CENTRAL ELECTRICITY REGULATORY COMMISSION

(Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulation 2012 with Amendments Dated 18.3.2014 and 5.1.2015

Notification dated 06-02-2012

Sl. No.	Description	Summary
1.	**Short Title and Commencement**	(i) Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulation 2012. (ii) Regulations shall come into force on 01-04-2012 and unless reviewed earlier or extended by the Commission shall remain in force for a period of 5 years from the date of commencement. (iii) First Amendment notified on 18-03-2014 (iv) Second Amendment notified on 05-01-2015
2.	**Definitions and Interpretation**	'Useful Life' in relation to a unit of a generating station including evacuation system shall mean the following duration from the date of commercial operation (COD) of such generation facility namely; (i) Wind energy power project – 25 years (ii) Biomass Power Project with Rankine Cycle Technology – 20 years (iii) Non-fossil fuel Co-generation Plant – 20 years (iv) Small Hydro Plant – 35 years (v) Solar PV /Solar Thermal Power Plant – 25 years (vi) Biomass Gasifier based power project – 20 years (vii) Biogas based power project – 20 years
3.	**Scope and Extent of Application**	These Regulations shall apply in all cases where tariff, for a generating station or unit thereof based on renewable sources of energy, is to be determined by the Commission under section 62 read with section 70 of the Act. Provided that in cases of Wind, small Hydro projects, Biomass based on Rankine Cycle, non-Fossil fuel based Co-generation projects, Solar PV, Solar Thermal Power Projects, Biomass Gasifier and Biogas power project, these Regulations shall apply subject to fulfillment of eligibility criteria specified in Regulation 4 of the Regulations.
4.	**Eligibility Criteria**	(i) Wind Power Projects – Using new Wind turbine generators located at sites approved by State Nodal Agency/State Govt. (only for zoning purpose) (ii) Small Hydro Project located at the site approved by State Nodal Agency/State Govt. using new plant & machinery and installed power plant capacity to be lower than or equal to 25 MW at single location. (iii) Biomass Power Plant Based on Rankine Cycle technology – Biomass power project using new plant and machinery based on Rankine Cycle technology and using Biomass fuel sources provided use of Fossil fuel is restricted upto 15% in terms of calorific value on annual basis till 31-03-2017. (iv) Non Fossil fuel based Co-generation project – The project shall qualify to be non fossil fuel based Co-generation project, if it is using new plant and machinery and is in accordance with the definition and also meets the qualifying criteria outlined below: Topping Cycle Mode of Co-generation – Any facility that uses non-fossil fuel input for power generation and also utilizes the thermal energy generated for useful heat applications in other industrial activities simultaneously. Provided that for the Co-generation facility to qualify under the topping cycle mode, the sum of useful power output and one half the useful thermal output (steam) be greater than 45% of the facilities energy consumption during season. (v) Solar PV and Solar Thermal Power Project – Based on technologies approved by MNRE. (vi) Biomass Gasifier based Power Project – The project shall qualify to be termed as a Biomass gasifier based power plant, if it is using new plant and machinery and having a grid connected system that uses 100% producer gas engine, coupled with gasifier technologies approved by MNRE.

		(vii) Biogas Based Power Project – The project shall qualify to be termed as a biogas based power plant if it is using new plant and machinery and having grid connected system that uses 100% Biogas fired engine coupled with Biogas technology for Co-digesting agriculture residues, manure and other bio waste as may be approved by MNRE.
5	**Control Period or Review Period**	Five years, of which the first year shall be the financial year, shall be 2012-13 provided: (a) The benchmark capital cost for Solar PV and Solar thermal to be reviewed annually by the commission. (b) Tariff determined for projects commissioned during the control period shall continue to be applicable for the entire duration of the Tariff Period (c) Revision in Regulations for next control period to be undertaken at least six months prior to end of the first control period. (d) In case regulations for next control period are not notified until commencement of next control period, the tariff norms shall continue to remain applicable until notification of the revised Regulations subject to adjustments as per revised Regulations.
6	**Tariff Period**	(i) 13 years except in case of SHP below 5MW, Solar PV and Solar Thermal, Biomass gasifier and Biogas based power Projects. (ii) 35 years for SHP below 5MW (iii) 25 years for Solar PV and Solar Thermal Power Projects (iv) 20 years for Biomass gasifier and Biogas based power projects (v) Tariff period to be considered from the date of commercial operation of RE generating stations (vi) Tariff determined to be applicable only for the duration of the tariff period as per (i), (ii), (iii) & (iv) above
7	**Project Specific Tariff**	(1) To be determined by the commission on case to case basis for the following type of projects. (i) Municipal Solid waste projects (ii) Any other new renewable energy technologies approved by MNRE (iii) Other hybrid projects include renewable – renewable or renewable conventional sources for which renewable technology is approved by MNRE. (iv) Solar PV and Solar Thermal projects, if project developer opts for project specific tariff, provided the commission shall be guided by the provisions of these Regulations. (v) Hybrid Solar Thermal Power Plants (vi) Biomass project other than that based on Rankine Cycle technology application with water cooled condenser. (1) (a) Determination of project specific tariff to be in accordance with terms and conditions of the Commission. (b) Provided the financial norms of these regulations except for capital cost shall be ceiling norms.
8.	**Petition and Proceedings for determination of Tariff**	(i) Commission to determine the generic tariff on the basis of suo-motu petition at least six months in advance at the beginning of each year of the control period as per norms specified in these Regulations. (ii) The petition for determination of project specific tariff shall be accompanied by fee with following information. (a) Information in forms 1.1, 1.2, 2.1 and 2.2 of Regulations (appended in these Regulations) as the case may be. (b) Detailed project report (c) A statement of all applicable terms and conditions and expected expenditure for the period for which tariff is to be determined. (d) A statement containing full details of calculation of any subsidy and incentive received, due or assumed to be due from the Central Government and/or State Government. This statement shall also include the proposed tariff calculated without consideration of the subsidy and incentive.

9.	**Tariff Structure**	Single part tariff consisting of the following fixed cost components: (a) Return on equity (b) Interest on loan capital (c) Depreciation (d) Interest on Working capital (e) Operation and maintenance expenses Note: Fuel cost component to be added to the above for Biomass and non-fossil co-generation. Single part tariff with two components, fixed cost component and fuel cost.
10.	**Tariff Design**	(i) The generic tariff shall be determined on levelised basis for the Tariff Period. For single part tariff with two components, tariff shall be determined on levelised basis considering the year of commissioning of the project for fixed cost component and on year of operation basis for fuel cost component. (ii) For levelised tariff computation, the discount factor equivalent to weighted average cost of capital shall be considered. (iii) Levelisation shall be carried out for the useful life while tariff shall be specified for the period equivalent to Tariff Period.
11.	**Despatch Principles for Electricity generated from Renewable Energy Sources**	(i) All RE Power Plants except Biomass Power Plants with installed capacity of 10 MW and above, and non- fossil fuel based co-generation plants to be treated as "MUST-RUN" power plants and not subjected to merit order despatch principles. (ii) Biomass Power Plants of 10 MW installed capacity and above, and non-fossil fuel based co-generation projects to be subjected to scheduling and dispatch code and specified under Indian Electricity Grid Code (IEGC) and UI settlement. (iii) Wind power generation plant 10 MW and above and connection point is 33 kV and above shall also be subjected to scheduling and despatch code as specified under Indian Electricity Grid Code (IEGC) 2010.
	Financial Principles	
12	**Capital Cost**	(i) All capital works including plant and machinery, civil works, erection and commissioning, financing, interest during construction and evacuation infrastructure upto inter-connection point. (ii) For project specific tariff the generating company shall submit the break-up of capital cost items along with its petition as per "Petition and proceedings for determination of tariff" given at Sl. No. 8 above.
13	**Debt Equity Ratio**	(i) For generic tariff based on suo – motu petition it is 70:30 (ii) For project specific tariff: (a) If equity is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. (b) If equity is less than 30%, actual equity to be considered for determination of tariff. (c) Equity invested in foreign currency be designated in Indian rupees on the date of each investment.
14	**Loan and Finance Charges**	(i) Loan tenure - 12 years. This loan shall be considered gross normative loan. (ii) Interest rate- Calculation for interest to be worked out on gross normative loan. (a) Normative loan outstanding as on 1st April of every year shall be worked out by deducting the cumulative repayment upto March 31st of previous year from the gross normative loan. (b) For the computation of tariff, the normative interest rate shall be considered as average of State Bank of India (SBI) Base rate prevalent during the first six months of previous year plus 300 basis points. (c) The payment of loan to commence from 1st year of commercial operation of the project and shall be equal to the annual depreciation allowed.
15.	**Depreciation**	(i) Value of depreciation shall be the capital cost and depreciation be allowed upto 90% of capital cost with salvage value as 10%. (ii) Depreciation per annum to be on "Differential Depreciation Approach" over loan period beyond loan tenure over useful life computed on "Straight Line Method". Depreciation – 5.83% per annum for first 12 years of tariff period. Remaining depreciation to be spread over the remaining useful life of the project. (iii) Depreciation to be charged from the first year. In case commercial operation is for part of the year, depreciation to be charged on pro-rata basis.

16.	**Return on Equity**	(i) The value base for the equity shall be 30% of the capital cost or actual equity (in case of project specific tariff determination) as determined under Regulation 13. (ii) The normative Return on Equity shall be: (a) 20% per annum for the first 10 years (b) 24% per annum 11th year onwards
17.	**Interest on Working Capital**	Working capital requirement shall be computed as follows: (i) Wind Energy/Small Hydro Power/Solar PV/Solar Thermal (a) O&M expenses – for 1 month (b) Receivables – 2 months of energy charges for sale of electricity calculated on the normative CUF. (c) Maintenance spares – 15% of O&M expenses (ii) Biomass Power and Non-fossil fuel Co-generation (a) Fuel cost – four months equivalent to normative PLF (b) O&M expenses – for 1 month (c) Receivables – 2 months of fixed and variable (fuel) charges for sale of electricity calculated on the target PLF. (d) Maintenance spares – 15% of O&M expenses (iii) Interest on working capital shall be interest rate equivalent to average State Bank of India base rate prevalent during first six months of the previous year plus 350 basis points.
18.	**Operation and Maintenance Expenses**	(i) O&M expenses to comprise R&M, establishment including employee expenses, administrative and general expenses. (ii) O&M expenses to be for the Tariff Period based on normative O&M expenses as specified in these Regulations for the first year of control period. (iii) Normative O&M expenses during first year of control period (FY 2012-13) be escalated at the rate of 5.72% per annum over the Tariff Period.
19	**Rebate**	(i) For payment of bills of the generating companies through LC – 2% (ii) Payment other than through LC but within 1 month of presentation of bills by generating companies – 1%
20	**Late Payment Surcharge**	Payment of bills beyond 60 days from the date of billing – 1.25%
21	**Sharing of CDM Benefits**	Proceeds of carbon credit from approved CDM project to be shared between generating company and concerned beneficiaries as follows: (a) 100% by project developer in the first year after the date of commercial operation of the generating station. (b) 2nd year – share of beneficiaries @ 10% to progressively increase by 10% every year upto 50% and then to be shared in equal proportion, by the generating company and the beneficiaries.
22	**Subsidy or Incentive by the Central/ State Government**	To be taken into consideration including accelerated depreciation benefit, if availed, while tariff is determined under these Regulations. For income tax benefit on account of accelerated depreciation, if availed, the following principles to be considered. (i) Assessment of benefit shall be based on normative cost, accelerated depreciation rate as per relevant provision under income tax Act and corporate income tax rate. (ii) Capitalization of RE projects during second half of the fiscal year.
23.	**Taxes and Duties**	Tariff determined under these regulations shall be exclusive of taxes and duties as may be levied by the appropriate Government. Provided that the taxes and duties levied by the appropriate Government shall be allowed as pass through on actual incurred basis.
	Technology Specific Parameters for Wind Energy	
24.	**Capital Cost**	(i) To include cost of Wind turbine generator, its auxiliaries, land cost, site development charges, other civil works, transportation charges, evacuation cost up to inter-connection point, financing charges and IDC. (ii) Capital cost shall be Rs. 525 Lacs/MW (FY 2012-13 during first year of Control Period) and shall be linked to indexation formula as outlined in these regulations

<table>
<tr><td>25</td><td>Capital Cost Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
<tr><td>26</td><td>Capacity Utilization Factor (CUF)</td><td>(i) CUF norms for control period shall be as follows:
<table>
<tr><th>Annual Mean Wind Power Density (W/m2)</th><th>CUF (%)</th></tr>
<tr><td>Upto 200</td><td>20</td></tr>
<tr><td>200-250</td><td>22</td></tr>
<tr><td>250-300</td><td>25</td></tr>
<tr><td>300-400</td><td>30</td></tr>
<tr><td>>400</td><td>32</td></tr>
</table>
(ii) Annual mean Wind power density as specified in (i) above shall be measured at 80 meter hub-height.
(iii) For classification of Wind energy project into particular wind zone class as per MNRE guidelines for Wind measurement, Wind mast either put up by C-WET or private developer and validated by C-Wet would normally extended 10 kM from the mast point to all directions for uniform terrain and limited appropriate distance in complex terrain with regard to complexity of the site. Based on such validation by C-WET state nodal agency should certify zoning of proposed wind farm complex.</td></tr>
<tr><td>27.</td><td>Operation and Maintenance Expenses</td><td>Normative O&M expenses for first year of the control period (i.e. FY 2012-13) shall be Rs. 9 Lac per MW and escalated at the rate of 5.72% per annum over the tariff period to compute the levellised tariff.</td></tr>
<tr><td colspan="3">Technology Specific Parameters for Small Hydro Project (SHP)</td></tr>
<tr><td>28</td><td>Capital Cost</td><td>(i) The normative capital cost for SHP during first year of control period (FY 2012-13) shall be as follows:
<table>
<tr><th>Region</th><th>Project Size</th><th>Capital Cost (Rs. Lac/MW)</th></tr>
<tr><td rowspan="2">Himachal Pradesh, Uttrakhand and North Eastern States</td><td>Below 5MW</td><td>700</td></tr>
<tr><td>5MW to 25 MW</td><td>630</td></tr>
<tr><td rowspan="2">Other States</td><td>Below 5MW</td><td>550</td></tr>
<tr><td>5MW to 25 MW</td><td>500</td></tr>
</table>
(ii) The capital cost for subsequent years shall be determined on the basis of indexation formula as outlined under these Regulations.</td></tr>
<tr><td>29</td><td>Capital Cost Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
<tr><td>30</td><td>Capacity Utilization Factor (CUF)</td><td>(i) CUF shall be 45% for SHP located in Himachal Pradesh, Uttrakhand and North Eastern States
(ii) For other States CUF shall be 30%.
Note: Normative CUF is net of free power to the home state if any, and any quantum of free power if committed by the developer over and above the normative CUF shall not be factored into the tariff.</td></tr>
<tr><td>31</td><td>Auxiliary Consumption</td><td>Normative Auxiliary Consumption - 1.0%</td></tr>
<tr><td>32</td><td>Operation and Maintenance Expenses</td><td>(1) Normative O&M expenses for the first year of the control period (i.e. FY 2012-13) shall be as follows:
<table>
<tr><th>Region</th><th>Project Size</th><th>Capital Cost (Rs. Lac/MW)</th></tr>
<tr><td rowspan="2">Himachal Pradesh, Uttrakhand and North Eastern States</td><td>Below 5MW</td><td>25</td></tr>
<tr><td>5MW to 25 MW</td><td>18</td></tr>
<tr><td rowspan="2">Other States</td><td>Below 5MW</td><td>20</td></tr>
<tr><td>5MW to 25 MW</td><td>14</td></tr>
</table>
Normative O&M expenses shall be escalated at the rate of 5.72% per annum for the tariff period for the purpose of determination of levellised tariff.</td></tr>
</table>

Technology Specific Parameters for Biomass Power Projects Based on Rankine Cycle Technology		
33	**Technology Aspect**	It shall be based on Rankine Cycle technology application using water cooled condenser.
34	**Capital Cost**	The normative capital cost of the Biomass power projects based on Rankine Cycle shall be as follows: (i) Rs. 540 lakh/MW for project (other than rice straw and juliflora (plantation) based project) with water cooled condenser; (ii) Rs. 580 lakh/MW for project (other than rice straw and juliflora (plantation) based project) with air cooled condenser; (iii) Rs. 590 lakh/MW for rice straw and juliflora (plantation) based project with water cooled condenser; (iv) Rs. 630 lakh/MW for rice straw and juliflora (plantation) based project with air cooled condenser
35	**Capital Cost Indexation Mechanism**	Detailed in CERC Regulations
36	**Plant Load Factor (PLF)**	(1) PLF for determining fixed charge component of Tariff shall be: (1) PLF during Stabilization upto 6 months from COD - 60% (2) PLF during the first year after stabilization: -70% (3) From 2nd year onwards: -80%.
37	**Auxiliary consumption**	Auxiliary power consumption (a) Project using Water Cooled Condenser - 11% during first year of operation and 10% from 2nd year onwards. (b) Project using air cooled condenser, 13% during first year of operation and 12% from second year onwards.
38	**Station Heat Rate**	(a) 4200 kCaL/kWh for project using traveling gate boilers (b) 4125 kCaL/kWh for AFBC boilers
39	**O&M Expenses**	For second year of control period (i.e. FY 2013-14) – 40 Lac/MW
40	**Fuel Mix**	(i) Power plant to be designed in such a way so as to use different types of non-fossil fuel available within the vicinity such as crop residues, agro-industrial residues, forest residues etc. and other Biomass fuels as may be approved by MNRE. (ii) Generating companies to ensure adequate availability of fuel to meet the respective project requirements.
41	**Use of Fossil Fuel**	Use of Fossil fuels shall be limited to the extent of 15% in terms of calorific value on actual basis till 31-07-2017.
42	**Monitoring Mechanism for the use of Fossil Fuel**	(1) Project developer to furnish a monthly fuel usage and fuel procurement statement duly certified by Chartered Accountant to the beneficiary (with a copy to appropriate agency appointed by the Commission for the purpose of monitoring the fossil and non-fossil fuel consumption) for each month, along with the monthly energy bill. The statement shall cover details indicated in the Regulations (2) Non-compliance with the above details shall result in withdrawal of applicability of tariff as per these Regulations
43	**Calorific Value**	The Calorific Value of the Biomass fuel used for the purpose of determination of tariff shall be 3100 kCaL/kg.
44	**Fuel Cost**	Biomass fuel price during first year of control period (FY 2012-13) shall be as follows and is linked to index formula as specified under CERC Regulation 45 Alternatively, for each subsequent year of the tariff period, the normative escalation factor of 5% per annum shall be applicable at the option of the Biomass project developer.

<table>
<tr><td></td><td></td><td>
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<tr><th>State</th><th>Biomass Price (Rs./MT) for 2012-13</th></tr>
<tr><td>Andhra Pradesh</td><td>2315</td></tr>
<tr><td>Haryana</td><td>2635</td></tr>
<tr><td>Maharashtra</td><td>2116</td></tr>
<tr><td>Madhya Pradesh</td><td>1507</td></tr>
<tr><td>Punjab</td><td>2756</td></tr>
<tr><td>Rajasthan</td><td>2300</td></tr>
<tr><td>Tamil Nadu</td><td>2277</td></tr>
<tr><td>Uttar Pradesh</td><td>2355</td></tr>
<tr><td>Other States</td><td>2283</td></tr>
</table>
Alternatively, Biomass fuel price shall be decided annually by the appropriate Regulatory Commission.
</td></tr>
<tr><td>45</td><td>Capital Cost Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
<tr><td colspan="3">Technology Specific Parameters for Non-Fossil Fuel Based Co-Generation Projects</td></tr>
<tr><td>46</td><td>Technology Aspect</td><td>A project shall qualify as a non-fossil fuel based Co-generation project if it meets the eligibility criteria as specified under Regulations 4 above</td></tr>
<tr><td>47</td><td>Capital Cost</td><td>Rs. 420 lac /MW for the first year of control period (FY 2012-13) and shall be linked to indexation formula as outlined under Regulation 48</td></tr>
<tr><td>48</td><td>Capital Cost Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
<tr><td>49</td><td>Plant Load Factor</td><td>For determining fixed charge, PLF shall be computed on the basis of plant availability for number of operating days (as given below) considering operations during crushing season and offseason and load factor of 92%.
<table>
<tr><th>State</th><th>Operating days</th><th>Plant Load Factor (%)</th></tr>
<tr><td>Uttar Pradesh and Andhra Pradesh</td><td>120 days (crushing) + 60 days (off-season) = 180 days</td><td>45</td></tr>
<tr><td>Tamil Nadu and Maharashtra</td><td>180 days (crushing) + 60 days (off-season) = 240 days</td><td>60</td></tr>
<tr><td>Other States</td><td>150 days (crushing) + 60 days (off-season) = 210 days</td><td>53</td></tr>
</table>
</td></tr>
<tr><td>50</td><td>Auxiliary Consumption</td><td>8.5%</td></tr>
<tr><td>51</td><td>Station Heat Rate (SHR)</td><td>SHR of 3600kCal/kWh for power generation component alone to be considered for computation of tariff</td></tr>
<tr><td>52</td><td>Calorific Value</td><td>(a) For Bagasse – 2250 kCaL/kg
(b) For Biomass fuel other than Bagasse as per Regulation 43 above</td></tr>
<tr><td>53</td><td>Fuel Cost</td><td>(i) Price of Bagasse shall be as follows and linked to indexation formulae as outlined under Regulation 54. Alternatively, for each subsequent year of the control period, the normative escalation factor of 5% per annum shall be applicable at the option of the project developer.</td></tr>
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<tr><td></td><td></td><td>
<table>
<tr><th>State</th><th>Bagasse Price (Rs./MT)</th></tr>
<tr><td>Andhra Pradesh</td><td>1307</td></tr>
<tr><td>Haryana</td><td>1859</td></tr>
<tr><td>Maharashtra</td><td>1327</td></tr>
<tr><td>Madhya Pradesh</td><td>946</td></tr>
<tr><td>Punjab</td><td>1636</td></tr>
<tr><td>Tamil Nadu</td><td>1408</td></tr>
<tr><td>Uttar Pradesh</td><td>1458</td></tr>
<tr><td>Other States</td><td>1420</td></tr>
</table>
(ii) For fuse of Biomass other than Bagasse the Biomass price as specified under Regulation 44 above shall be applicable.</td></tr>
<tr><td>54</td><td>Fuel Price Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
<tr><td>55</td><td>O&M Expenses</td><td>16.0 Lac/MW during the first year of control period to be escalated @ 5.72% per annum</td></tr>
<tr><td colspan="3">Technology Specific Parameters for Solar PV Power Project</td></tr>
<tr><td>56</td><td>Technology Aspects</td><td>Norms for Solar Photovoltaic (PV) power applicable for grid connected PV system based on the technologies such as crystalline silicon or thin film etc. as may be approved by MNRE.</td></tr>
<tr><td>57</td><td>Capital Cost</td><td>Rs. 1000.00 Lac/MW for FY 2012-13</td></tr>
<tr><td>58</td><td>Capacity Utilization Factor</td><td>19%
For project specific tariff determination, commission may deviate from above norm in pursuance of Regulations 7 and 8 above.</td></tr>
<tr><td>59</td><td>O&M Expenses</td><td>(i) Rs. 11.00 Lac /MW for the 1st year of operation allowed at the commencement of the control period to be escalated @ 5.72% per annum</td></tr>
<tr><td colspan="3">Technology Specific Parameters for Solar Thermal Power Project</td></tr>
<tr><td>60</td><td>Technology Aspects</td><td>Norms for Solar Thermal Power applicable for concentrated Solar power (CSP) technologies i.e. line focusing or point focusing as may be approved by MNRE</td></tr>
<tr><td>61</td><td>Capital Cost</td><td>Rs.1300 Lac/MW for F Y 2012-13
For project specific tariff determination, commission may deviate from above norm in pursuance of Regulations 7 and 8 above</td></tr>
<tr><td>62</td><td>Capacity Utilization Factor</td><td>23%
For project specific tariff determination, commission may deviate from above norm in pursuance of Regulations 7 and 8 above</td></tr>
<tr><td>63</td><td>O&M Expenses</td><td>(1) Rs. 15 Lac/MW for the 1st year of operation allowed at the commencement of the control period to be escalated @ 5.72% per annum</td></tr>
<tr><td>64</td><td>Auxiliary Consumption</td><td>10%
For project specific tariff determination, commission may deviate from above norm in pursuance of Regulations 7 and 8 above</td></tr>
<tr><td colspan="3">Technology Specific Parameters for Biomass Gasifier Power Projects</td></tr>
<tr><td>65</td><td>Technology Aspect</td><td>The norms for tariff determination specified here under are for the Biomass gasifier power projects.</td></tr>
<tr><td>66</td><td>Capital Cost</td><td>(i) The normative Capital Cost for Biomass gasifier project based on Rankine Cycle shall be Rs. 550 lakh/MW during 1st year of Control period (FY 2012-13) and shall be linked to indexation formula as per Regulation 67.
(ii) After taking into account capital subsidy net project cost shall be Rs. 400 lakh/MW for 2012-13.</td></tr>
<tr><td>67</td><td>Capital Cost Indexation Mechanism</td><td>Detailed in CERC Regulations</td></tr>
</table>

68	**Plant Load Factor**	80%
69	**Auxiliary Consumption**	10%
70	**Specific Fuel Consumption**	1.1 kG/kWh
71	**O&M Expenses**	Rs. 35 lakh/MW for first year of Control Period (FY 2012-13) with escalation of 5.72% per annum
72	**Fuel Mix**	Plant to be designed to use different type of non-fossil fuels available within the vicinity of project and ensure adequate availability of fuel.
73	**Fuel Cost**	For first year of control period (FY 2012-13) as per Regulation 44 and linked to indexation formula as per Regulation 74. Alternatively for each subsequent year, 5% escalation per annum at the option of project developer.
74.	**Fuel Price Indexation Mechanism**	Detailed in CERC Regulations
Technology Specific Parameters for Biogas Based Power Projects		
75.	**Technology Aspect**	The norms for Tariff determination specified here under for grid connected Biogas based power projects that uses 100% Biogas fired engine coupled with Biogas technology for co-digesting agricultural residues, manure and other Bi0-waste as may be approved by MNRE.
76	**Capital Cost**	(i) The normative capital cost for Biogas based power plant shall be Rs. 1000 Lac/ MW during first year of control period (FY 2012-13) and shall be linked to indexation formula as Regulation-77. (ii) After taking into account of capital subsidy net project cost shall be Rs. 700 Lac/MW for the year 2012-13.
77.	**Capital Cost Indexation Mechanism**	Detailed in CERC Regulations
78	**Plant Load Factor**	90% for determining fixed charge component of tariff.
79	**Auxiliary Consumption**	12%
80	**O&M Expenses**	Rs. 30 lakh/MW for first year of control period (FY 2012-13) with escalation of 5.72% per annum
81	**Specific Fuel Consumption**	3 kG of Substrate mix per kWh.
82	**Fuel Cost (Feed Stock Price)**	Rs. 990/MT during first year of control period (FY 2012-13)
83	**Fuel Price Indexation Mechanism**	Detailed in CERC Regulations
Miscellaneous		
84	**Deviation from Norms**	Vested with the Commission
85	**Power to Relax**	Vested with the Commission