Jammu and Kashmir State Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2013

JAMMU & KASHMIR
India

Jammu and Kashmir State Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2013

Act 28 of 2013

- Published on 17 May 2013
- Commenced on 17 May 2013
- [This is the version of this document from 17 May 2013.]
- [Note: The original publication document is not available and this content could not be verified.]

Jammu and Kashmir State Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2013Published vide Notification No. JKSERC/28 of 2013 dated 17.05.2013Last Updated 14th November, 2019No. JKSERC/28 of 2013. - In exercise of powers conferred under Section 56 read with Section 71(e) and Section 138(2) of the Jammu and Kashmir Electricity Act, 2010 (XIII of 2010), and all other powers enabling it in this behalf, and after previous publication, the Jammu and Kashmir State Electricity Regulatory Commission hereby makes the following regulations, namely:

1. Short title and commencement.

(1)These regulations may be called the Jammu and Kashmir State Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2013.(2)These regulations shall come into force from the date of their publication in the govt. gazette and unless reviewed earlier or extended by the Commission, shall remain in force for a period of 5 years from the date of commencement.(3)These Regulations shall extend to whole State of Jammu and Kashmir.

2. Definitions and Interpretation.

(1)In these regulations, unless the context otherwise requires,(a)"Act" means the J&K Electricity Act, 2010 (Act XIII of 2010);(b)"Auxiliary energy consumption" or "AUX" in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, and transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station;(c)"Biomass" means wastes produced during agricultural and forestry operations (for example straws and stalks) or produced as a byproduct of processing operations of agricultural produce (e.g., husks, shells, deoiled cakes, etc); wood produced in dedicated energy plantations or recovered from wild bushes/weeds; and the wood waste produced in some industrial operations;(d)"Biomass gasification" means a process of incomplete combustion of biomass resulting in production of combustible gases consisting of a mixture of Carbon monoxide (CO), Hydrogen (H2) and traces of Methane (CH4), which is called producer gas;(e)"Biogas" means a gas created when organic matter like crop residues, sewage and manure breaks down in an oxygen-free environment (ferments);(f)["Capital cost" means the capital cost as defined in Regulations 12, 24, 28, 33, 33 B, 47, 57, 61, 66 & 76;] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](g)"Commission" means the Jammu and Kashmir State Electricity Regulatory Commission referred to in sub-section (1) of Section 64 of the Act;(h)"Conduct of Business Regulations" means the Jammu and Kashmir State Electricity Regulatory Commission (Conduct of Business) Regulations, 2005 as amended from time to time;(i)"Control Period or Review Period" means the period during which the norms for determination of tariff specified in these Regulations shall remain valid;(j)"Gross calorific value" or "GCV" in relation to a fuel used in generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one liter of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;(k)"Gross station heat rate" or "GHR" means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;(l)"Hybrid Solar Thermal Power Plant" means the solar thermal power plant that uses other forms of energy input sources along with solar thermal energy for electricity generation, and wherein not less than 75% of electricity is generated from solar energy component;(m)"Installed capacity" or "IC" means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station (reckoned at the generator terminals), approved by the Commission from time to time;(n)"Inter-connection Point" shall mean interface point of renewable energy generating facility with the transmission system or distribution system, as the case may be:i. in relation to wind energy projects and Solar Photovoltaic Projects, inter-connection point shall be the line isolator on outgoing feeder on HV side of the pooling sub-station;ii. in relation to small hydro power, biomass power and non fossil fuel based cogeneration power projects and Solar Thermal Power Projects, the inter-connection point shall be the line isolator on outgoing feeder on HV side of generator transformer;(o)"MNRE" means the Ministry of New and Renewable Energy of the Government of India;(oa)["Municipal Solid Waste" means and includes commercial and residential wastes generated in municipal or notified areas in either solid or semi-solid form, excluding industrial hazardous wastes but including treated bio-medical wastes;] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](p)"Non-firm power" means the power generated from renewable sources, the hourly variation of which is dependent upon nature"s phenomenon like sun,

cloud, wind, etc., that cannot be accurately predicted;(q)"Non fossil fuel based co-generation" means the process in which more than one form of energy (such as steam and electricity) are produced in a sequential manner by use of biomass provided the project may qualify to be a co-generation project if it fulfills the eligibility criteria as specified in clause (d) of Regulation 4;(r)"Operation and maintenance expenses" or "O&M expenses" means the expenditure incurred on operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;(s)"Project" means a generating station or the evacuation system upto inter-connection point, as the case may be, and in case of a small hydro generating station includes all components of generating facility such as dam, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;(sa)[Refuse Derived Fuel' means segregated combustible fraction of solid waste other than chlorinated plastics in the form of pellets or fluff produced by drying, de-stoning, shredding, dehydrating, and compacting combustible components of solid waste that can be used as fuel;] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](t)"Renewable Energy" means the grid quality electricity generated from renewable energy sources;(u)"Renewable Energy Power Plants" means the power plants other than the conventional power plants generating grid quality electricity from renewable energy sources;(v)"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 other such sources as approved by the MNRE;(w)"Small Hydro" means Hydro Power projects with a station capacity up to and including 25 MW;(x)"Solar PV power" means the Solar Photo Voltaic power project that uses sunlight for direct conversion into electricity through Photo Voltaic technology;(y)"Solar Thermal power" means the Solar Thermal power project that uses sunlight for direct conversion into electricity through Concentrated Solar Power technology based on either line focus or point focus principle;(z)"Tariff period" means the period for which tariff is to be determined by the Commission on the basis of norms specified under these Regulations;(aa)"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:-(a)Wind energy power project 25 years(b)Biomass power project with Rankine cycle technology 20 years(c)Non-fossil fuel cogeneration project 20 years(d)Small Hydro Plant 35 years(e)Solar PV/Solar thermal power project 25 years(f)Biomass Gasifier based power project 20 years(g)Biogas based power project 20 years(ab)"Year" means a financial year.(2)Save as aforesaid and unless repugnant to the context or if the subject-matter otherwise requires, words and expressions used in these regulations and not defined, but defined in the Act, or the Jammu and Kashmir State Electricity Grid Code shall have the meanings assigned to them respectively in the Act or the Jammu and Kashmir State Electricity Grid Code.

3. Scope and extent of application.

-These Regulations shall apply in all cases where tariff, for a generating station or a unit thereof based on renewable sources of energy, is to be determined by the Commission under Section 56 read with Section 71 of the Act.[Provided that in cases of wind, Small Hydro projects, Biomass power based on Rankine cycle, non-fossil fuel based cogeneration projects, Solar PV, Solar Thermal power projects, Biomass gasifier, Biogas, Municipal Solid Waste and Refuse Derived Fuel based power

projects, these regulations shall apply subject to the fulfillment of eligibility criteria specified in Regulation 4 of these Regulations.] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

4. Eligibility Criteria. - (a) Wind power project

- using new wind turbine generators.(b)Small hydro project - located at the sites approved by State Nodal Agency/ State Government using new plant and machinery, and installed power plant capacity to be lower than or equal to 25 MW at single location.(c)[Biomass power project based on Rankine cycle technology [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).] - Biomass power projects using new plant and machinery based on Rankine cycle technology and using biomass fuel sources, provided use of fossil fuel is restricted only up to 15% in terms of calorific value on annual basis, till 31.03.2018.](d)Non-fossil fuel based co-generation project - The project shall qualify to be termed as a 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 requirement outlined below:Topping cycle mode of co-generation - Any facility that uses non-fossil fuel input for the 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 topping cycle mode, the sum of useful power output and one half the useful thermal output be greater than 45% of the facility's energy consumption, during season.Explanation. - For the purposes of this clause,(a)'Useful power output' is the gross electrical output from the generator. There will be an auxiliary consumption in the cogeneration plant itself (e.g. the boiler feed pump and the FD/ID fans). In order to compute the net power output it would be necessary to subtract the auxiliary consumption from the gross output. For simplicity of calculation, the useful power output is defined as the gross electricity (kWh) output from the generator.(b)'Useful Thermal Output' is the useful heat (steam) that is provided to the process by the cogeneration facility.(c)'Energy Consumption' of the facility is the useful energy input that is supplied by the fuel (normally bagasse or other such biomass fuel).(d)'topping cycle' means a cogeneration process in which thermal energy produces electricity followed by useful heat application in industrial activities.(e)Solar PV and Solar Thermal Power Project - Based on Technologies approved by MNRE.(f)Biomass Gasifier based Power Project - The project shall qualify to be termed as a biomass gasifier based power project, 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.(g)Biogas based Power Project - The project shall qualify to be termed as a biogas based power project, 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.(h)[Municipal Solid Waste based power project. [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).] The project shall qualify to be termed as a Municipal Solid Waste based power project, if it is using new plant and machinery based on Rankine cycle technology and using Municipal Solid Waste as fuel sources.](i)[Refuse Derived Fuel based power project. The project shall qualify to be termed as a Refuse Derived Fuel based power project, if it is using new plant and machinery based on Rankine cycle technology and using Refuse Derived Fuel as fuel sources.] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

Chapter 1
General Principles

5. Control Period or Review Period.

- The Control Period or Review Period under these Regulations shall be of five years, of which the first year shall be the financial year 2013-14.Provided that the benchmark capital cost for Solar PV and Solar thermal projects may be reviewed annually by the Commission.Provided further that the biomass price may be reviewed at the end of the third year of the Control Period.Provided also that the tariff determined as per these Regulations for the RE projects commissioned during the Control Period, shall continue to be applicable for the entire duration of the Tariff Period as specified in Regulation 6 below.Provided also that the revision in Regulations for next Control Period shall be undertaken at least six months prior to the end of the first Control Period and in case Regulations for the next Control Period are not notified until commencement of next Control Period, the tariff norms as per these Regulations shall continue to remain applicable until notification of the revised Regulations subject to adjustments as per revised Regulations.

6. Tariff Period.

- [(a) The Tariff Period for Renewable Energy power projects except in case of Small hydro projects below 5 MW, Solar PV, Solar thermal, Biomass Gasifier, Biogas, Municipal Solid Waste and Refuse Derived Fuel based power projects shall be thirteen (13) years.] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](b)In case of Small hydro projects below 5 MW, the tariff period shall be thirty five (35) years.(c)In case of Solar PV and Solar thermal power projects the Tariff Period shall be twenty five years (25) years.(d)In case of Biomass Gasifier and Biogas based power projects the Tariff Period shall be twenty years (20) years.(da)[In case of Municipal Solid Waste and Refuse Derived Fuel based power projects, the Tariff Period shall be twenty (20) years.] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](e)Tariff period under these Regulations shall be considered from the date of commercial operation of the renewable energy generating stations.(f)Tariff determined as per these Regulations shall be applicable for Renewable Energy power projects, only for the duration of the Tariff Period as stipulated under Regulations 6 (a), (b), (c), (d) and (e).

7. Project Specific tariff.

(a)Project specific tariff, on case to case basis, shall be determined by the Commission for the following types of projects:[i. Municipal Solid Waste and Refuse Derived Fuel based power projects; [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]Provided that the Commission while determining the project specific tariff for Municipal Solid Waste and Refuse Derived Fuel based power projects shall be guided by the provisions of Chapter 5A of these Regulations.]ii. Solar PV and Solar Thermal Power projects, if a project developer opts for project specific tariff:Provided that the Commission while determining the project specific tariff for Solar PV and Solar Thermal shall be guided by the provisions of Chapters 7 & 8 of these Regulations.iii.

Hybrid Solar Thermal Power plants;iv. Other hybrid projects include renewable-renewable or renewable conventional sources, for which renewable technology is approved by MNRE;v. Biomass project other than that based on Rankine Cycle technology application with water cooled condenser;vi. Any other new renewable energy technologies approved by MNRE.(b)Determination of Project specific Tariff for generation of electricity from such renewable energy sources shall be in accordance with such terms and conditions as stipulated under relevant Orders of the Commission.Provided that the financial norms as specified under Chapter-2 of these Regulations, except for capital cost, shall be ceiling norms while determining the project specific tariff.

8. Petition and proceedings for determination of tariff.

(1)The Commission shall 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 for renewable energy technologies for which norms have been specified under the Regulations.(2)Notwithstanding anything contained in these regulations,(a)the generic tariff determined for Solar PV projects based on the capital cost and other norms applicable for any year of the control period shall also apply for such projects during the next year; and(b)the generic tariff determined for Solar thermal projects based on the capital cost and other norms for the any year of the control period shall also apply for such projects during the next two years,provided that (i) the Power Purchase Agreements in respect of the Solar PV projects and Solar thermal projects as mentioned in this clause are signed on or before last day of the year for which generic tariff is determined and (ii) the entire capacity covered by the Power Purchase Agreements is commissioned on or before 31st March of the next year in respect of Solar PV projects and on or before 31st March of subsequent two years in respect of Solar thermal projects.(3)A petition for determination of project specific tariff shall be accompanied by such fee as may be determined by Regulations and shall be accompanied by:(a)Information in forms 1.1, 1.2, 2.1 and 2.2 as the case may be, and as appended in these regulations;(b)Detailed project report outlining technical and operational details, site specific aspects, premise for capital cost and financing plan etc.(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.(e)Any other information that the Commission requires the petitioner to submit.(4)The proceedings for determination of tariff shall be in accordance with the Conduct of Business Regulations.

9. Tariff Structure.

(1)The tariff for renewable energy technologies shall be 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;Provided that for renewable energy technologies having fuel cost component, like biomass power projects and non-fossil fuel based cogeneration, single part tariff with two components, fixed cost component and fuel cost component, shall be determined.

10. Tariff Design.

(1)The generic tariff shall be determined on levellised basis for the Tariff Period.Provided that for renewable energy technologies having single part tariff with two components, tariff shall be determined on levellised basis considering the year of commissioning of the project for fixed cost component while the fuel cost component shall be specified on year of operation basis.(2)For the purpose of levellised tariff computation, the discount factor equivalent to Post Tax weighted average cost of capital shall be considered.(3)Levellisation shall be carried out for the 'useful life' of the Renewable Energy project while Tariff shall be specified for the period equivalent to 'Tariff Period'.

11. Despatch principles for electricity generated from Renewable Energy Sources.

(1)All renewable energy power plants, except for biomass power plants with installed capacity of 10 MW and above and non-fossil fuel based cogeneration plants, shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.(1A)[The Municipal Solid Waste and Refuse Derived Fuel based power projects shall be treated as MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](2)[The Biomass power generating station with an installed capacity of 10 MW and above, Non-Fossil fuel based co-generation projects, Municipal Solid Waste and Refuse Derived Fuel based projects shall be subjected to scheduling and despatch code as specified under Jammu & Kashmir State Electricity Grid Code, 2006, as amended from time to time.] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](3)Wind power generation plants where the sum of generation capacity of such plants connected at the connection point to the transmission or distribution system is 10 MW and above and connection point is 33 KV and above shall be subjected to scheduling and despatch code as specified under Jammu and Kashmir State Electricity Grid Code 2006, as amended from time to time.(4)Solar generating plants with capacity of 5 MW and above and connected at the connection point of 33 KV level and above shall be subjected to scheduling and despatch code as specified under Jammu and Kashmir State Electricity Grid Code 2006, as amended from time to time.

Chapter 2
Financial Principles

12. [Capital Cost. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- The norms for the Capital cost as specified in the subsequent technology specific chapters shall be inclusive of all capital work including plant and machinery, civil work, setting up of flue gas treatment plant and other pollution control equipment, wherever required, to follow emission norms as prescribed by Ministry of Environment and Forest/Central Pollution Control Board/ State Pollution Control Board, erection and commissioning, financing and interest during construction,

and evacuation infrastructure up to inter-connection point:Provided that for project specific tariff determination, the generating company shall submit the break-up of capital cost items along with its petition in the manner specified under Regulation 8.]

13. Debt Equity Ratio.

(1)For generic tariff to be determined based on suo-motu petition, the debt equity ratio shall be 70:30.(2)For Project specific tariff, the following provisions shall apply:-If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

14. Loan and Finance Charges.

- (1) Loan Tenure. - For the purpose of determination of tariff, loan tenure of 12 years shall be considered.(2)Interest Rate - (a) The loans arrived at in the manner indicated in the Regulation 13 shall be considered as gross normative loan for calculation for interest on loan. The normative loan outstanding as on April 1st of every year shall be worked out by deducting the cumulative repayment up to March 31st of previous year from the gross normative loan.(b)For the purpose of computation of tariff, the normative interest rate shall be considered as average Jammu and Kashmir Bank Base rate prevalent during the first six months of the previous year plus 300 basis points.(c)Notwithstanding any moratorium period availed by the generating company, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

15. Depreciation.

(1)The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset.(2)Depreciation per annum shall be based on 'Differential Depreciation Approach' over loan period beyond loan tenure over useful life computed on 'Straight Line Method'. The depreciation rate for the first 12 years of the Tariff Period shall be 5.83% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 13th year onwards.(3)Depreciation shall be chargeable from the first year of commercial operation.Provided that in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

16. Return on Equity.

(1)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.(2)The normative Return on Equity shall be:(a)18% per annum for the first 10 years.(b)22% per annum 11th years onwards.

17. Interest on Working Capital.

(1)The Working Capital requirement in respect of wind energy projects, Small Hydro Power, Solar PV and Solar thermal power projects shall be computed in accordance with the following:Wind Energy / Small Hydro Power /Solar PV / Solar thermal(a)Operation & Maintenance expenses for one month;(b)Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative Capacity Utilization Factor (CUF);(c)Maintenance spare @ 15% of operation and maintenance expenses(2)[The Working Capital requirement in respect of Biomass power projects, Municipal Solid Waste, Refuse Derived Fuel based power projects and Non-Fossil fuel based co-generation projects shall be computed in accordance with the following clause :Biomass, Biogas Power, Municipal Solid Waste, Refuse Derived Fuel based power projects and Non-fossil fuel Co-generation(a)Fuel costs for four months equivalent to normative PLF;(b)Operation & Maintenance expense for one month;(c)Receivables equivalent to 2 (Two) months of fixed and variable charges for sale of electricity calculated on the target PLF;(d)Maintenance spare @ 15% of operation and maintenance expenses.](3)Interest on Working Capital shall be at interest rate equivalent to the average Jammu and Kashmir Bank Base Rate prevalent during the first six months of the previous year plus 350 basis points.

18. Operation and Maintenance Expenses.

(1)'Operation and Maintenance or O&M expenses' shall comprise repair and maintenance (R&M), establishment including employee expenses and administrative & general expenses.(2)Operation and maintenance expenses shall be determined for the Tariff Period based on normative O&M expenses specified by the Commission subsequently in these Regulations for the first Year of Control Period.(3)Normative O&M expenses allowed during first year of the Control Period (i.e. FY 2013-14) under these Regulations shall be escalated at the rate of 5.72% per annum over the Tariff Period.

19. Rebate.

(1)For payment of bills of the generating company through letter of credit, a rebate of 2% shall be allowed.(2)Where payments are made other than through letter of credit within a period of one month of presentation of bills by the generating company, a rebate of 1% shall be allowed.

20. Late payment surcharge.

- In case the payment of any bill for charges payable under these regulations is delayed beyond a period of 60 days from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company.Solar Power Project developer will pass as the gross benefits of CDM to the distribution licensee with whom PPA is signed, as per regulation of CERC.

21. Sharing of CDM Benefits.

(1)The proceeds of carbon credit from approved CDM project shall be shared between generating company and concerned beneficiaries in the following manner, namely)(a)100% of the gross proceeds on account of CDM benefit to be retained by the project developer in the first year after the date of commercial operation of the generating station;(b)In the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.The sharing would however, be done on actual receipt of such revenue in the proportion specified for the year to which this revenue relates.

22. Subsidy or incentive by the Central / State Government.

- The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation benefit if availed by the generating company, for the renewable energy power plants while determining the tariff under these Regulations.Provided that the following principles shall be considered for ascertaining income tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:(i)Assessment of benefit shall be based on normative capital cost, accelerated depreciation rate as per relevant provisions under Income Tax Act and corporate income tax rate.(ii)Capitalization of RE projects during second half of the fiscal year. Per unit benefit shall be derived on levellised basis at discount factor equivalent to Post Tax weighted average cost of capital.

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.

Chapter 3
Technology specific parameters for Wind Energy

24. Capital Cost.

(1)The capital cost for wind energy project shall include Wind turbine generator including its auxiliaries, land cost, site development charges and other civil works, transportation charges, evacuation cost up to inter-connection point, financing charges and IDC.(2)The capital cost for wind energy projects shall be Rs.575 Lakh/MW (FY 2013- 14 during first year of Control Period) and shall be linked to indexation formula as outlined under Regulation 25.

25. Capital Cost Indexation Mechanism.

(1)The following indexation mechanism shall be applicable in case of wind energy projects for adjustments in capital cost over the Control Period with the changes in Wholesale Price Index for Steel and Electrical Machinery.CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b)Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote. P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control PeriodEI(0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.6), for weightage to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.4), for weightage to Electrical Machinery IndexF1 = Factor for Land and Civil Works (0.08)F2 = Factor for Erection and Commissioning (0.07)F3 = Factor for IDC and Financing Cost (0.10)

26. Capacity Utilisation Factor (CUF).

(1)CUF norms for this control period shall be as follows:

Annual Mean Wind Power Density (W/m2)	CUF
Upto 200	20%
201-250	22%
251-300	25%
301-400	30%
>400	32%

(2)The annual mean wind power density specified in sub-regulation (1) above shall be measured at 80 meter hub-height.(3)For the purpose of 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 a private developer and validated by C-WET would be normally extended 10 km from the mast-point to all directions for uniform terrain and limited to appropriate distant in complex terrain with regard to complexity of the site. Based on such validation by C-WET, State Nodal Agency should certify zoning of the proposed wind farm complex.

27. Operation and Maintenance (O & M) Expenses.

(1)Normative O&M expenses for the first year of the Control Period (i.e. FY 2013-14) shall be Rs.9 Lakh per MW.(2)Normative O&M expenses allowed under these Regulations shall be escalated at the rate of 5.72% per annum over the tariff period to compute the levellised tariff.

Chapter 4
Technology specific parameters for Small Hydro Project

28. Capital Cost.

(1)The normative capital cost for small hydro projects during first year of Control Period (FY 2013-14) shall be as follows:

Project Size	Capital Cost (Rs. in Lac/ MW)
Below 5 MW	770
5 MW to 25 MW	700

(2)The capital cost for subsequent years shall be determined on the basis of indexation formula as outlined under Regulation 29.

29. Capital Cost Indexation Mechanism.

(1)The following indexation mechanism shall be applicable in case of small hydro power projects for adjustments in capital cost over the Control Period with the changes in Wholesale Price Index for Steel and Electrical Machinery.CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b) Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote. P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)

Small Hydro Project	Base Capital Cost (Rs. in Lac/MW)	Factor (1+F1+F2+F3)	P&M (0) (Rs. in Lac/MW)
SHP (<5 MW)	770	1.40	550
SHP (5-25 MW)	700	1.40	500

d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control PeriodEI (0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.6), for weightage to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.4), for weightage to Electrical Machinery IndexF1 = Factor for Land and Civil Work (0.16)F2 = Factor for Erection and Commissioning (0.10)F3 = Factor for IDC and Financing Cost (0.14)

30. Capacity Utilisation Factor.

- Capacity Utilisation factor for the small hydro projects located in the State shall be 45%.Explanation. - For the purpose of this Regulation 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.

31. Auxiliary Consumption.

- Normative Auxiliary Consumption for the small hydro projects shall be 1.0%.

32. Operation and Maintenance Expenses.

(1)Normative Operation and Maintenance (O&M) expenses for the first year of the Control period (i.e. FY 2012-13 shall be as follows.

Project Size	O&M Expenses (Rs. in Lac/ MW)
Below 5 MW	25
5 MW to 25 MW	18

(2)Normative O&M expenses allowed under these Regulations shall be escalated at the rate of 5.72% per annum for the Tariff Period for the purpose of determination of levellised tariff.

Chapter 5
Technology specific parameters for Biomass Power Projects based on Rankine Cycle Technology

33. Technology Aspect.

- The norms for tariff determination specified hereunder are for biomass power projects based on Rankine cycle technology application using water cooled condenser.[Chapter 5a] [Added by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).] Technology Specific Parameters For Power Projects Using Municipal Solid Waste /refuse Derived Fuel And Based On Rankine Cycle Technology

33A. Technology Aspect.

- The norms for tariff determination specified hereunder are for power projects which use Municipal Solid Waste and Refuse Derived Fuel and are based on Rankine cycle technology application, combustion or incineration, Biomethanation, Pyrolysis and High end gasifier technologies.

33B. Capital Cost.

- The normative capital costs for FY 2015-16,for power projects which use Municipal Solid Waste and Refuse Derived Fuel and are based on Rankine cycle technology application shall be as under:i. Rs 1500 lakh/MW for the power projects which use Municipal Solid Waste and are based on Rankine cycle technology application.ii. Rs 900 lakh/MW for the power projects which use Refuse Derived Fuel and are based on Rankine cycle technology application.Provided that the Capital Cost norms for the remaining years of the control period, for Municipal Solid Waste and Refuse Derived Fuel based power projects shall be reviewed on annual basis.

33C. Plant Load Factor.

(1)Threshold Plant Load Factor for determining fixed charge component of tariff for the power projects which use Municipal Solid Waste and Refuse Derived Fuel shall be:

PLF	MSW	RDF	
(a)	During Stabilisation	65%	65%
(b)	During the remaining period of the first year(after stabilization)	65%	65%
(c)	From 2nd Year onwards	75%	80%

(2)The stabilisation period shall not be more than 6 months from the date of commissioning of the project.

33D. Auxiliary Consumption.

- The auxiliary power consumption for the power projects which use Municipal Solid Waste and Refuse Derived Fuel shall be 15%.

33E. Station Heat Rate.

- The Station Heat Rate for power projects which use Municipal Solid Waste and Refuse Derived Fuel shall be 4200 kcal/kWh.

33F. Operation and Maintenance Expenses.

(1)Normative O&M expenses for FY 2015-16 for the power projects which use Municipal Solid Waste or Refuse Derived Fuel shall be 6% of normative capital cost.(2)Normative O&M expenses allowed for FY 2015-16 for the power projects which use Municipal Solid Waste and Refuse Derived Fuel respectively under these Regulations shall be escalated @ 5.72% per annum.

33G. Calorific Value.

- The Calorific Value of the Refuse Derived Fuel used for the purpose of determination of tariff shall be at 2500 kcal/kg.

33H. Fuel Cost.

- Refuse Derived Fuel price during FY 2015-16 shall be Rs 1,800 per MT. For each subsequent year of the Tariff Period, the normative escalation factor of 5% per annum shall be applicable at the option of the Refuse Derived Fuel project developer.No fuel cost shall be considered for determination of tariff for the power projects using Municipal Solid Waste.

34. [Capital Cost. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- The normative capital cost for the biomass power projects based on Rankine cycle shall be as under:-a. 540 lakh/MW for project [other than rice straw and juliflora (plantation) based project] with water cooled condenser;b. 580 lakh/MW for Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser;c. 590 lakh/MW for rice straw and juliflora (plantation) based project with water cooled condenser;d. 630 lakh/MW for rice straw and juliflora (plantation) based project with air cooled condenser.]

35. Capital Cost Indexation Mechanism.

(1)The following indexation mechanism shall be applicable in case of biomass power projects for adjustment in capital cost over the Control Period with the changes in Wholesale Price Index for Steel and Electrical Machinery,CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b)Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote. P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control PeriodEI (0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.7), for weightages to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.3), for weightages to Electrical Machinery IndexF1 = Factor for Land and Civil Works (0.10)F2 = Factor for Erection and Commissioning (0.09)F3 = Factor for IDC and Financing Cost (0.14)

36. Plant Load Factor.

(1)Threshold Plant Load Factor for determining fixed charge component of Tariff shall be:(a)During Stabilisation: 60%(b)During the remaining period of the first year (after stabilization): 70%(c)From 2nd Year onwards: 80%(2)The stabilisation period shall not be more than 6 months from the date of commissioning of the project.

37. [Auxiliary Consumption. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- The auxiliary power consumption shall be as under:a. For the project using water cooled condenser:i. During first year of operation: 11%;ii. From 2nd year onwards: 10%.b. For the project using air cooled condenser:i. During first year of operation: 13%;ii. From 2nd year onwards: 12%.]

38. [Station Heat Rate. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- The Station Heat Rate for biomass power projects using fossil fuel up to 15% of calorific value on annual basis, shall be as under till 31.03.2018:a. 4126 kcal/kWh for project using travelling grate boilers;b. 4063 kcal/kWh for project using AFBC boilers.]

39. Operation and Maintenance Expenses.

- [(1) Normative O&M expenses for the first year of the Control period (i.e. FY 2013-14 shall be 40 lakh/MW.] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).](2)Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2013-14) under these Regulations shall be escalated at the rate of 5.72% per annum.

40. Fuel Mix.

(1)The biomass power plant shall be designed in such a way that it uses different types of non-fossil fuels available within the vicinity of biomass power project such as crop residues, agro-industrial residues, forest residues etc. and other biomass fuels as may be approved by MNRE.(2)The Biomass Power Generating Companies shall ensure fuel management plan to ensure adequate availability of fuel to meet the respective project requirements.

41. [Use of Fossil Fuel. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- The use of fossil fuels shall be limited to the extent of the 15% in terms of calorific value on annual basis, till 31.03.2018.] [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

42. Monitoring Mechanism for the use of fossil fuel.

(1)The Project developer shall furnish to the State Nodal Agency, a monthly fuel usage statement and monthly 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 such as -(a)Quantity of fuel (in tonne) for each fuel type (biomass fuels and fossil fuels) consumed and procured during the month for power generation purposes,(b)Cumulative quantity (in tonne) of each fuel type consumed and procured till the end of that month during the year,(c)Actual (gross and net) energy generation (denominated in units) during the month,(d)Cumulative actual (gross and net) energy generation (denominated in units) until the end of that month during the year,(e)Opening fuel stock quantity (in tonne),(f)Receipt of fuel quantity (in tonne) at the power plant site and(g)Closing fuel stock quantity (in tonne) for each fuel type (biomass fuels and fossil fuels) available at the power plant site.(2)Non-compliance with the condition of fossil fuel usage by the project developer, during any financial year, shall result in withdrawal of applicability of tariff as per these Regulations for such biomass based power project.

43. [Calorific Value. [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

- For Biomass based projects using fossil fuel up to 15% of calorific contribution, the Calorific Value of fuel used for the purpose of determination of tariff shall be 3174 kcal/kg. till 31.03.2018.]

44. Fuel Cost.

- Biomass fuel price during first year of the Control Period (i.e. FY 2013-14) shall Rs.2500 per Tonne and shall be linked to index formulae as specified under 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.

45. Fuel Price Indexation Mechanism.

(1)In case of biomass power projects, the following indexing mechanism for adjustment of fuel prices for each year of operation will be applicable for determination of applicable variable charge component of tariff, in case developer wishes to opt for indexing mechanism:P (n) =P (n-1) * {a * (WPI(n)/WPI(n-1)) + b * (1+IRC) (n-1) + c *(Pd(n)/Pd(n-1))}Where,P (n) = Price per tonne of biomass for the nth year to be considered for tariff determinationP (n-1) = Price per tonne of biomass for the (n-1)th year to be considered for tariff determination. P1 shall be Biomass price for FY 2013-14 as specified under Regulation 44.a = Factor representing fuel handling costb =Factor representing fuel costc = Factor representing transportation costIRC(n-1) = Average Annual Inflation Rate for indexed energy charge component in case of captive coal mine source (in %) to be applicable for (n- 1)th year, as may be specified by CERC for 'Payment purpose' as per Competitive Bidding GuidelinesPd n = Weighted average price of HSD for nth year.Pd n-1 = Weighted average

price of HSD for (n-1)th year.WPI n = Whole sale price index for the month of April of nth yearWPI n-1 = Wholesale price index for month of April of (n-1)th year.Where a, b & c will be specified by the Commission from time to time. In default, these factors shall be 0.2, 0.6 & 0.2 respectively.(2)Variable Charge for the nth year shall be determined as under:i.e. VCn = VC1x (Pn / P1) or VCn = VC1x (1.05)(n-1) (optional)Where,VC1represents the Variable Charge based on Biomass Price P1 for FY

2013.

-14 as specified under Regulation 44 and shall be determined as under:

VC1=| Station Heat Rate (SHR)Gross Calorific Value (GCV)| x| 1(1 - Aux Cons. Factor)| x| P11000| (3)The biomass base price shall be revised at the end of third year of the control period and same shall also be applicable to project commissioned under this Control Period.

Chapter 6
Technology specific parameters for Non-fossil fuel based Cogeneration Projects

46. Technology Aspect.

- A project shall qualify as a non-fossil fuel based Co-generation project, if it is in accordance with the eligibility criteria as specified under Regulation 4(d).

47. Capital Cost.

- The normative capital cost for the non-fossil fuel based cogeneration projects shall be Rs.420 Lakh/MW for the first year of Control Period (i.e. FY 2013- 14), and shall be linked to indexation formula as outlined under Regulation 48.

48. Capital Cost Indexation Mechanism.

- The following indexation mechanism shall be applicable in case of non-fossil fuel based cogeneration projects for adjustments in capital cost with the changes in Wholesale Price Index for Steel and Electrical Machinery,CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b)Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote: P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for fiscal year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar

year (n-1) of the Control PeriodEI (0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.7), for weightages to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.3), for weightages to Electrical Machinery IndexF1 = Factor for Land and Civil Work (0.10)F2 = Factor for Erection and Commissioning (0.09)F3 = Factor for IDC and Financing Cost (0.14)

49. Plant Load Factor.

(1)For the purpose of determining fixed charge, the plant load factor for nonfossil fuel based cogeneration projects shall be computed on the basis of plant availability for number of operating days considering operations during crushing season and off-season as specified under clause (2) below and load factor of 92%.(2)The number of operating days shall be as follows:

Operating Days	Plant Load Factor (%)
150 days (crushing) + 60 days (off-season) = 210days operating days	53%

50. Auxiliary Consumption.

- The auxiliary power consumption factor shall be 8.5% for the computation of tariff.

51. Station Heat Rate.

- The Station Heat Rate of 3600 kCal/kWh for power generation component alone shall be considered for computation of tariff for non-fossil fuel based Cogeneration projects.

52. Calorific Value.

- The Gross Calorific Value for Bagasse shall be considered as 2250 kCal/kg. For the use of biomass fuels other than bagasse, calorific value as specified under Regulation 43 shall be applicable.

53. Fuel Cost.

(1)The price of Bagasse shall be as Rs.1600 per Tonne and shall be linked to indexation formula 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.(2)For use of biomass other than bagasse in co-generation projects, the biomass prices as specified under Regulation 44 shall be applicable.

54. Fuel Price Indexation Mechanism.

(1)In case of non-fossil fuel based cogeneration projects, the following indexing mechanism for adjustment of fuel prices for each year of operation will be applicable for determination of applicable variable charge component of tariff, in case developer wishes to opt for indexing

mechanism:P (n) =P (n-1) * {a * (WPI (n)/WPI (n-1)) + b * (1+IRC) (n-1) + c *(Pd(n)/Pd(n-1))}Where,P (n) = Price per tonne of Bagasse for the nth year to be considered for tariff determinationP (n-1) = Price per tonne of Bagasse for the (n-1)th year to be considered for tariff determination. P1 shall be Biomass p r i c e for FY 2013-14 as specified under Regulation 53.a = Factor representing fuel handling costb = Factor representing fuel costc = Factor representing transportation costIRC(n-1) = Average Annual Inflation Rate for indexed energy charge component in case of captive coal mine source (in %) to be applicable for (n- 1)th year, as may be specified by CERC for 'Payment purpose' as per Competitive Bidding GuidelinesPd n = Weighted average price of HSD for nth year.Pd n-1 = Weighted average price of HSD for (n-1)th year.WPI n = Whole sale price index for the month of April of nth yearWPI n-1 = Wholesale price index for month of April of (n-1)th year.Where a, b & c will be specified by the Commission from time to time.In default, these factors shall be 0.2, 0.6 & 0.2 respectively.(2)Variable Charge for the nth year shall be determined as under:i.e. VCn = VC1x (Pn / P1) or VCn = VC1x (1.05) (n-1) (optional)Where,VC1 represents the Variable Charge based on bagasse Price P1for FY 2013-14 as specified under Regulation 53 and shall be determined as under:

VC1=| Station Heat Rate (SHR)Gross Calorific Value (GCV)| x| 1(1 - Aux Cons. Factor)| x| P11000|

55. Operation and Maintenance Expenses.

(1)Normative O&M expenses during first year of the Control period (i.e. FY 2013- 14) shall be Rs.16 Lakh per MW.(2)Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2013-14) under these Regulations shall be escalated at the rate of 5.72% per annum.

Chapter 7
Technology specific parameters for Solar PV Power Project

56. Technology Aspects.

(1)Norms for Solar Photovoltaic (PV) power under these Regulations shall be applicable for grid connected PV systems that directly convert solar energy into electricity and are based on the technologies such as crystalline silicon or thin film etc. as may be approved by MNRE.

57. Capital Cost.

(1)The normative capital cost for setting up Solar Photovoltaic Power Project shall be Rs.1000Lakh/MW for FY 2013-14. Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

58. Capacity Utilisation Factor.

(1)The Capacity utilisation factor for Solar PV project shall be 19%.Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of

Regulation 7 and Regulation 8.

59. Operation and Maintenance Expenses.

(1)The O&M Expenses shall be Rs.11 Lakh/MW for the 1st year of operation.[Provided that Normative O&M expenses for the last two years of the Control Period (i.e. FY 2016-17 and FY 2017-18) shall be 1.5% of the approved capital cost for the respective year.] [Added by Notification No. 50-JKSERC of 2016, dated 22.4.2016 (w.e.f. 17.5.2013).](2)Normative O&M expenses allowed at the commencement of the Control Period under these Regulations shall be escalated at the rate of 5.72% per annum.

Chapter 8
Technology specific parameters for Solar Thermal Power Project

60. Technology Aspects.

(1)Norms for Solar thermal power under these Regulations shall be applicable for Concentrated solar power (CSP) technologies viz. line focusing or point focusing, as may be approved by MNRE, and uses direct sunlight, concentrating it several times to reach higher energy densities and thus higher temperatures whereby the heat generated is used to operate a conventional power cycle to generate electricity.

61. Capital Cost.

(1)The normative capital cost for setting up Solar Thermal Power Project shall be Rs.1300 Lakh/MW for FY 2013-14.Provided that the Commission may deviate from the above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

62. Capacity Utilisation Factor (CUF).

(1)The Capacity Utilisation Factor shall be 23%.Provided that the Commission may deviate from the above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

63. Operation and Maintenance Expenses.

(1)The O&M Expenses shall be Rs.15 Lakh/MW for 1st year operation.(2)Normative Operation and Maintenance Expenses allowed at the commencement of the Control Period under these Regulations shall be escalated at the rate of 5.72% per annum.

64. Auxiliary Consumption.

(1)The auxiliary consumption factor shall be 10%.Provided that the Commission may deviate from the above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

Chapter 9
Technology specific parameters for Biomass Gasifier Power Projects

65. Technology Aspect.

- The norms for tariff determination specified hereunder are for biomass gasifier based power projects.

66. Capital Cost.

- The normative capital cost for the biomass gasifier power projects based on Rankine cycle shall be Rs.550 Lakh/MW (FY 2013-14 during first year of Control Period) and shall be linked to indexation formula as outlined under Regulation 67. After taking into account of capital subsidy net project cost shall be ` 400Lakh/MW for FY 2013-14.

67. Capital Cost Indexation Mechanism.

(1)The following indexation mechanism shall be applicable in case of biomass gasifier power projects for adjustment in capital cost over the Control Period with the changes in Wholesale Price Index for Steel and Electrical Machinery,CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b)Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote: P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control PeriodEI (0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.7), for weightages to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.3), for weightages to Electrical Machinery IndexF1 = Factor for Land and Civil Works (0.10)F2 = Factor for Erection and Commissioning (0.09)F3 = Factor for IDC and Financing Cost (0.14)

68. Plant Load Factor.

- Threshold Plant Load Factor for determining fixed charge component of Tariff shall be 85%.

69. Auxiliary Consumption.

- The auxiliary power consumption factor shall be 10% for the determination of tariff.

70. Specific fuel consumption.

- Normative specific fuel consumption shall be 1.25 kg per kWh.

71. Operation and Maintenance Expenses.

(1)Normative O&M expenses for the first year of the Control period (i.e. FY 2013-14 shall be Rs.40 Lakh per MW.(2)Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2013-14) under these Regulations shall be escalated at the rate of 5.72% per annum.

72. Fuel Mix.

(1)The Biomass Gasifier based power plant shall be designed in such a way that it uses different types of non-fossil fuels available within the vicinity of biomass power project such as crop residues, agro industrial residues, forest residues etc. and other biomass fuels as may be approved by MNRE.(2)The Biomass Gasifier based Power Generating Companies shall ensure fuel management plan to ensure adequate availability of fuel to meet the respective project requirements.

73. Fuel Cost.

- Biomass fuel price during first year of the Control Period (i.e. FY 2013-14) shall be as per Regulation 44 and shall be linked to indexation formula as specified under Regulation 74. 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 Gasifier project developer.

74. Fuel Price Indexation Mechanism.

(1)In case of Biomass Gasifier power projects, the following indexing mechanism for adjustment of fuel prices for each year of operation will be applicable for determination of applicable variable charge component of tariff, in case developer wishes to opt for indexing mechanism:P (n) =P (n-1) * {a * (WPI(n)/WPI(n-1)) + b * (1+IRC) (n-1) + c *(Pd(n)/Pd(n-1))}Where,P (n) = Price per tonne of biomass for the nth year to be considered for tariff determinationP (n-1) = Price per tonne of biomass for the (n-1)th year to be considered for tariff determination. P1 shall be Biomass price for FY 2013-14 as specified under Regulation 44.a = Factor representing fuel handling costb = Factor representing fuel costc = Factor representing transportation costIRC(n-1) = Average Annual

Inflation Rate for indexed energy charge component in case of captive coal mine source (in %) to be applicable for (n- 1)th year, as may be specified by CERC for 'Payment purpose' as per competitive Bidding GuidelinesPd n = Weighted average price of HSD for nth year.Pd n-1 = Weighted average price of HSD for (n-1)th year.WPI n = Whole sale price index for the month of April of nth yearWPI n-1 = Wholesale price index for month of April of (n-1)th year.Where a, b & c will be specified by the Commission from time to time. In default, these factors shall be 0.2, 0.6 & 0.2 respectively.(2)Variable Charge for the nth year shall be determined as under:i.e. VCn = VC1x (Pn / P1) or VCn = VC1x (1.05)(n-1) (optional)Where,VC1represents the Variable Charge based on Biomass Price P1 for FY 2013-14 as specified under Regulation 44 and shall be determined as under:

VC1=| Station Heat Rate (SHR)Gross Calorific Value (GCV)| x| 1(1 - Aux Cons. Factor)| x| P11000| (3)The biomass base price shall be revised at the end of the control period for the next Control Period and same shall also be applicable to project commissioned under this Control Period.

Chapter 10
Technology specific parameters for Biogas based Power Projects

75. Technology Aspect.

- The norms for tariff determination specified hereunder are for grid connected biogas based power projects 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.

76. Capital Cost.

- The normative capital cost for the biogas based power shall be Rs.1100 Lakh/MW (FY 2013-14 during first year of Control Period) and shall be linked to indexation formula as outlined under Regulation 77. After taking into account of capital subsidy net project cost shall be Rs.800Lakh/MW for FY 2013-14.

77. Capital Cost Indexation Mechanism.

(1)The following indexation mechanism shall be applicable in case of biogas based power projects for adjustment in capital cost over the Control Period with the changes in Wholesale Price Index for Steel and Electrical Machinery,CC(n) = P&M(n)* (1+F1+F2+F3)P&M(n) = P&M(0) * (1+d(n))d(n) = [a*{(SI(n-1)/SI(0))- 1} + b*{(EI(n-1)/EI(0)) - 1}]/(a+b)Where,CC (n) = Capital Cost for nth yearP&M (n) = Plant and Machinery Cost for nth yearP&M (0) = Plant and Machinery Cost for the base yearNote: P&M (0) is to be computed by dividing the base capital cost (for the first year of the control period) by (1+F1+F2+F3)d (n) = Capital Cost escalation factor for year (n) of Control PeriodSI (n-1) = Average WPI Steel Index prevalent for calendar year (n-1) of the Control PeriodSI (0) = Average WPI Steel Index prevalent for calendar year (0) at the beginning of the Control Period

i.e. April 2012 to March 2013EI (n-1) = Average WPI Electrical Machinery Index prevalent for calendar year (n-1) of the Control PeriodEI(0) = Average WPI Electrical and Machinery Index prevalent for calendar year (0) at the beginning of the Control Period i.e. April 2012 to March 2013a = Constant to be determined by Commission from time to time, (In default it is 0.7), for weightages to Steel Indexb = Constant to be determined by Commission from time to time, (In default it is 0.3), for weightages to Electrical Machinery IndexF1 = Factor for Land and Civil Works (0.10)F2 = Factor for Erection and Commissioning (0.09)F3 = Factor for IDC and Financing Cost (0.14)

78. Plant Load Factor.

- Threshold Plant Load Factor for determining fixed charge component of Tariff shall be 90%.

79. Auxiliary Consumption.

- The auxiliary power consumption factor shall be 12% for the determination of tariff.

80. Operation and Maintenance Expenses.

(1)Normative O&M expenses for the first year of the Control period (i.e. FY 2013-14 shall be Rs.40 Lakh per MW.(2)Normative O&M expenses allowed at the commencement of the Control Period (i.e. FY 2013-14) under these Regulations shall be escalated at the rate of 5.72% per annum.

81. Specific Fuel Consumption.

- Normative specific fuel consumption shall be 3 kg of substrate mix per kWh.

82. Fuel Cost (Feed stock Price).

- Feed stock price during first year of the Control Period (i.e. FY 2013-14) shall be Rs.990/MT (net of any cost recovery from digester effluent).

83. Fuel Price Indexation Mechanism.

(1)In case of biomass power projects, the following indexing mechanism for adjustment of fuel prices for each year of operation will be applicable for determination of applicable variable charge component of tariff, in case developer wishes to opt for indexing mechanism:P (n) =P (n-1) * {a * (WPI(n)/WPI(n-1)) + b * (1+IRC) (n-1) + c *(Pd(n)/Pd(n-1))}Where,P (n) = Price per tonne of biomass for the nth year to be considered for tariff determinationP (n-1) = Price per tonne of biomass for the (n-1)th year to be considered for tariff determination.P1 shall be Feed stock price for FY 2013-14 as specified under Regulation 82a = Factor representing fuel handling costb = Factor representing fuel costc = Factor representing transportation costIRC(n-1) = Average Annual Inflation Rate for indexed energy charge component in case of captive coal mine source (in %) to be applicable for (n- 1)th year, as may be specified by CERC for 'Payment purpose' as per Competitive

Bidding GuidelinesPd n = Weighted average price of HSD for nth year.Pd n-1 = Weighted average price of HSD for (n-1)th year.WPI n = Whole sale price index for the month of April of nth yearWPI n-1 = Wholesale price index for month of April of (n-1)th year.Where a, b & c will be specified by the Commission from time to time. In default, these factors shall be 0.2, 0.6 & 0.2 respectively.(2)Variable Charge for the nth year shall be determined as under:i.e. VCn = VC1x (Pn / P1) or VCn = VC1x (1.05)(n-1) (optional)where,VC1represents the Variable Charge based on Biomass Price P1for FY 2013-14 as specified under Regulation 44 and shall be determined as under:

VC1=| Station Heat Rate (SHR)Gross Calorific Value (GCV)| x| 1(1 - Aux Cons. Factor)| x| P11000| (3)The biomass base price shall be revised at the end of third year of the control period and same shall also be applicable to project commissioned under this Control Period.

Chapter 11
Miscellaneous

84. Deviation from norms.

- Tariff for sale of electricity generated from a generating station based on renewable energy sources, may also be agreed between a generating company and a licensee, in deviation from the norms specified in these regulations subject to the conditions that the levellised tariff over the useful life of the project on the basis of the norms in deviation does not exceed the levellised tariff calculated on the basis of the norms specified in these Regulations.

85. Power to Relax.

- The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.Form-1.1: Form Template for (Wind Power or Small Hydro Project or Solar PV/Solar thermal)

S.No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter Values
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	
Capacity Utilization Factor	%				
Commercial Operation Date	mm/yyyy				
Useful Life	Years				

2	Project Cost	Capital Cost/MW	Normative Capital Cost	Rs.Lac/MW
Capital Cost	Rs.Lac			
Capital subsidy, if any	Rs.Lac			
Net Capital Cost	Rs.Lac			
3	Financial Assumptions		Tariff Period	Years
Debt: Equity	Debt	%		
Equity	%			
Total Debt Amount	Rs.Lac			
Total Equity Amount	Rs.Lac			
Debt component	Loan Amount	Rs.Lac		
Moratorium Period	Years			
Repayment Period (incld Moratorium)	Years			
Interest Rate	%			
Equity component	Equity Amount	Rs.Lac		
Return on Equity for first 10 years	% p.a			
Return on Equity 11th year onwards	% p.a			
Discount Rate	%			
Depreciation	Depreciation rate for first 12 years	%		
Depreciation rate 13th years onwards	%			
Incentives	Generation based Incentives, if any	Rs.L p.a		
Period for GBI	Years			
4	Operation & Maintenance	Normative O&M expense		Rs.Lac/MW
O&M expense per annum		Rs.Lac		
Escalation factor		%		

5	Working Capital	O&M expense		Months
		Maintenance Spare	(% of O&M expenses)	%
		Receivables		Months
		Interest on Working Capital		% p.a

Form-1.2: Form Template for (Wind Power or Small Hydro Project or Solar PV/Solar thermal) : Determination of tariff Components

Units Generation	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
Installed Capacity	MW													
Net Generation	MU													
Units Generation	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24		
Installed Capacity	MW													
Net Generation	MU													

Tariff Components(Fixed charge)	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
O&M Expenses	RS.Lac													
Depreciation	RS.Lac													
Interest on term loan	RS.Lac													
Interest on working Capital	RS.Lac													
Return on Equity	RS.Lac													
Total Fixed Cost	RS.Lac													

Tariff Components(Fixed charge)	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24
O&M Expenses	RS.Lac											
Depreciation	RS.Lac											
Interest on term loan	RS.Lac											
Interest on working Capital	RS.Lac											
Return on Equity	RS.Lac											
Total Fixed Cost	RS.Lac											

Per Unit Tariff components	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
	Rs./kWh													

PU O&M Expenses												
PU Depreciation	Rs./kWh											
PU Interest on term loan	Rs./kWh											
PU Interest on working Capital	Rs./kWh											
PU Return on Equity	Rs./kWh											
PU Tariff Components	Rs./kWh											
Per Unit Tariff components	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24
PU O&M Expenses	Rs./kWh											
PU Depreciation	Rs./kWh											
PU Interest on term loan	Rs./kWh											
PU Interest on working Capital	Rs./kWh											
PU Return on Equity	Rs./kWh											
PU Tariff Components	Rs./kWh											
Levellised Tariff	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
Discount Factors														
Discounted Tariff components	Rs./kWh													
Levellised Tariff	Rs./kWh													
Levellised Tariff	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24		
Discount Factors														
Discounted Tariff components	Rs./kWh													
Levellised Tariff	Rs./kWh													

Form - 2.1: Form Template for (Biomass Power or Non-fossil fuel based Cogan): Parameter Assumptions

S.No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter Values
1	Power Generation	Capacity	Installed Power Generation	MW	

		Capacity		
Capacity Utilization Factor	%			
Commercial Operation Date	mm/yyyy			
Useful Life	Years			
2	Project Cost	Capital Cost/MW	Normative Capital Cost	Rs.Lac/MW
Capital Cost	Rs.Lac			
Capital subsidy, if any	Rs.Lac			
Net Capital Cost	Rs.Lac			
3	Financial Assumptions		Tariff Period	Years
Debt: Equity	Debt	%		
	Equity	%		
Total Debt Amount	Rs.Lac			
Total Equity Amount	Rs.Lac			
Debt component	Loan Amount	Rs.Lac		
Moratorium Period	Years			
Repayment Period (incld Moratorium)	Years			
Interest Rate	%			
Equity component	Equity Amount	Rs.Lac		
Return on Equity for first 10 years	% p.a			
	% p.a			

Return on Equity 11th year onwards							
Discount Rate	%						
Depreciation	Depreciation rate for first 12 years	%					
Depreciation rate 13th years onwards	%						
Incentives	Generation based Incentives, if any	Rs.L p.a					
Period for GBI	Years						
4	Operation & Maintenance	Normative O&M expense		Rs.Lac/MW			
O&M expense per annum		Rs.Lac					
Escalation factor		%					
5	Working Capital	O&M expense		Months			
Maintenance Spare	(% of O&M expenses)	%					
Receivables		Months					
Interest on Working Capital		% p.a					
6	Fuel related assumptions	Station Heat Rate	During Stabilisation	Kcal/kWh	|-	Post Stabiliation	Kcal/kWh
Fuel types & mix	Biomass fuel type – 1	%	|-	Biomass fuel type - 2	%		

Fossil Fuel (coal)	%
GCV of Biomass fuel type -1	Kcal/kWh
GCV of Biomass fuel type - 2	Kcal/kWh
GCV of fossil Fuel (coal)	Kcal/kWh
Biomass price (fuel type – 1) : yr - 1	Rs/MT
Biomass price (fuel type – 2) : yr - 1	Rs/MT
Fossil fuel price (coal) : yr - 1	Rs/MT
Fuel price escalation factor	% p.a

[Form-2.2: Form Template for (Biomass Power, Municipal Solid Waste and Refuse Derived Fuel or Non-Fossil fuel based Cogen: Determination of Tariff Components] [Substituted 'Form-2.2: Form Template for (Biomass Power or Non-fossil fuel based Cogan): Determination of tariff Components' by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]

Units Generation	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
Installed Capacity	MW													
Net Generation	MU													
Units Generation	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24	Yr-25	
Installed Capacity	MW													
Net Generation	MU													

Tariff Components(Fixed charge)	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
O&M Expenses	RS.Lac													
Depreciation	RS.Lac													
Interest on term loan	RS.Lac													

Interest on working Capital	RS.Lac												
Return on Equity	RS.Lac												
Total Fixed Cost	RS.Lac												
Tariff Components(Fixed charge)	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24	Yr - 25
O&M Expenses	RS.Lac												
Depreciation	RS.Lac												
Interest on term loan	RS.Lac												
Interest on working Capital	RS.Lac												
Return on Equity	RS.Lac												
Total Fixed Cost	RS.Lac												
[Tariff Components(Variable charge) [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
Biomanss fuel type - 1	RS.Lac													
Biomanss fuel type - 2	RS.Lac													
Municipal Solid Waste	RS.Lac													
Refuse Derived Fuel	RS.Lac													
Fossil fuel (coal)	RS.Lac													
Sub-total (Fuel Costs)	RS.Lac													
Fuel cost allocable to power	%													
Total Fuel Cost	RS.Lac]													
[Tariff Components(variable charge) [Substituted by Notification No. 49-JKSERC of 2016, dated 22.3.2016 (w.e.f. 17.5.2013).]	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24	Yr - 25	
Biomanss fuel type –1	RS.Lac													
Biomanss fuel type –2	RS.Lac													

Municipal Solid Waste	RS.Lac													
Refuse Derived Fuel	RS.Lac													
Fossil fuel (coal)	RS.Lac													
Sub-total (Fuel Costs)	RS.Lac													
Fuel cost allocable to power	%													
Total Fuel costs	RS.Lac]													
Per Unit Tariff components	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13
PU O&M Expenses	Rs./kWh													
PU Depreciation	Rs./kWh													
PU Interest on term loan	Rs./kWh													
PU Interest on working Capital	Rs./kWh													
PU Return on Equity	Rs./kWh													
PU Tariff Components(Fixed)	Rs./kWh													
PU Tariff Components(Variable)	Rs./kWh													
PU Tariff Components(Total)	Rs./kWh													
Per Unit Tariff components	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24	Yr-2	
PU O&M Expenses	Rs./kWh													
PU Depreciation	Rs./kWh													
PU Interest on term loan	Rs./kWh													
PU Interest on working Capital	Rs./kWh													
PU Return on Equity	Rs./kWh													
PU Tariff Components(Fixed)	Rs./kWh													
PU Tariff Components(Variable)	Rs./kWh													
PU Tariff Components(Total)	Rs./kWh													
Levellised Tariff	Unit	Yr-1	Yr-2	Yr-3	Yr-4	Yr-5	Yr-6	Yr-7	Yr-8	Yr-9	Yr-10	Yr-11	Yr-12	Yr-13

Discount Factors												
Discounted Tariff components (Fixed)	Rs./kWh											
Discounted Tariff components (Variable)	Rs./kWh											
Discounted Tariff components (Total)	Rs./kWh											
Levellised Tariff (Fixed)	Rs./kWh											
Levellised Tariff (Variable)	Rs./kWh											

Levellised Tariff	Unit	Yr-14	Yr-15	Yr-16	Yr-17	Yr-18	Yr-19	Yr-20	Yr-21	Yr-22	Yr-23	Yr-24	Yr-25
Discount Factors													
Discounted Tariff components (Fixed)	Rs./kWh												
Discounted Tariff components (Variable)	Rs./kWh												
Discounted Tariff components (Total)	Rs./kWh												
Levellised Tariff (Fixed)	Rs./kWh												
Levellised Tariff (Variable)	Rs./kWh												