

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Explanatory Memorandum for the “Draft Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) (Third Amendment) Regulations, 2014”**

**Explanatory Memorandum**

**1.0 INTRODUCTION**

1.1 The Commission had notified the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 (hereinafter Principal REC Regulations) vide notification dated 14<sup>th</sup> January, 2010. As mentioned in the Statement of Reasons issued along with the regulations, the concept of renewable energy certificate seeks to address the mismatch between availability of renewable energy sources and the requirement of obligated entities to meet their renewable purchase obligations. The Commission had further clarified that the REC mechanism aimed at promoting investment in the renewable energy projects and to provide an alternative mode to the RE generators for recovery of their costs.

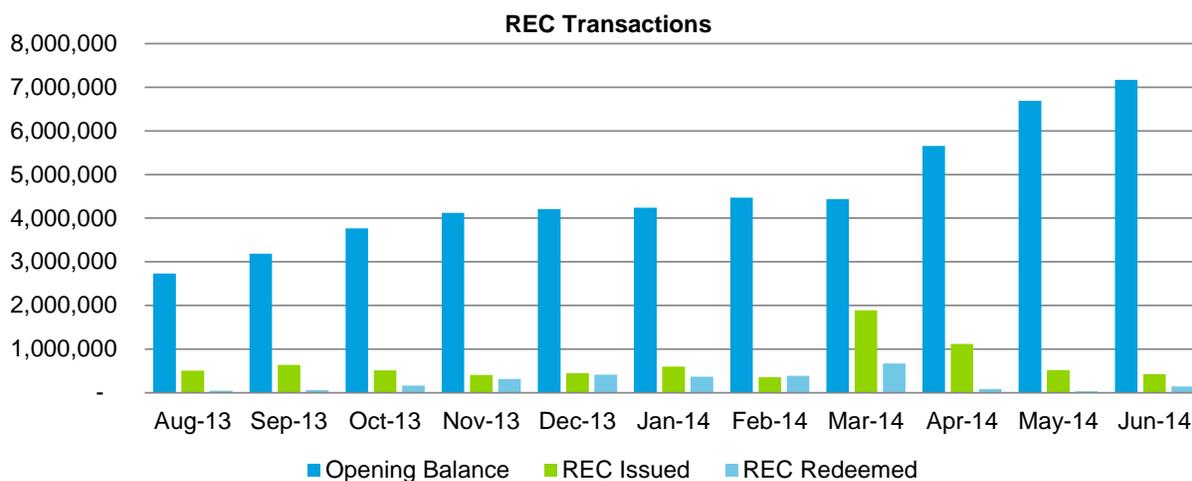
1.2 Subsequently, the Commission made two amendments in the Regulations (notifications dated 1.10.2010 and 11.07.2013) to provide clarity on applicability of the regulations to eligible entities and bring in certain essential checks and balances in the REC related processes.

1.3 The Commission also approved the procedures for accreditation, registration, issuance and redemption of RECs. Further, the Commission approved the rules/bye laws and mechanism for REC price discovery on power exchanges. The Forum of Regulators (FOR) approved the Model Regulations on Renewable Purchase Obligation, its compliance and Implementation of REC Framework for the State Electricity Regulatory Commissions (SERCs).

1.4 The REC trading on the power exchanges started during the month of March 2011. Ever since, the non-solar REC and solar REC trading sessions have been taking place regularly.

## 2.0 REC market trends

2.1 The volume of the RECs available in the market has been increasing overtime whereas the demand for RECs has been very low. This has resulted in REC trading at floor price for the past few months. The same is shown in the figure 1 below:



**Figure 1: REC inventory status (Source: REC registry of India)**

2.2 There is huge unsold inventory of around 8.9 million RECs (as on end July 2014) in the market. The RPO target setting and enforcement is perceived to be weak thereby leading to non-compliance by the obligated entities in meeting their annual RPO targets. While this remains a fundamental challenge in not just implementing the REC mechanism but also the development of renewable energy in the country, there are several other factors in the REC framework, which need to be reviewed in order to improve the efficacy of the REC framework. It is felt that certain features of the REC mechanism such as enabling framework for eligibility of distribution licensee for REC, long term visibility of floor and forbearance price, validity of RECs issued, frequency of trading sessions, etc. need to be reviewed in order to accelerate the RE capacity addition.

2.3 In the backdrop of the above, the Forum of Regulators commissioned a study to review the current REC framework. Based on the findings of the report and subsequent recommendation of the FOR as approved in its 42<sup>nd</sup> meeting held at New Delhi on

27.8.2014, the following issues are proposed to be addressed through the present amendment:-

### **3. Issue of eligibility for certificates to the distribution licensee for procurement of renewable energy beyond their renewable energy purchase obligation target**

3.1 CERC received representations that the distribution licensees who are purchasing renewable energy over and above their minimum purchase obligation at preferential tariff should be made "Eligible Entities for Renewable Energy Certificates" for such excess energy. As per Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, only the renewable energy generators are eligible for issuance of Renewable Energy Certificates (RECs). The Ministry of New and Renewable Energy Sources also submitted that in order to encourage procurement of renewable energy at preferential tariff beyond the RPO, the distribution licensee should be made eligible for issuance of RECs for such additional procurement. Further, the Commission in its Order dated 2.12.2013 in the Petition No.128/MP/2013 dated 25.06.2013 directed staff to examine the issue and submit a proposal to address the problems, if any, for the consideration of the Commission.

3.2 This aspect has been examined in the Commission and in the FOR and it is felt if the distribution utilities are made eligible for REC, they (especially the distribution utilities from resource rich states) would be encouraged to accommodate more renewable energy in the system by procuring renewable energy beyond the RPO target fixed by the appropriate Commission. This is in conformity with the national objective of promotion of RE. This suggestion can provide the right incentive structure for promotion of Renewable energy in States which are naturally endowed in this respect and are ready to implement progressive policy in the larger interest of the nation. It also helps in reducing project financing risk of Project Developer under REC mechanism. Bankability of a project selling electricity component and REC in bundled form would increase. However, the following issues, as highlighted in the FOR Report in the context need to be addressed:-

## **Issues need to be addressed in implementation**

3.3 The caveat is that it should be ensured that the renewable energy generators are not forced to sell energy under preferential tariff only, thereby restricting their choice.

3.4 Further, it cannot be implemented only for procurement of solar power by distribution licensees beyond Solar Purchase Obligation (SPO). It is required to be implemented for non-solar purchase obligation as well.

3.5 There is a wide divergence in RPO levels (solar and non-solar) amongst states. For the year 2013-14, this ranges from as low as 3.1% for Haryana to 10.25% in Karnataka. Further, most of the State Electricity Regulatory Commissions have not declared long-term RPO trajectories. The absence of national level long-term RPO trajectories (solar and non-solar) might act as a barrier in implementing the suggestion of issuance of RECs for procurement of RE power beyond RPO target.

## **Proposal**

3.6 Considering the above, it is proposed that the obligated entities should be made eligible for RECs, upon approval of the concerned State Commission, only for procuring renewable power beyond the RPO target set by the State Commission or the RPO target as may be stipulated in the Tariff Policy or in the National Action Plan on Climate Change, whichever is higher, subject to the condition that the RPO target as may be specified, by the concerned State Commission should not be lower than that for the previous financial year. In view of the above it is proposed to add, a new Regulation after Regulation 5 of the Principal Regulations as under:

*(i) A new clause (1A) shall be added after clause (1) of Regulation 5 of the Principal Regulations as under:*

*"(1A) A distribution licensee shall be eligible to apply for registration with the Central Agency for issuance of and dealing in Certificates if it fulfills the following conditions:*

*(a) It has procured renewable energy, in the previous financial year, at a tariff determined under Section 62 or adopted under Section 63 of the*

*Act, in excess of the renewable purchase obligation as may be specified by the Appropriate Commission or in the National Action Plan on Climate Change or in the Tariff Policy, whichever is higher:*

*Provided that the renewable purchase obligation as may be specified for a year, by the Appropriate Commission should not be lower than that for the previous financial year.*

*(b) It has obtained a certification of procurement of renewable energy as provided in sub-clause (a) of this regulation, from the Appropriate Commission."*

*(ii) In clause (2) of Regulation 5, the words "or the distribution licensee, as the case may be" shall be added after the words "The generating company".*

#### **4.0 Eligibility of issuance of Certificates to the renewable energy generators selling electricity component to third party through open access at mutually decided rate**

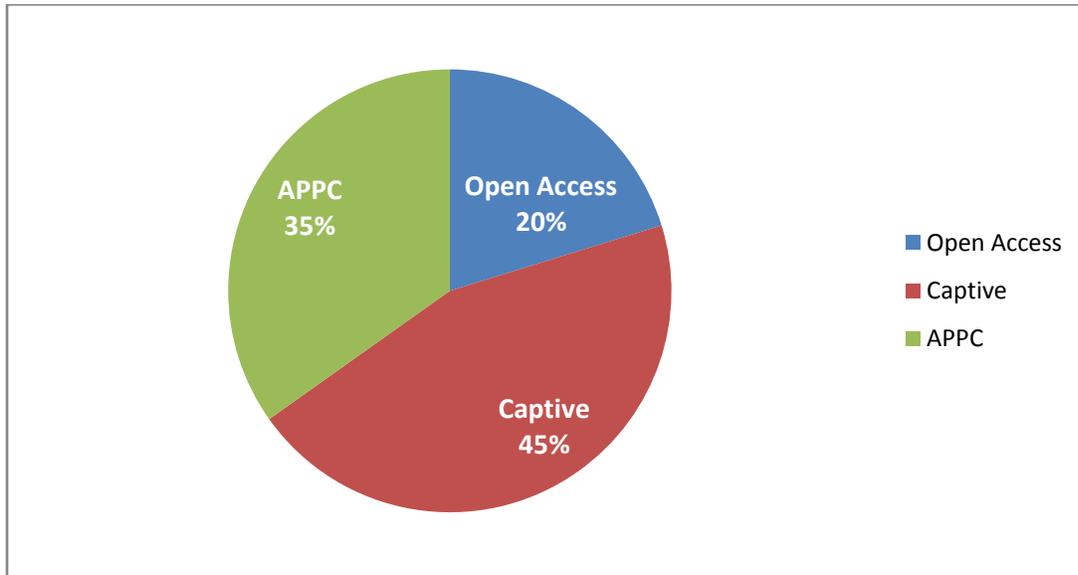
4.1 As per the CERC REC Regulations, the eligible RE generators mainly fall under three categories:

- i. RE generator selling electricity to a distribution utility at Average Pool Purchase Cost determined by the respective SERCs (can be termed as APPC route);
- ii. Captive Generation Plant for meeting captive electricity requirement (CGP route);
- iii. RE generator selling electricity to an open access consumer (OA route).

#### **Dominance of CGP & OA route in REC market**

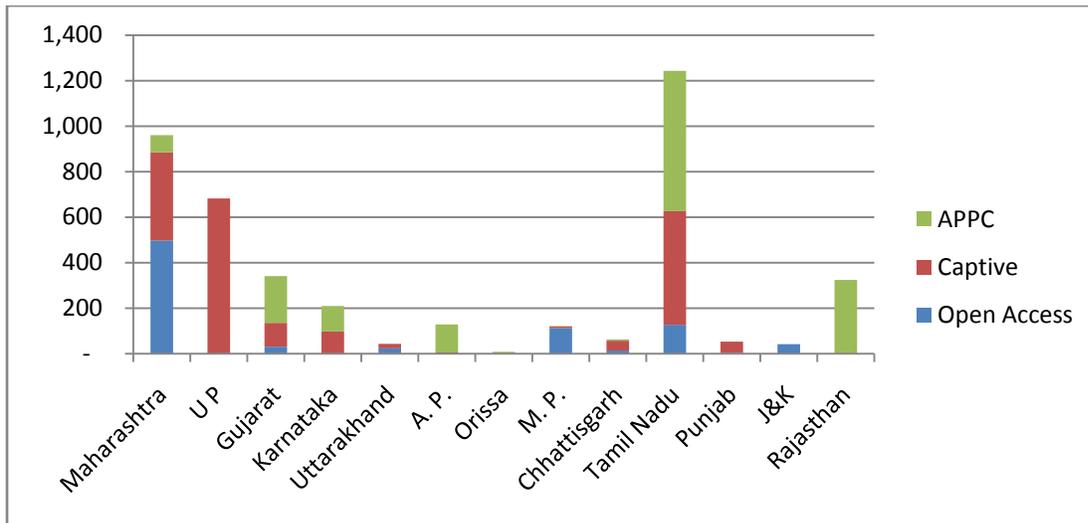
4.2 As on July 2014, a capacity of around 4,897 MW has been accredited for RE Generators under REC framework. However, the information related to segregation of this entire capacity based on the type of contractual route (APPC/OA/CGP) adopted by RE generator for selling electricity component is not available at the central level. Based on the inputs of state agencies, FOR has collated information from states aggregating to around 4,223 MW of accredited capacity. The following Figure 2 shows the breakup of projects accredited under APPC route, open access and captive route. The results clearly indicate that the REC capacity is currently dominated by RE generators operating under **CGP or OA route**.

**Figure 2: Projects accredited under APPC route, open access and captive route**



4.3 The state wise distribution of this capacity (4,223 MW) is shown in the figure 3 below:

**Figure 3: State wise distribution of REC capacity (in MW)**



4.4 The above figure indicates that three states viz., Tamil Nadu, Maharashtra and Uttar Pradesh have the maximum REC accredited capacity. Tamil Nadu has around 50% capacity under OA and Captive route. Uttar Pradesh has 100% capacity under Bagasse based CGP route whereas for Maharashtra around 95% of capacity is through OA & CGP route.

## Differential level of pricing for electricity component

4.5 One of the key reasons attributed to the dominance of CGP or OA route in the REC market can be related to the different level of pricing framework for electricity component under different routes – APPC, CGP and OA. Under APPC route, the RE generator is eligible only for APPC price determined by respective SERC which is reported to be lower than the electricity reference price levels under CGP or OA route.

4.6 The issue of higher realization by sale/consumption of electricity under OA/CGP route has been raised by different stakeholders. For example, the Statement of Reasons for Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) (Second Amendment) Regulations, 2013 has detailed some of the concerns raised by stakeholders:

*“16.10 Regarding, CGP, the KERC submitted that such plants are set up by industrial and other large consumers including bagasse based sugar factories to meet their own need of electricity and sale of surplus power generated in their units. Self-consumption by such units being replacement of the consumption of power from distribution utilities at retail tariff applicable to them and cost of generation is usually lower than utility’s retail tariff applicable to them. It is therefore not justified that such units get the additional benefit of the value of RECs for the power consumed by them out of their own generation. It is further submitted that the proposed amendments relating to CGP if notified, will make it more difficult for Forum of Regulators (FOR) to take-up such a review in the near future. (KERC)*

*16.11 Regarding , eligibility of RE generators selling power to third parties by open access at mutually decided rate, the KERC submitted that in State like Karnataka, it is found that RE generators are able to sell power to consumers at prices comparable to higher slabs of applicable retail tariffs fixed by the SERC. Even after deducting the open access charges and the cross subsidy charge, the generators are able to realize prices higher than the PPA rates available to similar generators. (KERC).”*

It is to be noted that the Karnataka Electricity Regulatory Commission (KERC) notified the KERC (Power procurement from Renewable Sources by Distribution licensee and renewable Energy certificate Framework) Regulations, 2011 as amended on 16.03.2011 and 20.12.2011, that recognize only those renewable energy generators eligible for issuance of Certificates that sell the electricity generated by it to the distribution licensee of the state at the pooled cost of power purchase. Aggrieved by the inconsistency in the eligibility criteria as specified in the Central and State Regulations, some of the stakeholders filed Writ Petition before the Hon'ble High Court of Karnataka (W.P. Nos. 7603-04-05/2012). The Hon'ble High Court vide its Order dated 2.4.2014 dismissed the Writ Petitions. The Hon'ble High Court also observed that "the renewable energy generator who chooses to sell his power in open access to consumers in preference to power purchase agreement makes a fair amount of profit".

4.7 The table below provides details of the APPC & retail tariff for the relevant consumer categories applicable across states for year 2014. The Table 1 below also captures the Net Electricity Component under both the cases (i.e. the net realization for an RE generator by way of sale of electricity component under different routes).

Table 1: APPC, Energy Charge and Net Electricity Component (Rs per kWh)

States	APPC**	Energy Charge (2014)*			Applicable OA charges**		Net Electricity Component Case 1 : EC- OA charge		Net Electricity Component Case 2: 90% of EC - OA charge	
		Comml.	Industry	Av. (Comml. & Ind.)	Captive	Third party	Captive	Third party	Captive	Third party
Andhra Pradesh	3.28	9.13	5.73	7.43	1.37	1.32	4.36	4.41	3.79	3.84
Gujarat	2.94	4.6	4.45	4.53	1.3	1.7	3.15	2.75	2.71	2.31
Haryana	3.29	5.85	5.3	5.58	0.96	1.49	4.34	3.81	3.81	3.28
HP	2.17	4.75	4.75	4.75	1.43	1.56	3.33	3.2	2.85	2.72
Karnataka	3.07	7.45	5.45	6.45	1.73	2.04	3.72	3.41	3.18	2.87
Maharashtra	3.45	10.91	6.33	8.62	1.77	2.07	4.56	4.27	3.93	3.63
MP	2.53	5.2	4.6	4.9	0.81	1.6	3.79	3	3.33	2.54
Punjab	3.59	6.58	6.26	6.42	1.32	2.39	4.94	3.87	4.31	3.24
Rajasthan	3.13	6.6	5.25	5.93	1.44	1.5	3.81	3.75	3.29	3.23
Tamil Nadu	3.11	7	5.5	6.25	1.21	2.93	4.29	2.57	3.74	2.02
UP	3.53	6.1	5.9	6	1.14	1.14	4.76	4.76	4.17	4.17
<b>Average</b>	<b>3.1</b>	<b>6.74</b>	<b>5.41</b>	<b>6.08</b>	<b>1.32</b>	<b>1.79</b>	<b>4.76</b>	<b>4.28</b>	<b>4.15</b>	<b>3.68</b>

\* CEA report, \*\*SERC orders

4.8 In the above table, two options of complete or partial recovery of energy charge have been considered for the computation of electricity component for CGP/OA as shown below:

Case	Definition of electricity Component
Case 1	Electricity Component for OA/CGP = [100% Energy Charge of consumer category] – OA charge
Case 2	Electricity Component for OA/CGP = [90% Energy Charge of consumer category] – OA charge

4.9 Under case 2, 90% energy charge is considered for computation of the net electricity component before the deduction of applicable OA charge. This is based on the assumption that under OA route, the OA consumer will expect discount over the consumer category tariff, for purchase of electricity component from an RE generator.

### **Introduction of Multipliers for the non-APPC based REC projects**

4.10 The aspect of differential pricing of electricity component under APPC route based RE projects vis-à-vis non-APPC (CGP /OA route) based RE projects can be addressed by providing a differential multiplier based on the type of contracting framework entered into by the REC project. The multiplier would be applicable to the Open Access (OA) and Captive Generation Plants (CGP) only and calculated based on the level variation in the electricity component of CGP/OA based projects vis-à-vis the APPC price. The proposed OA/CGP Multiplier is based on the following formula:

$$\text{OA/CGP Multiplier} = \frac{\text{APPC}}{\text{Electricity Component for OA/ CGP}^*}$$

\*Electricity Component for OA/ CGP = [100% or 90% Energy Charge of consumer category] – Open Access charges

4.11 The OA/ CGP multiplier would be dependent on the retail tariff category considered and can vary from state to state and across categories. The following three scenarios have been considered for sensitivity analysis on the proposed OA/CGP Multiplier for the above two cases:

- Scenario 1: Commercial category consumer tariff
- Scenario 2: Industrial category consumer tariff
- Scenario 3: Average of commercial and industrial category consumer tariff (Annexure-1)

4.12 Based on the analysis, the following is proposed:

- A separate multiplier for non-APPC based projects should be provided to bring parity for the electricity component for both APPC and non-APPC based projects.
- The net electricity component computed at 90% of Energy charge and after deducting the Open Access Charges can be considered for determining the multiplier for OA consumers and Captive Generators
- A multiplier of 0.50 for non-APPC based REC projects (Open Access and Captive Generators) is proposed. It means that an eligible entity sells the electricity generated to any other licensee or to an open access consumer at a mutually agreed price or self consume, shall be issued a half Certificate for one Megawatt hour of electricity generated from renewable energy source and injected into the grid or deemed to be injected in case of self consumption. Given that the objective of Multiplier is only to rationalize the revenue recovery in the instant case, this differentiation (by way of Multiplier) will have relevance and applicability limited to issuance of REC. Once issued, RECs will have no differentiation for the purpose of trading.

## **5.0 Long Term REC Pricing: Vintage Multiplier for solar projects**

5.1 REC Regulations, inter alia, provide that each certificate shall represent 1 MW hour of electricity generated from renewable energy source and injected into the grid. The REC Regulations provide for minimum and maximum price of the REC to avoid price volatility as well as ensure certain level of revenue certainty. These are called the 'floor price' and 'forbearance price', defined in the REC Regulations as follows:-

*"2. Definitions and Interpretation:*

*(1) In these regulations, unless the context otherwise requires,*

.....

- (f) 'floor price' means the minimum price as determined by the Central Commission in accordance with these regulations at and above which the certificate can be dealt in the power exchange;
- (g) 'forbearance price' means the ceiling price as determined by the Central Commission in accordance with these regulations within which only the certificates can be dealt in the power exchange;"

5.2 As per the first proviso to clause (1) of Regulation 9 of the REC Regulations, the Central Commission may in consultation with the Central Agency (National Load Despatch Centre) and Forum of Regulators (FOR) from time to time provide for floor price and forbearance price separately for Solar and Non-solar Renewable Energy Certificates. Further, Clause (2) of Regulation 9 of the REC Regulations provides for the guiding principles for determining the forbearance and floor price for solar and non-solar Certificates. The relevant provisions are extracted as under:

***"Regulation 9 of REC Regulations Pricing of Certificate:"***

*1. The price of Certificate shall be as discovered in the Power Exchange:*

*Provided that the Central Commission may, in consultation with the Central Agency and Forum of Regulators from time to time provide for the floor price and forbearance price separately for solar and non-solar Certificates.*

*2. The Central Commission while determining the floor price and forbearance price shall be guided inter alia by the following principles:*

- a) Variation in cost of generation of different renewable energy technologies falling under solar and non-solar category, across States in the country;*
- b) Variation in the Pooled Cost of Purchase across States in the country;*
- c) Expected electricity generation from renewable energy sources including:-
  - i. expected renewable energy capacity under preferential tariff*
  - ii. expected renewable energy capacity under mechanism of certificates;**
- d) Renewable Purchase obligation targets set by State Central Commissions"*

5.3 Based on the above referred guiding principles, the Commission earlier came out with an Order dated 1.06.2010 in the matter of 'Determination of Forbearance and Floor

Price for the REC framework' (suo motu Petition No.99/2010) and determined forbearance price and floor price for dealing in Certificates under the REC Regulations:

**Table 2: Floor and Forbearance price**

	<b>Non Solar REC (Rs./MWh)</b>	<b>Solar REC (Rs./MWh)</b>
<b>Forbearance Price</b>	3,900	17,000
<b>Floor Price</b>	1,500	12,000

5.4 Above determined forbearance price and floor price were valid for the control period up to 31.03.2012. Subsequently, based on the guiding principles specified in Para 3, the Central Commission vide its suo motu Order (No.142 / 2011) dated 13.06.2011 determined the following forbearance and floor for the control period from 1.04.2012 to 31.03.2017:

**Table 3: Forbearance and Floor price**

	<b>Non Solar REC (Rs./MWh)</b>	<b>Solar REC (Rs./MWh)</b>
<b>Forbearance Price</b>	3,300	13,400
<b>Floor Price</b>	1,500	9,300

#### **Concerns raised by stakeholders**

5.5 Based on the experience so far, various stakeholders raised concerns regarding the floor and the forbearance Price determined by the Commission. They are elaborated as under:

#### **Significant mismatch between Solar Certificate Floor price and Solar PV tariff**

5.6 The present notified solar certificate price range is Rs. 9,300-13,400 (Rs. 9.3/kWh –Rs.13.40/kWh) for the period 2012-2017. Meanwhile, solar PV tariff has come down drastically in the last three years and the latest price bids for large scale solar PV projects are around Rs. 6.50/kWh. The CERC determined solar PV tariffs are also set at Rs 7.72/kWh for FY 2014-15, without accelerated depreciation benefit. It is expected that prices will continue to decline. The Solar PV projects coming in later years (with lower costs) may get much higher profits if the market clearing price for solar RECs is dictated

by the older projects. It has been suggested that CERC should immediately revise solar floor and forbearance price downwards, else it will result in windfall profit for the solar PV project developers and will adversely impact the retail consumers. It has been argued that higher priced solar certificate price would not be sustainable for the solar sector in the long run.

#### **Vintage based multiplier for solar certificates**

5.7 As the floor and forbearance prices reduce in future with the emergence of low cost renewable energy technologies, REC mechanism doesn't offer a viable alternative for the investor who made investment earlier. This is particularly true in the case of Solar where all the investment is made up front and the project has negligible operational costs. Some of the stakeholders suggested that the REC Regulations should recognize that the investments already made in renewable energy projects, particularly in Solar PV projects, cannot take advantage of the low cost technologies. Therefore, it has been suggested that the Central Commission should introduce the concept of multiplier to the REC certificate recognizing the vintage of a project as and when floor price is reduced. The project set up in initial years should be entitled to higher number of certificates for same value of electricity generated than the project coming later and this valuation would have to be carried out every year based on the viability tariff required for each year.

5.8 In order to safeguard the interests of the RE generators and the obligated entities, the concept of floor price and forbearance price has been in place since its inception. The prevailing floor price is applicable upto FY 2017. This has been on account of the state specific variations in APPC and FIT which results in some states becoming attractive destination for REC projects. However, any changes in the floor price framework during the current control period or in future can have adverse impact on the REC market which is already facing challenges.

5.9 In case of solar REC, which is dominated by solar PV technologies, the tariff as determined by the Commission for FY 2014-15, has been reduced due to decline in capital costs and is currently lower than the prevailing solar floor price (Rs. 9.3 per kWh). The solar REC floor price thus requires to be aligned with the current solar tariff. This would also result in a reduction in the solar floor & forbearance price. Such change puts already

registered solar PV projects at a disadvantage since the cost of generation for new projects is likely to be less than vintage projects. Therefore, a vintage multiplier mechanism has been proposed to reasonably safeguard the existing solar generators registered under REC from future floor price adjustments by issuing higher quantum of RECs in case of future reduction in tariff or lower quantum of RECs in case of future increase in tariff . The methodology proposed for computing vintage multiplier for solar RECs is based on the difference of the minimum requirement (actual linked with year of commissioning of plant) and the current APPC. This approach ensures that the recovery of amount for the REC project developer is close to the minimum project viability linked with the tariff applicable during the year of commissioning. It is also proposed to provide the vintage multiplier for a period of 12 years, which corresponds to the period of debt repayment, and shall be applicable from the year of commissioning of the solar project. Given that the objective of Multiplier is only to rationalize the revenue recovery in the instant case, this differentiation (by way of Multiplier) will have relevance and applicability limited to issuance of REC. Once issued, RECs will have no differentiation for the purpose of trading. In view of the above it is proposed to amend Regulation 7 of the Principal Regulations as under:

***“Amendment of Regulation 7 of the Principal Regulations:***

***(i)*** *The words “other than distribution licensee” shall be added after the words “eligible entity” in the clause (1) of Regulation 7.*

***(ii)*** *The following new clause shall be added under clause (1) of Regulation 7 of the Principal Regulations as under:*

*“(1 A) The eligible distribution licensees shall apply to the Central Agency for Certificates within three months after obtaining the certification, as provided in clause (1A) of the Regulation 5, from the concerned Appropriate Commission.*

***(iii)*** *The following new clauses shall be added under Regulation 7 of the Principal Regulations as under:*

*“(7) An eligible entity that sells the electricity generated to the distribution licensee of the area in which the eligible entity is located, at the pooled cost of power purchase of such distribution licensee as determined by the Appropriate*

*Commission or sells electricity at the power Exchange at the market determined rate, shall be issued one Certificate for one Megawatt hour of electricity generated from renewable energy source and injected into the grid.*

*(8) An eligible entity that sells the electricity generated to any other licensee or to an open access consumer at a mutually agreed price, shall be issued Half Certificate for one Megawatt hour of electricity generated from renewable energy source and injected into the grid.*

*(9) An eligible entity which is a CGP based on renewable energy sources shall be issued Half Certificate for self consumption of one Megawatt hour electricity generated from renewable energy source.*

*(10) The Commission shall determine through separate order, the quantum of Certificate to be issued to the eligible entities being solar generating company, for one Megawatt hour of electricity generated from the renewable energy source and injected into the grid or deemed to be injected (in case of self consumption by eligible CGP) into the grid, with due regard to the conditions stipulated in clauses (7), (8) and (9) of this Regulation and after considering vintage of such projects with reference to the year of their commissioning as per the following formula:*

*Vintage Multiplier =*

*Maximum difference [Minimum Requirement in of Base Year – APPC of Current Year (state wise)] / Maximum Difference [Min Requirement in Current Year – APPC of Current Year (state wise)]*

*Where,*

- i. “APPC” means Average Pooled Cost of Purchase of State;*
- ii. “Minimum requirement” means minimum levelised tariff required for viability of project to meet interest expenses, loan repayment and operation & Maintenance Expenses for various renewable energy technologies in the commissioning year and current year based on tariff determined by the Commission in respective years;*

iii. “Base year” means the year of commissioning.

(11) Vintage multiplier shall be provided for a period of 12 years, from the year of commissioning.”

## 6.0 Validity period for RECs

6.1 The CERC in its order dated 19.12.2012, in Petition No. 266/SM/2012, took cognizance of the lapsing of RECs arising out of the non-redemption within the permissible timeline, apparently due to reluctance of the distribution licensees to purchase the RECs to meet their RPO. Keeping in view the objective of promotion of energy through renewable sources, the Commission considered it necessary to extend the validity period of RECs in order to give further opportunity to the RE generators to trade RECs at the Power Exchanges.

*“.....relax the provisions of Regulation 10(1) of the said regulation and Provide that the RECs issued on and after 1.11.2011 shall remain valid for a period of 730 days from the date of issuance. The relaxed period of validity shall be applicable to the RECs which have been issued or shall be issued till the date amendment to Regulation 10(1) of the REC Regulations is notified by this Commission. The Central Agency is directed to modify/adjust the period of validity of the RECs in terms of our directions above.”*

6.2 Subsequently, the Commission amended the REC Regulations. The REC market has remained sluggish even after the increase of validity period and RECs still face the risk of extinction without getting traded. The table 4 below details the quantum of RECs facing the risk of expiry in case the REC trading remains sluggish.

**Table 4: Expiry of RECs by December, 2014**

RE Source	Number of RECs likely to expire by Dec 2014
Wind	46,174
Bio-fuel cogeneration	10,782
Biomass	3,110
<b>Total</b>	<b>60,066</b>

Source: Central Agency

6.3 The key considerations for determining validity period are to provide certainty to RE generators in the event of lean demand on one side and also prevent hoarding of RECs by RE generators in speculation of increasing REC prices in future. However, given the current context in the REC market, it is proposed to increase validity of RECs by one year which are facing extinction risk owing to lean demand in the REC market. This issue was discussed in Forty Second (42nd) meeting of FOR held on 27th August 2014 in New Delhi. Based on the consensus evolved during the meeting, the following is proposed to address this issue:

- The validity of RECs, which are likely to expire in next one year, can be increased on interim basis by another one year. This is with the expectation that the REC market will revive in long term.
- The overall validity of RECs should be retained at 2 years as per the current framework

In view of the above it is proposed to amend Regulation 10 of the Principal Regulations as under:

***“Amendment to Regulation 10 of the Principal Regulations: The following proviso shall be added after second proviso to Clause (1) of Regulation 10 of the Principal Regulations as under:***

***“Provided that the validity of Certificates, which are likely to expire in the next one year from the notification of this amendment, shall be increased by another three hundred and sixty five days.”***

Sd/-

**(A.S. Bakshi)  
Member**

Sd/-

**(A. K. Singhal)  
Member**

Sd/-

**(M. Deena Dayalan)  
Member**

Sd/-

**(Gireesh B. Pradhan)  
Chairperson**

### Commercial category

Under this scenario the retail tariff (energy charge only) for commercial consumer category is considered. The OA/CGP multiplier has been computed based on the simple average of APPC and applicable energy charges for the commercial category consumers in respective states.

The key results under this scenario are detailed below:

**Table: Scenario 1- OA/ CGP Multiplier**

Scenario 1	OA/ CGP Multiplier				
	EC (Rs/kWh)	Case 1		Case 2	
States	Commercial	Captive	Third party	Captive	Third party
Andhra Pradesh	9.13	0.42	0.42	0.48	0.48
Gujarat	4.6	0.89	1.01	1.04	1.2
Haryana	5.85	0.67	0.75	0.76	0.87
HP	4.75	0.65	0.68	0.76	0.8
Karnataka	7.45	0.54	0.57	0.62	0.66
Maharashtra	10.91	0.38	0.39	0.43	0.44
MP	5.2	0.58	0.7	0.65	0.82
Punjab	6.58	0.68	0.86	0.78	1.02
Rajasthan	6.6	0.61	0.61	0.7	0.71
Tamil Nadu	7	0.54	0.76	0.61	0.92
UP	6.1	0.71	0.71	0.81	0.81
<b>Average</b>	<b>6.74</b>	<b>0.61</b>	<b>0.68</b>	<b>0.69</b>	<b>0.79</b>

For States like Gujarat the multiplier is greater than 1 as its APPC is higher than the electricity component (Electric charge – OA charges). The average multipliers for captive and Third party sale for Case 2 (90% of Electric charge – OA charges) come to 0.69 and 0.79 respectively. Thus these ratios signify that captive and OA route should get a small multiplier as compared to RE generators selling electricity to distribution consumer (APPC route).

### Scenario 2 – Industrial category

Under this scenario the retail tariff for Industrial category consumers has been considered. For the calculation of ratios under this scenario the simple average of APPC across states is

taken to avoid inclination towards any particular state having high demand (MU). The key results under scenario are detailed below:

**Table: Scenario 2 - OA/ CGP Multiplier**

Scenario 2	OA/ CGP Multiplier				
	EC (Rs/kWh)	Case 1		Case 2	
States	Industrial	Captive	Third party	Captive	Third party
Andhra Pradesh	5.73	0.75	0.74	0.87	0.85
Gujarat	4.45	0.93	1.07	1.09	1.28
Haryana	5.3	0.76	0.86	0.86	1
HP	4.75	0.65	0.68	0.76	0.8
Karnataka	5.45	0.83	0.9	0.97	1.07
Maharashtra	6.33	0.76	0.81	0.88	0.95
MP	4.6	0.67	0.84	0.76	1
Punjab	6.26	0.73	0.93	0.83	1.11
Rajasthan	5.25	0.82	0.84	0.95	0.97
Tamil Nadu	5.5	0.72	1.21	0.83	1.54
UP	5.9	0.74	0.74	0.85	0.85
<b>Average</b>	<b>5.53</b>	<b>0.77</b>	<b>0.89</b>	<b>0.89</b>	<b>1.06</b>

The table above shows the OA/Captive multipliers considering the applicable energy charges for the Industrial category. The multiplier for States like Gujarat is greater than 1 as its APPC is higher than the electricity component (Electric charge – OA charges). The average multipliers for captive and Third party for case 2 (90% of Electric charge – OA charges) come at 0.89 and 1.06 respectively.

Under the industrial consumer category the multipliers are higher as the retail tariffs for commercial are greater than the corresponding tariff of industrial category. These ratios signify that captive and OA route should get a small multiplier as compared to RE generators selling electricity to distribution consumer (APPC route).

### **Scenario 3 – Average of Commercial and industrial categories**

Under this scenario, the average energy charge of commercial and industrial is taken for the calculation of the multipliers. For the calculation of ratios under this scenario the simple average of APPC across states is taken to avoid inclination towards any particular state having high demand (MU).

The key results under scenario are detailed below:

**Table: Scenario 3 - OA/ CGP Multiplier**

Scenario 3	OA/ CGP Multiplier				
	Average EC	Case 1		Case 2	
States	Coml. & Ind.	Captive	Third party	Captive	Third party
Andhra Pradesh	7.43	0.54	0.54	0.62	0.61
Gujarat	4.53	0.91	1.04	1.06	1.24
Haryana	5.58	0.71	0.81	0.81	0.93
HP	4.75	0.65	0.68	0.76	0.8
Karnataka	6.45	0.65	0.7	0.75	0.82
Maharashtra	8.62	0.5	0.53	0.58	0.61
MP	4.9	0.62	0.77	0.7	0.9
Punjab	6.42	0.7	0.89	0.81	1.06
Rajasthan	5.93	0.7	0.71	0.8	0.82
Tamil Nadu	6.25	0.62	0.94	0.7	1.15
UP	6.00	0.73	0.73	0.83	0.83
<b>Average</b>	<b>6.41</b>	<b>0.67</b>	<b>0.76</b>	<b>0.77</b>	<b>0.89</b>

The table above shows the OA/Captive multipliers considering the average tariff of commercial and industrial categories. The average multipliers for Captive and Third party for Case 2 (90% of Electric charge – OA charges) come at 0.77 and 0.89 respectively. Thus, these ratios signify that captive and OA route should get a small multiplier as compared to RE generators selling electricity to distribution consumer (APPC route)

A detailed analysis on multiplier calculation for co-located plants under CGP category indicates that a lower multiplier is required (ranging from 0.50 to 0.64) under different cases.

### Key Results

	Scenario 1 (Commercial)				Scenario 2 (Industrial)				Scenario 3 (Average of Commercial & Industrial)			
	Case 1		Case 2		Case 1		Case 2		Case 1		Case 2	
	CGP	OA	CGP	OA	CGP	OA	CGP	OA	CGP	OA	CGP	OA
OA/CGP Multiplier	0.61	0.68	<b>0.69</b>	0.79	0.77	0.89	0.89	1.06	0.67	0.76	<b>0.77</b>	0.89