Petitioner THDC India Ltd., Bhagirathi Bhavan,  
Top Terrace, Bhagirathipuram  
Tehri Garhwal-249001

Respondents

1. Kerala State Electricity Board Ltd.,
2. Renewable Power Corporation of Kerala Ltd. (RPCKL)
3. Solar Energy Corporation of India Ltd., New Delhi, (SECI)

THDC represented by Sri U C Kannaujia, General Manager (NCR)  
Smt. Sunita Tamta, Manager (RE)  
Adv Asok Kumar, Counsel of petitioner

SECI represented by Sri I S Reddy, Manager (PS)  
Sri Abhinav Kumar, Manger

RPCKL represented by Sri Augustine Thomas, CEO  
Sri Bipin Sankar, Consultant

KSEB Ltd represented by : Sri. KGP Nampoothiri, Executive Engineer

First Hearing on : 14.10.2020  
Second hearing on : 01.12.2020  
Third hearing on : 05.01.2021

**Order dated 17.03.2021**

1. M/s THDC India Ltd., (hereinafter referred to as THDC or the petitioner) filed a petition on 07.09.2020, before the Commission under Section 86(1) of the Electricity Act, 2003, read with Rule 8 of the Electricity Rules, 2005 with the following prayers:

- (1) Approve the procurement of power by KSEB Ltd., from THDC India Ltd.'s solar PV Project of 50MW Capacity being established in the 200MW solar power park in Kasargod District in the State of Kerala.
- (2) Pass any such further Order or Orders as this Hon'ble Commission deems just and proper in the circumstance of the case.

2. The summary of the Petition filed by THDC is as follows:

- (1) M/s THDC India Ltd., the petitioner, is presently a Joint Venture (JV) of NTPC Ltd and Government of UP.
- (2) Solar Energy Corporation of India (SECI) is a Government of India Enterprise under administrative control of MNRE with the objective to assist Gol for implementing and facilitating National Solar Mission, for the development and promotion, commercialization of solar energy technology in the country.
- (3) On 13/02/2015, THDC entered into MoU with SECI for the development of Solar power project on behalf of THDC. On 18/02/2015, SECI and KSEB Ltd, entered into a MoU for undertaking solar power projects for sale of power to KSEB Ltd.
- (4) As proposed by the Government of Kerala, MNRE has given "in principle approval" for the setting up of 200MW solar park at Kasargod District in the State of Kerala and appointed SECI as the implementing agency.
- (5) Subsequently on 31/03/2015, THDC, KSEB Ltd. and SECI entered into a tripartite agreement for the setting up of a 50MW solar plant at Kasargod District for generation and sale of power to KSEB Ltd. In terms of tripartite agreement, THDC agreed to finance and own the project and SECI, on behalf of THDC, has agreed to develop and commission the project through EPC contract and operate and maintain the project through an agency. The power generated from 50MW Unit is intended to be supplied to KSEB Ltd.
- (6) Renewable Power Corporation of Kerala Ltd. (RPCKL), a Joint Venture of KSEBL & SECI, is the developer of the 200MW solar park in Kasargod District.
- (7) On 16.01.2019, a Power Sale Agreement was signed between THDC and KSEB Ltd., on 16/01/2019. Clause (7) of PSA, provides for a ceiling on tariff as under:

***"(7) Tariff***

***The Tariff will be levelized tariff not exceeding Rs.3.10/kWh, which is subject to further reduction based on the project cost discovered through reverse bidding for selection of EPC***

**contractor or rate as approved by Kerala State Electricity Regulatory Commission, whichever is lower”**

- (8) SECI on behalf of THDC, selected the EPC Contractor, for developing 50MW solar plant through open competitive e-bidding followed by e-Reverse Auction as per the NIT dated 08/02/2019 for Design, Engineering, Procurement and Supply, Construction and Erection, Testing, Commissioning, Associated Transmission system and also for comprehensive operation and maintenance for a period of 10 years of the 50MW Solar plant at Kasargod district. After completing all the procedures and formalities including e-Reverse Auction, M/s SECI selected, M/s Tata Power Solar Systems Ltd., as the EPC Contractor with the price as given below:

1	Total EPC Price	Rs.211.34 Cr
2	Total O&M cost for 10 years	Rs.26.04 Cr

As recommended by SECI, THDC issued the Letter of Award (LoA) to the EPC contractor M/s Tata Power Solar systems on 08/08/2019. The contract agreement was signed between M/s THDC and M/s Tata Power Solar systems Ltd., on 11/09/2019.

- (9) THDC submitted that being a Gol undertaking, in terms of Section 79(1) of Electricity Act, 2003, the tariff and terms and condition with respect to generation and sale of electricity by THDC to KSEB Ltd., is within the jurisdiction of CERC. Accordingly, THDC filed a petition before the CERC on 19/05/2020 for the determination of project specific tariff for 50 MW Solar PV Project at Kasargod District, for supplying energy to KSEB Ltd. As per the details of the petition, the tariff proposed by the petitioner is Rs.3.49/kWh, however they have submitted before CERC that, THDC has already agreed for the tariff of Rs.3.10/kWh under the PSA, thus giving benefit to KSEB Ltd. They further submitted before CERC that, THDC seeks liberty to approach the CERC for relaxation in the norm without affecting the tariff of Rs.3.10/kWh as agreed between the parties under the Power Sale Agreement.
- (10) THDC further submitted that Rule 8 of the Electricity Rules, 2005, notified by Central Government provides as under:

**“(8) Tariff of generation companies under section 79, the tariff determined by the central Commission for generating companies under clause(a) or (b) of Sub Section(1) of the Section 79 of the Act, shall not be subjected to the re-determination by the State Commission in exercise of the function under clause (a) or (b) of Sub section(1) of Section 86 of the Act, and subjected to the above, the State Commission may determine whether a distribution licensee in the State should enter into Power**

***Purchase Agreement or procurement process with such generating companies based on the tariff determined by Central Commission”***

Accordingly, in terms of the Section 86(1) of the Electricity Act, 2003, KSERC has the jurisdiction to decide on whether the quantum of power should be purchased by KSEB Ltd from the 50 MW Solar plant developed by SECI, at the ceiling tariff of Rs.3.10/kWh or at the tariff determined by CERC, whichever is lower, as per the clause (7) of the PSA signed between the Parties.

- (11) THDC further submitted that, as per the Section 86(1)(b) of Electricity Act, 2003, approval of this Commission is required to procure power from the 50 MW Solar Plant of THDC by KSEB Ltd. Accordingly, M/s THDC has filed the petition.
3. The Commission admitted the petition as OP 26/2020, and forwarded a copy of the petition to the respondents for their comments.
4. KSEB Ltd, vide letter dated 13.10.2020, submitted its comments and its summary is given below.
- (i) KSEB is obliged to meet the RPO target approved by the Commission. As part of the Gol scheme for the installation of 25 solar parks targeting 20000 MW solar power, MNRE, Gol had granted approval for setting up 200 MW solar park at Kasargod District in the State of Kerala. Out of the 200 MW, 50 MW solar plant is owned and operated by IREDA and declared CoD on 14.09.2017.
- (ii) Tehri Hydro Development Corporation of India Ltd. (THDCIL) was allocated a 50MW project in Paivalike at Kasargod. The land for the project is allotted by GoK on lease basis to KSEBL. KSEBL has allowed the right to use of the land to RPCKL for establishing the project. RPCKL in turn has entered into an agreement with THDCIL on 'Right of use' of the land.
- (iii) A tripartite agreement between THDCIL, SECI and KSEBL was signed on 31-03-2015 for development of the project and sale of power from the 50MW solar PV project to KSEB Ltd. KSEBL and THDCIL have initialled the draft PPA. Meanwhile, THDCIL has already filed petition before CERC for tariff determination. Notwithstanding the tariff determination by Hon'ble CERC, THDCIL has agreed to supply solar power from the project at a levelized tariff not exceeding Rs.3.10/unit.
- (iv) KSEB Ltd. requested that, considering the mandatory RPO requirement to be met by KSEB Ltd. and the solar RPO shortfall now faced by KSEB Ltd. and the competitive rate offered by THDCIL, approval may be given for the procurement of power by KSEB Ltd.

from THDC India Ltd.'s solar PV project of 50MW capacity established at Kasargod district and to approve the initialled PSA.

5. The first hearing on the petition conducted on 14.10.2020, through video conference. The summary of the deliberations during the hearing is given below.

- (1) Adv. Asok Kumar, counsel of the petitioner M/s THDCIL, submitted that NTPC Ltd. is a Central Government owned company and THDCIL is the Joint Venture company between NTPC Ltd. and Uttar Pradesh Government. Therefore, THDCIL is to be considered as a Central Government Company.

However, the Commission clarified that, the Section 2(45) of the Companies Act, 2013 makes it amply clear that to qualify as a Government Company, not less than 51% of the paid-up share capital has to held by the Government(s). This shareholding is reflected by the fact that these shares are issued in the name of the President of India in the case of a Govt. of India Company or in the name of the Governor of the State in the case of a State Govt. Company or in both names if it is a JV between the Centre and State or between two states. THDC was indeed a Government company as revealed by the share holding pattern prior to 25.03.2020. Consequent upon the transfer of the shares held by the President of India to NTPC Ltd and its nominee officers, it ceased to qualify as a Government company under the Section 2(45) of the Companies Act, 2013. Further, a JV between two PSUs or between a Central PSU and a State Government as in the present wherein the majority of shares are issued in favour of the respective PSUs, do not qualify the test of being a Government company as defined under Section 2(45) of the Companies Act, 2013.

The Commission during the hearing further clarified that based on the above criteria and after examining the shareholding pattern of THDC post 25.03.2020, THDC is no more a company owned or controlled by the Central Government. **Accordingly, Section 79 (1) (a) is not attracted and hence the Central Commission has no jurisdiction to regulate the tariff of 50 MW solar plant established by M/s THDC at Kasargod district, in the State of Kerala.**

The petitioner's counsel submitted during the hearing that, they will appraise these facts to the THDC management.

- (2) Sri Abhinav Kumar, SECI, submitted that SECI is the Central PSU under MNRE and is operating solar plants in Pan India basis, to promote solar power. In the case of 50 MW solar plant installed by THDC in Kasargod, SECI is the 'project management consultant'.
- (3) Smt. Sunita Tamta, Manager RE, THDC made a presentation of the petition before the Commission.

- (4) Sri KGP Nampoothiri, Executive Engineer representing KSEB Ltd submitted that detailed comments on the petition was submitted before the Commission on 13.10.2020, and they had nothing further to add at this stage. Once the petitioner files a proper petition for determination of tariff, KSEB Ltd may be given opportunity to present its comments.
6. Based on the deliberations during the hearing, the Commission, vide interim Order dated 23.10.2020 issued the following directions for compliance by the petitioner and respondents.
- “
- (1) *M/s THDC shall amend the petition/ submit its views, so as to include the determination of tariff of the electricity generated from the 50 MW solar plant developed by the petitioner at 200 MW Solar Park at Kasargod, with a copy to the respondent KSEB Ltd and SECI, latest by 30.10.2020.*
- (2) *Next hearing on the petition shall be held during second week of November-2020.”*
7. In compliance to the directions given under Interim Order of the Commission dated 23.10.2020, M/s THDC filed the revised petition on 04.11.2020, with following prayers.
- “
- (a) Admit the petition;
- (b) Approve the procurement of power by KSEB Ltd from THDC India Ltd's Solar PV Power Project of 50 MW capacity being established in the 200MW Solar Park in Kasargod District in the State of Kerala, including the price by determining the project specific tariff in terms of the KSERC (Renewable Energy and Net Metering) Regulations, 2020;
- (c) Direct KSEB Ltd to reimburse the tax paid on RoE in terms of Regulations 43 of Renewable Tariff Regulations;
- (d) Allow as a Pass through the taxes and duties in terms of Regulation 51 of Renewable Tariff Regulations; and
- (e) Pass any such further Order or Orders as this Hon'ble Commission may deem just and proper in the circumstances of the case.”
8. Summary of the additional details submitted by the petitioner in the revised petition for the determination of tariff is given below.
- (1) M/s THDC submitted the following documents.
- (i) DPR of the Project.
- (ii) Cost estimate of major components

- (iii) Project completion cost, evidence for expenditure and sources of finance.
  - (iv) Notice Inviting Tender (NIT) dated 08.02.2019 floated by SECI for selecting the EPC contractor.
  - (v) LoA dated 08.08.2019 issued by THDC to the EPC contractor M/s Tata Power Solar Systems Limited.
  - (vi) EPC Contract agreement between THDC and the EPC contractor M/s Tata Power Solar Systems Limited.
- (2) The petitioner further submitted that, M/s SECI on behalf of THDC, selected the EPC Contractor, for developing the 50MW solar plant through open competitive e-bidding followed by e- Reverse Auction. This was per the NIT dated 08/02/2019 for Design, Engineering, Procurement and Supply, Construction and Erection, Testing, Commissioning, Associated Transmission system and also for comprehensive operation and maintenance for a period of 10 years of the 50MW Solar plant at Kasargod District. After completing all the procedures and formalities including e-Reverse Auction, M/s SECI selected, M/s Tata Power Solar Systems Ltd., as the EPC Contractor with the price as given below:

The breakup of cost is as follows:

Sl No	Package	Price (Rs Cr)
1	Total EPC Price	211.34
2	Total O& M for 10 Years	26.04
3	Total NPV of O&M	16.22
4	Total EPC + NPV of O&M	227.56

- (3) EPC Agreement including 10 years O&M costs were executed on 11.09.2019 between Tata Power and THDC.
- (4) M/s THDC further submitted that, no subsidy was received for the project. The breakup of capital cost claimed including the 'Solar park charges, consultancy charges and other charges are given below.

Sl No	Description	Price (Rs Cr)	Cost claimed as (%) of total cost	Other costs claimed as (%) of EPC cost
1	Total EPC Price	211.34	81.5%	
2	Solar park charges	25.83	10.0%	12.2%
3	Consultancy charges	14.57	5.6%	6.9%
4	Other cost including IDC	7.55	2.9%	3.6%
5	Total	259.29	100.0%	
6	Cost per MW	5.18		

- (5) The financial parameters recommended by the petitioner for the determination of tariff is given below:

Interest rate on loan @ 9.11% being 200 base points above MCLR  
Loan tenure as 13 years  
Depreciation for first 13 years 5.28 %  
Auxiliary consumption 0.25%  
CUF -23%

Ms THDC clarified that for achieving the CUF, more number of panels are to be installed compared with Rajasthan and Gujarat.

- (6) THDC further submitted that O&M cost for 10 years is Rs 26.04 Cr as quoted by Tata power. THDC also requested to permit degradation factor of 0.7% for solar cells, exercising the power to relax under Regulation 65 of the KSERC (Renewable Energy & Net metering) Regulations, 2020.
- (7) Based on the above parameters, the tariff estimated by the petitioner is given below.

Levelised tariff without accelerated depreciation Rs 3.82/unit  
Levelised tariff with accelerated depreciation Rs 3.39/unit.

- (8) THDC further submitted that, it had placed the PSA before CERC and CERC had proceeded on the basis that a subsidiary of a company owned or controlled by Central Government is also a Central Government Company. Central Commission has been exercising powers for subsidiary of NTPC and NLC. **However, the present petition is being filed by THDC before this Commission to decide on the price of the purchase of electricity by KSEBL under Section 86(1) (b) of Electricity Act 2003 and THDC will pursue the proceeding before Central Commission under 79(1)(a) after the Kerala State Electricity Regulatory Commission determines the price.**

9. RPCKL, vide letter dated 23.11.2020 submitted the following.

- (i) Renewable Power Corporation of Kerala Limited (RPCKL) is entrusted with the development of a 200MW Solar Park in Kasargod District in unused land parcels in the District. Though about 1086.74 acres of land was originally identified for the development of the park, GoK finally allocated about 500 acres of land to KSEBL for development of 105 MW solar power. 250 acres of land at Ambalthara village was already allotted on right to use basis to IREDA for developing 50 MW solar plant, and the plant was commissioned and supplying power to KSEB Ltd since 14.09.2017.
- (ii) Another 250 Acre (101 Hectre) of land in the three villages shown below, was allotted to KSEB Ltd on 11.12.2018 for the development of another 50 MW.



No	Village	Land Area (Hectare)
1	Paivalige (പൈവളിഗെ)	75.2659
2	Chippar (ചിപ്പാർ)	16.3040
3	Meenja (മീഞ്ച)	9.6593
	<b>Total</b>	<b>101.2292</b>

Government has leased the land, free of lease charges for five years and balance 23 years at the rate of 2% of the fair value, revisable every three years among other conditions. The fair value of the land was fixed at s 2227/- per Acre in the order. KSEBL and RPCKL has signed a sub-lease Agreement on 01-02-2019 for setting up the said 50 MW solar plant at Kommangala (Paivalige). The cost of development of road, water etc is done by RPCKL and the charges for such development is recovered from the Plant developer through an up-front charge and yearly maintenance charges escalable @5.72% per annum. The DPR for developing the Solar Park in Kasargod District was approved by MNRE.

- (iii) The cost of developing the park is met from the Central Financial Assistance (CFA) provided by Ministry of New and Renewable Energy (MNRE) and the up-front cost provided by the Solar plant Developers at both the respective sites.

No	Particulars	Amount
1	Capital Cost for developing Park	Rs 6683.71 Lakhs
2	MNRE Subsidy (CFA)	Rs 1260.00 Lakhs
3	Capital Cost to be recovered	Rs 4596.36 Lakhs
4	Taxes and Charges Expected	Rs 827.35 Lakhs

- (iv) The one-time upfront fee claimed from the Solar Park developers is given below.

Sl No	Plant site	Land area (Ha)	Capacity (MW)	Amount (Rs.Cr)
1	Ambalathara-Velluda	83.45	50	21.89
2	Ambalathara-Nellithadam	10.94	5	2.19
3	Park Infrastructure	5.93		
4	Kommangala site	101.23	50	21.89
	<b>Total</b>	<b>201.55</b>	<b>105</b>	<b>45.96</b>

THDCIL has already paid the upfront charges of **Rs 2188.74 Lakhs +Taxes** to RPCKL.

- (v) As per the land use agreement signed between THDCIL and RPCKL, the total charges payable by THDCIL to RPCKL for the development and maintenance of the solar park is given below.

No	Item	Amount	Remarks
1	One-time up-front fee	<b>Rs. 2188.74 Lakhs</b>	Already paid
2	Yearly O&M Charges	Rs. 135.18 Lakhs	Escalation @ 5.72% pa
3	Water Charges	Govt Rate	Based on metered usage

The upfront cost is required to provide facilities like acquiring land for installation of solar plant, develop road access to the site, water supply, drainage and power evacuation and other essential facilities.

10. ***The second hearing on the petition conducted on 01.12.2020. During the hearing the Commission clarified that, the hearing is limited to the determination of tariff for electricity generated from the project. The appraisal for the approval of the draft initialled PSA between M/s THDC and KSEB Ltd will be held separately after determining the tariff.*** Smt Sunitha Tamta made a detailed presentation on the petition. Sri. Augustin Thomas, CEO, RPCKL and Sri. Bipin Sankar, consultant, RPCKL submitted the comments on behalf of the respondent RPCKL. Sri. K.G.P Nampoothiri, submitted the comments on behalf of KSEB Ltd. Summary of the deliberations during the second hearing is given below:

- (i) Petitioner submitted that the entire cost of the project is financed from their own funds. However, for the purpose of determination of tariff, debt: equity ratio of 70:30 is adopted. Further, the financial parameters as per the KSERC (Renewable Energy and Net Metering) Regulations 2020 is adopted for estimating the tariff of the electricity generated from the project. The CUF adopted is 23%, as agreed by the EPC contractor. The solar park charges are paid to RPCKL based on the invoices raised by them.
- (ii) Sri. Augustin Thomas, and Sri Bipin Sankar, on behalf of the second respondent M/s RPCKL submitted that, the land is allotted to RPCKL for development of solar park and the copies of the allotment of the land is already submitted to the Commission. All the relevant Government Orders also submitted before the Commission.
- (iii) The Commission noted that, the Renewable Power Corporation of Kerala Limited is a SPV formed jointly by KSEB Ltd and SECI. However, the distribution licensee yet to intimate the details of SPV and

get formal approval from the Commission for the creation of the SPV with joint partnership with SECI and also for the equity contribution made by KSEB Ltd in the SPV. KSEBL submitted that the RPCKL is a Joint venture company of SECI and KSEBL with 50:50 equity participation.

- (iv) The Commission observed that, though the petitioner claimed that the entire project cost is met from their own funds, the petitioner has claimed IDC for tariff determination. The petitioner submitted that the administrative expenses and employee cost are considered as part of the IDC. The Commission directed THDC to submit the detailed calculation of IDC claimed with all supporting details.
- (v) The Commission also noted that, EPC contractor is entrusted with the Operation and Maintenance of the plant for 10 years with a total cost of Rs 26.04 crore and the year wise details of the O&M cost to be paid by the petitioner to the EPC contractor also specified in the contract agreement. However, in the tariff calculation, the petitioner has claimed O&M cost @ Rs 7.13 lakh/MW for the first year, and 5.72% escalation annually for the subsequent years. The Commission is of the considered view that, the actual O&M cost as per the agreement signed with the EPC contractor shall only be considered for tariff determination.
- (vi) The petitioner prayed before the Commission to allow the Tax on RoE as pass through as per the provisions of the KSERC (Renewable Energy & Net metering) Regulations, 2020.

In the draft PSA initialled by both the petitioner and KSEB Ltd, mutually agreed for a ceiling tariff of Rs 3.10/unit for the electricity generated and supplied from the 50 MW plant of the petitioner. The Regulations 56 and 59 of the KSERC (Renewable Energy & Net metering) Regulations, 2020 permits the generator and distribution licensee to mutually agree to charge a lower tariff than the tariff determined on the basis of norms and parameters specified in these Regulations. Hence, the Commission clarified that, at any case, the payment by KSEB Ltd shall be limited to Rs 3.10/unit only including the tax on RoE for the electricity generated and supplied from the 50 MW plant of the petitioner to KSEB Ltd.

- (vii) The petitioner has claimed Rs 14.57 crore as consultancy charges, which is about 6.90% of the EPC contract price. The petitioner has not submitted the supporting documents for the claim of consultancy charges. The petitioner THDC and the respondent SECI agreed to provide the details of the claim of consultancy charges.
- (viii) Regarding the issue of approving the interim tariff till the Commission finally approving the final tariff, the petitioner submitted that, the project is expected to be commissioned by December 2020. Once the power

starts flowing, the petitioner will require payment for the electricity generated and supplied to KSEB Ltd. Hence they requested that, in the case the approval of the final tariff getting delayed the Commission may approve a provisional tariff. KSEB Ltd also agreed for the same.

11. Based on the deliberations during the second hearing held on 01.12.2020, the Commission directed the petitioner and respondents to comply the following.

- (i) M/s RPCKL shall provide the complete details of the cost incurred for developing the Solar Park at Kasargod including the source of funds with documentary evidence and supporting documents.

RPCKL shall also provide the details of the O&M cost claimed for the park including land lease rent, maintenance cost of the park with supporting documents. RPCKL shall also submit the rationale adopted for apportionment of the capital cost and O&M cost among the beneficiaries of the park with supporting documents.

- (ii) KSEB Ltd shall submit through an affidavit on the creation of the SPV namely Renewable Power Corporation of Kerala Limited (RPCKL) with SECI for the development of the Solar Park at Kasargod including approval of the State Government and MNRE, Government of India.

KSEB Ltd shall also in their affidavit mention whether KSEB Ltd had got approval / intimated KSERC regarding the creation of the SPV namely M/s RPCKL. Also whether approval of the Commission was taken for the equity contribution in RPCKL? If not, KSEB Ltd shall immediately ratify the action in this regard.

- (iii) The petitioner M/s THDC and the respondent SECI shall provide the additional details on the issues discussed during the hearings with supporting documents.

- (iv) Any other relevant details by the petitioner and respondent.

The Commission directed the parties to submit the details by 28.12.2020, with copies to either side.

12. In compliance of the directions of the Commission, M/s RPCKL vide letter dated 18.12.2020 submitted the additional details and its summary is given below.

- (i) As per MNRE guideline released in October 2015 for establishment of Solar Parks under the Jawaharlal Nehru National Solar Mission (JNNSM), the development and management of Solar Parks has to be undertaken by (1) a state designated nodal agency, a state public sector unit or Special Purpose Vehicle, (2) a JVC between the state Agency and SECI with 50 :50 equity participation, (3) by designating SECI as the Nodal Agency or (4) by private entrepreneurs. The

Government of Kerala has chosen to the second mode to implement the JNNSM Solar Park Scheme.

- (ii) The Central Government, in turn, approved the development of 200 MW solar park in Kerala with a Joint Venture Company (JVC) set up between SECI and KSEBL as the SPPD in Kasaragod district in 4858 hectares as proposed by the State Government. The total equity capital infused during the formation of the Company was Rupees one Crore (Rs. 1,00,00,000) shared 50:50 between SECI and KSEBL. There was no further capital infusion. This Park is one among the 26 Solar Parks in 20 States with aggregate capacity of 17,418 MW under the JNNSM Scheme considering the limited land availability in the State. This mode of implementation of the Solar Parks has been adopted other states such as Assam and Adhra Pradesh, for instance.
- (iii) RPCKL, is thus established to function as the implementing agency (SPPD) for the said Solar Park in Kerala. Government of Kerala had approved the establishment of JVC vide Order GO (RT) No. 174/2015/PD dated 24-07-2015.
- (iv) As per the MNRE guideline, the following are the **role of the SPPD** in development of the Solar Parks:
  - (i) Acquisition of land
  - (ii) Getting land related clearances
  - (iii) Developing approach road to each plot
  - (iv) Developing internal transmission system and maintaining it.
  - (v) Making arrangement to connect to the grid
  - (vi) Providing basic drainage.
  - (vii) Providing water supply (minimum essential quantity)
- (v) The SPPD has the responsibility to develop, operate and maintain the solar park and its facilities such as road connectivity, water availability, drainage, housing, parking and warehousing, for 25 years. The SPPD has been directed in the guideline to prepare an estimate for the O&M expenses, and formulate a recovery model to ensure the sustainability of the park, as per the financial model given in the Scheme for the solar park.
- (vi) The approved DPR envisages recovery of the development, operation and maintenance expenses of the Solar park through two components. An **Upfront Development Charges** and **annual fees** (including land lease after exemption and O&M charges from year 1). The upfront development charges will be allocated and recovered from each of the SPD based on the generation capacity that may be installed in the Solar Park. The **capital cost of developing the Solar park as per the approved DPR is Rs 66.84 Cr** and the proportional amount collected already from the Solar Plant Developer THDCIL **Rs 21.89 Cr plus GST @18%**. **Further, the Annual fee payable towards maintaining the park is Rs 135.18 Lakhs escalated at 5.18% per Annum.**

(vii) The amount received for development of the Park is given below:

No	Item	Rs in lakhs
1	Central Financial Assistance (CFA) received	874.00
2	CFA Interest	8.06
3	Upfront development charges by IREDA (inclusive of tax)	2537.71
4	Upfront development charges by THDCIL (inclusive of tax)	2582.72
	<b>Total</b>	<b>6002.49</b>

(viii) The following Table shows the expenditure incurred by RPCKL in developing the park, including the preoperative expenses comprises of initial expenses for land survey, demarcation, fencing, Staff salary, office and vehicle expenses etc.

No	Item	Rs in lakhs
1	Pre-operative expenses*	511.84
2	Roads	100.84
3	Internal Transmission system	3518.47
4	Resettlement and Rehabilitation expenses	18.37
5	Taxes	420.33
	<b>Total</b>	<b>4569.85</b>

(ix) The balance amount of  $(6002.49 - 4569.85) = \text{Rs } 1432.64 \text{ Lakhs}$  is to be utilised for future liabilities envisaged and shown in the table below where all figures given are in Rupee Lakh. The balance works has to be carried out under deposit work scheme through PWD, Panchayath and KSEBL.

No	Particulars	DPR provision	Expenditure (31-04-2020)	Future Liability	Total cost
1	Roads	407.05	102.43	559.50	661.93
2	Drainage	46.18	---	20.90	20.90
3	Street light	130.80	---	100.00	100.00
4	Internal Transmission	3523.75	3503.47	159.00	3662.47
5	Rehabilitation expenses	30.71	18.37	---	18.37
6	Environment & Mitigation	50.00	----	50.00	50.00
7	Solar Park building	300.00	----	250.00	250.00
8	Pre-operative expenses	500.00	511.84	89.00	600.84
9	LADF	249.32	----	250.00	250.00
10	<b>Taxes</b>	<b>1048.99</b>	<b>420.33</b>	<b>254.59</b>	<b>674.92</b>
11	Contingent provision	398.91	---	-----	----
12	<b>Total (inclusive of taxes)</b>	<b>6683.71</b>	<b>4556.44</b>	<b>1732.99</b>	<b>6289.43</b>

(x) The Central Financial Assistance (CFA) to be received in **Rs. 386.00 Lakhs** and the upfront charges collectible from 5 MW Nellithadam Site is **Rs. 257.27 Lakhs**; the total being **Rs. 643.27 Lakhs**. The Park will have a contingent reserve fund of **Rs. 394.27 Lakhs** (that is, Rs. 6683.71 less Rs. 6289.43) if above CFA and the upfront charges are not received.

- (xi) RPCKL further submitted that, the formation and functioning of RPCKL is strictly as per the guideline issued by MNRE and that the State and Central Government has approved the formation of the JVC. The corpus for the park development and subsequent operation and management is also as envisaged in the guideline and the approved DPR by MNRE. The development work of the Park is not completed and funds are required to complete the development project.

13. The petitioner M/s THDC vide letter dated 23.12.2020, submitted the following additional details.

**(i) IDC**

The details submitted as Annexure. It is submitted that book account for this project has not been closed. The project was originally scheduled to be commissioned by 07.05.2020 but due to Covid-19 impact delayed and likely to be commissioned by 31.12.2020.

**(ii) O&M expenses**

The Operation & Maintenance (O&M) expenditure considered for the project is:

Cost per MW in Rs. Lacs for 25 years

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Payment to M/s TPSSL *	4.43	4.58	4.73	4.89	5.06	5.24	5.42	5.61	5.81	6.33	6.69	7.07	7.48
Payment to RPCKL **	2.70	2.86	3.02	3.19	3.38	3.57	3.77	3.99	4.22	4.46	4.72	4.99	5.27
<b>Total</b>	<b>7.13</b>	<b>7.43</b>	<b>7.75</b>	<b>8.09</b>	<b>8.44</b>	<b>8.81</b>	<b>9.19</b>	<b>9.60</b>	<b>10.03</b>	<b>10.79</b>	<b>11.41</b>	<b>12.06</b>	<b>12.75</b>
Year	14	15	16	17	18	19	20	21	22	23	24	25	
Payment to M/s TPSSL *	7.91	8.36	8.84	9.34	9.88	10.44	11.04	11.67	12.34	13.04	13.79	14.58	
Payment to RPCKL **	5.57	5.89	6.23	6.58	6.96	7.36	7.78	8.22	8.69	9.19	9.72	10.27	
<b>Total</b>	<b>13.48</b>	<b>14.25</b>	<b>15.06</b>	<b>15.92</b>	<b>16.84</b>	<b>17.80</b>	<b>18.82</b>	<b>19.89</b>	<b>21.03</b>	<b>22.23</b>	<b>23.51</b>	<b>24.85</b>	

**\* Payment to M/s TPSSL-**

As per Agreement No. THDC/NCR/Solar/50MW/AG-02 dt. 11.09.2019, for 10 years, O&M Payment to the contractor as per actual is considered. From 11<sup>th</sup> year onwards escalation at the rate of 5.72% over the previous year as per KSERC regulation 2020 has been considered.

**\*\* Payment to RPCKL**

As per Implementation Agreement & Land Use Agreement signed between RPCKL and THDCIL on 07.02.2019, annual O&M charges for maintaining the Solar Park infrastructure such as Transmission facilities, establishment charges, various overheads including applicable statutory taxes etc. is to be paid by THDCIL to RPCKL. For first year the annual O&M charges are Rs. 135.18 Lakh which are to be escalated annually at the rate of 5.72%.

	<b>Detail of Expenditure</b>	<b>Rs. in Lakh for 50 MW</b>	<b>Rs. in Lakh per MW (for tariff calculation)</b>
*	1 <sup>st</sup> year O&M Cost of Tata	221.29	<b>4.43</b>
**	1 <sup>st</sup> year O&M Cost of RPCKL	135.18	<b>2.70</b>
	1 <sup>st</sup> year total O&M Cost (taken for tariff calculation)		<b>7.13</b>

(iii) **Income Tax on RoE :**

THDC requested to consider that Income Tax on ROE, as per Regulation 40 of KSERC (RE) Regulation 2020.

(iv) **Consultancy charges:**

THDC submitted that it is payable as per the MoU between SECI and THDC

(v) **Interim tariff**

The project is likely to be commissioned by 31.12.2020. Therefore, THDC requested for Final Tariff and may give order to KSEBL to pay to THDCIL for the electricity injected at the grid from the date of injection i.e. from the date of commissioning.

14. The third hearing on the petition was conducted on 05.01.2021 through video conference. The summary of the deliberations during the hearing is given below:

- (i) Smt. Sunitha Tamta, Manager, THDC made a presentation on the petition. The project is already synchronised with the grid on 31<sup>st</sup> December 2020. Approval from Electrical Inspectorate, Government of Kerala was obtained before synchronisation. An Agreement was reached with KSEB Ltd to purchase electricity from the project at the tariff determined by the Commission or @Rs 3.10/unit, whichever is less. The Solar Park charges was paid to the respondent RPCKL as per the Implementation Agreement signed between the RPCKL. The consultancy charges were paid to SECI as per the MOU signed with SECI. The O&M charges claimed for tariff determination includes the annual O&M charges paid to the respondent RPCKL as per the clause 6.2 of the Implementation Agreement.



- (ii) Sri. KGP Nampoothiri, the representative of KSEB Ltd requested for time period upto 15<sup>th</sup> January 2021 for submitting the compliance report as per the directions issued by the Commission vide Daily Order dated 14.12.2020.
- (iii) Sri Augustine Thomas, on behalf of the respondent M/s RPCKL submitted that, the Solar Park is developed for 105 MW Soar PV capacity, and the DPR of the scheme was approved by MNRE vide letter dated 31.05.2019. Out of the total capacity of 105MW, 50MW was already commissioned by IREDA and 50 MW plant of THDC is nearing completion. However, KSEB Ltd is yet to be identify the developer for 5 MW Solar plant. The cost incurred for developing the park is shared among the beneficiaries.

As per the approved DPR, the total investment approved for the park is Rs 66.83 crore. As on 30.04.2020, the respondent had incurred Rs 45.56 crore and Rs 17.32 crore is required for meeting the future liabilities. Accordingly, the total cost expected for developing the park is expected to be Rs 62.89 crore as against the DPR cost of Rs 66.83 crore.

15. KSEB Ltd, vide letter dated 18.01.2021 submitted the following.

- (1) The instant petition has been filed by THDC India Ltd. under section 62 and section 86(1)(b) of the EA, 2003 and the provisions of Kerala State Electricity Regulatory Commission (Renewable Energy and Net Metering) Regulations, 2020 and other applicable regulations for approval of power purchase and procurement process including the price at which the electricity to be purchased from the power project of THDC India Limited.
- (2) Hon'ble Commission vide Daily Order dated 14-12-2020 has issued following Orders on the tariff petition:  
*“9(ii) KSEB Ltd shall submit through an affidavit on the creation of the SPV namely Renewable Power Corporation of Kerala Limited (RPCKL) with SECI for the development of the Solar Park at Kasargod including approval of the State Government and MNRE, Government of India. KSEB Ltd shall also in their affidavit mention whether KSEB Ltd had got approval / intimated regarding the creation of the SPV namely M/s RPCKL. Also whether approval of the Commission was taken for the equity contribution in RPCKL?. If not, KSEB Ltd shall immediately ratify the action in this regard.”*
- (3) In this matter, KSEBL submitted the following:
  - (i) Renewable Power Corporation of Kerala Limited (RPCKL), is a joint venture company by Kerala State Electricity Board Limited (KSEBL) and Solar Energy Corporation of India (SECI), a Central Public Sector Unit Company (CPSU) under the administrative control of the Ministry of New and Renewable Energy (MNRE).

- (ii) MNRE had released, in October 2015, a guideline for establishment of Solar Parks under the Jawaharlal Nehru National Solar Mission (JNNSM). As per the MNRE guideline, the development and management of Solar Parks has to be undertaken by (1) a State designated nodal agency, a State public sector unit or Special Purpose Vehicle, (2) a JVC between the State Agency and SECI with 50 :50 equity participation, (3) by designating SECI as the Nodal Agency or (4) by private entrepreneurs. The Government of Kerala has chosen to the second mode to implement the Solar Park Scheme
- (iii) The Central Government, in turn, approved the development of 200 MW solar park in Kerala with a Joint Venture Company (JVC) set up between SECI and KSEBL as the SPPD (Solar Power Park Developer) in Kasaragod district in 485.80 hectares as proposed by the State Government. The total equity capital infused during the formation of the Company was Rupees one Crore (Rs. 1,00,00,000) shared 50:50 between SECI and KSEBL. There was no further capital infusion.
- (iv) The details of incorporation of RPCKL, Memorandum of Association and Article of Association are also submitted by KSEB Ltd.
- (v) RPCKL, is established to function as the implementing agency (SPPD) for the said Solar Park in Kerala. Government of Kerala had approved the establishment of JVC vide Order GO (RT) No. 174/2015/PD dated 24-07-2015.
- (vi) The present activities of RPCKL are not licensed activities requiring regulatory approval as per the Electricity Act, 2003. The Electricity Act, 2003, prescribes prior approval/intimation of Hon'ble Commission for the activities carried out by a Licensee only under Section 17, Section 41 and Section 51 of the EA, 2003 which are extracted below for ready reference of Hon'ble Commission:

*“Section 17. (Licensee not to do certain things): --- (1) No licensee shall, without prior approval of the Appropriate Commission, - (a) undertake any transaction to acquire by purchase or takeover or otherwise, the utility of any other licensee; or (b) merge his utility with the utility of any other licensee: Provided that nothing contained in this sub-section shall apply if the utility of the licensee is situate in a State other than the State in which the utility referred to in clause (a) or clause (b) is situate. (2) Every licensee shall, before obtaining the approval under sub-section (1), give not less than one month's notice to every other licensee who transmits or distributes, electricity in the area of such licensee who applies for such approval. (3) No licensee shall at any time assign his licence or transfer his utility, or any part thereof, by sale, lease, exchange or otherwise without the prior approval of the Appropriate Commission. (4) Any agreement, relating to any transaction specified in sub-section (1) or sub-section (3), unless made with the prior approval of the Appropriate Commission, shall be void.”*

As per this section, prior approval of Appropriate Commission is required only if there is an acquisition or merging of the utility of any other licensee situated in the same State.

Section 41 of the EA,2003 deals with other business of transmission licensee which requires prior intimation of the Appropriate Commission.

*“Section 41. (Other business of transmission licensee): A transmission licensee may, with prior intimation to the Appropriate Commission, engage in any business for optimum utilisation of its assets: Provided that a proportion of the revenues derived from such business shall, as may be specified by the Appropriate Commission, be utilised for reducing its charges for transmission and wheeling: Provided further that the transmission licensee shall maintain separate accounts for each such business undertaking to ensure that transmission business neither subsidises in any way such business undertaking nor encumbers its transmission assets in any way to support such business: Provided also that no transmission licensee shall enter into any contract or otherwise engage in the business of trading in electricity :”*

Section 51 of the EA,2003 deals with other business of distribution licensee which requires prior intimation of the Appropriate Commission:

*“Section 51. (Other businesses of distribution licensees): A distribution licensee may, with prior intimation to the Appropriate Commission, engage in any other business for optimum utilisation of its assets: Provided that a proportion of the revenues derived from such business shall, as may be specified by the concerned State Commission, be utilised for reducing its charges for wheeling : Provided further that the distribution licensee shall maintain separate accounts for each such business undertaking to ensure that distribution business neither subsidises in any way such business undertaking nor encumbers its distribution assets in any way to support such business. Provided also that nothing contained in this section shall apply to a local authority engaged, before the commencement of this Act, in the business of distribution of electricity.”*

- (vii) KSEB Ltd further submitted that, it is a corporate entity registered under the Companies Act, 2013 and is free to carry out activities in accordance with its Articles of Association and Memorandum of Association as approved by the Registrar of Companies, in accordance with applicable laws. The approval of the Hon'ble Commission is required in activities undertaken by the Company which are regulated under the provisions of the Electricity Act, 2003. The development of Solar Park is not a regulated activity as per the Electricity Act, 2003. Moreover, none of the assets of SBU-D and SBU-T are utilized in the functioning of RPCKL. The equity infusion of Rs.50 Lakhs by

KSEBL in RPCKL is disclosed in the audited accounts of KSEBL for 2015-16 under Note-14, and the same, in no manner, is to be reflected in the P&L account of the Company and thus in the regulated ARR & ERC of KSEB Ltd. As submitted supra, KSEB Ltd. has obtained all requisite approvals from various authorities for the establishment of RPCKL.

- (viii) KSEBL further submitted that RPCKL formation occurred before the commissioning of 50MW IREDA owned solar project at Kasargod for which Hon'ble Commission had approved the PSA and tariff of the project.

## **Analysis and Decision**

16. The Commission has examined the petition filed by M/s THDC, the counter affidavit filed by the respondents KSEB Ltd and M/s RPCKL, other relevant documents and records placed by the petitioner and the respondent and also the deliberations during the hearing, and decided the following.
17. The petitioner M/s THDC filed the original petition dated 07.09.2020 with the prayer to approve the procurement of power by KSEB Ltd from the 50 MW Solar PV plant being established by M/s THDC, and submitted that, being a Gol under taking, in terms of Section 79(1) of the Electricity Act, 2003, THDC filed a petition before the CERC on 19.05.2020 for the determination of project specific tariff for the plant. However, on examining the documents submitted by the petitioner before the Commission, it is noted that 75% equity of the Company earlier held by the President of India is transferred to NTPC Ltd vide Share Purchase Agreement executed between NTPC Ltd and the President of India on 25<sup>th</sup> March 2020 for the acquisition of legal and beneficial ownership of equity held by the President of India in THDC India Ltd for an aggregate consideration of Rs 7500 Crores.

The Commission observed that, as per Section 2(45) of the Companies Act, 2013, to qualify as a Government Company, not less than 51% of the paid-up share capital has to be held by the Government(s). This shareholding is reflected by the fact that these shares are issued in the name of the President of India in the case of a Govt. of India Company or in the name of the Governor of the State in the case of a State Govt. Company or in both names if it is a JV between the Centre and State or between two states. THDC was indeed a government company as revealed by the share holding pattern prior to 25.03.2020. Consequent upon the transfer of the shares held by the President of India to NTPC Ltd. and its nominee officers, it ceased to qualify as a Government company under the Section 2(45) of the Companies Act, 2013.

Further, a JV between a PSU and a State Government wherein the majority of shares are issued in favour of the respective PSU and State Government too do not qualify the test of being a Government company as defined under Section 2(45) of the Companies Act, 2013. The Commission during the

hearing clarified that based on the above criteria and after examining the shareholding pattern of THDC, post 25.03.2020, THDC is no more a company owned or controlled by the Central Government. **Accordingly, Section 79 (1) (a) is not attracted and hence the Central Commission has no jurisdiction to regulate the tariff of 50 MW solar plant established by M/s THDC at Kasargod district, in the State of Kerala.** The Commission vide interim Order dated 23.10.2020 directed the petitioner M/s THDC to amend the petition so as to include the determination of tariff of the electricity generated from the 50 MW solar plant developed by the petitioner at 200 MW Solar Park at Kasargod.

18. In compliance of the directions of the Commission, the petitioner M/s THDC filed the revised petition on 04.11.2020. **The Commission during the deliberations of the subject petition clarified that, the present proceedings are limited to determination of the tariff for electricity generated from the project.** The appraisal of the various clauses of the PSA initialled between the THDC and KSEBL will be held separately after determining the tariff for the electricity generated from the project.

19. The Commission further noted that, the clause-7 of the Power Sale Agreement (PSA) dated 16.01.2019 provides as follows.

**“(7) Tariff**

**The Tariff will be levelized tariff not exceeding Rs.3.10/kWh, which is subject to further reduction based on the project cost discovered through reverse bidding for selection of EPC contractor or rate as approved by Kerala State Electricity Regulatory Commission, whichever is lower”**

As above, as per the PSA dated 16.01.2019, signed between THDC and KSEB Ltd, this Commission has to determine the tariff for the electricity generated from the project. If the tariff so determined by this Commission is more than Rs 3.10/unit, the tariff applicable shall be Rs 3.10/unit, otherwise the applicable tariff for the project shall be the same approved by this Commission.

20. The Regulation 36 of the KSERC (Renewable Energy and Net Metering) Regulations deals with the determination of project specific tariff for the electricity generated from Renewable Sources of Energy, which is extracted below for ready reference.

**“36. Project Specific Tariff for the Electricity Generated from Renewable Sources of Energy.-**

(1) *The Commission may, based on a petition for determination of tariff as per the provisions of Electricity Act 2003, determine by an order the project specific tariff, on a case to case basis, for the Renewable Energy projects. This shall be done in accordance with the principles, norms and parameters specified or adopted by the Commission as per these Regulations.*

(2) *Provided that the financial norms as specified under these Regulations, shall be ceiling norms while determining the project specific tariff for such Renewable projects.*

(3) *A petition for determination of project specific tariff shall be*

accompanied by such fee as may be determined by Regulations and be accompanied by:

- a) Detailed Project Report outlining technical and operational details, site specific aspects, premise for capital cost, financing plan, project economic viability etc.;
- b) Estimates of cost of all major components for the project with evidence to its reliability.
- c) A statement indicating the project completion cost, evidence for all major expenditures incurred, sources of financing with its terms / conditions etc for the period, for which tariff is to be determined;
- d) A statement containing full details of any subsidy and incentive available, claimed and received, due or assumed to be due from the Central Government and/or the State Government;
- e) Any other information as decided by the Commission, for determining the project specific tariff for the project.

(4) For the determination of project specific tariff, the generating company shall submit the break-up of all the capital cost items accompanied by relevant paid vouchers/ tax receipts and other verifiable documents with its petition in the manner specified above.

*Provided that, the project specific tariff so determined shall be limited to the generic tariff determined by the Commission for the particular year of CoD, if it exceeds the generic tariff for that year and shall be based on the norms and parameters specified in these Regulations.”*

21. The Commission examined the various documents submitted by the petitioner for determination of project specific tariff, as per the provisions of the Electricity Act, 2003, KSERC (Renewable Energy and Net Metering) Regulations, 2020, other Rules and Regulations and prudent utility practices followed in the County. The following technical and financial parameters have been considered for determination of the tariff for the electricity generated from the solar plant.

1. Capital cost
2. Useful life of the plant
3. Plant load factor
4. Auxiliary consumption
5. Debt: Equity ratio
6. Term of loan and interest
7. Return on Equity
8. Interest on working capital
9. Depreciation
10. Operation and Maintenance expenses
11. Discount rate

### **Capital cost**

22. The capital cost of the project is the basis for determining the project specific tariff for the electricity generated from a generating plant. The tariff components including the interest on loan, depreciation, O&M cost etc. are calculated on the basis of the capital cost of the project. The capital cost

claimed by the petitioner for determination of tariff including the ‘Solar park charges, consultancy charges and other charges are given below.

SI No	Description	Price (Rs Cr)	Cost claimed as (%) of total cost
1	Total EPC Price	211.34	81.5%
2	Solar park charges	25.83	10.0%
3	Consultancy charges	14.57	5.6%
4	Other cost including IDC	7.55	2.9%
5	Total	259.29	100.0%
6	Cost per MW	5.18	

23. “Engineering, Procurement, and Construction” cost.

The petitioner M/s THDC submitted that, M/s SECI on behalf of THDC, selected the EPC Contractor, for developing 50MW solar plant through open competitive e-bidding followed by e- Reverse Auction as per the NIT dated 08/02/2019 for Design, Engineering, Procurement and Supply, Construction and Erection, Testing, Commissioning, Associated Transmission system and also for comprehensive operation and maintenance for a period of 10 years from the date of commissioning. After completing all the procedures and formalities including e-Reverse Auction, M/s SECI selected, M/s Tata Power Solar Systems Ltd., as the EPC Contractor with the price as given below:

SI No	Package	Price
		(Rs. Cr)
1	Supply works package (upto site)	178.11
2	Freight & Insurance	3.71
3	Erection works package	8.59
4	Civil and Allied works package	20.93
	Total EPC price	211.34

M/s THDC, issued Letter of Award (LOA) for Supply & Service Contract to M/s TATA Power Solar Systems Ltd on 08.08.2019. Subsequently, THDC signed the ‘Supply & Services Contract Agreement with M/s TATA Power Solar Systems Ltd on 11.09.2019.

As per the Clause-6 of the LOA dated 08.08.2019, the schedule of successful commissioning of the 50MW Solar PV plant is 09 (Nine) months from the effective date of the contract for all contractual purposes. The effective date of the contract shall be the date of issue of the LOA.

SI No.	Stage	Reference from D
1	Issue of LOA	Zero Date (D)
2	Commissioning of the plant as per the LOA and Contract Agreement	<b><u>D + 09 Months</u></b>

As detailed above, as per the LOA, the Solar PV of the petitioner has to be commissioned by 08.05.2020. However, the petitioner submitted that, the project was commissioned on 31.12.2020, there is delay of 7 months and 23 days (from the original schedule of commissioning. The petitioner submitted that, due to the Covid-19 Pandemic the commissioning of the project got delayed.

The clause-4 of the Appendix-1 to LOA, specify the ‘Liquidated Damages’ payable by the EPC contractor to the petitioner in the event of delay in commissioning of the project. The relevant clause is extracted below.

**“4. LIQUIDATED DAMAGES(LD)**

4.1 Subject to Force Majeure Clause, if the Contractor fails to comply with the Time for successful Commissioning of Plant facilities in accordance with SSC Clause for the whole of the facilities then the Contractor shall pay to THDCIL a sum equivalent to half percent (0.5%) per week of the Contract price for the whole of the facilities as liquidated damages for such default and not as a penalty, without prejudice to THDCIL’s other remedies under the Contract subject to the maximum limit of five percent (05%) of Contract Price for the whole of the facilities. THDCIL may, without prejudice to any other method of recovery, deduct the amount of such damages from any amount due or to become due to contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the contract. Once the maximum limit is reached, THDCIL may consider the termination of contract and/or shall have the discretion of getting executed the work from the Contractor with the maximum limit of Liquidated damages. Any such recovery on account of the Liquidated damages can be done from the running bills of the Contractor by THDCIL.”

As above, as per the provisions of the LOA, if the contractor fails to commission the project within the time limit specified, the contractor shall pay to THDC a sum equivalent to half percent (0.5%) per week of the Contract Price as liquidated damages for such default, subject to a maximum limit of five percent (05%) of the Contract Price.

In the present case, the total delay in commissioning the project from the date of CoD is 236 days, i.e., 33 weeks and ‘5’ days. The petitioner submitted that, the delay is due to Covid-19 Pandemic. It is a fact that, the whole Country was in complete lock down due to Covid 19 Pandemic from 24.03.2020 and this was extended till 31.05.2020, i.e, the lock down period was about 9 weeks and 5 days. Even after excluding the lock down period, the delay in commissioning of the project is about 24 weeks. The liquidated damages @0.50% of the Contract Price per week for 24 weeks is 12%, however the



ceiling on the liquidated damages as per the LOA is 5%, corresponding to a delay of 10 weeks only.

The Commission has examined the matter in detail. The Commission is constrained to not to accept the submission of the petitioner that, the entire delay of 33 weeks and 5 days is due to the Covid 19 pandemic alone. Hence the Commission hereby directs imposing the maximum liquidated damage @5% of the contract value of the EPC cost of Rs 211.34 crore. Accordingly, the total liquidated damages considered is of Rs 10.57 crore on the total EPC cost.

Thus, the Commission had considered the EPC cost as RS 200.77 crore excluding the liquidated damages only for determining the tariff for electricity generated from the project. The details are given below.

Sl No	Particulars	Amount (Rs. Cr)
1	EPC cost	211.34
2	Liquidated damages @5% of the EPC cost	10.57
3	Net EPC cost adopted for tariff determination	200.77

#### **Solar Park charges**

24. The petitioner M/s THDC submitted that, they had remitted Rs 25.83 crore to the respondent M/s RPCKL towards Solar Park charges as per the invoice raised by the respondent. The petitioner further submitted that, as per clause 6.1 of the Implementation Agreement dated 7<sup>th</sup> February 2019, the petitioner has to remit 'One-time Solar Power Park Development Expenses, towards capital cost for land development and for providing common infrastructure such as Internal Transmission lines, Roads etc of Rs 2188.74 lakh calculated as per the DPR for 50 MW Solar plant of the petitioner, plus all applicable taxes. Thus, the amount claimed by the respondent towards Solar Park charges is Rs 21.8874 crore plus the GST @18%.

The respondent RPCKL during the deliberations of the subject petition submitted that, the Ministry of New and Renewable Energy (MNRE) vide letter dated 31.05.2019 approved the DPR for the 105 MW Kasargod Solar Park in Kerala by M/s RPCKL with the total cost of Rs 6683.71 lakh including CFA of Rs 1260 lakh for internal infrastructure development.

The details of the cost of the Solar Park charges claimed by the petitioner from the beneficiaries of the park is detailed below.

No	Particulars	Amount
		(Rs lakh)
1	Capital Cost for developing Park as per the DPR	6683.71
2	MNRE Subsidy (CFA)	1260.00
3	Capital Cost to be recovered	5423.71
5	Capital cost to be recovered excluding taxes (18% GST)	4596.36

The balance approved DPR cost excluding the CFA was claimed from the beneficiaries in proportion of the Solar Plant Capacity. Thus, the amount claimed/ proposed to claimed from the beneficiaries is detailed below.

Sl No	Plant site	Land area (Ha)	Capacity (MW)	Amount (Rs.Cr)
1	Ambalathara-Velluda (IREDA site)	83.45	50	21.89
2	Ambalathara-Nellithadam	10.94	5	2.19
3	Park Infrastructure	5.93		
4	Kommangala site (THDC site)	101.23	50	21.89
	Total	201.55	105	45.96

Commission examined the details submitted by the petitioner M/s THDC and the respondent M/s RPCKL. The actual expense incurred for developing the solar park as on 30.04.2020 was Rs 45.5644 crore instead of the DPR cost of Rs 66.84 crore. The cost of the solar park claimed as per the DPR is only the estimate of the cost of the various components of the Solar Park at the time of preparing the DPR and hence the same cannot be considered for tariff determination. Now, 100MW Solar plant (50 MW by IREDA and 50 MW by THDC) is already commissioned. The respondent also not submitted the details of the balance work to be carried out in the Solar Park, and the reasons for the delay in execution of the same. Considering these reasons, the Commission can consider only the actual cost expended on the Solar Park amounting to Rs 45.5644 crore for tariff determination. Further, as per the details submitted before the Commission, the CFA receivable from MNRE is Rs 12.60 crore. Accordingly, the Solar Park charges approved for Tariff determination is detailed below.

**Solar Park charges to be recovered from Solar Plant developers**

No	Particulars	Claimed by the respondent RPCKL	Actual
		(Rs lakh)	(Rs lakh)
1	Capital Cost for developing Park as per the DPR	6683.71	4556.44
2	MNRE Subsidy (CFA)	1260.00	1260.00
3	Capital Cost to be recovered	5423.71	3296.44
5	Capital cost to be recovered excluding taxes (18% GST)	4596.36	2793.59

The facilities in the Solar Park is for developing 105 MW Solar PV capacity by the beneficiaries of the park. Hence the total cost incurred for developing the Solar Park by the RPCKL has to be shared among the beneficiaries in proportion of Solar PV capacity developed by each beneficiary. The details are given below.

Solar park charges to be shared by the beneficiaries of the Solar Park

Sl No	Plant site	Capacity (MW)	Claimed in the petition	Approved
			Amount (Rs.Cr)	(Rs. Cr)
1	Ambalathara-Velluda (IREDA site)	50	21.89	13.31
2	Ambalathara-Nellithadam	5	2.19	1.32
3	Park Infrastructure			
4	Kommangala site (THDC site)	50	21.89	13.31
	Total	105	45.96	27.94

**As detailed above, one time solar park charges payable by the petitioner is Rs 13.31 crore plus GST @ 18%, instead of the claim of Rs 21.89 crore plus 18% GST. Thus the solar park charges approved for the 50MW Solar Plant of the petitioner is Rs 15.71 crore including GST @18%.**

**Consultancy charges paid to M/s SECI**

25. The petitioner THDC claimed Rs 14.57 crore towards consultancy charges payable to the respondent SECI. As per the MoU dated 13.02.2015, signed between the petitioner M/s THDC and the third respondent M/s Solar Energy Corporation of India, the petitioner agreed to pay 8% of the EPC cost of Rs 211.34 crores plus applicable taxes and duties, as service charges to the respondent SECI. However, as requested by the petitioner, the SECI vide letter dated 30.07.2019, reduced its charges to 6% (plus applicable taxes and duties) of the EPC cost as against 8% as per the MoU dated 13.02.2015.

The Commission examined the documents submitted by the petitioner and also the payment schedule raised by SECI to THDC. The consultancy charges claimed by the petitioner amounting to Rs 14.57 crore is 6% of the EPC cost plus applicable taxes. **Considering the above, the Commission hereby admits the consultancy charges amounting to Rs 14.57 crore as part of capital cost of the project.**

**Other cost including IDC**

26. The petitioner has claimed Rs 7.55 crore towards other cost including IDC as part of the capital cost of the project. During the deliberations of the subject petition, the Commission observed that though the petitioner claimed that the entire project cost is met from own funds, the petitioner claimed IDC for tariff determination. Hence the Commission directed the petitioner to provide the detailed calculation of IDC claimed with all supporting calculation.

In compliance of the directions of the Commission, the petitioner produced a copy of the certificate from M/s Ajay Agarwal & Co., Chartered Accountants, wherein they certified that an amount of Rs 3,16,12,216/- has been incurred on account of employee benefit expenses and other expenses excluding depreciation and charges paid to SECI in respect of 50 MW Solar Power Project, Kasargod. The Commission however notes that except for this Auditor's certification for Rs 3.16 crore, no separate details have been provided for the Commission to check the prudence. No details or justification has been provided by THDCIL for this

expense. **Hence the Commission is constrained not to allow this cost of Rs 7.55 crore as part of the capital cost in determining the tariff of this project.**

### **Capital cost approved for tariff determination**

27. As explained in the preceding paragraphs, the total capital cost considered for determining the tariff for electricity generated from the solar plant is given below.

Sl No	Particulars	Claimed by the petitioner	Approved by the Commission
		(Rs. Cr)	(Rs. Cr)
1	EPC cost	211.34	211.34
2	Liquidated damages (Less)	0.00	10.57
3	Net EPC cost = (1)-(2)	211.34	200.77
4	Power evacuation cost	25.83	15.70
5	Consultancy charges	14.57	14.57
6	Other cost	7.55	0.00
7	Total for 50 MW solar plant	259.29	231.04
8	Cost per MW	5.19	4.62

### **Useful life of the project**

28. In the petition, the petitioner has adopted the useful life of the project as 25 years for tariff determination.

As per Regulation to (1) (bu) (f) of KSERC (Renewable Energy and Net Metering) Regulations 2020, the useful life of Solar PV projects as 25 years from the date of commercial operation.

**Hence, the Commission hereby approves the adoption of 25 years as the useful life of this project for tariff determination.**

### **Capacity Utilisation Factor**

29. The petitioner submitted that, the CUF as per the bidding documents at 23% has been considered for tariff determination. The petitioner further submitted that, Modular degradation is an acceptable technological phenomenon in Photo-Voltaic insolation concept. Though degradation has not been categorically specified in the Renewable Energy Regulations 2020, THDC may be permitted to adopt a degradation factor of 0.7% for the entire life of the project based on NIT in the present project specific tariff determination.

The Commission examined the CUF and annual degradation factor claimed by the petitioner with the provisions of the KSERC (Renewable Energy & Net Metering) Regulations, 2020 (herein after referred as RE Regulations 2020). As per the Regulation 54(3) of the RE Regulations, 2020, the normative CUF specified is 19% only.

The Commission notes that RE Regulation, 2020 does not specify the percentage of annual degradation of PV cells. However, it is true that PV cells do degrade over time and some allowance has to be given for this factor. As mentioned in the petition, since the degradation factor proposed is 0.7% as per NIT, the Commission hereby admit the same.

The petitioner has claimed a CUF of 23% for this project, which is better than the normative CUF specified in the Regulations, hence the Commission hereby adopts the CUF of 23% proposed by the petitioner for tariff determination.

### **Auxiliary Consumption**

30. In the petition, the petitioner has proposed to adopt the auxiliary consumption at 0.25%.

***As per the Regulation 54 (5) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the auxiliary consumption for the Solar PV projects is 0.25% of the gross generation. Hence, the Commission hereby approves the same for determination of the tariff for the electricity generated from the project.***

### **Debt: Equity Ratio**

31. The petitioner proposed to adopt the normative debt: equity ratio at 70:30 for determining the tariff of the project.

***As per the Regulation 40 of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the debt-equity ratio for determining the tariff for all renewable projects shall be 70:30. Hence, the Commission hereby approves the debt-equity ratio of 70:30 for determining the tariff for the electricity generated from the project of the petitioner.***

### **Loan repayment period**

32. The petitioner has proposed a loan tenure of 13 years for tariff determination.

***As per the Regulation 41 (1) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative loan tenure of 13 years shall be considered for the purpose of tariff determination. Hence the Commission hereby approves adopting the loan repayment period as 13 years without any moratorium period for tariff determination.***

### **Interest on loan**

33. The petitioner has claimed the interest on loan at 9.11% for tariff determination.

***However, as per the Regulation 41 (2) (ii) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative interest rate to be adopted for tariff determination is 'two hundred (200) basis points***

**above the average SBI Marginal Cost of Funds based Lending Rate (MCLR) for one month tenor prevalent during the last available six months'. The average SBI MCLR rate for past six months prior to January 2021 is 6.65% (one month tenor). Accordingly, as per the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative interest rate @ 8.65% is to be adopted for determination of tariff. The Commission adopts the same for determination of tariff for electricity generated from the project.**

### **Depreciation**

34. The petitioner has proposed depreciation @ 5.28% for first 13 years and 1.78% for the balance useful life of 12 years with a salvage value of 10%.

As already mentioned, Regulation 2(1)(bu) of KSERC (Renewable Energy & Net Metering) Regulations, 2020 has specified the useful life of Soar PV projects as 25 years. Further, as per the Regulation 42 of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, depreciation to be adopted for tariff determination is ' @5.28% per annum for first 13 years and remaining depreciation to be spread over the remaining useful life of the RE assets considering the salvage value of the project as 10% of the project cost'.

**Accordingly, the depreciation rate for determination of tariff is fixed @5.28% per annum for the first '13' years and at 1.78% per annum for the remaining useful life of '12' years for tariff determination of this project.**

### **Interest on working capital**

35. The petitioner had proposed the interest on working capital at the rate of 10.11 % for determination of tariff.

**Regulation 44 (2) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative interest on working capital shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average SBI Marginal Cost of Funds based Lending Rate (MCLR) for one month tenor prevalent during the last available six months'. The average SBI MCLR rate for past six months prior to January 2021 is 6.65% (one month tenor). Accordingly, as per the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the normative interest rate to be adopted for computing interest on working capital is @ 9.65% for determination of tariff. The Commission hereby adopts the same for determining the tariff for electricity generated from the project.**

### Operation and Maintenance Expenses

36. The petitioner claimed the O&M cost for 10 years at the rate as per the contract signed with the contractor M/s TATA Power Solar Systems Private Limited. In addition to the above, the petitioner included the cost of maintenance of the Solar park including the land lease charges and other establishment charges claimed by the respondent M/s RPCKL.

As per the O&M contract signed by the petitioner M/s THDC with the O&M contractor M/s TATA Power Solar Systems limited, the annual O&M cost payable including GST for 10 years from the first year after CoD is given below.

Year	O&M cost as per the Contract with M/s TATA Power Solar Systems Ltd	O&M cost/MW
	(Rs)	(Rs. Lakh)
1	22129366.00	4.43
2	22875890.64	4.58
3	23653246.82	4.73
4	24462660.99	4.89
5	25305408.75	5.06
6	26182816.73	5.24
7	27096264.68	5.42
8	28047187.61	5.61
9	29037077.94	5.81
10	31642385.08	6.33
Total	260432305.24	

Since the O&M cost of the Solar plant is the same derived as per the bid, and the same as per the O&M contract signed with the bidder M/s TATA Power Solar Systems Private Ltd, the Commission hereby approve the same for tariff determination.

#### O&M expenses for Solar Park.

As per the Implementation Agreement signed by the petitioner THDC with the respondent Solar Park developer M/s RPCKL dated 7<sup>th</sup> February 2019, the annual O&M charges payable by the THDC to RPCKL is Rs 135.18 lakh including land lease charges for the first year. There after, it is escalated at the rate of 5.72% annually.

However, as per the Government Order GO (Ms) No. 464/2018/RD dated 11.12.2018, 101.2292 Ha (250 Acre) of Government land was allotted to KSEB Ltd for developing a Solar Park by RPCKL, at free of lease rent for initial five years and thereafter lease rent payable is @2% of the fair value of the land for the balance 23 years. Further, as per the Land Use Agreement dated 7<sup>th</sup> February 2019 signed between THDC with the respondent RPCKL,

the annual lease rent payable is Rs 2227/- per Acre provisionally fixed by the Government of Kerala and this is subject to revision. Further, as per the agreement, first annual lease rent payable by the THDC is in the year 2023-24. Further, the total area of land allotted for the project is 250 Acres. Accordingly, the total annual lease rent payable for the 2023-24 is Rs 5.56 lakh for 2023-24.

Considering these facts, the Commission approves that, the lease rent payable from 2023-24 instead of the first year of CoD as claimed by the respondent RPCKL. Accordingly, the O&M charges approved for payable for maintaining the Solar Park to RPCKL as detailed below.

Year	O&M charges for the park excluding land lease rent		Annual lease rent	
	(Rs.Lakh)	(Rs. Lakh/MW)	(Rs.Lakh)	(Rs. Lakh/MW)
2020-21	129.61			
2021-22	5.72% escalation for subsequent years			
2022-23				
2023-24			5.57	0.11
2024-25			5.72% escalation for subsequent years	

### **Return on Equity**

37. As per the Regulation 43 of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the Return on Equity shall be 14% on the normative equity. Further, Income Tax/ Minimum Alternate Tax (MAT) on ROE if any, paid by the generator, shall be reimbursed separately by the distribution licensee on production of documentary evidence of remittance, annually for the entire useful life of the project.

The petitioner, as per the paragraph 31 of the amended petition dated 30.10.2020 submitted as follows.

‘For calculating the Return on Equity (ROE) in terms Regulation 43 of the Renewable Tariff Regulations, the rate of Income Tax has been adopted as 34.944% (30% corporate tax x 1.12 (surcharge) x 1.04 (education cess). As per Regulation 43 of the Renewable Energy Regulations, Income Tax/ Minimum Alternate Tax (MAT) on RoE if any, paid by the generator, shall be reimbursed on actual basis separately by the distribution licensee within 30 days of production of documentary evidence of remittance, annually for the entire useful life of the project.

***Hence, as per the Regulation 43 of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, the Commission approves RoE @14%. This RoE shall be for a maximum equity of 30% of the provisionally***



***approved capital cost or the actual equity brought in by the developers of this project.***

**Discounting factor for computing levelised tariff**

38. The petitioner has proposed a discounting factor @10.6% for arriving at the levelized tariff.

As per the second proviso to Regulation 37(2) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, ‘the discounting factor equivalent to pre-tax weighted average cost of capital (WACC) shall be considered for determination of tariff.

The WACC has been computed as under:

$$\begin{aligned} \text{WACC} &= \text{Cost of Debt} + \text{Cost of Equity, where} \\ \text{Cost of Debt} &= 70\% \times \text{interest on debt} \\ \text{Cost of equity} &= 30\% \times \text{return on equity} \end{aligned}$$

Accordingly, the Commission has arrived at a discounting factor for determining the levelised tariff as follows:

Particulars	WACC
<b>Cost of debt</b>	
0.7 * 8.65%	6.06%
<b>Cost of Equity</b>	
0.3 * 14%	4.20%
<b>Weighted Average cost of capital</b>	<b>10.26%</b>

***Accordingly, the Commission has decided to adopt the WACC @10.26% for determining the levelized tariff of the project.***

**Summary of the technical and financial parameters**

39. The summary of the technical and financial parameters adopted for determining the tariff of the 50MW Solar PV project of the petitioner is given below.

SINo	Particulars			Remarks
1	Installed capacity	50	MW	As per the petition
2	Life of the plant	25	Years	As per the petition
3	Capacity utilisation factor	23%		As per the petition
4	Auxiliary consumption	0.25	%	KSERC (RE) Reg-2020
5	Capital cost of the project	4.62	Rs.Cr./MW	Provisionally adopted by the Commission for the base year 2020

6	Debt: Equity	70:30		KSERC (RE) Reg-2020
7	Loan tenure	13	Years	KSERC (RE) Reg-2020
8	Interest rate (MCLR rate+ 2%) (MCLR- last six months- 6.65%)	8.65	%	KSERC (RE) Reg-2020
9	RoE (pre-tax)	14	%	KSERC (RE) Reg-2020
10	Working capital			KSERC (RE) Reg-2020
	(i) O&M cost for one month			
	(ii) Receivable equivalent to two months			
	(iii) Maintenance of spares @15% of the O&M expenses			
11	Interest on WC (MCLR+3%)	9.65	%	KSERC (RE) Reg-2020
13	O&M cost (first year)	As per the petition		
14	O&M cost (second year onwards)- 5.72% escalation on base year O&M [KSERC (RE) Reg-2020]			
15	Depreciation	5.28%	for first 13 years	KSERC (RE) Reg-2020
		1.78%	For remaining 12 years	KSERC (RE) Reg-2020
16	Discount rate = weighted average cost of capital	10.26	%	KSERC (RE) Reg-2020

#### 40. Benefit of accelerated depreciation.

The petitioner has claimed that they propose to avail the benefit of accelerated depreciation. The details of the accelerated depreciation benefit arrived at is detailed below.

In terms of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, for the projects availing the benefit of accelerated depreciation, an applicable Corporate tax rate of 34.94% has been considered. For the purpose of determining net depreciation benefits, depreciation @ 5.28% as per Regulations has been compared with depreciation as per Income Tax Act i.e., 40% of the written down value method. Moreover, additional 20% depreciation in the initial year is proposed to be extended to new assets acquired by power generation companies vide amendment in the Section 32, sub-section (1) clause (iia) of the Income Tax Act. Income tax benefits of accelerated depreciation and additional depreciation, have been worked out as per normal tax rate on the net depreciation benefit. Per unit levelized accelerated depreciation benefit has been computed considering the pre-tax weighted average cost of capital as the discount factor. Accelerated depreciation benefit has been computed as per existing provisions of Income Tax Act. The detailed computation of the accelerated depreciation is given as Annexure.

#### Tariff

41. Based on the above norms and parameters, the levelized tariff determined by the Commission for the 50 MW Solar PV plant established by M/s THDC is **Rs 3.42/unit without considering the benefit of accelerated depreciation. The benefit of accelerated depreciation for the project is Rs 0.30/unit.**

Accordingly, as detailed in the preceding paragraphs, the **tariff for the electricity generated from the project is Rs 3.12/unit with the benefit of accelerated depreciation.**

However, as per the clause-7 of the initialled Power Sale Agreement dated 16<sup>th</sup> January 2019, both the petitioner M/s THDC and the buyer of electricity M/s KSEB Ltd, mutually agreed as follows.

***“(7) Tariff***

***The Tariff will be levelized tariff not exceeding Rs.3.10/kWh, which is subject to further reduction based on the project cost discovered through reverse bidding for selection of EPC contractor or rate as approved by Kerala State Electricity Regulatory Commission, whichever is lower”***

***Since the tariff determined by the Commission is more than the ceiling tariff of Rs 3.10/unit, the Commission hereby approves the tariff for supply electricity from the project @Rs 3.10/unit. The respondent KSEB Ltd shall purchase the electricity from the project @Rs 3.10/unit. The clause-7 of the initialled Power Sale Agreement shall be modified accordingly.***

**42. The Prayer (c) of the Amendment Petition.**

The petitioner M/s THDC prayed before the Commission to ‘direct KSEB to reimburse the tax paid on ‘Return on Equity’ in terms of Regulation 43 of Renewable Energy Regulation, 2020.

Commission examined the prayer of the petitioner in the amendment petition dated 23.10.2020. The Regulation 59 of the KSERC (Renewable Energy and Net Metering) Regulations, 2020, permits the ‘renewable generator and distribution licensee’ to mutually agree to charge a lower tariff than the tariff determined by the Commission as per the norms specified in the KSERC (Renewable Energy and Net Metering) Regulations, 2020. The relevant Regulation is extracted below.

***“17. Deviation from Norms.-***

***As stated above the tariff determined under these Regulations shall be a ceiling tariff. The renewable generator and the distribution licensee may mutually agree to charge a lower tariff than the tariff determined on the basis of norms and parameters specified in these Regulation, with the prior approval of the Commission.”***

As already discussed under paragraph-41 above, as per the Cause-7 of the initialled PSA dated 16.01.2019, the petitioner M/s THDC and the respondent licensee KSEB Ltd, mutually agreed that, the tariff of the electricity generated from the plant shall not exceed Rs 3.10/unit, which is subject to further reduction based on the project cost discovered through reverse bidding for selection of EPC contractor or rate as approved by KSERC, which ever is lower. The tariff determined by the Commission based on the norms and

parameters specified in the KSERC (Renewable Energy and Net Metering) Regulations, 2020 is higher than the ceiling tariff @Rs 3.10/unit mutually agreed by the parties. Hence, as already decided under Paragraph-41 of this Order, the Commission, approved the tariff of electricity generated from the 50 MW Solar PV plant of the petitioner @Rs 3.10/unit. This is the upper ceiling on tariff mutually decided by the parties including the tax on ROE, and all other taxes and duties. Hence the Commission, rejects the prayers (c) in the amendment petition dated 30.10.2020.

43. **Prayer (d) of the Amendment petition**

The petitioner prayed before the Commission to 'Allow as a pass through the taxes and duties in terms of Regulation 51 of the Renewable Energy Regulations, 2020.

The Commission examined in detail the prayer of the petitioner. As already discussed under paragraph 42 above, the petitioner THDC and KSEB Ltd mutually agreed for a ceiling tariff of Rs 3.10/unit. Since the Commission determined tariff under this order is higher than the ceiling tariff, the Commission approve the tariff of the project of the petitioner @ Rs 3.10/unit. This is the upper ceiling on tariff mutually decided by the parties including the tax on ROE, and all other taxes and duties etc.

Considering these reasons, the Commission reject the Prayer (d) of the petitioner.

**Order of the Commission**

44. The Commission after detailed examination of the petition filed by M/s THDC India Ltd, the counter affidavit filed by the respondent KSEB Ltd and M/s RPCKL, other documents submitted during the deliberations of the subject petition, as per the provisions of the Electricity Act, 2003, KSERC (Renewable Energy & Net Metering) Regulations, 2020 and other relevant documents wherever necessary, hereby issue the following Orders.

- (1) The levelized tariff for the electricity generated from the 50 MW Solar Project of M/s THDC India Ltd is approved @ Rs 3.10/unit, inclusive of all taxes and duties including tax on RoE.
- (2) The levelized tariff approved as above is applicable for the entire electricity injected into the grid from the date of synchronization upto 25 years.
- (3) Since the tariff of this petition is already determined as per Section 86(1)(b) by the State Commission, the Commission hereby directs THDC India Ltd not to pursue for tariff determination under Section 79(1)(a) of the Electricity Act before the Central Commission.

- (4) Since the tariff approved for the project is the upper ceiling tariff mutually agreed by the petitioner M/s THDC India Ltd and the respondent KSEB Ltd, the petitioner is not eligible to reimburse the tax on RoE from KSEB Ltd, and also not eligible to pass through the taxes and duties to KSEB Ltd, as detailed under paragraph 42 and 43 of this order.
- (5) As mentioned under Paragraph 18 of this Order, the present proceedings are limited to determination of tariff for the project as per Section 62 of the Electricity Act, 2003. The petitioner M/s THDC India Limited and the respondent KSEB Ltd is required to modify the initialled PSA with the approved tariff as above, and shall file a separate petition for approval of the PSA as per the provisions of the Electricity Act, 2003 and the Regulations notified by this Commission.

Petition disposed off.

**Sd/-**  
**Adv. A.J. Wilson**  
**Member (Law)**

**Sd/-**  
**Preman Dinaraj**  
**Chairman**

Approved for issue

C R Satheeshchandran  
Secretary ( i/c)

**THDC- Technical and Financial parameters adopted for determining Tariff for 50 MW Solar PV project at Kasargod**

Sl No	Particulars			Remarks
1	Installed capacity	50	MW	As per the petition
2	Life of the plant	25	years	KSERC (RE) 2020
3	Plant load factor	23%		As per the petition
4	Degradation factor	0.70%		As per the petition
4	Auxiliary consumption	0.25%		KSERC (RE) 2020
5	Capital cost of the project	4.62	Rs .Cr/MW	CERC norms 2015 with escalation
6	Debt: Equity	70:30		KSERC (RE) 2020
7	Loan tenure	13	Years	KSERC (RE) 2020
8	Interest rate (MCLR rate+ 2%) (MCLR- last six months- 6.95%)	8.65	%	KSERC (RE) 2020
9	RoE (pre-tax)	14	%	KSERC (RE) 2020
11	Working capital			KSERC (RE) 2020
	(i) O&M cost for one month			
	(ii) Receivable equivalent to two month			
	(iii) Maintennace of spares @15% of the O&M expenses			
12	Interest on WC (MCLR+3%)	9.65	%	
13	O&M cost (first year)			Asper the petition
14	O&M cost (second year onwards)- 5.72% escalation on base year O&M	5.72%		
15	Depreciation	5.28%	for first 13years	KSERC (RE) 2020
		1.78%	For remaining 12 years	KSERC (RE) 2020
16	Discount rate = weighted average cost of capital	10.26	%	
17	Levelised tariff without the benefit of accelarated depreciation	3.42		
18	Accelarated depreciation	0.30		
19	Levelised tariff after accounting the benefit of accelarated depreciation	3.12		



