

**KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM**

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

OP No. 27/2013 and OP No 24/2012

PETITION IN THE MATTER OF

**Determination of project specific tariff for Karikkayam Small Hydel Project
(Ayyappa Hydro Power Ltd.) (3 x5 MW) – considering controlled release from
Sabarigiri HEP.- and execution of PPA**

Common Order Dated : 1st November 2014

OP No 24/2012

Petitioner M/s Ayyappa Hydro Power Ltd
Versus
Respondent Kerala State Electricity Board Ltd

OP No 27/2013

Petitioner Kerala State Electricity Board Ltd
Versus
Respondent M/s Ayyappa Hydro Power Ltd

1. Kerala State Electricity Board Limited, hereinafter referred to as 'KSEB Ltd', has filed the Petition No.OP-27 on 4/7/2013 requesting the Commission to fix a project specific tariff for the energy generated from Karikkayam Small Hydro Electric Project (15 MW) and supplied to KSEB Ltd.
2. The Respondent in the above petition is M/s Ayyappa Hydro Power Ltd., who is the owner of Karikkayam Small Hydro Electric Project. M/s Ayyappa Hydro Power Ltd. had also filed a Petition No.OP.24/12 dated 9/3/2012 before the Commission praying for approval of draft PPA for sale of power to KSEB Ltd from Karikkayam 15 MW SHP. In Article 8.2 of the draft PPA it was stated that the

tariff shall be as decided by Kerala State Electricity Regulatory Commission. In the interim Order dated 04-07-2012 in OP No 24/2012, the Commission had directed the petitioner to submit PPA after discussing it with KSEB Ltd and to file a tariff proposal.

3. The petition filed by KSEB Ltd was admitted by the Commission and posted for hearing on 5/09/2013. Accordingly the hearing was conducted on 5/09/2013 wherein both the petitioner and the respondent had submitted their arguments.
4. M/s Ayyappa Hydro Power Ltd filed a petition on 14-05-2014 requesting that KSEB Ltd shall be directed to enter into power purchase agreement with the M/s Ayyappa Hydro Power Ltd for a period of 13 years at a tariff rate of Rs 4.16/unit subject to final outcome of OP No 27/2013.
5. While the above petitions were under consideration of the Commission KSEB Ltd vide their letter No KSEB/TRAC/Karikkayam/2014-15/1313 dated 19-05-2014 submitted that KSEB Ltd is agreeable to provisionally adopting the generic tariff of Rs 4.16/Unit for the project as approved by the Commission for SHP's having installed capacities of 5 MW and above vide the KSERC(Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 dated 01-01-2013. This was subject to the condition that 'once the project specific tariff is approved by the Commission after ascertaining the actual CUF and project cost , the same may be made applicable with retrospective effect from the date of COD and the excess payment by KSEB Ltd, if any, may be allowed to be recovered from the respondent in subsequent monthly invoices.

Prayers

6. Prayer in the petition No.OP.24/12 dated 9/3/2012 of M/s Ayyappa Hydro Power Ltd. is as follows

You are requested to give your concurrence and forward the same to Kerala State Electricity Board for execution of power purchase agreement.

7. The prayers in the petition OP-27 dated 4/07/2013 of KSEB Ltd are given below:
 - (1) The tariff of Karikkayam Small Hydro Electric Project may be determined by adopting the capacity utilization factor as 50.6% considering the controlled release benefit of Sabarigiri Project. The other financial parameters of the project may be adopted as per KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013.
 - (2) The developer may be directed to enter into PPA with KSEB Ltd for supplying the power at the tariff determined by the Commission for the entire "BOOT PERIOD" of 30 years instead of "tariff period of 13 years" prescribed in KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013.
8. The prayers in the petition dated 15-05-2014 of M/s Ayyappa Hydro Power Ltd are as follows

- (1) Direct respondent to enter into a Power Purchase Agreement with the petitioner for a period of 13 years at a tariff rate of Rs 4.16/Unit subject to final outcome of O.P No 27/2013.
- (2) Direct respondent to pay the difference in price of Rs 1.82/Unit (difference between Rs 4.16/Unit and Rs 2.34/Unit) with interest for all units of power supplied till date subject to final outcome of O.P. No 27/2013
- (3) Direct the respondent to purchase power in future at the rate of Rs 4.16/Unit subject to final outcome of O.P. No 27/2013, and
- (4) Pass such further or other orders as this Hon'ble Commission may deem fit and proper in the facts and circumstances of the case and thus render justice.

Hearing of Petition

9. The main contentions and grounds submitted by the petitioner KSEB Ltd in its petition No O.P No 27 and during the hearing are as stated in paragraphs 8, 9, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26 of the petition which are quoted hereunder:

“8. As per the Small Hydel Policies notified by the State Government till date, all the IPPs have to supply electricity generated from the SHPs to KSEB at the tariff approved by the Hon. Commission. Hence as a major distribution licensee of the State, adopting uniform generic levelised tariff for all the SHPs irrespective of the CUF may result in passing on the burden to the consumers of KSEB. In this matter KSEB may submit the following for the kind consideration of the Commission.

- (i) As per the regulation, the full fixed cost is allowed to recover at the CUF of 30%.*
- (ii) However, if the CUF of a power plant is proven to be higher than the normative CUF, the annual fixed cost recovery allowed will become much higher than the annual fixed cost recovery at the normative CUF of 30%. There is no mechanism to pass on the part of such benefit over and above the 'normative annual fixed cost permissible' on account of higher CUF to the ultimate consumers of the State.*
- (iii) The tariff norms approved by the Hon. Commission from time to time shall be the basis for tariff determination for the renewable IPPs in the State and KSEB has to procure power from such generators at the rate approved by the Hon. Commission based on the tariff norms.”*

“9. The State Government has been taking initiatives for promoting Small Hydel Projects in the State. The State Government vide G.O. (MS) No.5/2006/PD dt 17/3/2006 and vide G.O. (P) No.

25/2012/PD dated 03//10/2012 notified the policy guidelines for developing Small Hydro Projects through IPP route. As per the clause 17(n) of the policy guidelines 2006 and also as per the clause 6.6 of the Kerala Small Hydro Policy 2012, the Small Hydro Power Projects utilizing the controlled release of water from the existing hydro and / or irrigation projects shall be reserved for development by KSEB. A copy of the SHP Policy 2006 and SHP Policy 2012 is marked as Annexure 1 (a) and Annexure 1(b).”

“17. M/s AHPL executed the implementation agreement with Government of Kerala on 15/6/2009 for execution and operation of Karikkayam project with installed capacity of 15MW on BOOT basis. The salient features of the Implementation Agreement are submitted below.

1. As per the article 2.2 of the Implementation Agreement, the BOOT period is valid up to a period of 30 years from the date of commissioning of the project.
2. Schedule-E of the Implementation Agreement stipulates that signing of PPA with KSEB is a pre-requisite for execution of the project among the other 9 conditions specified therein.
3. As per the original Government order on allocation of Karikkayam SHP to M/s. TECIL (G.O.MS.No.9/94/PD dated 19/5/1994), Government had ordered that all the Government rules and orders relevant to private power generation shall be observed for this project also.
4. As per the then prevailing Government policy on allotment of small hydro projects as IPPs, the developer has to supply electricity to KSEB at the tariff determined by Hon. Commission during the entire BOOT period.
5. As per clause 4.2.1 of the Implementation Agreement, M/s AHPL has to prepare a fresh Detailed Project Report. Accordingly, M/s AHPL has finalized the DPR during December 2010. The summary of the DPR is enclosed as Annexure -2.”

“18. As per the DPR, the project is proposed to be completed in two phases. In phase-1, output from the power plant is contemplated at 3 x 3 .3MW (at 50.6% PLF) for a reservoir level up to EL 42.5m with an annual generation of 43.6MU and in phase-II, operation of the power plant is contemplated for a reservoir level up to EL 49m at 3 X 5MW with an annual generation of 66.6MU at 50.6% PLF. However during the course of TEFRR evaluation process, M/s AHPL confirmed that they would install 3 machine of 5MW capacity each in phase-I itself, but with lower power output at 3.3MW for each unit i.e. with EL of 42.5m.

In phase-II, the head water level would be raised to 49m, thereby the output of each unit would increase to full load i.e. 5MW each.”

“19. As detailed above, as per the DPR, the capacity utilization of both phases shall be 50.60%. Further, as per the DPR, the energy selling rate for phase-1 is estimated at Rs.3.05 per unit and that for Phase-II is Rs.2.98 per unit and for the combination of Phase-I and Phase-II, the levelised generation cost is Rs.2.93 per unit (refer page23, and 25 of the DPR details are given as Annexure-2). As against the same, the generic tariff as per the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 for SHP having installed capacity more than 5 MW is Rs.4.16 unit.”

“20. As submitted earlier, the Karikkayam HEP receives controlled discharge from Sabarigiri Hydro Electric project via Kakkad HEP and eventually via Ullunkal HEP. Karikkayamis one of the two small HE projects identified by KSEB between Kakkad PH and Maniyar barrage on river Kakkad. The tail water of Sabarigiri Power House of KSEB and inflow from the catchment of Kakkad river downstream of Sabarigiri power house is discharged into Kakkad river itself. Thus Karikkayam SHEP utilizes the discharges from Sabarigiri HEP and Kakkad HEP of KSEB mainly for the generation.”

“21. As explained above, the higher CUF of the Karikkayam HEP and its competitive tariff arrived by the developer as detailed under paragraph 18 above is on account of the controlled release from KSEB’s Sabarigiri HEP.”

“22. It is further submitted that, the benefit of the controlled release is an additional benefit available to the M/s AHPL for Karikkayam project compared to other SHPs allowed as IPPs as per the policy guidelines notified by the State Government during the year 2006 and 2012.”

“23. Since the Sabarigiri HEP of KSEB was commissioned during the period between 1955 and 1960, the actual generation during the last 53 years and the tail-race discharge is readily available and hence the CUF of the plant can be realistically estimated. The developer has done the generation potential studies based on the actual tailrace discharge from Sabarigiri project. Hence, the CUF of 50.60% estimated by the developer seems to be realistic.”

“24. As per the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 the total annual fixed cost only required to be recovered from KSEB. Since the CUF of the plant is much higher, the levelised tariff for the tariff period from the date of COD will have to be much less than the

generic levelised tariff prescribed by the Hon. Commission as per the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013.”

“25. As submitted earlier, since the Pamba and Kakki reservoir of the Sabarigiri HEP and associated appurtenances are developed at the cost of KSEB and public exchequer, the benefit of controlled release over and above the ‘annual fixed cost recovery’ permissible as per the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 may be passed on to the consumers of the State in the form of reduction in tariff. Hence the developer may be directed to enter into PPA with KSEB for supplying power at the tariff determined by the Hon. Commission for the entire BOOT period of 30 years instead of the tariff period of 13 years prescribed in the KSERC (Power Procurement from Renewable sources by Distribution Licensee) Regulations, 2013.”

“26. It is further submitted that, while doing so, KSEB does not intend to reduce the cash flow to the developer, i.e., the annual fixed charges permissible, but only intends to pass on the additional profit over and above the RoE permitted as per the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013, to the ultimate consumers of the State of Kerala.”

10. In the written statement of defence, M/s Ayyappa Hydro Power Ltd submitted that it has incurred capital expenditure much more than what has been prescribed normatively in the KSERC (Power Procurement from Renewable Sources by Distribution Licensees) Regulations 2013. The respondent has further contended that it is eligible for a tariff which is higher than the normative tariff specified in the above Regulations. The main contention and grounds raised by the respondent are available in the averments in paragraphs 2, 3, 4, 8, 14, 15, 16, 17, 18, 19, 21, 22, 23 and 34 of the written statement which are quoted hereunder:

“2. In 1994, the Government of Kerala allotted the Karikkayam Small Hydro Project to M/s Travancore Electro Chemical Industries Ltd. (TECIL) as a captive power project (GO (MS) No.5/94/PD dated 25/4/1994 and GO (MS) No.9/94/PD dated 19/5/1994). The project was later converted into the Independent Power Project Category, based on a request from TECI (vide GO (Rt) No.465/05/PD dated 19/12/2005 and GO (Rt) No.9/06/PD dated 11/1/2006). In 2006, the Karikkayam SHP was transferred to AHPL for execution and operation of the project for a period of 30 years from the date of commissioning the project. AHPL entered into an Implementation Agreement with the Government of Kerala on 15/6/2009 for execution and operation of Karikkayam project with installed capacity of 15 MW on BOOT basis. The period of

operation was to be for thirty years from the date of commissioning of the project as per the conditions in GO (MS) No.5/06/PD dated 17/3/2006. The salient features of the Implementation Agreement are listed below:

- As per Article 2.2 of the Implementation Agreement, the BOOT period is valid up to a period of 30 years from the date of commissioning of the project.
- Schedule-E of the Implementation Agreement stipulates that the signing of the PPA with KSEB is a prerequisite for execution of the project among the other 9 conditions specified therein.
- As per the original Government order passed in relation allocation of the Karikkayam HP to M/s TECIL (GO (MS) No.9/94/PD dated 19/5/1994), the Government had ordered that all the Government rules and orders relevant to private power generation shall be observed for this project also.
- As per the then prevailing Government policy on allotment of small hydro projects as IPPs, the developer has to supply electricity to KSEB at the tariff determined by Hon. Commission during the entire BOOT period.”

“3. In 2013, the Hon. Commission vide notification No.442/CT/2012/KSERC dated 1/1/2013 notified the 2013 Regulation which specifies the various norms for fixation of tariff for renewable projects including the Small Hydel Projects. The 2013 Regulations fixed the general levelised tariff for Small Hydel Projects having installed capacity between 5 MW and 25 MW at Rs.4.16 per unit (Sub-clause 2 of Regulation 6 of the 2013 Regulations). The tariff was to apply to all projects commissioned on or after 01/01/2013 for the entire period of 13 years from the date of Commercial Operation, and the individual developers need not obtain specific approval from the Commission for the tariff applicable to their projects.”

“4. The Petitioners contend that the Commission adopted a Capacity Utilization Factor (hereinafter referred to as “CUF”) of 30% to determine the general levelised tariff. It has also been stated in the petition that the financial norms ensure recovery of ‘fixed cost’ invested in the project and a reasonable return on the investment at the weighted average RoE at 22.86%. The Petitioners further contend that since the “Annual fixed cost per MW” allowed to all SHP developers in the State during the control period 2013-14 is the same, irrespective of their CUF, the annual fixed cost recovery for developers with a CUF higher than 30% will be higher than the annual fixed cost permissible as per the 2013 Regulations. The Petitioners argue that adopting a uniform tariff ignoring the individual CUF of each project may result in passing on the burden

to the consumers of KSEB. Thus their averment is that the tariff paid per unit to such developers will have to be less than the general levelised tariff based on a CUF of 30%.”

“8. The Petitioner’s claim is baseless and is liable to be dismissed for the following reasons.

- (i) The Tariff should be determined only on the basis of the actual cost of generation and any other means of determining tariff is contrary to the Electricity Act, 2003.
- (ii) Assuming though not admitting that tariff need not be based on actual cost of generation, the financial criteria of the 2013 Regulations must be applied as a whole. The petitioner cannot choose to apply the criteria set out in the 2013 Regulations selectively i.e. criteria favourable to it and ignore actual in relation to all other criteria.

Each of these issues is discussed individually.

The tariff should be determined only on the basis of the actual cost of generation and any other means of determining tariff is contrary to the Electricity Act, 2003.

- (i) The statutory scheme for tariff determination is as follows:
Section 62 of the Electricity Act, 2003 (the “Act”) states:
“i. The Appropriate Commission shall determine the tariff in accordance with provisions of this Act for:
(a) Supply of electricity by a generating company to a distribution licensee:

Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity.

- (b) Transmission of electricity;
- (c) Wheeling of electricity;
- (d) Retail sale of electricity.

Provided that in case of distribution of electricity in the same area by two or more distribution licensees, the Appropriate Commission may, for promoting competition among distribution licensees, fix only maximum ceiling of tariff for retail sale of electricity.

- ii. The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.

iii. The appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

iv. No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.

v. The Commission may require a licensee or a generating company to comply with such procedures as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.

vi. If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.”

“14. The Petitioner submits that the Regulations contemplate fixing of the tariff at a maximum of Rs.4.16 per unit for a period of 13 years. Such provision, if considered to be mandatory, blatantly violates the principles set out above. It not only takes away the right of the Respondent to apply for a tariff determination every year, but also ignores the principles of tariff determination set out in the Act. The principles set out above clearly show that setting a uniform upper limit for the tariff for all applicants, irrespective of the facts applicable to each of their projects, is not contemplated by the provisions of the Act. The tariff set out in the Regulations can therefore only be treated to be an indicator of the tariff that this Hon. Commission must fix if it is determined that the facts that relate to a particular project are in line with the assumptions made in the Regulations.”

“15. In this regard, the Respondent submits that the Supreme Court has, in numerous cases, held that rules framed contrary to a statutory enactment are void. The Supreme Court, in General Officer Commanding in Chief v. Subhash Chandra Yadav: AIR 1988 SC 876, summed up the position of law as follows:

“It is well settled that rules framed under the provisions of a statute form part of the statute. In other words, rules have statutory force. But before a rule can have the effect of a statutory provision, two

conditions must be fulfilled, namely, (1) it must conform to the provisions of the statute under which it is framed; and (2) it must also come within the scope and purview of the rule making power of the authority framing the rule. If either of these two conditions is not fulfilled, the rule so framed would be void.”

“16. A similar stand was adopted in many other cases including Benoy Krishna v. State of West Bengal: AIR 1966 Cal 429 and State of Madhya Pradesh v. A.K. Jain: AIR 1958 MP 162. On this basis, the Respondent submits that if the Regulations are treated to be mandatory, the Regulations would fall foul of Section 61 and 62 of the Act. Consequently, the Applicant submits that this Hon. Commission must treat the Regulations to be directory in nature so as not to render the Regulations unconstitutional.”

“17. In the event the Regulations mandatorily apply and the tariffs fixed in the 2013 Regulations are considered to be not merely directory, the 2013 Regulations would be violative of Article 14 of the Constitution on the basis that the classification made between projects commissioned prior to the 2013 Regulations and post the 2013 Regulations would be arbitrary and without any nexus to the object of the 2013 Regulations which ostensibly is to ensure that the tariff is fixed in accordance with the provisions of the Act. In this regard, it is apposite to note the following observations of the Supreme Court of India in D.S. Nakara v. Union of India: 1983(1) SCC SC 305:

“Thus the fundamental principle is that Article 14 forbids class legislation but permits reasonable classification for the purpose of legislation which classification must satisfy the twin tests of classification being founded on an intelligible differential which distinguishes persons or thing that are grouped together from those that are left out of the group and that differentia must have a rational nexus to the object sought to be achieved by the statute in question...”

“18. As a corollary to this well-established proposition, the next question is, on whom the burden lies to affirmatively establish the rational principle on which the classification is founded correlated to the object sought to be achieved? The thrust of Article 14 is that the citizen is entitled to equality before law and equal protection of laws. In the very nature of things the society being composed of unequals a welfare State will have to strike by both executive and legislative action to help the less fortunate in the society to ameliorate their condition so that the social and economic inequality in the society may be bridged. This would necessitate a legislation applicable to a group of citizens otherwise unequal and ameliorate of whose lot is the object of state affirmative action. In the absence

of doctrine of classification such legislation is likely to flounder on the bed rock of equality enshrined in Article 14. The Court realistically, appraising the social stratification and economic inequality and keeping in view the guidelines on which the State action must move a constitutionally laid down in part IV of the Constitution, evolved the doctrine of classification. The doctrine was evolved to sustain a legislation or State action designed to help weaker sections of the society or some such segments of the society in need of succor. Legislative and executive action may accordingly be sustained if it satisfies the twin chest of reasonable classification on the rational principle correlated to the object sought to be achieved. The State, therefore, would have to affirmatively satisfy the Court that the twin tests have been satisfied. It can only be satisfied if the State establishes not only the rational principle on which classification is founded but correlate it to the objects sought to be achieved. This approach is noticed in RamanaDayaram Shetty v. The International Airport Authority of India when the Court observed that a discriminatory action of the Government is liable to be struck down unless it can be shown by the Government that the departure was not arbitrary but was based on some valid principle which in itself was not irrational, unreasonable or discriminatory.”

“19. Similarly, in M.C. Dhingra v. Union of India: 1996 SCALE (2) 321, the Supreme Court, while striking down an artificial cut-off date regarding providing certain benefits, held:

“All the persons who rendered temporary service prior to their joining the Government of India Service have been given the benefit of fixation of the pension payable by tagging the temporary service. The cut-off date is arbitrary violating Article 14 of the Constitution of India. Having grouped all the similar circumstanced employees, fixing the cut-off date and giving benefit to those who retired thereafter is obviously arbitrary. In similar circumstances, following the ratio in D.S. Nakara & Ors. Vs. Union of India & Ors.. [(1983) 1 SCC 305], this Court held in the case of R.L. Marwah vs. Union of India & Ors.. [(1987) 3 SCR 928] that such a restriction is arbitrary violating Article 14. On the facts and circumstances, we find that the restriction imposed in clause 4 of the Circular is violative of Article 14. It is, therefore, unconstitutional”.

“21. Therefore it is amply clear that in the event the Regulations and the 2013 Regulations are considered to be mandatory and applied in an inflexible manner, the 2013 Regulations, if challenged, will be struck down as being violative of Article 14. The Respondent therefore submits that this Hon. Commission must provide the regulations framed by it such an interpretation which would not render them constitutionally invalid.”

“22. On the basis of the above, the Respondent submits that the figures for calculation of tariff must be taken as per actual cost of the generation. If the actual cost of the generation is taken into account, the levelised tariff for the period of 13 years would be Rs.5.00 per unit. Annexure (B) provides further details. The said Annexure provides a calculation based on estimated actual cost of Generation and has been arrived at applying the factors as stipulated by the 2013 Regulation.”

“23. Assuming though not admitting that the tariff need not be based on actual cost of generation, the financial criteria of the 2013 Regulations must be applied as a whole. It is not permissible to apply some of the criteria adopted in the 2013 Regulations to determine a general levelised tariff and combine it with certain actual which are favourable to the Petitioner. Tariff determination based on a combination of some aspects actual cost and some aspects of the financial criteria adopted in the 2013 Regulations lacks legal sanction.”

“34. The Respondent therefore submits that the proposed methodology for determining the tariff in the present case falls foul of Article 14 of the Constitution of India and hence, this Hon. Commission must dismiss the present petition for fixing the tariff in the said manner.”

Analysis by the Commission

11. The main contentions raised by KSEB Ltd to support the plea for fixing a project specific tariff for Karikkayam SHP of M/s Ayyappa Hydro Power Ltd can be summarized as follows:

- (i) The existing hydro and irrigation projects in the state are developed using the funds from public exchequer. Since the controlled releases from the upstream projects are the results of investing huge amounts of public money for construction of dams and associated appurtenances using funds from the state exchequer, the Government has taken a view, by way of policy formulations, that the benefit of controlled release of water shall be passed on to the ultimate consumers of the state.
- (ii) The policy of the Government does not allow SHPs having the benefit of controlled release of water from existing hydro or irrigation projects to be passed on to private developers through IPP route, in general. The respondent has been allowed to develop the instant SHP due to the conversion of the SHP from CPP status to IPP status by orders of the Government on 19.12.2005, 11.1.2006, 23.5.2006 etc. Implementation agreement was executed by the developer on 15.6.2009 for Karikkayam SHP with a BOOT period of 30 years.

- (iii) The actual CUF for the project is estimated at 50.6% as per the DPR. This is due to the fact that the Karikkayam SHP utilizes the controlled discharge from upstream projects of KSEB Ltd. Generation of power will be possible even during summer months due to water released from Sabarigiri project and Kakkad project of KSEB Ltd, whereas summer generation will be much less in the case of other SHPs which are not downstream of existing storage projects. Considering the monsoon pattern of the state, CUF of a typical SHP without appreciable storage facility or without upstream reservoir for controlled release would be around 30% only. Hence the generic tariff fixed by the Commission based upon the CUF of 30% is reasonable.
- (iv) Thus controlled release of water is an additional benefit enjoyed by Karikkayam SHP when compared to other IPPs of the state. Hence the tariff of the SHP should be fixed based on the higher CUF.

12. The M/s Ayyappa Hydro Power Ltd prayed for dismissal of the petition. But they also argue that KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 Regulations cannot be treated as mandatory and must be read as directory in nature. It is argued that the Commission must fix the tariff as per the Regulations only if the facts related to a particular project are in line with the assumptions made in the Regulations. M/s Ayyappa Hydro Power Ltd argued that the figures for calculation of the tariff must be taken as per actual cost. The tariff must be either based on actual or at the very least by applying the KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations 2013 Regulations universally. M/s Ayyappa Hydro Power Ltd also argues against fixing a unique tariff only for the Karikkayam SHP, while the tariff as per the above 2013 Regulations are applied to all other SHPs and alleges that this could be a blatant violation of the principle of equality.

13. The Commission carefully analyzed all the arguments and averments made by both the parties. A generic tariff mechanism would provide incentives to the investors for use of most efficient equipment to maximize returns and for selecting the most efficient site, while a project-specific tariff would provide each investor, irrespective of the machine type and the site selected, the stipulated return on equity and it would shield the investor from the uncertainties involved in capacity utilization due to machine choice and site location. Considering the small capacities and diverse ownership of the renewable power projects, the Commission decided to determine the generic power tariff, rather than go for a project specific tariff on case-to-case basis. This is in tune with the policy adopted all over the country by CERC and other SERCs. This would also mean that where the returns are expected to be abnormally high by applying generic tariff, the Commission has to opt for project specific tariff.

14. The CUF taken for computing the normative tariff of the SHP of capacity above 5 MW in the KSERC (Power procurement from Renewable sources by Distribution

Licensees) Regulations 2013 is 30 %. Normative values of CUF were taken based on standards made by CERC for various southern states. The levelled tariff per unit is computed based on the above CUF by dividing the cost to be recovered annually as per norms by the number of units that can be generated per annum. The fact that the Karikkayam SHP of the respondent utilizes the controlled discharge from upstream projects like Sabarigiri and Kakkad HEP is not disputed. The DPR of the project shows that the CUF of the project is 50.6% and the energy that can be generated at this CUF is 66.68 MU per annum. Hence the cost recovery would also be proportionately higher.

15. KSEB Ltd has pointed out this anomaly in their petition and sought for recalculation of the per unit tariff based on the actual CUF. KSEB Ltd has also pointed out that the policy guidelines of the State Government specify that the SHPs utilizing the controlled release of water from the existing hydro /irrigation projects shall be reserved for development by KSEB Ltd. The benefit of the controlled release is an additional benefit available to the respondent compared to other SHPs.
16. In view of the facts and circumstances, the Commission has come to the prima facie conclusion that the CUF of the impugned project is more than the normative CUF adopted by the Commission for calculating the tariff for energy from SHPs. Similarly the argument of M/s Ayyappa Hydro Power Ltd, that if actual CUF is taken for determination of tariff then the actual project cost also should be taken into account, cannot also be ignored. Hence it would only be appropriate to work out project specific tariff based on actual project cost and actual CUF.
17. The regulations and terms and conditions of tariff issued by CERC do also provide for determination of project specific tariff where normative values become irrelevant and cannot be made applicable.
18. The M/s Ayyappa Hydro Power Ltd in para 8, 11, 14, 22, 23, 39 etc of the counter statement has also requested for deciding a project specific tariff based upon actual values of the components. The only condition put forward by M/s Ayyappa Hydro Power Ltd is that along with CUF the actual project cost and other factors shall also be considered. This plea of M/s Ayyappa Hydro Power Ltd is seen to be fair.
19. In short, both KSEB Ltd and M/s Ayyappa Hydro Power Ltd have prayed that the Commission should decide on a tariff which is specific for the project.
20. Commission also notes that in OP-24/2012 filed by M/s Ayyappa Hydro Power Ltd for approval of draft PPA submitted on 9.3.2012, the Commission had issued an order on 4.7.2012 directing that "*petitioner shall submit the PPA after discussing it with KSEB and file a tariff proposal. One month time is granted for this*". The developer has not responded to this till date. Nor has he provided any satisfactory explanation for the non-compliance of the said order of the Commission.
21. The Hon. APTEL in its order in Appeal No. 50 and 65 of 2008 filed by a developer of Small Hydro power, from the order of the Himachal Pradesh Electricity

Regulatory Commission on “Small Hydro Power Projects, Tariff and other issues” dated 12.08.2007, had observed that :

“ The consensus that emerged during arguments is that capital cost of Rs.6.5 Crores/MW should be accepted as the normative capital cost which can be adopted by the promoter of hydel energy and the Board, but the promoter or the Board shall be entitled to apply for a site specific fixation of capital cost in case either of them find the normative capital cost to be unsuitable for the project.

Since capacity utilization factor also varies with the specific project and specific site depending on the hydrology of a particular location it will be proper to follow the same dispensation as for capital cost for determining the CUF of the projects in which CUF of 45% is contested by the developer or the Board.”

22. The Hon. APTEL in the said order has also ordered that:

The capital cost of Rs.6.5 Crores/MW shall be treated as normative capital cost in all such cases as are found suitable by all parties. The promoters of hydel power in the State of Himachal Pradesh as well as the Himachal Pradesh State Electricity Board shall be entitled to apply to the Commission for fixing project specific capital cost for any project in case the normative capital cost is not suitable to either of them. Similarly, if CUF of 45% for a specific project is contested by either party, it may approach the Commission with the site specific CUF.

23. Considering the above orders of the Hon: APTEL, the Commission decided that it will be appropriate to decide the project specific tariff for Karikkayam SHP since KSEB Ltd has pointed out that the premises on which the normative tariff applicable from 1.1.2013 for the small hydro projects cannot be held valid in the case of Karikkayam SHP. The project specific tariff shall be decided taking into consideration the actual project cost as well as the CUF.

24. In the interim order dated 21-01-2014 commission directed that

- (i) The Commission will decide project specific tariff for the Karikkayam SHP of the M/s Ayyappa Hydro Power Ltd.
- (ii) M/s Ayyappa Hydro Power Ltd shall furnish the actual capital cost of the project along with certified documents supporting the same as well as tariff proposals as per directions in the order of the commission on OP 24/2012 dated 4-07-2012 within one month from the date of this order.
- (iii) M/s Ayyappa Hydro Power Ltd shall also submit particulars regarding CUF.
- (iv) KSEB Ltd may also furnish the relevant data and documents such as approved DPR etc to facilitate tariff computations.

25. M/s Ayyappa Hydro Power Ltd in the petition dated 09-05-2014 requested to direct KSEB Ltd to enter into a Power Purchase Agreement with M/s Ayyappa

Hydro Power Ltd for a period of 13 years at a tariff rate of Rs 4.16/Unit subject to final outcome of O.P No 27/2013 to direct KSEB Ltd to pay the difference in price of Rs 1.82/Unit (difference between Rs 4.16/Unit and Rs 2.34/Unit) with interest for all units of power supplied till date subject to final outcome of O.P. No 27/2013 to direct KSEB Ltd to purchase power in future at the rate of Rs 4.16/Unit subject to final outcome of O.P. No 27/2013, and to pass such further or other orders as the Commission may deem fit and proper in the facts and circumstances of the case and thus render justice.

26. While the above petitions were under consideration of the Commission KSEB Ltd in their letter No KSEB/TRAC/KSERC/Karikkayam/2014-15/1313 dated 19-05-2014 submitted as follows.

In the matter of determination of project specific tariff for Karikkayam considering the likely enhancement in Capacity Utilisation Factor (CUF) and actual project cost, together with the prayer of AHPL vide petition dated 09-05-2014, KSEBL may submit that

(i) The actual CUF of a small hydro project can be realistically ascertained only after appraising the actual generation from the SHP for a period of 3-4 years from the date of CoD. The Karikkayam SHP's 1st stage on 28-09-13 and project may achieve CoD by the next monsoon. Hence the actual CUF can be correctly ascertained after appraising the actual generation for the project for four years from the date of CoD

(ii) The capital cost of the project can be appraised only after getting details of capital cost as sought by KSEBL in the affidavit filed by KSEBL on 09-05-2014.

Considering the facts as detailed above the determination of project specific tariff considering the actual CUF and project cost may require some more time.

Hence till finalization of the project specific tariff vide petition vide petition O.P.No 27 of 2013, KSEBL agreeable for provisionally adopting the generic tariff of Rs 4.16/unit as approved by Commission for SHPs having installed capacities 5MW and above vide KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013 dated 01-01-2013 for the project on condition that 'once the project specific tariff is approved by the Commission after ascertaining the actual CUF and project cost, the same may be made applicable with retrospective effect from the date of CoD and excess payment by KSEB may be allowed to be recovered from the respondent in subsequent monthly invoices'.

27. It was informed that KSEB Ltd was already making provisional payment to M/s Ayyappa Hydro Power Ltd, for energy supplied by them from Karikkayam Small Hydro Project at the rate of Rs 2.34/Unit. In the letter dated 19-05-14, KSEB Ltd has conveyed that they are agreeable for provisionally adopting the generic tariff

of Rs 4.16/Unit as approved by the Commission for small hydro projects having installed capacities 5 MW and above vide KSERC (Power Procurement from Renewable Sources by Distribution Licensee) Regulations, 2013. Provisional payments are interim arrangements between the generator and licensee till final determination of tariff by the Commission.

28. Commission vide letter No 863/CT/2014 /KSERC/557 dated 28-05-2014 informed KSEB Ltd that Commission has no objection to KSEB Ltd, making such payment as an interim measure , pending final decision of Commission in O.P No 24/2012 and OP No 27/2013.
29. Since the actual CUF of SHP can be realistically ascertained only after appraising the actual generation from the SHP for a period of 3 to 4 years from date of CoD Commission decides that the generic tariff of Rs 4.16 /Unit may be adopted provisionally for a period of four years from the date of CoD and PPA may be executed for a period of four years on condition that project specific tariff shall be determined after the period of four years if either KSEB Ltd or M/s Ayyappa Hydro Power Ltd applies for such a tariff after ascertaining the CUF based on the actual data for four years from the date of CoD and actual project cost. If project specific tariff is determined after a period of four years from the date of CoD on a petition from either KSEB Ltd or M/s Ayyappa Hydro Power Ltd the same may be made applicable with retrospective effect from the date of CoD and adjustment of any excess /deficit payments shall be allowed in the subsequent bills of M/s Ayyappa Hydro Power Ltd. For the remaining nine years the tariff applicable shall be the generic tariff of Rs 4.16/Unit or the project specific tariff as decided by the commission as the case may be.

Orders of the Commission

30. After analyzing the arguments and averments made by KSEB Ltd and M/s Ayyappa Hydro Power Ltd in petitions (1) OP No 24/2012, (2) OP No. 27/2013 (3) Petition dated 14 -05-2014 of M/s Ayyappa Hydro Power Ltd and (4) Letter of KSEB Ltd No KSEB/TRAC/Karikkayam/2014-15/1313 dated 19-05-2014 Commission issues the following orders, disposing of these petitions and requests.
- (i) KSEB Ltd shall enter into PPA for a period of four years with M/s Ayyappa Hydro Power Ltd for purchase of power at the provisional rate of Rs 4.16/Unit.
 - (ii) If after completion of four years, if KSEB Ltd or M/s Ayyappa Hydro Power Ltd applies for a project specific tariff to be determined, such tariff shall be determined by the Commission based on the average CUF for the period of four years of actual operation of the project and the actual project cost as approved by the Commission.
 - (iii) If project specific tariff is determined after a period of four years from the date of CoD on petition from KSEB Ltd or M/s Ayyappa Hydro Power Ltd, the same

shall be made applicable with retrospective effect from the date of CoD and adjustment of any excess/deficit payments shall be allowed in the subsequent bills of M/s Ayyappa Hydro Power Ltd.

(iv) For the remaining nine years, the tariff applicable shall be the generic tariff of Rs 4.16/Unit or the project specific tariff as decided by the commission and PPA shall be executed accordingly.

31. The requests made in petitions (1) OP No 24/2012, (2) OP No. 27/2013 (3) Petition dated 14 -05-2014 of M/s Ayyappa Hydro Power Ltd and (4) Letter of KSEB Ltd No KSEB/TRAC/Karikkayam/2014-15/1313 dated 19-05-2014 are disposed of as above.

Dated this the 1st day of November, 2014

Sd/-
Mathew George
Member (Finance)

Sd/-
T.M.Manoharan
Chairman

Approved for issue

Sd/-
Secretary.