



# REGULATORY INSIGHTS



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## Editorial

Post Electricity Act, 2003 the Indian power sector has evolved through development of the market as well as penetration of renewables. The existing challenges in the regulatory governance structure, need for accelerating performance of the distribution segment, better Regulatory Compliance as well as opening up of the retail supply to competition necessitate a broader set of amendments to the Electricity Act 2003. Our opinion, shared with the Standing Committee on Energy, shares our detailed analysis of the proposed amendments and the suggestions thereof.

While implementing the important initiative to bring about retail competition, an unclear separation of carriage and content would significantly hinder the achievement of the intended objectives, and present numerous legal hurdles for the sector. The mechanism for PPA sharing and Cross Subsidy Balancing Fund (CSBF) would shield against inefficiency and also undermine retail supply competition. PPA sharing, with each entry/ exit of a competitive distribution licensee, without a cutoff date and sunset clause would make the sector less attractive for competing retailers. The CSBF, aimed to shield the incumbent licensees from loss of lucrative customers, should also have a sunset clause and be limited to the licence areas witnessing such a competition.

A number of additional suggestions including 'deemed open access', unbundling of consumer tariff, network access charges instead of wheeling charges and supplier of last resort are suggested for more effective implementation of retail supply competition in the sector.

The structure of regulatory governance, particularly Regulatory Compliance by stakeholders, role of advisory committees, and selection of chairperson and members of the commission have long-term and wider impact on the independence, accountability and the operational structure of the regulatory institutions and their effective role in the sector. The independence to staffing by the ERCs and their capacity building, and a Regulatory Cadre across the infrastructure sectors would help strengthen the overall regulatory governance structure in the sector. Provision for reporting for Regulatory Compliance should be an integral part of the regulatory framework covering regulations, orders, codes, rules etc. The Renewable Portfolio Obligation (RPO) Fund, and use of RECs as a guarantee of origin can help improve the compliance framework for promotion of green energy.

The proposal for replacement of smaller and less efficient wind turbines with efficient and larger ones, under the draft National Repowering Policy for Wind Power Projects 2022, would enhance the wind generation capacity by better utilisation of the existing sites. The policy would bring benefits to the project developers, while discoms would not share the gains in overall economic benefits to be generated from the repowered sites. Early termination of the existing PPAs (through mutual consent), proposed for the developers, should also be available to the discoms. Some of the other aspects of the policy also need reconsideration or change in its design. These include - multiplier for RPO for repowered turbines, definition of tariff for captive consumption, use of price for calculation of the PPA value etc.

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The Centre is hosted in the Department of Industrial and Management Engineering, IIT Kanpur and was seed funded by Government of United Kingdom through a project titled 'Supporting Structural Reforms in the Indian Power Sector' under Power Sector Reforms (PSR) program.

## MNRE National Repowering Policy for Wind Power Projects, 2022 [Draft]

MNRE on 17<sup>th</sup> October, 2022 notified the Draft National Repowering Policy for Wind Power Project Regulations, 2022. The key highlights of the draft are mentioned below:-

### Introduction:

The share of wind power in the country has increased from 21.1 GW in March, 2014 to 40.3 GW in March, 2022. The wind turbines installed earlier at the sites with high wind energy potential are of sub MW capacity with low hub height. These wind turbines were inefficient and needed to be repowered with the latest technologies.

**Repowering Potential:** NIWE has estimated repowering potential of the country to be 25406 MW considering wind turbines of capacity below 2 MW. The state wise details of repowering potential is given as under:

States	0.5 MW	0.5-1 MW	1-1.5 MW	1.5-2 MW	02 MW
Tamil Nadu	1181	2919	1813	1473.5	4100
Maharashtra	243	1068	1389	731.35	1311
Karnataka	0.3	954	652	1417.05	954.3
Gujarat	51	1457	1352	1805.35	1508
Rajasthan	39	1192	788	914.9	1231
Madhya Pradesh	0	290	260	1012	290
Kerala	0	18	0	10	18
Andhra Pradesh	92	378	195	1701.2	470
Total	1610	8280	6449	9067	25406

### Objective:

The objectives of the Repowering Policy are optimum utilization of wind energy resources by maximizing energy (kWh) yield/ km<sup>2</sup> of the project area and utilizing the latest state of the art onshore Wind turbine technologies.

### Eligibility:

- All wind turbines identified under BIS Act.
- Wind turbines completed their design life.
- Wind turbines below 2 MW rated capacity.
- Turbines connected to a single Polling Sub Station (PSS).
- Wind power Project with adjacent land area.
- More than 90% of the total capacity of the project should have completed its design life.

### Repowering Project:

The capacity of the wind turbine will be enhanced by 1.5 times the aggregate capacity of old turbines. Repowering projects are classified into two types - Standalone and Aggregation Projects.

## CER Opinion

**CER Minimum limit of turbine capacity after repowering (Clause No. 6):** The draft Clause states “.....*The capacity of the repowered Wind turbines is enhanced by at least 1.5 times of its aggregate capacity of old turbines*”. Further, as per Clause No. 2, “.....*the repowering of Wind turbine of below 2 MW capacity must be considered*”. If the turbine of capacity 1 MW is considered for repowering, the Policy would allow selection of new turbine of 1.5 MW, which is would still fall below 2 MW threshold specified for repowering. Hence, new turbines should not be less than this limit of 2 MW. This criteria should be over and above the 1.5 times limit suggested in the Policy.

**CER Definition of Private Developer (Clause No. 7 (ii) (a)):** The draft Clause states that “*SNAs/ CNA may identify the potential turbines for repowering. In such cases SNAs/ CNA either nominate any State/ Central PSEs as Wind Repowering Project Aggregators (WRPA) to repower the project or elicit interest from private developers for the same*” (emphasis added). The Policy does not leave any room for a public entity (e.g. SECI) to be a WRPA entity for carrying out the repowering. Policy should not exclude participation of public entities.

**CER** Considering an aggregation project for repowering: As per Clause No. 7 (ii) of the draft, the following points needs to be clarified for implementation of repowering in case of an aggregation project :-

- In case of aggregation project, if one/ multiple individual project refuses to participate in the repowering, it needs to be clarified whether the remaining capacity of the aggregation project will be considered for repowering or not.
- In case of projects having disputes related to ownership or legal or the consent to be provided for the repowering of the project, the methodology for the repowering should be defined for such cases and a Clause may be inserted stating that, “Repowering shall proceed with consent of at least 80% or 90% of the wind farm capacity”.

**CER** **Modification of Power Purchase Agreement (Clause No. 9 (a)):** The draft Clause states that “*The power generated corresponding to average of last three years’ generation prior to repowering would continue to be procured as per the terms of PPA in-force till the PPA tenure*”. The power generated corresponding to average of last three years prior to repowering would be at lower CUF. The new turbine would have higher CUF and capacity. If the old terms of PPA are considered for the repowered project, there will be no benefit to the discom for their consent provided for repowering. Provision for financial incentive to the discom should be included so that benefits of better economics are shared with the discom and hence the final consumers of electricity.

**CER** **Duration of project execution for repowering (Clause No. 9 (c)):** The draft Clause states “*....repowering period shall not exceed 2 years from the date of commencement of execution of re-powering*”.

The duration of **2 years for repowering of the existing turbines seems to be long**, as the primary site preparation work such as road widening, etc., would have already been completed.

Further, it is suggested that the following Clause may be added after the existing draft Clause “*There should not be any additional environmental impact and any road widening should be avoided while repowering*”. Adoption of airlifting the turbines would prevent further environmental damage. Also, the **provisions to address delay in completion of repowering, including penalty in terms of discount on tariff to the discom, should also be included in the Policy.**

It is suggested that, the repowering project is done in stages, so that power supply can commence from partially completed repowering.

**CER** **Refusal to procure additional power (Clause No. 9 (b)):** The draft Clause states “*The project developer(s) shall be at liberty to sell additional Wind power capacity (MW)/ generation to the incumbent DISCOMs or to any other entity through Open Access subject to refusal of concerned DISCOM*” (emphasis added). The term “*subject to refusal of concerned DISCOM*” needs more clarification as it is not clear whether the refusal is for the additional power to be procured by the discom or for power procurement through open access. It is recommended that the draft Clause may be rephrased as “*.....subject to the refusal of consent of discom to procure the additional power from the repowered wind project*”.

**CER** **Early termination (Clause No. 9 (d)):** The draft Clause states “*The project developer(s) shall be at liberty to seek early termination by mutual consent of both the parties*”.

The term “early termination” used in the draft Clause needs further clarification as with the reference in which it is being used.

In case, the original PPA does not include the conditions for early termination with the mutual consent, the insertion of this Clause may conflict with the original PPA. Would a compensation be payable to the discom in case of early termination or vice versa.

**CER** **Privileges of Captive Plant (Clause No. 9 (f)):** The draft Clause states “*In case of repowering of captive/ third party sale Wind power project, the consumer shall be allowed to purchase power from grid (through DISCOMs or any other available source) during the period of execution of repowering, as per relevant rules & regulation*”. During repowering of the captive projects, power procured by a captive consumer would be subject to the provision of open access including cross subsidy surcharge, as well as the renewable purchase obligation (RPO)<sup>1</sup>. **Consumption by captive consumers whose projects are undergoing repowering may be considered as deemed captive consumption for the specified duration of repowering, beyond which applicable terms/ Regulations would apply.** Appropriate amendments would be required in the respective Regulations for the same.

**CER** **Exemption of RPO compliance (Clause No. 10 (iv)):** The draft Clause states “*The Wind RPO compliance of concerned states in which the repowering project is situated shall be exempted for the remaining period till the commissioning of repowered project*”. (emphasis added)

A number obligated entities (for RPO) procure RE from plants located in other states. Exemption of RPO for the states hosting such RE projects does not seem to be justified. As it is the entities located in importing states that would be

affected in terms of their RPO. The above provision would enhance complexity of mapping the RPO vs procurement for such cases.

This Clause may be rephrased as “*The Wind RPO compliance of concerned states in which the repowering project is situated shall be exempted only to the extent of shortfall on account of wind turbine or wind farms under repowering (given that the project is being used to supply energy to the state in which it is installed) and to the extent that the original wind turbines are unavailable for generation till COD of the repowering projects*”. Also, if the energy generated from the project is procured by a consumer situated in another state, then the repowering of such wind project will not affect the RPO of the state in which the project is installed.

**CER Multiplier for RPO (Clause No. 10 (5)):** As per the Clause No. 86 (1) (e) of the Electricity Act, 2003, RPO is equivalent to the renewable energy consumed by an obligated entity as a percentage of the energy consumed from the conventional sources (excluding hydro). Providing a RPO multiplier would give the generator/ consumer significant undue advantage while undermining the overall compliance of actual RPO to be achieved by the respective discom/ obligated entity.

Also, this would lead to testing of the provisions of EA, 2003, as, for e.g., it is not feasible to translate 1 kWh of electricity consumed into more than 1 kWh of RPO equivalent. Providing RPO multiplier for repowered wind projects doesn't seem technologically justified.

It should be further clarified that the energy consumed from these repowered projects would be used to fulfill the 'Wind' RPO or would be included in the 'Others' RPO as per the new RPO trajectory provided by the MoP in 2022<sup>2</sup>.

**CER Loss of revenue for the duration of the repowering:** The draft Clause in the annexure states that “*In such cases, the existing owners deciding to go for repowering may be losing the future revenue from their projects*” (emphasis added). **Repowering of existing wind projects would not lead to loss of revenue for the project developers, but will only lead to loss of time value of RoE for the duration of repowering** i.e. during project execution. Since PPA will get extended after repowering so there would not be any future loss. It is the time value of money that will be lost.

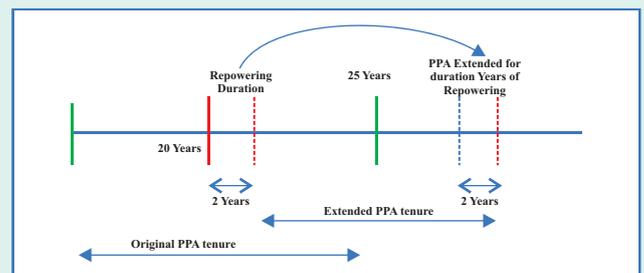


Figure 1: Addition of duration of repowering to extended PPA.

The projected loss which is attributed to “loss of future revenue from the project” would lead to significant overestimation as the project under repowering would lose the revenue only for the duration of implementation of the repowering. This would be relevant only in the case the revenue from PPA (for RE) with discoms is passed from the original owner to the WRPA and hence, needs to be accounted for while estimating the transfer value of the asset. (See Figure 1).

**CER Definition of tariff in case of captive consumption:** The draft Clause of the annexure states that “*In case of captive consumption, tariff as per tariff order(s) of the appropriate commission.....*”. In the case of captive consumption, **tariff (of the consumer) as per tariff order will lead to a significant overestimation of PPA value.** It is suggested that the tariff should be taken as a feed-in tariff of the generator.

$$\text{PPA value} = \text{NPV of } \sum_{k=0}^n [(t * G_k) - (OM_k)]$$

**CER Consideration of annual average generation for calculation of PPA value:** While calculating PPA value, **average realization (after adjusting for DSM related charges) should be used** instead of annual generation multiplied by the feed-in tariff since a generator over-/ under-injects energy due to error in generation forecasting, and is paid (to be paid) as per the DSM Regulation.

**CER Sharing of risk/ revenue between project owner and WRPA:** It is recommended that there should be an alternate approach to share the risk between the original developer/ owner and the WRPA. Instead of outright purchase of the 'rest of the PPA period' from the original owner, an alternate approach is to **let the original PPAs revenue as well as risk to be continued to the associated with the original owner, whereas the risks as well as the revenue associated with the additional capacity (due to repowering) be allocated to the WRPA.** However, a mechanism needs to be implemented wherein risks associated with generation forecasting (and hence the applicability of DSM charges) is shared proportionately for the original as well as the additional capacity.

<sup>1</sup> RPO differ between captive and open access consumers in some states.

<sup>2</sup> Renewable Purchase Obligation (RPO) and Energy Storage Obligation Trajectory till 2029-30 [Order], Ministry of Power.

[https://powermin.gov.in/sites/default/files/Renewable\\_Purchase\\_Obligation\\_and\\_Energy\\_Storage\\_Obligation\\_Trajectory\\_till\\_2029\\_30.pdf](https://powermin.gov.in/sites/default/files/Renewable_Purchase_Obligation_and_Energy_Storage_Obligation_Trajectory_till_2029_30.pdf)

**CER Clause No. 7 (1) (b):** The draft Clause states “*Project Owner may submit the Detailed Project Report (DPR) for repowering the old project to concerned SNA/ CNA for verification*”. Further clarification is required with regards to the kind of ‘verification’ and its cope (i.e. technical or financial aspects or both). It is desirable to keep the subjectivity to the minimum so as to reduce risk for the repowering projects.

**CER Clause No. 5 (iv):** The term “*Polling Sub Station (PSS)*”, may be replaced as “*Pooling Sub Station (PSS)*”.

**CER Clause No. 10 (iv):** The term “*PLF*” should be replaced as “*CUF*”.

## Notification of Renewable Generation Obligation as per Revised Tariff Policy

The Ministry of Power (MoP) on 7<sup>th</sup> November, 2022 notified Notification of Renewable Generation Obligation (RGO) as per Revised Tariff Policy Regulation, 2016. Some of the important insights are given below:-

### Introduction:

The MoP is considering RGO in accordance with Tariff Policy to enhance the generation and utilisation of Renewable Energy (RE) in the country. For decarbonisation, India has set a target of net zero by 2070 alongside intermittent targets by 2030. India has committed to achieve 50% of cumulative electric power installed capacity from non-fossil fuel-based energy sources by 2030.

The MoP has proposed mandatory supply of renewable energy equivalent to minimum 25% of capacity by the thermal generating station for the stations commissioned after 1<sup>st</sup> April, 2024.

## CER Opinion

**CER RGO as Renewable Capacity Obligation:** As per the Clause 6.4.5 of the Tariff Policy, 2016, “*...coal/ lignite based thermal generation station after a specified date shall be required to establish such renewable energy generating capacity or procure and supply renewable energy equivalent to such capacity...*”

It is suggested that the notification may be called as ‘Renewable Capacity Obligation’ instead of ‘Renewable Generation Obligation’ since obligation refers to capacity instead of generation.

**CER Role of RECs:** The Renewable Energy Certificates (RECs) are considered equivalent for meeting the obligation towards renewable purchase obligation of the obligated entities across states. In a similar manner, RECs should also be eligible for meeting the obligation towards renewable generation/ capacity obligation.

**CER Definition of capacity:** The definition of the capacity of renewable plant to be set up may be clarified, whether it is ex-bus/ gross/ net capacity of the plant.

Also, in case of hybrid plant, the capacity addition equal to 25% of installed capacity may not be equal to the 25% of thermal capacity in terms of generation of electricity due to difference in the generation profile the technology. For e.g. peak solar capacity would be harnessed during the mid-day, whereas peak wind capacity would be harnessed during late evening.

**CER Determination of the tariff of plants:** It may be clarified if in case of a thermal generation plant based on coal/ lignite is established after the specified date, the tariff for the renewable capacity would be determined together with the thermal capacity (bundled capacity) or would it be done separately. Also, if the tariff of such renewable capacity would be determined u/s 62 or adopted u/s 63 (of the Electricity Act, 2003). It is suggested that such renewable capacity be set up by the thermal generator through a process of competitive bidding, wherein an identified third party would provide the required capacity for the generation capacity on behalf of the thermal generator. Determination of tariff u/s 62 would be a backdoor entry for high-cost renewable energy capacity creation across the country. Such competitive bidding may be carried out by SECI or other agencies on behalf of the generating plants.

In case the thermal capacity being set up through a process of competitive bidding u/s 63, the renewable capacity should be bundled with conventional capacity for discovery of such a competitive tariff.



## UPERC Verification of Generating Plants and Captive Consumers, 2022 [Draft]

UPERC notified the Draft Verification of Generating Plants and Captive Consumers Regulation, 2022. Some of the important insights are given below:-

### Introduction:

The draft focuses on verification of the status of Captive Generating Plants (CGP) and Captive consumer, with respect to criteria of consumption and equity share as given in Electricity Rules, 2005. The verification will be done annually by the State Commission with the help of concerned SLDC, RLDC, and Distribution Licensees, after the end of the financial year on the basis of information submitted by the CGP and Captive users. The criteria of consumption and equity share as per Electricity Rules, 2005 for CGP and Captive consumer respectively is as follows: -

- Not less than 51% of the aggregate electricity generated in such plant, determined on an annual basis, is consumed for the captive use. Consumption shall be based on net electricity generated (i.e. gross generation minus auxiliary consumption) and net electricity generated is determined on annual basis at the end of the financial year.
- Not less than 26% of the ownership is held by the captive user(s).

### Objective:

The objective of these Regulations is to specify a methodology for verification of status of CGP and captive users, when consumers import power from their respective captive generator(s) located either within the state or outside the state.

### Consequence of failure to meet Captive user status:

If the CGP and captive consumer fails to meet the criteria of consumption and ownership then they shall lose the captive status for that year and would be imposed with cross subsidy surcharge and additional surcharge as applicable on open access consumer which shall be payable to concerned distribution licensee(s).

## CER Opinion

**CER Short Title of the Regulations (Clause No. 1.1):** The Regulations UPERC (Verification of Generating Plants and Captive Consumers) Regulation, 2022, may be renamed as UPERC (Verification of **Captive** Generating Plants and Captive Consumers) as the Regulations are applicable to **captive generating plants**.

**CER Verification of status of CGP (Clause No. 5.1):** The draft Clause states “.....shall be done annually by the State Commission... (emphasis added)”. It is suggested that word ‘state’ may be omitted.

**CER Responsibility for Verification of Captive Status:** Neither the Electricity Act, 2003 nor the Electricity Rules, 2005 ascribe the task of verification of captive status to the SERC. This would reduce the procedural burden on the Commission, which would address any difficulties in its implementation, to address the need for adjudicating a dispute arising out of the same.

The SLDC should be required to submit compliance report on the verification process and result thereof within 2 weeks of the identified cut-off date/ time by the UPERC. The Commission may ask for detailed information submission by SLDC to ensure that the process is implemented objectively and, in a fair and transparent manner.

**CER Data to be submitted by CGP and Captive user(s) (Clause No. (5.2)):** It may be clarified in the draft document whether the affidavit(s) to be submitted regarding the details of the generation and consumption has to be done in a single affidavit or separate affidavits has to be filled by CGP and Captive user(s). The Clause may be modified appropriately.

**CER Verification of consumption criteria for single captive user (Clause No. 5.4 (c) (i)):** The draft Clause’s 1<sup>st</sup> criteria states “...self-consumption shall not be less than 51%...”. It is suggested that word ‘self - consumption’ should be replaced by **captive consumption** and may rephrased as “...*captive consumption shall not be less than 51%...*”. Self-consumption may be erroneously attributed to the consumption at the end of the CGP.

**CER Verification of consumption criteria for Association of Persons (Clause No. 5.4 (c) (iii)):** The draft Clause’s 3<sup>rd</sup> criteria states “.....for captive use in proportion to their share in the power plant within...”. It is suggested that word ‘respective’ may be added to the clause and rephrased as “.....for captive use in proportion to their *respective share in the power plant within...*”.

**CER Verification of consumption criteria for Association of Persons (Clause No. 5.4 (c) (iii)):** The applicability of allowed variation of 10% is meant to be applicable on the percentage value of the percentage share of captive consumption, or as percentage points. It may be clarified in the criteria and thus be modified appropriately. The suggested modification along with an illustration may be added as suggested below.

“The captive users shall consume not less than 51% of the net electricity generated on annual basis for captive use in proportion to their **respective** share in the power plant within the variation not exceeding 10%. For example, a captive user, whose share in ownership of the captive power plant is 10%, should have a share in the net electricity generation within the range of 9% and 11%.”

**CER Verification of equity share holding criteria (Clause No. 5.5 (a) (i)):** The draft Clause’s 1<sup>st</sup> criteria states “.....*less than 26% of the equity share capital having.....*” It is suggested that word ‘paid up’ may be added as mentioned in 5.5.a.iii, and may rephrased as “.....*less than 26% of the paid up equity share capital having.....*”.

**CER Verification of equity share holding criteria (Clause No. 5.5 (a) (ii)):** The draft Clause’s 2<sup>nd</sup> criteria states “.....*not less than 26% proprietary interest and .....*” It is suggested that word ‘throughout the year’ may be added after proprietary interest and may rephrased as “.....*not less than 26% proprietary interest throughout the period of claim for captive status and .....*”.

**CER Verification of equity share holding criteria (Clause No. 5.5 (a) (ii)):** The draft Clause’s 2<sup>nd</sup> criteria states “.....*the generating station or power plant on annual basis.....*” It is suggested that word ‘throughout the year’ may be added in place of annual basis as mentioned in 5.5 (a) (iii), and may rephrased as “.....*the generating station or power plant throughout the year.....*”.

**CER Verification of equity share holding criteria (Clause No. 5.4 (a) (iv)):** The draft Clause’s 4<sup>th</sup> criteria states “.....*not less than 26% of the ownership on annual basis.....*” It is suggested that word “*throughout the year*” may be added in place of annual basis as mentioned in 5.5 (a) (iii), and may rephrased as “.....*not less than 26% of the ownership throughout the year .....*”.

**CER Duration of Captive Status Verification:** In all the instances of shareholding criteria, “*throughout the year*” may be replaced with “*throughout the period of claim for captive status*”. This would be relevant in case the claim of Captive status does not extend for the whole of the financial year.

**CER Change in consumption share due to Demand Response:** In the event of direction for a reduction in generation of captive consumption or drawl by the respective SLDC/ RLDC so as to ensure system security, appropriate adjustment should be made with reference to the schedule of generation/ drawl while calculating the proportion of consumption in net generation of CGP.

**CER Bank guarantee equivalent to cross subsidy surcharge and additional surcharge:** The draft Clause No. 6.1 states “.....*commencement of supply having validity up to by 31<sup>st</sup> May of following year, the security deposit in the form of unconditional and irrevocable Bank Guarantee...*”. It is suggested that the Clause may be rephrased as “*The Captive user(s) shall deposit before the date of commencement of supply, a security deposit having validity up to by 31<sup>st</sup> May of the following year, in the form of unconditional and irrevocable Bank Guarantee by a scheduled bank for an amount equivalent to the applicable cross subsidy surcharge and additional surcharge as decided by Commission applicable equivalent to the 51% of the captive consumption of the captive user(s)*”. In case of loss of captive status, based on the data of the preceding year/ period, the respective CGP and user(s) shall be informed within a 2 days so that any discrepancy could be rectified (if any) at the earliest by the captive users.

**CER Invoking Bank Guarantee for a Forthcoming year (Clause No. 6.2):** It may be legally untenable<sup>3</sup> to invoke a bank guarantee, which was a security against the estimated cross subsidy surcharge and additional surcharge for the 51% equivalent estimated captive consumption of the previous year, for failure to a bank guarantee for the ensuing year. The SLDC should also be informed about the revocation captive status of CGP/ captive user(s).

A provision should be incorporated wherein the criteria for invoking bank guarantee should also include ‘failure to provide bank guarantee for the ensuing year/ period’. Furthermore, the Clause seems to suggest that the whole of ‘annual’ bank guarantee would be invoked. Bank guarantee for a proportional period of, say 2 months equivalent, may be invoked, giving an option to the captive user to either provide the additional bank guarantee till the 15<sup>th</sup> of the

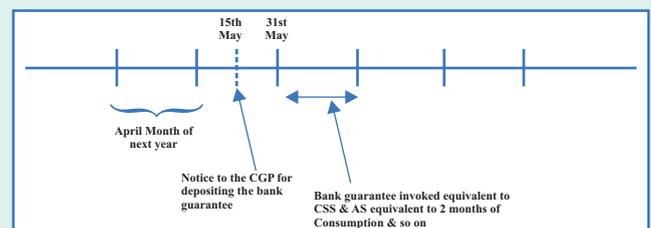


Figure 2: Process for invoking bank guarantee

<sup>3</sup> A legal opinion may be obtained on the same.

month after the next month or forfeit the eligibility as a captive consumer. The captive status (when meeting the said criteria) should be available for the period of the bank guarantee invoked minus the 15 days of advance review period i.e. 1.5 months after invoking the bank guarantee for a period of 2 months.

**CER Provisions for bank guarantee in excess (short) of default:** The draft Clause should also include provisions to address the condition where the bank guarantee is in excess (short) of the actual energy consumption in the year. For e.g., against a bank guarantee of Rs. 10 lakh (equivalent to cross subsidy surcharge and additional surcharge equivalent to the 51% consumption) and the actual incidence of such charges as, say Rs. 8 lakh, due to lower captive generation. Due to this or on account of lesser quantum of open access for captive consumption, a pro-rated amount should only be exposed for invocation of the bank guarantee.

**CER Availability of information in public domain:** It is suggested that the detailed information about the captive status of consumers and reasons for not meeting the same be placed on the website of the SLDC. This information should be archived and accessible in machine readable form (e.g. PDF, Worksheet etc.). This information may include, for each applicant, the estimated amount towards cross subsidy surcharge and additional surcharge, status of bank guarantee, current status.

**CER Templates, Detailed Procedure and Timelines:** An Annexure may provide a template for the information sought and the timeline associated with various processes.

**CER In Clause No. (5.4 (d) (iii)),** UPSLDC should be replaced by SLDC as the CGP may be located in another state while the consumer is located in the state of U.P. In such case, the relevant information would be provided by the SLDC of the host state of the CGP.

## Electricity (Amendment) Bill, 2022 [Draft]

The Union Power Ministry on 8<sup>th</sup> August, 2022, introduced the (Electricity Amendment) Bill, 2022 in Lok Sabha. Key points of the proposed amendment bill are given below:-

- Section 14 (b): Distribution of electricity by a distribution licensee in an area of supply in accordance with criteria prescribed by the Central Government
- Section 14 (b) (Sixth proviso): The Bill suggests to omit the words “*through their own distribution system*” for the distribution of electricity.
- Section 42: The discom owing network shall provide non - discriminatory open access to other licensees in the area of supply.
- Section 26: More power and functions of the NLDC for ensuring safety and security of the grid, and for the economic and efficient operation of the power system
- Section 28: The Bill provides for payment security mechanism to ensure timely payment of dues.
- Section 60:
  1. The power and associated costs from existing power purchase agreements (PPAs) with existing distribution licensee will be shared among all discoms in the area of supply.
  2. The State Government will set up cross subsidy balancing fund to deposit surplus of cross-subsidy of distribution licensee and to provide for any deficit with another distribution licensee in same area of supply.
- Section 62: The Appropriate Commission will determine maximum ceiling tariff and minimum tariff for retail sale of electricity.
- Section 64: The Bill provides for *suo-motu* determination of tariff by the Appropriate Commission, thereby reducing the time required for tariff determination and provision for interim tariff.
- Section 77: The Bill amends qualification of chairperson and members of Central Commission.

## CER Opinion

**CER ‘Carriage and Content separation’ vs ‘Distribution of electricity with or without network’:** The Bill proposes to bring forth retail competition in electricity supply by redefining ‘distribution of electricity’ (which was hitherto defined to be undertaken only through the distribution network) as ‘distribution of electricity’ both with and without

distribution network. While ‘distribution of electricity through the distribution network’ refers to the existing business of the distribution licensee (i.e. wire plus energy business), ‘the distribution of electricity without a distribution network’ refers to ‘retailing of electricity without a distribution network’.

**It is important to highlight that separation of carriage and content, i.e. the network services and retail supply of electricity, is essential to ensure effective competition in retail supply.** This aspect is highlighted while discussing multiple issues herein. Such an institutional separation would ensure that (i) the cost associated with retail supply of the incumbent licensee are not passed on the network business, and (ii) there is non-discriminatory open access through the distribution network to the entrant retail supplier. **Coexistence of the two activities of the distribution licensee would significantly undermine implementation of retail competition.** It is further highlighted that success of competition in the wholesale market is attributed to the separation of ‘carriage and content’<sup>4</sup> at the transmission whereby the transmission services were separated from bulk supply of electricity. **International experience in retail competition also highlights the need for separation of carriage and content of the incumbent distribution licensee.**

Dual attribution of ‘distribution’ of electricity could also create challenge for misinterpretation of the existing regulations, policies, rules, codes, etc. This may exponentially increase the burden of legal disputes for the licensees, generating company, SERC, APTEL as well as the Supreme Court. Ambiguity of the interpretation is best avoided in a sector already overburdened with legal disputes.

**CER Ambiguity of the definition of the existing multiple distribution licensee:** The Electricity Act, 2003 provides for multiple distribution licensee (i) to accommodate the prevailing historical legacy, e.g., in the licence areas in Mumbai, (ii) to reap benefits of competition where the density of load may allow for multiple distribution licensee, (iii) to present a credible threat to the incumbent licensee. The proposed amendment to the sixth proviso of Clause (b) to Section 14 of the Act suggesting to omit the words “*through their own distribution system*” should be dropped.

**CER Criteria for distribution of electricity:** There is a need to clarify that the criteria to be prescribed by the Central Government does not apply to grant of license, but the manner of distributing electricity. The Draft Clause replacing Clause (b) of Section 14 “(b) to distribute electricity as a distribution licensee in an area of supply in accordance with such criteria as may be prescribed by the Central Government”; may be modified as follows to bring the necessary clarity “(b) to distribute electricity, in accordance with such criteria as may be prescribed by the Central Government, as a distribution licensee in an area of supply ...”

**CER NLDC’s role in introducing schemes/ mechanisms to ensure grid stability:** The modification to the proviso to subsection 2 of Section 26 of the Act (‘*Provided that the National Load Despatch Centre shall not engage in the business of trading in electricity*’) by addition of the words “except as mandated by the Central Government for implementation of any scheme to ensure the stability of the power system” shall be inserted;” can be alternatively be done as discussed here.

**The market for ancillary services, and any such initiative that may be brought about by NLDC/ RLDCs may explicitly be excluded from the definition of trading** by adding a proviso after the definition of ‘trading’ u/s 2 (71) of the Act.

**CER SCED/ URS/ MBED: Optimal scheduling and despatch beyond the contracts:** The implementation of SCED/ URS currently involves incremental scheduling and despatch of electricity even when the respective entity may not have entered into an existing contract for the quantum exchanged through such mechanisms.

The existing provisions in the Act (u/s 26 (3)), which is now proposed as an amendment through insertion of subsection (4), limits the ability of NLDC to optimally schedule and despatch power if it continues to be bounded by ‘in accordance with the contract’. “(4) *The National Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in the country;*

*(b) be responsible for optimum scheduling and despatch of electricity in the country across different States and regions in accordance with the contracts entered into with the licensees or the generating companies: ...” (emphasis added)*

Thus, to ensure that the ‘optimisation’ of scheduling and despatch continues to be undertaken by the NLDC under SCED/ URS (and MBED or such a mechanism introduced later), which goes beyond the contracts, the clause (b) should be modified as “(b) *be responsible for optimum scheduling and despatch of electricity in the country across different States and regions in accordance with the contracts entered into with the licensees or the generating companies: ...”*

<sup>4</sup> Singh A, Power sector reform in India: current issues and Prospects, Energy Policy, 2006 <https://doi.org/10.1016/j.enpol.2004.08.013>

**CER Eligibility for Open Access:** The proposed addition of the fifth proviso to the Section 40 (c) (ii) of the Act states “...*maximum power to be made available at any time exceeds one megawatt shall be entitled to get open access to inter-State transmission system ..... on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission (emphasis added)*”.

- (i) Given that the regulatory framework across most of the states already provides open access for consumers having a demand of **‘one megawatt and above’**, the words **‘exceeds one megawatt’** should be replaced with **‘equals or exceeds one megawatt’**.
- (ii) “...*maximum power to be made available at any time exceeds one megawatt shall be entitled to get open access to inter-State transmission system ..... on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission (emphasis added)*”.

The above proviso in its current form seems to suggest that open access can be availed by a consumer, which will make available the maximum power as identified above, by any one including that through open access. To limit the applicability of the above proviso for its intended purpose, the words ‘to be made available’ may be replaced with ‘to be made available by a distribution licensee’. This context further emphasises the need for separately identifying the network provider and the electricity supplier, i.e. the separation of carriage and content.

- (iii) To ensure that the **limit of demand specified above is flexible** and can be further relaxed based on the situation across states, the following proviso should be added to *‘Provided that a Commission, may, through regulation, may further specify a lower limit of maximum power to avail open access’*.
- (iv) **Criteria for availing maximum power supply requirement in ‘MVA/ MW’:** The criteria for considering the power requirement of supply of electricity may be considered in ‘MVA/ MW’ as per the applicable policy for sanctioning of load for the state/ licensee.

**CER Sunset Clause for cross subsidy and additional surcharge:** The Bill proposes to introduce competition in retail electricity supply, while pursuing prevailing framework for open access with the obligation to pay cross subsidy and additional surcharge. The operational complexity and economic justification of these surcharges should not be perpetuated in an environment that aims to bring about retail supply competition in the sector. Hence, the Bill should also introduce a clause **for phasing out the applicability of above surcharges within five years of the notification of the Amendment.**

The Electricity Act, 2003 [No. 36 of 2003], originally provided for the elimination of above surcharges. This was removed through an amendment to the Act in 2007. The proposed sunset clause gains significance in the context of the introduction of competition in retail electricity supply as this would enable more effective competition in the sector.

**CER Efficient, Coordinated and Economic Distribution by Retailers of Electricity?:** The proposed amendment to Section 42 of the Act states “*for sub-section (1), the following sub-section shall be substituted, namely:—*

“(1) It shall be the duty of **all distribution licensees** to,—

1. *ensure an efficient, co-ordinated and economic distribution system in their area of supply:*

*Provided that a distribution licensee may use the distribution systems of other licensees in the area of supply for supplying power through the system of non-discriminatory open access;... ” (emphasis added)*

With the proposed introduction of competition in retail supply, a **‘distribution licensee’**, (**‘retailer without a distribution network’**), **will neither have the means nor the powers to ensure efficient, coordinated and economic distribution system in their area of supply.** Hence, this duty should be attributed only to the distribution licensee which own the distribution system. **This context further emphasises the need for separately identifying the network provider and the electricity supplier, i.e. the separation of carriage and content.**

The competition is the force that should ensure economy in the long-run. There would be instances wherein a retailer would end up undertaking business in an inefficient manner leading to uneconomic outcomes, and it may ultimately exit the business. This is a natural cycle of business. **All the distribution licensees (especially retailers) cannot and should not ensure efficiency and economy of other distribution licensees.**

The above amendment would also mean that **any (all) distribution licensee(s) can now invest to ensure ‘alternate’ (or a radial extension to the existing) distribution network, and seek coordination of the other ‘wired’ distribution licensees in doing so.** This would make the distribution network complex to operate, and for the SERCs to determine wheeling charges for the intervening components of the network.

**CER Duty to “develop and maintain” the distribution system:** The proposed modification of sub-section (1) to Section 42 of the principal Act,

“(1) It shall be the duty of a all distribution licensees to ensure develop and maintain an efficient, co-ordinated and economical distribution system in his their area of supply and..... to supply electricity in accordance with the provisions contained in this Act.” (*emphasis added to demonstrate changes from the principle Act*)

Omission of the words ‘develop and maintain’ in the proposed Bill also removes the responsibility of the distribution licensees (with wired network) to further develop and maintain the distribution system. Further development and maintenance of the distribution system is necessary to ensure that growing needs of consumers are met and also that the system continues to response to support emergence and growth of behind the meter generation and adoption of electric vehicles.

Thus, **duty to develop and maintain the distribution network should be retained for the distribution licensees (with wired network)**

**CER Model Regulations by Forum of Regulators:** The proposed amendment to Section 42 of the Act states “... *in accordance with the provisions of this Act and the rules made thereunder by the Central Government and the regulations made by the Appropriate Commission and in accordance with the model regulations laid down by the Forum of Regulators.*”; (*emphasis added*)

**The model regulations arrived at after discussions at the Forum of Regulators have played an important role in providing a starting point for the SERCs to further modify and develop the respective regulations through the usual participation and consultation process with stakeholders. However, the existing process of developing the model regulations does not go through the wider stakeholder discussion, a process followed before formalising the regulation and the policies in the sector. The process of developing model regulations is usually undertaken as a one-time exercise, wherein there is likely involvement of external consultants with very limited participation/contribution of the officers and members of the Commissions. There is also no feedback mechanism for review and continuous updation of model regulations. Thus, model regulations should be a guiding principle and amendment to that effect should be introduced in Section 61, Section 86 and other respective regulations.**

The distribution licensee, while performing its functions laid out u/s 42 of the Act, may likely face the dilemma of complying with multiple set of regulations including the model regulations. The Act (and the Bill) does not bestow binding status to the model regulations. The reference to the model regulations u/s 42 of the Act may be retained only as a guiding principle. This will avoid legal dispute arising on account of the differences between the actual regulations and the model regulations.

**CER Non-applicability of cross-subsidy and additional surcharge in case of competing distribution licensees:**

Addition of sub-section (4A) to Section 42 of the Act granting non-discriminatory open access to a distribution system to all the distribution licensee, should also include a proviso clarifying that cross-subsidy and additional surcharge would not be applicable in such cases. This would be similar to the proviso to Section 38 (2) (d) and Section 39 (2) (d) in the case of captive generating plants.

**CER Wheeling charges vs network access charges for open access to competing distribution licensees:**

Due to the natural monopoly characteristics of the distribution system, which primarily has fixed cost components associated with it, the charges for access to the same under the emerging scenario would likely be of a fixed charge basis. The approach to levy wheeling charges, currently applied to open access consumers on energy wheeled basis, cannot be carried forward in the context of retail competition with open access to distribution system. This is similar to the current context of the application of transmission charges, wherein long-term transmission access pricing is on the basis of MW, whereas short-term network charges are levied on the basis of MWh.

The following definition of wheeling (u/s 2 of the Act) would imply that the wheeling charges would be on energy wheeled basis.

“(76) **"wheeling"** means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee, as the case may be, are used by another person for the **conveyance of electricity** on payment of charges to be determined u/s 62;” (*emphasis added*)

Given the important role for network access and the associated charges, **‘charges for wheeling’ should be replaced with ‘charges for distribution system access and wheeling’.** This would also permit application of a two-part system in the interim as **‘Network Access Charge’ and ‘Network Usage Charge’.**

**CER Deemed open access for competition distribution licensees:** To ensure smooth rollout of the distribution/ retail competition, a ‘deemed open access’ criteria should be introduced for the competing distribution (retail) licensees with due information exchange and following required technical/ safety rules. This would ensure that the incumbent

licensee does not create hurdles through the process for obtaining the open access even though it is to be granted in a non-discriminatory manner (as per the proposed Amendment). **A competing ‘retailer’ should be deemed to have been granted open access** unless there is significant increase in load or addition of new consumers (beyond an aggregate limit) necessitating investment in the distribution system.

**A competing ‘retailer’ should be deemed to have been granted open access** unless there is significant increase in load or addition of new consumers necessitating investment in the distribution system.

The rules/ methodology applicable for sharing of transmission charges ensures revenue certainty and avoids risk of over or under recovery of transmission charges. A similar methodological approach can be applied in case of distribution network access and usage charges in the emerging scenario.

**The above discussion further highlights the need for separation of carriage and content by distinguishing between the “distribution licensee” and the “retail licensee”.**

**CER Reporting for Regulatory Compliance:** The policies, regulations, codes, rules, orders etc which emerge out of the overall regulatory and policy environment in the power sector places a variety of compliance obligations on various stakeholders like generators, licensees, Ombudsman, Regulatory Commissions etc. The compliance reporting is at most guided by the respective document, if provided for. In many instances it is not provided for, thus leaving a significant information gap and also adversely influencing compliance thereof.

A **new section** should be introduced for ‘**Reporting for Regulatory Compliance**’, which should mandate it through a specific regulation, rule etc. (as applicable) placing the compliance reporting obligation for the applicable stakeholders. The report on the same should be submitted to the respective Ministry and Regulatory Commission and be archived on their respective website.

**CER Sharing of PPA’s with the entrant distribution licensees (retailers):** The proposed addition to Section 60 of the Act states “... *Notwithstanding anything contained in this Act, on the issuance of licence to more than one distribution licensee in an area of supply, the power and associated costs from the existing power purchase agreements with the existing distribution licensee, as on the date of issuing licence to another distribution licensee, shall be shared among all the distribution licensees in the area of supply as per such arrangements as may be specified by the State Commission in accordance with the provisions of this Act and the rules made thereunder by the Central Government:*”; (emphasis added)

- The proposed amendment would bring **uncertainty to the existing as well as the new distribution licensees in terms of their power procurement portfolio**, both in terms of quantum as well as cost associated with the same.
- This arrangement will also **enhance the risk to the generators**, who have originally signed the PPA with a distribution licensee and are bound to receive capacity as well as the energy charges as laid down in the PPA from the distribution licensee. As an example, if one of the retailer (distribution licensee without wire) goes bankrupt<sup>5</sup>, then in that context, now the **generator is exposed to the risk associated with the bankruptcy of the other distribution licensees to whom part of the PPA would be partly ‘transferred’** through these arrangements which will be decided by the state regulators.
- In the absence of clear demarcation between the ‘distribution licensee with distribution network’ and the ‘distribution licensee without distribution network’, sharing of PPA would translate into a **significant entry barrier. This would be of particular concern, especially for a parallel distribution licensee who would make investment in setting up a distribution network. Hence, such distribution licensees should be excluded from applicability of the provisions under this Section.**
- **Uncertainty regarding cost and power sharing among the licensees:** The issuance of licence to a new distribution company in the area of supply of the existing licensee would require subsequent and **continuous review of the existing distribution of the existing PPAs** with all the distribution licensees. **A redistribution exercise would thus be required with each addition/ departure of a distribution licensee.** Also, the addition/ withdrawal of licensees in a particular area of supply will lead to uncertainty of the cost and quantum of power purchase to be done by a licensee, **thus may cast a shadow on the financial stability of the licensees.**

**CER Cutoff Date and the Sunset Clause for sharing of PPAs:** It needs to be clarified whether the Power Purchase Agreements which are under planning but not implemented will be included under the PPAs covered under the proposed Section 60A (1) of the Act which states ‘*the power and associated costs from the existing power purchase agreements with the existing distribution licensee, as on the date of issuing licence to another distribution licensee, shall be shared among all the distribution licensees in the area of supply*’. (emphasis added)

Multiple issue may arise out of the proposed section. **The definition of ‘existing’ PPAs would be dynamic as it**

would be linked to those ‘existing’ at the ‘time of issue of a new license’. In the similar spirit, the ‘existing’ PPAs would need to be reallocated with each instance of ‘surrender’ or ‘cancellation’ of an existing distribution licence. **What is the ambit of ‘associated’ costs?** This may include costs associated with ‘change in law’ that may be approved after a licensee has surrendered its distribution licence. In such a case, **certain costs accrued and attributable to a ‘set of licensees’ would be recoverable from a different set of licensees (i.e. post entry/ exit of a licenses).**

Furthermore, the first proviso of proposed Section 60A (1) should be in congruence with the second proviso of the proposed section. While the first proviso specifies that these arrangements would be made on the issuance of license, the second proviso specifies periodical review of power sharing.

One would clearly ascertain the complexity arising out of the ‘sharing of power and the associated costs’. **Defining a clear cutoff date for ‘freezing’ the PPAs that would fall under the exercise of the reallocation, and a sunset clause, beyond which the allocated PPAs would stand frozen, would provide each distribution licensee a greater room for commercial decision making and thus bring cost advantages to the consumers.**

**The issue identified below in the case of multiple ‘wired’ distribution licensees would also be handled by specifying a cut-off date (date of gazette publication of the Amendments).** Further, there should be **sunset clause identifying a date in future, beyond which such rebalancing would cease to be carried out.** A pre-defined period, say 5-7 years into the future, should be set as a sunset clause for such a rebalancing of PPAs else this would continue to impinge on the competitive outcome for the retail electricity supply and the benefits to the society as a whole.

**CER** **‘Arrangements’ vs ‘Resource Adequacy’:** In the context of the proposed Section 60A of the Act, **the arrangements may not have a legal sanctity as these would neither be part of the regulation, nor any specific order of the commission. In the absence of a legal basis for such ‘arrangements’, a multiplicity of legal disputes may arise from time to time and will make it difficult to implement retail competition in the sector.**

It is suggested that such ‘arrangements’ be issued as a part of a regulation on long-term demand forecasting and power procurement planning (the Resource Adequacy Plan for the respective state). **The State Commission should specify the ‘Regulations’, which may be based on the Rules specified by the Central Government.**

Notwithstanding the addition of Section 60A, the respective SERCs should still have a say in ensuring that the distribution licenses have put in place a resource adequacy plan to meet the demand for electricity in future. This should be the applicable with or without introduction of retail competition.

**CER** **De facto PPA and Scope of PPAs:** The Bill proposes that sharing of the Power Purchase Agreement between the distribution licensees will be based on the ‘arrangements’ specified by the State Commissions. Will such ‘arrangements’ result in de facto redistribution of PPA (between the suppliers/ generators and all the distribution licensees in an area), and hence the associated obligations, like payment security, change in law, etc? This arrangements will essentially result in **de facto Power Purchase Agreements** between the generators and the entrant distribution licensees, and modification of existing PPAs. A reallocation of PPAs should reassign all the rights and obligations to the resulting parties with the respective share in the power purchase. A legal framework would be required to implement such a dynamic PPA reallocation otherwise the legal process for PPA amendment or signing a new one would enter into a long process involving the SERCs, the Board of the respective licensees and the generating companies through a due legal process.

**The scope of PPAs sharing mechanism should include only the long-term PPAs, including those governed u/s 62 and u/s 63 of the Act. These should exclude any medium-term \ or short-term PPAs including those transacted through the power exchanges.**

**All the long-term PPAs entered into after the publication of the Amended Act in the Gazette should be outside the purview of the PPA sharing mechanism.** This would ensure that commercial decisions taken by the incumbent distribution licensees are purely commercially oriented and ensure that it does provide a perverse incentive for locking into PPAs while the sector is being opened up for retail competition.

**CER** **PPA Reallocation in the case of ‘existing’ Multiple Distribution Licensees:** The new Section 60A and its sub-section (1) proposed to be added in the Bill “60A (1) Notwithstanding anything contained in this Act, **on the issuance of licence to more than one distribution licensee in an area of supply, the power and associated costs from the existing**

<sup>5</sup> Eight retailers went bankrupt in Victoria, Australia in the year 2022

([https://en.wikipedia.org/wiki/List\\_of\\_defunct\\_utility\\_companies\\_in\\_Victoria,\\_Australia](https://en.wikipedia.org/wiki/List_of_defunct_utility_companies_in_Victoria,_Australia)), while a total of 52 retailers have gone bankrupt in UK since 2016 (<https://www.forbes.com/uk/advisor/energy/failed-uk-energy-suppliers-update/>)

power purchase agreements with the existing distribution licensee, as on the date of issuing licence to another distribution licensee, shall be shared among all the distribution licensees in the area of supply as per such arrangements as may be specified by the State Commission in accordance with the provisions of this Act and the rules made thereunder by the Central Government" (emphasis added)

The above section refers to sharing of PPAs between distribution licenses 'on issuance of a new distribution licence'. Its applicability in the case of existence of multiple distribution licensees in an area (e.g. in Mumbai) needs to be established. The PPAs of the distribution licensees there has already been a subject of legal disputes. A proviso clarifying the same can avoid such legal disputes.

**In the case of presence of multiple distribution licensees in an area of supply before the Amended Act coming into force, the cutoff date for the sharing of PPAs should be the date of gazette notification of the Amended Act, and PPA sharing outlined in sub-section (1) should be applicable beyond that.**

Similarly, the **applicability of the cross subsidy balancing fund should also have applicability post the cut-off date. Any cross-subsidy due to the costs due and incurred prior to the amended Act coming into force would be excluded.** (see emphasised text below) "(2) In case of **issuance of licence to more than one distribution licensee in an area of supply**, the State Government shall set up a **cross subsidy balancing fund** which shall be managed by a Government company or entity designated by that Government in accordance with such regulations as the State Commission may make in accordance with the provisions of this Act and the rules made thereunder by the Central Government." (emphasis added)

**CER** **Merits and Demerits of Cross-subsidy Balancing Fund (CSBF):** Clauses (2)-(3) of the new Section 60A proposed to set up a cross-subsidy balancing fund (CSBF), post a scenario with multiple distribution licensees.

"(2) In case of **issuance of licence (s) to more than one distribution licensee in an area of supply**, the State Government shall set up a **cross subsidy balancing fund** which shall be managed by a Government company or entity designated by that Government in accordance with such regulations as the State Commission may make in accordance with the provisions of this Act and the rules made thereunder by the Central Government.

(3) Any surplus with a distribution licensee on account of cross subsidy or cross subsidy surcharge or additional surcharge shall be deposited into the fund referred to in sub-section (2), and the fund shall be utilised to make good deficits in cross subsidy in the same area **or any other area of supply.**" (emphasis added)

It is highlighted that a **similar balancing (cross-subsidisation) is de facto practiced across government owned distribution licenses across different licence areas of the state.** This is implemented through 'back calculation' of the bulk supply tariff, during tariff determination u/s 62, to ensure that final consumer tariffs are uniform across these distribution licensees.

The Bill proposes a formal fund, with the onset of the retail supply competition. The intention of the proposal seems to safeguard the interest of the existing discoms from losing cross-subsidy due to migration of the creamy customers (e.g. commercial, industrial, bulk supply consumers etc.), to the competing distribution licensees. It is important to highlight that **the need for cross-subsidisation arises both due to the tariffs being misaligned to the cost of supply, but also on account of the inefficiencies that are built into the cost to supply. Perpetuation of the CSBF would also protect relative inefficiency across the distribution licensees.**

In case of multiple distribution licenses, the tariff would no longer be determined by the respective SERCs. Thus, both cost of supply as well as consumer tariff would be within the partial control of the distribution licensees. Cross-subsidisation across the distribution licensees would in-effect also mean cross subsidization across consumer categories across the competing licensees. **This would be detrimental to the spirit of competition as it would continue to shield the inefficiency of the inefficient licensees as well.**

Furthermore, with rebalancing of portfolios to be put in place with each entry/ exit of a distribution licensee, a significant part of the consumer tariff (about 70-75%) is brought under that 'balancing' mechanism. Any further need for rebalancing (through CSBF) would significantly be applicable to differences in the operational efficiency and the consumers tariff across consumers. **If consumer tariffs are rebalanced, there would not be any need for the CSBF. Thus, it becomes important to ensure that cross-subsidies in tariff are gradually reduced with a timeframe and let competition flourish thereafter.**

**CER** **Calculation of Cross-subsidy:** In context of multiple licensees, the calculation of cross subsidy would become a complex exercise as under retail competition, one generally witnesses multiple tariff plans even for a single consumer category. Under such circumstances, detailed data would be required from all the distribution licensees with respect to their Average Cost of Supply and Average Billing Rate. Given the dynamics of the market on account of switching of

the consumers across distribution licensees as well as across different tariff plans within a category, this would become complex and dynamic exercise.

**To ensure that such an exercise can be carried out with certain amount of reliability, significant data disclosure including the commercial ones (which are otherwise closely guarded by a business entity facing competition) would be required and be included within the purview of the Act. Appropriate Rules/ Regulations to that effect would be required to ensure that there is a common approach to estimate the same.**

**Cross Subsidisation with Non-competing Distribution Licensees?:** While sub-section (2) of Section 60A proposes a CSBF in case of multiple distribution licensees, sub-section (3) proposes to extend its domain to ‘any other area of supply’. By extension, this would mean that the **CSBF can be used to support deficit in licence areas that do not have multiple distribution licensees.** To avoid such a scenario, **the words ‘any other area of supply’ appearing at the end of the sub-section (3) may be replaced with ‘any other area of supply with multiple distribution licensees within the state.’**

In the context of Joint ERCs, it may also be clarified that the jurisdiction of CSBF is limited to the respective state only.

**CER** **Sunset Clause for CSBF:** As experienced in some of the developed countries, the cross-subsidy paradigm may be inverted, with the emergence of retail supply competition, wherein commercial and industrial consumers would face a tariff close to or even lower than the ‘average’ cost of supply (ACOS), whereas domestic, commercial and some other categories may pay higher than ACOS. This would invert the cross-subsidy paradigm. Given that the CSBF is a protection shield, with maturity of competition, **the mechanics of the cross subsidy balancing fund should be gradually phased out.** Furthermore, **such phase out would likely be differentiated across states/ areas of supply of distribution licensees** (but limited to an upper cap i.e. sunset date) depending on the economics of power procurement, cost and revenue dynamics, and the intensity of retail supply competition.

**CER** **Prudent cost recovery by tariff will hinder competition among licensees:** The proposed amendment to Section 61 of the Act states *“In section 61 of the principal Act, for clause (g), the following clauses shall be substituted, namely:—*

*“(g) the tariff recovers all prudent costs incurred for supply of electricity;*

*(ga) the tariff reduces cross subsidies in the manner specified by the Appropriate Commission;”* (emphasis added)...”

The original clause (g) is outlined below.

*“(g) that the tariff progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;”*

The proposed emphasis on recovery of ‘all prudent costs’ should make way for performance based tariff regulation. Section 61 is applicable for distribution licensees whose tariff would be determined u/s 62 of the Act, and under the absence of competition in the distribution segment. The mechanism of ‘recovery of all prudent costs’ would delay introduction of competition through issue of multiple distribution licensees, would not only **safeguard the existing (single) licensee. This, in turn, would further delay introduction of competition as the historical legacy of PPAs and inefficiency would be translated and passed on to competing licensees through sharing of PPAs and CSBF.**

Section 61 is applicable for a single distribution licensee whose tariff would be determined u/s 62 of the Act. Thus the above mentioned clause aiming reduction in cross subsidies remains limited to the single distribution licensee in an area of supply. **In case of multiple distribution licensees, Section 61 is not applicable. Thus the need for ‘reduction in cross subsidies’ does not apply. Once the mechanism for cross-subsidy balancing fund would be set in place, it would perpetuate the prevalence of cross-subsidies in the distribution areas subject to competition.**

This will reduce the incentives for the incumbent distribution licensees (especially those owned by the government) to improve their performance as the elimination of progressive cross subsidy reduction and creation of cross subsidy fund would reduce the incentive for cost reduction by the incumbent distribution licensees.

**CER** **Ceiling for ‘Overall’ Tariff:** As per the proposed second proviso u/s 62(1)(d) of the Act, *“Provided further that in such ceiling tariff, the cross subsidy, wheeling charges and adjustment in tariff pertaining to the period prior to the introduction of ceiling tariff, if any, shall be indicated separately by the Appropriate Commission.”*, (emphasis added)

Since the purpose of the above proviso is to implement overall ceiling rather than ceiling for individual components (which would also provide flexibility to the retailer to design appropriate tariffs), the same may be clarified by the following **additional proviso, “Provided further that in such a ceiling tariff would be applicable on the overall tariff rather than individual components of tariff, and would include all components excluding any taxes or duties,**

*as applicable.”*

**CER** **Unbundling of Consumer Tariff:** As highlighted by Singh (2010),<sup>6</sup> effective implementation of retail competition in the country would require unbundling of tariff identifying various components thereof. Implementation of the above provision would also necessitate unbundling of tariff even before such retail competition is implemented. **Therefore, the Bill should mandate unbundling of tariff for consumer tariff as a new sub-section (3A) to Section 62 as suggested below:**

**“(3A) The tariff for any consumer shall have multiple parts, separately identifying fixed as well as variable components. Such components shall be further segregated into sub-components identifying charges related to load/demand sanctioned, energy supplied, wheeling charges, cross-subsidy, subsidy provided by the government, service charge and, any other charges as determined by the Appropriate Commission u/s 62 or, fixed by a distribution licensee in case of multiple distribution licensees.”**

**CER** **Capacity and Capacity Building of ERCs, Model Staffing Plan and Regulatory Cadre:** The Electricity Regulatory Commissions (ERCs) are understaffed due to limited number of sanctioned posts, as well as lack of a regulatory cadre. Lack of ample resources significantly undermines the ability and capacity of the ERCs to engage on various duties in a timely manner<sup>7</sup>. **Our discussions with ERCs have often revealed the paucity of manpower and dependence on external sources, which also does not help in building internal capacity and institutional memory. Lack of such institutional capacity is also a reason for delay in issuing of relevant orders and regulations.**

Under Section 72, the Authority (CEA) has powers to appoint officers/ employees, on such terms and conditions, which are to be fixed in consultation with the Central Government. On similar lines, the Appropriate Commission should have the powers to appoint officers/ employees as required with terms and conditions for the same to be fixed in consultation with the Appropriate Government. Section 91(2) may be amended as **“(2) The Appropriate Commission may, in consultation with the approval of appropriate government, specify the numbers, nature and categories of other officers and employees.”** (underlined text to be added, strikethrough text to be deleted)

A **“Regulatory Cadre for the Infrastructure Sector”** be introduced so that the regulatory institutions across the infrastructure sectors have access to properly trained manpower with a stable career path. The cross-sectoral Cadre would also bring a mix of ideas and would also strengthen the regulatory independence in the functioning of the regulatory institutions.

The Act should strengthen the hands of the regulatory institutions by including provision of adequate resources and manpower as per the model staffing pattern to be issued by the Forum of Regulators. The model so developed should include the timeliness and adequacy of human resources, their capacity building needs and required certification.

Appropriate amendment to the Act u/s 91 (2) via a proviso, as suggested below, may address the same.

**“Provided that the Appropriate government would provide adequate resources, and timely sanction the adequate manpower as per the requirements framed by the Appropriate Commission.”**

Forum of Regulators has made concerted efforts to undertake capacity building of the ERCs over the years. A similar approach is required to **strengthen the regulated entities to ensure better regulatory compliance through a dedicated regulatory cells with adequate and trained manpower.** Certification based programs for supplementing these efforts can be adopted.<sup>8</sup>

**CER** **Strengthening Regulatory Governance for all Stakeholders:** The institutional governance structure of ERCs plays an important role in regulatory outcomes. The existing criteria for selection of Chairpersons and Members should be more inclusive, and should have better gender representation. The proposals in the amendment to include heads of certain organisations would raise concerns for regulatory independence and may tilt the outcome in favour of the represented organisations. This would also significantly reduce the potential for candidates who are not heads of such organisations. Keeping a wider criteria would present a larger bandwidth for

<sup>6</sup> Singh, A, Towards a Competitive Market for Electricity and Consumer Choice in the Indian Power Sector, Energy Policy, 2010 [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2759247](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2759247)

<sup>7</sup> A comparison with resource availability with similar institutions in the developed world is highlighted here. During FY 22, Federal Energy Regulatory Commission (FERC) of USA is estimated to spend more than USD 338 million for the electricity and hydro sector with a total of 1,154 full-time equivalents (FTEs) of employees for the electricity including hydro sector.

wider stakeholder representation. Given the evolutionary phase of the Indian power market henceforth, **head of a system operator, who plays a key independent role in the power sector, should also be included in the list, if retained in a modified form with wider criteria.**

The existing provisions of the Act includes a criteria for representation of various sets of stakeholders. However, the space is generally dominated by those with public administration experience. While this is also desirable, the role of candidates having direct experience with discoms, even though included in the qualification of members of CERC, had limited or perhaps no representation. **To bring a balance in representation, rotational representation of the respective set of stakeholders may be adopted as a philosophy for appointing the Members of the Commissions.**

**CER Representation of DISCOMs or the consumers at large needs to be encouraged in the Central Commission.** This will ensure that consumers' interests are protected as 40-45% of the total cost paid by them are taken into consideration are subject to the regulatory environment emerging out of the Central Commission.

To ensure uniformity in applicability of basic attributes for the Chairpersons as well as Members of the Commission, amendment to Section 77 (2) of the Act, may be rephrased as “(2) The Members, including the Chairperson of the Central Commission shall be persons of ability, integrity and standing, having adequate knowledge of.....”.

**CER Fuel and Power Purchase Adjustment Surcharge (FPPAS):** Fuel and Power Purchase Adjustment Surcharge (FPPAS) can be defined as a component of the tariff itself during the determination process and be applicable on the ‘energy charges’. **The tariff determination exercise should itself define the approach to determine the FPPAS on a quarterly basis. In doing so, the FPPAS would need not be defined as ‘amendment’ in tariff,** which is proposed to be included through the addition of a proviso to sub-section (4) to Section 62.

**CER The Central and the State Advisory Committee, Coordination Forum:** The Central and the State Advisory Committees are often given less importance in the overall governance mechanism. While some commissions conduct such meetings before most of the crucial business like key regulations, tariff orders etc., in case of others, it is given a lip service with limited and less important agenda items.

Furthermore, the agenda and minutes of the meetings are often not available for all the years on the respective website of some of the ERCs in a timely manner. Framework for compliance of such an institutional contribution should include timely meetings with relevant agenda items, perhaps at the time of each crucial regulatory decision. **Agenda and minutes of the central Coordination Forum (u/s 166 (1)) and state-level Coordination Forum (u/s 166 (4)) to be set up by the Central and the State Governments respectively should be reported regularly in the public domain in a timely manner. A proviso to that effect be included in the Act to strengthen such feedback mechanisms from a wide spectrum of stakeholders.**

**CER Prudent Cost Recovery and ‘Financial Stability’ of Licensees:** The proposed addition to Section 86 of the Act states “*In section 86 of the principal Act, in sub-section (1),— (a) in the proviso to clause (a), for the words “Provided that”, the following shall be substituted, namely:— “Provided that the tariff recovers all prudent costs incurred for supply of electricity and also provide reasonable returns on investment and take necessary steps to ensure financial stability of the licensees: Provided further that”;* (emphasis added)

Evolution of the regulatory approach to tariff determination should **gradually move away from the concept of ‘cost recovery’.** In fact, Section 61 alludes to incentives for efficiency, and tariff policy also invokes the need for disincentives for continued inefficiency. **In the developed countries with matured regulatory framework, cost recovery has long been replaced by incentive or performance-based regulation.** The Bill should enable such an environment for the sector.

The **regulatory framework for generation of electricity** has already moved towards normative cost of service based approach, which does not **assure recovery of costs as tariffs are based on norms set for various financial and technical parameters.**

Furthermore, **section 86 would be applicable,** in its proposed form to distribution licensees who are effectively **in competition under a multiple distribution licensees,** wherein cost recovery is no longer valid and, thus should be excluded from the applicability of the above proviso.

Furthermore, the cost recovery itself will not ensure financial stability. It also depends on external as well as internal factors. **The Act should not aim to ensure financial stability through means of tariff determination, otherwise**

<sup>8</sup> The Centre for Energy Regulation (CER) at IIT Kanpur has also undertaking the task of capacity building of ERCs, on behalf of Forum of Regulators. The Centre has also launched a Regulatory Certification Program on a variety of topics including “Power Sector Regulation: Theory and Practice”, “Power Market Economics and Operation” and “Renewable Energy: Economics, Policy and Regulation”

**continue inefficiencies would further linger in the sector.** The external factors may include change in electricity demand, resource mix of power supply, financial stress in the economy etc. The internal factors may include the managerial decisions that influence the commercial and financial health of the distribution licenses. In the context of multiple distribution licensees, by its very nature some businesses would be under financial stress.<sup>9</sup> **The SERCs should not be custodian of the financial health of the licensees facing competition in the sector.**

**CER Promotion of Co-generation (from fossil fuels?):** India's updated Intended Nationally Determined Contribution (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC) committing it to **reduce emissions intensity of its GDP by 45% (from 2005 level) by 2030, and achieve about 50% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030. Progress towards these targets would require reduction in share of fossil-fuel based electricity generation.**

The original intent of the Act was to promote generation and co-generation of electricity (both) from renewable energy sources.<sup>10</sup> The proposed amendment inherently seeks to emphasise role of fossil fuel based co-generation. **Given India's INDC commitments and target to increase penetration of renewable energy, the following proposed clause (ea) to sub-section (1) of Section 86 should be excluded.** "(ea) promote co-generation of electricity;"

**CER Role of Renewable Energy Certificates (RECs) in RPO Compliance:** The RPO obligation enshrined u/s 86 (1) (e) of the Act can be met through procurement of green energy or purchase of RECs.<sup>11</sup> The market for REC has played a key role in improving the compliance specially for captive and open access consumers. **It has potential for playing a greater role in RE development as well as the emerging market for carbon trading.**<sup>12</sup>

The amendment bill can codify the role of RECs further in ensuring the guarantee of origin for the RE. This **would further aid the success of green hydrogen mission as well.** A proviso to Section 86 (1) (e) of the Act can be added as follows

**"Provided that the above commitment can be met though the market instruments like the Renewable Energy Certificates and other such market-based instruments to be recognized by the Central Commission under Section 65 of the Act."**

**CER Role of SERCs in fostering Consumer Choice:** The enabling provisions (as suggested to be modified herein) of the Bill, aims to provide consumers a choice of electricity supplier. To strengthen the right of the consumers to exercise such a choice,

- Clause No. 23 (e) states *"after clause (j), the following clauses shall be inserted, namely:—*
- *"(ja) issue directions or guidelines or specify regulations to secure consumer choice and an efficient,..."* It is important to replace the word 'specify' with 'issue' in the draft Clause. This would be in line with the context of other Regulations 'issued' by the respective Commissions.

**CER Definition of Resource Adequacy:** Alongside inclusion of clause '(jb)',

*"(jb) review the resource adequacy at intervals of every six months for each of the distribution licensees....",*

a definition of "Resource Adequacy" should be included in Section (2), or it may be pointed be included in Section 79 and Section 86 in respect to the 'Grid Code' and 'State Grid Code' respectively.

**CER Supplier of last resort<sup>13</sup> :** Effective implementation of consumer choice would also need to be accompanied with the definition of the responsibility of a 'Supplier of Last Resort'. **In case of the inability of a distribution licensee to serve an embedded consumer, the consumer cannot be left stranded and need to be served electricity.** In fact,

<sup>9</sup>The experience from developed countries with retail supply competition reveals that numerous retailers loose out to competition and are forced out of business due to financial stress.

<sup>10</sup> The legal process had also set aside an interpretation wherein the Section 86(1)(e) was argued to mean 'promotion of cogeneration from fossil fuel' as well. There is legal clarity on the same now.

<sup>11</sup> For contributions to development of the REC market in the country, see

Singh A, A market for renewable energy credits in the Indian power sector, Renewable and Sustainable Energy Reviews, 2009

<https://www.sciencedirect.com/science/article/pii/S1364032107001463>

Singh A, "Economics, Regulation, and Implementation Strategy for Renewable Energy Certificates in India", in India Infrastructure Report 2010, OUP,

[https://www.researchgate.net/publication/335790471\\_Economics\\_Regulation\\_and\\_Implementation\\_Strategy\\_for\\_Renewable\\_Energy\\_Certificates\\_in\\_India](https://www.researchgate.net/publication/335790471_Economics_Regulation_and_Implementation_Strategy_for_Renewable_Energy_Certificates_in_India)

Singh A, Directions for Effective Regulation for Renewable Energy: An Analysis of Renewable Energy Certificates, Indian Energy Security

Summit: Energy Security for a sustainable future, 3-4 March 2011, New Delhi, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3440341](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3440341)

such a grid connected consumer would keep consuming the electricity while the required injection of energy by its contracted supplier may have ceased due to either breach of contract or failure at the end of the supplier.

In the present context of open access, such consumers are billed at temporary tariff and, applicable penal demand charges are also levied. In case of competitive retail suppliers, small domestic, commercial consumers etc, who have exercised choice to secure supply from an alternate supplier, should have right to return to an identified supplier(s), the **‘Supplier of Last Resort’, for a limited duration at the applicable tariff for the same category for such supplies (i.e. not being subjected to temporary tariff and penal demand charges)**. Thereafter, such a consumer would have to enter into a supply contract with another supplier. **A fund may be created from a pool of resources (CSBF?), which may compensate such suppliers of last resort for identified additional cost to temporarily serve such consumers. In the absence of such a mechanism, consumers may face significant barriers to implement choice of supply.**

**CER Implementation of RPO Shortfall Penalty:** The substituted Section 43 provides for imposition of penalty for RPO shortfall by the obligated entities.

*“(3) Notwithstanding anything contained in sub-sections (1) and (2), where the Appropriate Commission is satisfied on a complaint filed before it or otherwise, that obligated entity has not purchased power from renewable sources of energy as specified under clause (e) of sub-section (1) of Section 86, the Commission shall after giving such entity an opportunity of being heard, by order in writing, direct that, without prejudice to any other penalty to which he may be liable under this Act, such person shall be liable to pay a penalty of a sum calculated at a rate of—*

- (i) *not less than twenty-five paise per kilowatt-hour and not more than thirty-five paise per kilowatt-hour for the shortfall in purchase in the first year of default;*
- (ii) *not less than thirty-five paise per kilowatt-hour and not more than fifty paise per kilowatt-hour for the shortfall in purchase continuing after the first year of default.” (emphasis added)*

As per the proposed amendment in Section 142 (3) of the Act, the penalty to be implemented for shortfall in meeting RPO target to be proposed, should not be specified through the Act as this will sacrifice the flexibility to adjust the level of penalty as per the market economics of RE, and the overall regulatory framework for RE/ REC.

**It is proposed that such a penalty or its basis may be specified under the rules made by Central Government, in consultation with the SERCs/ JERCs, and the other stakeholders. This can then be revised from time to time to strengthen RPO compliance considering stakeholders' input.**

The proposed implementation framework for penalty highlights needs for clarity as the same can be interpreted in different ways as set out in the following example considering RPO for a three-year period (considering lowest level of penalty).

**Case 1:** The penalty rate imposed for the 1<sup>st</sup> year would be Rs. 0.25/ kWh (as per Section 142 (3)(i)). For the shortfall of 2<sup>nd</sup> and 3<sup>rd</sup> year in meeting the RPO targets, the penalty imposed is at the rate of Rs. 0.35/ kWh (as per Section 142 (3) (ii)).

	Year 1	Year 2	Year 3
<b>RPO Target (kWh)</b>	1000	1000	1000
<b>RPO Met (kWh)</b>	900	950	975
<b>RPO Shortfall (kWh)</b>	100	50	25
<b>Cumulative RPO Shortfall (kWh)</b>	100	150	175
<b>Penalty Rate (Rs./kWh)*</b>	0.25	0.35	0.35
<b>Penalty for 1<sup>st</sup> time shortfall (Rs.)</b>	0.25*100 = 25		
<b>Penalty for 2<sup>nd</sup> time shortfall (Rs.)</b>		0.35 * 50 = 17.5	
<b>Penalty for 3<sup>rd</sup> time shortfall (Rs.)</b>			0.35*25 = 8.75
<b>Overall Penalty for three years (Rs.)</b>		<b>51.25</b>	

\*- Lower limit mentioned in the proposed amendment taken as reference for calculation

<sup>12</sup> CER's Comments on “Policy paper for Indian Carbon Market, 2022 [Draft]”, Indian carbon market, BEE India [https://cer.iitk.ac.in/blog/new\\_blog/?id=MTg2NQ==](https://cer.iitk.ac.in/blog/new_blog/?id=MTg2NQ==)

<sup>13</sup> Singh, A, Towards a Competitive Market for Electricity and Consumer Choice in the Indian Power Sector, Energy Policy, 2010 [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2759247](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2759247)

**Case 2:** The penalty rate imposed for the 1<sup>st</sup> year would be Rs. 0.25/ kWh (as per Section 142 (3) (i)). For the continued shortfall, the penalty rate for shortfall in the 2<sup>nd</sup> year would be Rs. 0.25/ kWh (as per Section 142 (3) (i)) and for shortfall of the previous year penalty would be Rs. 0.35/ kWh (as per Section 142 (3) (ii)). Similarly, it would be calculated for the 3<sup>rd</sup> year.

	Year 1	Year 2	Year 3
RPO Target (kWh)	1000	1000	1000
RPO Met (kWh)	900	950	975
RPO Shortfall (kWh)	100	50	25
Cumulative RPO Shortfall (kWh)	100	150	175
1 <sup>st</sup> time RPO shortfall	100	50	25
2 <sup>nd</sup> time RPO shortfall		100 (of 1st year)	50 (of 2nd year)
3 <sup>rd</sup> time RPO shortfall			100 (of 1st year)
Penalty Rate (Rs./ kWh)*	0.25	0.35	0.35
Penalty for 1 <sup>st</sup> time shortfall (Rs.)	0.25*100 = 25	0.25*50 = 12.5	0.25*25 = 6.25
Penalty for 2 <sup>nd</sup> time shortfall (Rs.)		0.35*100 = 35	0.35*50 = 17.5
Penalty for 3 <sup>rd</sup> time shortfall (Rs.)			0.35*100 = 35
Overall Penalty for three years (Rs.)		131.25	

\*- Lower limit mentioned in the proposed amendment taken as reference for calculation

**Case 3:** The penalty rate imposed for the 1<sup>st</sup> year would be Rs. 0.25/ kWh (as per Section 142 (3)(i)). For the continued shortfall, the penalty rate applicable on the cumulative shortfall of 1<sup>st</sup> year and 2<sup>nd</sup> year would be imposed at Rs. 0.35/ kWh (as per Section 142 (3) (ii)) and so on.

	Year 1	Year 2	Year 3
RPO Target (kWh)	1000	1000	1000
RPO Met (kWh)	900	950	975
RPO Shortfall (kWh)	100	50	25
Cumulative RPO Shortfall (kWh)	100	150	175
1 <sup>st</sup> time RPO shortfall	100	50	25
2 <sup>nd</sup> time RPO shortfall		100 (of 1st year)	50 (of 2nd year)
3 <sup>rd</sup> time RPO shortfall			100 (of 1st year)
Penalty Rate (Rs./ kWh)*	0.25	0.35	0.35
Penalty for 1 <sup>st</sup> time shortfall (Rs.)	0.25*100 = 25		
Penalty for 2 <sup>nd</sup> time shortfall (Rs.)		0.35*150 = 35	
Penalty for 3 <sup>rd</sup> time shortfall (Rs.)			0.35*175 = 61.25
Overall Penalty for three years (Rs.)		121.25	

\*- Lower limit mentioned in the proposed amendment taken as reference for calculation

Suppose an obligated entity fails to meet its RPO target by 100 kWh for 1st year. Hence, the penalty imposed would be Rs. (0.25\*100) in all the three cases for the first year as per the above tables. For the 2<sup>nd</sup> and 3<sup>rd</sup> year there is ambiguity in calculation of the penalty to be imposed if the obligated entity fails to meet its RPO target. **Thus, the provisions for imposition of penalty should not leave any room for ambiguity.**

## RPO Fund:

It is also suggested that the revenue collected from such penalty should be deposited in separate fund to be created/ existing for the particular State and may be called as the Renewable Purchase Obligation Fund (RPO Fund), which should be utilized for promotion of RE and research and capacity building thereof. Alternatively, the fund can be used to purchase RECs and extinguishing the same, thereby transferring the economic benefits to the REC market.

To ensure that the RPO shortfall penalty is dynamic and reflects the prevailing economics of RE, the average MCP for

the REC for the respective quarter may be applied as penalty. The amount to be collected through such a penalty (in the fund as suggested above) can be used to purchase the equivalent RECs for meeting the RPO. **This would also ensure that the overall RPOs is fulfilled irrespective of the same being done by the respective obligated entity or the fund created for the penalties. This would give direct incentive to participate in the REC market for RPO fulfilment and ensure much better RPO compliance.**

## **CER** Development of Market-based Instruments: RECs and Carbon Credits:

Section 66 of the Act provides for development of the market in electricity by the Appropriate Commission. Given the role played by the renewable energy certificates (RECs) and the energy efficiency certifications (EScerts), and the emerging role of carbon market in the country (**post enactment of Energy Conservation (Amendment) Act, 2022**), this Section should also include a reference to the development of market-based instruments, which would also include derivatives. Section 66 of the Act may be modified as

“66. The Appropriate Commission shall endeavour to promote the development of a market (including trading) in power **and market-based instruments** in such manner as may be specified and shall be guided by the National Electricity Policy referred to in Section 3 in this regard.” (text to be added highlighted in bold)

**Given the current institutional framework for REC implementation, it provides a credible guarantee of origin for both renewable energy generation and hence displacement of carbon.** Section 86 (1) (e) of the Act, mandating RPO obligation for the obligated entities should also **provide for use of RECs and carbon credits in a fungible manner to the RPO obligations denominated in energy terms.** A proviso to that affect may be added therein.

**CER** **Market Monitoring:** A proviso to Section 66 should also mandate effective market monitoring by the Appropriate Commission. While market monitoring is already essential for efficient functioning of the wholesale market, it would also be equally important in the case of the retail market. A proviso should mandate the market monitoring and publication of its reports on a monthly/ quarterly basis through the respective web portal of the Appropriate Commission.

“Provided that the Appropriate Commission would continuously monitor the market behaviour and its outcome and publish a periodic (monthly/ quarterly) report on the same including incidences of malpractices identified and action taken thereof.”

**CER** **Data disclosure: System Operation and Storage:** Design of policy and regulatory framework depends significantly on the availability of data on technical, operational, financial as well as regulatory aspects for the entities in the sector. Section 73 (i) & (j) of the Act mandates the Central Electricity Authority (CEA) to collect and make public data secured from the entities in the sector. The current scope of the data does not include system operation, market-based instruments (those traded on PXs including the RECs, Escerts etc.), storage etc. The existing Clause (i) and (j) may be modified as follows

“(i) collect and record the data concerning the generation, transmission, **system operation**, trading, **market-based instruments**, distribution, **storage** and utilisation of electricity and carry out studies relating to cost, efficiency, competitiveness and such like matters;

(j) make public from time-to-time information secured under this Act, archive the same through its web-portal and provide for the publication of reports and investigations;”



## Regulatory Updates

### Tariff



KSERC ordered to revise the generic tariff applicable to 8.4 MW wind power project developed by Ahalia Alternate Energy Pvt. Ltd., Palakkad under IPP 15 mode at Rs. 4.70/ kWh instead of Rs. 5.34/kWh, with the benefit of accelerated

depreciation.

KSERC approved total income, expenditure and revenue surplus of Rs. 3653.59 lakh, Rs. 3423.83 lakh and Rs. 229.76 lakh respectively for the petition filed by CSEZA for truing up for FY 21. The cumulative revenue surplus at the beginning of the year 2020-21 was Rs.1391.53 lakh. The accumulated revenue surplus thus, at the end of the FY 21 would be Rs.1621.29 lakh.

KSERC approved the deviation from the guidelines issued by Ministry of Power for tariff based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects filed by KSEB Ltd. and adopted the L1-tariff of Rs. 3.96/ kWh discovered in the tender for setting up of 100 MW grid connected the Wind Power Projects in Kerala under competitive bidding route.

KSERC approved total income, expenditure and revenue surplus of Rs. 400.04 lakh, Rs. 766.41 lakh and Rs. 366.37 lakh respectively for the petition filed by Smart City for Truing up of Accounts for the year FY 20. The total cumulative revenue gap till FY 20 will be Rs. 413.38 lakh.



UERC decided to allow a Provisional Tariff of Rs. 7.60/ kWh, which is equivalent to the interim tariff claimed by the Uttarakhand Jal Vidyut Nigam Ltd. to meet/ recover the expenses till the determination of final tariff. The same

shall be recovered based on the energy generated/ supplied to the beneficiary. Any arrear against the energy supplied shall be recovered in three equal monthly instalments beginning from November, 2022 onwards.

UERC has allowed UPCL to recover the FCA amount to the extent claimed by it from various consumer categories at the rates submitted by it and as indicated in Annexure-I during the third quarter of FY 2022-23. UERC has also directed UPCL to maintain a separate record for such recoveries and submit the details of the quarter-wise FCA recovered vis-à-vis FCA allowed by the UERC within twenty days of the end of the quarter.

### Annexure-I: Category-wise FCA proposed to be charged during the third quarter of FY 2022-23

Sr. No.	Category	Average Billing Rate (Rs./ kWh)
1	Domestic (RTS-1)/ Concessional Snowbound Area (RTS-1A)	
1.1	Lifeline Consumers(RTS-1)/ Concessional Snowbound Area (RTS-1A)	Rs. 0.05/kWh
1.2	Consumers (Metered) (RTS-1)	Rs. 0.11/kWh Rs. 0.10/kVAh
2	Non-Domestic (RTS-2)	Rs. 0.15/kWh Rs. 0.15/kVAh
3	Government Public Utilities (RTS-3)	Rs. 0.14/kVAh
4	PTW/ Pumping Sets (RTS-4)	Rs. 0.05/kWh
5	Agriculture Allied Activities (RTS-4A)	Rs. 0.06/kWh
6	LT Industries (RTS-5)	Rs. 0.14/kWh Rs. 0.14/kVAh
7	HT Industries (RTS-5)	Rs. 0.14/kVAh
8	Mixed Load (RTS-6)	Rs. 0.13/kVAh
9	Railway Traction (RTS-7)	Rs. 0.14/kVAh
10	Electric Vehicle Charging Stations (RTS-8)	Rs. 0.12/kWh



GERC directed generating companies, SLDC, licensees and utilities to file their tariff applications for approval of true-up for FY 2021-22 and for determination of Annual ARR and Tariff for FY 2023-24 on or before 15<sup>th</sup> December, 2022 based on the principles and methodologies as provided in the GERC (MYT) Regulations, 2016.



WBERC decided to allow the release of Rs. 1239.58 Cr. as Employee cost under the terminal benefit head out of the total withheld amount of Rs. 2556.00 Cr. in the ARR orders up to 2017-18.



RERC looked into the tariff for the supply of electricity 2020 issued by the respondent AVVNL and considered that the fixed charges for temporary supply shall be levied on maximum demand actually recorded during the month or 75% of contract demand, whichever is higher. Now since the standby supply as per Open Access Regulations, 2016, is to be charged as per temporary supply tariff, therefore, the fixed charges for standby supply shall be charged on a Billing demand basis.

### Power Procurement



UPERC observed that the discovered weighted average landed rate proposed by NPCL for January and February, 2023 at Rs. 7.68/ kWh, is higher in comparison to the approved short-term power purchase landed rate of Rs. 5.36/ kWh.

## Regulatory Updates

Also, the discovered weighted average rate at Rs. 6.36/ kWh is higher than Average Power Purchase Cost, at Rs. 5.08/ kWh, approved in the ARR Tariff order for FY 2022-23. UPERC ordered that NPCL shall explore other options including rebidding for the period from 1<sup>st</sup> January, 2023 to 28<sup>th</sup> February, 2023 and in the meantime continue to procure power from Power Exchange(s).



GERC concluded that the process of power procurement carried out by the GUVNL is in conformity with the guidelines issued by the MoP vide notification dated 30<sup>th</sup> March, 2016 and the guidelines issued by the GERC vide notification dated 14<sup>th</sup> August, 2013 hence allowed the distribution licensees for the FY 2022-23 on estimation basis as a part of the ARR.



RERC directed JVVNL, AVVNL, and JdVNL to submit all relevant details regarding expenses incurred in the execution of smart metering above the current normative O&M expense, including the actual amount of payment made to Advanced Metering Infrastructure Service Provider, saving in various components of O&M cost and benefit derived from the implementation of smart metering under total expenditure mode along with the true up petition of the relevant year for consideration of the RERC.



APERC ordered that it is appropriate that the APSPDCL should pay the Khandaleru Power Company Ltd. a tariff of Rs.3.73/ kWh for the power supplied by it from Unit-II, for the period from March 2020 to October, 2021, on or before 31<sup>st</sup> December, 2022. If payment is not made within the time as stipulated above, the amount shall carry interest at 12% per annum from 1<sup>st</sup> January, 2023 till payment is made.



JERC has ordered that JKPCL shall not charge trading margin exceeding Rs. 0.02/ kWh on the electricity trade, including all charges, except the charges for scheduling energy and open access. The trade margin specified herein shall be applicable to all short-term/ long-term, buy/ sell contracts for the intra-UT trading in electricity undertaken by JKPCL in UT of J&K and UT of Ladakh. JERC also directs the JKPCL to submit its business plan along with the power procurement details with MYT petition to be filled by the distribution licensees namely JPDCL and KPDCL, in coordination with the distribution licensee, as per the timeline given in the MYT Regulations.



JSERC has approved Tata Steel Utilities and Infrastructure Services Limited to purchase of power from DVC at two interconnection points i.e., 70 MVA at 132 kV Manuiki, Chandil and 26 MVA at 33 kV Jamshedpur.



BERC has given liberty to Bihar State Power (Holding) Company Ltd. to file the proposal of exiting from the Bulk Power Supply Agreements of FSTPS Stage-I & II and KSTPS Stage- I on the completion of the period of 25 years, at the appropriate time with an objective to optimize power purchase cost considering the various parameters i.e., availability from existing and upcoming PPA's, considering Merit Order Despatch (MOD) principle, power consumption profile of consumers, etc.



MPERC observed that the tariff of each unit of Phase-I of the Omkareshwar solar project has been discovered by the Rewa Ultra Mega Solar Ltd. through a transparent process of competitive bidding in accordance with Guidelines issued by Ministry of Power, Government of India under Section 63 of the Electricity Act, 2003. Therefore, the MPERC hereby adopts the tariff of Rs. 3.22/ kWh, Rs. 3.21/ kWh, and Rs. 3.26/ kWh for allotted capacity of 88 MW, 100 MW, and 90 MW for unit D, E and F respectively in terms of Section 63 of the Electricity Act, 2003 for long term procurement of power from floating solar power project Phase-I at Omkareshwar reservoir by procurer MPPMCL.



MERC adopts Short Term Power Procurement by KRC DISCOMs for 8 MW RTC for the period from 1<sup>st</sup> Nov., 2022 to 31<sup>st</sup> Oct., 2023. Peak power of 4 MW for the period from 1<sup>st</sup> Nov., 2022 to 28<sup>th</sup> Feb., 2023.

MERC grants its prior approval to Adani Electricity Mumbai Ltd.- Distribution (AEML-D) for cost increase possibility during FY 2022-23. MERC, also approved ceiling rate of Rs. 6/ kWh for short term power procurement during FY 2022-23. Any tariff adopted below the ceiling shall be considered as deemed adopted as per competitive bidding guidelines provisions for short-term power procurement notified by the CG.

MERC has partly allowed the case under which Kreate Energy India Pvt. Ltd. have to pay Rs. 1.96 Cr. to Petitioners within 15 days from the date of Order as compensation for increased power purchase expenses on account of illegal diversion of contracted power to 3rd party.

## Regulatory Updates

### Renewable Energy, RPO and REC

UPERC observed that RE certificates issued by the Exchange have been submitted by the Shree Cement Ltd. UPERC directs the Shree Cement Ltd. to approach the exchange and submit the uniquely identifiable REC number for each of the REC that has been purchased so that the purchase of REC can be mapped and confirmed.

JERC has adopted the tariff of Rs. 4.65/ kWh for Solar Power Project to be set up under Component-A of the PM-KUSUM scheme in UT of Jammu and Kashmir, JERC also accords its approval for procurement of power generated from 13.4 MW capacity solar PV projects, to be set up under Component-A of the PM-KUSUM scheme by the distribution licensees on a long term basis for a period of 25 years.

GERC admitted the petition and directed PGVCL, to abide by the terms of the Tripartite Wheeling Agreement. GERC has also provided credit to Varmora Granito in terms of the Tripartite Wheeling Agreement dated 22<sup>nd</sup> October, 2018 for the Solar Energy generated and scheduled by Herald Infratech from its Solar Power Project w.e.f 01<sup>st</sup> July, 2020

MERC ordered MSEDCL to make the payment of Late Payment Surcharge (LPS) from 15<sup>th</sup> March 2017 to March, 2020 to Transportation Corporation of India within a month from the date of this order. In case the amount is not paid by MSEDCL within the time period, penal interest will accrue at 1.25% per month on any outstanding LPS.

MERC has extended the Scheduled Commercial Operation Date of 150 MW Solar Project of Juniper Green Field Pvt. Ltd. by 2 months i.e. upto 1<sup>st</sup> August, 2022. MSEDCL can raise a claim of Liquidated Damages as per the PPA provisions in case of delay in commissioning beyond the date of 1<sup>st</sup> August, 2022 for a balance capacity of 70 MW.

MERC has partly allowed Adani Electricity Mumbai Ltd.-Distribution (AEML-D) to distribute a quantum of 1000 MW (500 MW + 500 MW under green shoe option) for long-term procurement. After the tariff discovery pursuant to competitive bidding, AEML-D shall seek prior approval of the MERC before exercising the green shoe option under the proposed procurement. The continuation of PPA with Dahanu Thermal Power Station shall not be continued. AEML-D will have to approach the MERC separately for approval of its plans for future power procurement. Deviation sought by AEML-D based on "Evaluation of Bid with respect to the Escalation Factors" is rejected while deviation based on "Term of Power Purchase Agreement" is accepted.

Renewable power procured by AEML-D shall be counted towards its RPO.

AEML-D shall thus submit modified Bidding documents to the Office of the MERC for information and shall also initiate the bidding process for 1000 MW power procurement on RTC basis from grid-connected Renewable Energy Power Projects, supported by non-renewable energy sources.

MERC approves Brihanmumbai Electric Supply and Transport Undertaking's (BEST) proposal for power procurement of 234 MW solar power from SECI at a tariff of Rs. 2.54/ kWh discovered through competitive bidding plus its trading margin of Rs. 0.07/ kWh for 25 years and additional risk premium of Rs. 0.1/ kWh. The procured power shall be considered for meeting the Solar Renewable Purchase Obligation targets of BEST.

MERC gives its approval to the bidding documents for long-term procurement (25 years) of 225 MW capacity from grid-connected Wind-Solar Hybrid Power Projects through competitive bidding process.

MERC approved the long-term procurement of 132.75 MW of power from the solar generator. Power purchased from these plants will be counted towards the fulfilment of MSEDCL Solar RPO.

### Others

PSERC allowed the addition of cost of biomass pellets along with Coal and oil to add to the total fuel cost of PSPCL Thermal Generating Units (GGSSTP Ropar & GHTP, Lehra Mohabbat) for ARR, FCA and other purposes. MOD shall be calculated without considering the impact of Biomass Pellets. The final for pass-through will be calculated based on actual accurate data on pellets cost and other factors. PSPCL shall also submit the data for energy quantification produced from biomass in biomass co-firing for verification/ inspection by PEDAs for qualification of same as PSPCL's RPO compliance.

BERC allowed an additional ARR of Rs. 451.78 Cr. in the review for true up of FY 2020-21 on account of the treatment of AT&C loss subsidy of Rs. 1266 Cr. received from the State Govt. to meet financial loss due to higher AT&C loss beyond the trajectory fixed the BERC with applicable carrying cost. BERC allowed an additional ARR of Rs. 812.60 Cr. in the review for true-up of FY 2020-21 on account of the treatment of AT&C loss subsidy of Rs. 1266 Cr. received from the State Govt. to meet financial loss due to higher AT&C loss beyond the trajectory fixed the BERC with applicable carrying cost.

## Tariff Orders

State/Union Territory (SERC)	Licensee/Utility	True-up	Annual Performance Review (APR)	Aggregate Revenue Requirement (ARR)	Tariff
Rajasthan (RERC)	RRVUNL	FY 2018-19 to 2020-21			
Andaman & Nicobar (JERC)	EDA&N		FY 2021-22	FY 2022-23 to FY 2024-25	FY 2022-23
Goa & UTs (JERC)	EWEDC	FY 2020-21	FY 2020-21	FY 2022-23 to FY 2024-25	FY 2022-23
Jharkhand (JSERC)	IPL, TSUISL	FY 2019-20	FY 2020-21		
(JSERC) Jharkhand	TSL, TPCL	FY 2019-20	FY 2020-21		FY 2021-22
Manipur & Mizoram (JERC)	MSPCL, Power & Electricity Department Government Of Mizoram	FY 2018-2019 to FY 2022-2023		2022-23	
Jammu & Kashmir (JERC)	JPDCL, KPDCCL	FY 2019-20	FY 2020-21 and FY-2021-22	FY 2022-23	FY 2022-23
Ladakh (JERC)	Ladakh Power Development Department, JKSPDCL	FY-2019-20 and FY-2020-21	FY-2020-21	FY-2022-23	FY-2022-23
Jammu & Kashmir (JERC)	JKSPDCL	FY-2017-18, FY-2018-19, FY-2019-20 and FY-2020-21		FY-2021-22 to FY-2025-26	FY-2022-23
Madhya Pradesh (MPERC)	Central DISCOM, East			FY-2022-23 to FY 2026-27	

## Regulations

Title	Date of Approval/Notification
JERC Manipur & Mizoram (Electricity Supply Code) (Seventeenth Amendment) Regulation, 2022	19 <sup>th</sup> October, 2022
JERC Manipur & Mizoram (Renewable Purchase Obligation and its Compliance) (First Amendment) Regulations, 2022	26 <sup>th</sup> October, 2022
PSERC (Electricity Supply Code and Related Matters) (Eleventh Amendment), 2022	9 <sup>th</sup> November, 2022
PSERC (Terms and Conditions for Determination of Generation, Transmission, Wheeling and Retail Supply Tariff) Regulations, 2022	27 <sup>th</sup> October, 2022
PSERC (Harnessing of Captive Power Generation) Regulations, 2022	27 <sup>th</sup> October, 2022



*\*Disclaimer: The information provided herein is extracted/reproduced from Order/Regulation/Document etc, of the respective Commissions. This is for information purpose only and does not in any matter reflect opinion or analysis thereon.*

## Regulatory Certification Program



CER in association with EAL, is pleased to announce the 3<sup>rd</sup> **Regulatory Certification Program on "Power Sector Regulation: Theory and Practice"** commencing from 19<sup>th</sup> February to 5<sup>th</sup> March, 2023. The program would help to understand and analyse the key issues in the power sector from economic, legal and regulatory prospective. **The last date for registration is 15<sup>th</sup> February, 2023.** For further program details including duration, key topics, schedule, registration process and fee, please visit [https://cer.iitk.ac.in/psr\\_reg/?id=1](https://cer.iitk.ac.in/psr_reg/?id=1).

## eMasters on "Power Sector Regulation, Economics and Management"



The classes for Cohort II of **eMasters Degree Program on "Power Sector Regulation, Economics and Management"** will commence in January, 2023. It is a multidisciplinary online program, approved by Senate, IIT Kanpur. It focuses on developing insights into the development of electricity markets in India and discussing the challenges and way ahead. The program content explains the Regulatory process considering the applicable engineering, economics, legal and environmental viewpoints. Apart from faculty from relevant departments of IIT Kanpur, the sessions for the program would be contributed by leading national and international experts. The program is delivered in **online** mode, with recorded and live interactive sessions, to offer flexibility to working professionals. The target includes Electricity Regulatory Commissions, Generating Companies, Licensees (Transmission, Distribution, and Trading), Financial Institutions, Consultants, Equipment Manufacturer and Academic Institutions. The Regulatory Capstone Projects will help the students to apply the concepts and devise solutions for real-life challenges. <https://emasters.iitk.ac.in/powersector>.

We invite readers to register at CER's web portal to access CER's publications and resource material. This would also help us design CER's activities and deliver a more relevant output by engaging with stakeholders. We also request your inputs on the newsletter and the activities of the Centre.

*Regulatory Insights Team*

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### Other Initiatives



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