

KARNATAKA ELECTRICITY REGULATORY COMMISSION
No. 16, C-1, Millers Tank Bund Road, Yellappa Garden, Bed Area, Vasanth Nagar,
Bengaluru, Karnataka 560052

Notification

No. S/03/1/560 dated 06.08.2024

KERC (Implementation of Peer to Peer Solar Energy Transaction) Regulations, 2024

PREAMBLE:

1. In terms of KERC (Implementation of Solar Rooftop Photovoltaic) Regulations, 2016 and the Orders of the Commission issued in this regard, the Commission has recognised the SRPTV projects under self-investment by the Consumers and has allowed Net or Gross metering arrangement for injection of energy to the ESCOM's grid, at the Commission determined tariff payable to the prosumers.
2. In order to accelerate the capacity addition in SRPTV, the Commission, vide its Order dated 9th December, 2019 has decided to recognise third party investment in SRTPV projects on consumers' rooftops, under various business models, allowing sale of energy under net/ gross metering at the Commission determined tariff by executing power purchase agreements.
3. The above SRTPV arrangements recognise only the sale of energy between consumers and the distribution utility. However, of late a new concept of sale of energy between consumers to consumers has emerged. The sale of surplus power by the consumer/ prosumer to another consumer at an agreed tariff is known as Peer to Peer (P2P) solar energy transactions, through Blockchain based platform, which is gaining popularity. The concept is seen as a promising innovation in the energy sector for Decentralization, Renewable Energy Integration, Efficiency and Flexibility, Empowering Prosumers, Cost Savings, Grid Resilience, Environmental Impact, Innovation in Technology, Community Engagement and Regulatory Evolution. The P2P concept would help in recovery of investment much faster as compared with the existing arrangements.



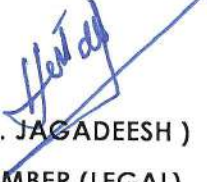
4. The objective of framing the Regulations is to promote rooftop solar, efficient utilization of existing assets and to implement innovative technologies by facilitating transactions of rooftop solar energy through blockchain/any other technology based P2P platform besides ensuring reasonable returns on the investments.
5. The P2P solar transactions offer various benefits, the success of which depends on regulatory support, technological advancements, and widespread adoption within communities. As the energy sector evolves, P2P transactions are likely to play a significant role in shaping the future of sustainable energy systems.
6. Hence, the Commission has decided to issue draft Karnataka Electricity Regulatory Commission (Implementation of Peer to Peer Solar Energy Transaction through block chain based platform) Regulations, 2024.
7. As required under Sub Section (3) of Section 181 of Electricity Act 2003, the draft Regulations were notified in the official gazette on 17.01.2024 to elicit objections/suggestions/comments from the interested persons and stakeholders. The Commission has also conducted a public hearing on 28.03.2024, to elicit the views of the public and stakeholders on the draft Karnataka Electricity Regulatory Commission (Implementation of Peer to Peer Solar Energy Transaction through block chain based platform) Regulations, 2024, issued by the Commission. The Commission has considered the views/comments/suggestions received from the stakeholders.
8. As per Section 181 read with Sections 61, 62 and 66 of the Electricity Act 2003, the Karnataka Electricity Regulatory Commission (Commission) is mandated to specify the principles for the said Regulations. Therefore, in exercise of the powers conferred on it under Section 86(1) read with Sections 181, 61, 62 of the Act, and all the powers enabling it in this behalf, the Commission hereby makes the Regulations, namely Karnataka Electricity Regulatory Commission (Implementation of Peer to Peer Solar Energy Transaction) Regulations, 2024.



Order

After considering the views/ objections/comments/ suggestions of the stakeholders on the draft regulations, the Commission hereby approves the Karnataka Electricity Regulatory Commission (Implementation of Peer to Peer Solar Energy Transaction) Regulations, 2024.


(P. RAVI KUMAR)
CHAIRMAN


(H.K. JAGADEESH)
MEMBER (LEGAL)


(JAWAID AKHTAR)
MEMBER

KARNATAKA ELECTRICITY REGULATORY COMMISSION

No. 16 C-1, Miller Tank Bed Area, Vasanth Nagar, Bengaluru- 560 052

No: KERC/S/03/1/561

Date: 06.08.2024

NOTIFICATION

In exercise of powers conferred under section 181 of the Electricity Act, 2003 (herein after referred to as the Act) read with section 61 thereof and all other powers enabling it in this behalf, and after previous publication, the Karnataka Electricity Regulatory Commission hereby makes the following regulations, namely:

1. Short Title and Commencement-

- (1) These Regulations may be called the KERC (Implementation of Peer to Peer Solar Energy Transaction), Regulations, 2024.
- (2) These Regulations shall come into effect from the date of their publication in the Official Gazette.
- (3) These Regulations shall be applicable to all the Distribution Licensees and the Eligible Consumers in the State of Karnataka.
- (4) These Regulations shall be read along with the KERC (Implementation of Solar Rooftop Photovoltaic Power Plants) Regulations, 2016 and all the other Orders on Solar energy, issued by this Commission from time to time.

2. Definitions and Interpretations-

- (1) In these Regulations, unless the context otherwise requires –
 - a) Actual Injection: in a time block means the actual electricity injected by the Prosumer, measured by the energy meters at specified point of injection;
 - b) Actual Transaction: means actual exchange of energy (kWh) between a Prosumer and a Consumer as measured at a specified point of drawal for a quantum of energy (kWh) for any time block during a day;

- c) Any other Technology: means any technology or methodology that can be used to record all transactions' data for enabling Peer-to-Peer Transactions.
- d) Blockchain: Blockchain is a digitally distributed, decentralized, public immutable ledger that exists across a network for recording transactions.
- e) Energy Drawal or Actual drawal: in a time block means the electricity drawn by a consumer measured by the Energy meter.
- f) Intraday Transaction: means the submission of schedule for generation of the same day.
- g) Nth Month: The Month in which Distribution Licensee raises the bill of P2P participants for energy transacted on P2P platform.
- h) Nth day: Day on which energy is transacted on P2P platform.
- i) Participant: Means a prosumer or a consumer who has registered himself with the Distribution Licensee and Service Provider to sell or buy rooftop solar energy through P2P platform provided by the Service Provider.
- j) P2P Consumer: A person who is a consumer of Distribution Licensee and is registered with the Service Provider to buy solar energy through P2P platform from a P2P prosumer.
- k) P2P Prosumer: a person who is a prosumer/consumer of Distribution Licensee and is registered with the Service Provider to sell solar energy generated through his rooftop solar unit on P2P platform.
- l) P2P Platform: Peer to Peer Platform means blockchain/any other technology based electronic platform provided by the Service Provider on which P2P Prosumers can sell his solar energy to P2P Consumers at a price mutually agreed by them on P2P Platform.
- m) P2P transaction: Peer to Peer transaction means transaction of energy among P2P participants through P2P platform provided by the Service Provider.
- n) Scheduled Transaction: means schedule for transaction for exchange of energy (kWh) between a Prosumer and a Consumer, from a specified point of injection to a specified point of drawal for a quantum of energy (kWh) for any time block during a month;
- o) Scheduled injection: for a time block or any period means the schedule of injection in MW or MWh by a Prosumer.

- p) Service Provider: An agency who registers itself with Distribution Licensees to provide P2P solar energy transaction services on blockchain/any other technology based P2P Platform.
- q) Transaction Charge: Fees charged by Service Provider for P2P solar energy transaction on P2P platform, as determined by the Commission from time to time.
- r) Transaction Price: Mutually agreed price between P2P Prosumers and P2P Consumers, for energy transacted on P2P platform.

(2) Words and expressions used in these Regulations not specifically defined herein above, but defined in the Act and Rules or any other Regulations made thereunder, shall have the meaning assigned to them in the Act and Rules or Regulations.

3. Eligibility:

These Regulations shall apply to the Registered domestic consumers and SRTPV domestic Prosumers having net metering or gross metering arrangement, who opt to transact energy among themselves through online Platform of Service Provider(s). This includes multiple consumers and prosumers engaging in P2P transactions of energy.

For example, if Consumer A, Consumer B, and Consumer C, along with Prosumer X and Prosumer Y, choose to participate in energy transactions, they can do so using the specified online P2P platform. Consumer A might purchase excess energy generated by Prosumer X and Prosumer Y, while Consumer B and Consumer C could also purchase surplus energy with Prosumer Y, all facilitated through the platform.

4. General Principles:

The distribution licensee shall provide gross metering or net-metering arrangement to the eligible consumers in its area of supply, as decided by the Commission from time to time on non-discriminatory and first come first served basis for facilitating transaction of rooftop solar energy through blockchain/any other technology based Peer to Peer platform, as detailed below: