



REGULATORY INSIGHTS



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Editorial

The Indian power sector has witnessed significant development in rural electricity access, growth of renewables as well as development of various market segments, since the enactment of the Electricity Act 2003. The experience with developing and implementing regulatory framework, particularly those related to multi-year ARR and tariff framework, enables to explore the evolutionary process for the regulatory philosophy sector. Furthermore, the objective to enhance competition across the electricity supply chain necessitates a change in the National Electricity Policy that was last spelled-out in 2005.

CER's analysis of the draft National Electricity Policy 2021 identifies a number of issues for consideration and provides suggestions for addressing the same. Some of the key inputs of CER include - emphasis on governance reform for the government-owned distribution utilities, enhancing the scope from RE development to clean energy transition for the sector, adoption of light-handed regulation with a gradual shift towards Performance-Based Regulation/Incentive Regulation, addressing curtailment particularly through introduction of market-based hedging instruments for RE, adoption of single RPO basket, separation of SLDC from STU, creation of Distribution System Operator (DSO), flexibility and market for ancillary services, a mechanism for evaluating the implementation of smart meters including prepaid meters, data access and transparency, and need for capacity building in the sector.

Renewable Energy Certificates (RECs) retain their relevance even with the emergence of a variety of options for sale of renewable energy in the country. CER is of the opinion that the role of RECs should be extended to use it under a unified framework for 'Guarantee of Origin' for all the renewable energy generated in the country. Adoption of technology-specific REC multipliers and integrating the ESCerts market under the PAT mechanism would significantly enhance the liquidity and competition in the REC market. Furthermore, the introduction of RECs-based derivatives and its secondary trading would also enhance interest in this market segment.

The draft Electricity (Rights of Consumers) (Amendment) Rules, 2021 aims to empower the consumers, particularly those with behind the meter RE generating resources. To encourage demand-side management and effective utilisation of behind the meter RE generation/storage resources, it is suggested that time of day tariff be implemented for all consumers above 5 kW load of sanctioned load. Investment in feeder separation for more effective integration of solarised agriculture pump-sets evaluated on the basis of the overall economic benefits would bring further distribution to the utility as well as the consumers.

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



UK Government

MoP: National Electricity Policy, 2021 [Draft]

The Ministry of Power notified the draft National Electricity Policy (NEP), 2021 on 27th April, 2021. The aims of the policy are:

- ❖ Promotion of clean and sustainable generation of electricity
- ❖ Development of an adequate and efficient transmission system
- ❖ Revitalization of DISCOMs
- ❖ Development of efficient markets for electricity
- ❖ Supply of reliable and quality power of specified standards in an efficient manner
- ❖ To move towards light-touch regulation

CER Opinion

CER National Electricity Policy and Plan: The Central Government shall, from time to time, prepare the NEP and tariff policy, in consultation with the State Governments and the authority for the development of the power system based on optimal utilisation of resources such as coal, natural gas, nuclear substances or materials, hydro and Renewable Sources of Energy (RES). (Section 3)

CER Financial Turnaround of DISCOMs and DISCOM Level Governance Reform: The historical experience with various central sector schemes has demonstrated limited and short-lived impact of such reform-linked programs that often have limited inputs from the entities (distribution licensees) who are to implement the same. A 'single-design-fit-all' approach needs to be replaced with a menu of alternate set of reform-linked programs that allow the target entities to pick the one most suitable (and hence, automatically revealing their preferences, thus providing further inputs for policy design). Further, the program design process should include broad-based consultation with stakeholders including think tanks. Till today, power sector reform has focused on sector-level governance and has not been able to significantly influence the utility-level governance structure, which continues to hinder the turnaround of the sector.

CER Visibility of Performance of 'non-licensees' (Franchisees etc.) in the Distribution: While *Section 13* of the Electricity Act, 2003 exempts license requirement for “local authority, panchayat institution, users' association, co-operative societies, non-governmental organisations, or franchisees”, this is construed to mean an absence of visibility of their performance. In order to evaluate the success of such alternate models, there is a need for greater access to information about their performance. While this may not entail direct regulatory purview, this would serve as an effective performance benchmark for the regulated licensees, and also provide guidance to the licensees in the selection of franchisees. NEP should propose a broad framework for data submission by such entities and its evaluation by the SERCs.

CER Clean Energy Transition: Increasing share of RE, adoption of cleaner fuels, improvement in the efficiency of existing generation assets, and retirement of old, inefficient and polluting plants beyond their existing PPA should be an integral part of the clean energy transition to be included in NEP. (Clause 5.6)

The current focus should be on de-carbonisation rather than de-coaling the sector completely. Improvement of the flexibility of existing coal-based generation may support even higher RE share in the future.

CER Light-handed (touch) regulation: Greater competition and Performance-Based Regulation (PBR) would enable *light-handed (touch) regulation*. Mandate competitive procurement in generation and transmission, and graduated approach in distribution.

Light-handed (touch) regulation is applicable in the context of a sector achieving maturity in competition with regulatory oversight. Given the current regulatory dispensation in the sector, competitive segments are subject to light-handed regulation. (Clause 2.0 (vi))

If the objective of the policy is to reduce the regulatory process burden for the determination of tariff, this can be implemented by graduating from Normative Cost of Service (nCoS) regulation to adopting PBR.

In the light of the above, (the objective of) “Development of adequate and efficient transmission system” may be

modified as 'Development of adequate and efficient transmission system at a reasonable cost through competitive bidding'. (Clause 2.0 (ii))

CER An ABC Approach to Make in India initiative and Aatmanirbhar Bharat: “Promotion of manufacturing of goods and services in India in the Generation, Transmission, and Distribution segments of the Power sector under the Make in India initiative and Aatmanirbhar Bharat” are economically justified policy options. This should also be linked to the provisions of the Electricity Act, 2003. To avoid disruption in investment and operation in the sector, a graded approach should be adopted for the implementation of these policy options. An ABC analysis can be used to help identify items based on existing domestic capability, scale economics, relative economics of domestic and international manufacturing, technology requirement, scale of investment required, etc. Three (or more) baskets of identified goods and services can be identified for promoting domestic manufacturing and procurement over varying time horizons.

A - Very short term (say 6 months)

B - Short-term (1-2 years)

C - Medium-term (3-5 years)

However, it should be ensured that the policy does not lead to market concentration influencing the availability and price of such goods and services. Further, this should also allow for continuity of supply and services for existing contracts. The Ministry can issue a separate notification for the same. (Clause 2.0 (vii)) and (Clause 4.1 (xiv))

CER Review of Electric Power Survey and NEP: The National Electricity Plan, to be prepared by CEA, has been delayed for a significant time. A regular release of the NEP is desirable to ensure that there is a general guideline available about the approach to planning in the sector. The regularity of the Plan needs to be ensured in line with that of the Electric Power Survey. An alternate approach would be, to develop a platform that allows necessary changes to be incorporated in the Plan as subsequent reviews till a comprehensive revision of the same is undertaken. (Clause 3.2)

CER Demand Side Management (DSM) may also be explicitly included in Clause 4.1 (ix) as one of the areas covered under the policy.

CER Differential Generation Tariffs for peak and off-peak hours: Time-differentiated consumer tariffs provide a relevant price signals to the consumers of electricity. However, a similar approach for generation tariff is not desirable and would be complex to implement. Existing beneficiaries of PPAs bear the associated fixed charges and hence, have a claim over the available generation capacity across the day. Separate determination (u/s 62) of differential tariffs for peak and off-peak hours for such generating stations would not be economically justified. (Clause 5.3)

CER Wider Applicability of ToD Tariff across Consumer Categories: Mandate ToD tariff for all consumers above 10 kW across consumer categories, to be gradually applicable to all consumers above 5 kW. All EV Charging to be based on ToD tariff to ensure that there is sufficient visibility of this new load to assist load forecasting and planning for the distribution network.

CER Determination of adequate primary, secondary and tertiary reserves at national, regional and state level, to be undertaken by CEA should be based on long-term techno-economic feasibility to meet the projected demand under growing RE share and be undertaken in consultation with key stakeholders including the Load Despatch Centres. (Clause 5.4)

CER Competition in Generation and Transmission: NEP should emphasize the role of competition in power procurement (including power plants to be set up in the state sector) as well as setting up of transmission assets (inter- as well as intra-state) in the country. A UMPP approach, whereby land procurement and necessary clearances have been obtained, would help significantly reduce the investor risk and lead to more competitive price discovery. This would address the growing concern for rising transmission tariff. In the case of asset specificity, particularly in the case of Large Hydropower projects, the “Swiss Challenge” approach may be adopted. This would ensure competitive pressure (due to credible threat) to a tariff determination petition. (Clause 5.20, 6.8)

CER RE Curtailment: Curtailment of RE power is undertaken both for operational (system) as well as commercial reasons. The regulatory framework should mandate the system operator to maintain a record of all instances of RE

curtailment along with system parameters enabling its analysis to identify reasons attributable to system constraints. Availability of such detailed data in the public domain would allow its analysis and make the process subject to regulatory scrutiny.

RE electricity generation (wind and solar) primarily have a fixed cost (single part) structure. Artificial segregation of the single-part tariff into two-parts (fixed and variable) would depend on the debatable choice of CUF leading to regulatory burden. Furthermore, given the 'must run' status of RE plants, a two-part tariff would not be recommended. (Clause 5.21)

Separation of SLDCs from the State Transmission Utility (STU) and linking its RoE to curtailment of scheduled RE within a reasonable range would help address curtailment concerns.

CER Derivatives for Risk Hedging for RE: Introduction of derivatives for RE would allow investors to hedge risk arising out of uncertainty in generation as well as in curtailment. Curtailment-related RE derivatives can also be used to ensure that part of the risk of curtailment be passed on to the DISCOMs who have signed PPAs for such RE procurement. Such an approach to risk-sharing/hedging should become an integral part of the RE PPAs in the future.

CER Separation of SLDC from STU: Separation of system operation from the state transmission utility, and further separation of STU function from the intra-state transmission licensee would reduce conflict of interest, and also improve the climate for open access and competition in the sector. Independence of SLDC would also help address anomalies in the implementation of merit order despatch and RE curtailment due to non-technical reasons.

CER Incentives for heat recovery systems should be provided under the available mechanism for energy efficiency through the Perform Achieve and Trade (PAT) scheme under the Energy Conservation Act, 2001. This could be supported through an Energy Service Company. (Clause 5.22)

CER Single RPO Basket for Better Economics of Compliance: Given that the relative cost of alternate RE sources has converged significantly, it would be economically efficient to specify a single RPO basket. Depending on local resource endowments and economics of access to RE from elsewhere in the country, economically efficient technology choices would be made to ensure overall RPO compliance, which would effectively displace the equivalent amount of non-RE power.

Apart from economics, a single RPO basket would also provide flexibility in choosing an appropriate mix of alternate RES that considers the availability of balancing power and other system constraints.

CER Rejuvenating the REC Market: The Renewable Energy Certificates (REC) market can be rejuvenated by enhancing its scope by issuing REC to all RE generation (including that from non-REC plants) and using RECs to identify the source of origin. The RECs acquired through PPAs as well as the REC market can then be submitted as proof of compliance with the respective SERCs. This would enhance liquidity in the REC market as well. (Clause 5.24)

Further, there are also economic benefits from merging the market for ESCerts under the PAT scheme with the REC market.

CER Technical, Financial, and Institutional Sustainability of Mini/Micro-grids: Electricity Access through micro-grids is not an end to itself but an intermediate solution with an aim to provide 24x7 reliable and quality power to consumers in rural as well as remote areas. Operational, financial, and institutional sustainability of micro-grids needs to be ensured by harnessing their role in a grid integrated environment. (Clause 5.27)

CER Solarisation of Agriculture Pumps: Solarisation of agricultural load is an important option for the DISCOMs to reduce cross-subsidy burden and address system losses. Given the experience with the development of mini-grids and concerns for their sustainability, policy and regulatory framework for solarised agricultural load should ensure technical, financial as well as institutional sustainability. To fully utilize the potential of the grid-connected solarised agricultural pumps to feed electricity to the grid, such feeders would require to be charged (especially during day hours). This, along with the growing availability of electricity across most states, may require a reassessment of the overall economic benefits of feeder separation. (Clause 7.6)

CER Sub-licensee and Carriage and Content Separation: Given the existing legal framework under the Electricity Act 2003, the SERCs would not have a legal basis to implement these proposals in the distribution segment. Further, in the absence of clarity on the rights and obligations of the sub-licensee, there would not be a clarity with respect to regulatory purview for the same, particularly those differentiating it from the distribution licensee and

the franchisee. A graduated approach to implement 'Carriage and Content Separation' should begin with its implementation under a 'policy and regulatory sandbox' approach in a few identified areas that meet its prerequisite especially with respect to metering.

The proposal under the draft NEP, being subordinate to the Principal Legislation, suggesting the need for an Amendment of the Act itself needs a suitable legal support; else, it provides little basis for adoption by the SERCs. (Clause 7.7)

CER Recovery of all 'Reasonable and Legitimate' Costs: By design, the normative cost of service regulation and performance-based regulation does not provide for recovery of all 'reasonable and legitimate costs'. An appropriate amendment to Clause 7.8 is thus required to support regulatory evolution in the sector. Further, a number of investments (including that for improving quality of supply) can be and are being undertaken through the OPEX model, hence should be incorporated herein. (Clause 7.8)

CER Distribution System Operator: Distribution System Operator (DSO) would play an important role in supporting the growth of RE, improvement in operational performance of the sector, and emergence of competition in the retail segment. To enable active DSM and load forecasting, there is a need to improve the visibility of behind the meter generation and consumption. The significant growth in rooftop solar, particularly that behind the meter and at the consumer devices, would continue to pose challenges in identifying and forecasting short-term electricity demand, plan for distribution and transmission network, strengthening and extension, and make adequate investment in generation capacity. DSOs would also play a key role in the emergence of peer-to-peer market in the near future.

The evolution of a DSO should not be dependent on the adoption of separation of carriage and content but, would enable its introduction later. (Clause 7.9)

CER Monthly data on feeder-wise energy accounting as well as reliability indices should be available in the public domain to enhance the accountability of the DISCOMs. The distribution network planning should also take into account the proposed rollout of smart grid and deployment of solar rooftops and/or storage by the consumers. (Clause 7.13)

CER Distribution Plan: The National Electricity Plan, prepared by CEA, generally places emphasis on generation and transmission planning while taking into account certain aspects of the distribution segment. Given that the CEA was able to publish the National Electricity Plan for generation and transmission in 2018 and 2019 respectively, it may be a challenging task for the CEA to engage with all the DISCOMs in helping to prepare the distribution plan. Alternatively, CEA, in consultation with stakeholders, may develop a framework document to enable DISCOMs to prepare their respective distribution plans, which would then be approved by the respective SERC. (Clause 7.13)

CER Optimising Long-term as well as Short-term Power Procurement: Long-term demand forecasting and power procurement planning studies undertaken by the Energy Analytics Lab (EAL) at IIT Kanpur has demonstrated that significant cost reduction can be achieved through periodical optimisation considering medium to long-term projected demand profile against existing PPAs and available options for power procurement (including that through the short-term market) and flexibility of available resources to meet the ramping requirement of a power system with higher VRE share. Thus, the need for long-term as well as short-term options should be periodically reviewed to avoid significant fixed cost burden to the utilities, and to the consumers. (Clause 7.14)

Given the growing role of the competitive market and the emergence of rooftop solar, solarised agriculture, and demand response, the distribution licensees should not be expected to 'tie-up' adequate long-term capacity as they can better optimise their power procurement portfolio by partly engaging in the short-term market. DISCOMs should engage in active portfolio management using available short-term options while minimising risk for availability and cost of electricity. (Clause 7.15)

CER National Metering Road Map: A time-bound, consistent, and cost-effective metering plan, in the form of a National Metering Road Map, should be designed in consultation with the stakeholders and deployed through the assistance of the central government. This should also ensure that existing investment in the meters should not unduly lose its economic value thus burdening the consumers. Further, adequacy of the required digital ecosystem and trained manpower should be ensured through such a program.

To ensure that there is sufficient political support for 100% metering of the consumers, the subsidy provided by the

respective State government should be tied up with the aggressive plan for 100% metering of the consumers. Central government assistance package to a distribution licensee should compulsorily include a sub-package of dedicated funding for consumers' metering. Overall funding should be linked to the achievement of metering targets. (Clause 7.16)

CER Pre-paid Metering: Pre-paid metering is generally adopted in the case of consumers with bad credit history, or vulnerable consumers who would like to limit their energy expenses. Deployment of pre-paid metering should be made available as a choice to the rest of the consumers. For a certain class of vulnerable consumers' first tranche of 'pre-payment' (in full) through a DBT mechanism (to the licensee) would make the consumer indifferent to the cycle of payments to follow.

A comprehensive replacement of all the existing meters with pre-paid metering may result in significant loss of economic value (in the form of unrecovered depreciation) and hence, would require an appropriate cost-benefit analysis. It is important to highlight that prepaid metering is not a natural choice of the private DISCOMs, and also does not find universal application in the international context. (Clause 7.17)

CER Smart Meters and Demand Response Program: Deployment of smart meters would make it much easier to implement a demand response program, if there are adequate regulatory provisions enabling the distribution companies to offer appropriate financial incentives for consumers' participation, either directly or through an aggregator. A credible demand response also enhances competition in the sector. Further, investment in smart meters would have limited economic value unless there are appropriate regulatory initiatives to capitalise on the capability of smart meters. (Clause 7.18)

CER Flexibility and Market for Ancillary Services: Increasingly higher penetration of Variable Renewable Energy (VRE) places additional challenges on the system operator and also demands flexibility from various constituents of the power system. Economic signals to enhance the flexibility of conventional generation should come from the introduction of a market for 'fast response ancillary services'. This would ensure that appropriate technology choice is made on the merits of its economic benefits to bring about desired technical characteristics. The market signal would provide adequate incentive for such investment and also encourage better forecasting for short-term demand as well as generation from VRE sources. (Clause 8.2)

CER Data Transparency and Data Access: Unavailability of system-level information, particularly at the state level, makes it challenging to develop analytical tools that can help optimisation of available resources. This also encourages academic research based on system data in the Indian context rather than that based on available system information for other countries/regions.

CER Incentivise Feeder Level Performance Improvement: Monthly data on feeder-wise energy accounting as well as reliability indices should be available in the public domain to enhance the accountability of the DISCOMs. Monthly publishing of such information in the descending order of their AT&C/Distribution losses along with the name of the concerning officers, can have a significant impact on operational performance. An incentive structure can be designed to ensure that the associated officials get due recognition and economic benefits of better performance.

CER Adequate transparency of network's transfer capability both for the inter-state as well as intra-state transmission network should be available in the public domain to ensure that grant of open access, particularly for intra-state transmission network, is not unfairly denied. (Clause 8.3)

CER Visibility of Behind the Meter Generation and Consumption: Increasing capacity for behind the meter electricity generation reduces the visibility of such capacity and its generation profile, which will become an increasing challenge to reliably forecast short-term electricity demand for the utilities as well as the system operators. Rooftop solar capacity beyond a certain limit (say, 20 kWp) should be enabled for remote access of the real-time generation consumption and storage data. For a small capacity rooftop solar generation, such capabilities should be implemented on a sample of facilities, which should be invested by the respective DISCOMs/SLDCs. (Clause 8.5)

CER Improve Information Access to DEEP Platform: The DEEP platform remains a black box for most of the market participants, thus reducing the overall efficiency of the market. Easy access to information about the contracts available and their economics through the DEEP portal, and the discovered prices and cleared volume thereof would provide sufficient market signals for other market segments. Even while private participants may

not have access to the DEEP portal, the bridging of information asymmetry would enhance the competition in the short-term power market as well. Furthermore, it also limits the ability of the developed optimisation tools to assimilate this information in their decision-making on a real-time basis. (Clause 9.3)

CER Data Sharing Policy: The development of analytic tools and academic research depend significantly on the availability of relevant data. The power sector generates a significant amount of data throughout its supply chain. Energy Analytics Lab (EAL) at IIT Kanpur has taken the initiative to compile the available data and make it accessible in visualised form through its portal (eal.iitk.ac.in). Unavailability of information, particularly at the state level, makes it challenging to develop analytical tools that can help significant optimisation of available resources (the key objective of NEP u/s 3 of the Act). Given its experience, EAL, IIT Kanpur would be willing to pool resources to further assist in this endeavor.

CER's Regulatory Database: The Centre for Energy Regulation (CER), IIT Kanpur is developing a Regulatory Database that would assist performance benchmarking and further evolution of the regulatory framework in the sector. While most of this data is available in the public domain, significant disparity in data definitions across time and space makes this a very challenging task. A common data format framework should address such anomalies and also enhance its access.

CER Energy security and clean energy an integral part of all major investment decisions. To ensure that the country is able to achieve reduction in emission intensity as per its international obligations and also go beyond that, all relevant investment proposals and decisions across the sector (beyond an identified limit) should also assess the contribution of such investment towards achieving this target (in line with the environmental impact assessment undertaken for large projects. The aim to reduce energy intensity, thus, also becomes an integral part of the decision-making in the sector in the long run and ensures smooth clean energy transition. (Clause 14.0)

CER Capacity Building Needs of the Power Sector: Centre for Energy Regulation (CER), IIT Kanpur has been actively engaged in addressing capacity building needs of the sector particularly that covering aspects related to regulation, power market as well as renewable energy integration. We note that needs for capacity building are widely understood and addressed in the regulatory system; however, the regulatory entities particularly at the state-level have limited participation in such endeavors. This limits the ability of such entities in engaging fruitfully in the regulatory processes at the state as well as central level. A broad-based policy, incentivising such continuous engagement, would help understand and assimilate various reform-linked programs and contributing more effectively to discussions thereof.

MoP: Redesigning the Renewable Energy Certificate (REC) Mechanism [Discussion Paper]

The Ministry of Power issued a discussion paper on “Redesigning the Renewable Energy Certificate (REC) Mechanism” on 07th June, 2021. Some of the important insights are given below:

Key objectives:

- To increase the share of non-fossil fuel-based electricity energy to meet the international target of 175 GW by 2022
- To maintain the future energy security by promoting the new RE technologies such as offshore wind, Hydrogen, Pumped storage hydro plants, etc.

Proposal for the redesign of REC Mechanism:

- ❖ **Validity period of RECs and Floor & Forbearance Price:**
 - The REC validity period may be removed *i.e.* perpetual validity till it is sold
 - The floor and forbearance prices are not required to be specified as RECs holders would have the complete freedom to decide the timings to sell
 - CERC may intervene in cases of malpractices observed in the REC trading
- ❖ **Period for which the RECs are to be issued to RE generators:** Eligible RE generators will be eligible for issuance of RECs for 15 years from the date of commissioning of the projects and 25 years for the existing RE project
- ❖ **Promotion of new and high-cost technologies in RE and the provision of multiplier for issuance of RECs**
 - The concept of the multiplier, negative list, and sunset clause can be introduced for various technologies

depending upon their maturity level

- For new RE projects that need to be promoted will be provided at least 15 years of policy visibility to attract investments and promotion
- ❖ Incentivising obligated entities for procurement of RE power beyond RPO
 - Option 1: Only DISCOMs to be issued RECs for quantum beyond RPO compliance (additional benefit of REC need not be given to Open Access (OA) and Captive Power Plant (CPP) consumers)
 - Option 2: RECs can be issued to the obligated entities that purchase RE Power beyond their RPO compliance. This would facilitate and promote the REC market
 - No REC to be issued to the beneficiary of the concessional charges or waiver of any other charges

CER Opinion

CER Floor and Forbearance prices: In its earlier comments to CERC, the relevance (or rather irrelevance) of the floor and the forbearance price was highlighted. Given an efficient market, artificial and rather arbitrary fixation of floor price introduces distortions. *Singh (2010)* highlighted the anomaly in fixation of floor price and how it would give windfall gain to existing players under the regulated tariff contracts, *i.e.* Feed-in Tariff (FiT) contracts, to exit and sign another one under the REC framework. (Section 5.1)

With the RECs having a perpetual validity, the relevance of floor price is further diminished. Furthermore, compliance penalty for RPO shortfall (as applicable in respective states, if any) indirectly translates into a forbearance price (See *Singh (2010)* for further discussion on the same).

CER REC as Unified Framework for “Guarantee of Origin”: The REC framework should be expanded as a unified framework for “Guarantee of Origin”. Non-REC projects do not have a guarantee of origin certification at present. This currently serves the purpose as the system operator and the distribution utility can identify the energy injected through the metering infrastructure. However, there is such certification to allow this 'green energy' to be identified and traded further in the market. By issuing RECs to all RE projects (including those under FiT framework, captive as well as merchant RE capacity) in the country would have the following advantages,

- Ensure full **visibility of RE energy footprint** across the country.
- Unified '**Guarantee of Origin**' certification across all RE technologies
- **Enable the obligated entities (DISCOMs) to offload, in the form of RECs, excess RE procurement beyond their RPO**, particularly which on account of contracts signed under the FiT framework.
- **Develop a retail market for 'green electricity'**, wherein distribution utilities can sell a 'green electricity product' to willing consumers.

CER Banking of RECs and Roll over of RPO Generators / Obligated Entities: With the perpetual extension of the period of validity of RECs, the need for allowing banking of RECs by the REC project developers themselves is obviated. However, the obligated entities (distribution licensees, and OA and CPP consumers), having over-achieved their RPO target (through procurement from projects under FiT framework), should get an option to offload the same. This can be achieved with greater flexibility if all RES-based electricity generation in the country is issued RECs to certify their origin. (Section 5.1)

CER Secondary Market for RECs: It is important to note that excess procurement of equivalent RECs can be avoided to some extent but cannot be overruled. A provision for the secondary market for RECs by allowing its open re-trading would provide additional liquidity and efficiency in the market with proper regulatory oversight. This would also generate interest of common investors as this would also facilitate more regular trading in RECs.

CER REC Derivatives: Introduction of the derivatives market for electricity is under discussion for some time. Derivatives for the REC market would open up risk mitigation strategy for the obligated entities as well as investors in REC based projects. In combination with the secondary market for RECs, REC based derivatives open up a new vista for further improving the efficiency of the REC market.

CER Issuance of RECs for 15/ 25 years: It is discussed in the paper that the RE generators will be eligible for RECs till

15 and 25 years for new projects and existing projects, respectively. This does not provide a level playing field for a REC-based projects in comparison to the projects under the FiT regime or those who can participate in GTAM/GDAM market till the end of PPA/project life, as applicable. (Section 5.2)

To address the anxiety of the investors in REC-based projects, a clarification about the eligibility of such projects to freely participate in the green market platform, beyond the 15-year REC issuance period as well.

CER Multiplier and Sunset clause: The application of multiplier and sunset clause would promote and provide upfront support to the new high-cost RE technology in its initial stages. This was one of the key suggestions ever since the discussion on introduction of the REC market began in India. The concept of multiplier and sunset clause should be appropriately applied in their respective context as discussed below. (Section 5.3)

The concept of the sunset clause is to be applied for a technology over a 'period of time'. This can be implemented by adopting a reducing REC multiplier for the identified technology. To ensure that the technology developers, suppliers, investors as well as financial institutions work towards reducing the overall capital and operation cost, the multiplier associated with the sunset clause should be predefined for a period of 5- 7 years. This may be subject to a mid-term review after a 3-4 years. This would provide better regulatory certainty for a technology.

The relative REC multiplier across technologies should be tuned to the relative cost differentiation across the technologies. A periodic adjustment should only be applied after considering the Levelised Cost of Electricity (LCOE) of RE electricity discovered primarily through a competitive basis, and also taking into account the ongoing technological developments, and international cost benchmarks for projects setup through competitive basis.

Setting up a proper trajectory for the multipliers would provide a cost benchmark targets for RE technology developers and investors. The figure below explains the two concepts. It should also be noted that the multipliers are to be linked to the identified base year and should be reduced over a period of time.

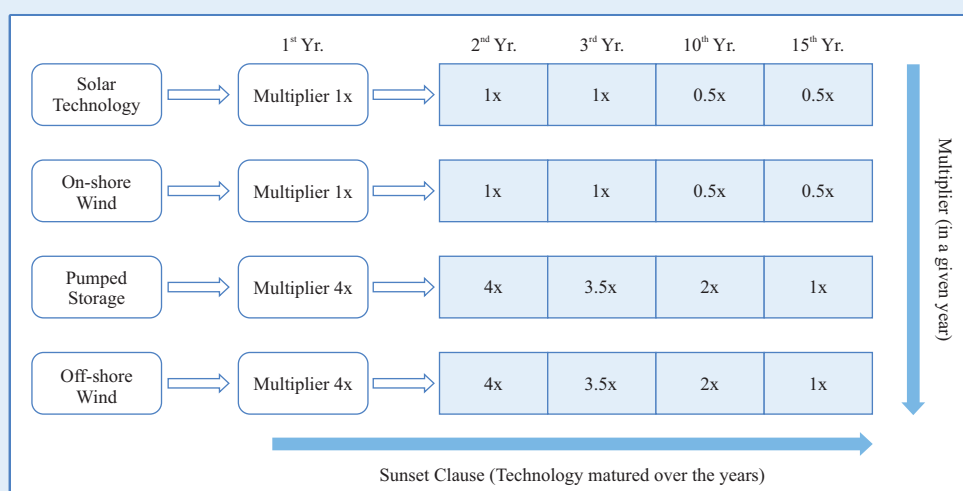


Figure: Multiplier & Sunset clause

Note: Further debate is required to differentiate the 'energy' and the 'storage' value of pumped storage based hydro plants. Therefore, if a new project starts at 3rd year, the multiplier should be 3.5x and not 4x as the particular may have gained some maturity over 3 years.

Given that REC based projects, particularly solar projects, would effectively face a negative REC price (as APPC >> LCOE of solar PV, as competitive price benchmark for solar have declined significantly below the APPC), the REC multiplier for solar should be pegged much lower in comparison to other technologies to promote the later.

CER Option 1: Only DISCOMs to be issued RECs for quantum beyond RPO compliance: RPO compliance would be established only after the completion of a (financial) year for all the obligated entities including DISCOMs. In such cases, the decision to allot REC for excess RE procurement on ex-post basis would be procedurally difficult as the quantum of such RE procurement would not be known. Furthermore, it would not be feasible to uniquely identify (non-REC) projects from which such REC would need to be allocated and apportioned. (Section 5.4)

In contrast, the above-mentioned suggestion for using RECs as a guarantee of origin would avoid all such concerns and make the process much simpler.

CER No REC to be issued to the beneficiary of the concessional charges or waiver of any other charges: The process to find out all the beneficiaries (RE generators) those may have been provided concessions of various sorts, *i.e.* waiver of transmission charges or preferential banking charges etc, would be a time-consuming and tedious task. This will raise the significant cost of administrating it also raises a number of legal disputes as the value of a number of concessions may vary across projects but all of which may be denied the REC benefit. (Section 5.5)

As per the current order issued by MoP, dated 21st June, 2021, the waiver of Inter-State Transmission System (ISTS) charges on the transmission of electricity generated from Solar and Wind sources is extended for projects to be commissioned up to 30th June, 2025. Implications of such policy and regulatory changes cannot be predicted beforehand and hence, raise the concerns for regulatory and policy uncertainty.

CER Merging the REC and ESCerts market under the PAT scheme: *Singh (2009)* proposed merger of an energy efficiency certificate scheme that may be launched in future (This was later launched under the PAT scheme) with the then suggested REC market. Given the common decarbonisation attribute of the REC and the ESCerts, merger of the later market in the former would provide numerous benefits for the both. This would not only enhance the overall cost effectiveness of cost of compliance by the obligated entities (for RPO as well as energy efficiency target under the respective framework) but also enhance the footprint of the RECs+ESCerts market, provide missing liquidity and efficiency to the ESCerts market.

Implementation of this suggestion would require adoption of a conversion multiplier (*i.e.* finding the number of REC equivalent for each ESCert), which can be determinate on the basis of the relative decarbonisation under the two schemes.

MoP: Electricity (Rights of Consumers) (Amendment) Rules, 2021 [Draft]

The Ministry of Power issued a draft amendment to the Electricity (Rights of Consumers) Rules, 2021 on 9th April, 2021. These rules may be called the Electricity (Rights of Consumers) (Amendment) Rules, 2021.

Key points of the proposed amendment Rules are:

- ❖ Definitions of “Gross-metering”, “Net-metering” and “Net-billing or net feed-in” may be added in sub-rule to the Rule 2 of the Electricity (Rights of Consumers) Rules, 2020
- ❖ The Commission may allow net metering to the prosumer for loads up to 500 kW or up to the sanctioned load, whichever is lower, and net-billing or net feed-in for other loads
- ❖ Prosumers are incentivised to install energy storage so that stored solar energy can be utilized by them or fed into the grid during peak hours

CER Opinion

CER Rule (2) of the Amendment Rules:

“Gross-metering:... the total solar energy generated from Grid Interactive Rooftop Solar PV system of a Prosumer and the total energy consumed by the Prosumer are accounted separately through appropriate metering arrangements.”

As per the definition specified in sub-rule (m) to Rule 2 of the Electricity (Rights of Consumers) Rules, 2020, “prosumer means a person who consumes electricity from the grid and can also inject electricity into the grid for distribution licensee, using the same point of supply”. It is not clear if 'appropriate metering arrangements' include more than one metering arrangement (required for gross metering cases) as it may conflict with the condition of 'using the same point of supply'.

CER Rule (3) of the Amendment Rules:

“... The Commission may allow net metering to the prosumer for loads up to five hundred kW or up to the sanctioned load, whichever is lower...”

A number of consumers, particularly large commercial and industrial consumers, have a 'contract demand' with the licensee instead of 'sanctioned load'. Unless both are construed to mean the same, the above sentence may be reconstructed as “... for loads up to five hundred kW or up to the sanctioned load or contract demand (as the case may be), whichever is lower...”

CER Time-of-Day Tariff:

“... Commissions may introduce time-of-the-day (ToD) tariffs whereby Prosumers are incentivised to install energy storage so that stored solar energy can be utilized by them or fed into the grid during peak hours ... ”

'Commissions' should be replaced with 'Appropriate Commission'.

ToD based tariff option should be available to all consumers above 5 kW and be mandatory for consumers above 10 kW. This would encourage consumers to install storage solutions and/or adopt demand side management options. On-site economical storage would also help long-term reduction in peak demand and hence, the Resource Adequacy to meet the same.

CER Feeder Separation and Solarised Agriculture Pump sets: To fully utilize the potential of grid connected solarised agricultural pumps to feed electricity to the grid, these feeders would be required to be charged (especially during day hours). Evaluation of an investment towards feeder segregation in future should consider this additional requirement.

HPERC (Security Deposit) (Fourth Amendment) Regulations, 2021 [Draft]

HPERC issued a draft fourth amendment of "HPERC (Security Deposit) Regulations, 2021" on 22nd April, 2021. The key highlights and the comparison made between the Regulations post 3rd amendment and 4th amendment (draft) are :

	Third Amendment	Fourth Amendment (Draft)
Factor for security deposit	$(n + 1.35)^*$	$(n + 1)^*$
Security deposit amount	amount equivalent to the average bill (excluding arrears but including late payment surcharge, if any) for $(n + 1.35)$ months based on the bills raised to the period of 12 billing months (April to March) of the immediately preceding year	(include net of arrears and subsidy) for $(n + 1)$ months based on the bills raised to the period of 12 billing months immediately preceding the date of such demand “the amount equivalent to the average monthly bill (net of arrears and subsidy, if any) for $(n + 1)$ months based on the bills raised to the period of 12 billing months immediately preceding the date of such demand”
Calculation of security deposit rates	Based on LDHF [#] formula	Based on the category-wise rates provided in sub-regulation (2) of regulation 5
Base for calculating security deposit rates	Average monthly bill of the previous year	Average monthly bill of the previous year
Mode of payment	Cash/Demand Draft (DD)	Cash/Demand Draft (DD)/Electronic mode
Increment in initial security deposit rates	Annually	5% (every 3 years)
Review period of additional security deposit	Annually	1 st day of quarter just before the quarter in which 6-month tenure ends
Additional security deposit	Shall not exceed 30% of the average monthly bills raised to the period of 12 billing months (April to March) of the immediately preceding year	Shall be payable in 3 equal quarterly instalments and 1 st such instalment shall be payable within 60 days from the date on which demand is raised
Adjustment of security deposit for permanent reduction	Amount recovered to be apportioned against the security deposit for balance load, as per rates for the FY 2020-21	Balance amount shall be apportioned on pro-rata basis against the security deposit for the balance connected load

*where n is the number of months in a billing cycle

[#]LDHF Formula: Rate of Initial Security Deposit in (₹/kW) of connected load = $L \cdot D \cdot H \cdot F \cdot T \cdot (n+1.35)$ or per kVA of Contract Demand

L: connected load for applicant falling under single-part tariff/contract demand for those under two-part tariff

D: average number of working days for the relevant tariff category

H: number of hours per day for which power is used on an average basis

F: demand factor for the respective category of consumers

T: average tariff in ₹/kWh or ₹/kVAh in accordance with the retail tariff order of the Commission

CER Opinion

CER Security deposit for the supply of electricity: In relation to the security deposit amount & base for calculating security deposit rates mentioned in the draft Regulation, following measures are suggested:

- Apart from the average bill, the calculation of security deposit should also consider any arrears to reflect the higher commercial risk associated with such customers. A good credit history over the next 6 months should lead to recalculation of the security deposit and the excess amount be adjusted against the bill of the preceding billing cycle. The inclusion of arrears in the calculation of the average billing amount should disincentivise delay in bill payment. (Regulation 4.3)
- The average billing amount, apart from the adjustment for arrears suggested above, is the amount due to the utility on account of the bills raised by it, and hence should not require any adjustment on account of subsidy either accounted for in the ARR or directly paid to the consumers under a direct benefit scheme.

CER Mode of Payment: The draft Regulation provides three modes of payment viz. Cash, Demand Draft (DD) and Electronic mode. However, it is advised that any shortfall in the security deposit can also be adjusted against the net payable (in cash or in energy terms) to be paid by the utility to consumers with solar rooftop plants having net-metering/gross-metering arrangements. (Regulation 4.4-4.7)

CER Refund/Additional Security Deposit due to the Change in Sanctioned Load/Contracted Demand: Regulation 8.2 only accounts for the reduction in security deposit due to the reduction in sanctioned load/contracted demand. In case the consumer seeks an increase/reduction in the sanctioned load/contracted demand, the use of historical average monthly bill will not be an appropriate basis for calculation of security deposit rate. The security deposit amount should be proportionately increased/decreased based on the desired increase/decrease of the sanctioned load/contracted demand. Hence, while amending Regulation 8, the case for an increase in security deposit on account of the increase in sanctioned load/contracted demand should also be incorporated. (Regulation 8)

CER Method of Calculation of Initial Security Deposit Rate:

- The draft Regulation provides a table for the initial security deposit rates. The Regulation should clearly differentiate the method of calculation of security deposit rate for consumers with monthly and bi-monthly billing cycle. Since, security deposit is expected to address the risk associated with non-payment of bill of 'a billing cycle', security deposit calculation for consumers with bi-monthly billing should consider average billing over the billing cycle in place of average monthly billing. Since, this may result in additional security deposit demand from such consumers, it is suggested that this scheme be implemented on a graduated basis, and delayed for some time given the prevailing pandemic scenario. (Regulation 5.2)
- The Commission may like to consider lowering the load limit of 20 kW to be reduced (say, 10 kW) for applicability of the security deposit rate of ₹165 per kW as the reduced rate should be available for the smaller consumers only.

Proposed Amendments in JERC for the State of Goa & UTs (Electricity Supply Code) Regulations, 2018 [Draft]

JERC (Goa & UTs) proposed amendments in “JERC (Electricity Supply Code) Regulations, 2018” on 12th May, 2021. These are called JERC (Electricity Supply Code) (Second Amendment) Regulations, 2021.

The proposed amendments are given below:

- ❖ Tenant added in the definition of “occupier”. (Clause 2.3(52))
- ❖ Definition of standby meter expanded by including all new connections of 11 kV and more (up from 33 kV in 2018 Supply Code). (Clause 2.3(63))
- ❖ Definition of a new term “Initial period of agreement” is introduced. This period is as follows in the proposed regulation: (Clause 2.3 (41a))
 - LT connection: 6 months
 - HT connection: 1 year
 - EHT connection: 2 years
- ❖ Domestic consumers having contracted demand up to 25 kW (up from 20 kW) exempted from installing power factor correction device. (Clause 4.7)
- ❖ Licensee asked to add an option of mobile app for availing new connection in addition to the existing avenues in 2018 Supply Code. (Clause 5.26)
- ❖ The applicant provided another chance of applying for a new connection. After the expiry of 2 months (which was the deadline 2018 Code), a one-time option for the revival of lapsed bills has been given for 2 more months after payment of twice the demand notice extension fee. (Clause 5.49)
- ❖ Requirement for NOC from the previous occupant in case of transfer of connection is removed. Now, the security deposit of the previous owner is transferred to the new owner without any NOC or additional security. In case of multiples owners, transferred in the name of the first owner, or a joint connection if so required. (Clause 5.87)
- ❖ Amended to deal with change in ownership due to transfer to the legal heir. Earlier the security deposit lying with the licensee was transferred to the legal heir and a shortfall in the same was payable by the applicant. The proposed draft states that no additional security deposit shall be charged. In case of multiples owners, deposit will be transferred in the name of the first owner, or a joint connection if so required. (Clause 5.88)
- ❖ Prepaid meters should be installed with the MDI facility that 2018 Code recommends. (Clause 6.7)
- ❖ In case of domestic connections, higher of cooling load (air conditioners, coolers etc.) or heating load; excluding equipment used for cooking (geysers, heating rod etc.) is to be taken for determination of Total Connected load. (Annexure VIII)
- ❖ For calculation of security deposit amount, formula has altered from the 2018 Supply Code as follows: (Annexure XVIII)

Previous formula:
Security deposit = [Load x Load Factor x 30 days] + [30 days x 24 hours x Current tariff]

Proposed formula:
Security deposit = [Load x Load Factor x 30 days] + [30 days x H hours x Average Billing Rate]

Changes:

 - Calculation for Load to be calculated using updated Annexure VIII
 - 24 hours replaced by 'H' hours (that varies for different categories, and hence, will reduce security amount burden)
 - Current tariff replaced by Average Billing Rate (ABR)

CER Opinion

CER Load Factor: The definition of Load factor may be modified as:

“Load Factor” is the ratio of the total number of units consumed during a given period to the total number of units that would have been consumed, had the load been maintained at the sanctioned load or contracted maximum demand level throughout the same period. (Clause 2.3 (47))

CER Occupier vs User of Electricity: The legal repercussions of use of the term “occupier” should be vetted. This may be of concern in case a property is under dispute. The notion of 'occupier' should not have a reflection on property

right. The term may be replaced with “user of electricity”. (Clause 2.3 (52))

CER Standby Meter: The amended definition of the “standby meter” may be modified as:

“Standby Meter” means a meter connected to CT and VT, other than those used for the main meter and check the meter and shall be used for accounting and billing of electricity in case of failure of the main meter for the existing consumers having a standby meter, and all new connections at the voltage level of 11 kV and above to be issued after notification of these Regulations.” (Clause 2.3 (63))

CER Initial Period of Agreement: In the light of the new definition of “Initial Period of Agreement”, the supply code should clarify if a new consumer would need to periodically extend the agreement after the expiry of an initial period of agreement. In such a case, the modalities for the extension of the agreement (beyond the initial period of six months/one/two years, as applicable) should be clarified. Provision for automatic extension of the agreement with no cost implications would assuage concerns of the consumers. (Clause 2.3 (41a))

CER Adequacy of Power Factor (PF) & Installation of Shunt Capacitors: Small consumers, particularly in the case of domestic and commercial categories generally have a sanctioned load, whereas large consumers (such as industrial consumers) have a contracted demand. An appropriate term representing 'load' should be used in case of this clause as well as elsewhere in the code. (Clause 4.7)

CER The allowed duration for installation of PF correction device (Clause 4.7 (a) & (b)) seems relatively relaxed and may be reduced to four (04) months and six (06) months respectively, for the domestic and commercial consumer specified set of consumers. The licensee should also include the provision for filing application for modification of connection and following status thereof in addition to the procedure for new application (through web/app etc.). This would minimize the need for a physical interface, especially given the current circumstances. (Clause 5.26)

CER Clause 5.49 refers to 'revival fee being twice the extension fee' whereas the code does not define and specify the extension fee. If defined elsewhere, the appropriate document may be referred to.

CER Transfer of Connection:

- The phrase “The application form shall be accepted on showing proof of ownership/occupancy of property” may be reworded as 'The application form shall be accepted on showing proof of ownership/occupancy/tenancy of property'. (Clause 5.87)
- In case the property is under a legal dispute, transfer of security deposit to the 'occupier' may not be justified and may need to be vetted legally.

CER Prepaid Meter - Exemption from Security Deposit: In case of consumers with prepaid meters, the requirement for security deposit should be waived while ensuring sufficient advance payment thereof. Furthermore, the provision of refund of such security deposit should also be included for such consumers.

CER Determination of Load: Procedure of determination of connected/sanctioned load for domestic connection as laid out in Annexure-VIII should be further revamped, while considering some of the following points. The domestic electrical equipment's list and equipment rating should be restructured as per changing pattern of device ownership and the current standard. (Annexure-VIII) For example - LED bulbs, electric chimney, water purifiers, dishwasher, etc. merit inclusion in the list. Smaller load on account of Wi-Fi routers, mobile chargers, etc. may be counted as miscellaneous load. Furthermore, the specified load, particularly for AC has come down over the past few years due to adoption of efficient technology assisted by the Star rating scheme. It is expected that efficient ACs (as compared to those listed in Annexure-VIII) would be installed by consumers due to their wider availability and sale. It is likely that in a few years an insignificant inventory of old AC would remain in operation. Load extension/revision in the future should also consider such changes.

- Counting of load for both heaters as well as cooler/AC, which is not usually going to be used concurrently, should be reconsidered.
- An alternate approach would be to count the load of electrical switches, and plug points that may allow the use of different types of devices while also considering the coincidental utilization of the same.

CER In Annexure-XVIII, for the calculation of security deposit amount for a consumer, the formula should use 'Sanctioned Load/Contracted Demand' in place of "load".

Proposed OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 [Draft]

Odisha Electricity Regulatory Commission (OERC) proposed a draft regulation for 'Procurement of Energy from Renewable Sources and its Compliance' on 27th April, 2021. Key points of this draft regulation are given below:

- ❖ Co-firing of biomass in coal-based thermal power station – Non-Solar RPO
- ❖ Roof-top Solar PV system under net metering agreements – Solar RPO
- ❖ Large Hydro power projects (>25 MW and that started commercial operation after 8th March, 2019) including pumped storage projects – HPO
- ❖ If generation from qualified LHPs is inadequate to meet HPO, small hydro commissioned on or after 8th March, 2019 will be eligible for HPO fulfilment. If small hydro generation exceeds the optimal HPO trajectory in such situations, the surplus would be classified as "Other Non-Solar RPO".

Minimum quantum of electricity to be procured from Renewable Sources by Obligated Entity as percentage of total Consumption in kWh

Year	Solar RPO (in %)	Non-Solar RPO			Total RPO (in %)
		HPO (in %)	Other Non-Solar RPO (in %)	Total Non- Solar RPO (in %)	
2021-22	7.25	0.18	5.82	6.00	13.25
2022-23	8.00	0.35	6.15	6.50	14.50
2023-24	8.75	0.66	6.59	7.25	16.00
2024-25	9.75	1.08	7.17	8.25	18.00

CER Opinion

CER Technology Neutral RPO: Cost of procurement from solar power plants has been on a decline, and is now even less than other RES. It would be appropriate to dispense with technology-wise RPO differentiation as solar and non-solar RPO. This would reduce the overall cost of compliance for the obligated entities.

CER Purchase Obligation from Renewable Sources: The draft regulation considers co-firing of biomass in coal-fired thermal power plants as renewable energy and which shall be eligible for non-solar RPO. It is also important to specify a framework for verification of the extent of co-firing of biomass in coal-fired thermal power plants to enable proper estimate of its contribution towards RPO. (Clause 4.1)

CER Consequences of Default: The draft regulation states that non-compliance of RPO would result in penalty which can be calculated by the State Agency as below: (Clause 10.1)

$$\text{Penalty} = \text{Shortfall in units of RPO} * \text{Forbearance price}$$

- As forbearance price for HPO is not defined, a clarification is needed regarding the calculation of penalty for non-compliance of HPO.
- In its absence, it is recommended to use non-solar forbearance price in the case of HPO, as HPO is categorized under non-solar RPO.

Further readings:

- 1) #Comments on "Electricity Act, 2003 (Amendment 2020) (Draft)"
- 2) #Comments on "CERC's Proposal for Determination of Forbearance Price and Floor Price for the REC Framework" – March, 2020
- 3) @Comments on Draft Terms and Conditions for Exchange of Energy Savings Certificates Regulations, CERC, 2016
- 4) @Comments on "Draft Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation (Second Amendment) Regulations, 2013"
- 5) @Comments on "Determination of Forbearance and Floor Price for REC framework, Central Electricity Regulatory Commission, July 2011"
- 6) @Comments on "Setting a Floor and Forbearance Price for Renewable energy Certificates (RECs), Central Electricity Regulatory Commission, April 2010"
- 7) @Comments on "Draft CERC regulation for REC Framework Implementation 2009, issued by Central Electricity Regulatory Commission, Nov. 2009"

Above regulatory submissions can be accessed from

<https://cer.iitk.ac.in/blog>

@ <https://www.iitk.ac.in/ime/anoops/regulatorypolicy/index.php>

Regulatory Updates

Tariff



HPERC determined the price of GoHP Free Power for FY22 at ₹ 2.49/unit for purchase by HPSEBL. This Order will remain into effect for FY 2021-22 i.e. till 31st March, 2022.

The HPERC decided to retain all the provisions of the draft amendment of HPERC (Cross Subsidy Surcharge, Additional Surcharge and Phasing of Cross Subsidy) (Second Amendment) Regulations, 2021 without any changes in it.



KSERC has approved the following after consideration of the M/s. Technopark's application for truing up of accounts for the year 2018-19:

- Total revenue is ₹ 6423.57 lakh
- Total expenditure is ₹ 5926.08 lakh
- The revenue surplus for the year is ₹ 497.49 lakh
- The revised accumulative revenue surplus up to 2017-18 is ₹ 1183.38 lakh. Total cumulative revenue surplus till 2018-19 will be ₹ 1680.87 lakh (₹ 1183.38 lakh + ₹ 497.49 lakh)

KSERC has approved the following after considering the petition filed by M/s Rubber Park India Private Limited (RPIL) for truing up of accounts for the year 2018-19:

- Total income is ₹ 1914.26 lakh
- Total expenditure is ₹ 1801.27 lakh
- The revenue surplus for the year is ₹ 112.99 lakh
- The revised accumulative revenue surplus up to 2017-18 is ₹ 132.62 lakh. (₹ 137.01 lakh – ₹ 4.39 lakhs)
- Total cumulative revenue surplus till 2018-19 will be ₹ 245.61 lakh (₹ 132.62 lakh + ₹ 112.99 lakh)



MERC approved the revised power procurement plan of Maharashtra Airport Development Company Ltd., however, rejected the adoption of tariff of ₹ 5.25/unit. It has allowed Maharashtra Airport Development Company Ltd. to

keep on scheduling power against LoA issued by it at rate of ₹ 5.25/kWh for consumers in MIHAN SEZ.

MERC did not allow Rattan India power Limited (Amravati) for interim relief relating to the direction for 50% payment of outstanding due amount towards energy supplied to MSEDCL under PPA dated 22nd April, 2010 and 5th June, 2010.

MERC issued Practice Direction allowing revision in Contract Demand up to 2 occasions to HT Industrial and HT Commercial consumers and up to 1 occasion to LT

Industrial and LT Commercial consumers in a billing cycle up to 31st March, 2022 on the case filed by Kalika Steel Alloys Pvt Ltd. and 27 others.

MERC allowed a depreciation amount of ₹ 7.23 Cr. @6.49% for FY 2014-15 for the retail supply business of Tata Power Company Limited (Distribution).

MERC clarified on the applicability of Tariff to Hotels pursuant to the Government of Maharashtra Resolution dated 3rd December, 2020, a case filed by Adani Electricity Mumbai Limited (Distribution). MERC directed unless the Maharashtra government provides advance subsidy under Section 65 of the Electricity Act, 2003 on account of the reduced tariff amount due to the consideration of hotel business from Commercial to Industrial category, Distribution Licensees shall continue to levy commercial tariffs on hospitality businesses as approved in their respective Tariff Orders.

MERC approved the PPA dated 27th May, 2021 entered between KRC DISCOMs (MindSpace Business Parks Private Limited; Gigaplex Estate Private Limited; KRC Infrastructure and Projects Private Limited) and Create Energy (I) Pvt. Ltd. – Power Department of Sikkim. The Commission also adopted the Tariff determined through transparent bidding process for the Short-Term procurement of power up to 14 MW (RTC) for one year starting from 1st July, 2021 to 30th June, 2022 through combined power procurement.



PSERC determined additional surcharge applicable for the period 1st April, 2021 to 30th September, 2021 as under:

Particulars	PSPCL in the Petition	PSERC
Additional Surcharge payable by full open and partial open access consumers for availing open access beyond the contract demand maintained with the distribution licensee	1.22 ₹/kWh	1.16 ₹/kWh
Additional Surcharge payable by partial open access consumers for availing open access upto the contract demand maintained with the distribution licensee	0.93 ₹/kWh	0.83 ₹/kWh



TNERC provided liberty to M/s Kallam Spinning Mills Pvt. Ltd. (the Petitioner) to sell power and directed NPDCL to purchase the balance 70% energy out of generated 4 MW (i.e. 2.80 MW) @ ₹ 3.03/kWh i.e. at the same tariff as is being procured for 29% energy (1.16 MW) under PP&CWA, till the end of tenure of PP&CWA i.e. upto 28th January, 2022.

Regulatory Updates

Power Procurement



DERC ordered that while making alternate connectivity arrangements, the Timarpur Okhla Waste Management Co. Ltd. will be entitled to captive generation as provided in the EPA dated 20th January, 2010 and amended EPA dated 27th July, 2011, and that if the Timarpur Okhla Waste Management Co. Ltd. fails to make alternate connectivity arrangements, he will not be entitled to the benefit of this clause. It is also mandated that BRPL get 50% of the maximum yearly generation at ex-bus, which is equivalent to 56.94 MUs with a maximum of 60 MUs per year.

DERC gave the subject careful deliberation and came to the decision that the TPDDL should contact MNRE for a deviation and request approval for the variation in regard to the bidding documents.

The Commission has notified DERC (Terms and Conditions for Open Access) Regulations, 2005 facilitating Open Access in Delhi. Timarpur Okhla Waste Management Company Ltd. shall apply to the concerned SLDC as specified in the Regulations for sale of power to third parties subject to meeting its obligations under the EPA/PPA, as amended.



HERC approved procurement of 500 MW short-term power from the sources and cost as proposed by the HPPC from 01st May, 2021 to 30th September, 2021 through tariff-based Competitive Bidding process.

HERC granted approval of the power procurement petition of HPPC on 10th June, 2021 as follows:

- Extension of the source of 50 MW Hydro Power from the 450 MW Baglihar Stage-1 HEP for the next 10 years w.e.f. 1st April, 2021 at the existing tariff and terms and conditions.
- Procurement of additional 100 MW gross power round the clock from 450 MW Baglihar Stage-1 HEP for a period of 10 years w.e.f. 1st July, 2021.
- Procurement of 270 MW gross power from the 450 MW Baglihar Stage-2 HEP during the months of May to September for a period of 10 years, scheduled to begin in May 2022, at terms and conditions similar to the procurement of 50 MW gross power currently scheduled from the Generator JKSPDC.

HERC directed that the PPA between M/s Shiga Energy Pvt. Ltd. and M/s Dans Energy Pvt. Ltd. with HPPC dated 11th September, 2020 under HERC (Conduct of

Business) Regulations, 2019 was null and void. The Commission dismissed and disposed of the present petition(s) on 23rd June 2021.



The KSERC has approved the initialed Power Purchase Agreement (PPA) between KSEB Ltd and NTPC Ltd for the procurement of 90 MW Solar Power at the rate of ₹ 2.97/unit.

The Commission has approved the initialed Power Purchase Agreement (PPA) between KSEB Ltd and M/s Tata Power Company Limited for the procurement of 110 MW Solar Power at the rate of ₹ 2.97/unit.

The Commission has granted permission to KSEB Ltd. to sign the PPA with M/s TP Saurya Limited, the 100% subsidiary of the successful bidder M/s Tata Power Company Limited. The agreement dated 23rd March, 2021 and its amendment dated 9th June, 2021 signed between M/s TPCL and its 100% subsidiary TP Saurya Ltd shall form integral part of the PPA to be signed between KSEB Ltd and TP Saurya Ltd.

The Commission considering the request by the petitioner M/s KSEB Ltd has approved the following tariff for 35W, 70W & 110W LED Street Lights for enabling KSEB Ltd. to raise monthly electricity bills on LSGDs especially for the NILAAVU Scheme (a project of Government of Kerala to replace all conventional street lights with energy efficient LED lights for illuminating all roads and sub-roads of Grama Panchayats, Municipalities and Corporations):

Type of Lamp	Wattage (W)	(₹)/Lamp/Month		
		Burning Hours/day		
		4 hrs.	6 hrs.	12 hrs.
LED	35	10	15	29
	70	19	29	58
	110	30	47	91



TSERC directed the licensee (TSNPDCL) to submit the revised PPA negotiated with the petitioner (M/s Gayatri Sugars Ltd.) on completion of the 10 years of the project from the commercial operation date in so far as 16.5 MW bagasse-based cogeneration project.



WBERC approved the PPA executed on 07th April, 2021 by and between DPL and WBSEDCL for purchase of the entire quantum of power from Unit – VII and Unit – VIII of DPL with effect from 1st

January, 2019 up to the useful life of the units at a tariff to be determined under Section 62 of the Electricity Act, 2003 in terms of regulation of the WBERC (Terms and Condition of Tariff) Regulations, 2011.

Regulatory Updates

Renewable Energy, RPO and REC



APERC has requested the Committee to submit its report on the implementation of the must-run status granted to the M/s Azure Power India Pvt Ltd.'s solar projects, to refrain from curtailing the solar energy generated therefrom; and to compensate the unlawful and arbitrary curtailment of generation from the solar projects within two months from the date of holding its first meeting.



GERC orders that the time restriction for executing PPAs be extended until 31st May, 2021 rather than the 30th April, 2021 for the projects covered in 'Small Scale Distributed Solar Projects, 2019' policy of the Government of Gujarat as decided in Petition No. 1954 of 2021.

GERC decided to approve the Short Term Power Purchase from Adani Enterprises Limited for 50 MW RTC power at ₹ 3.69/Unit (at GETCO periphery) for the period 1st April, 2021 to 30th September, 2021 and 50 MW RTC power at ₹ 3.69/Unit (at GETCO periphery) for the period 1st October, 2021 to 31st March, 2022, as recommended by the Standing Committee of bid evaluation.



KSERC has directed KSEB Ltd. to process and issue a feasibility report within two weeks for the connectivity of the 1 MW solar power plant being installed in the premises of M/s Kerala Health Care Pvt. Ltd., according to the provisions of the KSERC (Renewable Energy and Net Metering) Regulations, 2020. Further, there will be no voltage-based restriction, and consumers/prosumers applying for net-metering up to 1 MW will be permitted to avail of this facility.



MERC accorded its approval to procure 400 MW of wind-solar hybrid power from SECI for 25 years at the tariff of ₹ 2.41/unit discovered through competitive bidding plus its trading margin of 7 paise/unit. The procured power shall be considered for meeting solar and non-solar RPO requirements of Brihanmumbai Electric Supply and Transport Undertaking.

MERC directed MSEDCL to issue credit adjustments for the months of September and October 2016 in the following billing cycle if not done previously, regarding

the adoption of correct monthly Open Access billing methodology for adjustment of Renewable Energy and Captive Power under Open Access for the Period April 2016 to October 2018.



HERC carefully examined and incorporated the comments and arguments made by the various stake holders regarding HERC (Rooftop Solar Grid Interactive System Based on Net Metering/Gross Metering) Regulations, 2021. The commission gave detailed guidelines for constitution and functions of house rooftop solar monitoring mechanism on 25th June 2021.



PSERC allows investment for installation of solar plants on the roofs of control rooms of various 400/220/132 KV Grid substations of PSTCL & SLDC buildings as Capital work in the MYT Control Period FY 2020-21 to 2022-23.

PSERC decided to impose a penalty of ₹ 25,000 on PepsiCo for non-compliance of RPO for FY 2015-16 and FY 2016-17 during the respective years.



The RERC in exercise of the power conferred under the regulation 19 and regulation 22 of the RERC DREGS Regulations 2021 directs that the Rooftop and Small Solar Grid Interactive Systems commissioned under Net Metering agreements upto 15th September, 2021, shall continue to operate under the Net Metering arrangement till the period of Connection Agreement, as per the provisions of the Rajasthan Electricity Regulatory Commission (Connectivity and Net Metering for Rooftop and Small Solar Grid Interactive Systems) Regulations, 2015 and subsequent amendments thereof.



UPERC decided to approve the extension of the duration of PPA dated 8th November, 2006 for next 10 years from January 2021 to December 2030, signed between M/s SBEC bioenergy limited and UPPCL.

UPERC directed UPPCL to deposit a total amount of ₹ 72.45 billion in RPO Regulatory Fund. This include an amount of ₹ 14.59 billion which is equivalent to the respective shortfall in RPO units until the FY 2020-21 at the rate of ₹ 1/kWh and ₹ 57.85 billion against projected RPO requirements for FY 2021-22. The total amount of ₹ 72.45 billion can be paid in ten equal instalments. The RPO Regulatory fund would be used to procure renewable energy, including hydropower.

Regulatory Updates

Others

Under Regulation 21 (i) and Regulation 16 (vii) of the Power Market Regulations 2010, CERC granted the registration of Pranurja Solutions Limited (PSL) to establish and operate a power exchange. PSL is the third power exchange in India after India Energy Exchange (IEX) and Power Exchange India (PXIL).

APERC directed APSPDCL and APEPDCL to refund ₹ 11,21,82,980 to M/s Spectrum Power Generation Limited as the rebate amount availed from the monthly energy bills for the years 2016-17, 2017-18, 2018-19 and 2019-20 (till October 2019) along with applicable interest till the date of payment in proportion to their respective liabilities within three months from today.

DERC imposes a penalty of ₹ 20,000/- (₹ 10,000/- for each violation) in respect of violation of Regulation 32 (8) (i), (ii) & (iii) and Regulation 61 (4) and (5) of SOP Regulations, 2017 to be paid by BRPL within 30 days of the order.

HERC granted source approval to M/s Sneha Kinetic Power Projects Private Ltd (96 MW) on 29th April, 2021, selected through competitive bidding under Expression of Interest invited by the HPPC under Section 86 (1)(b) of the Electricity Act, 2003.

MERC allowed to consider the additional capital and operation expenditure and other consequential impact on actual basis for reimbursement under Change in Law subject to sensible review on the case of Sai Wardha Power Generation Limited for in principle approval and consequent compensation on account of Change in Law event due to introduction of the Environment (Protection) Amendment Rules, 2015 impacting revenues and cost of Petitioner during the operation period.

PSERC approved the One Time Settlement (OTS) scheme for a period of three months from the date of Issuance of circular by the PSPCL on the same terms and conditions as already approved by the Commission vide letter no. PSERC/Tariff/T-134/422 dated 22nd May, 2018. The OTS scheme shall be applicable to those consumers whose defaults in payment/defaulting amount existed as on 31st December, 2020.

RERC suggested that there should be provision for cyber security in the matter of RERC (Metering) Regulations, 2007 and amendments thereof and issue of RERC (Metering) Practice Directions, 2021 as CEA (Metering Regulations) already have enabling provisions related to cyber security. Therefore, Commission decided that Metering Committee should issue “Code of Practice of Metering” considering CEA (Metering Regulations).

TNERC issued the following directives to Railways in regards to Open Access operations:

- Railways must abide by the terms and conditions of all the Rules and Regulations that apply to the responses, as well as enter into an agreement with a clear commitment to all techno-commercial obligations for Open Access operation and single point scheduling to be considered.
- Railways must transfer the whole contracted demand of all TSS points to TANGEDCO and TANTRANSCO for their 110 kV Traction operations, as well as delink from TANGEDCO's 33/22/11 KV LT network to operate as a Licensee.
- Railways must pay ₹ 300 per kVA of contracted demand at every TSS point and ₹ 11 per kWh of power from TANGEDCO for standby charges till they surrender the surplus capacity.
- All transmission, wheeling, and other fees must be paid in accordance with OA regulations.
- Harmonic charges will be paid in compliance with the Commission's regulations and orders.

TNERC directed to TANGEDCO, to determine the applicability of an additional surcharge of ₹ 0.70/kWh, on six-monthly basis from 16th April, 2021 to 30th September, 2021 directed under Regulation 24 (3) of the TNERC Grid Connectivity and Intra State Open Access Regulations. TANGEDCO would collect 15-minute block data on available capacity, power scheduled by TANGEDCO, and power scheduled by Open Access consumers (non-renewable and renewable energy) in order to file the details when filing the petition for an additional surcharge. TANGEDCO must make every effort to ensure maximum power availability in order to avoid paying stranded availability penalties.

TSERC directed to transfer the case on 'seeking the recovery of shortfall amounts from the licensee for the energy supplied in October and November 2010' to the CERC as the petition involves two DISCOMs of Telangana and two DISCOMs of Andhra Pradesh, and hence, the decision cannot be taken by only one Commission.

TSERC directed to transfer the case on 'seeking the recovery of ₹ 2,66,34,295 towards pending dues on account of supply of electricity' to the CERC as the petition involves two DISCOMs of Telangana and two DISCOMs of Andhra Pradesh, and hence, the decision cannot be taken by only one Commission.

Tariff Orders

State/Union Territory (SERC)	Licensee/Utility	True-up	Annual Performance Review (APR)	Aggregate Revenue Requirement (ARR)	Tariff
Andaman & Nicobar (JERC)	EDA&N	-	FY 20-21	FY 21-22	FY 21-22
Bihar (BERC)	NBPDCL, SBPDCL	FY 19-20	FY 20-21	FY 21-22	FY 21-22
Gujarat (GERC)	TPL-D, TPL-G AIVPL, MUL, DGVCL, MGVL, PGVCL, UGVCL, GSECL, GETCO, SLDC	FY 19-20	-	FY 21-22	FY 21-22
Himachal Pradesh (HPERC)	HPSEBL	FY 18-19 FY 19-20	FY 19-20 to FY 23-24	-	FY 21-22
Karnataka (KERC)	BESCOM, HESCOM, MESCOM, GESCOM, HUKKERI, CESC, AEQU, MSEZ, KPTCL	-	FY 19-20	FY 21-22	FY 21-22
Lakshadweep (JERC)	LED	-	FY 20-21	FY 21-22	FY 21-22
Manipur (JERC)	MSPDCL, MSPCL	FY 19-20	-	FY 21-22	FY 21-22
Mizoram (JERC)	PED	FY 19-20	-	FY 21-22	FY 21-22
Puducherry (JERC)	PPCL, PED	FY 18-19 FY 19-20	FY 20-21	FY 21-22	FY 21-22
Punjab (PSERC)	PSPCL, PSTCL	FY 19-20	FY 20-21 FY 21-22	-	FY 21-22
Telangana (TSERC)	TS Transco	-	-	FY 19-20 to FY 23-24	-
Uttarakhand (UERC)	UPPCL, PTCUL, UJVN, GIPL, SEPL, GBHPPL, SLDC	FY 19-20	FY 20-21	FY 21-22	-
West Bengal (WBERC)	WBSEDCL, DVC	-	FY 09-10 to FY 13-14	-	-

Regulations

Title	Date of Approval/Notification
Renewable Energy (including RPO and REC)	
HERC (Terms and Conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulations, 2021	30 th April, 2021
Supply code	
MERC (Electricity Supply Code and standards of performance of distribution licensees including power quality) Regulations, 2021	26 th June, 2021
Others	
APERC (Licensees' Standards of Performance) Regulation (3 rd Amendment), 2004	4 th June, 2021
DERC (Schedule of Charges and the Procedure) (6 th Amendment) Order, 2021	15 th April, 2021
RERC (Consumer Grievance Redressal Forum, Electricity Ombudsman and Consumer Advocacy) Regulations, 2021	5 th April, 2021
TSERC (Deviation Settlement Mechanism and related matters) Regulation, 2021	16 th June, 2021

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Regulatory Insights Team

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Other Initiatives



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