

Renewable Purchase Obligation (RPO) Analysis

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The article showcases the RPO targets of Indian States and also analyses the RPO regulation for captive users in different states.

STATE WISE SOLAR RPO TARGETS

States	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Andhra Pradesh	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%					
Arunachal Pradesh	Not Regulation Issued for the RPO by the Power Department										
Assam	0,10%	0,15%	0,20%	0,25%							
Bihar	0,25%	0,25%	0,50%	0,75%	1,00%	1,25%	1,50%	1,75%	2,00%	2,50%	2,00%
Chhattisgarh	0,25%	0,50%									
Delhi	0,10%	0,15%	0,20%	0,25%	0,30%	0,35%					
JERC(Goa & UT)	0,30%	0,40%									
Gujrat	0,50%	1,00%									
Haryana	0,00%	0,05%	0,75%								
Himachal Pradesh	0,01%	0,25%	0,25%	0,25%	0,25%	0,25%	0,50%	0,75%	1,00%	2,00%	2,00%
Jammu & Kashmir	0,10%	0,25%									
Jharkhand	0,50%	1,00%									
Karnataka	0,25%										
Kerala	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%	0,25%
Madhya Pradesh	0,40%	0,60%	0,80%	1,00%							
Maharashtra	0,25%	0,25%	0,50%	0,50%	0,50%						
Manipur	0,25%	0,25%									
Mizoram	0,25%	0,25%									
Meghalaya	0,30%	0,40%									
Nagaland	0,25%	0,25%									
Orissa	0,10%	0,15%	0,20%	0,25%	0,30%						
Punjab	0,03%	0,07%	0,13%	0,19%							
Rajasthan	0,50%	0,75%	1,00%								
Sikkim	Not Regulation Issued for the RPO by the Power Department										
Tamil Nadu	0,05%										
Tripura	0,10%	0,10%									
Uttarakhand	0,03%	0,05%									
Uttar Pradesh	0,50%	1,00%									
West Bengal			0,25%	0,30%	0,40%	0,50%	0,60%				

(Source: SERCs Order on RPO Regulations)

STATE - WISE ANALYSIS OF RPO REGULATION FOR CAPTIVE USERS

State	Regulation for Captive Users	Definition of 'renewable Energy' as per the commission order	Remarks
Andhra Pradesh	Every consumer owning a cap-tive generating plant of in-stalled capacity of one (1) MW and above shall purchase corresponding percentage of renewable energy as defined by the commission.	'Renewable energy sources' means renewable sources such as Co-generation (from renewable sources of energy like bagasse), Mini Hydel, Municipal Waste, Industrial Waste, Biomass, Wind, Solar including its integration with combined cycle, bio-fuel cogeneration, Geo-thermal, Tidal and such other sources as recognized or approved by MNRE	Purchase of energy from renewable energy sources shall also be treated as fulfilment of the Renewable Power Purchase Obligation (RPO) prescribed herein
Arunachal Pradesh	Not Applicable	Not Applicable	Not Applicable
Assam	'Obligated entity' means the distribution licensee, consumer owning the captive power plants and open access consumer in the state of Assam which is mandated to fulfill renewable purchase obligation under these Regulations	'Renewable energy sources' means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity

STATE – WISE ANALYSIS OF RPO REGULATION FOR CAPTIVE USERS

State	Regulation for Captive Users	Definition of 'renewable Energy' as per the commission order	Remarks
Bihar	Every entity consuming electricity (a) generated from conventional Captive Generating Plant having capacity of 5MW and above for his own use and or	Renewable Energy Sources' means nonconventional, renewable electricity generating sources such as small/mini/micro/ hydel, wind solar, biomass and bagasse based cogeneration, urban/municipal waste, or such other sources, (which are generally inexhaustible and can be replenished in a short period of time) as approved by the Ministry of New and Renewable Energy, Government of India or by the state of Bihar;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity
Chhattisgarh	Any person who is a captive user (from other than renewable energy based power generating plant) with connected load of 1 MW and above (or such other capacity as may be stipulated by order(s) of the Commission from time to time); shall be subjected to minimum percentage of Renewable Purchase Obligation (RPO) to the extent of its consumption met through such captive source.	Renewable Energy Sources means renewable sources such as hydel, wind, solar, biomass including bagasse, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	
Delhi	The regulations shall apply to any Captive user, using other than renewable energy sources exceeding 5 MW	"Renewable Energy Sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	
JERC (Goa & UT)	Obligated entity is defined as entity mandated under clause (e) of subsection (1) of section 86 of the Act to fulfill the renewable purchase obligation obligation (RPO)	Renewable Energy Sources" in this context means electricity generating sources recognized or approved by the MNRE.	Such obligation to purchase electricity from renewable energy sources shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity
Gujarat	The regulations shall apply to any person consuming electricity generated from conventional Captive Generating Plant having capacity of 5 MW and above for his own use.	'Renewable energy sources' in this context means nonconventional, renewable electricity generating sources such as mini/ micro hydel, wind, solar, biomass and bagasse based cogeneration, urban/municipal waste, or such other sources, (which are generally inexhaustible and can be replenished in a short period of time) as approved by the Ministry of New and Renewable Energy, Government of India or by the State of Gujarat;	The RPO regulations, excluding clause 8 (Obligation for captive/open access consumers shall come into force on the date of their publication in the Gazette. Clause 8 of these Regulations shall come into force from a date to be notified by the Commission separately. Commission is yet to notify the date.
Karnataka	Any person consuming electricity generated from captive generating plant or plants, using other than renewable sources and having a total capacity exceeding 5 MW	"Renewable sources of energy" means nonconventional, renewable electricity generating sources such as minihydel, microhydel, wind, solar, biomass (including bagasse based cogeneration), urban/ municipal waste, or such other sources as approved by the MNRE, Government of India, or Government of Karnataka	
Kerala	'Obligated entity' means the distribution licensee, consumer owning the captive power plants and open access consumer in the State of Kerala, which is mandated to fulfill renewable purchase obligation under these Regulations	"Renewable energy sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by the concerned obligated entity
Madhya Pradesh	'Obligated Entity' means the entity such as the Distribution Licensees, Captive Consumers and Open Access Consumer who are mandated to fulfill Renewable Purchase Obligation under these Regulations	'Renewable Energy Sources' means renewable sources such as small Hydro, mini Hydro, Wind, Solar, Biomass, Bio Fuel Cogeneration, Urban/Municipal waste and such other sources as approved by MNRE;	Obligation to purchase Renewable Energy shall be inclusive of the purchases, if any, from Renewable Energy Sources already being made by Obligated Entities.
Maharashtra	Any person who owns a grid connected Captive Generating Plant with installed capacity of 1 MW and above (or such other capacity as may be stipulated from time to time) and consumes electricity generated from such plant for his own use; shall be subjected to minimum percentage of RPO to the extent of his consumption met through such captive source.	Renewable Energy Sources means renewable sources such as mini hydro, micro hydro, small hydro, wind, solar, biomass including bagasse, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Provided further that captive user(s) consuming power from grid connected fossil fuel based co generation plants, are exempted from applicability of RPO target and other related conditions as specified in these Regulations.
Manipur Mizoram	The Regulations shall apply to any other person consuming electricity of 1MW and above generated from conventional Captive Generating Plant for his own use	"Renewable Energy Sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity

STATE – WISE ANALYSIS OF RPO REGULATION FOR CAPTIVE USERS

State	Regulation for Captive Users	Definition of 'renewable Energy' as per the commission order	Remarks
Meghalaya	'Obligated entity' means a distribution licensee, a consumer owing a captive power plant and an open access consumer in the State of Meghalaya which is mandated to purchase electricity from renewable energy sources and to fulfill the requirements under these regulations.	'Renewable energy sources' means renewable sources such as small hydro, wind, solar including its integration with combined cycle biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by the Ministry of New and Renewable Energy;	
Nagaland	The regulations shall apply to any other person consuming electricity of 1MW and above generated from conventional Captive Generating Plant for his own use	"Renewable Energy Sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity;
Orissa	The regulation shall be applicable to any other person consuming electricity generated from conventional Captive Generating Plant having capacity of 5 MW and above for his own use	"Renewable energy sources" means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste, and such other sources as recognized or approved by MNRE;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity Orissa has a separate RPO for Co-generation based plants also.Orissa has a separate RPO for Cogeneration based plants also
Punjab	Obligated entity is defined as entity mandated under clause (e) of subsection (1) of section 86 of the Act to fulfill the renewable purchase obligation Obligation (RPO)	'Renewable energy sources' means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and such other sources as recognized or approved by MNRE;	Such obligation to purchase electricity from renewable energy sources shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity
Rajasthan	The regulations shall be applicable to any captive consumer of a Captive Power Plant of installed capacity one MW and above.	Renewable energy sources means and includes nonconventional renewable generation sources such as mini hydel, wind, solar including solar component of its integration with combined cycle, biomass, biofuel cogeneration, urban or municipal waste and other such sources as approved by MNRE, excluding the nuclear power stations and hydel power stations of capacity above 25 MW.	Separate RPO for CPP/Open access consumers
Sikkim	Not Available	Not Available	
Tamil Nadu	RPO compliance shall be implemented for captive and open access consumers whose sanctioned demand is 1MVA and above from 01-04-2012	"New and renewable sources" means the nonconventional, renewable electricity generating sources such as mini / micro hydel, wind, solar, biomass, bagasse based cogeneration, urban/municipal waste, or other such sources as approved by the Government of India or Government of Tamil Nadu which are generally inexhaustible and can be replenished in a short period of time;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity
Tripura	The regulations shall apply to any other person consuming electricity generated from conventional Captive Generating Plant having capacity of 5 MW and above for his own use	Renewable energy sources means renewable sources such as small hydro, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal waste and as such other sources as recognized or approved by MNRE;	
Uttarakhand	"Obligated Entity" means the distribution licensee, captive user and open access consumer in the State, which is mandated to fulfill renewable purchase obligation under these regulations	"Renewable Energy Sources" means renewable electricity generating sources such as small hydro, wind, solar, biomass, bio fuel, cogeneration (including bagasse based cogeneration), urban or municipal waste and such other sources as recognized or approved by MNRE or State Government;	Such obligation to purchase renewable energy shall be inclusive of the purchases, if any, from renewable energy sources already being made by concerned obligated entity;
Uttar Pradesh	The regulations shall be applicable to any captive user(s) who consumes electricity generated from its grid connected captive generating plant having installed capacity of 1 MW and above (or such other capacity as may be stipulated by the Commission from time to time by an order)	"Renewable energy sources" means renewable electricity generating sources such as small hydro, wind, solar, biomass, bio fuel cogeneration (including bagasse based cogeneration), urban or municipal waste and such other sources as recognized or approved by MNRE or State Government;	Obligation to purchase renewable energy shall be inclusive of the purchases, if any, already being made from renewable energy sources by the concerned obligated entity
West Bengal	Not applicable to captive users as per draft regulation dated 10th August 2012	'Renewable source' means renewable electricity generating sources such as hydro generating station, wind, solar, biomass based on 100% producer gas on combustion route, urban / municipal waste, industrial waste, geothermal, tidal, ocean thermal energy conversion (OTEC) or other such sources as approved by the MNRE	Provided that consumption procurement of renewable and/or cogeneration power from own generation or from other sources at the price above the capping price, fixed by the Commission where applicable shall not be considered as eligible quantum for fulfillment of RPO.