

**BEFORE THE HONOURABLE KERALA STATE ELECTRICITY
REGULATORY COMMISSION, THIRUVANANTHAPURAM**

In the matter of : Petition under Regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, seeking exemption from depositing amount corresponding to the shortfall in achieving Renewable Purchase Obligation for the years, 2010-11, 2011-12 and 2012-13.

AND

In the matter of : Kerala State Electricity Board Limited
Vydyuthi Bhavanam,
Pattom, Thiruvananthapuram.

Petition under Regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, seeking exemption from depositing amount corresponding to the shortfall in achieving Renewable Purchase Obligation for the years 2010-11, 2011-12 and 2012-13.

Back ground

1. Kerala State Electricity Board Limited(KSEBL), the successor entity to erstwhile Kerala State Electricity Board (KSEB), the petitioner in the instant petition, most humbly submits the following for the kind consideration of the Hon. Commission.
2. KSEBL is the generator and power procurer of all consumers of the State including that for small licensees in the State. As the deemed distribution licensee in the State of Kerala, KSEBL has been duly complying with the provisions in the Electricity Act,2003, National Electricity Policy,2005 and Tariff Policy,2006.
3. Further, KSEBL has been implementing all the policy directives of the Central and State Government, extending electricity at subsidized rates to the socially downtrodden segments of the society and also to the agricultural consumers of the State. After the enactment of the Electricity Act-2003, KSEBL has been continuing as the deemed

distribution licensee and transmission utility of the State and also generating electricity for the consumers of the State.

4. KSEBL is the instrument of the State Government on implementing its policy directives, providing reliable power at affordable cost to the consumers, developing infrastructure for the carriage of electricity etc.
5. Any penalty imposed on KSEBL will have serious impact on its financials and ultimately will fall on the entire electricity consumers of the State.
6. Hon'ble Commission vide the letter no.337/CT/2013/KSERC/229 dated 26-2-2015 has issued directions to KSEBL to deposit an amount of Rs.125 crores into a separate fund created as per Regulation 6 of the KSERC(Renewable Purchase Obligation and its compliance) Regulations, 2010 for purchase of solar and non-solar RECs corresponding to the shortfall in achieving Renewable Purchase Obligation for the years 2010-11, 2011-12, 2012-13 and 2013-14.
7. The present petition is being submitted under Regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, seeking exemption from depositing the amount.

I. Legal and Policy framework for Renewable Purchase Obligation

(i) Provisions in the Electricity Act, 2003

8. The various provisions in the Electricity Act-2003, empowering the Hon'ble Commission for promoting 'co-generation and generation of electricity from renewable sources of energy are quoted below.

(a) Section 61(h) of the Electricity Act,2003 stipulate that, while specifying the 'terms and conditions for determination of tariff' Hon'ble Commission shall be guided by '*the promotion of co-generation and generation of electricity from renewable sources of energy;*

(b) Section 86 (1)(e) of the EA 2003 specify as follows.

(e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(ii) Provisions in the National Electricity Policy, 2005

9. “Clause 5.12 of the National Electricity Policy provides as under:

5.12 COGENERATION AND NONCONVENTIONAL ENERGY SOURCES

5.12.1 Non-conventional sources of energy being the most environment friendly there is an urgent need to promote generation of electricity based on such sources of energy. For this purpose, efforts need to be made to reduce the capital cost of projects based on non-conventional and renewable sources of energy. Cost of energy can also be reduced by promoting competition within such projects. At the same time, adequate promotional measures would also have to be taken for development of technologies and a sustained growth of these sources.

5.12.2 The Electricity Act 2003 provides that co-generation and generation of electricity from non-conventional sources would be promoted by the SERCs by providing suitable measures for connectivity with grid and sale of electricity to any person and also by specifying, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Such percentage for purchase of power from non-conventional sources should be made applicable for the tariffs to be determined by the SERCs at the earliest. Progressively the share of electricity from nonconventional sources would need to be increased as prescribed by State Electricity Regulatory Commissions. Such purchase by distribution companies shall be through competitive bidding process. Considering the fact that it will take some time before nonconventional technologies compete, in terms of cost, with conventional sources, the Commission may determine an appropriate differential in prices to promote these technologies.

5.12.3 Industries in which both process heat and electricity are needed are well suited for cogeneration of electricity. A significant potential for cogeneration exists in the country, particularly in the sugar industry. SERCs may promote arrangements between the cogenerator and the concerned distribution licensee for purchase of surplus power from such plants. Cogeneration system also needs to be encouraged in the overall interest of energy efficiency and also grid stability. “

(iii) Provisions in the National Tariff Policy, 2006

10. Clause 6.4 of Tariff Policy further provides as follows:

“6.4. Non-conventional and Renewable sources of energy generation including Co-generation:-

(1) Pursuant to provision of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of distribution licensee for purchase of energy from such sources, **taking into account availability of such resources in the region and its impact on retail tariffs.** Such percentage for purchase of energy should be made applicable for the tariffs to be determined by the SERCs latest by April 1, 2006.

- (i) *Within the percentage so made applicable, to start with, the SERCs shall also reserve a minimum percentage for purchase of solar energy from the date of notification in the official gazette which will go up to 0.25% by the end of 2012-13 and further up to 3% by 2022.*
- (ii) *It is desirable that the purchase of energy from non-conventional sources of energy takes place more or less in the same proportion in different states. To achieve this objective in the current scenario of large availability of such resources only in certain parts of the country, an appropriate mechanism such as renewable energy certificates (REC) would need to be evolved. Through such a mechanism, the renewable energy based generation companies can sell the electricity to local distribution licensees at the rates for conventional power and can recover the balance cost by selling such certificates to other distribution companies and obligated entities enabling latter to meet their renewable power purchase obligation. In view of the comparatively higher cost of the electricity from solar energy curretly, the REC mechanism should also have a solar specific REC.*
- (iii) *It will take some time before non-conventional technologies can complete with conventional sources in terms of cost of electricity. Therefore, procurement by distribution companies shall be done at preferential tariffs determined by the Appropriate Commission.”*

11. Pursuant to the mandate of the Electricity Act, 2003 and the policies framed there under, various State Commissions across the nation have established the renewable purchase obligations either through regulations or through orders.
12. However, renewable energy sources across the country are not evenly distributed across the States. In some states, the potential of renewable energy sources is not that significant. On the other hand, there are other states where there exist very high potential of RE sources and in such states there are avenues for harnessing the potential beyond the RPO level fixed by the State Commissions. However, the fact that the cost of generation from RE sources is usually high compared to the conventional sources, discourages the local distribution licensees from purchasing RE generation beyond the RPO level mandated by the State Commission. Hence, for encouraging development of renewable energy in resource rich States beyond the renewable purchase obligation level fixed by the State Commissions, the concept of Renewable Energy Certificates was introduced. This concept seeks to address the mismatch between availability of RE sources and the requirement of the obligated entities to meet their renewable purchase obligation.
13. In order to address the above issues arising on account of divergence in renewable purchase obligations, tariffs and different technologies across the country, the Forum of Regulators in November, 2008 decided to formulate a policy for adopting a common approach to the promotion of renewable sources of energy in the country as a whole by introducing Renewable Energy Certificate mechanism. The following recommendations were made regarding REC mechanism.

“11.8 Feasibility of introducing RE certificate mechanism

11.8.1 A suitable mechanism like REC is necessary to promote RE sources on the scale envisaged in the National Action Plan on Climate Change. The MNRE had commissioned a study to examine the feasibility of developing a model to operationalise RECs. The study should also examine the GBI as a basis for evaluation of RECs. The legal sanctity of REC vis-à-vis EA 2003 needs to be examined.”

CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 and its subsequent amendments.

14. In exercise of the mandate in section 66 of the Electricity Act-2003 that the Appropriate Commission shall endeavor to promote the development of a market (including trading) in power in such manner as may be specified and shall be guided by the National Electricity Policy , the Central Electricity Regulatory Commission issued CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, vide the notification No. L-1/12/2010-CERC Dated: 14th January, 2010. A copy of the regulation is marked as **Annexure-1**.
15. Under the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, Renewable Energy Certificates were introduced as a market based instrument to promote renewable energy and facilitate renewable purchase obligations.
16. Subsequently, the Central Commission, vide order dated 29th January, 2010, designated the National Load Despatch Centre (NLDC) as the 'Central Agency' within the meaning of the REC Regulations. In accordance with the Regulation 3 (3) of the REC Regulations the Central Agency submitted detailed procedures, which after consultation with stakeholders, was finalized and approved vide the Commission's Order No. L-1/12/2010-CERC dated 01.06.2010.
17. As per the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 and the approved detailed procedure, REC mechanism has been evolved mainly :
 - (a) As a market based instrument to promote renewable energy and facilitate renewable purchase obligations (RPO).
 - (b) To address the mismatch between availability of RE resources in each States and the requirement of the obligated entities to meet the renewable purchase obligation (RPO).
 - (c) The REC mechanism seeks to promote additional investment in RE projects and is meant to provide RE generators an alternate mode of recovery of their costs.
 - (d) The REC regulations cannot make any provision which directly or indirectly encourages breach of existing contracts.

- (e) Cost of electricity generation from renewable sources is classified as 'cost of electricity generation equivalent to conventional energy sources' and the 'cost for environmental attributes'.
 - (f) RE generators will have two options (i) either to sell the renewable energy at the preferential tariff fixed by the Commissions, OR (ii) to sell electricity generation and environmental attributes associated with RE generations separately.
 - (g) To enable the obligated entities to meet their RPO under section 86 (1) (e) of the Act through purchase of RECs. Purchase of REC would be deemed as purchase of RE for RPO compliance.
 - (h) to designate Central Agency for registration, repository, and other functions for implementation of REC framework at national level.
 - (i) SERC to recognize REC as valid instrument for RPO compliance.
18. Pursuant to the issue of CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, concerns were raised from various quarters that the renewable generators having an existing PPA with distribution utilities for sale of electricity at preferential (cost plus) tariff might attempt to breach the existing contracts with the sole objective of making profits through REC mechanism. Further, misgivings and apprehensions were raised regarding the eligibility of captive generators based on renewable energy for participating in REC mechanism.
19. To address these issues, Central Commission vide notice No. L-1/12/2010-CERC Dated: 29th September, 2010 issued CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) (First Amendment) Regulations, 2010. As per the amendment to the principal regulations, CERC has clarified that.
- (a) A generating company having entered into a power purchase agreement for sale of electricity at a preferential tariff shall not, in case of pre-mature termination of the agreement, be eligible for participating in the Renewable Energy Certificate (REC) scheme for a period of three years from the date of termination of such agreement or till the scheduled date of expiry of power purchase agreement whichever is earlier.

- (b) The main objective of REC mechanism is to encourage new capacities addition and to provide an alternative mode to the RE generators for recovery of their costs.
- (c) REC is a national level framework, jurisdiction in terms of 'eligibility criteria' for participation in REC scheme, registration of RE generators, issuance of REC, and transactions in PXs etc., clearly vests with CERC.
- (d) The role of SERC is in recognizing REC as a valid instrument for meeting RPO.
- (e) a Captive Power Producer (CPP) based on renewable energy sources shall be eligible for the entire energy generated from such plant including self consumption for participating in the REC scheme subject to the condition that such CPP has not availed or does not propose to avail any benefit in the form of concessional/promotional transmission or wheeling charges, banking facility benefit and waiver of electricity duty

20. Subsequently, the Central Commission in its endeavor to strengthen the REC framework and to address some of the design issues and to remove ambiguities which are affecting its implementation issued vide notification no.L-1/12/2010/CERC dated 10-7-2013 the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) (Second Amendment) Regulations, 2010 modifying the eligibility criteria of RE generators and captive generators to participate in the REC mechanism.

21. Further, Hon'ble CERC vide the Statement of reasons (SOR of the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) (Second Amendment) Regulations, 2010 has clarified that in the matter of REC Mechanism, CERC Regulations/ guidelines shall prevail over SERC(s) Regulations/ guidelines. The relevant paragraph is quoted below.

"46.5 It is suggested to incorporate following amendment in the Regulation 14 of the CERC REC Regulations: "In case of any inconsistency in Regulations/ guidelines issued by SERC(s) in the matter of REC Mechanism, CERC Regulations/ guidelines shall prevail over SERC(s) Regulations/ guidelines in all the matter related to Registration, issuance of RECs and redemption of RECs." (POSOCO)

22. The summary of the policy and legal framework in the country for the promotion of renewable energy generation and co-generation is submitted below.
- (1) Section 61(h) and 86(1)(e) of the Electricity Act,2003 empowers the appropriate commission for the promotion of cogeneration and generation based on renewable energy sources and also to specify a percentage for purchase of electricity from such sources.
 - (2) Paragraph 5.12 of the National Electricity Policy prescribes that co-generation and generation of electricity from non-conventional sources would be promoted by the SERCs by providing suitable measures for connectivity with grid and sale of electricity to any person and also by specifying, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee.
 - (3) Paragraph 6.4 of Tariff Policy prescribes that *Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage for purchase of energy from Non-conventional sources of energy generation including Co-generation taking into account availability of such resources in the region and its impact on retail tariffs.*
 - (4) The SERCs to issue RPO regulations in compliance with the mandates in section 61(h) and 86(1)(e) of the EA,2003.
 - (5) For ensuring optimum harnessing of the renewable energy potential of States where there are avenues for harnessing the potential beyond the renewable purchase obligation level fixed by the State Commissions, the concept of Renewable Energy Certificates was introduced and Central Electricity Regulatory Commission issued regulations and detailed procedure for the implementation of REC framework.
 - (6) The RPO and REC are introduced to promote optimum development of renewable sources across the State and not for imposing penalty to the States.

23. Regarding the fixation of RPO, the following may kindly be submitted.
- (1) The tariff policy clearly specify that, the while fixing the RPO, the availability of the renewable sources shall be considered.
 - (2) Since the tariff of renewable sources are comparatively higher than conventional sources, the impact of the renewable sources on the retail tariff also shall be considered.
 - (3) Fixing higher RPO target for States where scarcity of renewable sources may force the DISCOMS to incur higher amount for procuring REC and it may lead to increase in retail tariff.

II. **Initiatives taken by the State Government and KSEBL/KSEB for the Promotion of Renewable energy generation and Co-generation in the State of Kerala.**

(a) **State Government policy and initiatives for the development of Small Hydro Projects in the State**

24. Government of Kerala has been taking various initiatives for the promotion of renewable energy in the state of Kerala since 1990. Government of Kerala during 1990 had laid down conditions for allotment of Small/Mini Hydro projects to private developers considering the implementation difficulties faced by KSEB due to its poor financial situation. Further, vide G.O.MS.No.5/92/PD dated 12-3-1992, GoK stipulated certain guidelines for setting up power generation schemes in the private sector. Subsequently, KSEB vide B.O. dated 22-8-1992 decided to allot five hydel schemes to captive and IPP developers. , based on which two projects viz. Maniyar (12 MW) and Kuthungal (21MW) have been commissioned on CPP route.
25. Subsequently, Government of Kerala vide the G.O.(Rt.)No.291/2000/STED dtd.17-8-2000 formed a committee for formulating the state policy on renewable energy sources in response to the letter from Ministry of Non-Conventional energy sources. The committee prepared a draft renewable energy policy which was accepted by GoK vide the G.O(MS) No.16/2002/STED dated 3-4-2002. The policy aims at the development, propagation and promotion of Non-conventional Energy sources and creation of suitable environment for private participation in Power Generation sectors. The main features envisaged in the state renewable energy policy 2002 are summarized below.

- (i) In addition to non conventional energy sources like solar, wind, biomass etc, small hydro projects, having installed station capacity of and below 25 MW are to be treated as renewable energy generators.
 - (ii) The power producers shall sell power to Kerala State Electricity Board (KSEB) at rates described in article 4.6 of this policy.
 - (iii) KSEBL shall provide banking and wheeling facility for the energy generated by CPPs.
26. In 2003, Government of Kerala announced revised guidelines for setting up Small Hydro Projects through captive power/IPP mode vide GO (MS)NO. 02/03/PD dated 16-01-2003. With the enactment of EA 2003, the guidelines were further modified during 2006 to incorporate the provisions of Electricity Act 2003 vide G.O(MS)No.5/2006/PD/17-3-2006. As per the revised policy guidelines.
- (i) The small hydro schemes are allotted on BOOT basis under IPP/CPP mode. After the BOOT period, these projects are to be transferred back to the Government of Kerala/KSEB as directed by the Government or extended further on mutually agreed terms.
 - (ii) The tail race scheme, dam toe and other regulated flows are open only to KSEB or its successor entities.
 - (iii) All the directions/controls/rectifications issued by CERC/CEA/Central Bodies/southern Electricity Board Authorities/SERC from time to time as adopted by the Government/KSEB shall be binding on the developer,
 - (iv) The captive generators have to pay KSEBL wheeling charge and transmission losses as decided by KSERC.
 - (v) KSEBL will have the first right to purchase the power generated by the IPP at the bid rates subject to the approval of KSERC.
 - (vi) If KSEB not intending to purchase power from IPPs/ CPPs, prior sanction of Government is to be obtained for sale of surplus power outside the state.

27. Subsequently, GoK issued Kerala Small Hydro Power Policy, 2012 applicable to projects with installed capacity upto 25 MW pursuant to the issue of guidelines for purchase of electricity from Renewable Energy sources including SHPs, making it mandatory for the distribution licensees to source a certain percentage of their consumption from Renewable Energy sources. As per the policy:
- (i) All Small Hydro Power Projects identified by Kerala State Electricity Board and not set apart for private participation, including all dam-toe power and cluster power projects of existing dams, and also Small Hydro Power Projects utilizing the controlled release of water from the existing hydro and/ or irrigation projects shall be reserved for development by Kerala State Electricity Board.
 - (ii) The State Transmission Utility / Kerala State Electricity Board shall have the first right of purchase the power generated by IPPs and surplus of power from CPPs at a tariff and other terms and conditions set forth by the Kerala State Electricity Regulatory Commission.
 - (iii) If KSEB or its successor entity is not intending to purchase the power, Kerala State Electricity Regulatory Commission will permit non-discriminatory open access within the State of Kerala to sell the power to any entity within Kerala.
 - (iv) KSEB will permit banking facility during a financial year subject to availability of Grid and the rights for banking the energy with the KSEB and charges applicable for the same shall be determined by the regulation in force from time to time.
- (b) **State Government policy and initiatives for the development of wind power in the State of Kerala**

28. The technical wind potential available in the State is about 600 MW. For harnessing this wind potential, GoK vide G. O. (MS) No: 23/2004/PD dated 06.11.2004 issued policy guidelines for the development of wind power in the State through private developers. Some of the features envisaged in the guidelines are as follows:

- (i) KSEB will have the first right to purchase the power generated by a wind energy generator developed through IPP route at the bid rates subject to approval of SERC. The purchase will be subject to financial viability of such purchase and other system requirements. If KSEB is not

intending to purchase the power from IPP, then the Developer is permitted to sell the power to any other party (consumer(s)/ licensee) at rates approved by SERC.

- (ii) KSEB will have the first right to purchase the energy, if any, generated by a Captive wind energy generator over their captive consumption requirement at the rates specified for a tariff period by the Kerala State Electricity Regulatory Commission (SERC). The purchase will be subject to the energy requirements of the State, grid frequency, other system parameters and financial viability of such purchase. If KSEB is not intending to purchase the excess power from the CPP, then the CPP is permitted to sell the power in excess over their requirement to any other party (consumer(s)/ licensee) at a rate approved by SERC, which shall include applicable surcharge, additional surcharge and/or transmission/ distribution charges.
- (iii) KSEB/ STU will provide its surplus transmission capacity available with it for wheeling power from the wind generating station to their captive consumption end on payment of wheeling charges and other levies as determined by SERC.
- (iv) Transmission and distribution losses for wheeling power will be accounted at the rate determined by SERC.

29. The policy directives issued by GoK vide G.O dated 6-11-2004 for wind power generation in private land was later revised vide G.O(MS)No.7/2007/PD dated 11-5-2007 and subsequently in 2008 vide G.O.(Rt.)No.295/08/PD dated 22-11-2008, as follows.

“wind power and wind power potential sites being gifts of nature are natural resources of the state. Government intends to ensure optimum utilization of their natural resources to suit the overall development strategy of the State in public interest. However, Government will grant permission for any person as defined in Electricity Act,2003, who intends to set up captive generating plants for its own consumption within the State of Kerala, provided that, preference for allotment for setting up wind farms as captive generating plant shall be given to HT/EHT industrial consumers having settled undisputed dues with KSEB/State Utility and any other requisites from the statutory authorities and Local bodies.”

(c) State Government policy and initiatives for the development of solar power in the State of Kerala

30. Solar power development in the State of Kerala is still at nascent stage. Low maturity level and high cost of the technology, non-compatibility of transmission and distribution infrastructure, limitations on land availability, inadequacy of fiscal incentives and entry of unscrupulous elements into the field have been the reasons behind the very low penetration of solar energy in the mainstream life of Kerala.
31. However, as Renewable Purchase Obligation (RPO) and more specifically solar purchase obligations have become mandatory recently, GoK issued Kerala Solar Energy Policy,2013 with a vision to mainstream the use of solar energy in the energy mix of Kerala.

III. Regulations issued by Hon'ble KSERC for the development of Renewable energy in the State of Kerala

32. In exercise of powers conferred under Sections 61 and 86(1)(e) of the Electricity Act, 2003, Hon'ble KSERC vide the notification dated 24th June 2006 has notified the KSERC (Power procurement from Renewable Sources by Distribution licensee) Regulations, 2006, where in the Hon'ble Commission has approved the normative tariff for SHP's developed under IPP route at Rs 2.44/unit for 25 years, Wind IPPs at Rs 3.14 per unit. Subsequently, vide the amendment dated 22-11-2010, the Hon'ble Commission has revised tariff for SHP's and Wind IPPs commissioned on or after 22-11-2010 at Rs 2.94 per unit and Rs 3.64 per unit for 25 years. Subsequently vide the notification dated 01-01-2013, the State Commission has revised the normative tariff for renewable projects commissioned on or after 01-01-2013 as follows.
 - Rs 4.88 per unit for SHPs with installed capacity below 5 MW for 35 years.
 - Rs 4.16 per unit for SHPs having installed capacity between 5 MW to 25 MW for 35 years
 - Rs 4.77 per unit for Wind projects for 25 years.
33. Further, in exercise of powers conferred under Sections 61,66, 86(1)(e) of the Electricity Act, 2003 and also in line with the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, the Hon'ble KSERC has notified the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, vide the notification No.1517/ CT/ 2010 Dated, November 23, 2010.

34. As per Regulation 3(1) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, every obligated entity shall purchase not less than 3% of its consumption of energy from renewable energy sources under the Renewable Purchase Obligation during the years from 2010 with annual increase of 10% of 3% per year up to a maximum RPO of 10%. Provided that 0.25% of the consumption of energy shall be procured from generation based on solar as renewable energy source only.

Quote:

“3. Renewable Purchase Obligation.-

Every obligated entity shall purchase not less than 3% of its consumption of energy from renewable energy sources under the Renewable Purchase Obligation during the years from 2010 with annual increase of 10% of 3% per year upto a maximum RPO of 10%. Provided that 0.25% of the consumption of energy shall be procured from generation based on solar as renewable energy source only.”

Unquote:

35. Further, Hon’ble State Commission vide the order No.1429/CT/KSERC/State Agency/2010 dtd.3-12-2010 has designated M/s. Agency for Non Conventional Energy and Rural Technology (ANERT) as the state agency for accreditation and recommending the renewable energy projects for registration and to undertake functions under the Kerala State Electricity Regulatory Commission (Renewable Purchase Obligation and its Compliance) Regulations,2010.
36. Even though as per KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, Hon’ble KSERC had fixed the RPO target as 0.25% of the consumption of energy to be procured from generation based on solar as renewable energy source with effect from 2010-11 , Hon’ble KSERC later ordered that all the licensees shall meet the solar RPO from the year 2013-14 onwards only.

IV. RPO Compliance by KSEBL as an obligated entity

(a) SHP development in the State by KSEBL

37. KSEBL as the generator and power procurer of all the consumers in the state of Kerala and as well as the State Government agency in implementing the power policy directives of the State Government, has been complying with various directives issued by the Central and State Commissions.
38. Small Hydro is the major renewable energy source available in the State. KSEB/KSEBL as the generator of electricity has been giving due thrust for developing Small Hydro Projects. However due to the higher capital cost

and lower PLF compared to the conventional sources, the average tariff of the power generated from renewable energy sources is usually higher than conventional sources. Hence, in earlier days KSEBL had been giving thrust only for economically viable SHPs especially tail-race schemes/ SHPs with higher PLF. However, presently KSEBL has been developing SHPs at an accelerated scale.

39. As on 31-03-2014, KSEB/KSEBL has commissioned 103.90 MW SHPs in the State. The average annual generation from existing SHPs is about 380 MU. Further, about 103 MW of SHPs having an annual generation of 290 MU is at various stages of execution. Further, KSEBL has been taking initiatives for developing another 117 MW with an annual generation of 320 MU.
40. However, the energy availability from SHPs are subject to vagaries of monsoon. The annual energy generation from SHPs during the last four years (2010-11 to 2013-14) is detailed below.

Sl No	Renewable energy sources	Installed Capacity (MW)	Generation (MU)			
			2010-11	2011-12	2012-13	2013-14
	KSEB own generation					
	Small Hydro Plants					
1	PLBE	16.00	120.68	102.21	99.30	113.93
2	Neriamangalm Extn	25.00	95.48	63.03	94.52	143.67
3	Kallada	15.00	72.09	65.09	24.56	67.55
4	Peppara	3.00	9.75	8.2	3.69	7.63
5	Madupetty	2.00	2.28	1.22	2.45	5.75
6	Chembukadavu I & II	6.45	13.54	11.99	9.36	12.42
7	Urumi I & II	6.15	15.94	13.27	10.61	13.67
8	Malankara	10.50	36.93	31.94	26.69	30.37
9	Lower Meenmutty	3.50	7.2	4.86	2.16	5.62
10	Ktdy. Tail Race	3.75	4.35	8.57	7.87	7.96
11	Malampuzha	2.50		2.77	1.9	4.96
12	Poozhithode	4.80		9.36	10.67	12.1
13	Ranni-Perunadu	4.00		0.21	6.15	9.52
14	Peechi	1.25			0.26	3.29
	Sub Total	103.90	378.24	322.72	300.19	438.44

(b) SHP's developed through IPP route

41. As per the policy directives of the State Government, Iruttukkanam Stage-1 &2 (4.5 MW), Ullumkal (7MW) and Karikkayam have been in operation as on 31-03-2014. The details of annual generation from these SHPs are tabled below.

Sl No	IPPs -SHPs	Capacity (MW)	Generation (MU)			
			2010-11	2011-12	2012-13	2013-14
1	Ullumkal(IPP)		23.93	22.67	14.34	22.79
2	Iruttukkanam(IPP)		9.58	18.62	19.48	23.99
3	Karikkayam					17.07
	Sub Total		33.51	41.29	33.82	63.85

42. But irrespective of the policy initiatives of the State Government, and costs plus tariff approved by the Commission for SHPs in line with CERC norms, no new SHP capacity has been added into the KSEB system through IPP route.

(c) Wind Power development in the State

43. KSEBL has installed 2.05 MW of wind farm in Kanjikode, Palakkad district during the year 1995. The average annual generation from KSEB wind farms is about 2 MU only.
44. The total Wind capacity installed in the State through IPP route as on date is about 32.85 MW.
45. It may be submitted that, eventhough State Government has issued liberalized policy on developing Wind farms in the State, and also Hon'ble Commission has also approved the normative cost plus tariff in line with the CERC (Terms and Conditions for determination of tariff from Renewable Energy Sources) Regulations, no new wind capacities are added in the State during the last few years.
46. The annual generation from Wind IPPs during the last four years are detailed below.

Sl No	IPPs-Wind	Capacity (MW)	Generation (MU)			
			2010-11	2011-12	2012-13	2013-14
1	Agali (wind IPP)	14.25	33.66	35.90	37.70	32.61
2	Ramakalmedu(wind IPP)	18.60	29.38	31.59	30.64	33.19
	Sub total	32.85	63.04	67.49	68.34	65.80

(d) Power procurement from Co-generation plants

47. KSEB has been procuring surplus power from the co-generation plants M/s MP Steel Castings Ltd and M/s Philips Carbon Ltd. The details of the electricity purchase from these plants during the period from 2010-11 to 2013-14 is detailed below.

Sl No	Captive Co-generation plants	Generation (MU)			
		2010-11	2011-12	2012-13	2013-14
1	MPS Steel	34.07	26.51	7.08	34.35
2	PCBL		8.66	26.47	23.39
	Sub Total	34.07	35.17	33.55	57.74

48. As per the prudent utility practices, various judgments of the APTEL, and decisions of other State Commissions, KSEB has been accounting the electricity purchased from the co-generation plants as detailed above against the RPO obligations of KSEBL.
49. But Hon'ble Commission vide the letter dated 26th February 2015 has communicated that, the electricity purchase from the co-generaion plants (i) M/s MP steels and (ii) M/s Philips Carbon black cannot be admitted for accounting against RPO of the State.
50. In this matter, kind attention of the Hon'ble Commission is invited to the various judgments of the APTEL, and other State Commissions extracted below.

(1) Judgments of Hon'ble APTEL

Hon'ble APTEL vide the judgments (a) Judgment dated 26th April-2010 on appeal petition 57 of 2009, (b) Judgment dated 30th Jan-2013 on appeal petition No.54 of 2012, (c) Judgment dated 10th April-2013 on appeal petition No. 125 of 2012, has ordered that, irrespective of the fuel used for co-generation, the obliged entities mandated to meet the Renewable Purchase Obligations can buy the power from co-generation plants to discharge their obligations. The copies of the judgment along with other details were already brought to the attention of the Hon'ble Commission vide the submission dated 27-8-2014.

(2) Decision of TNERC

Tamil Nadu Electricity Regulatory Commission in their order against the case No. 31 of 2011, stated as follows:

“4.8. The Commission observes that the Order of the APTEL as discussed above is subsequent to the issue of the Regulation by this Commission in 2008. From the above judgment it is observed that under the scheme of the Act, both renewable source of energy and cogeneration power plant, are equally entitled to be promoted by State Commission through suitable methods and suitable directions, in view of the fact that cogeneration plants, which provide many number of benefits to environment as well as to the public at large, are to be entitled to be treated at par with other renewable energy sources. Further, it is observed from the above judgment that the intention of the legislature is to clearly promote cogeneration in this industry generally irrespective of the nature of the fuel used for such cogeneration. It is also observed from the above judgment that the fastening of the obligation on the co-generator to procure electricity from renewable energy sources would defeat the object of section 86(1)(e). Since the above judgment is generic in nature, the Commission clarifies that the 2 x 25 MW cogeneration plant of the petitioner at Sahupuram, Tamil Nadu, being a cogeneration plant, would be treated similar to a renewable energy generator. Consequently, the consumer who consumes the energy generated by this cogeneration plant would be eligible for accounting the same for RPO subject to all other provisions of the RPO Regulations, 2010.”

(3) Decision of Chattisgarh ERC

Chhattisgarh Electricity Regulatory Commission in respect of petition No. 07 of 2013, concluded as follows:-

“31. In view of orders passed by Hon’ble Tribunal in Appeal No. 57 of 2009, 54 of 2012, 59 of 2012 and review order in appeal no IA 262 of 2012 in RP (DFR) No. 1311 of 2012 in APPEAL No. 57 of 2009, it is decided that captive/users /consumers consuming power to the extent of RPO specified under Regulation, 2011, from fossil fuel based co-generation plants shall be exempted from RPO for the year 2012-13. As per Hon’ble Tribunal judgment, definition of the obligated entity would not cover a case where a person is consuming power from co-generation plant. BSP as distribution licensee shall be exempted from RPO for the year 2012-13, so far as it consumes power to the extent of RPO specified under Regulation, 2011, from fossil fuel based co-generation plant. In case the energy consumption from co-generation power plant by the captive users/consumers/BSP is in excess with

respect to RPO specified, then such excess consumption of co-generation power shall not be considered for RPO or any other purpose for the succeeding years. For subsequent control period i.e. 2013-16, RPO obligation shall be governed by Chhattisgarh State Electricity Regulatory Commission (Renewable Purchase obligation and REC framework Implementation) Regulations, 2013, to be notified by Commission

- (4) As per OERC (Renewable and Co-generation Purchase Obligation and its Compliance) Regulations, 2010 issued by ORISSA ELECTRICITY REGULATORY COMMISSION, the 'Renewable Energy Sources' AND 'Renewable Purchase Obligation' has been defined as follows:

"j) "Renewable energy sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste, and such other sources as recognized or approved by MNRE;

k) 'Renewable Purchase Obligation (RPO) means the requirement specified through these Regulations by the Commission under Clause (e) of sub-section (1) of section 86 of the Act or by way of orders from time to time for the obligated entity to purchase electricity from co-generation and generation of electricity from renewable energy sources;"

51. As detailed above, number of State Regulators have been admitting the generation from co-generation irrespective of fuel for accounting against the RPO. Accordingly, KSEB has also accounted the power purchase from the co-generation plants - M/s MP Steel and M/s Philips Carbon Black against the RPO for the years 2010-11 to 2013-14. Hence, KSEBL may request that, Hon'ble Commission may kindly admit the co-generation from M/s MP steel and M/s Philips Carbon Black against the RPO of the State.

(e) **Energy generation from Maniar SHP for fulfilling the RPO of the State**

52. Maniar and Kuthumkal are the two small hydel projects established in the State through CPP route. However, Kuthumakal SHP has already been accredited for REC, and hence KSEBL has not considered the same for meeting the RPO of the State.

53. Maniar SHP has been utilizing the tailrace discharge from the Sabarigiri HEP (335 MW) owned and operated by KSEBL. KSEB was the State Government instrumentality for the implementation of the Maniar SHP.
- (i) Maniyar Project is allotted by GoK to M/s.Carborandum Universal Ltd. (CUMI) vide G.O.No.17/91/PD dated 18-1-1991 for execution and operation for a period of 30 years from CoD with the consent of KSEB.
- (ii) KSEBL had given its consent for the allotment of Maniar SHP to M/s Carborandum Universal vide the B.O.No.PLG.CVI/1/82 dated 22-2-1991. On 18th May 1991, KSEBL had entered into an agreement with M/s.Carborandum Universal Ltd and major provisions in the agreement are submitted below.
- The terms and conditions of Private Sector Participation in Generation of Power announced by Government of Kerala vide G.O(MS) No.23/90/PD dated 7-12-1990 forms part of the agreement.
 - M/s.Carborandum Universal Ltd. agrees to abide by the rules and regulations to be framed by the State Government and KSEB from time to time in the matter of electricity generation by private agencies
 - The land with all structures including electric installations, machinery, buildings and other appurtenants and operating facilities constructed in connection with the Maniyar HEP shall without any cost, be transferred to the ownership of KSEB at the end of 30 years from CoD.
 - The energy from Maniyar HEP fed into KSEB grid less twelve percent towards wheeling charges and T&D losses will be delivered free of cost to CUMI at their EHT terminals.
 - Under no circumstances shall CUMI be entitled for the sale or transfer of any excess energy or any energy produced from the project to any party other than KSEB.
54. Maniar SHP has been utilizing the natural resources of the State and also utilizing the tail race discharge of KSEB's Sabarigiri HEP (335MW).
55. As the Maniar SHP has been utilizing the resources of this State, the electricity generated from the SHP may have to be allowed to accounted under the RPO of the State of Kerala only and thus pass on

the benefit to the consumers of the State of Kerala. Since the RPO is aimed at optimum development of the State, the energy generated from all the renewable sources in the state has to be accounted against the RPO of KSEBL, the distribution licensee in the state of Kerala.

56. Further, this plant was allotted by the State Government with the consent of KSEB, much before the Central Government enacted the Electricity Act-2003. The developer is not allowed to get any other benefit other than captive consumption against their industrial usage.
57. Since KSEBL is the generator and power procurer for all consumers of the State, the energy generation from Maniar may be allowed to be accounted against the RPO of KSEBL on behalf of the State, so that any short-fall in RPO can be compensated and accordingly all the consumers may get relieved from the liability of penalty to that extent. Considering the facts and submission above, it is humbly requested that Hon'ble Commission may kindly account the electricity produced from Maniar SHP against the RPO of KSEBL on behalf of the State.

(f) Solar Power Purchase Obligation

58. As submitted earlier, Hon'ble Commission vide the order dated 4-4-2013, has ordered that:

"1. Solar Power purchase obligation as per the Regulation cited, at the rate of 0.25% of the consumption of energy, shall be insisted from the FY 2013-14 in the case of KSEB and from the FY 2014-15 in the case of other Licensees in the state. The solar power purchase obligation shall be enhanced by 10% every year thereafter.

2. The consumption for 2013-14 shall be taken as the base year in the case of KSEB and 2014-15 for other Licensees for computing the obligation.

3. ANERT being the designated state agency shall monitor the solar power purchase obligation and submit periodical reports to the Commission as per the Regulations."

59. KSEBL has been taking earnest efforts for generating electricity from Solar. The details are given below.

- (1) KSEBL has entered into a Power Sale Agreement with Solar Energy Corporation of India(SECI) during August 2014 for supply of 30MW solar energy under the programme Batch I, Phase 2 Jawaharlal Nehru National Solar Mission, Viability Gap Fund Scheme of MNRE. No objection certificate for long term open access have been given to SECI. This solar power will be expected to start scheduling from the year 2015-16.

- (2) MoU has been signed between KSEBL and NHPC for the development of 50 MW capacity solar power project at West Kallada in Kollam District by NHPC. As per the MoU, KSEBL shall facilitate for the formation of a Special Purpose Vehicle (SPV) involving the Grama Panchayat and the land owners, and shall enter into a bipartite agreement with the Grama Panchayat or SPV to facilitate transfer of land to the project. Registration Process of company has been completed. DPR of the project will be completed by NHPC during February 2015 itself. It is expected that work can be awarded during August 2015.
 - (3) KSEBL has already taken steps for developing 200 MW solar park at Kasargod district. Solar Energy Corporation of India (SECI) is the nodal agency for the project. Out of the 200 MW, 100 MW is proposed to be developed through the new VGF scheme which is under consideration of approval by the Central Government. Out of the balance 100 MW, 50 MW is decided to be implemented through IREDA (Indian Renewable Energy Development Agency) and 50 MW through THDCIL (Tehri Hydro Development Corporation of India Ltd). Separate Tripartite agreement was signed (i) between KSEBL, SECI & IREDA and (ii) between KSEBL, SECI and THDCIL on 31-03-2015.
 - (4) KSEBL has been taking earnest steps for providing net metering connectivity as per the KSERC(Grid Interactive Distributed Solar Energy System) Regulations, 2014 issued by Hon'ble Commission. About 41 applications from eligible consumers have been received so far, for providing grid connectivity to such solar power plants, with a total capacity of 1.015MW. Out of this, 10KW of solar power plant of M/s.Krishna Jewels, Kannur and 1KW of Dr.Pavithran, Sreekaryam has been test charged, while connectivity to the other plants are in progress.
 - (5) KSEBL has also implemented the suo-motu order dated 30-9-2014 issued by Hon'ble Kerala State Electricity Regulatory Commission (KSERC) to provide Generation Based Incentive (GBI) for off-grid captive solar power plants @Rs.1.00 / Unit.
60. The solar energy from the different sources as detailed above is expected to start scheduling from the current financial year 2015-16. Considering the sincere efforts taken by KSEBL for accelerating the electricity generation from 'Solar', it is humbly requested that Hon'ble Commission may kindly permit KSEBL to carry forward the Solar RPO for the year 2013-14 to the year 2015-16.

(g) Summary of the RPO met during the period from 2010-11 to 2013-14

61. The summary of the energy generation / purchase from various renewable sources including co-generation plants is tabled below.

Sl No	Renewable energy sources	Generation (MU)			
		2010-11	2011-12	2012-13	2013-14
1	KSEB SHP	378.24	322.72	300.19	438.44
2	KSEB Wind	1.51	2.03	1.76	2.27
3	IPPs -SHPs	33.51	41.29	33.82	63.85
4	IPPs-Wind	63.04	67.49	68.34	65.80
5	Co-generation	34.07	35.17	33.55	57.74
6	Maniar Captive- SHP (not claimed REC)	40.59	36.91	21.49	40.23
7	Total	550.96	505.61	459.15	668.33
	Net energy consumption by KSEB as a distribution licensee	14098.89	15508.44	16337.48	16930.89
	Renewable energy as a percentage of total energy distributed	3.91%	3.26%	2.81%	3.95%
	RPO target	2.75%	3.03%	3.30%	3.58%

62. As detailed above, KSEB/KSEBL could achieve the RPO target stipulated as per the Regulation 3(1) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010 for the years 2010-11, 2011-12 and 2013-14. However, for the year 2012-13, there was a shortfall in the RPO achieved by KSEBL compared to the target, mainly due to unprecedented failure of monsoon during the year 2012-13 and resultant reduction in energy generation from Small Hydel Projects in the State.
63. KSEBL vide the affidavit dated 27-08-2014 and submission dated 31-10-2014 had prayed before the Hon'ble Commission that, by invoking the provisions under 1st proviso to regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, KSEBL may be allowed to adjust the RPO shortfall during the year 2012-13 due to failure of monsoon against the excess RPO met during the years 2010-11, 2011-12 and 2013-14. The 1st proviso to regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, is extracted below for ready reference.

Quote:

"6. Effect of default.-

Provided that in case of genuine difficulty in complying with the renewable purchase obligation because of non-availability of certificates, the obligated entity

can approach the Commission for carry forward of compliance requirement to the next year.”

Unquote:

V. Orders / decisions of State Electricity Regulatory Commissions for carry forwarding/ adjusting the shortfall in RPO against the surplus RPO achieved in previous years / carry forward to the future years.

64. Most of the State Electricity Regulatory Commissions in the country are allowing the distribution licensees to carry forward the shortfall in RPO to subsequent years. Further, the excess RPO achieved in previous years are also allowed to be adjusted in the subsequent years for meeting the RPO. The details are submitted below.

(1) Punjab State Electricity Regulatory Commission vide order dated 5-9-2014 in Petition No.34 of 2014 has allowed the obligated entities in the state that have not fulfilled its RPO to carry forward in the subsequent years as extracted below.

“11. As there have been some factors beyond the reasonable control of PSPCL such as delay in commissioning of the new RE Projects by the developers and less generation from existing and newly commissioned RE Projects etc. besides other reasons brought out in the petition, the Commission allows PSPCL to carry forward the shortfall in RPO compliance for FY 2013-14 to FY 2014-15 to be complied with by 31.12.2014, failing which further action as per Regulations may be initiated. This shall be in addition to the RPO compliance for FY 2014-15 specified in the RPO Regulations, 2011.”

(2) Maharashtra State Electricity Regulatory Commission in suo-motu order in case no.180 of 2013 has made a similar judgment allowing the adjustment of excess RPO of the previous year in the subsequent year of shortfall and carry forward of shortfall in a year to subsequent years. The relevant para of the order is extracted below.

“The Commission observed that MSEDCL has shortfall of 684.89 MU for FY 2012-13 in meeting their Non- Solar RPO targets. After considering the surplus of 386.52 MU of previous years, there is still a shortfall of 298.37 MU in FY 2012-13. The Commission allows MSEDCL to meet its Non-Solar RPO shortfall of 298.37 MU for FY 2012-13 in FY 2013-14 on cumulative basis.”

(3) Haryana State Electricity Regulatory Commission vide the order dated 20-11-2013 in Petition No. 8 of 2012 had allowed the Discoms/HPPC to carry forward the shortfall in RPO to the subsequent years. The relevant paragraph of the order is extracted below.

“The Discoms / HPPC are allowed to carry forward the shortfall, on actual basis, the RPO compliance for FY 2011-12, FY 2012-13 and FY 2013-14 to the next financial year i.e. FY 2014-15. However, it is clarified that the RPO carried over to FY 2014-15 shall be in addition to the RPO for FY 2014-15.”

- (4) The Delhi Electricity Regulatory Commission has allowed the distribution companies to carry forward their RPO of last year to current fiscal year vide the 2014-15 tariff order, which came after the discoms requested the DSERC to either waive off their RPO or consider carrying forward the commitment to subsequent years.
 - (5) Gujarat Electricity Regulatory Commission has vide order dated 17-8-2012 in suo-motu petition no.1219 of 2012 has ordered to carry forward the shortfall in procurement of renewable energy during FY 2011-12 to FY 2012-13. Also, any excess procurement of solar energy by the distribution licensees during FY 2012-13 was also allowed to be adjusted against the fulfillment of Non-solar RPO for that financial year. This decision of the State Commission was upheld by Hon’ble APTEL of electricity also vide judgment dated 25-4-2014 in Appeal no. 24 of 2013 & IA no. 39 of 2013 filed by Indian Wind Energy Association.
 - (6) Chattisgarh:” In the event of non compliance of the RPO by distribution licensees by any of the modalities, from non-solar renewable energy plants or solar power plants in the State, the distribution licensee whose purchase of renewable energy is maximum during the year shall be compensated by other distribution licensees so that percentage of renewable energy consumption by all the distribution licensees functioning in the State become equal.”
 - (7) TNERC has clarified that purchases made from cogeneration units irrespective of the fuel type would be considered for fulfilling their RPO.
65. KSEBL may once again humbly request before the Hon’ble Commission that, as decided by other SERC’s across the country as detailed above, Hon’ble Commission may kindly allow KSEBL to carry forward the short fall in RPO during the year 2012-13 against the surplus RPO attained during the year 2010-11, 2011-12 and 2013-14 and the balance if any may be allowed to carry forward to the subsequent years.
66. In addition to the above, KSEBL has already established 1904.75MW of hydel stations having capacity above 25MW. This includes 101.90MW of hydro capacity having installed capacity between 25MW and 50MW with

a total annual generation of 612MU, the details of which are given below.

Sl. No	Station	Installed capacity(MW)	Design Energy(MU)
1	Pallivasal	37.5MW	284
2	Panniar	32.40	158
3	Poringalkuthu	32	170
	Total	101.90	612

67. It is requested that Hon'ble Commission may kindly consider the energy generated from these sources also as part of non-solar RPO obligation of KSEBL.
68. **Clarification and directions issued by the KSERC vide the letter No. 337/CT/2013/ KSERC 229 dated 26th February 2015**
69. KSEBL vide the affidavit dated 27-08-2014 had prayed before the Hon'ble Commission that,
- (1) The energy purchase from the co-generation plants M/s MP- Steel and M/s Philips Carbon and generation from Maniar SHP may be accounted as part of RPO of KSEBL.
 - (2) Necessary direction may be issued to M/s ANERT to re-work the RPO obligation duly considering the energy purchase from M/s MP-Steel and M/s Philips Carbon and generation from Maniar SHP.
 - (3) Adjust the RPO shortfall if any during the year 2012-13 due to failure of monsoon may be adjusted against the excess RPO met during the years 2010-11, 2011-12 and 2013-14, and exempt KSEBL from depositing any amount into a separate fund to be created by KSEBL as per the regulation-6 of the KSERC (Renewable Purchase Obligation and its compliance) Regulations,2010.
70. In response to the request and prayers of the Board, Hon'ble Commission vide the letter dated 26th February 2015, clarified as follows.
- (1) Co-generation can be considered as renewable energy, only if the co-generation uses renewable energy such as small hydro, solar, wind, biomass, bio gas etc. In the case of MP steel and Philips Carbon black, co-generation is not from renewable energy sources. Therefore claim of KSEBL in this regard cannot be admitted.

- (2) KSEBL is not purchasing any energy from Maniar SHP. Hence the energy generated from Maniar SHP cannot be accounted towards the RPO of KSEBL.
- (3) Carry over the shortfall in RPO can be permitted only if REC is not available. Hence claim of KSEBL cannot be admitted.
- (4) KSEBL is directed to create a separate fund as per Regulation 6 of KSERC (Renewable Purchase Obligation and its compliance) Regulations, 2010 and remit an amount of Rs 125.00 crores for the purchase of solar and non solar REC.

71. Cogeneration from M/s M.P steel and M/s Philips Carbon black:

Regarding the issue to consider the co-generation from M/s M.P steel and M/s Philips Carbon black against the RPO, Hon'ble Commission may kindly consider the judgments of Hon'ble APTEL dated 26th April-2010 in appeal petition No. 57 of 2010, judgment dated 30th Jan-2013 in appeal petition No. 54 of 2012 and judgment dated 10th April-2013 in appeal petition 125 of 2012 as detailed under paragraph 50 of the present petition. Further, many SERCs in the country including Tamilnadu ERC, Chattisharh ERC, OERC have already decided that, the electricity purchase from co-generation irrespective of the fuel used can be accounted against the RPO. The details are submitted under paragraph(50) above. Hence, KSEBL may once again humbly request before the Hon'ble Commission that, considering the above, the electricity purchase from the co-generation plants of M/s MP Steel and M/s Philips Carbon Black may be admitted for accounting against the RPO of KSEBL.

72. Request to consider the electricity generation from Maniar SHP to account against the RPO of the State.

KSEBL vide the paragraph 52 to 57 of this petition has submitted the detailed explanation on the reasons for considering the electricity generation from Maniar SHP towards the RPO of the KSEBL on behalf of the state of Kerala. Considering the reasons submitted therein, Hon'ble Commission may kindly permit KSEBL to account the electricity produced from Maniar SHP against the RPO of KSEBL on behalf of the State.

Adjust the RPO shortfall if any during the year 2012-13 due to failure of monsoon may against the excess RPO met during the years 2010-11, 2011-12 and 2013-14.

73. Vide the paragraph 64 and 65 of this petition, KSEBL has submitted the decisions of the various SERCs in the country in carry forwarding/ adjusting the RPO during an year against the surplus RPO achieved in previous years/ to carry forward the short fall in achievement of RPO to subsequent years. KSEBL may once again request before the Hon'ble Commission that, as decided by other SERCs as detailed under paragraph-64 above, Hon'ble Commission may kindly allow KSEBL to carry forward the short fall in RPO during the year 2012-13 against the surplus RPO attained during the year 2010-11, 2011-12 and 2013-14 and the balance if any may be allowed to carry forward to the subsequent years.

74. Regarding the direction of the Hon'ble Commission to deposit an amount of Rs 125.00 crore as penalty for noncompliance of the RPO in a separate fund as per Regulation -6 of the KSERC (Renewable Purchase Obligation and its compliance) Regulations,2010, KSEBL may submit the following for the kind consideration of the Hon'ble Commission.

- (1) Any penalty imposed on KSEBL on account of the shortfall in RPO is a pass through in tariff. KSEBL as the generator and power procurer for entire consumers of the State, the liability may ultimately fall on the shoulder of the entire consumers of the State.
- (2) After accounting the co-generation from M/s MP steel and M/s Philips Carbon Black and also electricity generation from Maniar SHP, KSEB had achieved excess RPO except during the 2012-13. The shortfall in RPO during the year 2012-13 is on account of the failure of monsoon and consequent reduction in generation from SHPs in the State.
- (3) The State Government has been taking various initiatives through policy directives for the development of the renewable energy generation including the generation from SHPs, wind and solar power in the State. However, irrespective of the various initiatives taken by the State Government, the capacity addition in generation and wind through IPP route during the last few years is far behind the expectation. The Wind capacity sofar developed under IPP route is 32.85 MW and SHP capacity under IPP is 22 MW as detailed under paragraph 44 and 45 above.

- (4) KSEBL as the generator and power procurer of the State has been procuring the entire electricity generated from renewable through IPP route at the rate approved by the Hon'ble Commission.
- (5) Considering the slow pace of development of renewable sector through IPP route, KSEBL as its own has been giving more thrust for developing SHPs at accelerated pace. So far, KSEBL as its own has installed SHPs with a total capacity of 103.9 MW as on 31-03-2014. Further, 103 MW of SHPs are at various stages of implementation and the same is expected to commission during the years 2015-16 and 2016-17. Further another 117 MW of SHPs are under active consideration of the KSEBL for implementation. With the commissioning of these SHPs, the non-solar RPO of the State can be met to a large extent.
- (6) KSEBL has been taking active steps for accelerating the electricity generation of Solar to a larger scale to meet the energy requirement of the State. The details are given under paragraph 58, 59 and 60 of this petition. KSEBL has been targeting to meet the solar RPO by the year 2015-16.

Renewable generation and the real intention behind RPO, REC mechanism

75. It is true that, the development of the electricity generation from Renewables is tardy compared to the conventional energy sources mainly due to the higher cost of electricity generated from renewable. Further, renewable resources are also concentrated at few States in the country. Considering the tardy capacity addition from renewable, the policy makers vide the section 61 and 86 of the Electricity Act-2003 has empowered the SERCs for promoting the electricity generation renewable and co-generation plants.
76. In line with the statutory powers conferred under section-61 (h) and section 86(1)(e) of the Electricity Act-2003, Hon'ble CERC vide the notification dated 14-1-2010 has evolved the REC mechanism mainly:

- (a) As a market based instrument to promote renewable energy and facilitate renewable purchase obligations (RPO).
- (b) To address the mismatch between availability of RE resources in state and the requirement of the obligated entities to meet the renewable purchase obligation (RPO) through purchase of RECs which is deemed as purchase of RE for RPO compliance.
- (c) For creating avenues for harnessing the potential beyond the RPO level fixed by the State Commissions in states where there are very high potential of RE sources, but the high cost of generation from RE sources discourages the local distribution licensees from purchasing RE generation beyond the RPO level mandated by the State Commission.
- (d) It also helps those states where the potential of renewable energy sources is not that significant, from specifying higher renewable purchase obligations.

77. Hence, the main objective of REC mechanism is for ensuring optimum harnessing of the renewable energy potential of States where there are avenues for harnessing the potential beyond the renewable purchase obligation level fixed by the State Commissions.

78. Kind attention is invited to paragraph 6.4 of the National Tariff Policy notified by the Central Government, wherein it is stipulated that, the State Commissions should have to fix the RPO target 'duly taking into account the availability of such sources in the region and its impact on retail tariff'. The paragraph 6.4 of the National Tariff policy is extracted below for ready reference.

Paragraph 6.4 of Tariff Policy prescribes that *Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage for purchase of energy from Non-conventional sources of energy generation including Co-generation taking into account availability of such resources in the region and its impact on retail tariffs.*

79. However, the Hon'ble Commission has not considered the tardy capacity addition from Renewables especially Wind and SHPs in the State despite the policy initiatives of the Government. Further, a detailed study on the impact of the RPO in the retail tariff is yet to be initiated by the Hon'ble Commission.

80. Hence, considering these issues, Hon'ble Commission kindly exempt KSEBL from depositing an amount of Rs 125.00 crore in a separate fund as per Regulation -6 of the KSERC (Renewable Purchase Obligation and its compliance) Regulations,2010, imposed as penalty for noncompliance of the RPO.

Prayer

Considering all the averments as submitted above, KSEBL may humbly pray before the Hon'ble Commission that,

- (1) The electricity procurement from the Co-generation plants M/s MP Steel and M/s Philips Carbon black may be allowed to be accounted as part of the RPO of KSEBL.
- (2) The generation from Maniyar Captive power project may be accounted towards the RPO of KSEBL on behalf of the State of Kerala.
- (3) By invoking the provisions of the regulation 6(2) of the KSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010, the shortfall in RPO if any during the year 2012-13 due to failure of monsoon may be adjusted against the excess RPO met during the years 2010-11, 2011-12 and 2013-14 and the balance if any may be allowed to carry forward to the subsequent years.
- (4) KSEBL may be exempted from depositing an amount of Rs 125.00 crore as penalty for noncompliance of the RPO in a separate fund as per Regulation -6 of the KSERC (Renewable Purchase Obligation and its compliance) Regulations,2010.
- (5) As stipulated under paragraph 6.4 of the National Tariff Policy, the RPO target may be re-fixed considering the tardy capacity addition in Renewable Generation and its impact on retail tariff.

Sd/

Chief Engineer (Commercial & Tariff)

