REC Mechanism

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What is Renewable Energy Certificate (REC)

Renewable Energy Certificates (RECs) represent the attributes of electricity generated from renewable energy sources. These attributes are unbundled from the physical electricity and the two products—the attributes embodied in the certificates and the
commodity electricity—may be sold or traded separately. In other words, one REC represents that 1MWh of energy is generated from renewable sources. RECs are expected to become the currency of renewable energy markets because of their flexibility and the fact that they are not subject to the geographic and physical limitations of commodity electricity. RECs can be used by the obligated entities to demonstrate compliance with regulatory requirements, such as Renewable Purchase Obligations.

Who are obligated to purchase RECs

The entities mandated to purchase a defined quantum of renewable energy of their overall consumption are Obligated entities. Obligated entities may either purchase renewable energy or can purchase RECs to meet their Renewable purchase Obligation (RPO) set under Renewable Purchase Obligation of their respective States. Following entities are generally obligated in the State:

a. Distribution Licensees
b. Captive Consumers
c. Open Access users

Who are eligible to sell RECs

Eligible entities are those renewable generators who meet following criteria

a. Type of renewable source is approved by MNRE and respective State Commission.
b. Not have any Power Purchase Agreement (PPA) for the capacity related to such generation to sell electricity at a preferential tariff determined by the appropriate commission
c. Not having agreement to sell electricity to local distribution company at price not exceeding pooled cost of power purchase of that distribution company
d. Sells electricity to the
   i. distribution licensee of the area at a price not exceeding the pooled cost of power purchase of such distribution licensee, OR
   ii. to any other licensee or to an open access consumer at a mutually agreed price, or through power exchange at market determined price. Selling electricity to any entity other than local distribution company at market driven prices or otherwise

Categories of Certificates

There are two categories of certificates:

a. Solar Certificates issued to eligible entities for generation of electricity based on solar as renewable energy source.
b. Non-solar certificates issued to eligible entities for generation of electricity based on renewable energy sources other than solar.

Procedure for Application of Issuance of Renewable Energy Certificates
Step 1. Accreditation

Through this process State Nodal Agency (SNA) authorizes or endorses the RE Generator and recommends it for registration.

- Eligible Generator can get accredited not before 6 months prior to the proposed date of commissioning.
- Accreditation Certificate valid for 5 years from the date of accreditation.
- Separate applications for separate RE generation projects
- Minimum capacity of RE generation project to be 250 kW.

Step 2. Registration

Through this process, NLDC (Central Agency) registers their Generator as 'Eligible Entity' for its RE Generation Project.

- Eligible Generator can get registered not before 3 months prior to the proposed date of commissioning.
- Registration can only be done after receipt of the 'Certificate of Accreditation' for the RE Generation Project from the concerned State Agency.
- Registration is valid for 5 years from the date of Registration.

Click here to view the format of Application for Registration of Generating Company and Certificate of Registration

Step 3. Issuance of REC

Through this process State Nodal Agency (SNA) authorizes or endorses the RE Generator and recommends it for registration.

- The electricity generated from RE project is injected into the grid and sold to either a distribution licensee or open access consumer with whom it has contract or sold through the power exchange. The metering of quantum of Renewable Energy injected into the grid is approved by or recorded through energy accounting by SLDC.
- Eligible RE Generator to apply to NLDC to issue the RE certificates equivalent to the amount of electricity injected into the grid as certified by the SLDC. The application to be filed within three months from the date of renewable energy generated.
- Application can be made on a fortnightly basis, i.e., on the 1st day of the month or on 15th day of the month
- NLDC to issue RECs to Eligible RE Generator within 15 days as per SLDC and State Agency’s generation report.
- RECs to be sold within 365 days of issuance or else they will lapse.

Step 4. REC Trading at Exchange Platform

Once the RECs are issued to the RE Generator (Eligible Entity), sale/purchase of RECs amongst Eligible RE Generators and Obligated entities to be undertaken only through Power Exchanges.

- Trading through Closed double-sided auction on the last Wednesday of every month.
- Call of bids from 13:00 Hrs to 15:00 Hrs on the auction day (T-day).
- PXs to intimates details of maximum sale bids placed by each Eligible RE Generator to NLDC by 15:30 Hrs.
- NLDC to check availability of RECs with the eligible entity by 16:00 Hrs.
- Post-confirmation from NLDC, PXs to determine Market Clearing Price and Market Clearing Volume and send the details final cleared trades to NLDC for extinguishing of RECs sold in the records of NLDC by 17:00 Hrs.
Step 5. Surrender/Redeeming of RECs

The Obligated Entities purchase RECs through PXs and to surrender to SERC or other agency as specified by SERCs as to meet their RPO. NLDC (REC Registry) to maintain record of RECs sold and purchased.

Step 6. Compliance Reporting

Compliance Auditors to monitor and report the compliance of REC Regulations.

Step 7. Procedure for Application

Procedure for Application of Issuance of Renewable Energy Certificates:

The applicant shall apply for accreditation on web based application and shall also submit the same information in physical form with State Agency. For application visit to www.recregistryindia.in.

Designated Agency


Renewable Energy Purchase Obligation (RPO) and their compliance

RERC has issued the order to purchase the power from Renewable Sources to meet RPO in the area of Distribution by licensee by licensee, CPP and Open access consumers.

To download detailed order Click Here

Percentage RPO Obligation Specified by Commission

<table>
<thead>
<tr>
<th>Year</th>
<th>Wind Minimum</th>
<th>Wind Maximum</th>
<th>Biomass Minimum</th>
<th>Biomass Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>2.00</td>
<td>5.00</td>
<td>0.50</td>
<td>1.00</td>
</tr>
<tr>
<td>2007-08</td>
<td>4.00</td>
<td>6.00</td>
<td>0.88</td>
<td>1.75</td>
</tr>
<tr>
<td>2008-09</td>
<td>5.00</td>
<td>7.00</td>
<td>1.25</td>
<td>2.50</td>
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</table>
### Percentage RPO Obligation Amended by Commission

<table>
<thead>
<tr>
<th>Year</th>
<th>Wind</th>
<th>Biomass</th>
<th>Solar</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>4.50</td>
<td>1.00</td>
<td>0.50</td>
<td>6.00</td>
<td>6.00</td>
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<tr>
<td>2012-13</td>
<td>5.10</td>
<td>1.25</td>
<td>0.75</td>
<td>7.10</td>
<td>7.10</td>
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<tr>
<td>2013-14</td>
<td>5.70</td>
<td>1.50</td>
<td>1.00</td>
<td>8.20</td>
<td>8.20</td>
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</table>

### Percentage RPO Obligation achieved by Licensee

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Energy (in MU)</th>
<th>Wind Farm (in MU)</th>
<th>% of Total Energy (in MU)</th>
<th>Biomass (in MU)</th>
<th>% of Total Energy (in MU)</th>
</tr>
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<tbody>
<tr>
<td>2007-08</td>
<td>36779.41</td>
<td>627.01</td>
<td>1.70</td>
<td>139.19</td>
<td>0.38</td>
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<tr>
<td>2008-09</td>
<td>38952.73</td>
<td>765.60</td>
<td>1.97</td>
<td>174.26</td>
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<td>2009-10</td>
<td>44819.54</td>
<td>995.49</td>
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<td>178.09</td>
<td>0.40</td>
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<td>2010-11</td>
<td>46015.15</td>
<td>1387.84</td>
<td>3.02</td>
<td>176.67</td>
<td>0.38</td>
</tr>
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</table>

### Wind Power Projects Accredited by RREC

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of RE Generator</th>
<th>Village</th>
<th>District</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M/s Dhariwal Industries Limited</td>
<td>Selat</td>
<td>Jaisalmer</td>
<td>8.4</td>
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<tr>
<td>2</td>
<td>M/s Paharpur Cooling Towers Limited</td>
<td>Serawa</td>
<td>Jaisalmer</td>
<td>6.3</td>
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