

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

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

OP No 46/2023

In the matter of : Petition seeking removal of difficulty in submitting monthly bill for the generated energy from Stage II (1x1.5) MW Iruttukanam SHP.

Petitioner : Sri. P D Nair, Managing Director
Viyyat Power Private Limited

Respondents : 1. Kerala State Electricity Board Limited,
2. Principal Secretary, Power Department
3. The Director, Energy Management Centre

KSEBL represented by : 1. Sri. Ajithkumar, K.N, Executive Engineer
2. Sri. Shine Raj, Asst: Executive Engineer

State Government represented by : Joint Secretary, Power Department,
Government of Kerala

Date of hearing : 25.07.2023, 02:30 PM

Order dated 01.12.2023

1. M/s Viyyat Power Private Ltd (hereinafter referred as M/s VPPL or petitioner) filed a petition on 16.05.2023 before the Commission with following prayers:
“
 - a. *Separate Import Export Energy meters of the required accuracy class is provided for both Stage I (2 X 1.5) MW and Stage II (1 X 1.5) MW projects. The Petitioner prays that the Hon'ble Commission may be pleased to allow at the end of every month the billing for the energy generated and supplied to the Grid from Stage I and Stage II projects as per the joint meter readings.*
 - b. *Alternatively, Since all the 3 generating Units – two of Stage I and one of Stage II – are all identical and the water conducting system is common for all the Units, the total generated energy every month is divided in to 3 equal parts, two parts for Stage I and one part for Stage II as there are two generators in Stage I and only one generator in Stage II and monthly bills are raised at the beginning of subsequent month for Stage I and Stage II and paid accordingly. The Hon'ble Commission may kindly observe that this is the most fair solution for KSEBL and the Petitioner which will also be in line with the Act 2003 enabling monthly billing for the energy supplied in the previous month.”*

2. Summary of the petition filed by M/s Viyyat Power Private Ltd is given below:

- (1) The State Government had allotted Iruttukanam SHP Stage-1 (3MW) to the petitioner M/s Viyyat Power Pvt Ltd through bidding route in the year 2004. The bid tariff was Rs 2.40/unit, with the yearly rate as follows;
 - Rs 1.08/unit from 03.06.2010 to 03.09.2010,
 - Rs 2.70/unit from 03.09.2010 to 03.09.2022
 - Rs 2.07/unit for the remaining period of the tariff period.
- (2) The petitioner has also signed an implementation agreement with the State Government on 10.12.2004. The petitioner had signed the PPA with erstwhile KSEB on 07.06.2007 for supplying the electricity generated from the project at the tariff derived through bidding process. The stage-1 project was commissioned on 04.11.2010.
- (3) Subsequently, as requested by the petitioner, the State Government vide the Order G.O (Rt) No. 11/2011/PD dated 12.01.2011 has given 'in principle approval' at the Company's risk and cost for installing an additional 1.5 MW at the same location as Stage-2 project. The petitioner has commissioned the Stage-2 project on 10.04.2012.

The Stage-2 project has been using the water from the same catchment area of Stage-1 project. Further, Stage-2 project was envisaged with the same weir and power tunnel and other water conductor system of the Stage-1 project. Considering these facts, the petitioner could complete the Stage-2 project within 10 months from the date of allotment, since this involves the construction of the Y piece connecting the penstock, power house to inhouse the additional capacity of 1.5MW, the machinery installation, and switchyard expansion etc.

- (4) This Commission vide Order dated 30.09.2011 in Petition No: OP 20/2011 has determined the tariff of the electricity generated from the Stage-2 project and also approved the methodology for raising the invoices for Stage-1 and Stage-2 projects. The relevant portion of the Order is extracted below;

"5. Order of the Commission

- 5.1** *The rates applicable for the first 11.92 MU shall be the tariff arrived at through the bidding route ie 240 paise per unit.*
- 5.2** *The rates applicable for the next 3.87 MU shall be the tariff fixed by the Commission: 294 paise per unit.*
- 5.3** *The generation in excess of the above shall be divided in the ratio 11.92:3.87 and the above two tariffs applied for the respective quantities.*
- 5.4** *KSEB and M/s Viyyat Power Private Limited shall sign a revised Power Purchase Agreement incorporating the above clauses after obtaining approval from the Commission."*

- (5) The petitioner, in the instant petition, has raised the issue that, the Order of the Commission dated 30.09.2011 does not enable the petitioner to raise monthly bill for the energy generated from Stage II project as required by the EA-2003. The petitioner has to wait till the end of each financial year to segregate the total energy generated between Stage I and Stage II in that financial year. Then the petitioner can raise the bill for the generated energy from Stage II project in that year. This prevents raising of bills for every month for the energy generated and supplied during that month.

In the present case KSEBL is not able to make the payment on time for the energy supplied from Stage II in the whole year 2022- 23, even when the bill is raised in April 2023.

Hence the petitioner requested that, the Commission may be pleased to simplify this procedure so that the developer is able to raise monthly invoices and KSEBL is able to check and pay, for energy supplied in a month at the beginning of the next month without waiting for the full year to elapse and avoid confusion in doing so.

3. KSEB Ltd on 20.07.2023 had submitted the detailed comments on the petition OP No:46/2023 filed by the petitioner, M/s VPPL. The summary of the comments of KSEB Ltd is given below;

- (1) Though the Commission has approved the tariff of the Iruttukanam Stage-2 project on 30.09.2011 in petition OP No. 20/2011, the petitioner is yet to sign PPA with KSEBL. However, KSEBL has been making payments to the petitioner for the electricity generated from Stage-2 as per the Order dated 30.09.2011 in petition OP No. 20/2011.
- (2) As per the TEFR, the design energy of Iruttukanam stage-1 is 11.92MU and that of Stage-2 project is 3.87MU per annum. However, the actual generation is much higher than the design energy for Stage-1 and Stage-2 projects. The details are given below.

Actual generation from Iruttukanam Stage-1 & Stage-2 since its CoD

Year	Total Generation (MU)	Stage I (MU)	Stage II (MU)
2013-14	23.064	14.044	9.020
2014-15	23.184	15.244	7.940
2015-16	24.827	15.857	8.970
2016-17	20.080	13.240	6.840
2017-18	24.829	14.799	10.030
2018-19	10.508	10.508	0
2019-20	19.158	12.548	6.610
2020-21	22.582	15.292	7.290
2021-22	26.036	17.126	8.910

The actual generation of Iruuttukanam Stage-1 and Stage-2 projects are much higher than the designed energy. This is due to the water from the catchment area of Sengulam Augmentation Scheme of KSEBL.

- (3) KSEBL submitted that, as per the Order of the Commission dated 30.09.2011 in petition OP No. 20/2011, it has been making payments to the petitioner as per the invoices raised by them. The petitioner has been raising monthly invoices for generation from Stage-1 and Stage-2 at the tariff applicable to Stage-1 initially. At the end of the financial year, the petitioner is submitting the supplementary bill for excess generation after reconciling the first 11.92MU at the tariff of Rs 2.70/unit applicable to stage-1 and the next 3.87MU at Rs 2.94/unit. The excess generation is apportioned among stage-1 & 2 in the ratio of 11.92:3.87, and the stage-1 & stage-2 tariff is applied to the respective quantities.
- (4) KSEBL further submitted that, even though the petitioner has not executed the PPA with KSEBL for stage-2 project, it has been promptly paying the electricity charges as per the invoice raised by the petitioner.

KSEBL further submitted that, during the year 2022-23 also, it had reimbursed the electricity charges for Stage-1 and Stage-2 as per the Order of the Commission dated 30.09.2011 in petition OP No. 20/2011.

- (5) KSEBL further submitted that, both the methods proposed by the petitioner is not as per the Order of the Commission dated 30.09.2011, and it may results additional liability to the licensee. KSEBL would have an additional liability of Rs 6.175 lakh per year as per the methodology-1 and the same would be about Rs 5.26 Lakh per year as per the methodology-2.

Considering the above reasons, KSEBL requested to reject the petition filed by the petitioner M/s Viyyat Power Pvt Ltd.

Hearing on the petition

4. The hearing of the petition was held on 25.07.2023 at the Court Hall of the Commission. Shri. P D Nair, Managing Director, VPPL appeared on behalf of the Petitioner. Sri. Ajith Kumar. K.N, Executive Engineer and Sri. Shine Raj, Asst. Executive Engineer presented the comments of the respondent KSEBL. Joint Secretary, Power Department, GoK, offered the comments on behalf of the State Government. The summary of the deliberations during the hearing is given below.

- (1) The petitioner has explained the background of filing the petition as detailed in the petition, which was summarised in the paragraph-2 of this Order above.

The petitioner further submitted that, the Order dated 30.09.2011 in petition OP No. 20/2011 does not enable the petitioner to raise monthly bills for energy generated from Stage II, as required by the Indian Electricity Act 2003. The petitioner has to wait till the end of each

financial year to know the total energy generated from Stage-1 and Stage-2 in that financial year. This prevents raising of final invoice for every month for the energy generated and supplied during that month from stage-2, and the petitioner has to wait for one full year for raising the energy bills for the energy supplied in that year.

In order to simplify and facilitate monthly invoice for energy supplied in each month from Stage II in the subsequent month itself, the petitioner prays the following;

“Since all the 3 Generating Units - two of Stage 1 and one of Stage II - are all identical and the water conducting system is common for all the Units, except the Penstock the total generated energy every month is divided in to 3 equal parts, two parts for Stage I and one part for Stage II as there are two generators in Stage I and only one generator in Stage II and monthly bills are raised at the beginning of subsequent month for Stage 1 and Stage II and paid accordingly. The Hon'ble Commission may kindly observe that this is the most fair and accurate solution for KSEBL and the Petitioner which will also be in line with the Act 2003 enabling monthly billing for the energy supplied in the previous month.”

(2) The respondent KSEBL has submitted the following during the hearing;

(i) KSEBL has presented the observation of the Commission under paragraph 4.5 (1st, 2nd and 3rd provisos) and paragraph -5 of the Order dated 30.09.2011 in petition OP No. 20/2011, which is extracted below.

“....determination of tariff for the electricity pumped out by the Machines in Stage 1 and the Machine in Stage 2 separately would be erroneous since the source of water is same for both the Stages. Hence the electricity pumped out from the project as a whole has to be priced in a judicious manner.

It can also be seen that the hydro storage or generation capability of the project is enhanced not due to the addition of one machine alone. As such new tariff cannot be applied for all the electricity generated from the new machine in a mechanical way. It has been reported that even without the installation of the 3rd machine, the Petitioner is generating electricity more than the designed capacity, obviously due to the reasons explained above. Hence a formula for dividing the total electricity generated from the project between the old tariff and new tariff will have to be devised.

The Petitioner had developed the existing plant (3MW) expecting an annual generation capability of 11.92 MU and installed the additional machine (1.5MW) expecting another annual generation capability of 3.87MU. But the project may be able to generate more electricity for some years, until the Sengulam Augmentation scheme of KSEB is completed. This electricity can not be attributed either to Stage 1 or Stage 2 alone. It would be fair to assume that this additional electricity is generated from the 3 machines in proportion to their capacity and can be priced accordingly.”

5. Orders of the Commission

5.1 The rates applicable for the first 11.92 MU shall be the tariff arrived at through the bidding route ie 240 paise per unit.

5.2 The rates applicable for the next 3.87 MU shall be the tariff fixed by the Commission: 294 paise per unit.

5.3 The generation in excess of the above shall be divided in the ratio 11.92:3.87 and the above two tariffs applied for the respective quantities.

5.4 KSEB and M/s Viyyat Power Private Limited shall sign a revised Power Purchase Agreement incorporating the above clauses after obtaining approval from the Commission."

- (ii) The above Order was issued by the Commission on 30.09.2011 in Petition OP No. 20/2011. The Stage-2 project was commissioned on 10.04.2012. Since then, the petitioner has been raising the monthly bills of the electricity generated from Stage-1 and Stage-2 and also raising the year end reconciliation through supplementary bills. KSEBL has been promptly making the payments to the petitioner till the year 2021-22, though the petitioner is yet to sign PPA for Stage-2. The petitioner has not raised any issue till the year 2021-22.
 - (iii) However, the present dispute raised during the year 2022-23, wherein the yearly tariff of Stage-1 was changed in September 2022 from Rs 2.70/unit to Rs 2.07/unit. However, the petitioner is yet to sign PPA for Stage-2 of Iruttukanam.
 - (iv) KSEBL stated that seeking modifications to the billing methodology without entering into a valid PPA lacks legal viability, since the petitioner has challenged the Order dated 30.09.2011 before the Hon'ble Supreme Court. The proposals presented by the petitioner are in direct contradiction to the existing Order issued on 30.09.2011 in OP No. 20/2011.
- (3) Joint Secretary, Power Department, GoK appeared on behalf of the State Government and submitted that, the State Government fully endorse the views of the KSEBL in the subject matter raised in the petition OP No. 46/2023.
 - (4) During the hearing, the Commission observed that, the petitioner filed appeal petition before the Hon'ble Supreme Court of India against the Order of the Commission dated 30.09.2011 in OP No.20/2011, it is still pending before the Hon'ble Supreme Court of India. Hence the Commission directed the petitioner to clarify whether the Commission can entertain such a petition or subjudice.
5. The State Government vide the letter dated 16.09.2023 informed that, the Government of Kerala fully endorse the stand of KSEBL in petition OP No. 46/2023 dated 16.05.2023 filed by M/s Viyyat Power Private Limited.

6. The petitioner has submitted additional affidavit on 25.09.2023, mainly on the difference in the invoice raised by the petitioner and the amount admitted by KSEBL for the electricity generated and supplied to KSEBL during the year 2022-23. The petitioner submitted that, it is more realistic to proportionate the energy generated in the ratio of MW capacity instead of design energy.

Regarding the clarification sought by the Commission, whether the Commission can entertain the petition, since the Order of the Commission dated 30.09.2011 in petition OP No. 20/2021 is pending before the Hon'ble Supreme Court, the petitioner submitted as follows;

"The matter lying before the Hon'ble Supreme Court is on the rate of Tariff applicable for the energy generated and supplied from Stage-II, and the not on the quantum of energy generated by Stage-II or deemed to be generated from Stage-II. The issue raised before the Commission is regarding the quantum of energy generated from the Stage-II or deemed to be generated from Stage-II, and not regarding the tariff determined by the Commission. The petitioner further submitted that, it is not sub-judice at all to decide the quantum of energy generated or deemed to be generated and supplied from Stage-II."

Analysis and Decision of the Commission

7. The Commission having examined in detail the petition filed by M/s Viyyat Power Private Ltd., counter affidavit of the respondent M/s KSEB Ltd, deliberations of the subject matter during the hearings held on 25.07.2023, the provisions of the Electricity Act, 2003, various Rules and Regulations in force, here by decided on the matter as follows;

8. In order to get clarity on the issues raised by the petitioner M/s Viyyat Power Pvt Ltd, the brief background of the Iruttukkanam SHP stage-1 (2x 1.5MW) and Iruttukkanam Stage-2 (1x 1.5 MW) is to be examined.

- (1) The State Government vide the order No. GO (Ms) No.16/04/PD dated 21.06.2004, had allotted the Iruttukkanam (3 MW) SHP at Idukki to M/s Viyyat Power Private Ltd. The allotment criteria was the lowest tariff rate per unit of electricity offered by the petitioner for sale to KSEB Ltd. The tariff quoted by M/s Viyyat Power Private Limited for the electricity generated from Iruttukkanam SHP (3 MW) to KSEB was;

- (a) @Rs 1.08/unit for the 6th year of the BOOT period.
- (b) @Rs 2.70/unit from 7th to 18th year of the BOOT period.
- (c) @Rs 2.07/unit from 19th to 30th year of the BOOT period.

Where, the BOOT period is 30 years from the date of allotment by the State Government.

- (2) The petitioner signed an 'Implementation Agreement' with the State Government on 10th December 2004. Further, the petitioner signed Power Purchase Agreement (PPA) with KSEB on 7th June 2007. Article

8 of the PPA specify the tariff payable by KSEB Ltd for the electricity generated and supplied to the State grid, which is extracted below.

"8.1 Tariff Period shall be reckoned from CoD of the first generating unit and thereafter shall be continued till the end of BOOT period.

8.2 The single part tariff shall be for two tariff periods as given below

a. Period I: 6th to 18th year of BOOT period.

b. Period II: 19th to 30th year of BOOT period.

For period I, the tariff shall be as given below(Outcome of the bid process)

Years	6*	7	8	9	10	11	12	13	14	15	16	17	18
Tariff (Rs/kWh)	1.08	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70

For period II, the tariff shall be Rs 2.07/kWh (Out come of the bid evaluation)

*Note: 6th year tariff is meant only for the months 70 to 72 (both months inclusive) from 03-09-2004, the date stipulated for signing of the Implementation Agreement."

- (3) As per the Techno Economic Feasibility Report approved by the State Government, the design energy of Iruttukkanam-Stage-1 (2 x 1.5 MW) is 11.92 MU. The Iruttukanam SHP (3 MW) declared COD on 04.11.2010.
- (4) As requested by the petitioner, the State Government vide the G.O (Rt) No.117/2011/PD dated 25.05.2011, granted permission to the petitioner to install additional Machine of 1.5 MW to the existing project, augmenting the existing capacity of 3 MW (2 x 1.5 MW) to 4.5 MW. It is clarified in the Government order that, the additional generating unit of 1.5 MW, it will not require any additional civil structure except the power house. The Company also informed the Government that, they are willing to take up the risk in case of water shortage once the water is diverted to KSEB's Sengulam Augmentation scheme. The Evaluation Committee constituted by the State Government recommended to grant sanction for setting up an additional unit of 1.5 MW on the condition that, any loss on account of this investment may not be factored into the pricing of power from the main unit.

The petitioner signed a Supplementary Implementation Agreement with the State Government on 22.09.2011, wherein the petitioner agreed that, the terms and conditions of the PPA to be signed with KSEB will be the same as that of the original PPA dated 07.06.2007, except for the tariff which shall be decided by the KSERC. It is further agreed in the Supplementary Implementation Agreement that, *the Company will not have any claim over the water from the catchment stream of the proposed diversion weir of the Sengulam Augmentation scheme and will not make any claim on account of that in future.*

- (5) The design energy of Iruttukanam Stage-2 project is 3.87 MU only. Iruttukanam Stage-2 (1.5MW) was declared commercial operation on 10.04.2012.
- (6) The Commission vide the Order dated 30.09.2011 in petition No. OP 20/2011, determined the tariff for the electricity generated from the Iruttukanam stage-II at Rs 2.94/unit, at the preferential tariff approved by

the Commission vide the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) (Second Amendment) Regulations, 2010 dated 22.11.2010.

9. As discussed above, the Iruttukanam Stage-1 and Stage-2 utilises the water from the same catchment area. Further, both the projects use the same weir and power tunnel etc. The design energy of Stage-1 is 11.92 MU, whereas the design energy of Stage-2 is 3.87 MU only, which is only 32% of the design energy of Stage-1.

However, the tariff of stage-1 and stage-2 project is totally different. The tariff for stage-1 is the tariff quoted by the bidder and the tariff of stage-2 is the tariff determined by the Commission.

Since the tariff for the Stage-2 is higher than that of Stage-1, the Commission vide the Order dated 30.09.2011 in Petition OP No. 20/2011 has evolved the following methodology to apportion the total generation at Iruttukanam (stage-1 & 2- 4.5 MW) among Stage-1 (2 x 1.5MW) and Stage-2 (1x 1.5MW).

“5. Order of the Commission

- 5.1*** The rates applicable for the first 11.92 MU shall be the tariff arrived at through the bidding route ie 240 paise per unit.
- 5.2*** The rates applicable for the next 3.87 MU shall be the tariff fixed by the Commission: 294 paise per unit.
- 5.3*** The generation in excess of the above shall be divided in the ratio 11.92:3.87 and the above two tariffs applied for the respective quantities.
- 5.4*** KSEB and M/s Viyyat Power Private Limited shall sign a revised Power Purchase Agreement incorporating the above clauses after obtaining approval from the Commission.”

10. Further, the Commission vide the paragraph 4.5 of the above Order dated 30.09.2011 in Petition OP No. 20/2011 has explained the reasons for approving such a methodology for apportioning the total generation among Stage-1 and Stage-2 as above, which is extracted below.

“4.5 As per the Techno Economical Feasibility Report (TEFR) submitted by the petitioner the Stage 1 of the project (2 X 1.5MW) has a catchment area of 21.45 Sq KM and design discharge of 3.31 cumecs from the weir to generate 11.92 MU of energy. Water utilizable shall be 47.4774 Mm³ per annum and PLF of 45.36% was available. From the hydrological studies it was found that water will be available from the same catchment area to the extent of 15 Mm³ to run another 1.5MW machine for 62 days fully and 70 days partially. This could generate 3.87MU annually. The PLF will be lesser. Thus the total requirement of water to the extent of 62.4774 Mm³ will be available from the catchment area of 21.45 Sq KM. In other words the water available from the catchment area will be drawn through a common penstock pipe and will be utilised for generating 11.92 MU by the existing machines and 3.87MU by the new unit. The total catchment area of Western Kallar river upto the weir of the Petitioner is 46.5 SqKM. Out of the above 28.5 SqKM will be diverted for use in the Sengulam Augmentation scheme of KSEB when the scheme is completed, thus leaving a balance of 21.45 SqKM for the Petitioner. But the Sengulam Augmentation scheme of KSEB

is, as usual, nowhere near completion. Hence the Petitioner will be able to utilise the full catchment area of 46.5 SqKM for a few more years. That is, the generation capability of the Petitioner's project will be much higher than the design levels for fairly long periods.

From the above it can be seen that determination of tariff for the electricity pumped out by the Machines in Stage 1 and the Machine in Stage 2 separately would be erroneous since the source of water is same for both the Stages. Hence the electricity pumped out from the project as a whole has to be priced in a judicious manner.

It can also be seen that the hydro storage or generation capability of the project is enhanced not due to the addition of one machine alone. As such new tariff cannot be applied for all the electricity generated from the new machine in a mechanical way. It has been reported that even without the installation of the 3rd machine, the Petitioner is generating electricity more than the designed capacity, obviously due to the reasons explained above. Hence a formula for dividing the total electricity generated from the project between the old tariff and new tariff will have to be devised.

The Petitioner had developed the existing plant (3MW) expecting an annual generation capability of 11.92 MU and installed the additional machine (1.5MW) expecting another annual generation capability of 3.87MU. But the project may be able to generate more electricity for some years, until the Sengulam Augmentation scheme of KSEB is completed. This electricity can not be attributed either to Stage 1 or Stage 2 alone. It would be fair to assume that this additional electricity is generated from the 3 machines in proportion to their capacity and can be priced accordingly.”

11. The petitioner and KSEB has been adopting the above methodology for raising the invoices and settling the tariff of the energy generated from both the Iruttukanam Stage-1 and Stage-2 project since the year 2011-12.

As per the details submitted before the Commission, the petitioner is raising the monthly bills for the energy generated from Stage-1 and Stage-2 at the tariff of Stage-1, i.e, @ Rs 2.70/unit. At the year end, the petitioner is apportioning the total generation among the Stage-1 and Stage-2 as per the Order of the Commission dated 30.09.2011 in petition OP No. 20/2011. The energy attributable to the Stage-1 is billed @Rs 2.70/unit and energy of the Stage-2 is billed at Rs 2.94/unit.

12. The above procedures of billing was continued from 2011-12 till the year 2021-22, without any dispute between the petitioner M/s Viyyat Power Pvt Ltd and the respondent KSEBL.

The Commission also noted that, as per the above methodology, the apportioning of the total energy among Stage-1 and Stage-2 was done at the year end only, and not done on monthly basis. However, since the difference between the tariff of Stage-1 and Stage-2 was only Rs 0.24/unit, (Rs 2.94/unit of stage-2 and Rs 2.70/unit of Stage-1), the petitioner has not requested to simplify the procedure for raising the invoices of Stage-2 at Rs 2.94/unit.

13. However, the tariff quoted by the petitioner for Stage-1, for the tariff period-II is Rs 2.07/unit only. As per the records, Tariff period-2 starts from 04.09.2022 onwards.

Accordingly, the tariff of electricity attributable to the Stage-1 is Rs 2.07/unit from 04.09.2022 onwards, and however the tariff of the Stage-2 project is continuing at Rs 2.94/unit. Thus there is difference of Rs 0.87/unit between the tariff of Stage-1 and Stage-2 project (Rs 2.94/unit of Stage-2 and Rs 2.07/unit of Stage-1).

If the petitioner continue with the methodology followed till the year 2021-22 for raising the invoices for Stage-1 and Stage-2, they have to wait until the year end to get the tariff of Stage-2 and may have cash flow issues.

14. The petitioner, in the instant petition requested before the Commission to simplify the procedure specified in the Order dated 30.09.2011 in petition OP No. 20/2011 for billing the energy of Stage-1 and Stage-2 so as to raise the invoices on monthly basis. The petitioner also suggested two methodologies as detailed in paragraph-1 above for raising the monthly bills of Stage-1 and Stage-2 of Iruttukanam SHP.

In the first methodology, the petitioner proposed to raise the invoices of Stage-1 and Stage-2 of the project based on the joint meter readings. In the second methodology, the petitioner proposed to divide the total generation into three equal parts, two parts is apportioned for Stage-1 and one part of Stage-2 citing that all the three units of the project are identical units of 1.5MW each. Further, stage-1 and stage-2 are using the common weir and water conductor system.

However, both the methodologies proposed by the petitioner is not acceptable to the Commission due to the reasons explained in paragraph 4.5 of the Order dated 30.09.2011 in petition OP No. 20/2011, which is extracted under paragraph 10 above.

The petitioner is also aware that, the design energy of Stage-1 is 11.92 MU, where as the design energy of Stage-2 is 3.87MU only. Considering the total design energy of 15.79MU (11.92MU of Stage-1 and 3.87MU of Stage-2), the contribution of Stage-1 is 75.50% of the total design energy, where as the contribution from Stage-2 is just 24.50% of the total design energy. Hence, if the methodologies proposed by the petitioner is accepted, it may results in undue advantage to the petitioner, and additional liability to the respondent KSEBL and its consumers. The methodologies proposed by the petitioner is also against the spirit and intention of granting permission for installing additional 1.5MW unit at Iruttukanam.

15. The Commission is of the opinion that, if the methodology approved by the Commission vide the Order dated 30.09.2011 in Petition OP No. 20/2011 for apportioning the total generation among Stage-1 and Stage-2 based on the design energy is extended to cover billing on monthly basis, along with the year end reconciliation, it could address the issues raised by the petitioner in fair and equitable manner.

In order to extent the above methodology to monthly basis, the month wise details of the design energy of both Stage-1 and Stage-2 is required. But the TEFR submitted by the petitioner for Stage-1 and Stage-2 of Iruttukanam SHP

had given only the design energy on annual basis, i.e, design energy of 11.92 MU for Iruttukanam Stage-1 and 3.87MU for Iruttukanam Stage-2, and it does not contain the month wise details of the design energy of both Stage-1 and Stage-2.

16. However, the actual month wise generation details of Iruttukanam Stage-1 and Stage-2 as per the invoice raised by the petitioner is available with the Commission for the years from 2012-13 to 2022-23 except during the year 2018-19. The details are given below.

Month wise generation of Iruttukanam SHP- Stage-1 (2 x 1.5 MW) (Actuals)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2019-20	2020-21	2021-22	2022-23	Average
Month	(in Million Units)										
Apr	0.12	0.25	0.11	0.34	0.19	0.13		0.28	0.43	0.60	0.27
May	0.02	0.12	0.35	0.44	0.32	0.10		0.36	1.07	1.74	0.50
Jun	1.40	2.22	1.16	1.53	1.73	1.12	0.02	1.22	2.21	1.95	1.45
Jul	2.32	2.63	2.54	2.64	2.62	2.54	1.80	2.35	2.14	2.65	2.42
Aug	2.29	2.61	2.63	2.56	2.63	2.64	2.53	2.50	2.42	2.69	2.55
Sep	2.18	2.53	2.54	2.34	2.16	2.54	2.29	2.51	2.05	2.47	2.36
Oct	2.14	2.12	2.50	2.35	1.01	2.47	2.27	2.41	2.48	2.26	2.20
Nov	1.14	1.11	1.48	1.39	0.55	1.66	1.62	1.86	2.29	1.52	1.46
Dec	0.02	0.05	1.09	1.19	0.56	0.37	0.99	1.01	1.32	1.04	0.76
Jan	0.04	0.08	0.62	0.57	0.17	0.38	0.53	0.70	0.69	0.86	0.46
Feb	0.03	0.18	0.29	0.20	0.09	0.22	0.19	0.16	0.08	0.27	0.17
Mar	0.05	0.06	0.31	0.16	0.24	0.03	0.20	0.05	0.20	0.24	0.15
Total	11.74	13.96	15.61	15.69	12.28	14.19	12.44	15.41	17.37	18.27	14.77

Month wise generation of Iruttukanam SHP- Stage-2 (1 x 1.5MW) Actuals)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2019-20	2020-21	2021-22	2022-23	
Month	(in Million Units)										
Apr	0.32	0.00	0.12	0.27	0.08	0.09		0.02	0.00	0.11	0.11
May	0.50	0.13	0.21	0.45	0.13	0.27		0.10	0.31	0.83	0.32
Jun	0.47	1.07	0.80	0.77	1.13	0.97		0.68	1.03	0.85	0.86
Jul	1.15	1.39	1.25	1.36	1.37	1.35	0.71	1.25	1.19	1.34	1.24
Aug	1.22	1.37	1.37	1.30	1.35	1.39	1.29	1.28	1.25	1.37	1.32
Sep	1.02	1.35	1.27	1.22	1.17	1.33	1.20	1.28	1.16	1.26	1.23
Oct	0.32	1.19	1.29	1.26	0.91	1.32	1.19	1.27	1.27	1.19	1.12
Nov	0.35	0.94	1.02	1.11	0.38	1.12	1.06	0.29	1.18	1.05	0.85
Dec	0.70	0.97	0.19	0.78	0.00	0.91	0.26	0.12	0.97	0.68	0.56
Jan	0.37	0.42	0.00	0.24	0.11	0.19	0.02	0.19	0.20	0.05	0.18
Feb	0.24	0.11	0.03	0.21	0.08	0.15	0.04	0.15	0.31	0.12	0.14
Mar	0.16	0.18	0.04	0.15	0.13	0.28	0.04	0.13	0.04	0.25	0.14
Total	6.81	9.10	7.57	9.14	6.84	9.37	5.80	6.76	8.91	9.10	8.07

17. Based on the monthly pattern of actual generation of Iruttukanam Stage-1 and Stage-2 projects, the monthly pattern of generation of Iruttukanam stage-1 and Stage-2 is arrived as detailed below. Based on the monthly pattern of generation, the Commission has apportioned the annual design energy of both

stage-1 and stage-2 projects on a monthly basis to arrive at a reasonable estimation of month wise design energy of both projects, as detailed below.

Monthly pattern of Design Energy- Iruttukkanam- Stage-1 (3MW)

Month	Avg. generation from 2012-13 to 2022-23 (except 2018-19)		Month wise design energy
	(MU)	(%) of total	(MU)
Apr	0.27	1.8%	0.22
May	0.50	3.4%	0.40
Jun	1.45	9.8%	1.17
Jul	2.42	16.4%	1.95
Aug	2.55	17.3%	2.06
Sep	2.36	16.0%	1.90
Oct	2.20	14.9%	1.78
Nov	1.46	9.9%	1.18
Dec	0.76	5.2%	0.62
Jan	0.46	3.1%	0.37
Feb	0.17	1.2%	0.14
Mar	0.15	1.0%	0.12
Total	14.77	100.0%	11.92

Monthly pattern of Design Energy- Iruttukanam- Stage-2 (1.5MW)

Month	Avg. generation from 2012-13 to 2022-23 (except 2018-19)		Month wise design energy
	(MU)	(%) of total	(MU)
Apr	0.11	1.4%	0.05
May	0.32	4.0%	0.16
Jun	0.86	10.7%	0.41
Jul	1.24	15.3%	0.59
Aug	1.32	16.3%	0.63
Sep	1.23	15.2%	0.59
Oct	1.12	13.9%	0.54
Nov	0.85	10.5%	0.41
Dec	0.56	6.9%	0.27
Jan	0.18	2.2%	0.09
Feb	0.14	1.8%	0.07
Mar	0.14	1.7%	0.07
Total	8.07	100.0%	3.87

18. The summary of the month wise design energy of Iruttukanam stage-1, Iruttukanam stage-2 is given in the Table below.

Month wise details of the Design Energy of Iruttukanan Stage-1 & Stage-2

Month	Stage-1 (3 MW)		Stage-2 (1.5 MW)		Total Stage-1 & 2	
	Design energy (MU) 'x'		Design energy (MU) 'y'		Design energy (MU)= 'x'+ 'y'	
Apr	x1	0.22	y1	0.05	z1	0.27
May	x2	0.40	y2	0.16	z2	0.56
Jun	x3	1.17	y3	0.41	z3	1.59
Jul	x4	1.95	y4	0.59	z4	2.55

Aug	x5	2.06	y5	0.63	z5	2.69
Sep	x6	1.90	y6	0.59	z6	2.49
Oct	x7	1.78	y7	0.54	z7	2.31
Nov	x8	1.18	y8	0.41	z8	1.59
Dec	x9	0.62	y9	0.27	z9	0.88
Jan	x10	0.37	y10	0.09	z10	0.46
Feb	x11	0.14	y11	0.07	z11	0.21
Mar	x12	0.12	y12	0.07	z12	0.19
Total	x	11.92	y	3.87	z	15.79

19. Based on the month wise design energy as above, the Commission decides to extent the methodology approved vide the Order dated 30.09.2011 in petition OP No. 20/2011 for raising the monthly invoices of Stage-1 and Stage-2, subject to the year end reconciliation, as detailed below.

- (1) For each month, provisional invoices shall be raised as follows.
 - the energy generated upto design energy from Stage-1 shall be billed at Rs 2.07/unit, i.e., the tariff as per the PPA dated 7th June 2007.
 - The energy generated in excess of design energy of Stage-1 and upto the design energy of Stage-2 shall be billed at @Rs 2.94/unit, i.e., the tariff approved by the Commission for Stage-2 vide the Order dated 30.09.2011 in petition OP No. 20/2011.
 - The energy generated and supplied to KSEBL in excess of the sum of the 'design energy of Stage-1 and Stage-2' for each month shall be divided in the ratio of 11.92:3.87, and the tariff applicable for the Stage-1 and Stage-2 above shall be applicable to the respective quantities.
- (2) KSEBL shall make the monthly payments to the petitioner for the invoice raised for the electricity generated from Stage-1 and Stage-2 by the petitioner as above. The above methodology for raising the invoice and settling the payment shall be followed for each month of the respective financial year from April to March.
- (3) Within one month after the end of the respective financial year, the petitioner shall reconcile the entire energy generated from the Iruttukanam Stage-1 and Stage-2, and raise the final invoices strictly as per the Order of the Commission dated 30.09.2011 in petition OP No.20/2011 and submit to the KSEBL along with supplementary claims/ credit request. The shortfall in revenue due to the petitioner/ excess amount claimed from the respondent, if any, shall be adjusted as follows.
 - (i) The shortfall in revenue, i.e, the difference between the final invoice and sum total of the monthly invoices, shall be claimed through a supplementary invoice and KSEBL shall pay the claim after due verifications.
 - (ii) The excess claim, if any, received by the petitioner based on monthly invoices, i.e, the difference between the 'sum total of the monthly invoices' and 'final invoice' shall be adjusted against the

invoices raised by the petitioner for the invoices for the electricity generated from Stage-1 and Stage-2 in the first month(s) of the subsequent financial year.

- (4) The petitioner M/s Viyyat Power Pvt Ltd and the respondent KSEBL may follow the above methodology for settling the energy generated and supplied to KSEBL during the year 2022-23, however the rate for energy supplied from Stage-1 from 01.04.2022 to 03.09.2022 shall be @Rs 2.70/unit and the rate for energy supplied from Stage-1 from 04.09.2022 till 31.03.2023 shall be Rs 2.07/unit.

The Commission is of the considered view that, with the above methodology, the difficulty raised by the petitioner for raising the monthly invoices for Stage-2 could be resolved.

Analysis and Decision of the Commission

20. The Commission having examined in detail the petition filed by M/s Viyyat Power Private Ltd., counter affidavit of the respondent M/s KSEB Ltd, deliberations of the subject matter during the hearings held on 25.07.2023, the provisions of the Electricity Act, 2003, various Rules and Regulations in force, here by Orders the following;

- (1) The prayers of the petitioner M/s Viyyat Power Ltd to approve the methodologies proposed by the petitioner as per the paragraph-1 above is rejected due to the reasons explained in paragraph-14 of this Order.
- (2) Approve the procedures for raising the monthly invoices and year end reconciliation and settlement of the energy generated and supplied to KSEBL from Iruttukanam Stage-1 (2 x 1.5= 3MW) and Iruttukanam Stage-2 (1x 1.5= 1.5 MW), as detailed in paragraph-19 above.

The petitioner M/s Viyyat Power Pvt Ltd and the respondent KSEBL shall strictly follow the procedures for raising the invoices and effecting the payments as per paragraph-19 above from the year 2023-24 onwards.

- (3) The invoices for the energy generated and supplied from Iruttukanam, Stage-1 (3MW) and Stage-2 (1.5MW) of the financial year 2022-23 shall be settled as per the procedures detailed in paragraph 19(4) above.

The 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