

# Policy on Co-generation and Generation of Electricity from Renewable Sources of Energy, Dated: 05.06.2012, West Bengal

Sl. No.	Description	Summary				
1.	<b>Nodal Agency</b>	West Bengal Renewable Energy Development Agency				
2.	<b>Objectives</b>	<p><b>Long-term objectives:</b></p> <p>a) Facilitating enhanced contribution of electricity generation from RE resources;</p> <p>b) Facilitating and sustaining private sector investment in the development of renewable energy and</p> <p>c) Adopting / evolving RE technologies and facilitating commercial development of the same e.g. wind, solar, tidal, geothermal etc;</p> <p><b>Short-term objectives:</b></p> <p>a) Identifying technology-wise thrust areas and strategies for RE in the State;</p> <p>b) Developing a Roadmap for each of the RE technologies;</p> <p>c) Facilitating RE investments in the public as well as the private sector;</p> <p>d) Charting an energy-mix and framing a timeline in synch with the RPOs;</p> <p>e) Developing future RE technologies via pilot projects, and</p> <p>f) Framing the basic building blocks to develop necessary regulatory, administrative, infrastructural and institutional mechanisms.</p>				
3.	<b>Target</b>	<b>RE Source</b>	<b>Potential (in MW)</b>	<b>Existing Installed Capacity (in MW)</b>	<b>Target Cumulative Capacity (in MW)</b>	
					<b>2017 (End of the 12<sup>th</sup> Plan)</b>	<b>2022 (End of the 13<sup>th</sup> Plan)</b>
		Wind Power	450	2	75	450
		Mini & Small Hydro	394	97	220	394
		Co-generation 1	6001	69	355	600
		Biomass	662	16	240	662
		Waste to Energy 2	100	7	50	100
		Solar	Under Preparation	2	100	500
		Total	2206	193	1040	2706
4.	<b>Wind Farms</b>	<p>1. Government-owned wasteland in areas having minimum annual mean Wind Power Density (WPD) of 200 Watt/m<sup>2</sup> measured at a hub height of 50 meters and using new generation wind turbine generators will be offered for setting up of wind projects.</p> <p>2. The CDM benefits would be allowed to directly accrue to the developer.</p>				

5.	<b>Small, Mini and Micro Hydel Projects</b>	<ol style="list-style-type: none"> <li>1. The Nodal Agency will undertake studies to prepare the DPR for SHP in a time bound manner and will offer the identified sites for development.</li> <li>2. The mini-hydro proposals, which involve diversion of water flow, resulting in drying up of a stream/river stretch, will not be considered for development.</li> </ol>
6.	<b>Biomass Projects</b>	<ol style="list-style-type: none"> <li>1. In West Bengal, rice husk is a primary feedstock for biomass projects. However, other forms of agricultural waste like wood, straw, maize, energy plantation, etc. are also being considered for generating biomass power in West Bengal.</li> <li>2. For this, barren Government land, waste land, as well as degraded forest land shall be made available.</li> <li>3. The two-part tariff mechanism for biomass projects with partial fixed cost recovery linked to project availability and the variable cost linked to the fuel cost shall be considered for implementation.</li> </ol>
7.	<b>Small-Scale Biomass Power Projects Using Gasifiers</b>	<ol style="list-style-type: none"> <li>1. The power generated is primarily used to meet the captive demand of the rice mills.</li> <li>2. Presently, in West Bengal, 173 rice-husk-based gasifier systems with an aggregate capacity of 3.5 MW have been installed under the MNRE initiated programme for commercial establishments.</li> </ol>
8.	<b>Waste to Energy</b>	<ol style="list-style-type: none"> <li>1. The priority areas for development of power projects will be identified in line with the National Master Plan for Development of Waste-to-Energy in India.</li> <li>2. Use of bio degradable waste is to be encouraged for generation of electricity through waste-to-energy power projects as well as preventing soil degradation of the waste dumping ground.</li> </ol>
9.	<b>Co-generation</b>	<p>The Policy envisages that iron and steel, fertilizer and chemical industries having 2,000 KVA and above as connected load, should produce at least 5 per cent of their requirement through captive power plants employing co-generation technology.</p>
10.	<b>Solar Photovoltaic</b>	<ol style="list-style-type: none"> <li>1. Apart from grid-connected solar power, the State is targeting huge capacity addition through rooftop and smaller solar installations.</li> <li>2. The reactive power charges as well as unscheduled interchange charges shall be borne by the co-generation &amp; renewable energy source developers / distribution licensee / consumers, as the case may be, and as per applicable Regulations of the Commission.</li> </ol>
11.	<b>Rooftop and Small Solar PV Installations</b>	<ol style="list-style-type: none"> <li>1. Depending on the rooftop area available and building loads, these solar systems can be as large as 5-10 MW and can power a majority of the building's non-fluctuating loads.</li> <li>2. Urban local bodies (Municipal Corporations, Utilities, City, Corporations) will form an essential part of the comprehensive solar Policy for cities.</li> <li>3. It shall be mandatory for all the public buildings to have solar devices to meet electricity requirements and other applications.</li> <li>4. All existing and upcoming commercial and business establishments having more than 1.5 MW of contract demand will be required to install solar rooftop systems to meet at least 2% of their total electrical load.</li> <li>5. Further, all the existing and upcoming schools and colleges, hospitals, large housing societies and Government establishments having a total contract demand of more than 500 KW will be required to install solar rooftop systems to meet at least 1.5% of their total electrical load.</li> </ol>

12.	<b>Decentralised Distributed Generation (DDG)</b>	All remote and non-electrified villages where grid access is technically and commercially not viable shall be electrified based on DDG.
13.	<b>Evacuation Infrastructure</b>	<ol style="list-style-type: none"> <li>1. For grid connectivity of RE projects, the inter-connection point of the renewable energy generation facility with the transmission or distribution system will be as per Regulations of the Commission.</li> <li>2. For creating pooling stations, the RE projects expected to come up till the year 2020 should be considered, provided that, the evacuation infrastructure cost beyond the inter-connection point shall be borne by the licensees and shall be recovered from the consumers as per suitable pricing framework developed by the Commission (WBERC).</li> <li>3. The co-generation and renewable energy sources excepting rooftop solar PV sources shall be connected to the State grid at a voltage level of 132 kV or 66 kV or 33 kV or 11 KV or 6 KV subject to technical suitability determined by the licensee.</li> <li>4. Rooftop solar PV sources of capacity ranging between 100 kW – 2 MW shall be allowed connectivity at LV or MV or 6 kV or 11 kV of the distribution system of the licensee as considered technically and financially suitable by the licensee and the developer.</li> </ol>
14.	<b>Time Limit for Projects</b>	It is mandatory for the Developer to start the work of the project within six months of getting all the necessary statutory clearance.
15.	<b>Land for R.E. Project Development</b>	<ol style="list-style-type: none"> <li>1. For cases where Government vested land is available, the permission for use of such land will be given for 30 years or the project life whichever is less.</li> <li>2. For projects on private land the developer will arrange the entire required quantum of land through direct purchase from / suitable agreement with the land owner. R.E. projects may not require conversion of private /agricultural land to non agriculture purposes subject to necessary government orders passed for these purposes.</li> </ol>
16.	<b>Clearance</b>	<ol style="list-style-type: none"> <li>1. The Nodal Agency will act as a Single Window for obtaining assistance from all line Departments.</li> <li>2. The Nodal Agency will coordinate and pursue with all the concerned Departments for speedy approvals and clearances within 90 days.</li> <li>3. In case, the project involves clearance from the MoEF, necessary approvals and clearances will be arranged and coordinated by the Nodal Agency within 120 days.</li> </ol>
17.	<b>Green Energy Fund</b>	<ol style="list-style-type: none"> <li>1. In order to finance various initiatives for development of RE in the State, a Green Energy Fund shall be created by the Nodal Agency.</li> <li>2. The Nodal Agency should use this fund for promotion of RE which will generate sufficient revenue to make the fund self-sustainable.</li> <li>3. The Nodal Agency shall levy a charge for providing administrative support for obtaining statutory clearance at various levels.</li> <li>4. The specific details of the chargeable expenses that shall be recovered upfront from the selected developer shall be specified in the bid documents. Such amount earned will be deposited in the Green Energy Fund.</li> <li>5. Eighty (80)% of the penalty imposed for violation of any statutory clearances shall also be channelled into the Green Fund. Moreover, 50% of the penalty imposed for not meeting the RPO by the obligated entities shall also be fed into the Green Fund.</li> </ol>

<b>18.</b>	<b>Budgetary Support</b>	The budgetary allocation shall be done in such a way that separate funds shall be created and parked for different RE technologies.
<b>19.</b>	<b>Open Access</b>	Any person generating electricity from co-generation or renewable sources can opt for open access, subject to availability of adequate transmission facility to any transmission licensee's system within the State on payment of various charges as specified.
<b>20.</b>	<b>RPO</b>	The State Government is committed to procure and utilize the renewable energy power as required and determined by the WBERC.
<b>21.</b>	<b>Net Metering</b>	<ol style="list-style-type: none"> <li>1. Net metering facility will be extended to solar power systems installed on rooftops and connected to the electrical grid to feed excess power back to the grid.</li> <li>2. Net metering facility for solar rooftop PV should be provided along with a separate meter to get a clear assessment of consumption and generation of electricity by the consumer.</li> </ol>
<b>22.</b>	<b>Incentives</b>	<ol style="list-style-type: none"> <li>1. Exemption of demand cut to the extent of 50% of the installed capacity assigned for captive use purpose will be allowed subject to the Regulations of the Commission.</li> <li>2. The host and obligated distribution utilities shall provide revolving Letter of Credit from a nationalized bank as a payment security mechanism for all RE projects.</li> <li>3. In case of RE project construction in very remote areas, some infrastructural support including approach roads to the project site may be provided at Government cost.</li> </ol>
<b>23.</b>	<b>CDM Benefit sharing mechanism</b>	All risks, costs, and efforts associated with the availing of carbon credits shall be borne by the generating company. Further, the entire proceeds of carbon credit from approved CDM project, if any, shall be retained by the generating company.
<b>24.</b>	<b>Social and Environmental Issues</b>	<ol style="list-style-type: none"> <li>1. The developer shall make suitable financial provisions for mitigation of adverse impacts according to the approved Environment Impact Assessment Plan and Environment Management Plan.</li> <li>2. The Developer/Government acquiring land shall provide an amount not exceeding one percent (1%) of the project cost for :- <ol style="list-style-type: none"> <li>a) the rehabilitation and resettlement of the persons displaced from the project area</li> <li>b) local development activities like building of schools, hospitals etc.</li> </ol> </li> </ol>