

Appendix F

Renewable Purchase Obligation (RPO) for States

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The Renewable Purchase Obligation (RPO) is being implemented throughout the country to create demand for renewable energy. Under the Electricity Act 2003, the National Electricity Policy 2005 and the Tariff Policy 2006, State Electricity Regulatory Commissions (SERCs) are obligated to purchase a certain percentage of power from renewable energy sources. The Central Electricity Regulatory Commission (CERC) also plays a facilitatory role.

Subsequent to the launch of the Solar Mission, almost every state announced a solar specific percentage as a part of the overall RPO (Table F2 at the end of this appendix).¹ These are currently in the range of 0.25% to 0.5% and expected to go up to 3% by 2022 as envisaged in the Mission guidelines. These are complemented by solar-sector specific Renewable Energy Certificates (RECs).

Table F1 below provides more details of the relevant Acts and Policies, in the context of RPOs and RECs.

Table F1: Government Acts and Policies Acting as Drivers for Renewable Purchase Obligation (RPO) and Renewable Energy Certificates (RECs)

Act / Policy	Description
NAPCC ²	The National Action Plan of Climate Change (NAPCC) set the target of 5% renewable energy purchase for FY 2009-10 to be increased by 1% for the next 10 years. The NAPCC further recommends strong regulatory measures to fulfill these targets.
Electricity Act 2003 ^{3,4}	<p>The Electricity Act 2003 was a major legislation in the Indian power sector as it set the stage for competition and private investment by de-licensing generation, and providing open-access. It also set the stage for the state level commissions to promote generation of electricity from renewable sources.</p> <p>The Act promotes electricity generation from co-generation and renewable energy sources through the following enabling provisions:</p> <ul style="list-style-type: none"> (i) The State Electricity Regulatory Commissions (SERCs) to specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee (Sec.86 (1) (e)). (ii) The SERCs to promote co-generation and generation of electricity through renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any persons (Sec. 86(1) (e)). (iii) The terms and conditions for the determination of tariff to be prescribed by the SERCs to promote co-generation and generation of electricity from renewable sources of energy (Sec. 61(h)). (iv) The National Electricity Policy (NEP) to be formulated by the central government, in consultation with the state governments for development of the power system based on optimal utilization of resources including renewable sources of energy (Sec. 3(1)). (v) The Central Government to prepare a national policy, in consultation with the state governments, permitting stand alone systems (including those based on renewable sources of energy and other nonconventional sources of energy) for rural areas (Section 4). <p>Subsequent to the enactment of the Act, the SERCs have specified a Renewable Purchase Obligation (RPO) and have specified feed-in tariff and other terms and conditions to promote co-generation and generation of electricity from renewable energy sources.</p>

National Electricity Policy 2005 ⁵	The National Electricity Policy 2005 stipulates that: progressively the share of electricity from non-conventional sources would need to be increased; such purchase by distribution companies shall be through competitive bidding process; considering that it will take some time before non-conventional technologies compete, in terms of cost, with conventional sources, the Central Electricity Regulatory Commission may determine appropriate differential tariffs to promote these technologies.
National Tariff Policy 2006 ^{6,7}	The National Tariff Policy 2006 mandates that SERCs purchase a minimum percentage of energy from renewable sources, taking into account the availability of such resources in the region and its impact on retail tariffs. It was further revised to include solar power purchase obligation of 0.25% in phase 1 and going up to 3% by 2022; to meet solar power obligations, state utilities can also purchase solar-specific Renewable Energy Certificates (RECs) from participating projects.
Renewable Purchase Obligation ⁸	<p>The Renewable Purchase Obligation (RPO) is being implemented throughout the country for creating demand for renewable energy. Under the Electricity Act 2003, the National Electricity Policy 2005 and the National Tariff Policy 2006, SERCs are obligated to purchase a certain percentage of power from renewable energy sources (in the area of a distribution licensee).</p> <p>Various State Commissions have specified the renewable purchase obligation (RPO) for their distribution companies as required under section 86(1)(e) of the Electricity Act. They have also determined the tariffs of renewable sources generation based on different technologies. However, the specified RPO varies from 1% to 10% across the country. At the same time there is wide divergence in the tariffs of different technologies set by different Regulatory Commissions.</p>
JNNSM (RPO - Solar) ⁹	<p>Although in the long term, the Mission would seek to establish sector-specific legal and regulatory frameworks for the development of solar power, in the short term, it would be necessary to embed the activities of the Mission within the existing policy frameworks.</p> <p>Subsequent to the launch of the Solar Mission, almost every state announced a solar specific percentage as a part of the overall RPO (Solar-RPO). These are currently in the range of 0.25% to 0.5% and expected to go up to 3% by 2022 as envisaged in the Mission guidelines.</p> <p>These solar purchase obligations are complemented with solar-specific Renewable Energy Certificates (solar-RECs), which allow utilities and solar power generation companies to buy and sell these certificates to meet their solar power purchase obligations.</p>
Indian Electricity Grid Code-2010 ¹⁰	Indian Electricity Grid Code 2010 (IEGC) has also incorporated special provisions of connection, operations, forecasting, scheduling and commercial settlement for wind and solar generating plants.

¹ "Regulatory Affairs & Business Development" (pages 17 - 19), *Enercon (India) Limited*, <http://www.enerconindia.net/pdf/Regulatory-Governance.pdf> (accessed April 27, 2012).

² "National Action Plan on Climate Change", *Government of India, Prime Minister's Council on Climate Change*, www.google.co.in/url?sa=t&rct=j&q=national+action+plan+on+climate+change&source=web&cd=1&ved=0CEUQFjAA&url=http%3A%2F%2Fpmindia.nic.in%2FClimate%2520Change.doc&ei=A0IHT-2T0suxrAeHufCfDw&usq=AFQjCNGlr6SxMyGu4ofOK5IcCKLIWArm5A&sig2=u3PIHPw5qrYOoDrSeax (accessed April 27, 2012).

³ S.K. Soonee et al., "Renewable Energy Certificate Mechanism in India", *16th National Power Systems Conference*, December 15-17, 2010, npsc2010.uceou.edu/papers/7116.pdf (accessed April 27, 2012).

⁴ "CERC Regulation on Renewable Energy Certificates", *Central Electricity Regulatory Commission*, January 14, 2010, www.cercind.gov.in/Regulations/CERC_Regulation_on_Renewable_Energy_Certificates_REC.pdf (accessed April 27, 2012).

⁵ S.K. Soonee et al., "Renewable Energy Certificate Mechanism in India", *16th National Power Systems Conference*, December 15-17, 2010, npsc2010.uceou.edu/papers/7116.pdf (accessed April 27, 2012).

⁶ S.K. Soonee et al., "Renewable Energy Certificate Mechanism in India", *16th National Power Systems Conference*, December 15-17, 2010, npsc2010.uceou.edu/papers/7116.pdf (accessed April 27, 2012).

⁷ "National Electricity Policy", *The Gazette of India*, February 12, 2005, www.powermin.nic.in/whats_new/national_electricity_policy.htm (accessed April 27, 2012).

⁸ "Policies on Renewables: Report", *Forum of Regulators, Central Electricity Regulatory Commission*, November 2008, ireda.gov.in/Trifforder/Proceedings/II/Forum%20of%20reg.Policies%20on%20Renewables-oct.08.pdf (accessed April 27, 2012).

⁹ "Jawaharlal Nehru National Solar Mission: Towards Building Solar India", *Government of India*, india.gov.in/allimpfrms/alldocs/15657.pdf (accessed April 27, 2012).

¹⁰ "Grid Code", *Central Electricity Regulatory Commission*, April 28, 2010, www.nldc.in/docs/gridcode.pdf (accessed April 27, 2012).

20	UTTARAKHAND	Final-06 July 2010-RETO	Non Solar	4.00%	4.50%	5.00%														
			Solar	0.00%	0.03%	0.05%														
21	UTTAR PRADESH	Final-17 Aug 2010	Non Solar	3.75%	4.50%	5.00%														
			Solar	0.25%	0.50%	1.00%														
22	WEST BENGAL	Final-10 Aug 2010		2.00%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%								
23	JERC for Goa & all Uts		Non Solar	0.75%	1.70%	2.60%														
			Solar	0.25%	0.30%	0.40%														
24	JERC for Manipur & Mizoram	Final-05 May 2010	Manipur -Non Solar	1.75%	2.75%	4.75%														
			Manipur -Solar	0.25%	0.25%	0.25%														
			Mizoram -Non Solar	4.75%	5.75%	6.75%														
			Mizoram -Solar	0.25%	0.25%	0.25%														

“Regulatory Affairs & Business Development” (pages 17 - 19), *Enercon (India) Limited*, <http://www.enerconindia.net/pdf/Regulatory-Governance.pdf> (accessed April 27, 2012).