

KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

Present : Shri T K Jose, Chairman
Adv. A.J Wilson, Member
Shri B Pradeep, Member

OP 01/2021

In the matter of : Petition under Section 62,64 & 86 of the Electricity Act, 2003 read with provisions of KSERC (Renewable Energy & Net Metering) Regulations, 2020 for determining project specific tariff of 8MW Small Hydel Project Developed by M/s Anakampoil Power Pvt Ltd at Chaliyar Basin at Kozhikode District.

Petitioner : M/s Anakampoil Power Private Limited
Plot No. 304-L-III, 3rd Floor,
Road No. 78, Jubilee Hills,
Hyderabad-96.

Respondents

1. Kerala State Electricity Board Ltd.
Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram. 695004
2. Energy Management Center
Sreekaryam, Thiruvananthapuram.

Date of hearings :

First hearing on	17.06.2021
Second hearing on	08.09.2021
Third hearing on	20.10.2021
Fourth hearing on	09.02.2022
Fifth hearing on	24.01.2023

Venue : Court hall of the Commission (Hybrid hearing)

Order dated 23.11.2023

1. M/s Anakampoil Power Private Limited(hereinafter referred as M/s APPL or petitioner) filed a petition before the Commission on 01.01.2021 with the following prayers:

a. *Direct KSEBL to comply with the Order dated 20.07.2018 passed by this Hon'ble Commission in OP No. 2/2018;*

- b. *Pass an order determining levelled tariff of Rs. 5.31/kWh for the SHP of the Petitioner for supply of electricity to the Respondent No. 1;*
 - c. *Pass an Order for provisional tariff, for supply of electricity during the pendency of the present petition, subject to adjustment after determination of final tariff for the SHP of the Petitioner*
 - d. *Pass an order for reimbursement of the fees for tariff determination, by the Respondent No. 1 to the Petitioner; and*
 - e. *Pass such further order(s) which the Hon'ble Commission deems fit and just in facts of the present case.*
2. Summary of the petition filed by M/s Anakampoil Power Private Limited is given below:
- (1) M/s Anakampoil Power Private Limited is a company registered under Companies Act, 2013 and is a generating company under Section 2(28) of the Electricity Act, 2003. It has commissioned the Anakampoil SHP with installed capacity of 8 MW at Chaliar basin at Kozhikode, Kerala and achieved its commercial operation on 17th December 2020.
 - (2) The project was awarded to the petitioner by the State Government based on the selection process conducted by the Energy Management Center (EMC) on behalf of the State Government. GoK issued a Request for Proposal ('RfP') dated 30.07.2013 for development of 62 small hydro projects on BOOT basis for a period of 30 years from qualified bidders in the Request for Qualification bid. The Petitioner was successful bidder for one of the Projects, namely, the 6.75MW Anakampoil project.
 - (3) As per Clause 1.1.2 of the RfP, the Petitioner executed Implementation Agreement (IA) dated 16.01.2015 with Government of Kerala. GoK vide Order dated 25.03.2015, approved Techno Economic Feasibility Report and also enhanced the capacity from 6.75 MW to 8 MW, based on the request of the Petitioner.
 - (4) The petitioner paid a premium of Rs. 187.2 lakh; i.e., 23.4 lakh per MW for 8 MW to get the project instead of the threshold limit of Rs 15.00 lakh per MW specified in the bid.
 - (5) The estimated cost of the project was Rs 63.00 crore. The Petitioner completed the financial closure for the Project, with Rs 44.10 Cr as **term loan from PFC Green Energy Ltd ('PFC'), a wholly owned subsidiary of Power Finance Corporation Ltd.**
 - (6) The Petitioner filed a petition on 09.11.2017, Petition No. OP No. 02/2018, with prayer to
 - (a) *Direct the KSEBL to forthwith execute the PPA with the petitioner in terms of the RFP and the bidding documents.*
 - (b) *Direct KSEBL to construct and ensure completion of the evacuation facilities by April, 2018 to generate and supply electricity from the SHP without delay; and*

(c) Determine the generic tariff for the projects to be commissioned in the FY 2017-18 and 2018-19.

(7) The Commission vide the **Order dated 20.07.2018 decided OP No. 02/2018** and held as follows:

.....
(i) ***The respondent KSEB Ltd has confirmed their willingness to purchase power from the 8 MW SHP developed by the petitioner at the tariff and terms and conditions as decided by this Commission, the first prayer of the petitioner is answered in the affirmative.***

(ii) *Regarding the second prayer of the petitioner, the Commission hereby direct the petitioner and respondent that,*

(1) The petitioner has to construct the transmission facilities from generator switchyard upto the nearest substation of KSEB Ltd, either on its own or through KSEB Ltd as deposit work at the cost and responsibility of the developer. If the petitioner decides to construct the transmission facilities through KSEB Ltd as deposit work, the developer has to remit the cost of the evacuation facilities as specified under paragraph 17 (ix) above.

(2) The petitioner shall apply for connectivity for the generating stations with the grid of the KSEB Ltd as per the provisions of the KSERC (Connectivity and Open Access) Regulations, 2013 and KSEB Ltd shall grant connectivity as per the provisions of the said Regulations, and the petitioner shall also bear the cost for augmenting the distribution system of KSEB Ltd, if any, as per the Regulation 8 of the KSERC (Connectivity and Intra-State Open Access) Regulations, 2013.

(3) KSEB Ltd shall construct the substation and other evacuation facilities for the SHPs developing in the Chaliyar basin as per the time lines specified in the KSERC (Connectivity and Open Access) Regulations, 2013.

(4) In the event of any delay in completion of the evacuation system as per the open access regulations, KSEB Ltd shall be liable to pay penalty as per the provisions of the Electricity Act, 2003 and appropriate Regulations notified by the Commission.

(iii) The petitioner shall file proper application before the Commission with necessary and sufficient details with supporting documents for determination of the project specific tariff, after declaration of date of commercial operation.

(8) Thereafter, the Petitioner filed a Petition before the Commission, being OA No. 13/2018 with prayers to;

- (a) *Pass an order determining the project specific tariff for the SHP of the petitioner for supply of electricity by the petitioner to the respondent No. 1 from the SHP*
- (b) *Pass an order for reimbursement of the fees for tariff determination by the respondent No1 to the petitioner; and*
- (c) *Pass such further order(s) which the Hon'ble Commission deems fit and just in facts of the present case*

The Commission vide the Order dated 20.08.2018 in Petition OA No. 13/2018, ordered that the Commission *may determine the project specific tariff of the project once the project achieves CoD*. The Commission also ordered that, the petition fee amounting to Rs 1.70 lakh remitted will be adjusted against the petition fee of subsequent filing.

The present petition was filed in the above background.

3. Main issues raised in the petition dated 01.01.2021

- (1) **Dispute in the draft PPA.** The draft PPA between the petitioner and KSEB Ltd yet to be initialed. KSEB Ltd proposes certain modifications from the draft PPA notified along with the bidding documents RFS notified by the Energy Management Center. But the petitioner not willing to incorporate the changes proposed by KSEB Ltd from the draft PPA published along with the bidding documents.

According to KSEB Ltd, the draft PPA as per the tender document is only a reference document. The terms and conditions proposed by KSEBL is similar to the PPAs being approved by this Hon'ble Commission. Accordingly KSEBL stated that, it cannot follow a different format, and insisting to incorporate the changes proposed by it in the PPA to be signed.

- (2) **Connectivity and sharing of transmission charges**
The project was already commissioned with temporary evacuation facilities at the cost of the petitioner. The total cost incurred for the petitioner for the construction of the temporary evacuation facilities is Rs 4.408 crore.

During the proceedings in OP No. 02/2018, the petitioner pointed out that it has to bear only the cost of construction of evacuation for 7.5 km, 33 kV transmission line from the power house to the 33kV substation at Thambalamanna. The DPR submitted and TEFRR approval of the GoK was also based on the same.

However, subsequently a comprehensive scheme was planned by KSEB Ltd at 110kV level for evacuation of power from several SHEPs in the Eruvanjipuzha river basin with an aggregate capacity of 45.8 MW including Anakampoil SHP. The cost of the aforesaid scheme is Rs. 63.77 crore and pro-rata share of Anakampoil SHP is Rs.9.269 Crore. The petitioner vide the letter dated 13.05.2020 submitted an undertaking

on Kerala Stamp paper of Rs 200.00 stating that the petitioner shall share the pro-rata payment for the common evacuation upto point of connectivity after the adjustment of cost incurred in the construction of the temporary power evacuation system.

Hence the petitioner craves leave to approach the Commission once the permanent evacuation network is made available by KSEBL, with the final cost.

(3) Capital cost

The capital cost claimed by the petitioner and the same as per the TEFR and PFC for sanctioning the loan is given in the table below.

Table-1. Capital cost claimed as on date of CoD

Sl No	Particulars	As per Techno Economic Feasibility Report	PFC Appraised	Actuals claimed vide the Original petition
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)
A	Preliminary & Pre-operative Expense	55.18	4.06	5.87
B	Land, R&R & Site Development		3.30	3.70
C	Engineering and Consultancy		0.26	0.21
D	Civil Works		26.79	31.41
E	EPC/Plants & Machinery		19.11	19.90
F	Evacuation Facility		1.65	4.85
	Subtotal	55.18	55.17	65.94
G	Contingencies	1.38	1.38	0.00
H	Working Capital Margin	0.50	0.50	0.50
	<u>Project Cost without IDC</u>	57.06	57.05	66.44
I	Interest During Construction (IDC)	3.00	5.85	10.65
	Total project cost	60.06	62.90	77.09
	Cost/MW (Rs. Cr/MW)	7.51	7.86	9.64

The petitioner submitted the following reasons for the increase in capital cost.

- (i) Delay in implementation resulting in increase of preliminary and pre-operating expenses by Rs 181.00 lakh and IDC by Rs 480.00 lakh.
 - The delay was due to delay in getting forest clearance,
 - Unprecedented flood at the site in the years 2018 and 2019.
 - Lockdown imposed on account of Covid-19 pandemic.
- (ii) Additional civil works – Rs 460 lakh.
- (iii) Increase in cost of evacuation facilities. - Rs 320 lakh.

(4) Capacity Utilisation Factor (CUF).

As per the approved DPR, the design energy arrived for the 75% dependable year as 27.67MU. Further, if the summer generation from

February to May is excluded, the Design energy may be reduced to 23.07MU, and the annual average CUF worked out at 38.62%.

However, the petitioner has claimed the annual design energy at 23.76MU and CUF at 33.91% (excluding the summer generation from Feb to May). The reason for the reduction in design energy submitted by the petitioner is summarized below.

- (i) As per the guidelines of CEA and CBIP, the annual energy should be calculated without overload. (NB, However, on perusal of the guidelines of CEA, there is no rules as claimed by the petitioner).
- (ii) Head loss. As per the DPR, the head loss was 8.61m, however based on the executed parameters of the water conductor system, the actual head loss worked out to be 9.38m.
- (iii) The actual combined efficiency is lower than the value considered in the approved DPR.
- (iv) As per the forest clearance, the power generation from the project is limited to the period between June to January.

(5) Tariff.

The petitioner determined the tariff for the electricity generated from the project @Rs 5.31 /unit, based on the following assumptions.

- Debt:Equity ratio . 70:30
- Loan repayment period- 13 years
- Interest on loan- 9.30%
- Interest on WC- 10%
- RoE- 14%
- Corporate tax- MAT @25%, education and health cess-4%, surcharge-7%,
- O&M expenses- Rs 24.81 lakh/MW for 2020-21 with 5.72% escalation for subsequent years.
- Depreciation -5.28%.
- Accelerated depreciation benefit- The petitioner not intended to avail accelerated depreciation benefit.

4. KSEBL submitted its comments on the petition on 16.06.2021, and its summary is given below.

- (1) The petitioner not willing to agree to the modifications in the PPA suggested by KSEBL which is in line with the recent PPAs approved by the Commission.
- (2) The evacuation plan for SHEPs on Eruvanjipuzha river basin was proposed in 2017 by constructing 2 x50MVA 110/33kV substation at Nellipoyil and 110kV UG cable from Nellipoyil substation to Thambalamanna extending over a distance of 11kM at the total cost of Rs 63.77 crore. However, the beneficiaries are not willing to bear the their proportionate cost, hence the administrative sanction for the proposal was not issued by KSEB Ltd.

Hence, a temporary evacuation scheme was approved for evacuating the power from Pathamkayam SHEP (8MW) and Anakampoil SHEP with a total estimate of Rs 4.41 crore.

- (3) **Tariff.**
The Commission vide the Order dated 20.07.2018 in petition OP No. 02/2017 has decided that project specific tariff shall be determined for the project once the project is commissioned and CoD is achieved. The Commission has directed the petitioner to file appropriate petition for the determination of project specific tariff with all relevant details.
- (4) **Capital cost.**
The normative capital cost as per the RE Regulations, 2020 is Rs 7.07 crore/MW for SHP having installed capacity 5MW to 25MW. The same may be adopted for the determination of tariff. However, the petitioner has claimed a higher capital cost than the ceiling capital cost approved by the Commission.

KSEBL further submitted that, the petitioner is eligible to get a grant of Rs 3.5 crore per MW subject to a maximum of Rs 20.00 crore from MNRE for implementation of the project. However the petitioner could not avail the same.
- (5) **CUF.**
As per the DPR, the annual load factor of the 8MW plant at 100% machine availability is 41.01% and the same at 95% machine availability is 39.48%. However in the petition, the petitioner has adopted the CUF of 33.91% only, on the reason that the combined efficiency of the turbine and generators provided by the manufacturer is lower than the same approved in the DPR.
- (6) **Return on Equity.**
KSEBL requested that, the RoE may be allowed at the base rate of 14% in line with the KSERC (Renewable Energy and Net metering) Regulations, 2020, and tax, if any, paid by the company can be reimbursed on production of proof of payment.
- (7) **KSEBL further submitted that, the tariff claimed by the petitioner for the project is on the higher side.**
- (8) **Reimbursement of fees for tariff determination.**
There is no provision in the Regulations for reimbursement of fee for tariff determination, hence the claim of the petitioner for the same may be disallowed.

5. **First Hearing on the petition was conducted through video conference on 17.06.2021. The Commission adjourned the hearing on the request of the petitioner.**

6. In the mean time, the petitioner on 27.07.2021 submitted the rejoinder to the counter affidavit of KSEBL. The summary of the counter affidavit submitted by the petitioner is given below.

- (1) The Commission may direct KSEBL to accept changes/ modifications as proposed by the petitioner, to the draft PPA shared by KSEBL, to enable the parties to initial and to submit before the Commission for approval.
- (2) CoD of the project.
The project was synchronised with the grid on 17.12.2020. Subsequently, upon successfully charging the evacuation arrangement on 19.06.2021, was resynchronised to the grid on 25.06.2021. KSEBL vide its office order dated 08.07.2021 has constituted a coordination committee to witness performance test and to take necessary action to declare CoD for the project. After completing all the procedures, KSEBL vide its letter dated 15.07.2021 has recommended to declare the CoD of the project effective from 14.07.2021. Accordingly, the CoD of the project was declared on 14.07.2021.
- (3) Capital cost
The petitioner vide the rejoinder dated 27.07.2021 has proposed to revise the claim on capital cost of the project from Rs 77.09 crore to Rs 80.84 crore. The details are given below.

Table-2.
Revised claim on capital cost of the project

Sl No	Particulars	As per Techno Economic Feasibility Report	PFC Appraised	Actuals claimed vide the Original petition	Revised claim vide the rejoinder dated 27.07.2021	Addl cost claimed vide the rejoinder dated 27.07.2021
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs.Cr)	(Rs.Cr)
A	Preliminary & Pre-operative Expense	55.18	4.06	5.87	6.20	0.33
B	Land, R&R & Site Development		3.30	3.70	3.70	0.00
C	Engineering and Consultancy		0.26	0.21	0.21	0.00
D	Civil Works		26.79	31.41	31.41	0.00
E	EPC/Plants & Machinery		19.11	19.90	19.90	0.00
F	Evacuation Facility		1.65	4.85	5.78	0.93
	Subtotal	55.18	55.17	65.94	67.20	1.26
G	Contingencies	1.38	1.38	0.00	0.00	0.00
H	Working Capital Margin	0.50	0.50	0.50	0.50	0.00
	<u>Project Cost without IDC</u>	57.06	57.05	66.44	67.70	1.26
I	Interest During Construction (IDC)	3.00	5.85	10.65	13.14	2.49
	Total project cost	60.06	62.90	77.09	80.84	3.75
	Cost/MW (Rs. Cr/MW)	7.51	7.86	9.64	10.11	0.47

As above, the petitioner has claimed an additional cost of Rs 3.75 crore in the rejoinder, over the same claimed in the original petition.

According to the petitioner, the excess claim of Rs 3.75 crore is under the following heads.

- (i) Preoperative expenditure of Rs 0.33 crore, incurred towards salaries, administrative expenses during the extended implementation period.
- (ii) Rs 0.93 crore was incurred/ to be incurred on and above the approved evacuation cost of Rs 4.40 crore.

The petitioner claimed that, the increase is on account of the change in the scope of works during execution of the project. Out of this, Rs 0.76 crore has already incurred and the balance Rs 0.17 crore will be incurred during the next lean season.

- (iii) Rs 2.49 crore towards increase in the interest during construction.

- (4) Revised tariff.

Based on the claim of additional capital cost, the petitioner has revised the levelized tariff of the power generated from the 8MW Anankampoil SHP from Rs 5.31/unit to Rs 5.58/unit, i.e., an increase of Rs 0.27/unit.

- (5) The petitioner further submitted that, as per the CERC (Terms and Conditions for Tariff determination for Renewable Energy Sources) Regulations, 2020, the normative capital cost of SHP having capacity between 5MW to 25MW is Rs 9.00 crore per MW. Hence the petitioner requested that, in the event the Commission may approve the capital cost based on normative basis, the Commission may kindly approve the normative capital cost of Rs 9.00 crore/MW as approved by CERC. The provisions of the KSERC (Renewable Energy & Net metering) Regulations, 2020 also permits the same.

- (6) The petitioner further submitted that, the increase in capital cost is due to the delay in commissioning of the project. The delay was mainly attributed due to the following;

- (i) Delay in getting forest clearance.
- (ii) Delay due to floods in 2018 and 2019, and,
- (iii) Delay due to lockdown in 2020 and 2021.

- (7) The petitioner has denied the contention of the KSEBL that, it had not claimed the subsidy available from MNRE.

The petitioner further submitted that, MNRE vide its notification dated 02.07.2014 had issued guidelines has offered CFA/subsidy for SHPs upto 25MW upto the end of the 12th plan, i.e., upto 31.03.2017. The

extension of subsidy scheme is not yet done. The petitioner vide its letter dated 31.01.2018 submitted the application to avail subsidy under aforesaid program. MNRE vide its letter dated 13.06.2018 informed that the Ministry is in the process of revising the subsidy scheme of SHPs and the petitioners project would be taken up for consideration once the new guidelines are issued. The petitioner sofar has not availed any subsidy for funding the cost of the project. Hence the petitioner requested to determine the tariff without considering any such Government subsidy.

(8) Capacity Utilisation Factor.

The petitioner submitted that, it had provided all necessary documents for claiming the lower CUF than the same as per the DPR. They further submitted that, the Energy Management Center (EMC) has recommended to approve the revised CUF/PLF of 33.91% for Anakampoil SHP.

(9) The petitioner submitted that, it had not considered any tax in tariff calculation as per the KSERC (Renewable Energy and Net Metering) Regulations, 2020.

7. The petitioner filed additional affidavit on 02.09.2021 to place on record the subsequent developments, which are (i) declaration of CoD as 14.07.2021, (ii) to submit copy of draft PPA and (iii) audited accounts.

8. The Second Hearing on the petition was held on 08.09.2021 through video conference. Smt. Sikha Ohri, Counsel presented the matter on behalf of the Petitioner, Smt. Latha S.V, Assistant Executive Engineer, presented the matter on behalf of the Respondent KSEB Ltd. Since the petitioner failed to forward a copy of the rejoinder to KSEBL, the Commission adjourned the matter as requested by KSEBL. Commission directed M/s Anakampoil to serve a copy of rejoinder and additional affidavit to KSEB Ltd as agreed by the Counsel. KSEB Ltd was directed to submit the reply on or before 27th September, with copy to the petitioner. KSEBL yet to submit a reply.

9. The third hearing of the petition was conducted through video conference on 20.10.2021. The deliberations during the hearing are summarized below.

(i) Smt. Sikha Ohri, appeared before the Commission on behalf of the petitioner and Smt. Latha S.V, AEE, appeared on behalf of KSEB Ltd. KSEB Ltd, at the beginning of the hearing submitted that, few of the officers of the Commercial & Tariff wing of KSEB Ltd are affected by Covid 19 Pandemic, and their office is not fully functional now. Hence KSEB Ltd request before the Commission to adjourn the hearing by two weeks.

(ii) The representative of the petitioner also submitted that, the hearing may be adjourned as requested by KSEB Ltd due to the spread of the Covid-19 Pandemic among its officers. However, the petitioner raised the issue that, though the petitioner is supplying power to KSEB Ltd since 17.12.2020, KSEB Ltd yet to release any payment to the petitioner for

the energy supplied to KSEB Ltd. The financials of the petitioner is badly affected even the day to day functions besides the loan repayment obligations etc. Hence the petitioner request before the Commission to grant an interim tariff so that KSEB Ltd can arrange the payment.

- (iii) KSEB Ltd clarified that, the respondent has no objection in granting an interim tariff for the electricity generated and supplied to KSEB Ltd.

Based on the deliberations, the Commission issued Interim Order dated 25.10.2021 and ordered the following.

- (1) *Approve an interim tariff for the electricity generated and supplied to KSEB Ltd from the 8MW Anakampoil SHP @ Rs 4.00/unit, w.e.f 17.12.2020 and KSEB Ltd shall make provisional payments for the electricity generated and supplied to KSEB Ltd from the date of synchronisation of the project at this rate.*
- (2) *Once the Commission approves the project specific tariff for the 8MW Anakampoil SHP, the provisional payments made, shall be adjusted to the project specific tariff, and the excess payment/ shortfall in payment, if any shall be adjusted in the future bills, without any claim on the belated payments by both the parties.*
- (3) *The next date of hearing will be informed subsequently.*

10. KSEB Ltd vide the rejoinder dated 29.11.2021 has submitted the following.

- (i) The delay in execution of the work is entirely attributable to the petitioner, as the entire work was executed by the petitioner themselves. KSEBL further submitted that, as per the Clause 6.6 of the Implementation Agreement with the State Government, provide as follows;

“ 6.6 Liability for other losses, damages etc.

Save and except as expressly provided in the Article 13, no party hereto shall be liable in any manner whatsoever to the other party in respect of any loss, damage, cost, expense, claims, demand and proceedings relating to or arising out of concurrence or existence of any Force Majeure Event”.

As per the above provisions of the Implementation Agreement, KSEBL shall not be liable in any manner whatsoever to the petitioner in respect of any loss, damage, cost, expense, claims, demand and proceedings relating to or arising out of concurrence or existence of any Force Majeure Event. Liability for losses and damages shall be recovered through insurance claims.

- (ii) The IDC of the project was increased from Rs 3.00 crore in the DPR to Rs 13.14 crore. The petitioner has claimed that the increase in IDC is due to the delay in commissioning of the project. KSEBL submitted that, the delay in execution of the project is purely attributable to the petitioner and hence the same may be rejected.

- (iii) KSEBL further submitted that, as per Clause 32(2) of the KSERC (Renewable Energy & Net metering) Regulations, 2020, the norms and parameters specified in the Regulation shall be ceiling norms and shall not prevent the generator and the distribution licensee from mutually agreeing for more economic norms than that specified in these Regulations.

Therefore, KSEBL requested that, it is willing to enter into agreement with the Anakampoil power developer subject to the condition that, the petitioner limit their claim for capital expenditure in accordance to the ceiling limit specified by the KSERC reduced by MNRE grants as per Government of India notification dated 2nd July 2014.

11. The petitioner on 20.01.2022 has submitted the rejoinder against the KSEBL rejoinder dated 29.11.2021 and its summary is given below.

- (i) The Commission vide its Order dated 20.07.2018 in petition OP No. 02/2018, orders that,
“The respondent KSEBL has confirmed their willingness to purchase power from the 8MW SHP developed by the petitioner at the tariff and terms and conditions as decided by the Commission, the first prayer of the petitioner is answered in the affirmative.”

Therefore, the principle of res judicata is squarely applicable to the present case and KSEBL cannot be permitted to now contend that it is not intending to enter into agreement with M/s Anakampoil Power developers unless the tariff and other terms and conditions mutually agreeable.

- (ii) The petitioner also contended argument of the KSEBL that, it is not a party in the tender process initiated by Government of Kerala. The State Government vide the Order GO (Rt) No. 167/03/PD dated 29.04.2013 for evaluation/ monitoring of the RFQ of SHP allotted to IPPs/CPPs, with the following officers as members:
(1) Principal Secretary, Power
(2) Secretary- Finance (Expenditure)
(3) Additional Secretary- Law
(4) Chairman, KSEB
(5) Director, EMC.

KSEBL as the PSU under the GoK, had active participation right from the culmination of the tender process for allotment of the SHP till according TEFRA approval. Therefore, KSEBL cannot now alienate itself from the tender process and subsequent developments thereof.

- (iii) CERC vide the notification dated 23.06.2020 has notified the CERC (Terms and Conditions for Tariff determination for Renewable Energy Sources) Regulations, 2020 (herein after referred to as CERC Regulations, 2020). This Regulation has come into force on 01.07.2020 and these Regulations are applicable for the period upto 31.03.2024.

As per the Regulation 27 of the CERC Regulations 2020, the normative capital cost of SHPs having installed capacity in the range of 5 MW to 25MW, upto the interconnection point is Rs 9.00 crore per MW. In addition to the above, the additional cost incurred for setting up of the evacuation system has also to be considered for determination of tariff.

The petitioner further submitted that, the capital cost for setting up of SHPs is site specific; hence comparison of cost per MW of two hydro projects is not possible as both projects have different topography, geological condition, head and discharge.

The project cost of Anakampoil SHP is reasonable with respect to benchmark set by CERC.

12. Fourth hearing on the petition was held on 09.02.2022 through video conference. Smt. Sikha Ohri and Sri.Tanmay Das, appeared on behalf of the petitioner. Sri. P. Murali, DY CE, Commercial, Smt. Latha S.V, AEE, appeared on behalf of the Respondent KSEB Ltd. Summary of the deliberations during the hearing is given below.

(1) The Commission at the outset clarified that the tariff determination of a generating plant for supplying electricity to a distribution licensee as per Section 62 read along with Section 86(1)(a) of the EA-2003, and the approval of the PPA as per Section 86(1)(b) of the EA-2003 for purchase of power by a distribution licensee are two distinct and separate issues. Hence, the Commission clarified that, at first the Commission may determine the tariff for the electricity generated from the project as per the provisions of EA-2003 and KSERC (Renewable Energy and Net Metering) Regulations 2020. Once the Commission determined the tariff the parties may submit the mutually agreed initialed PPA duly incorporating tariff and other terms and conditions before the Commission for approval. The Commission shall deal the approval of the PPA separately.

(2) Capital Cost

KSEB Ltd submitted that the capital cost claimed for the project is much higher than the capital cost approved in the DPR approved by the State Government. The capital cost was also much higher than the capital Cost approved by the Power Finance Corporation for sanctioning loan for the project. The increase in capital cost resulted in increase in claim for the tariff of the power generated from the project. KSEB Ltd may purchase power from the project only if the electricity tariff approved by the Commission is viable for KSEB Ltd.

The petitioner submitted that the increase in capital cost was mainly due to delay in commissioning due to natural calamities – such as flood

happened in the year 2018 & 2019. There was also delay in getting forest clearance of the project.

The petitioner further submitted that during the construction, they provided additional flood protection works as recommended by the Energy Management Centre (EMC), which was not in the original scope of work, The petitioner also submitted that the evacuation cost claimed is as per the Order of the Commission dated 20.07.2018 in OP No. 02/2018.

The Commission also clarified during the hearing that it shall examine in detail the capital cost claimed by the petitioner along with the tax invoices and other details. Further the petitioner shall produce all the Orders issued by the State Government, who is the sanctioning authority for the project for claiming additional capital cost incurred, and which was not in original scope of work in TEFRR and DPR approved by the Government.

(3) MNRE subsidy

KSEB Ltd submitted that a subsidy of ₹ 1.5 Cr/ MW is available for Small Hydro Projects. However, the petitioner has not availed the same and claimed the tariff without availing the subsidy.

The petitioner further submitted that, they had applied for MNRE subsidy before the financial closure. However, MNRE subsidy scheme for SHEPs are available only up to 30.09.2017. Further, MNRE vide letter dated 30.12.2021 communicated to the petitioner that at present there is no scheme for financial support available to SHEPs. The Commission directed the petitioner and respondent to produce the documentary evidence for the MNRE subsidy available if any, for SHEPs implemented during the period of the project of the petitioner.

(4) Capacity Utilisation Factor (CUF)

KSEB Ltd submitted that, the CUF as per the DPR was 41%, but in the present petition they claimed a reduced CUF of 33.91% for the project. KSEB Ltd further submitted that, due to reduction in CUF the tariff claimed for the project is much higher than that originally claimed. KSEB Ltd further submitted that the project sanctioning authority the State Government had not approved the reduced CUF or the empowered Techno Economic Committee constituted by the State Government had also not recommended the reduction in CUF as claimed by the petitioner. Hence KSEB Ltd requested before the Commission to not to consider the reduction in CUF as claimed by the petitioner for tariff determination.

The petitioner submitted that the reduction in CUF, was as approved by the committee of EMC. This is mainly due to the head loss and changes in the project parameters including water conductor system.

The Commission clarified during the hearing that any changes in the project parameters shall be got approved by the project sanctioning authority the State Government. The Commission further directed the petitioner and the respondent to submit the documentary evidence in support of their claims.

- (5) The petitioner during the hearing submitted that the KSEB Ltd already communicated affirmatively their willingness to purchase power from the project at the tariff and terms and conditions approved by this Commission. The Commission in the Order dated 20.07.2018 in OP No. 02/2018 also recorded the willingness of KSEB Ltd to purchase power from the project. The petitioner invested and commissioned the project including the evacuation system on the assurance given by KSEB Ltd to purchase of power from the project at the tariff approved by the Commission. Further this project is initiated and awarded by the State Government only. Hence the petitioner argued that the respondent KSEB Ltd cannot change its stand now.

The Commission directed the Respondent to communicate the decision of the management of KSEB Ltd in consultation with State Government regarding their willingness to purchase of power from the project or not.

Based on the deliberations during the fourth hearing, the Commission has directed the petitioner M/s Anakampoil Power Private Limited and Respondent KSEB Ltd to submit a detailed argument notes on the issues raised in the paragraph 4 above, with a copy to either side, latest by 17.03.2022.

Written arguments submitted by the petitioner M/s Anakampoil Power Private Ltd

13. In compliance of the directions of the Commission, M/s Anakampoil Power Private Limited (M/s APPL) vide its written submission dated 02.03.2022 submitted the following;

(1) **Project cost**

M/s APPL claimed a capital cost of Rs 10.10 Cr/MW (9.38 Cr/MW excluding evacuation cost beyond the interconnection point).

As per the Kerala State Electricity Regulatory Commission (Renewable Energy and Net Metering) Regulations, 2020, the normative capital cost ceiling for small hydro projects having capacity above 5 MW is Rs. 707 Lakh/MW. The Commission had fixed the normative capital cost based on the CERC (Terms and Conditions for Tariff determination for Renewable Energy Sources) Regulation, 2017.

The CERC RE Regulation, 2017 was repealed and replaced by the CERC (Terms and Conditions for Tariff determination for Renewable Energy Sources) Regulation, 2020 (hereinafter referred to as the 'CERC RE Regulation, 2020'). The Regulation 27 of the CERC RE Regulation

2020 specifies the normative capital cost of small hydel projects, which is extracted below.

"27. Capital Cost

(1) *The normative capital cost for small hydro projects during first year of Control Period i.e. financial year 2020-21 shall be as follows:*

Region	Project site	Capital Cost (Rs. lakh/ MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	1100
	5 MW to 25 MW	1100
Other States	Below 5 MW	780
	5 MW to 25 MW	900

(2) *The capital cost for small hydro projects as specified for first year of the Control Period shall remain valid for the entire duration of the Control Period unless reviewed earlier by the Commission.*

M/s APPL further submitted that, there are no material direct losses and damages on account of the floods in 2018 and 2019. However, the Energy Management Centre, vide letter dated 11.10.2018 had suggested additional protection works to protect the project from future flood damages .

Cost of power evacuation

M/s APPL further submitted that the cost incurred for setting up of evacuation system amounts to ₹578 Lakhs, the same also ought to be allowed through tariff. In terms of the Order dated 20.07.2018 in petition OP No. 02/2018, the cost of setting up of evacuation system also allowed through pass through in tariff.

M/s APPL further submitted that, comparing with the capital cost of SHPs implemented by KSEB Ltd and other agencies, the capital cost of Rs. 80.84 crore of the Anakkampoil SHP is reasonable.

(2) **Eligibility of the Project for CFA /financial support in the form of grants/assistance/subsidy extended by MNRE**

The Ministry of New and Renewable Energy (MNRE) vide notification dated 02.07.2014 issued guidelines for implementation of Small Hydro Power (SHP) programme (up to 25 MW capacity) during the year 2014-15 & remaining period of 12th Plan i.e., up to 31.03.2017 (extended up to 30.09.2017) with Central Financial Assistance/financial support in the form of grants/assistance/subsidy. Any further extension of the subsidy scheme has not taken place.

The petitioner could acquire the Forest Clearance for the Project only on 07th May 2018, although, M/s APPL had applied for the same on 11.10.2014. In the meantime, MNRE subsidy scheme had expired. The petitioner vide its letter dated 31.01.2018, submitted the application for availing the subsidy.

MNRE vide letter dated 13.06.2018 informed that the Ministry is in the process of revising the present Small Hydro Power Scheme and the Petitioner's project would be taken up for consideration once new guidelines are issued. However, MNRE vide letter dated 30.12.2021, informed that Anakampoil SHP is not eligible for capital subsidy under aforementioned scheme. Therefore, M/s APPL has not availed any subsidy for funding the cost of the Project.

(3) **Capacity Utilization Factor**

M/s APPL submitted that the authority for approval of the CUF lies with Technical Committee constituted by G.O (Rt) No. 240/2013/PD dated 23/08/2013. The Technical Committee is constituted in terms of the provisions of the Implementation Agreement dated 16.01.2015.

M/s APPL further submitted that the Energy Management Centre vide letter dated 30.04.2021 informed the revised CUF/PLF of 33.91% for the Project against the original CUF/PLF of 39.48%, based on the letter from Technical Committee dated. 05.02.2021. Therefore the petitioner considered the revised CUF of 33.91% for arriving the tariff of the project.

(4) **On the issue of PPA**

M/s APPL submitted that the issue related to the PPA is already settled by the Commission in OP 02/2018 and wherein KSEB Ltd had affirmatively confirmed their willingness to purchase power from the project at the tariff and terms and conditions as decided by the Commission.

(5) **Tariff**

The petitioner denied the argument of the KSEB Ltd that the claimed tariff of Rs 5.58/unit is on the higher side. The CERC by its Petition No. 2/SM/2021 (Suo-Moto), dated 31.03.2021 determined the generic tariff of Rs. 5.68/ unit for small hydro projects having capacity of more 5 MW. Further this Commission, vide the KSERC RE Regulations, 2020, has determined the generic tariff of Rs. 5.91/ unit for small hydro projects having installed capacity of and below 5 MW.

Hence the tariff of the Anakampoil SHP is lower than the aforementioned tariff.

Written arguments submitted by the respondent KSEBL

14. In compliance of the directions of the Commission, M/s KSEB Ltd vide submission dated 10.03.2022 submitted the written arguments before the Commission. The summary of the arguments submitted is given below;

State Government Policies on power Procurement from Renewables

- (1) As per the Clause 12 of the Small Hydro Policy issued by Government of Kerala in the year 2012, KSEB Ltd shall have the first right of purchase of power generated by the IPPs and surplus power from CPPs at a tariff and other terms and conditions set forth by the KSERC. If KSEB Ltd is not intending to purchase the power, KSERC will permit non-discriminatory open access for sale of power outside the State as per the regulations notified by KSERC.

Further, in the meeting held by Hon'ble Chief Minister on 01.07.2017, it was decided that in future, the power from RE sources developed by private IPPs within the State shall be procured only through annual bids.

Tariff Policy 2016 issued by MoP

- (2) As per the Tariff Policy notified by Ministry of Power on 28.01.2016, only a maximum of 35% of the installed capacity can be procured by the Distribution Licensee at the regulated tariff under Section 62 of the EA-2003.

Even though the policies do not stipulate mandatory purchase of entire power from the project, KSEBL intimated its willingness to purchase power from the 8MW SHEP at the terms and conditions as decided by KSERC on 23.03.2019.

However, subsequent action of the developer insisting KSEBL to agree upon certain PPA conditions and the cost escalation forced KSEBL to have a relook into the decision of entering into the PPA with the petitioner as agreed earlier.

Capital cost of the project

- (3) The petitioner has claimed an exorbitant increase in capital cost compared to the capital cost envisaged during the inception period. The revised project cost is 147% higher than the DPR cost.

The project was allotted to developer on 21.07.2014 and IA executed on 16th Jan 2015. The MNRE approval for financial support for setting up new SHEP was issued on 2nd July 2014 and available up to 31st March 2017 and further extended upto 3.09.2017.

As per the MNRE subsidy scheme, the CFA available is Rs 1.5 crore/MW. However, as per the details submitted, the petitioner approached the MNRE only on 30.01.2018, where as the implementation agreement with the GoK was signed in the year 2015.

- (4) As per the DPR, the project cost is Rs 54.94 crore (Rs 6.86 cr/MW) and the project cost including the cost of 10kM 33kV transmission line is Rs 60.05 crore. However, the actual cost claimed as on CoD is Rs 80.84 crore (Rs 10.105 Cr/MW), which is 147% higher than the DPR cost.

The petitioner claimed that, the increase in capital cost is mainly due to the delay in commissioning due to natural calamities such as flood happened in the year 2018 and 2019.

As per the provisions of the Implementation Agreement and PPA, KSEBL shall not liable in any manner in respect of loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of any Force Majeure event. Flood is a force majeure event.

Preliminary & Pre-operative expenses

- (5) The preliminary & pre-operative expenses of Rs 620 lakh against Rs 587 lakh originally claimed, i.e., an additional amount of Rs 33.00 lakh.

Delay in getting forest clearance.

- (6) As per the RFP of the bidding documents, the additional cost incurred due to delay in getting forest clearance is entirely attributable to petitioner.

Interest during Construction

- (7) As the delay in commissioning of the project is entirely attributable to the petitioner, they are not entitled to claim IDC for the delay.

Evacuation facility

- (8) The petitioner has claimed an additional cost of Rs 93 lakh on and above the approved evacuation cost citing change in scope of work. KSEB Ltd submitted that they had approved an estimate of Rs 4.41 Cr for temporary evacuation after remitting the supervision charge of Rs 44.08lakhs.

Even though 8km of 33 kV double circuit line was sanctioned, actual execution was only for Rs **6.9km**. Additional work, if any, carried out by the petitioner may also come in the sanctioned amount of Rs 4.41Cr. The petitioner had not intimated KSEBL about the revised amount and also not remitted supervision charges for the same.

Hence KSEBL requested that, increase in cost for evacuation over and above the sanctioned amount of Rs 4.41 crore may be disallowed.

Financial Viability of purchasing power from run of river projects.

- (9) KSEBL submitted that the SHEP is run off river project, the output of which is highly dependable on natural run off. During monsoon season KSEBL is already facing issues of surplus energy, hence buying extra electricity at higher price will create huge financial burden to consumers.

Moreover, in present scenario, the renewable power are becoming cheaper and cheaper. KSEB Ltd is intending to purchase solar power @Rs 2.44/unit and wind energy @Rs 2.82/unit.

Moreover, as per the MoP, Tariff Policy dated 28.01.2016, KSEB Ltd is obliged to purchase a maximum of 35% of the installed capacity of Anakampoil 8MW SHEP at the regulated tariff.

Capacity Utilisation Factor (CUF)

- (10) The CUF as per the DPR was 41% but M/s APPL had claimed a reduced CUF of 33.91% for fixing tariff for the project. Hence, the tariff claimed for the project is much higher than that originally claimed. It was submitted that neither the project sanctioning authority, the State Govt nor the empowered Techno Economic Committee has recommended the reduction in CUF as claimed by the petitioner for tariff determination.

The turbine & generator efficiency as per DPR is 94%&96.5% whereas actual efficiency is only 92.5% and 96.2%. There is every chance of installing low efficiency machines to save the cost of the project.

The loss of head in the DPR is determined based on the design discharge with all machines working at 100% load. As per the DPR, the design discharge of 8.24 m³/sec is available for 78 days with a maximum velocity of 4.218 m/sec and discharge of 3.278 m³/sec is available for 123 days. When the discharge is reduced to 3.278 m³/sec, the velocity also get reduced to 1.630 m/sec. Since the loss of head is proportional to square of the velocity, the resulting loss will get reduced to 15% of the maximum loss estimated.

Any wrong selection of hydro mechanical equipment and poor workmanship during the erection of penstock and design of bends will result in higher loss.

The CUF adopted by the petitioner is not approved by the project sanctioning authority and the Technical committee constituted by the State Government vide the Order G.O (Rt) No. 240/PD dated 23.08.2013.

Considering the above, KSEBL has requested to consider the CUF as per the DPR for the determination of tariff.

15. The fifth hearing on the petition was held on 24.01.2023 through video conference. Smt. Sikha Ohri, the counsel for the petitioner and Sri. Tanmay Das, Promoter of Company, presented the matter on behalf of the petitioner before the Commission. Shri M.P. Rajan, Dy Chief Engineer, Shri. Ajithkumar, Executive Engineer and Shri Shine Raj, AE, presented the counter argument on behalf of the Respondent KSEB Ltd. The summary of the deliberations during the hearing is given below.

- (1) At the outset, the Commission instructed the parties that, this is the fifth hearing on the subject petition. All the documents, clarifications, additional submissions, argument notes submitted by the petitioner and respondent are placed on record before the Commission. Hence, the

additional clarifications/documents if any, only need to be presented in detail during the proceedings of the present hearing.

- (2) The petitioner briefly explained the background and earlier decision of the Commission regarding the determination of project specific tariff for 8MW Anakampoil project of the petitioner.

The petitioner, submitted that all the supporting documents for claiming the actual cost of completion of the project has been submitted before the Commission. The Commission may approve the capital cost after prudence check. The petitioner, further submitted their comments on the argument of the respondent KSEB Ltd, that the capital cost shall be limited to the ceiling capital cost specified in the KSEB (Renewable Energy and Net Metering) Regulations, 2020 (hereinafter referred as RE Regulations, 2020). In this regard, the petitioner submitted that the, Commission has specified the technical, financial parameters and norms for SHPs in the RE Regulations, 2020 based on the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2017. However, the CERC vide notification dated 23.06.2020 has notified the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020. In the said regulation, CERC has revised the technical, financial parameters and norms for SHPs including its Capital Cost. Hence, the petitioner requested to adopt the Capital Cost as per the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020.

The petitioner, further submitted that the Technical Committee constituted by the EMC has revised the CUF of the project and the petitioner has adopted the CUF as recommended by the Technical Committee, for tariff determination.

The petitioner claimed that there was delay from the side of KSEB Ltd to complete the power evacuation scheme. It was further submitted that the actual cost incurred for constructing the power evacuation was only claimed for tariff determination.

- (3) KSEB Ltd submitted that the tariff claimed by the petitioner @₹5.58/unit is on higher side and much higher than the tariff of the existing SHPs established through IPP route in the State.

KSEB Ltd further submitted that the length of the transmission line for power evacuation was much less than the scheme approved by KSEB Ltd. Hence, the actual evacuation cost may be less than the cost claimed by the petitioner. KSEB Ltd also pointed out that there is duplication of work in the evacuation scheme proposed by the petitioner and implemented without the approval of SBU-T of KSEB Ltd.

KSEB Ltd also submitted that the Generator and Turbine efficiency claimed by the petitioner is much less than the same as per the DPR. It

was also pointed out that the Generator and Turbine efficiency claimed is much less than that of the recently commissioned SHPs of KSEB Ltd.

KSEB Ltd also presented the actual month wise generation from Anakampoil SHP for the last one year. It was submitted that the actual PLF is about 40% instead of the 33.91% claimed by the petitioner.

- (4) The Commission directed KSEB Ltd to submit the additional points raised in the present hearing through an affidavit, within one week from the date of this hearing, with a copy to the petitioner. The Commission also instructed the petitioner to submit their rejoinder to KSEB Ltd's submission within one week after receipt of the additional submission from KSEB Ltd.

The Commission also directed the petitioner and respondent to submit their considered views in following the entire norms specified under KSEB RE Regulations, 2020 or CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020 for determining the project specific tariff of the 8MW Anakampoil SHP.

16. KSEBL vide the submission dated 31.01.2023 has submitted the following;

- (1) The tariff as per the original petition was Rs 5.31/unit, however vide the rejoinder dated 27.07.2021, the petitioner revised the claim @Rs 5.58/unit. The tariff claimed by the petitioner for the electricity generated from the project is excessively high.
- (2) The Commission may consider MNRE grant and CDM benefits while determining the tariff.
- (3) The actual CUF from July 2021 to June 2022 was about 43.62% as against 33.91% claimed by the petitioner.
- (4) The increase in cost of evacuation system over and above the approved estimate of Rs 4.40 crore may be disallowed.
- (5) KSEBL has agreed to adopt the norms as per the CERC (Terms and Conditions for Tariff determination for Renewable Energy Sources) Regulations, 2020.

17. The petitioner has submitted the additional details on 07.02.2023 and its summary is given below.

- (1) Capital cost. The petitioner again submitted the details of the actual cost of the 8MW project as Rs80.84 crore. The petitioner also submitted that, as per CERC RE Regulations, 2020, the normative capital cost approved by CERC for SHPs having capacity above 5 MW is Rs 9.00 crore.
- (2) As submitted earlier, the petitioner again submitted that, MNRE subsidy/grant is not available for SHPs since 01.10.2017.
- (3) The petitioner submitted that, it had already submitted application for CDM benefits on 01.07.2022 for CDM registration, which is under process. The petitioner submitted that, it shall adhere to the regulation by sharing the CDM proceeds upon successful registration of the project and thereafter upon monetisation of the approved CERs.

- (4) According to the petitioner, the actual CUF in the year 2021-22 was 34.75% and that in the year 2022-23 is 35.64% only.
- (5) The petitioner requested that, the revenue from the sale of infirm power shall not be deducted from the capital cost while determining the tariff.
- (6) The petitioner submitted that, the cost of 578 lakh actually incurred shall be considered for tariff determination.
- (7) The petitioner submitted that, it is relying on the CERC Regulations, 2020 on the limited issue of capital cost.

Analysis and Decision

18. The Commission, having examined in detail the petition filed by M/s, Anakampoil Power Pvt Ltd dated 01.01.2021, the counter affidavit filed by the respondent KSEB Ltd, deliberations during the various hearings, other documents and records, and as per the provisions of the Electricity Act, 2003, and other relevant Rules and Regulations in force, has decided as follows.
19. The petitioner, M/s Anakampoil Power Pvt Ltd had filed the instant petition with the following prayers;
 - (1) *Direct KSEBL to comply with the order dated 20.07.2018 passed by this Hon'ble Commission in OP No. 2/2018;*
 - (2) *Pass an order determining levelled tariff of Rs. 5.31/kWh for the SHP of the Petitioner for supply of electricity to the Respondent No. 1;*
 - (3) *Pass an order for provisional tariff, for supply of electricity during the pendency of the present petition, subject to adjustment after determination of final tariff for the SHP of the Petitioner*
 - (4) *Pass an order for reimbursement of the fees for tariff determination, by the Respondent No. 1 to the Petitioner; and*
 - (5) *Pass such further order(s) which the Hon'ble Commission deems fit and just in facts of the present case.*

Subsequently, the petitioner had modified the prayer (2) vide its rejoinder dated 27.07.2021 has requested to approve the levelized tariff @Rs 5.58/unit.

20. The first prayer of the petitioner is to direct the respondent KSEBL to comply with the Order dated 20.07.2018 passed by the Commission in OP No. 02/2018. The background of the said Order is discussed below.
 - (1) The petitioner, earlier has filed a petition dated 09.11.2017 in OP No.02/2018 before the Commission with the following prayers;
 - (a) *Direct the KSEBL to forthwith execute the PPA with the Petitioner in terms of the RFP and the bidding documents;*
 - (b) *Direct KSEBL to construct and ensure completion of the evacuation facilities from the project switchyard of the Petitioner by April, 2018 to ensure that the Petitioner is in a position to generate and supply electricity from the SHP without any delay.*

- (c) *Determine the generic tariff for the projects to be commissioned in the financial years 2017-18 and 2018-19; and*
 - (d) *Pass such further order(s) as deemed appropriate on the facts and circumstances of the case.*
- (2) The Commission, after examining the petition and counter affidavit and other remarks of KSEBL, and also after conducting hearings on the matter, vide the Order dated 20.07.2018 had decided as follows;

“The Commission after duly examining the petition filed by M/s Anakampoil Power Private Ltd, the counter argument of the respondent KSEB Ltd, and other documents placed before it, here by orders that,

- (i) *The respondent KSEB Ltd has confirmed their willingness to purchase power from the 8 MW SHP developed by the petitioner at the tariff and terms and conditions as decided by this Commission, the first prayer of the petitioner is answered in the affirmative.*
- (ii) *Regarding the second prayer of the petitioner, the Commission hereby direct the petitioner and respondent that,*
 - (1) *The petitioner has to construct the transmission facilities from generator switchyard upto the nearest substation of KSEB Ltd, either on its own or through KSEB Ltd as deposit work at the cost and responsibility of the developer. If the petitioner decides to construct the transmission facilities through KSEB Ltd as deposit work, the developer has to remit the cost of the evacuation facilities as specified under paragraph 17 (ix) above.*
 - (2) *The petitioner shall apply for connectivity for the generating stations with the grid of the KSEB Ltd as per the provisions of the KSERC (Connectivity and Open Access) Regulations, 2013 and KSEB Ltd shall grant connectivity as per the provisions of the said Regulations, and the petitioner shall also bear the cost for augmenting the distribution system of KSEB Ltd, if any, as per the Regulation 8 of the KSERC(Connectivity and Intra-State Open Access) Regulations, 2013.*
 - (3) *KSEB Ltd shall construct the substation and other evacuation facilities for the SHPs developing in the Chaliyar basin as per the time lines specified in the KSERC (Connectivity and Open Access) Regulations, 2013.*
 - (4) *In the event of any delay in completion of the evacuation system as per the open access regulations, KSEB Ltd shall be liable to pay penalty as per the provisions of the Electricity Act, 2003 and appropriate Regulations notified by the Commission.*
- (iii) *The petitioner shall file proper application before the Commission with necessary and sufficient details with supporting documents for determination of the project specific tariff, after declaration of date of commercial operation.*

The petition disposed off.”

- (3) The paragraph 17(ix) of the said Order address the construction of the evacuation system from the generator switchyard of the petitioner upto nearest substation of KSEB Ltd and for claiming the cost of construction for determination of the tariff. The relevant paragraph is extracted below.

“17 (ix) The Commission has examined the entire issue and ordered that, the transmission facilities from generator switchyard upto the nearest substation of KSEB Ltd shall be constructed by the developer either on its own or through KSEB Ltd as deposit work at the cost and responsibility of the developer. The petitioner shall also bear the cost for augmenting the distribution system of KSEB Ltd, if any, as per the Regulation 8 of the KSERC(Connectivity and Intra-State Open Access) Regulations, 2013. The petitioner can claim such cost as part of the capital cost of the project and the Commission may consider such costs while determining the tariff, after appraising the prudence of such claim.”

21. As discussed in the paragraph 20 above, it is a settled position that, KSEBL shall purchase the electricity generated from the 8MW Anakampoil at the tariff and other terms and conditions specified by the Commission. It is also confirmed that, the evacuation system from the generator switchyard of the project upto the nearest substation of KSEBL shall be constructed at the cost and responsibility of the developer. The Commission has also clarified that, the cost of construction of the evacuation system from the generator switchyard upto the nearest substation of KSEBL may be considered while determining the tariff of the project.

As per the details submitted by the parties, the project was synchronised with the grid on 17.12.2020 and achieved CoD on 14.07.2021. Since then the power from the project is injected into the grid. Further, KSEBL has been making payments to the generator at the approved interim tariff @ Rs 4.00 per unit.

Further, KSEBL is the incumbent distribution licensee owned by the State Government. It is also one of the biggest distribution licensees in the Country has been serving more than 139 lakh consumers in the State of Kerala. Further, KSEBL has been implementing the various policy directives of the State Government and Central Government including the initiatives of the Governments to promote RE generation.

Considering these aspects in detail, the Commission is of the considered view that, the KSEBL cannot take a different stand at this stage from its earlier offers, and has to purchase the electricity generated from the project at the tariff and other terms and conditions specified by this Commission and also has to comply with the various policy directives of the State Government in consistent with the provisions of the Electricity Act, 2003. As per the provisions of the Electricity Act, 2003, and KSERC (Conditions of License for Existing Distribution Licensees) Regulations, 2006, KSEBL has to comply with the Orders and Directions issued by this Commission unless it is stayed or quashed by the higher Courts.

22. During the deliberations of the subject petitions, the petitioner M/s Anakampoil and the respondent KSEBL has raised many issues on the draft Power Purchase Agreement (PPA) to be signed between the parties. In this matter, the Commission hereby clarify that, the tariff determination as per the Section 62 of the EA-2003 and the approval of the Power Purchase Agreement as per Section 86(1)(b) of the EA-2003 are two distinct functions of the Commission. The tariff determination involves detailed appraisal of the project and it is a time consuming process. Hence the Commission has decided to limit the scope of the present petition to the determination of the project specific tariff of the electricity generated from the project. Once the Commission determine the tariff, the petitioner M/s Anakampoil Power Pvt Ltd and the respondent KSEBL Ltd may initial the PPA at the approved tariff and mutually agreed terms and conditions, and submit the same before this Commission for approval as per the Section 86(1)(b) of the EA-2003.

Determination of project specific tariff of the electricity generated from the 8MW Anakampoil SHP

23. The second prayer of the petitioner is to determine the levelized tariff for the Anakampoil SHP (8MW) for supply of electricity to the respondent. The petitioner has originally proposed the levelized tariff @Rs 5.31/unit, however vide the rejoinder dated 27.07.2021, the petitioner proposed to approve the levelized tariff @Rs 5.58/unit.

Inorder to determine the project specific tariff, the Commission has to appraise the capital cost, capacity utilisation factor, and other technical and financial parameters as per the provisions of the relevant Regulations, Rules and prudent utility.

Base year of tariff determination

24. The petitioner Anakampoil Power Pvt Ltd and the respondent KSEBL during the deliberations of the subject matter confirmed that, the date of commercial operation of the project (CoD) was on 14.07.2021. Hence the Commission has decided to adopt the base year of the tariff determination as the FY 2021-22, i.e., the financial year in which the project had achieved CoD.

Applicable Regulations for determination of project specific tariff

25. The Commission on 7th February 2020 has notified the KSERC (Renewable Energy and Net Metering) Regulations, 2020 (herein after referred as RE Regulations, 2020) , and it was published in the official Gazette on 5th June 2020. As per the Regulation 33 of the said Regulation, it is applicable for five years from 2019-20, i.e., upto 2023-24.
26. Chapter-IV of the RE Regulations 2020 deals with the technical and financial norms and other aspects and procedures for the determination of tariff. The second and third proviso to RE Regulations, 2020 specifies that, this Commission while formulating and notifying the principles and norms and parameters for determination of tariff of the RE projects was guided by the principles, norms and parameters specified by the Central Commission for the

determination of tariff of the electricity generated from the Renewable Energy Projects.

It is also specified in the RE Regulations 2020 that, until separate norms and parameters are specified by this Commission for the purpose of determination of tariff, the principles norms and parameters specified in the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2017, as amended from time to time. The relevant Regulations is extracted below.

“ 32. Norms for determination of tariff.-

.....

*Provided further that, the Commission, while formulating and notifying the principles, norms and parameters for determination of tariff for the renewable energy from various categories of renewable source of energy, is guided by the National Electricity Policy and Tariff Policy published under Section 3 of the Act and **the principles, norms and parameters specified by the Central Commission for this purpose.***

*Provided also that, until separate principles, norms and parameters are specified by the Commission for the control period, the principles, norms and parameters specified by the Central Commission for the purpose of determination of tariff for the electricity generated from various categories of renewable sources of energy, **as specified in the Central Electricity Regulatory Commission (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2017, as amended from time to time, shall be adopted by the Commission for the purpose of determination of tariff under these Regulations.**”*

27. The Commission has formulated the technical and financial norms specified in the RE Regulations, 2020 based on the principles, norms and parameters specified by the Central Commission in the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2017 (hereinafter referred to as CERC RE Regulations, 2017). The said CERC Regulations was applicable from 01.04.2017 to 31.03.2020 only.

Subsequently, the Central Commission vide the notification dated 23rd June 2020 has notified the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2020 (herein after referred to as CERC RE Regulations, 2020).

The Commission noticed that, there is considerable change in the norms and parameters for tariff determination specified in the CERC RE Regulations, 2020 compared to the CERC RE Regulations, 2017. Hence there is difference in the norms and parameters for tariff determination of electricity generated from the RE sources specified by this Commission in the RE Regulations, 2020 and the same in the CERC Regulations, 2020.

As per the Section 61(a) of the EA-2003, while specifying the terms and conditions for determination of tariff, the State Commissions shall be guided by the ‘principles and methodologies specified by the Central Commission for

determination of the tariff applicable to generating companies, and transmission licensees’.

28. During the deliberations of the subject petition, the petitioner M/s Anakampoil Power Pvt Ltd has requested before the Commission to adopt the CERC RE Regulations, 2020 for appraising the capital cost of the project for tariff determination. Further, the respondent KSEBL also during the deliberations of the subject matter clarified that, they had no objection in adopting the CERC RE Regulations, 2020 for the determination of tariff.
29. **After appraising the entire aspects in detail, the Commission has decided to adopt the norms and parameters specified by the Central Commission as specified in the CERC RE Regulations, 2020 for the determination of tariff of the electricity generated from the RE projects, until this Commission amend/modify the norms and parameters in the KSERC RE Regulations, 2020 in line with the CERC RE Regulations, 2020. Accordingly, the Commission has adopted the technical and financial parameters and norms as per the CERC RE Regulations, 2020 for the determination of the project specific tariff of the 8MW Anakampoil Power Private Ltd.**
30. The following technical and financial parameters have been considered for determination of the tariff for the electricity generated from the Anakampoil SHP (8MW).
 - (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

31. The total capital cost incurred as on CoD is one of the deciding factor for determining the tariff of the electricity generated from a small hydro project. Considering its importance, the Commission has examined in detail the capital cost claimed by the petitioner for tariff determination.
32. The capital cost as per the Techno Economic Feasibility Report (TEFR) approved by the technical committee, the same appraised by the Power Finance Corporation (PFC) for sanctioning the loan, the actuals claimed in the original petition dated 01.01.2021 and the revised claim as per the rejoinder dated 27.07.2021 is given below.

Table-3
Comparison of the capital cost claimed by the petitioner

Sl No	Particulars	As per Techno Economic Feasibility Report	PFC Appraised	Actuals claimed vide the Original; petition	Revised claim vide the rejoinder dated 27.07.2021
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs.Cr)
A	Preliminary & Pre-operative Expense	55.18	4.06	5.87	6.20
B	Land, R&R & Site Development		3.30	3.70	3.70
C	Engineering and Consultancy		0.26	0.21	0.21
D	Civil Works		26.79	31.41	31.41
E	EPC/Plants & Machinery		19.11	19.90	19.90
F	Evacuation Facility		1.65	4.85	5.78
	Subtotal	55.18	55.17	65.94	67.20
G	Contingencies	1.38	1.38	0.00	0.00
H	Working Capital Margin	0.50	0.50	0.50	0.50
	<u>Project Cost without IDC</u>	57.06	57.05	66.44	67.70
I	Interest During Construction (IDC)	3.00	5.85	10.65	13.14
	Total project cost	60.06	62.90	77.09	80.84
	Cost/MW (Rs. Cr/MW)	7.51	7.86	9.64	10.11
	Cost/MW (Rs. Cr/MW) excluding cost of evacuation scheme	7.51	7.66	9.03	9.38

The petitioner submitted the following reasons for the increase in capital cost over the PFC appraised cost.

- (i) Delay in implementation resulting in increase of preliminary and pre-operating expenses by Rs 181.00 lakh and IDC by Rs 480.00 lakh.
 - a. The delay in commissioning of the project was mainly due to delay in getting forest clearance. The forest clearance took 43 months against the estimated period of 6 months.
 - b. Unprecedented flood at the site in the years 2018 and 2019.
 - c. Lockdown imposed on account of Covid-19 pandemic.
- (ii) Additional civil works – Rs 460 lakh.
The petitioner further submitted that, after the flood during the August 2018, as recommended by Energy Management Center(EMC), they carried out additional protection works with total cost of Rs 2.88 crore to avoid future damages due to high floods.

In addition to the above, the petitioner has incurred additional cost of Rs 78 lakh for the removal of boulders, and Rs 42 lakh for the construction of the retaining wall.

The Commission noted that, the petitioner could not get the approval/ ratification from the Technical committee constituted by the State Government vide the GO dated 29.04.2013 for the additional protection works. The EMC is only the nodal agency and all the recommendations of the EMC shall get approved by the State Government.

- (iii) Increase in cost of evacuation facilities. - Rs 320 lakh.
The plan for power evacuation facility was revised by KSEBL. The approved estimate of KSEBL along with the supervision charges turned out to be Rs 3.20 crore more than the DPR approved estimates.

33. The total capital cost as per the TEFRR approved by the technical committee constituted by the State Government was Rs 60.06 crore (Rs 7.51 crore per MW). As per the appraisal of the Power Finance Corporation, the project cost including IDC is Rs 62.90 crore (Rs 7.86 crore /MW) and the capital cost excluding the cost of power evacuation scheme is Rs 7.66 crore/MW . But the actual cost claimed by the petitioner is Rs 80.84 crore (Rs 10.11 crore per MW) and the actual cost excluding the cost of power evacuation scheme is Rs 9.38 crore per MW.

The petitioner had submitted various reasons for the increase in cost of capital of the Anakampoil Power Project including the delay in forest clearance and floods in 2018, increase in IDC due to the delay, additional protection works carried to avoid the damages of the future floods like that happened in 2018.

As per the provisions of the implementation agreement signed between the petitioner and the State Government dated 16.01.2015, the flood is a force majeure event and, the damages due to force majeure events has to met from the insurance proceeds and petitioner cannot share it with the respondent KSEBL and its consumers. Further, there is no provision in the implementation agreement and other rules and Regulations to pass on the cost over run and time over run as part of the capital cost of the project. Hence the Commission decided to compare the cost claimed by the petitioner with the normative cost of capital of SHPs specified in the appropriate Regulations.

34. As discussed in the **paragraphs 25 to 29 above**, the Commission has decided to adopt the technical and financial norms specified by the CERC for the determination of tariff of the 8MW Anakampoil SHP. Hence, the Commission had examined the capital cost claimed by the petitioner with the normative capital cost as per the CERC RE Regulations, 2020. The relevant Regulations are discussed below.

- (i) The Regulation 27 of the CERC RE Regulations, 2020 specifies the normative capital cost allowable for small hydro projects in the country achieved CoD during the period from 01.07.2020 to 31.03.2023. The relevant Regulations is extracted below.

"27. Capital Cost

(1) The normative capital cost for small hydro projects during first year of Control Period i.e. financial year 2020-21 shall be as follows:

Region	Project site	Capital Cost (Rs. lakh/ MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	1100
	5 MW to 25 MW	1100
Other States	Below 5 MW	780
	5 MW to 25 MW	900

(2) The capital cost for small hydro projects as specified for first year of the Control Period shall remain valid for the entire duration of the Control Period unless reviewed earlier by the Commission.

- (ii) The Regulation-12 of the CERC RE Regulations, 2020, specifies the cost of the various components of the SHP included in the normative capital cost specified by the CERC. The same is extracted below.

“12.Capital Cost Norms for capital cost, as specified in relevant chapters of these regulations, shall be inclusive of land cost, pre-development expenses, all capital work including plant & machinery, civil work, erection, commissioning, financing cost, interest during construction, and evacuation infrastructure up to inter-connection point.”

As above, the normative capital cost specified by the CERC includes the cost of capital for the evacuation infrastructure upto interconnection point.

- (iii) Further, the Regulation 2(1)(o) of the CERC RE Regulations, 2020, defines the ‘interconnection point’ which is extracted below.

o) ‘Inter-connection point’ shall mean interface point of renewable energy generating facility with the transmission system or distribution system, where the energy is injected, as the case may be, and include:

- i. in relation to wind power projects, solar PV power projects, renewable hybrid energy projects and renewable energy with storage Projects, line isolator on outgoing feeder on HV side of the pooling sub-station; and*
*ii. in relation to **small hydro projects**, biomass gasifier based power projects, non-fossil fuel based co-generation projects and solar thermal power projects, **line isolator on outgoing feeder on HV side of generator transformer.***

As discussed above, the normative capital cost of SHPs specified by the CERC includes the cost of capital of the evacuation system upto the line isolator on the outgoing feeder on HV side of the generator transformer.

35. As discussed in the paragraph 34 above, the normative capital cost specified by the CERC for SHPs achieved CoD in the State of Kerala during the period from 01.07.2020 to 31.03.2023 is Rs 9.00 crore per MW. Further, this cost includes the cost of evacuation infrastructure upto line isolator on the outgoing feeder on HV side of the generator transformer.

Further, the normative capital cost specified by the CERC is the ceiling on the capital cost allowed for tariff determination.

Considering these aspects in detail, the Commission has decided to limit the capital cost, including the cost of ‘evacuation infrastructure upto line isolator on the outgoing feeder on HV side of the generator transformer’ as on CoD for tariff determination @Rs 9.00 crore per MW.

In addition to the above, the Commission has also decided to allow the prudent cost incurred for evacuating power from the project as part of the cost of capital for tariff determination.

Cost of evacuation scheme for evacuating the power from the Anakampoil SHP

36. As already discussed under paragraph 20(3) above, the Commission vide the paragraph 17(ix) of Order dated 20.07.2018 in petition OP No. 02/2018 has taken a considered decision on the treatment of the cost of construction of the evacuation system from the generator switchyard of the petitioner upto nearest substation of KSEBL. The relevant paragraph of the Order is extracted below.

“17 (ix) The Commission has examined the entire issue and ordered that, the transmission facilities from generator switchyard upto the nearest substation of KSEB Ltd shall be constructed by the developer either on its own or through KSEB Ltd as deposit work at the cost and responsibility of the developer. The petitioner shall also bear the cost for augmenting the distribution system of KSEB Ltd, if any, as per the Regulation 8 of the KSERC(Connectivity and Intra-State Open Access) Regulations, 2013. The petitioner can claim such cost as part of the capital cost of the project and the Commission may consider such costs while determining the tariff, after appraising the prudence of such claim.”

37. The Commission has noted that, KSEBL vide its letter dated 13.12.2017 and also as per the minutes of the meeting dated 04.01.2019 has decided to evolve a permanent power evacuation scheme in connection with the various SHEPs in Eravanjipuzha river basins including the Pathamkayam SHP (8MW) of M/s Minar Renewables, Anakampoil SHP (8MW) of the petitioner, Arippara (4.5MW) of the M/s CIAL, Muthappanpuzha SHP (4.5MW) & Kilikallu SHP (3MW) of M/s Minar Renewables Ltd and various projects of KSEB Ltd with a total capacity of 17.80MW. The total cost of the proposed evacuation scheme is Rs 63.77 crore. The proposal include the following,

- (i) Construction of a 33/110kV pooling station at Nellipoyil (Narangathode) with 33/110kV, 2 x 50MVA transformers.
- (ii) Laying 11 km, 3 runs, SC 110kV, 1x630mm², XLPE UG Cable (Aluminium Sheathed) from Thambalamanna to Nellipoyil),
- (iii) Connecting various SHPs to the pooling station Nellipoyil by drawing 33kV OH/UG cables.

However, the administrative sanction for the proposed permanent evacuation scheme was yet to be issued by KSEBL on the reason that the SHP beneficiaries are yet to give consent for sharing the cost on pro-rata basis on the basis of the capacity of their plant.

38. Considering the delay in finalising and implementing the permanent evacuation scheme, KSEB Ltd vide its Order BO No. 276/2019 dated 22.03.2019 has accorded Administrative Sanction (AS) for the estimate amounting to Rs 440.80 lakh for the temporary arrangement for the evacuation of power from Pathamkayam SHP (8MW) and Anakampoil SHP (8MW) at Eruvanjipuzha river basin. The following works are envisaged in the temporary evacuation arrangement approved by KSEBL.

- (1) Constructing 33kV double circuit OH line using AL59 conductor in the existing 33kV Thambalamanna- Chembukadavu line route from location CKT -47 to Thambalamanna substation, on lattice poles.
- (2) Constriction of one 33kV feeder bay at Thambalamanna substation and
- (3) Conversion of existing 2.5 kM 33kV single circuit OH line to double circuit from Pathamkayam SHEP to location CKT-47 using ACSR conductor.

Subsequently, as requested by the petitioner, KSEBL vide its letter dated 12.07.2019 had permitted M/s Minar Renewable Energy Projects Pvt Ltd and M/s Anakampoil Power Private Ltd to carry out the temporary evacuation arrangement works by themselves instead of deposit works, after remitting the supervision charges of Rs 44.08 lakh to KSEBL.

The petitioner vide the letter dated 07.08.2019 informed KSEBL that, since the Minar Renewables Ltd of Pathamkayam SHP (8MW) expressed their financial incapability to execute the temporary evacuation work since they were affected by the flood in the year 2018 and incurred considerable amount for its restoration along with the one year generation loss, the petitioner M/s Anakampoil Power Pvt Ltd, ready to execute the temporary evacuation scheme by themselves on behalf of the both the beneficiaries.

KSEBL vide the letter dated 19.08.2019 had permitted the petitioner to carry out the temporary evacuation work by the petitioner itself, for both the Pathamkayam SHP (8MW) owned by M/s Minar Renewables Pvt Ltd and Anakampoil SHP (8MW) owned by M/s Anakampoil Power Pvt Ltd.

Though the KSEBL has granted administrative sanction for the temporary evacuation scheme for both the Pathamkayam SHP (8MW) of M/s Minar Renewables Pvt Ltd and Anakampoil SHP (8MW) of M/s Anakampoil Power Pvt Ltd, however, the entire cost of the evacuation scheme was initially borne by the petitioner only citing the reasons of financial difficulties faced by the developer of Pathamkayam SHP, M/s Minar Renewables Pvt Ltd. During the deliberations of the present petitioner, the petitioner could not clarify whether M/s Minar Renewables Ltd has shared its proportionate cost with the petitioner or not.

39. The Commission also noted that, the petitioner vide its rejoinder dated 27.07.2021 has claimed that, the actual cost of the temporary evacuation scheme was increased by Rs 0.93 crore over the scheme approved by KSEBL. According to the petitioner, there was change in the scope of the scheme, that has resulted in increase in the cost. But KSEB Ltd during the deliberations of the subject petition opposed the claim and submitted that, the petitioner has not obtained the approval of the additional cost over the administrative sanction granted by the licensee.

KSEBL has also submitted that, though the construction of 8km of 33 kV double circuit line was sanctioned as part of the temporary evacuation scheme, the actual execution was only for around 6.90km of 33kV DC lines, thus there is savings of the cost of construction of 1.1km of 33kV line from the sanction granted by it. KSEBL further submitted that, the additional works claimed by the petitioner including the works in the location PNP1 to PNP 25 was included in the original scope of work sanctioned by KSEBL.

Considering the above, KSEBL requested to not to allow the increase in cost claimed by petitioner.

40. The petitioner in the rejoinder dated 09.02.2023 has admitted that, there is a reduction in estimate of Rs 49.00 lakh due to the savings in cost of construction of 1.10km of 33 kV line as pointed out by KSEBL.

However, the petitioner during the deliberations submitted that, it had incurred Rs 24.31 lakh towards the pro-rata cost of land for permanent pooling point purchased and handed over to KSEBL, and Rs 17.17 lakh towards pro-rata cost for construction of permanent pooling point. These two additional cost claimed by the petitioner is about Rs 41.48 lakh.

The Commission also noted that, the other claims of evacuation schemes by the petitioner including the items under Annexure-P59 of the original petition is covered in the original scope of works. Hence such items cannot be admitted as additional expenses over the administrative sanction of Rs 440.80 lakh granted by KSEBL.

- 41. The Commission after appraising the temporary evacuation scheme as above, has decided that, since the cost of temporary evacuation scheme is incurred by the petitioner, the Commission provisionally allow the cost of Rs 440.80 lakhs along with Rs 44.08lakh (10% of the sanctioned amount) as supervision charges of the temporary evacuation scheme.**

42. The Commission had already determined the project specific tariff of the Pathamkayam SHP (8MW) of M/s Minar Renewables Ltd and Arippara SHP (4.5MW) of CIAL in the same basin. The details are given below.

- (1) Order dated 04.09.2019 in petition OA No. 08/2018 in the matter of determination of project specific tariff of Pathamkayam SHP (8MW).** The details of the power evacuation scheme considered for the tariff determination of the Pathamkayam (8MW) SHP is extracted below.

“The petitioner submit that, KSEB Ltd had claimed Rs 10.3146 crore towards the share of Pathamkayam SHP for the common evacuation scheme to be developed by KSEB Ltd for evacuating power from the SHPs developing at the Chaliyar basin.

KSEB Ltd vide its affidavit dated 14.06.2019 submitted that, the share of the Pathamkayam SHP (8MW) in the common evacuation scheme proposed for evacuating the SHPs developed in the Chaliyar basis is Rs 8.00517 crore. However, considering the urgent need for evacuation of the power from the Pathamkayam project, KSEB Ltd decided to provide temporary evacuation scheme at a total cost of Rs 4.41 crore, after collecting the amount from the petitioner. KSEB Ltd also submitted that, the amount claimed for temporary evacuation scheme shall be adjusted against the total cost of Rs 8.00517 crore, the share of Pathamkayam project in the comprehensive evacuation scheme.

The Commission noted the affidavit filed by KSEB Ltd and decided to include the share of Pathamkayam 8 MW SHP in the comprehensive evacuation scheme amounting to Rs 8.00517 crore in the capital cost of Pathamkayam project for determine the tariff. However, KSEB Ltd shall not claim any additional amount from the petitioner under comprehensive evacuation scheme for evacuating power from the SHPs developing in the Chaliyar basin.”

As above, the Commission has considered Rs 8.005 crore towards the share of the permanent power evacuation scheme of Pathamkayam SHP, though the scheme is yet to be finalized by KSEBL.

The Commission also not aware of the fact that, whether M/s Minar Renewables Ltd has shared the cost of the temporary evacuation scheme sanctioned by KSEBL vide its Order dated 22.03.2019 for the temporary power evacuation of Pathamkayam SHP (8MW) and Anakampoil SHP (8MW). KSEB Ltd also not appraising these facts in its totality and placed before the Commission for appropriate decision.

- (2) Order dated 08.03.2023 in petition OP No. 65/2023 in the matter of determination of tariff of the Arippara SHP (4.5MW) of M/s CIAL.

The cost of power evacuation schemes approved as part of the capital cost of the Arippara SHP vide the Order dated 08.03.2023 in petition OP No. 65/2023 is extracted below.

“...However, as per the Regulation 12 of the CERC RE Regulations, 2020, the normative capital cost specified in the CERC Regulations includes the cost of evacuation infrastructure upto the interconnection point. Further, as per the Regulation 2(1)(o) of the CERC RE Regulations,2020, the interconnection point for small hydro projects is the line isolator on outgoing feeder HV side of generator transformer.

Considering the above, the Commission has decided to admit the following cost of evacuation infrastructure claimed by the petitioner from the HV side of the generator transformer also in addition to the normative capital cost claimed by the petitioner.

Cost of evacuation infrastructure claimed

Sl No	Particulars	Amount (Rs. Cr)
1	Cost of cable & Cable laying charges from Arippara to Common pooling substation (2.5 km long)	0.805
2	Deposit works paid to KSEB Ltd	1.620
3	Fees paid to Panchayat and PWD for road cutting permit for cable laying	0.035
4	Charges for testing, commissioning and other technical services	0.113
5	Advance amount paid for cost of land for common pooling substation	0.103
	Total	2.676

M/s CIAL Infra vide the letter dated 27th February 2023 has claimed that, since the submission of the project cost details vide the letter dated 20.12.2021, the petitioner had incurred an additional amount of Rs 1.1495 crore on account of power evacuation. Out of this claim, Rs 1.106 crore is the amount shared with the other developers Anakampoil SHP and Pathamkayam SHP. The petitioner could not submit the details and justification and rationale for such sharing of expenses with the developers Anakampoil SHP and Pathamkayam SHP. Hence the Commission hereby rejects such claim of M/s CIAL Infra as part of the cost of evacuation infrastructure.”

As discussed in the proceedings, there is lack of clarity on the permanent power evacuation scheme and its sharing among the beneficiary generators as proposed by KSEBL in the Chaliyar basin and also the temporary power evacuation scheme sanctioned by KSEBL at a total cost of Rs 440.80 lakh for evacuating power from Pathamkayam SHP (8MW) and Anakampoil SHP (8MW). There is no clarity on the sharing of the cost of temporary evacuation scheme by the other beneficiary, M/s Minar Renewables Ltd of Pathamkayam SHP (8MW).

43. Considering the entire aspects in detail, the Commission is of the considered view that, KSEBLtd as the STU of the State has miserably failed to carryout its statutory functions as per the Section 39 of the Electricity Act, 2003, for the co-ordinated development of the transmission system in the Chaliar basin for the power evacuation of the various generation projects in the Chaliar basin.

The Commission once again clarify that, as per the Section 39(2) of the Electricity Act, 2003, among others, KSEB Ltd as the STU is responsible for the co-ordinated development of the transmission system in the Chaliyar basins in co-ordination with the generating companies. While doing so, KSEBL cannot wait for the concurrence of the generators to share the cost of evacuation scheme or not. If the permanent evacuation scheme is essential for the smooth flow of electricity from the generating station to the load centres, STU shall proceed with the same with the approval of this Commission.

However, as per the deliberations of the subject petition and also the petitions of Pathamkayam SHP (8MW) of M/s Minar Renewables Ltd and Arippara SHP (4.5MW) of M/s CIAL, the Commission is constrained to remark that, KSEBL is totally blind and ignorant about the evacuation scheme so far implemented

by these generators, its cost and sharing of cost between them. The Commission once again clarify that, the safety and security of all transmission system in the State, whether it is executed through the private parties or through deposit work, shall be ensured by STU at its own risk.

44. Considering these aspects in detail, the Commission hereby direct the KSEBL as the STU of the State, to submit the clarity on the following issues on the power evacuation scheme of the SHPs developed in the Chaliyar basin.

- (1) Details of the load flow studies of the various generation projects planned and implemented in the Chaliyar basin, including the projects owned/ constructed/proposed by KSEBL and the projects developed/to be developed by Independent Power Producers/ Captive users.
- (2) Whether a permanent power evacuation scheme is required or not?. If required, what is the total cost of such permanent evacuation scheme and its proposed cost sharing?
- (3) Whether KSEBL has proposed any new transmission scheme under Transgrid/ green corridors in the Chaliyar basin or nearby areas?. If so, complete details may be submitted before the Commission.
- (4) What is the cost of temporary power evacuation scheme incurred by the private developers (a) Pathamkayam SHP (8MW) of M/s Minar Renewables Ltd, (b) Arippara SHP (4.5MW) of CIAL and (c) Anakampoil SHP (8MW) of Anakampoil Power Pvt Ltd, for connectivity and evacuating the power from the respective generators.

KSEBL as the STU shall submit the above details within one month from the date of this Order.

45. As decided under paragraph 35 and 41 above of this Order, the total capital cost approved for the tariff determination of the Anakampoil SHP (8MW) is given below.

Table-4
Capital cost approved by the Commission for tariff determination

Sl No	Particulars	As per Techno Economic Feasibility Report	PFC Appraised	Actuals claimed vide the Original; petition	Revised claim vide the rejoinder dated 27.07.2021	Approved by the Commission
		(Rs. Cr)	(Rs. Cr)	(Rs. Cr)	(Rs.Cr)	(Rs. Cr)
1	Preliminary & Pre-operative Expense	53.53	4.06	5.87	6.20	Rs 72.00 crore (Rs 9.00 crore/MW)
2	Land, R&R & Site Development		3.30	3.70	3.70	
3	Engineering and Consultancy		0.26	0.21	0.21	
4	Civil Works		26.79	31.41	31.41	
5	EPC/Plants & Machinery		19.11	19.90	19.90	
6	Subtotal	53.53	53.52	61.09	61.42	

7	Contingencies	1.38	1.38	0.00	0.00	
8	Working Capital Margin	0.50	0.50	0.50	0.50	
9	<u>Project Cost without IDC</u>	55.41	55.40	61.59	61.92	
10	Interest During Construction (IDC)	3.00	5.85	10.65	13.14	
11	Total project cost	58.41	61.25	72.24	75.06	72.00
12	Cost/MW excluding the cost of power evacuation scheme	7.30	7.66	9.03	9.38	9.00
12	Evacuation Facility	1.65	1.65	4.85	5.78	4.85
13	Total project cost	60.06	62.90	77.09	80.84	76.85
14	Cost/MW (Rs. Cr/MW)	7.51	7.86	9.64	10.11	9.61

As above, the Commission hereby approve provisionally Rs 76.85 crore (Rs 9.61 crore per MW) as capital cost of the Anakampoil SHP (8MW) for determination of tariff for the electricity generated from the project.

Useful life of the project

46. As per the Regulation 2(1)(hh) of the CERC RE Regulations, 2020, useful life of Small Hydro Project is specified as 40 years.

However, the State Government vide the Order dated GO (Ms) No. 23/2014/PD dated 21.07.2014 has allotted the project to the petitioner for implementation on BOOT basis for 30 years from the date of execution of Implementation Agreement with the State Government.

The petitioner has signed the Implementation Agreement with the State Government on 16.01.2015. As per the Clause 2.1 of the Implementation Agreement, the Agreement is valid for a period of 30 years from the date of allotment including the implementation period.

As per the GO dated 21.07.2014, the BOOT period of the project is only upto 15.01.2045 and thereafter the terms may be extended by both the parties on mutually agreed terms, otherwise the project has to be transferred to the Government or KSEB Ltd/its successors on being authorized by the Government at free of cost.

The project achieved the CoD on 14.07.2021. Thus effectively, about 23 years, 6 months and 3days only available to the petitioner to recover the entire cost of the project.

Considering these reasons, the Commission has adopted the useful life of the project as 24 years (rounded off) on the presumption that the project shall be handed over to the State Government/ KSEB Ltd after the BOOT period. In the event the petitioner and Government/KSEB Ltd decided to extent the agreement for a further period, it can be done only on mutually agreed terms and prior approval of such terms from this Commission, and also duly considering the fact that the entire cost recovery is ensured during the BOOT period.

Capacity Utilisation Factor (CUF)

47. The petitioner has submitted a copy of the detailed project report (DPR) of the Anakampoil SHP (8MW) project as part of the petition.

As mandated in the implementation agreement, the State Government vide the Order GO (Ms) No. 10/2015/PD dated 25.03.2015 had approved the Techno Economic Feasibility Report of the project.

As per Annexure-5.6 of the DPR, read along with Annexure 5.5(k) and salient features provided under Chapter-2 of the DPR, the design energy of the project at 75% dependable year (hydrology of 1995-96) and at 95% machine availability is 27.31 MU at the CUF of 39.48%.

The Commission has also noted that, the petitioner has used the design energy of 27.31MU for financial evaluation of the project under Chapter-13 of the DPR and appraising the financials of the project.

However, the petitioner has proposed a lower CUF 33.91%, based on the recommendation of a committee formed by Energy Management Center. The reason for the review of the CUF as per the Annexure- P28 of the rejoinder dated 27.07.2021 is extracted below;

“It is observed that the project report prepared by Design Group Bangalore (A reputed firm in the field of Hydro Power Development). On looking through the project report & also reading the attachment given by EMC, it is seen that during the preparation of the DPR, the concept was the project comes under Generic Tariff and as such **less importance given for Energy & PLF**. The calculation of energy was utilized for fixing the installed capacity.

The State Commission issued draft notification on 04.11.2016 and issued final order in 2017 that the project specific tariff applicable to project capacity more than 5MW.

As such now this project is come under Project Specific Tariff Group. In this category, CUF/PLF and Energy Generation will come to a major role. That is the reason the developer is insisting the calculation of Energy and corresponding PLF with the actual parameters incorporating the conditions imposed by Government’.

The Commission has noted the reasons for the review of the CUF initiated by the developer at this stage. The rational for the review of the CUF from the DPR at this stage is baseless and against the prudent utility practices followed in the Country. Moreover the DPR was approved by the State Government vide the GO dated 25.03.2015, however such approval was not obtained for the review of CUF initiated by EMC as requested by the developer. The EMC also not empowered to review the CUF or project parameters as and when requested by the developer.

However, as per the Regulation 53(2) of the KSERC (Renewable Energy & Net Metering) Regulations, 2020, in case the actual CUF varies by (+) or (-) 10% of the CUF adopted for tariff determination, the petitioner M/s Anankampoil Power Pvt Ltd or the respondent KSEBL can file a petition for revising the tariff with all

relevant supporting details with reasons for such variations with documentary evidences.

48. The Commission has also examined the restrictions imposed for generation in the second stage forest clearance granted by MoE&F vide its letter dated 23.04.2018, which is marked as Annexure P-69 of the original petition. As per the 2nd stage forest clearance, the power generation from the project is allowed only between June-January in every financial year. Considering the restrictions in power generation stipulated in the forest clearance, the Commission has excluded the hydel generation of February to May from the monthwise hydel generation of the 75% dependable year 1995-1996 as provided in the DPR. The details are given below.

Hydel generation approved for tariff determination

Month	Estimate of generation (MU) as per DPR	Revised generation as per the Stage-2 forest clearance (MU)
Apr	0.21	Not permitted
May	0.28	Not permitted
June	4.73	4.73
July	6.22	6.22
Aug	6.22	6.22
Sep	5.33	5.33
Oct	2.21	2.21
Nov	1.76	1.76
Dec	0.46	0.46
Jan	0.14	0.14
Feb	0.06	Not permitted
Mar	0.05	Not permitted
Total	27.67	27.07
CUF	39.48%	38.62%

As above, the Commission has decided to adopt the annual generation of Anakampoil SHP as 27.07MU, at the CUF of 38.62%, based on the DPR and also the restrictions on power generation imposed in 2nd stage forest clearance of the MoE&F, Gol.

Auxiliary Consumption

49. As per the Regulation 29 of the CERC RE Regulations, 2020, auxiliary consumption of SHPs shall be considered as 1% for the determination of tariff. Hence the Commission adopts the auxiliary consumption of the Anakampoil SHP as 1% of the design energy for the determination of tariff.

Debt: Equity Ratio

50. As per the Regulation 13 of the CERC RE Regulations, 2020, the normative Debt: Equity ratio is 70:30. The Commission decided to adopt the same for the determination of the project specific tariff of Anakampoil SHP (8MW).

Loan repayment period

51. As per the Regulation 14(1) of the CERC RE Regulations, 2020, for the determination of project specific tariff, the loan tenure shall be 15 years.

Accordingly, the Commission had adopted the loan tenure as 15 years for the determination of the project specific tariff of the Anakampoil SHP.

Interest of loan

52. As per the Regulation 14(2) of the CERC RE Regulations, 2020, the 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) (one year tenor) prevalent during the last available six months'.

As detailed in the previous paragraphs, the CoD of the project was on 14.07.2021. The average MCLR (one year tenor) for the past six months from the month of CoD, (from January 2021 to June 2021) is 7.00%. Accordingly, the Commission decides to adopt the normative interest rate for the determination of tariff at 9.00%.

Depreciation

53. The Commission, as per the Regulation 15 of the CERC RE Regulation, 2020, has decided to adopt depreciation @4.67% for the first 15 years and 2.22% for the balance BOOT period of 9 years (24 years-15 years).

Components of working capital

54. As per the Regulation 17 of the CERC RE Regulations 2020, the components of the working capital consists of the following:
- (i) O&M cost for one month,
 - (ii) Maintenance of spares at 15% of the O&M cost,
 - (iii) Receivable for 45 days of tariff for sale of electricity calculated on the normative CUF.

Interest on working capital

55. As per the Regulation 17(4) of the CERC RE Regulation 2020, the interest on working capital shall be at interest rate equivalent to the normative interest rate of three hundred and fifty (350) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months.

The CoD of the Anakampoil SHP is in the month of July 2021. The average SBI MCLR rate for past six months prior to the date of CoD is 7.0%. Accordingly, as per the CERC RE Regulation, 2020, the Commission decides to adopt the interest rate for computing interest on working capital at 10.50% for determination of tariff.

Operation and Maintenance Expenses

56. As per the Regulation 30 of the CERC RE Regulations, 2020 the O&M cost for SHEP having size 5MW to 25MW is 24.37 Lakh/MW for the base year 2020-21. The Commission decided to adopt the same.

Further, as per the Regulations 30(2) and 19(2) of the CERC RE Regulations, 2020, the O&M cost for the subsequent years shall be obtained by escalating the base year O&M expenses at the rate of 3.84% per annum.

Return on equity

57. As per the Regulations 16 of the CERC RE Regulations, 2020, the normative RoE specified is 14%. The Commission decides to provide RoE @14% on 30% of the capital cost adopted for tariff determination.

The Commission has been taking the consistent stand that, Income Tax/ Minimum Alternative 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. Hence, any tax paid on the RoE shall be allowed as a pass through, limited to the amount of equity considered in this Order, which shall be claimed separately from KSEB Ltd, duly furnishing proof of payment of such tax.

Discount factor for computing levelised tariff

58. As per the Regulation 10 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020, for the purpose of levelised tariff computation, the discount factor equivalent to Post Tax Weighted Average Cost of Capital(WACC) shall be considered.

The CERC vide the RE Tariff Order dated 31.03.2021, has adopted the following methodology for arriving the discounting factor for determining the tariff of the RE projects commissioned during the year 2021-22;

“ F. Discount Factor

9. Regulation 10(2) of the RE Tariff Regulations specifies methodology to calculate discount factor for the purpose of levelised tariff computation as under:

“10. Tariff Design ... (2) For the purpose of levelised tariff computation, discount factor equivalent to post-tax weighted average cost of capital shall be considered.”

10. Accordingly, the discount factor considered for this exercise is equal to the post tax weighted average cost of capital on the basis of normative debt:equity ratio (70:30). Considering the normative debt equity ratio and weighted average of the post-tax rates for debt and equity component, the discount factor is calculated.

11. Interest Rate considered for the loan component (i.e., 70% of capital cost) is 9%. For equity component (i.e., 30% of capital cost), the rate of Return on Equity (ROE) is considered at post-tax rate of 14%. Further, Corporate Tax rate has been considered as 34.94%¹. Accordingly, the discount factor derived by this method for all technologies is 8.30%. (Discount Factor = $[(9\% \times 0.70) \times (1 - 34.94\%)] + (14.0\% \times 0.30) = 8.30\%$.)”

The Commission has adopted the above methodology followed by CERC for arriving the discounting factor for arriving the levelized tariff of the Anakampoil SHP (8MW), which was also achieved the CoD during the year 2021-22.

Interest on debt = 9% (as per paragraph 51 above)
RoE = 14% (as per paragraph 56 above)
Income tax rate = 34.94% (base rate-30%, 12% surcharge on base rate, 4% health and educational cess on 'base rate plus surcharge').

Discount rate = $[9\% \times 0.70 \times (1-34.94\%)]+(14\% \times 0.3)= 8.30\%$

Summary of the technical and financial parameters

59. The summary of the technical and financial parameters adopted for determining the tariff of the Anakampoil SHP is given below.

Sl No	Particulars			Remarks
1	Installed capacity	8	MW	As per the petition
2	Life of the plant from CoD considered for tariff determination	24	Years	As per the Implementation Agreement
3	Capacity utilisation factor	38.62	%	As per the DPR & 2 nd stage forest clearance
4	Auxiliary consumption	1%		CERC RE Regulation 2020
4	Capital cost of the project	9.61	Rs .Cr/MW	CERC RE Regulations, 2020 plus evacuation cost provisionally approved
5	Debt: Equity	70:30		CERC RE Regulation 2020
6	Loan tenure	15	Years	
7	Interest rate (MCLR rate+ 2%) (MCLR- last six months- 7.0%)	9.0	%	
8	RoE	14.0	%	
9	MAT/ Income tax	Pass through at actual		
10	Working capital			
	(i) O&M cost for one month			CERC RE Regulation 2020
	(ii) Receivable equivalent to 45 days			
	(iii) Maintenance of spares @15% of the O&M expenses			
11	Interest on WC (MCLR+3.50%)	10.5	%	
12	O&M cost (base year 2020-21)	24.37	Rs Lakh/ MW/ year	CERC RE Regulation 2020
	Escalation for O&M cost for subsequent years	3.84%	Annually	
	O&M cost for 2021-22	25.31	Rs Lakh/ MW/ year	
14	Depreciation	4.67%	for first 15 years	CERC RE Regulation 2020
		2.22%	For remaining useful life	
15	Discount rate = weighted average cost of capital	8.30	%	

Based on the above norms and parameters, the levelised tariff is determined for the 8MW Anakampoil Small Hydro Project for the useful life of the project at Rs 4.43/unit.

Subsidy or incentive by the Central / State Government

60. The Regulation 22 of the CERC RE Regulations, 2020 specifies that, the Commission shall take into consideration any incentive or subsidy offered by the Central / State Government including accelerated depreciation. The relevant regulation is extracted below.

“22.Subsidy or Incentive by the Central / State Government.-

- (12) The Commission shall take into consideration any incentive, grant or subsidy from the Central or State Government, including accelerated depreciation benefit, availed by the project, while determining the tariff under these regulations:
Provided that the following principles shall be considered for ascertaining income tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:
- i) Assessment of benefit shall be based on normative capital cost, accelerated depreciation rate and corporate income tax rate as per relevant provisions of Income Tax Act, 1961 as amended from time to time; and
 - ii) Capitalization of renewable energy projects during second half of the fiscal year.
 - iii) Per unit benefit shall be derived on levelized basis at discount factor equivalent to weighted average cost of capital.
- (2) Any grant, subsidy or incentives availed by renewable energy project, which is not considered at time of determination of tariff, shall be deducted by the beneficiary in subsequent bills after receipt of such grant, subsidy or incentive in suitable instalments or within such period as may be stipulated by the Commission.
- (3) In case the Central or State Government or their agencies provide any generationbased incentive, which is specifically over and above the tariff, such incentive shall neither be taken into account while determining the tariff nor be deducted by the beneficiary in subsequent bills raised by the particular Renewable energy project.”

The Commission has noted that the provisions of Accelerated Depreciation are available in the Income Tax Act 1961 and Rules framed there under. A person who qualifies under the above statutory provisions is entitled to get benefit of Accelerated Depreciation. Moreover, that Income Tax Act would not make any discrimination between the tax payers / investors, everyone is allowed to avail the benefit as per provisions under Income Tax Act. Under Cost plus approach the tariff is determined upon normative cost and performance parameters. In view of the fact that the Commission has allowed all reasonable cost and returns to be recovered from the tariff, it is fair that any benefit occurring due to subsidy / accelerated depreciation would be factored in while determining the tariff. Hence the Commission decides to determine a levelized tariff taking into account the benefit of accelerated depreciation available under Income Tax Act 1961 and Rules framed under it.

In terms of the above regulation, for the projects availing the benefit of accelerated depreciation, applicable Corporate Tax rate of 34.94% has been considered. For the purpose of determining net depreciation benefits, depreciation @4.67% as per straight line method has been compared with depreciation as per Income Tax Act, 1961 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, 1961.

Depreciation for the first year has been computed at the rate of 40% and the accelerated depreciation at 20%, assuming the Project to be capitalized for the full financial year. The tax benefit has been worked out as per the Corporate

Income Tax rate on the net depreciation benefit. The 'per unit levelised accelerated depreciation benefit' has been computed considering the weighted average cost of capital as the discounting factor. The detailed computation of benefit of accelerated depreciation is given as Annexure-1.

The benefit of accelerated depreciation for the project is Rs 0.28/unit. The net levelised tariff of the project after accounting the accelerated depreciation is Rs 4.15/unit.

Tariff

61. Considering the above parameters, the Commission hereby approve the levelised tariff for the electricity generated from the Anakampoil SHP 8MW developed by M/s Anakampoil Power Pvt Ltd at Rs 4.43/unit without the benefit of accelerated depreciation and Rs 4.15/unit with the benefit of accelerated depreciation. The levelised tariff approved by the Commission is applicable for the entire electricity injected into the grid from the date of synchronization.

KSEB Ltd shall enter into PPA with the petitioner @Rs 4.15/unit, for the purchase of the entire electricity generated from the project.

Order of the Commission

62. The Commission, after the detailed examination of the petition filed by M/s Anakampoil Power Pvt Ltd, and comments of the respondent KSEB Ltd and also duly considering the provisions of the Electricity Act-2003, Tariff Policy 2016, and the Regulations notified by the CERC and KSEB, and other relevant documents wherever necessary, the Commission here by orders the following:

- (1) The levelised tariff for the electricity generated from the Anakampoil SHP 8MW developed by M/s Anakampoil Power Pvt Ltd is approved @ Rs 4.15/unit duly considering the benefit of accelerated depreciation.
- (2) The levelised tariff approved by the Commission is applicable for the entire electricity injected into the grid from the date of synchronization.
- (3) KSEB Ltd shall reimburse, any tax paid on the RoE, limited to the amount of equity specified in this Order. For claiming the tax, developer shall furnish the proof of payment of such tax to KSEB Ltd.
- (4) KSEB Ltd shall submit a detailed report on the directions given under paragraph 44 of this Order within one month from the date of this Order.

Petition disposed off. ordered accordingly

Sd/-
T K Jose
Chairman

Sd/-
Adv. A J Wilson
Member

Sd/-
B Pradeep
Member

Approved for issue

Sd/-
C R Satheesh Chandran
Secretary

**Anakampoil Small Hydro Project (8MW)
(2021-22)**

SI No	Head	Sub Head	Detailed Head	Unit	Norm
1	Power Generation	Capacity	(i) Installed Power Generation Capacity	MW	1
			(ii) Capacity Utilisation factor	%	38.62
			(iii) Auxiliary consumption	%	1
			(iv) Useful life for tariff determination	years	24
2	Project cost	Capital cost /MW	Power plant cost	Rs .Cr	9.61
3	Source of Fund		Tariff period	Years	24
		<u>Debt- equity</u>	Debt	%	70
			Equiy	%	30
		Debt component	Loan amount/MW	Rs.Cr	6.73
			Moratorium	Years	0
			Replacement period (include moratorium)	Years	15
			Interest rate	(MCLR+2)%	9.00
		Equity component	Equity amount/ MW	Rs.Cr	2.88
			Normative RoE	%	14.00
4	Financial Assumptions				
		Depreciation	Depreciation rate for first 15 years		4.67
			Remaining tariff period		2.22
5	Working capital	For Fixed charges	O&M charges	Months	1
			Maintenance spare	% of O&M expenses	15
			Receivable for debtors	days	45
			Interest on working capital	(MCLR+3.5)%	10.50
6	Operation and Maintenance	O&M expenses (2019-20)	O&M COST 2020-21	Rs. Lakh/MW	24.37
			O&M expense escalation	%	3.84
			O&M COST 2021-22	Rs. Lakh/MW	25.31
7	Discount factor				8.30%
Generic Tariff - for 24 years without the benefit of accelerated depreciation			4.43	Rs/unit	
Accelerated depreciation			0.28	Rs/unit	
Generic Tariff for 24 years with the benefit of accelerated depreciation			4.15	Rs/unit	

