



**Power Exchange India Limited
Renewable Energy Certificates**



PXIL

Transforming Power Markets

Introduction

The National Action Plan for Climate Change (NAPCC) that was announced by the Hon. Prime Minister of India in June 2008 puts in place several policy measures to address the issue of sustainable development and specifically global warming. One of the key measures identified is the promotion of renewable energy generation and Renewable Energy Certificates have been put forward as a key policy measure for achieving this.

What are Renewable Energy Certificates (RECs)?

Energy generated from renewable sources has two key attributes. One is the electricity itself, which is a commodity, while the other is the environmental attribute. Renewable Energy Certificates are a market based instrument that represents this environmental attribute associated with power generated from renewable sources.

These certificates are tradeable and hence have a market discovered price. Thus these certificates will enable the commodity electricity and the green attribute to be separately priced and sold. The commodity electricity can be sold at a price competitive to conventional electricity while the RECs can be purchased by entities to meet their Renewable Purchase Obligations (RPOs).

There are two types of RECs - Solar RECs and non Solar RECs. Both these certificates will be separately traded and priced. One certificate denotes one MWh of renewable electricity. The certificates are tradeable only on the Power Exchanges. The certificates are valid only for a single trade and may be sold within 365 days of issuance after which they shall lapse. These certificates shall be traded within the price band determined by the CERC from time to time.

Why are Renewable Energy Certificates Required?

Renewable resources are not uniformly distributed across the country. Hence procurement of renewable electricity is restricted to the resources locally available. Renewable Purchase Obligations (RPOs) are also determined on this basis. Renewable Energy Certificates now provide another avenue for an entity to meet its Renewable Purchase Obligation or to meet its voluntary renewable purchase targets through the purchase of RECs instead of electricity. Hence this will aid the development of renewable resources by aggregating demand for renewables across the country irrespective of geographical distribution of resources.

Who can participate?

The regulations define two types of entities as participants in this market

- **Eligible Entities** These are generators who produce electricity from renewable sources and can only sell REC's. Only generators over 250kW capacity may be eligible.
- **Obligated Entities** These are entities having RPOs and will hence purchase RECs to meet the same.
- In addition to the above, entities may purchase RECs to meet voluntary renewable electricity consumption targets



Procedure

Step 1. Accreditation (Through State Nodal Agency)

Verification of application and project.

RE generator can get accredited not before 6 months prior to the proposed date of commissioning.

Step 2. Registration of accredited generators (Through Central Agency, NLDC)

Registration would follow Accreditation by State Agency

RE generator to apply for registration not before 3 months prior to the proposed date of commissioning.

Step 3. Issuance of RECs (Through Central Agency, NLDC)

RE generator to apply for issuance within 3 months of generation.

Issuance of REC based on information from SLDC about injection of RE into the grid.

Application can be made on a fortnightly basis

Eligible RE generator will receive a certificate within 15 days.

Step 4. Trading of RECs (Through Power Exchange)

Trading on Power Exchanges on the last Wednesday on every month.

Auction timings would be from 13:00Hrs to 15:00Hrs on the day of auction or as amended by Exchange from time to time.

By 15:30Hrs, Power Exchanges to intimate central agency about the sale bids from eligible RE generators.

Central agency to check and confirm the quantum of RECs available with each eligible RE generator by 16:00Hrs.

After confirmation, Power Exchanges to determine Market Clearing Price and Market Clearing Volume based on the available bids.

Power Exchanges to send the trade report to central agency for extinguishing of RECs sold by 17:00Hrs.

Salient Features

Type of Market	Renewable Energy Certificate
Type of Certificates	1) Non Solar Certificates 2) Solar Certificates
Trading Methodology	Anonymous close bid double-sided Auction for each type of Certificate separately
Auction Timings	13.00 hours to 15.00 hours on the day of Auction
Banking or any other concessional benefits	Not allowed
Penalty for Non Compliance	Forbearance Price (May vary depending on SERC)
Trading Day	Last Wednesday of Every month
Minimum Bid Volume	1 Certificate (Equivalent to 1 MWh of Energy injected) for each type of Certificate
Minimum Bid Price	Floor Price (as notified by CERC from time to time) for each type of Certificate
Maximum Bid Price	Forbearance Price (as notified by CERC from time to time) for each type of Certificate
Minimum Volume Quotation Step	1 Certificate (Equivalent to 1 MWh of Energy injected)
Minimum Value Quotation step	Rs. 0.01 per Certificate
Settlement Price(s)	As per Matching Rules of Exchange detailed in Annexure II of the Business Rules

Membership at Power Exchange India Limited

Below are the different types of membership categories available at PXIL:-

1. Trading-cum-Clearing Member (TCM)

TCM membership shall entitle the members to trade and clear, both for themselves and / or on behalf of their clients. This membership category is suitable for Traders and active utilities.

2. Trading and Self Clearing Member (TSCM)

TSCM membership entitles the members to trade and clear for themselves only. It is suitable for large captives and utilities.

3. Trading and Self-Clearing Member - Plus (TSCM - P)

TSCM membership shall entitle the members to trade and clear for themselves only. However, such members shall assign the job of bidding for themselves to an Advisory Member. It is suitable for Captives and Industrial Consumers.

4. Advisory Member (AM)

AM membership shall entitle the members to provide Advisory Services to its Constituents. Such members shall not be entitled to either trade or clear. It is for Firms not having a Trading License from CERC.

5. Clients

Clients shall be associated to the members to trade and clear for themselves only. However, such members may assign the job of bidding to themselves or to Electricity Traders. It is suitable for smaller consumers who wish to participate in this market

About Us

Power Exchange India Limited is India's first institutionally promoted Power Exchange. PXIL is committed to developing for the country the power market that it deserves. Towards this end, PXIL has been involved in designing and delivering unique locally relevant products and solutions. Participants on the PXIL platform benefit from its deep understanding of markets and its expertise in designing and delivering appropriate products.



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