

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

O.P. No. 23 of 2013

**In the matter of approval of PPA to be signed with KSEB for drawal of
power from their 2x55kW mini hydel project**

Petitioner : The Secretary,
Mankulam Grama Panchayat, Idukki District.

Respondent : K.S.E.B.Ltd.

Present : **Shri T. M. Manoharan, Chairman**
Shri Mathew George, Member

Order dated 04.09.2014

Back ground :-

1. A mini hydel project at Pampumkayam near Mankulam Ward was conceived by the Munnar Panchayat in Idukki District during 2001 for harnessing the hydel potential of Melessery stream near Pampumkayam falls. After the formation of Mankulam Grama Panchayat, bifurcating the ward from Munnar Panchayat, implementation of project was taken up by Mankulam Grama Panchayat under the guidance of Energy Management Centre (EMC), Kerala. The project with 2 x 55kW machines was originally envisaged as a stand-alone generating station un-connected to the distribution grid of KSEB Limited. This stand-alone project was commissioned during the month of October 2004. As Mankulam Panchayat was not electrified, they were operating the project in a“stand-alone mode”, catering about 300 consumers in the Panchayat, as a community project by the people.

2. During 2006, K.S.E.B.Ltd.had constructed distribution lines from Chithirapuram to Mankulam under the RGGVY scheme. Since the consumers in Mankulam Panchayat wanted the better quality and stable supply, the consumers opted for supply from KSEB Limited. The generating units of the Pampumkayam mini hydel station did not have the

technical standards for synchronizing with the KSEB grid. Therefore the generation from the said unit had to be discontinued. Subsequently the distribution network owned by the Mankulam Grama Panchayat were taken over by KSEB Ltd., on mutually agreed terms and conditions. The power plant remained idle for some period due to various reasons, including issues relating to connectivity to KSEB grid. The Panchayat, with the technical support of EMC, renovated the station by replacing the generator and modifying the control equipment, so that it could be synchronized to KSEB grid. The formal inauguration of the renovated project was held on 10.05.2012. The generated power is to be purchased by the Respondent as per Renewable Energy Purchase Obligation (RPO) at the rates fixed by the Commission. Presently the power is being fed to KSEB grid as infirm power @ Rs. 2/ unit, as stated by the Petitioner.

3. The Secretary, Mankulam Grama Panchayat has filed petition for approval of Power Purchase Agreement (PPA) to be executed with the Respondent K.S.E.B.Ltd., for the drawal of power from this project to KSEB grid. The petitioner has remitted a petition fee of Rs. 10,000/-, as specially approved by the Commission. The petition was admitted as OP 23/13.

Hearing

4. Hearing was held on 10.7.2013, 30.10.2013 and 29.08.2014. Both the Petitioner and the Respondent were directed to initial the PPA and submit the same for approval of the Commission. As per interim order dated 1/11/2013, the Commission had directed the Respondent to complete all the tests and install all the metering equipments in terms of the draft PPA, so that commercial operation can be declared as stated in the letter no. C.P./Plg.III/Mankulam/2012/303 dated 20.9.2012 of KSEB Limited, addressed to the Director, Energy Management Centre. The relevant portions of the said letter is extracted below:

Quote:

“.....The existing policy guidelines for the development of small/mini hydel projects are as follows:

1. The developer has to execute an implementation agreement with the Government of Kerala for implementing the project on build, own, operate and transfer (BOOT) basis. Upon the expiry of the BOOT period, the developer should transfer the project with its facilities to the Government free of cost.

2. *After completing all the work of the project, the machines have to undergo performance test for showing its capacity, which is precondition for declaring the commercial operation of the project.....”*

Unquote:

5. The Respondent, K.S.E.B.Ltd. has submitted that the draft PPA in respect of the 110 kW Mankulam project is duly initialed by both the parties. All the terms and conditions of the same have been agreed to. The tariff has to be fixed based on the declared date of commercial operation.

6. The Petitioner submitted that this Mini Hydel Project has been executed by the Mankulam Grama Panchayat and the revenue earned from the project is to be utilised for the development of the Panchayat itself. The Panchayat is situated in a remote hilly terrain, surrounded by forests. He has submitted that considering the fact that such small run off the river projects would be able to operate in optimal capacity only during rainy seasons and the plant load factor would be very low, promotional tariff may be allowed while approving the power purchase agreement.

7. In the hearing on 30.10.13, K.S.E.B.Ltd. has submitted that the project has not so far been commissioned, as there were some more tests to be completed and metering equipment had to be installed. The Commission instructed the Respondent to submit the details of successful completion of all the mandatory tests, so that the commercial operation of the project can be declared. In response to this, the Respondent has submitted on 07.05.2014, that the commercial operation has been declared by KSEB Limited with effect from 03.08.2012, the date on which the initial reading was taken by the Assistant Engineer of KSEB Limited. The Commission sought further clarifications from KSEB on the following issues:

1. Who is the authority to declare commercial operation
2. What are the pre-requisites for declaring the commercial operation
3. Was the commercial operation declared by the competent authority after completing the prescribed tests and satisfying about the performance parameters.

8. For the above queries KSEB submitted that ,

“ K.S.E.B. or any other independent agency authorised by Govt. has to issue a certificate of completion of the project, pursuant to the performance tests demonstrated by the company, before such agency. Such performance test will be considered successful, if the project operates for a period of 14 days with minimum one day continuous operation at

90% nominal capacity or above. If the tests could not be conducted by the company, due to non-availability of water, K.S.E.B. Ltd. shall issue a provisional certificate for carrying out the possible tests, with the available water. It is also submitted by the K.S.E.B.Ltd. that normally performance tests are conducted along with the first time synchronisation of the machines. In the instant case, synchronisation was done without formal notice for doing the performance tests. It is further submitted that on different dates on or after synchronisation, officials of K.S.E.B.Ltd. have inspected the plant and ensured safe operation of the project. As the machines are in satisfactory continuous operation from 03.08.12 till date, it was felt that another test to verify the performance was totally unnecessary. "

9. The Full Time Directors of K.S.E.B.Ltd. in their meeting on 28.03.2014 has decided to consider 03.08.12, the date from which the machines have been on continuous operation, as the deemed Date of Commercial Operation (CoD). The following aspects were also seen discussed in the Board Order.

".... As the required meters were not readily available in the market, replacement of the meters could be done only on 04.11.2013. The initial reading (on the non- standard metering system) was taken by the concerned Asst. Engineer on 03.08.2012 and further readings taken regularly. The team of Engineers designated for authorising connectivity (viz., Dy. Chief Engineers, Electrical. Circle, Thodupuzha and System Operation Circle, Kalamassery of K.S.E.B.Ltd. and a representative of Energy Management Centre) in their sitting on 26.02.14, has recommended to consider 03.08.12 as the CoD."

Analysis and Decision of the Commission:

10. Mankulam mini hydel project has been constructed by the Petitioner Grama Panchayat in a very remote forest area. The prayer in the petition is for approval of the PPA, for which the tariff applicable to the project has to be determined by the Commission. Barring, a few corrections to be made, the terms and conditions in the draft PPA are accepted and initialed by both the parties.

11. The Commission has issued the following regulations determining terms and conditions for procurement from renewable energy sources. The tariff applicable to small hydroelectric projects with installed capacity less than 5MW are given below:

Name of Regulation	Date of effect	Tariff Rs./unit
KSERC(Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2006	04.07.2006	2.44
KSERC(Power Procurement from Renewable Sources by Distribution Licensee)(2 nd Amendment) Regulations, 2010	22.11.2010	2.94
KSERC(Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013	01.01.2013	4.88

As per Clause 5(2) of KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 the tariff of Rs.4.88/Kwh shall be applicable only for the projects commissioned or synchronised on or after 01.01.13. Thus the tariff applicable to Mankulam mini hydroelectric project is dependent on the date of commercial operation.

12. As per sub clause (g) of Clause 1.0 of KSERC (Power procurement from Renewable Sources (distribution licensees) Regulations, 2013,

“Date of Commercial Operation (CoD) shall mean with respect to each generating unit, the date on which such generating unit marks entry into commercial service and with respect to the project, the date on which the project marks commercial operation pursuant to the performance tests demonstrated successfully by the developer before the Board, meeting the specified parameters.”

13. It is submitted by the Respondent that the machine had been synchronised on 03.08.2012 with the technical support of EMC. Normally, the performance tests are done at the time of synchronisation of the machines with the grid. On 12.10.2012, the Chief Engineer (Corporate Planning), K.S.E.B.Ltd. convened a meeting to sort out the issues related with the synchronisation of the project. The Dy. Chief Engineer, Electrical Circle, Thodupuzha and the Executive Engineer, TMR Division, Pallom were instructed to replace the existing non-standard metering equipment with a standard one. It was also directed that a team comprising of Dy. Chief Engineer, System Operation Circle, Kalamassery, Dy. Chief Engineer, Electrical Circle, Thodupuzha, Executive Engineer, TMR Dn. Pallom and a representative of EMC shall visit the Project and make a recommendation to the Board for authorising connectivity.

14. The Respondent had further submitted that, *“as the required meters were not readily available in the market, the replacement of the metering system could be*

accomplished only on 4.11.2013. However, the initial meter reading (on the non-standard metering system) was taken by the Asst. Engineer, Chithirapuram and the meter was sealed on 3.8.2012. From this date onwards energy is being continuously made available from the project and monthly readings taken regularly.” The team of officers as mentioned in para 13 above in their meeting on 26.02.2014 had recommended to consider 03.08.2012 as the Commercial Operation Date.

15. The Commission has examined all the aspects in detail. In the hearing on 30.10.13, the Respondent had taken a position that the project was not so far commissioned as there were some more tests to be completed and standard metering equipment were to be installed. It could be seen that only after the directions contained in the daily order of the Commission dated 01.11.2013, the team of officers had met and made their recommendation to consider an anterior date as CoD. Subsequently the Respondent changed their stand and informed the Commission about their decision to deem 03.08.2012 as CoD making the Petitioner eligible only for the lower tariff of Rs. 2.94 per unit.

16. KSEB itself in their letter no. CP/Plg.III/Mankulam/2012/303 dt..20.9.2012, addressed to the Director, Energy Management Centre had made it abundantly clear that performance test for showing its capacity is a precondition for declaring the commercial operation of the project. Admittedly by the KSEB Limited, the required performance test which were pre-conditions for the declaration of commercial operation of the project had not been conducted even as on the date of hearing on 30.10.2013. The directive of the Commission in the interim order dated 1/11/2013 to complete all the required tests necessary for declaring the CoD was given in the light of this position taken by the KSEB Limited. During the earlier hearings held on 10/7/2013 and 30/10/2013 KSEB Ltd. had not taken a stand that the project was already Commissioned and the date of commercial operation is to be taken as 03.08.2012. As admitted by the respondent, the metering system was replaced only on 04.11.2013. Further the Chief Engineer (Corporate Planning), K.S.E.B. Ltd. convened a meeting on 12.10.12 wherein it was directed that a team comprising of Dy. Chief Engineer, System Operations Circle, Kalamassery, Dy. Chief Engineer, Electrical Circle, Thodupuzha, Executive Engineer, TMR Division, Pallom and a representative of EMC shall visit the project and make a recommendation to the KSEB Limited for authorising connectivity. This Committee had its meeting only on

26.02.2014 after a delay of more than one year. It is not clear, whether or not this team has ever visited the project or carried out the performance tests at any time. KSEB Limited in their submission dated 24.07.2014 has stated that “on different dates on or after the synchronization, KSEB Limited officials have checked and ensured the safe operation of the project. As the machines have been in satisfactory continuous operation from 03.08.2012 till date another test to verify its performance was totally unnecessary”. Thus the meeting of the designated team without visiting the project and its recommendation without conducting the performance test to deem the CoD as 03.08.2012 appears to be only an attempt to obtain a decision favourable to the Licensee. It is stated in the Order No. B.O. (FTD) No.1060/2014 (CP/PIg.III/Mankulam/2013-14)dated 28/3/2014 of KSEB Limited that “to declare the CoD after the tests and installation of proper metering system, has the consequence that if the CoD falls on any date after 1.1.2013 shall automatic accredit the project for a tariff of Rs.4.88”. In this regard it is pertinent to note that the committee of officers to conduct performance test and to recommend on connectivity to the grid of KSEB Limited was unilaterally fixed by the Chief Engineer (Corporate Planning) of KSEB Limited and the said committee had no representative from the project developer namely Mankulam Grama Panchayat. Usually the commercial operation is declared by the project developer after successful conduct of performance test and demonstration of declared capacities. The performance test and demonstration of capacities have to be jointly witnessed by both the parties. Here the KSEB Limited in the capacity of purchaser of energy, has constituted a team of their own technical officers and decided to declare commercial operation of the project of Mankulam Grama Panchayat from an anterior date, contrary to the stand taken by KSEB Limited on earlier occasions in writing and during the hearing before the Commission. From this it is clear that the decision of the Licensee to ante date the CoD is only for depriving the Mankulam Grama Panchayat of the promotional tariff applicable to the projects of which CoD is on or after 01.01.2013. Hence the Commission views that the declaration of the CoD can only be on or after 26.02.2014, the date of recommendation by the designated team.

17. As the draft of the agreement is prepared before the re-vesting of the assets and liabilities of the erstwhile KSEB in the newly formed company namely K.S.E.B.Ltd, changes have to be made in the PPA to suit the present legal status of KSEB Limited. As

per Article 4.7 in the draft PPA, “*KSERC shall declare the CoD, considering the proposal and result of the performance test furnished by the co-ordination committee.*” Since KSERC is not the authority to declare commercial operation of the project, Article 4.7 of the draft PPA has to be modified in view of the observations and decision of the Commission in para 16.

Orders of the Commission

1. The tariff for the Mankulam mini HEP shall be Rs.4.88 as specified in KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 in view of the findings in paragraphs 16 and 17 above.
2. The period of PPA shall be 35 years as specified in Regulation 6 of KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013.
3. The draft PPA in respect of Mankulam mini HEP, submitted by the Petitioner Mankulam Grama Panchayat duly initialed by KSEB Limited is approved subject to the observations and modifications in this order.
4. Petition is disposed of accordingly.

Mathew George
Member

T.M.Manoharan
Chairman