

**THE HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION,
SHIMLA**

WHEREAS the Himachal Pradesh Electricity Regulatory Commission has published in the Himachal Pradesh Government Gazette on different dates the following, namely:-

Himachal Pradesh Electricity Regulatory Commission (HPERC), (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2017;
(Notification No. : HPERC/428, Dated: Dated: 16.11.2017)

A. Himachal Pradesh Electricity Regulatory Commission Supply Code (HPERC), (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2017 (First Amendment), 2018;
(Notification No. : HPERC/428, Dated: Dated: 07.05.2018)

- Inserted/ Replaced matter is shown as []^D at appropriate place; wordings inserted/ replaced shown within square brackets;
 - In both of above cases; -^D ; superscript D implies that change is caused by Amendment '4';
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Notification

Shimla, the 16th November, 2017

No. HPERC/428- WHEREAS the Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012, specified norms and other provisions for the Renewable Energy projects for the control period extending upto 30.09.2017 and thus it has become necessary to put in place the new regulations commencing from 01.10.2017;

AND WHEREAS the Commission, as required under sub-section (3) of Section 181 of the Electricity Act, 2003 (36 of 2003), read with rule 3 of the Electricity (Procedure for Previous Publication) Rules, 2005, has published the draft regulations in Rajpatra, Himachal Pradesh dated 19.08.2017, and uploaded the same on the Commission's website, for information of all the persons likely to be affected and also invited, within twenty one days from the aforesaid publication in Rajpatra, Himachal Pradesh, the public objections/suggestions by way of insertions in newspapers "The Tribune" and "Amar Ujala" dated 20th August, 2017. The said period of 21 days allowed for submission of objections/suggestions, was further extended upto 29th September, 2017. Two public hearings were conducted by the Commission on 16th September, 2017 and 7th October, 2017 to hear the views of stakeholders in person. The suggestions/objections received in respect of the draft regulations have been duly taken into consideration;

NOW, THEREFORE, the Himachal Pradesh Electricity Regulatory Commission, in exercise of the powers conferred by Section 61, sub-section(1) of Section 62, clause(a), (b) and (e) of sub-section (1) of Section 86 and Clause (zd) of sub-section (2) of Section 181, of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf hereby makes the following regulations, namely.-

REGULATIONS

CHAPTER-I

PRELIMINARY

1. Short title and commencement. - (1) These regulations may be called the Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2017.

(2) These Regulations shall come into force on 1st October, 2017 and unless reviewed earlier or extended by the Commission, shall remain in force till ~~31st March, 2020~~^A [31st March, 2019]^A.

2. Definitions and Interpretation.- (1) In these Regulations, unless the context otherwise requires.-

- (a) 'Act' means the Electricity Act, 2003 (36 of 2003);
- (b) 'Auxiliary energy consumption' or 'AUX' in relation to a period in case of a project 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 renewable energy generator terminals of all the units of the generating station;
- (c) 'Capital cost' means the capital cost as defined in regulation 21;
- (d) 'Commission' means the Himachal Pradesh Electricity Regulatory Commission referred to in sub-section (1) of section 82 of the Act;
- (e) 'Conduct of Business Regulations' means the Conduct of Business Regulations specified by the Commission under sub-section (1) of section 92 of the Act;
- (f) 'Control period or review period' means the period during which the norms for determination of tariff specified in these Regulations shall remain valid;
- (g) 'Date of commencement of operation of the project' means the date on which the first unit of the project is synchronized with the grid for the first time;

¹Modified words and figures in sub-Regulation (2) of Regulation 1, vide First Amendment (A), 2018

- (h) **‘Renewable energy generator’** means the person(s) generating or intending to generate energy, including cogeneration, from renewable energy sources;
- (i) **‘HIMURJA’** means the Himachal Pradesh Energy Development Agency set up by the State Government for the development of the renewables;
- (j) **‘Installed capacity’** or **‘IC’**, for the purpose of tariff determination, means the summation of the name plate capacities of all the units of the generating station, reckoned at the renewable energy generator terminals or the capacity for which the renewable energy generator has executed implementation agreement with the State Government, whichever is higher;
- (k) **‘Interconnection facilities’** means all the facilities and works which shall include, without limitation, switching equipment, protection control and metering devices etc. and all the associated works (also including civil and electrical works), for the incoming bay(s) for the project line(s) at the interconnecting sub-station of the licensee and shall also include any other works like re-organisation of bays at the interconnecting sub-station and associated civil works as may be required for facilitating the said incoming bays;
- (l) **‘Inter-connection point’** means the physical touch point where the project line(s) and the allied equipments of the interconnection facilities, forming part of the renewable energy project, are connected, or are to be connected, with the transmission system or distribution system, in accordance with the interconnection agreement/connectivity agreement or power purchase agreement or the power system master plan/sub-plan of the State Transmission Utility/distribution licensee, as may be relevant;
- (m) **‘Licensee’** means a person to whom a licence has been granted or deemed to have been granted by the Commission under Section 14 of the Act;
- (n) **‘MNRE’** means the Ministry of New and Renewable Energy of the Government of India;
- (o) **‘Municipal Solid Waste’** means and includes commercial and residential waste generated in a municipal area or its adjoining areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical wastes;
- (p) **‘Net saleable energy’** in relation to a period and in respect of a project, means the quantum of energy available for sale from that project at the interconnection point in that period, after meeting auxiliary consumption, transformation losses in the transformers at the generating station switchyard, the losses in project line(s) upto the interconnection point and free power, if any, to the State Government;

- (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 fulfils 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, without limitation, the expenditure on manpower, establishment (including employees expense, administrative and general expenses), repairs, spares, consumables, insurance and overheads as well as the taxes, duties and other levies on any or all such activities;
- (s) **'Project'** means a RE technology based generating station alongwith generator/step up transformers at power house switchyard, the evacuation system upto the interconnection point, including interconnection facilities, and in the case of a small hydro generating station includes, without limitation, 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 in addition to the project line(s) and the interconnection facilities;
- (t) **'Project line'** means the evacuation infrastructure from the generating station to the interconnecting sub-station of the licensee, to be provided, operated and maintained as a part of the project by the renewable energy generator(s) for the purpose of evacuation of power from the project;
- (u) **'Refuse Derived Fuel'** means segregated combustible fraction of solid waste other than chlorinated plastics in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting combustible components of solid waste that can be used as fuel;
- (v) **'Renewable energy'** means the grid quality electricity generated from renewable energy sources;
- (w) **'Renewable Energy Certificate mechanism'** or **'REC mechanism'** means the mechanism devised for the development of market in power from non-conventional energy sources by issuance of transferable and saleable credit certificates under the Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, and the Himachal Pradesh Electricity Regulatory Commission (Renewable Power Purchase Obligation and its Compliance) Regulations, 2010;
- (x) **'Renewable energy sources'** mean renewable sources of energy such as small hydro, wind, solar including its integration with combined cycle, biomass, bio

fuel cogeneration, urban or municipal waste including Municipal Solid Waste (MSW) based power projects and Refuse Derived Fuel (RDF) based power projects and other such sources as approved by the MNRE;

- (y) **'Small Hydro Project' or 'SHP'** means a hydro power project with a station capacity up to and including 25 MW and shall also include the project line(s) and the Interconnection Facilities.;
- (z) **'Solar PV power'** means the Solar Photo Voltaic power project that uses sunlight for direct conversion into electricity through Photo Voltaic technology;
- (aa) **'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;
- (ab) **'Tariff period'** means the period for which tariff is to be determined by the Commission on the basis of norms specified under these Regulations;
- (ac) **'Useful Life'** in relation to a project shall mean the useful life of the following duration from the date of commencement of operation of the project, namely:-
- | | |
|--|-------------------------------------|
| (a) Wind energy power project | 25 years |
| (b) Biomas power project, non-fossil fuel based cogeneration | 20 years |
| (c) SHPs | 40 years |
| (d) Municipal Solid Waste (MSW)/ Refuse Derived Fuel (RDF) based Power project | 20 years |
| (e) Solar PV/Solar thermal power plant | 25 years |
| (f) Any other renewable energy technology approved by the MNRE; | As may be fixed under regulation 18 |
- (ad) **'Year'** means a financial year.

(2) The words and expressions used in these Regulations and not defined herein, but defined in the Act or the regulations issued by the Commission, shall have the meanings assigned to them in the Act or in such regulations issued by the Commission; the words and expressions used herein but not specifically defined in these Regulations or in the Act, but defined under any law, passed by a competent Legislature and applicable to the electricity industry in the State, shall have the meanings assigned to them in such law; the words and expressions used herein, but not specifically defined in the Regulations or in the Act or any law passed by a competent Legislature, shall have the meanings as are generally assigned to them in the electricity industry.

3. Scope and extent of application.- (1) Save as provided in sub-regulations (2) and (3), these Regulations shall apply in all cases where tariff, for a project based on renewable sources of energy, is to be determined by the Commission under section 62, read with section

86, of the Act:

Provided that in cases of wind power projects, small hydro projects, biomass power based on Rankine cycle, non-fossil fuel based cogeneration projects, solar PV based power projects, solar thermal based power projects, biomass gasifier based power projects, biogas based power projects, municipal solid waste based power projects and Refuse Derived Fuel based power projects, these regulations shall apply subject to the fulfilment of eligibility criteria specified in regulation 4 of these regulations.

(2) These Regulations shall not apply in the following cases:-

(i) where long term agreements for disposal/use of energy have either already been signed by the renewable energy generators or have been approved by the Commission, or the joint petitions for the approval of the Power Purchase Agreements have been filed before the Commission, prior to the date of commencement of these Regulations:

Provided that in case the capacity has been enhanced subsequent to signing/approval of such agreement(s), the applicability of these regulations shall be ascertained, based on such criteria, separately for the original capacity and the additional capacity;

(ii) projects upto 100 kW, for which the Commission may determine tariff through a separate order;

(iii) where the tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government.

(3) Notwithstanding anything contained in sub-regulations (1) and (2)-

(a) where long term agreements have been executed between the renewable energy generators and the licensee, before setting up of the Commission, the provisions of such agreements shall continue to be applicable;

(b) where, after the setting up of the Commission, the joint petition for approval of the power purchase agreement has been filed before the Commission prior to the commencement of these regulations, the tariff shall be in accordance with the terms and conditions of such approved power purchase agreement read with the Himachal Pradesh Electricity Regulatory Commission (Power Procurement from Renewable Sources and Cogeneration by Distribution Licensee), Regulations, 2007 and the Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012, as may be relevant, irrespective of the date on which such agreement is actually approved by the Commission and/or is executed.

4. Eligibility Criteria.- A project shall be eligible for being considered to be based on renewable sources of energy on the fulfilment of the following criteria:-

(a) **Wind power project.**—using new wind turbine renewable energy generators.

(b) **Small hydro project.**—located at the sites approved by the State Government or

its agency; using new plant and machinery; and the 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** .- 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% of total fuel consumption on annual basis.
- (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 application 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 of the useful thermal output should be greater than 45% of the facility's energy consumption, during season.

Explanation. - For the purposes of this clause-

- (i) 'Useful power output' is the gross electrical output from the renewable energy 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, the auxiliary consumption shall be subtracted from the gross output. For simplicity of calculation, the useful power output is defined as the gross electricity (kWh) output from the renewable energy generator.
- (ii) 'Useful thermal output' is the useful heat (steam) that is provided to the process by the cogeneration facility.
- (iii) 'Energy consumption' of the facility is the useful energy input that is supplied by the fuel (normally biogases or other such biomass fuel).
- (iv) '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 based Power Project.** –Based on Technologies approved by the 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 the 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 the MNRE.
- (h) **Municipal Solid Waste (MSW) based power projects.**— The project shall qualify to be termed as a Municipal Solid Waste (MSW) based power project, if it is using new plant and machinery based on Rankine cycle technology and using Municipal Solid Waste (MSW) as fuel sources; and
- (i) **Refuse Derived Fuel (RDF) based power projects.**— The project shall qualify to be termed as a Refuse Derived Fuel (RDF) based power project, if it is using new plant and machinery based on Rankine cycle technology and using Refuse Derived Fuel (RDF) as fuel sources.

CHAPTER-II

PROMOTION OF GENERATION FROM RENEWABLE ENERGY SOURCES

5. Promotion of renewable energy sources.— (1) Any renewable energy generator who does not have an arrangement for disposal/use of energy from his project may, with prior consent of the distribution licensee and approval of the Commission, enter into a power purchase agreement, on long term basis or under the REC mechanism, with the distribution licensee as per the provisions of the relevant applicable regulations, read with regulation 3; or the renewable energy generator may have open access to transmission system and/or distribution system of the licensee(s), as the case may be, in accordance with the Himachal Pradesh Electricity Regulatory Commission (Grant of Connectivity, Long-term and Medium-term Intra-State Open Access and Related Matters) Regulations, 2010.

(2) The renewable energy generator, to whom connectivity with the transmission or distribution system of the concerned licensee has not already been granted, shall apply for connectivity to the licensee at least 24 months prior to intended date of such connectivity or within such time frame as may be mutually agreed:

Provided that in case of renewable technologies other than small hydro projects, such application may be made at least 12 months prior to the intended date of such connectivity or within such time frame as may be mutually agreed.

(3) The licensee may, on receipt of the application, grant its approval to provide interconnection point as per the power system master plan/sub-plan, as devised by the State Transmission Utility (STU)/ distribution licensee for various capacities of projects, duly keeping in view the provisions in the agreements already executed or the mutual acceptance between the licensee and the renewable energy generator.

(4) The renewable energy generator shall, soon after finalisation of the interconnection point or immediately in cases where the same has already been finalised, execute an interconnection agreement with the State Transmission Utility and/or the intra-State transmission licensee and/or distribution licensee owning the system where connectivity is to be provided.

(5) The licensee shall, after receipt of the estimated cost of the interconnection facilities, provide appropriate facilities consistent with the grid connectivity standards laid down by the Authority or as specified in the relevant Code(s)/Regulations-

- (i) in case where such facilities are to be provided at an existing substation, within a period of 12 months or as may be agreed otherwise; and
- (ii) in case of the new sub-station, within such period as may be mutually agreed keeping in view the time frame in which such new sub-station is to be commissioned:

Provided that the renewable energy generator shall give prior intimation, at least 4 months before the expected date of commencement of operation of the project, to the licensee about his intention and readiness to inject power and also regarding the arrangements finalised by him for disposal of power beyond the interconnection point:

Provided further that the renewable energy generator will have to comply with the connectivity standards and the conditions as specified in the State Grid Code/Indian Electricity Grid Code (IEGC) – Regulation 2010, the Electricity Distribution Code and/or any other Standards/Codes/Regulations as may be relevant.

(6) In order to optimize the use of limited transmission/sub-transmission corridors or the limited space at the sub-stations of the licensee, the renewable energy generators may, with the approval of the licensee, enter into a suitable arrangement for joint project line(s) for two or more projects and inject power into the grid through the joint evacuation system in accordance with the principles laid down, from time to time, by the Commission.

(7) Notwithstanding anything contained in the preceding sub-regulation (6), where there are right of way problems or there are space limitations at the sub-station of the concerned licensee, the licensee may require the renewable energy generators to enter into suitable arrangement for joint project line(s) for two or more projects and inject power into the grid through the joint evacuation system.

(8) The renewable energy generators may, in consultation with and also with the prior approval of the licensee, augment or establish, on behalf of the licensee, the transmission/distribution system beyond the interconnection point, on build and transfer basis, as per the best industry practices and the expenditure so incurred by the renewable energy generators and approved by the licensee shall be repaid by the licensee, alongwith interest, in five equal installments, spread over a period not exceeding 5 years commencing

from one year after the date of commissioning of such works, and such expenditure shall be allowed as a pass through to the licensee:

Provided that if such works are not a part of the Capital Expenditure Plan (CAPEX PLAN) approved by the Commission, then the necessary approval for the CAPEX PLAN for the same shall be obtained by the licensee from the Commission before according approval to any such arrangement.

6. Grid Connectivity. –Mechanism for grid connectivity shall be as under-

- (a) the renewable energy generator shall construct, operate and maintain the project line(s) at his cost;
- (b) the licensee shall, at the cost of renewable energy generator, provide, operate and maintain the interconnection facilities;
- (c) the transmission licensee and/or the distribution licensee shall bear the cost of augmentation/establishment of network beyond the interconnection point under the CAPEX PLAN and the new or the augmented network shall form part of the assets of the transmission or the distribution licensee, as the case may be.

7. Coordination Committee.-The Commission may constitute a coordination committee to facilitate coordination among the State Transmission Utility, transmission licensee, distribution licensee, HIMURJA and Directorate of Energy of the State Government for evacuating power from renewable energy projects.

CHAPTER-III

TARIFF DETERMINATION

GENERAL PRINCIPLES

8. Power Purchase Agreement.- (1) In case of the projects covered under these Regulations, the renewable energy generator or the distribution licensee may offer to sell/purchase power in any of the following manner:

- (i) for the entire tariff period starting from the date of commencement of operation of the project, or for the balance tariff period in case of enhancement of the capacity of the project at the later stage by availing any of the available tariff option under regulation 13;
- (ii) for the mutually agreed period(s) under the REC mechanism;
- (iii) for the residual part of the tariff period, after having sold power initially under the REC mechanism, in accordance with the provisions of regulation 16;
- (iv) in any other manner as may be mutually agreed in accordance with provisions of these Regulations:

Provided that the distribution licensee shall endeavour to procure power through

competitive bidding, which, to start with, may be done separately for each type of renewable technology:

Provided further that in accordance with the Tariff Policy notified by Ministry of Power, Government of India, the distribution licensee has to procure the entire net saleable power from the waste to energy plants in the State at the tariff determined by the Commission under section 62 of the Act and such plants have also been excluded from the competitive bidding process for tariff determination.

(2) In the event of their arriving at a mutual understanding on various issues of the power purchase agreement, including the tariff option under regulation 13, the parties shall file a joint petition before the Commission for approval of the proposed power purchase agreement and shall execute the requisite power purchase agreement after approval of the Commission:

Provided that if the parties have arrived at a mutual understanding on the various issues of the power purchase agreement, as aforesaid, and the renewable energy generator requires a power purchase agreement to achieve the financial closure of the project, the parties may file joint petition for approval of the proposed power purchase agreement before the financial closure.

9. Control period or review period.- (1) The control period for the small hydro projects under these Regulations shall start from the 1st October, 2017 and shall end on the ~~31st day of March, 2020~~ [^][²31st March, 2019]^A:

Provided that the technology specific parameters for the renewable energy sources, other than small hydro projects, may be fixed for such durations and reviewed at such intervals, as the Commission may find appropriate in accordance with regulation 18.

(2) The tariff(s) determined under these Regulations for the renewable energy generation project(s) or for a category thereof, to which these Regulations are applicable, shall, unless amended or revised under regulation 20, continue to be applicable till the expiry of the tariff period as specified in regulation 10.

(3) The revision of the Regulations for the next control period shall be undertaken six months prior to the end of the control period and in case the revised Regulations are not notified before the end of the control period, the tariff norms laid down under these Regulations shall, subject to adjustments under the revised Regulations, continue to remain applicable until the notification of the revised Regulations.

10. Tariff period.- The duration of tariff period in case of small hydro projects shall be 40 years and for other renewable technologies, the Commission may fix the same under regulation 18.

²Modified words and figures in sub-Regulation (1) of Regulation 9, vide First Amendment, 2018

11. Special provisions for Small Hydro Projects.-

- (1) Where the first Implementation Agreement of a small hydro project has been executed on or before 31st December, 2014 and neither any joint petition for approval of the Power Purchase Agreement has been filed before, nor any power purchase agreement, whether under REC Mechanism or otherwise, has been approved by, the Commission for such project prior to the date of commencement of these Regulations, the norms, tariffs and other associated terms and conditions as per Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012, shall be applicable in the same manner as applicable to the small hydro projects covered in the said Regulations:

Provided that for the purpose of this regulation, the date of signing the first Implementation Agreement of the small hydro project shall only be taken into account and the Supplementary Agreement(s), if any, executed thereafter due to any reason, but other than due to enhancement of capacity, whatsoever, viz for extension of the scheduled completion date, shall not be considered:

Provided further that in cases where the power purchase agreements have already been approved by, or the joint petitions for approval of the power purchase agreement(s) have been filed before, the Commission prior to the date of commencement of these Regulations, the tariff(s) for such small hydro projects shall be governed as per the provisions of power purchase agreements and relevant Regulations irrespective of the dates on which such agreement(s) are actually approved and/or executed:

Provided further that if a Supplementary Implementation Agreement is executed on or after 1st January, 2015 to provide for enhancement of capacity, the tariff and other terms and conditions as per regulation 14 and regulations 20 to 41 shall be applicable only for the incremental energy generation as per the provisions under regulations 17.

- (2) Save as provided in sub-regulation(1), the tariff determined under the regulation 14 and regulations 20 to 41 shall be applicable only for such small hydro projects where-
- (i) the 1st Implementation Agreement has been signed on or after 1st January, 2015;
 - (ii) no power purchase agreement, whether under REC Mechanism or otherwise, has been approved by the Commission before the date of commencement of these Regulations; and
 - (iii) the RE generator implementing the small hydro project has neither filed joint petition for approval of PPA before the Commission, nor has commenced the operation of its project, prior to the date of commencement of these Regulations.

12. Tariff design.- (1) The single part levellised tariff structure shall be followed for the

renewable energy technologies:

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, i.e. fixed cost component and fuel cost component, shall be determined.

(2) The following fixed cost components shall be included for determining the tariff:-

- (a) Return on equity;
- (b) Interest on loan capital;
- (c) Depreciation;
- (d) Interest on working capital; and
- (e) Operation and maintenance expenses.

(3) The generic or project specific tariff shall be determined on levellised basis for the tariff period:

Provided that tariff for renewable energy technologies, having single part tariff with two components, referred to in the proviso to sub-regulation (1), shall be determined on levellised basis for the tariff period in respect of the fixed cost component and the fuel cost component shall be specified on year of operation basis.

(4) For the purpose of levellised tariff computation, the discount factor equivalent to the post tax weighted average cost of capital shall be considered.

13. Tariff options/applicability.- (1) The following tariff options, subject to mutual acceptance of both the parties, shall be available to the renewable energy generator and the distribution licensee, intending to sell/purchase power from small hydro projects for the entire useful life of the project ,-

(i) for the small hydro projects covered under sub-regulation (1) of regulation 11, to be governed by the generic levellised tariff and associated terms and conditions in accordance with the provisions of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012, in the same manner in which such tariff would have been applicable if the power purchase agreement would have been signed before the commencement of these Regulations.

(ii) for the small hydro projects not covered under preceding clause (i):-

- (a) to be governed by the generic levellised tariff to be determined by the Commission, in accordance with the regulation 14, in relation to the control period in which the power purchase agreement for the project is approved;
- (b) to be governed by project specific levellised tariff to be determined by the Commission in accordance with the regulations 15 and 19, including the exit options available thereunder to the parties;

- (c) to be governed by any other tariff, as may be mutually agreed by them with the prior approval of the Commission, in accordance with the regulation 42;
- (d) to be governed by the process of competitive bidding in cases where the licensee resorts to competitive bidding.

(2) Where, after sale of net saleable energy to the licensee as per the power purchase agreement(s) approved by the Commission under REC mechanism in the initial periods, the net saleable energy is to be sold to the distribution licensee for the residual period of the useful life of the project, the tariff for such sale for such residual period shall be regulated in accordance with the regulation 16.

(3) Where, after execution of a long term power purchase agreement, the capacity of the project is enhanced with the approval of the State Government, the tariff shall be regulated under regulation 17.

(4) In case of the renewable energy sources, other than small hydro projects, the tariff options, as provided in regulation 18, shall be available to the parties intending to enter into power purchase agreement for sale/ purchase of power.

(5) The parties shall, while arriving at a mutual understanding about sale/purchase of power, also mutually decide the tariff option to be adopted, and shall, before submitting the joint petition for approval of the proposed power purchase agreement under regulation 8, also reflect the same in the proposed power purchase agreement:

Provided that the tariff option adopted in the power purchase agreement shall be irrevocable and binding.

14. Generic levellised tariff.- (1) The Commission shall for each category, mentioned in regulation 33 of small hydro projects, other than those covered in sub-regulation (1) of regulation 11, determine separate generic levellised tariffs and associated terms and conditions, within 90 days from the date of commencement of these Regulations by taking into account the norms specified under these Regulations:

Provided that in case of renewable energy technologies, other than small hydro projects, the Commission may fix the generic levellised tariffs in accordance with the regulation 18.

(2) The tariff being normative, any shortfall or gain due to performance or any other reasons is to be borne/retained, as the case may be, by the renewable energy generator and no true up of any parameter, including additional capitalisation for whatsoever reasons, shall be taken up during the validity of the tariff except for the specific provisions in these regulations.

(3) Save as provided under sub-regulations (1) of regulation 11, where the parties have, as per the power purchase agreements executed by them, opted for generic levellised tariff or the same is otherwise applicable under regulation 16, the generic levellised tariff determined

in relation to the control period under sub-regulations (1) shall be applicable for all the projects of that category for which the power purchase agreements are approved by the Commission in that control period.

15. Project specific levelled tariff.-(1) Where the parties to a power purchase agreement, for a project, other than the small hydro projects covered in sub-regulation (1) of regulation 11 have mutually agreed, in such power purchase agreement for which joint petition is filed before the Commission on or after commencement of these Regulations, and is thereafter approved by the Commission, and executed thereafter by the parties, opted for a project specific levelled tariff, the Commission shall determine such tariff taking into consideration-

- (i) prudent capital cost as may be admitted by the Commission duly keeping in view normative capital cost under these Regulations, the cost approved in the Detailed Project Report, the actual expenditure incurred as per auditor's certificate, the information furnished under regulation 19:

Provided that in case of delay in execution of the project, the Commission shall consider the time over run cost as follows-

- (a) where the delay is due to factors entirely attributable to the renewable energy generator, the entire cost shall be borne by the renewable energy generator;
- (b) where the delay is due to force majeure, the Commission may allow the net additional cost incurred on this account to the renewable energy generator; and
- (c) in a situation not covered under clauses (a) and (b), the Commission may allow the additional cost, not exceeding 50% of the net additional cost incurred due to time over run:

Provided further that the renewable energy generator shall be deemed to have subscribed to the requisite insurance policies covering the risks during construction stage and also to have stipulated provisions for the liquidated damages in the contracts relating to the construction of the project, awarded by him, as per the prudent practices, and accordingly, in case of any time and cost over runs, the Commission shall not allow any amount which is or would have been recoverable by him on account of such deemed provisions for insurance and liquidated damages:

Provided further that any cost pertaining to allotment of the project, including upfront premium and any other amount charged by the State Government while granting extension or capacity enhancement or/and any liquidated damages/penalty imposed in accordance with the power purchase agreement executed with the licensee, will not form part of the capital cost;

- (ii) the normative annual capacity utilisation factor specified under Chapter-V of these Regulations for the small hydro projects or the annual capacity utilisation factor worked out on the basis of data for 75% dependable year as per the

approved/concurred Detailed Project Report, whichever is higher;

- (iii) the technology specific parameters as specified for the small hydro projects in Chapter V of these Regulations and as may be laid down by the Commission for the other renewable technologies as per regulation 18;
 - (iv) financial norms/principles, in relation to the renewable energy technologies based power projects, as specified in Chapter-IV of these Regulations, which shall except for capital cost, be considered as ceiling norms; and
 - (v) the ceiling tariff (s), if any, fixed by the Commission for the respective categories of the renewable energy technologies based power projects: Provided that if the licensee and renewable energy generator have, in accordance with regulations 32 and 42, agreed in the power purchase agreement executed by them after prior approval of the Commission to any improved norms, including operation and maintenance norms, which may lead to overall reduction in the levelled tariff, such improved norms shall apply for determination of the project specific levelled tariff.
- (2) Where the project specific levelled tariff, as determined under sub regulations (1)–
- (i) exceeds 105% of the corresponding generic levelled tariff, duly adjusted for permissible rate of free power if any, determined by the Commission in relation to the control period or other provisions under which the power purchase agreement was approved by the Commission, the distribution licensee shall have the option to exit from the power purchase agreement, provided that this option shall not be available to the distribution licensee if the renewable energy generator agrees to keep the tariff within the aforesaid limit;
 - (ii) is less than 95% of the corresponding generic levelled tariff, duly adjusted for permissible rate of free power if any, determined by the Commission in relation to the control period or other provisions under which the power purchase agreement was approved by the Commission, the renewable energy generator shall have the option to exit from the power purchase agreement, provided that this option shall not be available to the renewable energy generator if the distribution licensee agrees to keep the tariff within the aforesaid limit.
- (3) Where the exit option is exercised by any party under sub-regulation (2) and the interconnection point for that project falls under the control of the distribution licensee, it shall, on request from the renewable energy generator, provide open access through its system to the renewable energy generator as per the open access regulations.

16. Tariff for residual period after sale/purchase under REC mechanism.- (1) In cases where, after sale/purchase of net saleable energy to/by the licensee as per the power purchase agreement approved by the Commission, under REC mechanism in the mutually agreed initial period(s), or even if the project has not commenced its operation during such initial period(s), the net saleable energy for the residual period of the useful life of the project is to be sold to the distribution licensee under long term power purchase agreement, the tariff for sale/purchase

of net saleable energy during such residual period shall, save as provided in sub-regulations (2) and (3), be regulated as under:-

- (a) If the first power purchase agreement for sale/purchase of power under REC mechanism from a small hydro projects was executed by the parties and/or approved by the Commission before the commencement of these Regulations, the provisions of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012, shall be applicable irrespective of the fact whether the project has, or has not, commenced its operation, in the same manner as if the power purchase agreement for the residual life of the project would have been approved prior to commencement of these Regulations;
 - (b) Save as provided in succeeding clause (c), if the joint petition for the approval of first power purchase agreement for sale/purchase of power to/by the licensee under REC mechanism from a small hydro project, other than the small hydro projects covered in sub-regulation (1) of regulation 11, is filed before the Commission on or after the commencement of these Regulations and is approved by the Commission thereafter, the generic levellised tariff, as determined by the Commission for the relevant category of small hydro projects under these Regulations, as per regulation 14 and regulations 20 to 41 shall be applicable;
 - (c) In case of small hydro projects covered under sub-regulation (1) of regulation 11, or where the project had commenced its operation, prior to the commencement of these Regulations, the provisions of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012 shall be applicable even if the joint petition for approval of the first power purchase agreement for sale/purchase of power under R mechanism from such small hydro projects is filed before the Commission on or after the commencement of these Regulations;
 - (d) In case of projects based on renewable energy technologies, other than small hydro projects, the terms and conditions as may be incorporated by the Commission, to address such situations, in the terms and conditions to be fixed in accordance with regulation 18 shall be applicable.
- (2) Save as provided in sub-regulation (3), in cases where any specific conditions in relation to the rate/tariff applicable for the residual period, referred to in sub-regulation(1), have been stipulated while approving the power purchase agreement under REC mechanism, such conditions shall also be applicable.
- (3) If the circumstances so warrant, the Commission may, even after the commencement of these regulations, on the merit of a case, approve the rate/tariff prevailing in any of the earlier time frames prior to the commencement of Himachal Pradesh Electricity Regulatory Commission (Power Procurement from Renewable Sources and Cogeneration by Distribution Licensee), Regulations, 2007 or the commencement of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy

Sources and Terms and Conditions for Tariff Determination) Regulations, 2012 or these Regulations, as the case may be, for sale/purchase of the net saleable energy during the residual period referred to in sub-regulation(1).

17. Capacity enhancement.- (1) Where, after the allotment of the original project, the capacity of a small hydro project is enhanced, with the approval of the State Government, the tariff for sale of net saleable energy from such projects, shall be governed by the relevant provisions of sub-regulations (2) to (7), as applicable.

(2) Where the Implementation Agreement for the original capacity as well as the Supplementary Implementation Agreement for the enhanced capacity have been signed by the concerned developer with the State Government on or before 31st December, 2014, the relevant provisions of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012 and of the power purchase agreements, if approved and signed, shall be applicable irrespective of the dates of signing the power purchase agreements for the original capacity and the enhanced capacity.

(3) Where the Implementation Agreement for the original capacity has been signed by the concerned developer with the State Government on or before 31st December, 2014, but the Supplementary Implementation Agreement for the enhancement of the capacity is signed on or after 1st January, 2015, and no joint petition for approval of the power purchase agreement for the enhanced capacity has been filed, or approved by the Commission prior to the commencement of these Regulations, a composite rate shall be worked out, on normative basis irrespective of the dates of signing the power purchase agreements for the original capacity and enhanced capacity, as follows:-

- (i) the tariff applicable for the original capacity as per the provisions of Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) Regulations, 2012 shall be considered for the annual energy generation corresponding to 75% dependable year as per the Detailed Project Report for the original capacity, irrespective of the date of signing of the power purchase agreement for the original capacity:

Provided that if joint petition for the approval of power purchase agreement for the original capacity has already been filed before, or the PPA has been approved by, the Commission, or executed by the parties, before the commencement of these Regulations, the tariff and associated terms and conditions, as per such power purchase agreement read with the approval of the Commission, shall be considered;

- (ii) for the annual incremental energy generation due to enhancement of capacity i.e. the annual additional energy generation which is expected to take place in the 75% dependable year as per the detailed project report for the enhanced

capacity, the generic levelled tariff determined as per the provisions under regulations 12 to 14 and regulations 20 to 41 of these Regulations for the category of small hydro projects in which the enhanced capacity falls, shall be considered:

Provided that the tariffs considered for the respective energy quantum as per clauses (i) and (ii) of this sub-regulation shall be governed by the associated terms and conditions as per the respective power purchase agreements and relevant Regulations and in case of any adjustment in any of these tariffs, the adjustment(s) shall be applicable only for the respective energy quantum as per clauses (i) and (ii) of this sub-regulation under this sub-regulation:

Provided further that the composite rate for the entire saleable energy shall, in no case, be higher than the rate applicable under these regulations to the small hydro project category under which the enhanced capacity falls:

Provided further that in cases where the incremental capacity is commissioned in phases, the tariff(s) during such interim stages shall be computed based on such incremental energy generation corresponding to the additional capacity actually installed from time to time.

(4) Where the Implementation Agreement for the original capacity as well as the Supplementary Agreement for the enhanced capacity are signed on or after 1st January, 2015 and prior to the commencement of these Regulations, neither the project has commenced its operation nor the joint petition for approval of Power Purchase Agreement has been filed before the Commission, the following provisions shall be applicable:-

- (i) where neither the Commission has approved, nor the parties have executed, the power purchase agreement for the original capacity, the enhanced capacity shall be taken into consideration while approving or executing the power purchase agreement, as the case may be;
- (ii) where the power purchase agreement for the original capacity of a small hydro project, covered in these Regulations, has already been approved after the commencement of these Regulations, and executed thereafter, and such power purchase agreement provides for generic levelled tariff in accordance with provisions under regulation 14 and regulations 20 to 41, the generic levelled tariff as well as other associated terms and conditions as per the provisions under regulation 14 and regulations 20 to 41, applicable to the relevant category of small hydro projects under which the enhanced capacity of the small hydro projects falls, shall be applicable to the entire capacity:

Provided that if such power purchase agreement for the original capacity contains provision for determination of project specific levelled tariff, the Commission may, on application from both the parties, determine the project specific levelled tariff by taking into account the norms applicable for the category of small hydro projects in which the enhanced capacity of the project falls.

(5) Where the power purchase agreement has been executed for the original capacity and the renewable energy generator sells energy from the additional capacity, under the relevant Regulations governing REC mechanism, to the distribution licensee with a provision to sell such energy to the licensee for the balance part of the tariff period after exit from the REC mechanism, the following provisions shall apply:-

(i) the tariff for the entire net saleable energy for the residual part of the tariff period shall be fixed/determined in accordance with sub-regulation (2), (3) or (4), as the case may be;

(ii) during the interim period when the energy is sold partly under the power purchase agreement for the original capacity and partly through the REC mechanism-

(a) unless provided otherwise in the power purchase agreement for the original capacity, the tariff applicable for the original capacity shall not be subject to any adjustment, on account of variation in free power, under sub-regulation (6), (b) the total net saleable energy shall be apportioned in a firm ratio on the basis of original capacity and the enhanced capacity.

(6) In the cases covered by sub-regulations (3), (4) and clause (i) of sub-regulation (5), the tariff shall be adjusted on account of variation in the free power in accordance with sub-regulations (2) and (3) of regulation 36:

Provided that in case capacity enhancement is approved by the State Government, if the percentage rate of free power undergoes change due to-

(i) any change in general policy during the intervening period between the dates of execution of Implementation Agreement for the original capacity and the Supplementary Implementation Agreement for the enhanced capacity, e.g. on account of Local Area Development, change in basic rates, change in the category of the project based on the capacity etc; or

(ii) additional free power specifically for enhancement of capacity:-

the variations in free power on account of item (i) shall only be considered for adjustment in tariff as per sub-regulations (2) and (3) of regulation 36, but additional free power for capacity enhancement as per item (ii) shall not be considered for tariff adjustment.

(7) Where the parties fail to arrive at an understanding for sale/ purchase of energy in the manner specified in sub-regulations (3) to (6), the right of the distribution licensee for the net saleable energy as per the original power purchase agreement, duly taking into account the data contained in the Detailed Project Report for the original capacity and power generation on real time basis, shall remain protected and the renewable energy generator shall be eligible to dispose off only the net incremental saleable energy (i.e. after duly adjusting the licensee's first right as aforesaid and the total quantum of free energy for the enhanced capacity of the project):

Provided that in such a case, the renewable energy generator shall also arrive at an understanding with the distribution licensee about the modalities for energy accounting on real time basis as well as on monthly and annual basis and

based on the same, the renewable energy generator shall also make the distribution licensee a party to any such agreement for disposal of such incremental energy:

Provided further that in case the licensee and the renewable energy generator mutually agree to purchase/sell the net incremental saleable energy at a specific rate and jointly make an application to the Commission for determination of such rate, the Commission may determine the specific levelled rate for such net incremental saleable energy as per the provisions of this sub-regulation and by taking into account the provisions of the regulations/practices prevalent in the time frame during which the capacity enhancement was permitted by the State Government.

- (8) Where, after the Commission has approved the power purchase agreement for sale of power from a project based on a renewable technology other than small hydro project, the capacity of the project is enhanced, the tariff for sale of net saleable energy from such project shall be governed by such terms and conditions as may be included by the Commission, to address such situations, in the terms and conditions fixed by it under regulation 18.

18. Tariff for renewable energy projects, other than small hydro projects.-

- (1) The renewable energy projects, other than small hydro projects, may include the following:

- (i) Wind power project;
- (ii) Biomass based power project based on Rankine cycle technology;
- (ii) Non-fossil fuel based co-generation project;
- (iii) Biomass gasifier based power project;
- (iv) Municipal Solid Waste (MSW) based power projects and Refuse Derived Fuel (RDF) based power projects;
- (vi) Solar PV and solar thermal power projects;
- (vii) Hybrid projects other than Hybrid solar thermal power plants including renewable-renewable or renewable-conventional sources, for which renewable technology is approved by the MNRE;
- (viii) Biomass project other than that based on Rankine cycle technology application with water cooled condenser;
- (ix) Any other renewable energy technology which may be approved by the MNRE.

- (2) Where the technological specific parameters and other terms and conditions, including the tariff period and useful life of the project, have not been specified, the Commission may, by an order, at any time and at such intervals as it considers appropriate to do so, fix the same:

Provided that in case of renewable technologies, other than small hydro projects, such parameters and terms conditions may also include other suitable provisions as the Commission may feel necessary to address the situations covered under regulations 16 and 17:

Provided further that the Commission may, by order, categorise the

renewable energy projects, other than small hydro projects, under the respective renewable energy technologies specified in sub-regulation (1), based on the capacity of projects, the available subsidy schemes and such other factors as may be considered appropriate by it:

Provided further that the Commission may, in order to promote such technologies for smaller capacities, follow, *mutatis mutandis*, upto the limits as it may consider necessary separately for each such technology but not exceeding 5 MW for any such technology, any or all of the technological specific parameters, including capital cost, and other terms and conditions or the tariff, in respect of the relevant part of the control period for the relevant renewable energy technology, as it may deem fit

- (a) as specified or adopted by the Central Commission for determining project specific tariff for any project(s) or generic levellised tariff for any category of project(s); or
- (b) the rate discovered through competitive bidding undertaken by any Government agency; or
- (c) the inputs available from any other sources, as the Commission may find appropriate:

Provided further that the financial norms, except for capital cost, as specified under Chapter-IV of these Regulations shall also be considered as ceiling norms.

(3) The Commission may, after having fixed the norms/parameters and other related terms and conditions as per sub-regulation (2), determine, or otherwise fix, by order, either generic levellised tariff(s) for any or all categories of such renewable energy technology(ies):

Provided that the Commission may, by order, fix, at such time intervals as it may consider appropriate, the ceiling rates and associated terms and conditions to be used by the licensee for reverse bidding for procurement of power from the projects based on such technologies.

(4) The renewable energy generator and the distribution licensee intending to sell/purchase power from the projects based on the renewable energy sources, other than the small hydro projects, for the entire useful life of the project, may, at the time of filing joint petition for the approval of the power purchase agreement, mutually agree to be governed by the generic levellised tariff, if the Commission has already determined or expressed its intention, by order, to determine such a rate for that technology, or in absence of Commission having expressed any such intention, for determination of project specific tariff by the Commission.

(5) In order to facilitate execution of the power purchase agreements by the distribution licensee with the renewable energy generator, within the framework of sub-regulation (4), the Commission may, subject to mutual agreement between the parties, allow, or otherwise direct, the parties to incorporate in the power purchase agreement-

- (i) a provisional tariff based on the generic levellised tariff, if any, notified by the Central

- Commission for that technology(ies), for the relevant timeframe, or any other rate as may be considered appropriate by the Commission;
- (ii) other related terms and conditions including the maximum permissible variations in the provisional tariff;
 - (iii) any deviations from norms, as may be mutually agreed by the parties under regulations 32 and 42; and
 - (iv) any other conditions as may be considered appropriate by the Commission.

19. Petition and proceedings for determination of project specific levellised tariff.-

(1) Where the renewable energy generator and the licensee have mutually agreed, in the power purchase agreement signed by them with the approval of the Commission, for the determination of project specific levellised tariff, the renewable energy generator may file, on any date falling between ninety (90) days to one hundred and eighty (180) days before the expected date of commencement of operation of the project, the petition for determination of the project specific levellised tariff in accordance with the Conduct of Business Regulations which shall, apart from such fee as specified by the Commission, be accompanied by-

- (a) a copy of the mutual agreement between the parties for project specific determination of tariff and the conditions, if any;
- (b) the detailed breakup of capital expenditure incurred and to be incurred for completing the works covered in the original scope of works or for discharging the outstanding liabilities in respect of the completed works and tariff calculations etc. as per the formats as may be laid down by the Commission from time to time;
- (c) the detailed project report outlining technical, operational data, capacity utilisation factor, site specific aspects, premise for capital cost and financing plan and in case of small hydro projects hydrological data for 75% dependable year;
- (d) a statement of all applicable terms and conditions and annual expenses as per these Regulations;
- (e) a statement containing full details of calculations of any subsidy, incentives and grant or budgetary support received, due or assumed to be due, from the Central Government and/or State Government. This statement shall also include the proposed tariff calculated in accordance with these Regulations;
- (f) electronic formats and soft copy of other details submitted;
- (g) requirements of additional data relevant to the agreement in pursuance of which the project specific determination is sought; and
- (h) any other information as the Commission may require the petitioner(s) to submit at the time of undertaking, or during the course of, determination of project specific tariff.

(2) The Commission may, during the pendency of the petition filed under sub-regulation (1), allow, on such terms and conditions as it may consider necessary, a provisional tariff not

exceeding the generic levelled tariff, if any, applicable to the relevant category.

20. Review of tariff- (1) Save as provided in sub-regulations (2) and (3), the generic levelled tariff or project specific levelled tariff, as the case may be, determined in accordance with the provisions of these Regulations shall be firm and shall not be subject to any review.

(2) Impact of any change(s) in the rate of free power under the general policy for allotment of sites, but only to the extent permitted under regulation 36 and further within the limit of 13% as per the National Tariff Policy and/or National Hydro Policy, shall be payable/adjustable as per the provisions of regulations 36.

(3) If, after the determination of the generic levelled tariff for the control period or the project specific levelled tariff for a project:-

- (i) a water cess or tax on generation is levied which impacts all or any of the projects; and/or
- (ii) the limit of 13% for the pass through of free power in the tariff as per the National Hydro Policy/Tariff Policy is revised by the Central Government, or staggered by the Government; and/or
- (iii) the mechanism or quantum of the capital subsidy or budgetary grant mentioned in regulation 22 is changed as a matter of policy; and/or
- (iv) the State Government revises its instructions with regard to the minimum flow of water downstream of diversion structure of the small hydro projects and implements the same;

The Commission may, suo-motu or on an application made to it, by generic or specific order, review the tariff for the residual tariff period or such other part as it may deem fit, for the projects or group of projects actually impacted, to account for the impact of such changes:

Provided that while revising the tariff, the Commission may incorporate such terms and conditions, including the period for which such revised tariff shall be applicable, as it may deem fit.

CHAPTER-IV FINANCIAL PRINCIPLES

21. Capital Cost.- (1) The norms for the capital cost in case of small hydro projects shall be as specified in Chapter-V of these Regulations and in case of other renewable technologies, shall be as stipulated under relevant orders of the Commission under regulation 18.

(2) The norms for the capital cost shall be inclusive of all the expenses required to be incurred as per prudent practices upto the commissioning of the project, including, but not limited to, the cost of capital works, land, preparation of the Detailed Project Report, Survey and Investigation, plant and machinery, civil works, erection and commissioning, financing

and interest during construction, land acquisition, resettlement and rehabilitation, contribution towards Local Area Development Fund (LADF), statutory and non-statutory clearances and evacuation infrastructure up to inter-connection point (also including interconnection facilities), insurance charges against the risks during construction stage etc and also all taxes, levies and duties on all such components/works capital works:

Provided that any cost pertaining to allotment of the project, including upfront premium and any other amount charged by the State Government while granting extension or capacity enhancement or/and any liquidated damages/penalty imposed in accordance with the power purchase agreement executed with the licensee, will not form part of the capital cost:

Provided further that for project specific tariff determination, the renewable energy generator shall submit the item wise break-up of capital cost along with its petition in the manner specified under regulation 19 and the capital cost admitted by the Commission shall be taken into consideration.

22. Subsidy or incentive or grant/budgetary support by the Central/ State Government.-

(1) While determining the generic levelled or project specific levelled tariff, as the case may be, for the renewable energy project(s) under these Regulations, the Commission shall take into consideration any incentive and/or subsidy and/or grant available under the schemes of the Central or State Government or its agencies, but excluding accelerated depreciation benefit under the Income Tax Act:

Provided that for tariff determination, only 75% of the capital subsidy available to the project as per applicable scheme of the MNRE/State Government shall be considered:

Provided further that the Commission may evolve suitable mechanism(s) for incorporating impact of the subsidy component for determination or adjustment of generic levelled tariffs for various categories of projects:

Provided further that the capital subsidy under the schemes of the Central or State Government or its agencies, shall, unless the circumstances otherwise warrant, be ordinarily adjusted in the middle of first 12 months from the commencement of the tariff period against the principal component of the loan amount as additional reduction apart from the normal payment:

Provided further that where the Central Government or the State Government notifies or has notified any generation based incentive (GBI) scheme for a particular kind of renewable technology, such technology based generating station shall be assumed to have availed the benefit of such a scheme and their tariffs shall automatically be treated as reduced by the amount of generation based incentive (GBI) per unit for the period during which such incentive remains applicable.

(2) Where any additional grant or budgetary support is available to any project, apart from the incentive and/or subsidy and/or grant available under sub-regulation (1) of this regulation, the Commission shall account for 100% of such budgetary support, while

determining project specific levellised tariff.

(3) The amount of subsidy shall be considered for each renewable source as per the applicable policy of the MNRE/State Government and if the amount and/or mechanism of subsidy is changed by the MNRE/State Government, consequent corrections in tariffs may be carried out by the Commission in accordance with regulation 20.

23. Debt-Equity Ratio.- (1) The normative debt equity ratio shall be 70:30.

(2) For generic levellised tariff, the Commission shall adopt debt equity ratio of 70:30.

(3) For project specific levellised tariff, the following provisions shall apply -

(i) if the equity actually deployed is more than 30% of the capital cost admitted by the Commission under regulation 15, the equity deployed in excess of 30% limit shall be treated as normative loan in accordance with the National Tariff Policy and shall be deemed as advanced at the weighted average rate of interest and for a weighted average tenor of the long term debt component of the project after ascertaining the reasonableness of the interest rates and taking into account the effect of debt restructuring, if any;

(ii) in case the equity deployed is equal to or below the normative level of 30%, the actual equity would be used for determination of Return on Equity in tariff computations;

(iii) the equity invested in foreign currency, if any, shall be designated in Indian rupees on the date of each investment.

Explanation.- For the purposes of return on equity, any resources available to the renewable energy generator from its share premium account or from its internal resources that are used to fund the equity commitments of the project under consideration shall be treated as equity subject to the limitations contained in this regulation and regulation 26.

(4) The Commission shall treat any incentive or subsidy and/or grant/budgetary support available from the MNRE/State Government, to the extent specified under regulation 22, to have been utilized towards prepayment of debt in such phases as it may deem fit, leaving balance loan to be considered for determination of tariff.

24. Loan and Finance Charges.- (1) For the purpose of determination of tariff, loan tenure of 13 years, inclusive of moratorium period, if any, shall be considered:

Provided that the capital subsidy admissible to the renewable energy generator shall normally be considered for the reduction of loan period and such reduced loan tenure shall be considered for the purpose of tariff determination.

(2) Interest Rate.-

(a) The loans arrived at in the manner indicated in the regulation 23 shall be considered as

gross normative loan for calculation for interest on loan. The normative loan outstanding as on 1st April of every year shall be worked out by deducting the cumulative repayment up to 31st March of previous year from the gross normative loan.

(b) For the purpose of computation of tariff(s) under these Regulations, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one year tenor) prevalent during the last available six months, prior to the respective date(s) from which such tariff(s) the respective generic levellised tariffs are to be made applicable, shall be considered:

Provided that in case where the project specific tariff is to be determined, such average rate of SBI, as prevalent during the respective periods in which the loan has been availed, shall be taken into account on weighted average basis and the rate so worked out on this basis or the weighted average rate at which the loan has been availed, whichever is lower, shall be considered.

- (c) Notwithstanding any moratorium period availed by the renewable energy generator, the repayment of loan shall be considered from the first year of the tariff period and shall be equal to the annual depreciation allowed.
- (d) Apart from the adjustment of subsidy in accordance with regulation 22, the loan repayment for a financial year or the relevant part period thereof shall be considered to have been done in the middle of that financial year or the relevant part period thereof, as the case may be.

25. Depreciation.- For the purpose of tariff determination, depreciation shall be computed in the following manner, namely:-

- (a) the value base for the purpose of depreciation shall be the normative capital cost (for generic tariff) or the capital cost of the project as admitted by the Commission (for project specific tariff), as the case may be;
- (b) 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;
- (c) depreciation per annum shall be based on 'Differential Depreciation Approach'. For tariff purposes, the depreciation shall be allowed @ 5.28% per annum till such time the requirement for repayment of loan component of the capital cost as per regulations 21, 23 and 24 after adjusting the amount of subsidy as per regulation 22, is fully provided and the remaining depreciation shall be spread over the residual useful life of the project on straight line method;
- (d) depreciation shall be chargeable from the first year of commencement of operation of the project:

Provided that in case of operation of the asset for part of the year, depreciation shall be charged on pro rata basis for the purposes of project specific determination of tariff.

26. Return on Equity.-(1) The value base for the equity shall be 30% of the normative capital cost as determined under regulation 21:

Provided that in case of project specific determination, the value base of equity shall be restricted to the actual amount of equity or 30% of the capital cost admitted by the Commission, whichever is lower, in accordance with the provisions of regulation 23.

(2) The normative return on Equity shall be 17% per annum on pre tax basis and shall not be subject to any adjustment on account of any taxes, or changes in the tax rates, under the Income Tax Act.

27. Interest on working capital: (1) The working capital requirement in respect of wind energy projects, small hydro power, solar PV and solar thermal projects shall be computed in accordance with the following: -

- (a) operation and maintenance expenses for one month;
- (b) receivables equivalent to 2 (two) months of energy charges for sale of electricity calculated on the net saleable energy corresponding to the CUF considered for tariff determination on normative basis;
- (c) maintenance spare @ 15% of operation and maintenance expenses.

(2) The working capital in respect of biomass power projects with Rankin Cycle technologies, biomass gasifier based power projects, non-fossil fuel based cogeneration projects, Municipal Solid Waste power projects and Refused Derived Fuel project shall be computed in accordance with the following:-

- (a) fuel cost for four months equivalent to normative Plant Load Factor (PLF);
- (b) operation and maintenance expenses for one month;
- (c) receivables equivalent to 2 (two) months of energy charges (fixed and variable charges) for sale of electricity calculated on the net saleable design energy on normative basis;
- (d) maintenance spare @ 15% of operation and maintenance expenses.

(3) In case of the renewable technologies not covered in sub-regulations (1) and (2), the Commission may adopt such norms, as it may consider appropriate, at the time of determination of tariff.

(4) Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (One Year Tenor) prevalent during the last available six months, prior to the respective date(s) from which the generic tariff(s) are to be made applicable:

Provided that in case where the project specific tariff is to be determined, such average rate for the last available six months prior to the date from which the project specific tariff is to be made applicable, shall be considered.

28. Operation and maintenance expenses.- (1) Operation and maintenance expenses

mean the expenditure incurred on operation and maintenance of the project, or part thereof, and includes, without limitation, the expenditure on manpower, establishment (including employees expense, administrative and general expenses), repairs, spares, consumables, insurance and overheads as well as the taxes, duties and other levies on any or all such activities.

(2) Operation and maintenance expenses shall be determined for the tariff period based on normative operation and maintenance expenses specified in Chapter-V of these Regulations for the small hydro projects and as stipulated in relevant orders of the Commission for other renewable technologies.

(3) Normative O&M expenses allowed under these Regulations shall be escalated at the rate of 5.72% per annum over the tariff period.

29. Taxes and duties.- Tariff determined under these Regulations shall be inclusive of all taxes and duties and shall not be subject to any change except for the provisions specified under regulation 20.

30. Rebate.- (1) The due date for payment of bills shall be 60 days from the date of billing.(2) For payment of bills of the renewable energy generator through letter of credit, a rebate of 2% shall be allowed.(3) Where payments are made other than through letter of credit within a period of one month of presentation of bills by the renewable energy generator, a rebate of 1% shall be allowed.

31. Late payment surcharge.- The distribution licensee shall make timely payments of energy bills of the renewable energy generators by assigning priority over and above all other payments. 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 simple interest rate of 1.25% per month shall be levied by the renewable energy generator for the actual number of days by which the payment is delayed.

32. Ceiling norms.- The financial norms, except for capital cost, as specified in this Chapter of these Regulations, shall be considered as ceiling norms and the same shall not preclude the licensee or renewable energy generator from agreeing to improved norms, including operation and maintenance norms, which may lead to overall reduction in the levellised tariff and in case the improved norms are agreed to, such improved norms shall be applicable for determination of the project specific levellised tariff.

CHAPTER –V

TECHNOLOGY SPECIFIC PARAMETERS FOR SMALL HYDRO PROJECTS

33. Categorisation.- For the purpose of tariff determination, the small hydro projects shall be categorized as under:-

(i)	Above 100 kW to 2 MW capacity
(ii)	Above 2 MW to 5 MW capacity
(iii)	Above 5 MW to 25 MW capacity

34. Normative Capital cost.- (1) In case of small hydro projects, the normative capital cost inclusive of all its components as specified in regulation 21 of these Regulations, for the control period shall be as under:-

Sr. No.	Category of small hydro project	Rupees in Lac per MW
(i)	Above 100 kW to 2 MW capacity	880
(ii)	Above 2 MW to 5 MW capacity	850
(iii)	Above 5 MW to 25 MW capacity	800

(2) The subsidy/grant/budgetary support or incentives provided by the Central/State Government shall be adjusted in accordance with the regulation 22 of these Regulations.

35. Normative saleable energy.- (1) The normative saleable energy at the interconnection point for the purpose of generic levellised tariff shall be computed on the following lines namely :-

- (i) the normative annual capacity utilisation factor (CUF) for all the small hydro projects upto 25 MW shall be 55%. The number of hours in a year for calculations of CUF shall be 8766;
- (ii) the normative annual energy worked out at the normative CUF under preceding clause (i) for the installed capacity shall be adjusted for the auxiliary consumption, transformation losses and the losses in the project line(s) at the normative rates as per regulations 37 and 38;
- (iii) the energy worked out under preceding clause (ii) shall be further reduced by the permissible rate of the free power subject to a maximum of 13%, for any year or part thereof, consistent with the National Hydro Policy, Tariff Policy and the policy of the State Government for allotment of sites of small hydro projects in the manner as laid down in regulation 36, so as to arrive at the year wise normative net saleable energy at the interconnection point which shall be taken into account for working out the generic levellised tariff:

Provided that in case the limit of 13% for the pass through of free power in the tariff as per the National Hydro Policy/Tariff Policy is revised by the Central Government, or staggered by the Government, at any stage, the Commission may review the tariff(s) as per the provisions under regulations 20.

(2) The normative capacity utilization factor (CUF) under clause (i) of sub-regulation (1) takes into account the impact of mandatory release of water discharge immediately downstream of diversion structure of the project based on the existing instructions of the State Government which provide that for the purpose of determination of minimum discharge, the threshold value not less than 15% of the minimum inflow observed in the lean season shall be considered.

(3) The normative year wise net saleable energy for the purpose of project specific tariff determination shall also be worked out on similar lines given in sub-regulations (1) and (2) but by taking into account the annual Capacity Utilisation Factor (CUF) in accordance with clause (ii) of sub-regulation (1) of regulation 15, the normative auxiliary consumption and transformation losses under regulation 37 and the energy losses in the project line under regulation 38.

36. Free Power.- (1) The Commission shall consider appropriate structure(s) of free power for determination of generic levellised tariffs for various categories of small hydro projects, as mentioned in regulation 33, duly keeping in view of the provisions of the State Hydro Policy for allotment of sites for small hydro projects, National Hydro Policy, Tariff Policy and the limits specified under sub-regulation(3):

Provided that in case the structure of free power actually applicable to a project, duly curtailed as per sub-regulation (3), is at variance from the structure considered while determining the generic levellised tariff, such tariff shall be suitably adjusted based on the structure of free power applicable subject to the limit specified in sub-regulation(3):

Provided further that in cases requiring determination of the project specific tariff, the Commission shall consider the structure of free power actually applicable to that project subject to the above and the limits specified in sub-regulation(3).

(2) In case of any change in the structure of free power for a small hydro project from that considered for the determination of generic levellised tariff or project specific levellised tariff in accordance with sub-regulation (1) or in cases where the adjustment in tariff on account of variation in free power has to be allowed as per the specific provisions contained in these Regulations, including those covered in regulation 17 and sub-regulation (2) of regulation 20, the distribution licensee shall adjust the tariff as per the following formula:-

Rate payable for the month for the net saleable Energy (Rs/kWh)	$= a \times (100-b)/(100-c)$
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Where, -

“a” is the levellised tariff (in Rs/kWh) which is required to be adjusted under this regulation

“b” is the free power (in percentage) taken into account or deemed as taken into

account for the month, in “a” in the corresponding month of the tariff period by reckoning the date of commencement of operation of the project as the starting date of the tariff period.

“c” is the free power (in percentage) to be allowed in the tariff for the month subject to maximum limit of 13% free power(energy) and the provisions of sub- regulation (3)-

Where free power is applicable at different rates for different parts of a month, the permissible free power (i.e “c”) shall be determined under this sub-regulation separately for each such part and weighted average rate for the month as a whole shall be worked out by considering the total quantum of energy for each day of the month.

(3) The free power (in percentage) to be taken into consideration for the purpose of determination of tariff under sub-regulation (1) and/or any adjustment under sub-regulation (2) shall be subject to the following: -

- (i) The free energy to be taken into account for any part of the tariff period for the purposes of sub-regulation (1), or to be allowed for any part of the tariff period for the purposes of sub-regulation (2), shall not exceed 13% free power(energy) which includes 12% free power to home State and 1% additional free power for Local Area Development Fund, as stipulated in the National Hydro Policy/ Tariff Policy;
- (ii) Any quantum of free energy, if committed by the renewable energy generator over and above the 13% free power(energy) for any period shall not be factored into the tariff;
- (iii) Additional free energy, if any, to be provided by the renewable energy generator to the State Government, on account of curtailment of waiver period due to delay in commissioning of project as per provisions of Implementation Agreement and/or for enhancement of capacity and/or for any reason attributed to the renewable energy generator shall not be taken into account even if the total free power for any period, including such additional free power, does not exceed 13% free power(energy);
- (iv) The quantification and adjustment of free energy as well the energy accounting shall be made with reference to the energy projected/ received at the interconnection point;
- (v) The free energy to be allowed for any period for the purpose of sub-regulation (2) shall in no case be more than that actually deducted for that period in the energy accounts, out of the total energy received at the interconnection point.

37. Auxiliary consumption and transformation losses.- Normative auxiliary consumption and transformation losses for the small hydro projects shall be 0.5% of the gross generation and the same for transformation losses at the switchyard linked to the generating

station of the projects shall also be 0.5%:

Provided that for the sake of simplicity, these two factors shall be clubbed together and accounted for as 1% of the gross generation.

38. Energy losses.- (1) The normative energy losses in the project line(s) shall be 0.7% of the net generation (i.e. after deducting auxiliary consumption and transformation losses, on normative basis, from the gross generation).

(2) For the project specific levelled tariff, the percentage losses worked out on the basis of actual length of the project line(s), conductor size and expected power flow shall be taken into consideration.

39. Operation and maintenance expenses.- (1) Normative annual O&M expenses for the control period shall be as follows:-

Sr. No.	Category of Project	Annual O&M expenses Rupees in Lac per MW
(i)	Above 100 kW to 2 MW capacity	33
(ii)	Above 2 MW to 5 MW capacity	29
(iii)	Above 5 MW to 25 MW capacity	24

CHAPTER V-VI

OTHER PARAMETERS

40. CDM benefits.- (1) In case of small hydro projects, the proceeds of carbon credit from approved CDM project shall be retained by the Small Hydro Project generator and shall not be adjusted in the tariff.

(2) In case of renewable energy technologies, other than the small hydro projects, the CDM benefit shall be shared in the following manner, namely:-

- a) 100% of the gross proceeds on account of CDM benefit to be retained by the project developer for the year in which the project commences its operation and the first year immediately thereafter;
- b) In the second year i.e. after the expiry of period mentioned in clause (a) above, 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.

41. Tariff for lower or higher generation.-The tariff based on normative quantum of net saleable energy corresponding to the normative CUF, or any other higher CUF taken into

consideration for the project specific determination of tariff as per the provisions of regulation 15, as the case may be, shall be applicable for the entire quantum of net saleable energy actually achieved irrespective of whether such quantum is higher or lesser than the normative quantum of net saleable energy taken into consideration for determination of the tariff.

CHAPTER-VII

MISCELLANEOUS

42. Deviation from norms.-Tariff for sale of electricity by the renewable energy generator may also be agreed between the renewable energy generator and the licensee in deviation from the norms specified in these regulations subject to the condition 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 determined on the basis of the norms specified in these Regulations:

Provided that the reasons for deviation from the norms specified under these Regulations shall be recorded in writing.

43. Overriding effect.-The provisions of these Regulations shall have effect notwithstanding anything inconsistent therewith contained in any other regulations, framed by the Commission, relating to the determination of tariff and/or making provisions for open access under the Act.

44. Power to remove difficulties .- If any difficulty arises in giving effect to these Regulations, the Commission may, of its own motion or otherwise, by an order, and after giving a reasonable opportunity to those likely to be affected by such order, make such provisions, not inconsistent with these Regulations, as may appear to be necessary for removing the difficulty.

45. 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.

By order of the Commission

Sd/-

Secretary