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**ODISHA ELECTRICITY REGULATORY COMMISSION**  
PLOT NO 4, CHUNOKOLI, SHAILASHREE VIHAR,  
BHUBANESWAR - 751021

**NOTIFICATION**

**The 15th July 2020**

**No. OERC/RA/GEN.REGU./29/2019 (Vol-I)/795** - In exercise of powers conferred by Section 61 read with 62 (1) (a), 86(1) (a) (b) and Clauses (zd), (ze), (zf), (zg), (zh) of Section 181 of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in that behalf, the Odisha Electricity Regulatory Commission hereby makes the following Regulations, namely:

## **CHAPTER - 1: PRELIMINARY**

### **1. SHORT TITLE AND COMMENCEMENT**

- (1) These Regulations shall be called “Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020”.
- (2) These Regulations shall extend to the whole of the State of Odisha.

- (3) The Commission in specifying these Regulations shall be guided by the principles contained in Sections 61 and 62 of the Act to encourage competition, efficiency, economical use of resources, good performance and optimum investments.
- (4) These Regulations shall come into force on the date of publication in the Official Gazette, and unless reviewed earlier or extended by the Commission shall remain in force till 31.03.2024:

Provided that, where the Commission has, at any time prior to the notification of these Regulations, approved a Power Purchase Agreement (PPA) or arrangement between a generating company and a Beneficiary, or has adopted the tariff contained therein for supply of electricity from an existing project then the tariff for supply of electricity by the generating company to the Distribution Licensee shall be in accordance with such PPA or arrangement for such period as may be so approved or adopted by the Commission, to the extent of existing Installed Capacity as contained in the PPA.

## **2. SCOPE AND EXTENT OF APPLICATION**

- (1) These Regulations shall be applicable to all existing and future Generating Stations supplying power to GRIDCO (The State designated entity to procure power for DISCOMs) / distribution licensees of the State under long term agreement except generating stations which are subject to the jurisdiction of the Central Commission and also such renewable energy generating stations located in the State whose tariff is decided by the Commission under relevant Regulations and orders.
- (2) Subject to the provisions of the Act, Rules and Policies, any new generating station which comes up in future and proposes to supply electricity to a distribution licensee of the State shall be subjected to the norms prescribed under these Regulations by the Commission, unless it proposes to supply electricity through bidding in accordance with the guidelines issued by the Central Government as per provisions of Section 63 of the Act.

## **3. DEFINITIONS AND INTERPRETATION**

- (1) In these Regulations, unless the context otherwise requires-
  - (a) “**Act**” means the Electricity Act, 2003 (36 of 2003);
  - (b) “**Additional Capital Expenditure**” means the capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project

- (c) by the generating company in accordance with the provisions of these regulations;
- (d) “**Additional Capitalisation**” means the additional capital expenditure admitted by the Commission after prudence check, in accordance with these regulations;
- (e) “**Admitted capital cost**” means the capital cost which has been allowed by the Commission for servicing through tariff after due prudence check in accordance with the relevant tariff regulations;
- (f) “**Auxiliary Energy Consumption**” or “**AUX**” in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, and transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station;

Provided that auxiliary energy consumption shall not include energy consumed for supply of power to housing colony and other facilities at the generating station and the power consumed for construction works at the generating station and integrated coal mine;

Provided further that auxiliary energy consumption for compliance of revised emission standards, sewage treatment plant and external coal handling plant (jetty and associated infrastructure) shall be considered separately for the purpose of Auxiliary consumption..

- (g) “**Auditor**” means an auditor appointed by the generating company, in accordance with the provisions of sections 224, 223B and 619 of the Companies Act, 1956 (1 of 1956), as amended from time to time or Chapter X of the Companies Act, 2013 (18 of 2013) or any other law for the time being in force;
- (h) “**Bank Rate**” means the one year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 300 basis points;
- (i) “**Beneficiary**” in relation to a generating station means the person purchasing electricity generated at such a generating station whose tariff is determined under these regulations;
- (j) “**Capital Cost**” means the capital cost as determined in accordance with Regulation 9 of these regulations;

- (k) **“Change in Law”** means occurrence of any of the following events:
- (i) enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any Indian law; or
  - (ii) adoption, amendment, modification, repeal or re-enactment of any existing Indian law; or
  - (iii) change in interpretation or application of any Indian law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation; or
  - (iv) change by any competent statutory authority, in any condition or covenant of any consent or clearances or approval or licence available or obtained for the project.
- (l) **“Commission”** means the Odisha Electricity Regulatory Commission referred to in sub-section (1) of the Section 82 of the Act;
- (m) **“Competitive Bidding”** means a transparent process for procurement of equipment, services and works in which bids are invited by the project developer by open advertisement covering the scope and specifications of the equipment, services and works required for the project, and the terms and conditions of the proposed contract as well as the criteria by which bids shall be evaluated, and shall include domestic competitive bidding and international competitive bidding;
- (n) **“Cut-off Date”** means the last day of the calendar month after thirty six (36) months from the date of commercial operation of the project;
- (o) **“Date of Commercial Operation”** or **“COD”** means
- (i) In relation to a unit of the thermal generating station, the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, from 0000 hour of which scheduling process as per the Odisha Grid Code (OGC) is fully implemented, and in relation to the generating station as a whole, the date of commercial operation of the last unit of the generating station;
  - (ii) In relation to a unit of hydro generating station including pumped storage hydro generation station, the date declared by the generating company from 0000 hour of which, after notice to the beneficiaries,

scheduling process in accordance with the Odisha Grid Code is fully implemented, and in relation to the generating station as a whole, the date declared by the generating company after demonstrating peaking capability corresponding to installed capacity of the generating station through a successful trial run, after notice to the beneficiaries;

Provided that the generating company shall certify to the effect that the generating station meets the key provisions of the technical standards of Central Electricity Authority (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and Grid Code as amended from time to time.

#### **Note**

In case the hydro generating station with pondage or storage is not able to demonstrate peaking capability corresponding to the installed capacity for the reasons of insufficient reservoir or pond level, the date of commercial operation of the last unit of the generating station shall be considered as the date of commercial operation of the generating station as a whole, provided that it will be mandatory for such hydro generating station to demonstrate peaking capability equivalent to installed capacity of the generating unit or the generating station as and when such reservoir /pond level is achieved.

In case of purely run-of-river hydro generating station if the unit or the generating station is declared under commercial operation during lean inflows period when the water is not sufficient for such demonstration, it shall be mandatory for such hydro generating station or unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient inflow is available.

- (p) “**Day**” means a calendar day consisting of 24 hours period starting at 0000 hour;
- (q) “**Declared Capacity**” or “**DC**” in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day or whole of the day, duly taking into account the availability of fuel or water, and subject to further qualification in these regulation;
- (r) “**De-capitalisation**” for the purpose of the tariff under these regulations, means reduction in Gross Fixed Assets of the project as admitted by the

Commission corresponding to inter-unit transfer of assets or the assets taken out from service;

- (s) “**Design Energy**” means the quantum of energy which can be generated in a 90% dependable year with 95% installed capacity of the hydro generating station;
- (t) “**Existing Project**” means a project which has been declared under commercial operation from a date prior to 01.04.2020;
- (u) “**Expansion project**” shall include any addition of new capacity to the existing generating station;
- (v) “**Expenditure Incurred**” means the fund, whether the equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released;
- (w) “**Extended Life**” means the life of a generating station or unit thereof beyond the period of useful life, as may be determined by the Commission on case to case basis.
- (x) “**Financial Statement**” means for each financial year, the following statements, namely-
  - (i) Balance sheet, prepared in accordance with the form contained in Part I of Schedule III to the Companies Act, 2013 as amended from time to time;
  - (ii) Profit and loss account, complying with the requirements contained in Part II of Schedule III to the Companies Act, 2013;
  - (iii) Cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
  - (iv) Report of the statutory auditors;
  - (v) Cost records prescribed by the Central Government under Section 148 of the Companies Act, 2013;

Together with notes there to, and such other supporting statements and information as the Commission may direct from time to time;

Provided further that the Commission may, from time to time, specify regulatory accounts to be maintained by a local authority under the Act.

- (y) “**Financial Year**” means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- (z) “**Force Majeure**” for the purpose of these regulations means the event or circumstance or combination of events or circumstances including those stated below which partly or fully prevents the generating company to complete the project within the time specified in the Investment Approval, and only if such events or circumstances are not within the control the generating company and could not have been avoided, had the generating company taken reasonable care or complied with prudent utility practices:
  - (i) Act of God including lightning, drought, fire and explosion, earthquake, volcanic eruption, landslide, flood, cyclone, typhoon, tornado, geological surprises, or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred years; or
  - (ii) Any act of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action;
  - (iii) Industry wide strikes and labour disturbances having a nationwide impact in India; or
  - (iv) Delay in obtaining statutory approval for the project except where the delay is attributable to project developer;
- (aa) “**Fuel Supply Agreement**” means the agreement executed between the generating company and the fuel supplier for generation and supply of electricity to the beneficiaries;
- (bb) “**Generating Unit**” or “**Unit**” in relation to a thermal generating station (other than combined cycle thermal generating station) means steam generator, turbine generator and auxiliaries, or in relation to a combined cycle thermal generating station, means turbine generator and auxiliaries or combustion turbine-generator, associated waste heat recovery boiler, connected steam turbine-generator and auxiliaries, and in relation to a hydro generating station means turbine generator and its auxiliaries;

- (cc) **“Generating Station”** shall have the same meaning as defined under sub-Section 30 of Section 2 of the Act and for the purpose of these regulations shall also include stages or units of a generating station;
- (dd) **“Grid Code”** means the Odisha Grid Code (OGC) Regulations, 2015 as amended from time to time or subsequent re-enactment thereof;
- (ee) **“Gross Calorific Value”** or **“GCV”** in relation to a thermal generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel, as the case may be;
- (ff) **“GCV as Received”** means the GCV of coal as measured at the unloading point of the thermal generating station through collection, preparation and testing of samples from the loaded wagons, trucks, ropeways, Merry-Go-Round (MGR), belt conveyors and ships in accordance with the IS 436 (Part-1/ Section 1)- 1964;

Provided that the measurement of coal shall be carried out through sampling by third party to be appointed by the generating companies in accordance with the guidelines, if any, issued by the Central Government/Commission;

Provided further that samples of coal shall be collected either manually or through hydraulic augur or through any other method considered suitable keeping in view the safety of personnel and equipment;

Provided also that the generating companies may adopt any advance technology for collection, preparation and testing of samples for measurement of GCV in a fair and transparent manner;

Provided that GCV of as Received coal shall be found out by taking GCV of coal on as “billed basis” and allowing an adjustment for total moisture as per the formula given as under:

$$\frac{\text{GCV X (1-TM)}}{(1-IM)}$$

Where: GCV = Gross Calorific Value of coal

TM = Total Moisture

IM – Inherent Moisture



- (gg) “**Gross Station Heat Rate**” or “**SHR**” means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;
- (hh) “**Indian Governmental Instrumentality**” means the Government of India, Governments of Odisha and any ministry or department or board or agency controlled by Government of India or Government of Odisha or quasi-judicial authority constituted under the relevant statutes in India;
- (ii) “**Infirm Power**” means electricity injected into the grid prior to the date of commercial operation of a unit of the generating station;
- (jj) “**Installed Capacity**” or “**IC**” means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station reckoned at the generator terminals, as may be approved by the Commission from time to time;
- (kk) “**Investment Approval**” means approval by the Board of the generating company or any other competent authority conveying administrative sanction for the project including funding of the project and the timeline for the implementation of the project;
- Provided that the date of Investment Approval shall reckon from the date of the resolution of the Board of the generating company where the Board is competent to accord such approval and from the date of sanction letter of competent authority in other cases;
- (ll) “**kCal**” means a unit of heat energy contents in mineral, measured in one kilo calories or one thousand calories of heat produced at any instantaneous period;
- (mm) “**Kilowatt-Hour**” or “**kWh**” means a unit of electrical energy, measured in one kilowatt or one thousand watts of power produced or consumed over a period of one hour;
- (nn) “**Landed Fuel Cost**” means the total cost of coal (including biomass in case of co-firing) delivered at the unloading point of the generating station and shall include the base price or input price, washery charges wherever applicable, transportation cost (overseas or inland or both) and handling cost, charges for third party sampling and applicable statutory charges;
- (oo) “**Maximum Continuous Rating**” or “**MCR**” in relation to a unit of the thermal generating station means the maximum continuous output at the

generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water or steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;

- (pp) **“New Project”** means the generating station or unit thereof achieving its commercial operation on or after 01.04.2020;
- (qq) **“Operation and Maintenance Expenses”** or **“O&M expenses”** means the expenditure incurred on operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, repairs, maintenance spares, consumables, insurance and overheads but excludes fuel expenses, water charges and security expenses;
- (rr) **“Original Project Cost”** means the capital expenditure incurred by the generating company, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (ss) **“Plant Availability Factor (PAF)”** in relation to a generating station for any period means the average of the daily declared capacities (DCs) for all the days during that period expressed as a percentage of the installed capacity in MW less the normative auxiliary energy consumption.
- (tt) **“Plant Load Factor”** or **“(PLF)”** in relation to thermal generating station or unit for a given period means the total sent out energy corresponding to scheduled generation during the period, expressed as a percentage of sent out energy corresponding to installed capacity in that period and shall be computed in accordance with the following formula:

$$PLF = 10000 \times \sum_{i=1}^n SG_i / \{N \times IC \times (100 - AUX_n)\} \%$$

Where,

IC= Installed Capacity of the generating station or unit in MW,

SG<sub>i</sub>= Scheduled Generation in MW for the i<sup>th</sup> time block of the period,

N= Number of time blocks during the period, and

AUX<sub>n</sub>= Normative Auxiliary Energy Consumption as a percentage of gross energy generation;

(uu) **“Project”** means

in case of a hydro generating station, all components of hydro generating station and includes dam, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;

in case of thermal generating station, all components of the thermal generating station and includes biomass pellet handling system, pollution control system, effluent treatment plan, as may be required;

Provided that in case of thermal generating stations it does not include mining (if it is a pit head project) and dedicated captive coal mine;

(vv) **“Prudence Check”** means scrutiny of reasonableness of any cost or expenditure incurred or proposed to be incurred in accordance with these regulations by the generating company;

(ww) **“Pumped Storage Hydro Generating Station”** means a hydro generating station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir;

(xx) **“Quarter”** means the period of three months commencing on the first day of April, July, October and January of each financial year in case of existing project, and in case of a new project, in respect of the first quarter, from the date of commercial operation to the last day of June, September, December or March, as the case may be;

(yy) **“Revised Emission Standards”** in respect of thermal generating station means the revised norms notified as per Environment (Protection) Amendment Rules, 2015 or any other Rules as may be notified from time to time;

(zz) **“Run-of-River Generating Station”** means a hydro generating station which does not have upstream pondage;

(aaa) **“Run of River Generating Station With Pondage”** means a hydro generating station with sufficient pondage for meeting the diurnal variation of power demand;

(bbb) **“Scheduled Commercial Operation Date”** or **“SCOD”** shall mean the date(s) of commercial operation of a generating station or generating unit

thereof as indicated in the Investment Approval or as agreed in power purchase agreement as the case may be, whichever is earlier;

- (ccc) “**Scheduled Energy**” means the quantum of energy scheduled by the concerned Load Despatch Centre to be injected into the grid by a generating station for a given time period;
- (ddd) “**Scheduled Generation**” or “**SG**” at any time or for any period or time-block means schedule of ex-bus generation in MW or MWh, given by the concerned Load Despatch Centre;
- (eee) “**State Generating Station**” means a generating station whose entire generation of electricity is dedicated to the State.
- (fff) “**Start Date**” or “**Zero Date**” means the date indicated in the Investment Approval for commencement of implementation of the project and where no such date has been indicated, the date of Investment Approval shall be deemed to be Start Date or Zero Date;
- (ggg) “**Statutory Charges**” comprises taxes, cess, duties, royalties and other charges levied through Acts of the Parliament or State Legislatures or by Indian Governmental Instrumentality under relevant statutes;
- (hhh) “**Storage Type Generating Station**” means a hydro generating station associated with large storage capacity to enable variation of generation of electricity according to demand;
- (iii) “**Tariff Period**” means the period comprising four (4) years starting from 1<sup>st</sup> April 2020 to 31<sup>st</sup> Mar 2024, as may be extended by the Commission;
- (jjj) “**Thermal Generating Station**” means a generating station or a unit thereof that generates electricity using fossil fuels such as coal, lignite, gas, liquid fuel or combination of these as its primary source of energy or co-firing of biomass with coal;
- (kkk) “**Trial Run**” in relation to generating station or unit thereof shall mean the successful running of the generating station or unit thereof at maximum continuous rating or installed capacity for continuous period of 72 hours in case of unit of a thermal generating station or unit thereof and 12 hours in case of a unit of a hydro generating station or unit thereof;

Provided that where the beneficiaries have been tied up for purchasing power from the generating station, the trial run shall commence after seven days notice by the generating company to the beneficiaries.

(lll) **“Unloading Point”** means the point within the premises of the coal based thermal generating station where the coal is unloaded from the rake or truck or any other mode of transport;

(mmm) **“Unit”** in relation to a thermal generating station other than combined cycle thermal generating station means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle thermal generating station, means turbine-generator and auxiliaries; and in relation to a hydro generating station including pumped storage hydro generation station means turbine-generator and its auxiliaries;

(nnn) **“Useful Life”** in relation to a unit of a generating station from the COD shall mean the following, namely:-

(i) Coal based thermal generating station - 25 years

(ii) Hydro generating station including pumped storage hydro generation station - 40 years

Provided that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission on case to case basis;

(ooo) **“Year”** means a financial year from 1st April to 31st March in case of an existing project, and from date of commercial operation to 31st March in case of a new project.

(2) The words and expressions used in these regulations and not defined herein but defined in the Act or any other regulations of the Commission shall have the meaning assigned to them under the Act or any other regulations of the Commission.

(3) Reference to any Act, Rules and Regulations shall include amendment or consolidation or re-enactment thereof.

4. All proceedings under these Regulations shall be governed by the OERC (Conduct of Business) Regulations, 2004 and as amended from time to time.

## CHAPTER – 2: PROCEDURE FOR TARIFF DETERMINATION

### 5. TARIFF DETERMINATION

- (1) Notwithstanding anything contained in these Regulations, the Commission shall at all times have the authority, either on suo motu basis or on a Petition filed by the applicant, to determine the tariff, including terms and conditions thereof, of any generating company.
- (2) Tariff in respect of a generating station may be determined for the whole of the generating station or a unit or units of the generating station:

Provided that tariff shall be determined unit wise till the time tariff cannot be determined for the whole of the generating station or for units as per the condition mentioned in proviso below;

Provided that tariff shall be determined for units after the cut-off date of the last unit of the generating station or after the capital cost of the last unit of the generating station is finalized, whichever is earlier;

Provided that tariff shall be determined for the whole of the generating station after the cut-off date of the last unit in the generating plant or after the capital cost of the last unit in the generating plant is finalized, whichever is earlier;

Provided further that in relation to multi-purpose hydro schemes, with irrigation, flood control and power components, the capital cost chargeable to the power component of the scheme only shall be considered for determination of tariff.

Provided that where only a part of the generation capacity of a generating station is tied up for supplying power to the beneficiaries through long term power purchase agreement and the balance part of the generation capacity have not been tied up for supplying power to the beneficiaries, the units for such part capacity shall be clearly identified and in such cases, the tariff shall be determined for such identified capacity. Where the unit(s) corresponding to such part capacity cannot be identified, the tariff of the generating station shall be determined with reference to the capital cost of the entire project, but the tariff so determined shall be applicable corresponding to the capacity contracted for supply to the beneficiaries.

- (3) In case of expansion of existing generating station, the tariff shall be determined for the expanded capacity in accordance with these regulations;

Provided that the common infrastructure of existing generating station, shall be utilized for the expanded capacity and the benefit of new technology in the expanded capacity, as determined by the Commission, shall be extended to the existing capacity.

- (4) Assets installed for implementation of the revised emission standards shall form part of the existing generation project and tariff thereof shall be determined based on the submission of actual capital expenditure duly certified by the Auditor.
- (5) For the purpose of determination of tariff, the capital cost of the project may be broken up into units and distinct units forming part of the project, if required;

Provided that where break-up of the capital cost of the project for different units are not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the installed capacity of the units.

- (6) The Commission, if need arises, due to insufficiency of data, explanation, information etc provided by the petitioner, may issue provisional tariff for the whole of the generating station or a unit or units of the generating station till such time final tariff is determined.

## **6. TARIFF FILING**

- (1) The generating company may make an application for determination of tariff of new generating station or unit thereof in accordance with the Procedure Regulation prior to sixty (60) days of the anticipated date of commercial operation;
- (2) The generating company shall make an application as per Formats prescribed by the Commission with necessary information and explanations, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the tariff period of the generating station. If Commission so desires, the Commission can get the capital expenditure verified by an independent agency appointed by the Commission, the cost of such verification shall be borne by the generating company or as directed by the Commission;

Provided that in case of an existing project, the application shall be based on admitted capital cost including any additional capitalization already admitted up to 31.03.2020 and estimated additional capital expenditure for the respective years of the tariff period 2020-21 to 2023-24;

Provided further that, in case of emission control system required to be installed in existing generating station or unit thereof to meet the revised emission standards, an application shall be made for determination of supplementary tariff (capacity charges or energy charge or both) based on the actual capital expenditure duly certified by the Auditor;

Provided further that application shall contain details of underlying assumptions for projected capital cost and additional capital expenditure, where applicable;

Provided further that any estimated additional capitalization will be as per Regulation 12(1) and (2) of this regulation.

- (3) The tariff filing shall be in such form and in such manner as may be prescribed by the Commission from time to time.
- (4) Every application for determination of tariff or for continuation of previously determined tariff shall be accompanied by a fee as specified by the Commission for filing of petitions or applications before the Commission, as amended from time to time.
- (5) The Commission may seek clarification and additional information on the application and the applicant shall provide clarifications and additional information within the date stipulated by the Commission.
- (6) True up for any period shall be governed by the provisions of the Regulation under which the tariff for that year was determined.

## **7. TARIFF PETITION**

- (1) The Tariff Petition shall include a forecast of Aggregate Revenue Requirement and expected revenue from Tariff for each year of the Tariff Period in the manner specified in these Regulations, and be accompanied by applicable fees.
- (2) The forecast of expected revenue from Tariff and charges shall be based on the estimates of quantum of electricity to be generated by each Unit/Station for each year of the Tariff Period;
- (3) Based on the forecast of Aggregate Revenue Requirement and expected revenue from Tariff and charges, the Generating Company shall submit the proposed Tariff or Fees and Charges for each year of the Tariff Period, that would meet the gap, if any, in the Aggregate Revenue Requirement, including unrecovered revenue gaps of previous years to the extent proposed to be recovered.



- (4) Full details supporting the forecast shall be provided, including but not limited to details of past performance, proposed initiatives for achieving efficiency or productivity gains, technical studies, audited Financial Statements contractual arrangements and secondary research, to enable the Commission to assess the reasonableness of the forecast.
- (5) On receipt of the Petition, the Commission shall either-
  - (a) issue an Order approving the Aggregate Revenue Requirement and Tariff for the each financial year, subject to such modifications and conditions as it may stipulate; or
  - (b) reject the Petition for reasons to be recorded in writing, after giving the Petitioner a reasonable opportunity of being heard.
- (6) Notwithstanding anything contained above the existing generation plants of OHPC and OPGC (UNIT-I & II) may make an application as per the Format prescribed by the Commission for determination of tariff as per annual schedule, by November 30th of every year for determination of tariff in respect of the units of the generating station.

Provided that the OHPC and OPGC (Unit - I & II) shall make an application as per the prescribed Format with necessary information and explanations, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the period for which application for determination of tariff is filed of the generating station:

Provided further that application shall contain details of underlying assumptions for projected capital cost and additional capital expenditure, wherever applicable.

## **8. TRUING UP OF CAPITAL EXPENDITURE AND TARIFF FOR THE PERIOD 2020-24**

- (1) The Commission shall carry out truing up exercise at the end of the Tariff Period along with the tariff petition filed for the next tariff period, with respect to the following:
  - (a) the capital expenditure including additional capital expenditure incurred up to 31.03.2024, as admitted by the Commission after prudence check at the time of truing up.
  - (b) the capital expenditure including additional capital expenditure incurred up to 31.3.2024, on account of Force Majeure and Change in Law.

Provided that the generating company, may in its discretion make an application before the Commission one (1) more time prior to 2023-24 for revision of tariff.

Provided that the generating company, shall make an application, as per the Format prescribed by the Commission with necessary information and explanations, for carrying out truing up exercise in respect of the generating station or a unit thereof

The generating company, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 01.04.2020 to 31.03.2024, duly audited and certified by the auditors

Provided that where after the truing up, the tariff recovered exceeds the tariff approved by the Commission under these regulations, the generating company shall refund to the beneficiaries, the excess amount so recovered along with Bank Rate as on 1<sup>st</sup> April of the respective year.

Provided that where after the truing up, the tariff recovered is less than the tariff approved by the Commission under these regulations, the generating company shall recover from the beneficiaries, the under-recovered amount along with Bank Rate as on 1<sup>st</sup> April of the respective year.

Provided that the amount under-recovered or over-recovered, along with interest at the rates specified in this regulation, shall be recovered or refunded by the generating company in six (6) equal monthly instalments starting within three (3) months from the date of the tariff order issued by the Commission after the truing up exercise at the rate equal to the Bank Rate as on 1st April of the respective year from the date of the tariff order issued by the Commission after the truing up exercise.

- (c) The existing generation plants of OHPC and OPGC (Unit - I & II) may file an application each year for truing up of its generating stations of the previous year(s), with respect to the capital expenditure including additional capital expenditure incurred up to last day of the previous year(s) and determination of revenue gap/surplus for the ensuing year, within the time limit as specified by the Commission.

Provided that the applicant shall submit to the Commission, information in such form as may be prescribed by the Commission, together with the Audited Accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges.

## **CHAPTER – 3: COMPUTATION OF CAPITAL COST AND CAPITAL STRUCTURE**

### **9. CAPITAL COST OF THE PROJECT**

(1) Capital cost for a Project shall include:

- (a) The expenditure incurred or projected to be incurred, including Interest During Construction (IDC) & Incidental Expenditure During Construction (IEDC) and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan –
  - (i) Being equal to 70% of the funds deployed in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan or
  - (ii) Being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

Provided that any revenue earned during construction period up to COD on account of interest on deposits or advances, or any other receipts may be taken into account for reduction in incidental expenditure during construction.

- (b) Capitalised initial spares subject to the ceiling norms specified as under:
  - (i) Coal-based thermal generating stations – 2.0% of original project cost
  - (ii) Hydro generating stations including pumped storage hydro-electric generating station - 1.0% of original project cost
- (c) Expenditure on account of additional capitalization and decapitalization determined in accordance with these regulations
- (d) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 13 of these regulations;
- (e) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

- (f) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
  - (g) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
  - (h) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
  - (i) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
  - (j) Expenditure on account of change in law and force majeure events;
  - (k) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries;
  - (l) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (2) The capital cost in case of hydro Generating Station shall also include:
- (a) Cost of approved Rehabilitation and Resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
  - (b) Cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area.
- (3) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff.

Provided further that prudence check may include scrutiny of the reasonableness of the capital expenditure in the light of capital cost of similar projects based on past historical data, wherever available, reasonableness of financing plan, interest during construction, incidental expenditure during construction, use of efficient technology, cost over-run and time over-run, procurement of equipment and

materials through competitive bidding and such other matters as may be considered appropriate by the Commission for determination of tariff;

Provided also that where the power purchase agreement entered into between the generating company and the beneficiaries provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff;

Provided also that the Commission may issue guidelines for vetting of capital cost of hydro-electric projects by independent agency or expert body and in that event the capital cost as vetted by such agency or expert may be considered by the Commission while determining the tariff for the hydro generating station;

Provided also that in case the site of a Hydro Generating Station is awarded to a developer (not being a State controlled or owned company) by the State Government by following a transparent process of bidding, any expenditure incurred or committed to be incurred including the premium payable to the State Government by the project developer for getting the project site allotted, shall not be included in the capital cost.

**10. INTEREST DURING CONSTRUCTION (IDC) AND INCIDENTAL EXPENDITURE DURING CONSTRUCTION (IEDC)**

- (1) Interest during construction (IDC) shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD.
- (2) Incidental expenditure during construction (IEDC) shall be computed from the zero date, taking into account pre-operative expenses upto SCOD:

Provided that any revenue earned during construction period up to SCOD on account of interest on deposits or advances, or any other receipts shall be taken into account for reduction in incidental expenditure during construction.

- (3) In case of additional costs on account of IDC and IEDC due to delay in achieving the COD, the generating company shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds in case of IDC and details of IEDC during the period of delay and liquidated damages recovered or recoverable corresponding to the delay.
- (4) If the delay in achieving the COD is not attributable to the generating company, IDC and IEDC beyond SCOD may be allowed after prudence check and the

liquidated damages, if any, recovered from the contractor or supplier or agency shall be adjusted in the capital cost of the generating station.

- (5) If the delay in achieving the COD is attributable either in entirety or in part to the generating company or its contractor or supplier or agency, in such cases, IDC and IEDC beyond SCOD may be disallowed after prudence check either in entirety or on pro-rata basis corresponding to the period of delay not condoned and the liquidated damages, if any, recovered from the contractor or supplier or agency shall be retained by the generating company.

## **11. CONTROLLABLE AND UNCONTROLLABLE FACTORS**

- (1) The following shall be considered as controllable and uncontrollable factors for deciding time over-run, cost escalation, IDC and IEDC of the project:
  - (a) The “controllable factors” shall include but shall not be limited to the following:
    - (i) Efficiency in the implementation of the project not involving approved change in scope of such project, change in statutory levies or change in law or force majeure events; and
    - (ii) Delay in execution of the project on account of contractor or supplier or agency of the generating company.
  - (b) The “uncontrollable factors” shall include but shall not be limited to the following:
    - (i) Force Majeure events;
    - (ii) Change in law; and
    - (iii) Land acquisition except where the delay is attributable to the generating company.

## **12. ADDITIONAL CAPITALISATION**

- (1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:
  - (a) Undischarged liabilities recognized to be payable at a future date;

- (b) Works deferred for execution;
- (c) Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 9(1)(b) of these Regulations;
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;
- (e) Change in law or compliance of any existing law;
- (f) Force Majeure events; and
- (g) Any additional works/services, which have become necessary for efficient and successful operation of a generating station but not included in the original capital cost

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

Provided further that the assets forming part of the project but not put to use, shall not be considered.

- (2) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:
  - (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;
  - (b) Change in law or compliance of any existing law;
  - (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
  - (d) Liability for works executed prior to the cut-off date;
  - (e) Force Majeure events;

- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
  - (g) Raising of ash dyke as a part of ash disposal system.
- (3) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:
- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
  - (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
  - (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
  - (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.
- (4) The capital expenditure, in respect of existing generating station incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:
- (a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;
  - (b) Change in law or compliance of any existing law;
  - (c) Force Majeure events;
  - (d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Governmental Instrumentality or statutory authorities responsible for national or internal security;
  - (e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;



- (f) Usage of water from sewage treatment plant in thermal generating station.
- (5) In case of de-capitalisation of assets of a generating company the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.

### **13. RENOVATION AND MODERNIZATION**

- (1) The generating company, for meeting the expenditure on renovation and modernization (R&M) for the purpose of extension of life beyond the useful life of the generating station or a unit thereof, shall make an application before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, record of consultation with beneficiaries and any other information considered to be relevant by the generating company.
- (2) Where the generating company, makes an application for approval of its proposal for renovation and modernization, the approval shall be granted after due consideration of reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.
- (3) Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on the estimates of renovation and modernization expenditure and life extension, and after deducting the accumulated depreciation already recovered from the original project cost, shall form the basis for determination of tariff.

### **14. ADDITIONAL CAPITALIZATION ON ACCOUNT OF REVISED EMISSION STANDARDS:**

- (1) A generating company requiring to incur additional capital expenditure in the existing generating station for compliance of the revised emissions standards shall share its proposal with the beneficiaries and file a petition for undertaking such additional capitalization.

- (2) The proposal under clause (1) above shall contain details of proposed technology as specified by the Central Electricity Authority, scope of the work, phasing of expenditure, schedule of completion, estimated completion cost including foreign exchange component, if any, detailed computation of indicative impact on tariff to the beneficiaries, and any other information considered to be relevant by the generating company.
- (3) Where the generating company makes an application for approval of additional capital expenditure on account of implementation of revised emission standards, the Commission may grant approval after due consideration of the reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.
- (4) After completion of the implementation of revised emission standards, the generating company shall file a petition for determination of tariff. Any expenditure incurred or projected to be incurred and admitted by the Commission after prudence check based on reasonableness of the cost and impact on operational parameters shall form the basis of determination of tariff.

## **15. SALE OF INFIRM POWER**

- (1) Supply of infirm power shall be accounted as deviation and shall be paid for from the regional or State deviation settlement fund accounts in accordance with the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time.

Provided that any revenue earned by the generating company from sale of infirm power after accounting for the fuel expenses shall be applied in adjusting the capital cost accordingly.

## **16. DEBT-EQUITY RATIO**

- (1) For a project declared under commercial operation on or after 01.04.2020, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan;

Provided also that in case of a generating station where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff;

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;

Provided further that any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

**Explanation-**The premium, if any, raised by the generating company, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station.

- (2) In case of the generating station declared under commercial operation prior to 01.04.2020, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.03.2020 shall be considered.

Provided that in case of a generating station which has completed its useful life as on or after 01.04.2020, if the equity actually deployed as on 01.04.2020 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

- (3) Any expenditure incurred or projected to be incurred on or after 01.04.2020 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension the normative debt-equity ratio shall be considered to be 70:30 for determination of tariff;

Provided that in case of a generating station where equity employed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan;

Provided also that in case of a generating station where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff.

## **17. SPECIAL PROVISIONS**

- (1) In respect of a thermal or hydro generating station that has completed useful life of the plant or has completed the tenure of the PPA (as applicable), the generating company and the beneficiary may mutually agree on an arrangement, where OERC shall continue to determine energy charge, capacity charges and other charges as specified in these regulations.
- (2) The beneficiary shall have the first right of refusal and upon its refusal to enter into an arrangement as above, the generating company shall be free to sell the electricity generated from such station in a manner as it deems fit.

## CHAPTER - 4: COMPUTATION OF TARIFF

### 18. COMPONENTS OF TARIFF

- (1) The tariff for supply of electricity from a thermal generating station shall comprise of two parts, namely, capacity charge (for recovery of annual fixed cost consisting of the components specified in Regulation 19 (1) and energy charge (for recovery of primary and secondary fuel cost).
- (2) The supplementary capacity charges for additional capitalization and supplementary energy charges, on account of implementation of revised emission standards in existing generating station or new generating station, as the case may be, shall be determined by the Commission separately.
- (3) The tariff for supply of electricity from a hydro generating station shall comprise of capacity charge and energy charge to be derived in the manner specified from Regulation 28(2) till Regulation 29(5), for recovery of annual fixed cost [consisting of the components referred to in Regulation 19(1)] through these two charges.

### 19. ANNUAL FIXED COST

- (1) The annual fixed cost (AFC) of a generating station shall consist of the following components:
  - (a) Return on equity;
  - (b) Interest on loan capital;
  - (c) Depreciation;
  - (d) Interest on working capital;
  - (e) Operation and maintenance expenses;
  - (f) Income Tax;
  - Less:
  - (g) Non-Tariff Income:
- (2) The Annual Fixed Cost for OHPC and OPGC (Unit-I & II) will be determined by the Commission by taking into account the notification(s) issued by the Government of Odisha from time to time and their PPAs.

## **20. RETURN ON EQUITY**

- (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulations 16(1), (2) and (3):
- (2) Return on equity shall be computed at the base rate of 14% for all generating stations;

Provided that return on equity in case of OPGC (Unit - I & II) and OHPC stations shall be as per the provisions of the PPA.

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station;

Provided further that:

- (a) In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station is found to be declared under commercial operation without Commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the confirmation by the SLDC;
- (b) in case of existing generating station, as and when any of the requirements under (a) above of this Regulation are found lacking based on the confirmation by the concerned SLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

## **21. TAX ON INCOME**

- (1) Income tax of the Generating Company shall be recovered from the beneficiaries. This will exclude income tax on other income streams (income from non-generation and non-transmission business).
- (2) The actual assessment of income tax should take into account benefits of tax holiday and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 and shall be passed on to the consumers.

## 22. INTEREST ON LOAN CAPITAL

- (1) The loans arrived at in the manner indicated in Regulation 16 shall be considered as gross normative loan for calculation of interest on loan.
- (2) The normative loan outstanding as on 01.04.2020 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.03.2020 from the gross normative loan.
- (3) The loan repayment for each year of the tariff period shall be deemed to be equal to the depreciation allowed for corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.
- (4) Notwithstanding any moratorium period availed by the generating company the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed for the year or part of the year.
- (5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized at the beginning of each year applicable to the project;

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;

Provided further that if the generating station, does not have actual loan, then the weighted average rate of interest of the generating company as a whole shall be considered.

- (6) The interest on loan shall be calculated on the normative average loan of the respective years by applying the weighted average rate of interest.
- (7) The generating company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company, in the ratio of 1:1.
- (8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

- (9) In case of dispute, any of the parties may make an application in accordance with the Conduct of Business Regulations, as amended from time to time:

Provided that the beneficiaries shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan

### **23. DEPRECIATION**

- (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof. The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.
- (2) 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;

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the generating station;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

Provided also that any depreciation disallowed on account of lower availability of the generating station or unit, shall not be allowed to be recovered at a later stage during the useful life or the extended life.

- (3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.
- (4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-A to these regulations for the assets of the generating station;

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of fifteen (15) years from date of commercial operation shall be spread over the balance useful life of the assets;

Provided that for existing plants of OHPC as per the directions of the High Court of Orissa, depreciation will be calculated at pre-1992 norms notified by Government of India on the book value of the assets;

Provided, further that for existing plants of OPGC (UNIT-I & II), the applicable depreciation rate shall be as determined by Commission from time to time.

- (5) In case of the existing projects, the balance depreciable value as on 01.04.2020 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.03.2020 from the gross depreciable value of the assets.
- (6) In case of de-capitalization of assets in respect of generating station or unit thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.
- (7) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

Provided that in case of multiple units of a generating station weighted average life for the generating station shall be applied.

- (8) In case of de-capitalization of assets in respect of generating station or unit thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.

#### **24. INTEREST ON WORKING CAPITAL**

- (1) The working capital shall cover:
  - (a) For Coal-based thermal generating stations
    - (i) Cost of coal, if applicable, for fifteen (15) days for pit-head generating stations and thirty (30) days for non-pit-head generating stations, for generation corresponding to the normative annual plant availability factor;
    - (ii) Advance payment for thirty (30) days towards cost of coal for generation corresponding to the normative annual plant availability factor;



- (iii) Cost of secondary fuel oil for one (1) month for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;
  - (iv) Maintenance spares @ 20% of operation and maintenance expenses specified in Regulation 25(1);
  - (v) Receivables equivalent to forty-five (45) days of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and
  - (vi) Operation and maintenance expenses for one (1) month including water charges and security expenses.
- (b) For hydro generating stations including pumped storage hydro-electric generating station
  - (i) Receivables equivalent to forty five (45) days of fixed cost;
  - (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in Regulation 25(1);
  - (iii) Operation and maintenance expenses for one (1) month including security expenses.
- (2) The cost of fuel in cases covered under sub-regulation (1) of Regulation 24 shall be based on the landed fuel cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual weighted average for the third quarter preceding financial year in case of each financial year for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses) and gross calorific value of the fuel as per actual weighted average for three (3) months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

- (3) Rate of interest on working capital shall be on normative basis and shall be equal to the Bank Rate as on 01.04.2020 or on 1st April of the year in which the generating station or a unit thereof, is declared under commercial operation, whichever is later.

Provided that in case of truing-up, the rate of interest on working capital shall be considered at Bank Rate as on 1st April of each of the financial year during the tariff period 2020-24.

- (4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken loan for working capital from any outside agency.

## 25. OPERATION AND MAINTENANCE EXPENSES

- (1) Normative operation and maintenance expenses shall be as follows, namely:

- (a) **Coal based (including those based on CFBC technology) generating stations**, other than the generating stations referred to in sub-regulation (c) below:

Year	(Rs. in lakh/MW)				
	200/210/250 MW series	300/330/350 MW series	500 MW series	600 MW series	800 MW series and above
2020-21	34.12	28.71	23.30	20.97	18.87
2021-22	35.31	29.72	24.12	21.71	19.54
2022-23	36.56	30.76	24.97	22.47	20.22
2023-24	37.84	31.84	25.84	23.26	20.93

Provided that where the date of commercial operation of any additional unit(s) of a generating station after first four units occurs on or after 01.04.2020, the O&M expenses of such additional unit(s) shall be admissible at 90% of the operation and maintenance expenses as specified above;

- (i) The additional operation and maintenance expenses on account of implementation of revised emission standards shall be as per CERC notified rates;

Provided that till the norms are notified, the OERC shall decide the additional O&M expenses on case to case basis.

- (b) **Hydro generating station:** In case of the hydro generating stations declared under commercial operation on or after 01.04.2014, operation and maintenance expenses shall be fixed at 2% of the original project cost (excluding cost of rehabilitation & resettlement works) and shall be subject to annual escalation of 5.72% per annum for the subsequent years.
- (c) O&M norms for the existing plants of OPGC (UNIT-I & II) and OHPC will be as determined by the Commission from time to time.
- (d) The water charges and security expenses for thermal generating stations shall be allowed separately after prudence check

Provided that water charges shall be allowed based on water consumption depending upon type of plant and type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the petition;

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;

- (e) The security expenses for hydro generating stations shall be allowed separately after prudence check:

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses at the time of truing up.

## **26. NON-TARIFF INCOME**

- (1) The amount of Non-Tariff Income of the Generating Company as approved by the Commission in accordance with Regulation 41 shall be deducted while determining its Annual Fixed Charge:

Provided that the Generating Company shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission.

- (2) The Non-Tariff Income shall include:
  - (a) Income from rent of land or buildings;
  - (b) Income from sale of scrap;

- (c) Income from investments;
- (d) Income from sale of ash/rejected coal;
- (e) Interest income on advances to suppliers/contractors;
- (f) Net Income from supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the Generating Company for construction works at the generating Station, after adjusting the expenses incurred for supply of such electricity;
- (g) Income from rental from staff quarters;
- (h) Income from rental from contractors;
- (i) Income from hire charges from contractors and others;
- (j) Income from advertisements;
- (k) Income from sale of tender documents;
- (l) Any other Non-Tariff Income.

Provided further that all supply of electricity by the Generating Company to the housing colonies of its operating staff and for construction works at the generating Station, shall be metered and billed separately:

Provided also that the tariff for supply of electricity by the Generating Company to the housing colonies of its operating staff and supply of electricity by the Generating Company for construction works at the generating Station, shall be the same as the Tariff approved by the Commission for the supply of electricity to the respective consumer category by the Distribution Licensee for that area of supply.

## **27. COMPUTATION AND PAYMENT OF CAPACITY CHARGE AND ENERGY CHARGE FOR THERMAL GENERATING STATIONS**

- (1) The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating station. The capacity charge shall be recovered under two segments of the year, i.e. High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and

within each season in two parts viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off-Peak Hours of the month as follows:

Capacity Charge for the Year (CCy) =

Sum of Capacity Charge for three months of High Demand Season +

Sum of Capacity Charge for nine months of Low Demand Season

- (2) The Capacity Charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

Capacity Charge for the Month (CCm) =

Capacity Charge for Peak Hours of the Month (CCp) +

Capacity Charge for Off-Peak Hours of the Month (CCop)

Where,

**High Demand Season:**

$CCp1 = (0.20 \times AFC) \times (1/12) \times (PAFMp1 / NAPAF)$  subject to ceiling of  $(0.20 \times AFC) \times (1/12)$

$CCp2 = \{(0.20 \times AFC) \times (2/12) \times (PAFMp2 / NAPAF)$  subject to ceiling of  $(0.20 \times AFC) \times (2/12)\} - CCp1$

$CCp3 = \{(0.20 \times AFC) \times (3/12) \times (PAFMp3 / NAPAF)$  subject to ceiling of  $(0.20 \times AFC) \times (3/12)\} - (CCp1 + CCp2)$

$CCop1 = \{(0.80 \times AFC) \times (1/12) \times (PAFMop1 / NAPAF)$  subject to ceiling of  $(0.80 \times AFC) \times (1/12)\}$

$CCop2 = \{(0.80 \times AFC) \times (2/12) \times (PAFMop2 / NAPAF)$  subject to ceiling of  $(0.80 \times AFC) \times (2/12)\} - CCop1$

$CCop3 = \{(0.80 \times AFC) \times (3/12) \times (PAFMop3 / NAPAF)$  subject to ceiling of  $(0.80 \times AFC) \times (3/12)\} - (CCop1 + CCop2)$

**Low Demand Season:**

$CCp1 = \{(0.20 \times AFC) \times (1/12) \times (PAFMp1 / NAPAF)$  subject to ceiling of  $(0.20 \times AFC) \times (1/12)\}$

$$CCp2 = \{(0.20 \times AFC) \times (2/12) \times (PAFMp2 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (2/12)\} - CCp1$$

$$CCp3 = \{(0.20 \times AFC) \times (3/12) \times (PAFMp3 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (3/12)\} - (CCp1 + CCp2)$$

$$CCp4 = \{(0.20 \times AFC) \times (4/12) \times (PAFMp4 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (4/12)\} - (CCp1 + CCp2 + CCp3)$$

$$CCp5 = \{(0.20 \times AFC) \times (5/12) \times (PAFMp5 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (5/12)\} - (CCp1 + CCp2 + CCp3 + CCp4)$$

$$CCp6 = \{(0.20 \times AFC) \times (6/12) \times (PAFMp6 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (6/12)\} - (CCp1 + CCp2 + CCp3 + CCp4 + CCp5)$$

$$CCp7 = \{(0.20 \times AFC) \times (7/12) \times (PAFMp7 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (7/12)\} - (CCp1 + CCp2 + CCp3 + CCp4 + CCp5 + CCp6)$$

$$CCp8 = \{(0.20 \times AFC) \times (8/12) \times (PAFMp8 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (8/12)\} - (CCp1 + CCp2 + CCp3 + CCp4 + CCp5 + CCp6 + CCp7)$$

$$CCp9 = \{(0.20 \times AFC) \times (9/12) \times (PAFMp9 / NAPAF) \text{ subject to ceiling of } (0.20 \times AFC) \times (9/12)\} - (CCp1 + CCp2 + CCp3 + CCp4 + CCp5 + CCp6 + CCp7 + CCp8)$$

$$CCop1 = \{(0.80 \times AFC) \times (1/12) \times (PAFMop1 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (1/12)\}$$

$$CCop2 = \{(0.80 \times AFC) \times (2/12) \times (PAFMop2 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (2/12)\} - CCop1$$

$$CCop3 = \{(0.80 \times AFC) \times (3/12) \times (PAFMop3 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (3/12)\} - (CCop1 + CCop2)$$

$$CCop4 = \{(0.80 \times AFC) \times (4/12) \times (PAFMop4 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (4/12)\} - (CCop1 + CCop2 + CCop3)$$

$$CCop5 = \{(0.80 \times AFC) \times (5/12) \times (PAFMop5 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (5/12)\} - (CCop1 + CCop2 + CCop3 + CCop4)$$

$$CCop6 = \{(0.80 \times AFC) \times (6/12) \times (PAFMop6 / NAPAF) \text{ subject to ceiling of } (0.80 \times AFC) \times (6/12)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5)$$

$CCop7 = \{(0.80 \times AFC) \times (7/12) \times (PAFMop7 / NAPAF)\}$  subject to ceiling of  $(0.80 \times AFC) \times (7/12)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6)$

$CCop8 = \{(0.80 \times AFC) \times (8/12) \times (PAFMop8 / NAPAF)\}$  subject to ceiling of  $(0.80 \times AFC) \times (8/12)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6 + CCop7)$

$CCop9 = \{(0.80 \times AFC) \times (9/12) \times (PAFMop9 / NAPAF)\}$  subject to ceiling of  $(0.80 \times AFC) \times (9/12)\} - (CCop1 + CCop2 + CCop3 + CCop4 + CCop5 + CCop6 + CCop7 + CCop8)$

Provided that in case of generating station or unit thereof, under shutdown due to Renovation and Modernisation, the generating company shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.

Where,

$CCm =$  Capacity Charge for the Month;

$CCp =$  Capacity Charge for the Peak Hours of the Month;

$CCop =$  Capacity Charge for the Off-Peak Hours of the Month;

$CCpn =$  Capacity Charge for the Peak Hours of nth Month in a specific Season;

$CCopn =$  Capacity Charge for the Off-Peak of nth Month in a specific Season;

$AFC =$  Annual Fixed Cost;

$PAFMpn =$  Plant Availability Factor achieved during Peak Hours upto the end of nth Month in a Season;

$PAFMopn =$  Plant Availability Factor achieved during Off-Peak Hours upto the end of nth Month in a Season;

$NAPAF =$  Normative Annual Plant Availability Factor.

- (3) Normative Plant Availability Factor for “Peak” and “Off-Peak” Hours in a month shall be equivalent to the NAPAF specified in Regulation 32(1)(a) of these regulations. The “Peak” hours shall be from 19:00 Hours to 22:00 Hours within a day and the remaining hours shall be “Off-Peak” Hours. The High Demand

Season shall be from April to June and Low Demand Season shall be the remaining months;

Provided that the Commission may modify the “peak” and “off-peak” hours along with high demand and low demand season from time to time.

Any under-recovery or over-recovery of Capacity Charge as a result of under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of a Season (High Demand Season or Low Demand Season, as the case may be) shall not be adjusted with under-achievement or over-achievement, vis-à-vis the NAPAF in Peak and Off-Peak Hours of the other Season:

Provided that within a Season, the shortfall in recovery of Capacity Charge for cumulative Off-Peak Hours derived based on NAPAF, shall be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Peak Hours in that Season:

Provided further that within a Season, the shortfall in recovery of Capacity Charge for cumulative Peak Hours derived based on NAPAF, shall not be allowed to be off-set by over-achievement of PAF, if any, and consequent notional over-recovery of Capacity Charge for cumulative Off-Peak Hours in that Season:

- (4) The Plant Availability Factor achieved for a Month (PAFM) shall be computed in accordance with the following formula:

$$PAFM = 1000 \times \sum_{i=1}^N DC_i / \{N \times IC \times (100 - AUX)\} \%$$

Where,

AUX=Normative auxiliary energy consumption in percentage.

DC<sub>i</sub> = Average declared capacity (in ex-bus MW), for the i<sup>th</sup> day of the period i.e. the month or the year as the case may be, as certified by the SLDC after the day is over.

IC = Installed Capacity (in MW) of the generating station

N= Number of days during the period.



Note: DCi and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.

- (5) In addition to the capacity charge, an incentive shall be payable to a generating station or unit thereof @ fifty (50) paise/ kWh for ex-bus scheduled energy during Peak Hours and @ forty (40) paise/ kWh for ex-bus scheduled energy during Off-Peak Hours corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) achieved on a cumulative basis within each Season (High Demand Season or Low Demand Season, as the case may be), as specified in regulation.
- (6) The provisions under Clauses (1) to (5) of this Regulation shall come into force with effect from 01.04.2021. Till that date, the capacity charge for a thermal generating station determined under these regulations shall be recovered in accordance with the provisions contained in Clauses 4.29 to 4.31 and Clause 6.9 to 6.10 of the “Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014”, subject to the condition that the NAPAF and NAPLF shall be taken as specified under these regulations.
- (7) The incentive applicable and payable to the existing plants of OPGC (Unit-I & II) and OHPC will be as determined by the Commission from time to time.
- (8) **Energy Charge:** The energy charge in respect of the thermal generating Stations shall comprise of landed fuel cost of primary fuel, cost of secondary fuel oil consumption and landed cost of reagents on account of implementation of the revised emission standards.
- (9) The energy charge shall cover the primary and secondary fuel cost and limestone consumption cost (where applicable) and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). Total Energy charge payable to the generating company for a month shall be:

Energy Charges = (Energy charge rate in Rs/kWh) x {Scheduled energy (ex-bus) for the month in kWh}

- (10) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(11) For coal based fired stations

$$ECR = \{(SHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

Where,

AUX = Normative auxiliary energy consumption in percentage;

CVPF= Weighted Average Gross calorific value of coal “**as received**” in kCal per kg for coal based stations;

CVSF = Calorific value of secondary fuel, in kCal per ml;

ECR = Energy charge rate in Rupees per kWh sent out;

SHR = Gross station heat rate in kCal per kWh;

LC = Normative limestone consumption in kg per kWh;

LPL = Weighted average landed price of limestone in Rupees per kg;

SFC = Normative Specific fuel oil consumption in ml per kWh;

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per liter or per standard cubic meter, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

LPSFi= Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month

Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, etc., as per the Format prescribed by the Commission.

Provided further that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company.

- (12) In case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the generating company and beneficiaries in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station;

Provided that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement: Provided further that the weighted average price of alternative source of fuel shall not exceed 30% of base price of fuel computed as per clause (13) of this Regulation;

Provided also that where the energy charge rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 30% of base energy charge rate as approved by the Commission for that year or exceeds 20% of energy charge rate for the previous month, whichever is lower shall be considered and in that event, prior consultation with beneficiary shall be made at least three (3) days in advance.

- (13) Where biomass fuel is used for blending with coal, the landed cost of biomass fuel shall be worked out based on the delivered cost of biomass at the unloading point of the generating station, inclusive of taxes and duties as applicable. The energy charge rate of the blended fuel shall be worked out considering consumption of biomass based on blending ratio as specified by Authority or actual consumption of biomass, whichever is lower.
- (14) The Commission through specific tariff orders to be issued for each generating station shall approve the energy charge rate for each year of the tariff period. Any variation in Price and Gross Calorific Value of coal as billed by supplier (after adjusting for variation during storage) shall be adjusted on month to month basis in the bills;

Provided, that the Generating Company shall indicate Energy Charge Rates at base price of primary and secondary fuel approved by the Commission and the

adjustments on account of change in price and gross calorific value of coal for the previous month separately.

- (15) **Landed Fuel Cost of Primary Fuel:** The landed fuel cost of primary fuel for any month shall consist of base price or input price of fuel corresponding to the grade and quality of fuel and shall be inclusive of statutory charges as applicable, washery charges, transportation cost by rail or road or any other means and loading, unloading and handling charges;

Provided that procurement of fuel at a price other than Government notified prices may be considered, if it is based on competitive bidding through transparent process or as approved by OERC;

Provided further that landed fuel cost of primary fuel shall be worked out based on the actual bill paid by the generating company including any adjustment on account of quantity and quality;

Provided also that in case of coal-fired based thermal generating station, the Gross Calorific Value shall be measured by third party sampling and the expenses towards the third party sampling facility shall be reimbursed by the beneficiaries.

- (16) **Transit and Handling Losses:** For coal, the transit and handling losses shall be as per the following norms:-

Pithead generating stations: 0.2%

Non-pithead generating stations: 0.8%

Provided that in case of pit-head stations, if coal is procured from sources other than the pit-head mines which is transported to the station through rail, transit and handling losses applicable for non-pit head station shall apply;

Provided that in case of imported coal, the transit and handling losses applicable for pit-head station shall apply.

- (17) **Gross Calorific Value of Primary Fuel:**

- (a) The gross calorific value for computation of energy charges as per these regulations shall be done in accordance with 'GCV as received' basis.

- (18) **Landed Cost of Reagent:**

- (a) Where specific reagents such as Limestone, Sodium Bi-Carbonate, Urea or Anhydrous Ammonia are used during operation of emission control

system for meeting revised emission standards, the landed cost of such reagents shall be determined based on normative consumption and purchase price of the reagent through competitive bidding, applicable statutory charges and transportation cost.

(b) The normative consumption of specific reagent for the various technologies installed for meeting revised emission standards shall be notified separately.

(19) The computation and payment of capacity charge and energy charge for existing plants of OPGC (UNIT-I & II) will be as determined by the Commission from time to time.

## **28. COMPUTATION AND PAYMENT OF CAPACITY CHARGE AND ENERGY CHARGE FOR HYDRO GENERATING STATIONS OTHER THAN PUMPED STORAGE HYDRO GENERATING STATIONS**

(1) The fixed cost of a hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis under capacity charge (inclusive of incentive) and energy charge, which shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State;

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall provisionally be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge and energy charge payment during such period.

(2) The capacity charge (inclusive of incentive) payable to a hydro generating station for a calendar month shall be

$$\text{AFC} \times 0.5 \times \text{NDM} / \text{NDY} \times (\text{PAFM} / \text{NAPAF}) \text{ (in Rupees)}$$

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NAPAF = Normative plant availability factor in percentage

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percentage

- (3) The PAFM shall be computed in accordance with the following formula:

$$PAFM = 10000 \times \sum_{i=1}^N DCi / \{N \times IC \times (100 - AUX)\} \%$$

Where,

AUX = Normative auxiliary energy consumption in percentage

DCi = Declared capacity (in ex-bus MW) for the i<sup>th</sup> day of the month which the station can deliver for at least three (3) hours, as certified by the nodal load dispatch centre after the day is over.

IC = Installed capacity (in MW) of the complete generating station

N = Number of days in the month

- (4) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, excluding free energy, if any, during the calendar month on ex-bus basis, at the computed energy charge rate. Total Energy charge payable to the generating company for a month shall be:

$$\text{Energy Charges} = (\text{Energy charge rate in Rs. / kWh}) \times \{\text{Scheduled energy (ex-bus) for the month in kWh}\} \times (100 - \text{FEHS}) / 100.$$

- (5) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis, for a hydro generating station, shall be determined up to three (3) decimal places based on the following formula, subject to the provisions of Regulation 28(9):

$$ECR = AFC \times 0.5 \times 10 / \{DE \times (100 - AUX) \times (100 - FEHS)\} \text{ Where,}$$

DE = Annual design energy specified for the hydro generating station, in MWh, subject to the provision in Regulation (6) below.

FEHS = Free energy for home State, in percent, as defined in Regulation 35, if any.

- (6) In case the saleable scheduled energy (ex-bus) of a hydro generating station during a year is less than the saleable design energy (ex-bus) for reasons beyond

the control of the generating station, the treatment shall be as per clause (7) of this Regulation, on an application filed by the generating company.

- (7) Shortfall in energy charges in comparison to fifty (50) percent of the annual fixed cost shall be allowed to be recovered in six (6) equal monthly instalments;

Provided that in case actual generation from a hydro generating station is less than the design energy for a continuous period of four (4) years on account of hydrology factor, the generating station shall approach the Central Electricity Authority with relevant hydrology data for revision of design energy of the station.

- (8) Any shortfall in the energy charges on account of saleable scheduled energy (ex-bus) being less than the saleable design energy (ex-bus) during the tariff period 2014-20 which was beyond the control of the generating station and which could not be recovered during the said tariff period shall be recovered in accordance with clause (7) of this Regulation.

- (9) In case the energy charge rate (ECR) for a hydro generating station, computed as per clause (5) of this regulation exceeds eighty paise per kWh, and the actual saleable energy in a year exceeds  $\{DE \times (100 - AUX) \times (100 - FEHS) / 10000\}$  MWh, the Energy charge for the energy in excess of the above shall be billed at eighty paise per kWh only;

- (10) The concerned Load Despatch Centre shall finalise the schedules for the hydro generating stations, in consultation with the beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all beneficiaries in proportion to their respective allocations in the generating station.

- (11) The computation and payment of capacity charge and energy charge for existing plants of OHPC will be as determined by the Commission from time to time.

## **29. COMPUTATION AND PAYMENT OF CAPACITY CHARGE AND ENERGY CHARGE FOR PUMPED STORAGE HYDRO GENERATING STATIONS**

- (1) The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis as capacity charge. The capacity charge shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, that is to say, in the capacity excluding the free power to the home State;

Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall be worked out provisionally based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge payment during such period.

- (2) The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be:

$(AFC \times NDM / NDY)$  (in Rupees), if actual Generation during the month is  $\geq 75\%$  of the Pumping Energy consumed by the station during the month and

$\{(AFC \times NDM / NDY) \times (\text{Actual Generation during the month during peak hours} / 75\% \text{ of the Pumping Energy consumed by the station during the month})$  (in Rupees)}, if actual Generation during the month is  $< 75\%$  of the Pumping Energy consumed by the station during the month.

Where,

AFC = Annual fixed cost specified for the year, in Rupees.

NDM = Number of days in the month

NDY = Number of days in the year

Provided that there would be adjustment at the end of the year based on actual generation and actual pumping energy consumed by the station during the year.

- (3) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average energy charge rate of twenty (20) paise per kWh, excluding free energy, if any, during the calendar month, on ex power plant basis.

- (4) Energy charge payable to the generating company for a month shall be:

$= 0.20 \times \{\text{Scheduled energy (ex-bus) for the month in kWh} - [\text{Design Energy for the month (Dem)}] + 75\% \text{ of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month}\} \times (100 - \text{FEHS}) / 100.$



Where,

DEm = Design energy for the month specified for the hydro generating station, in MWh, subject to the provision below.

FEHS = Free energy for home State, in per cent, as defined in Regulation 35(3), if any.

Provided further that in case the Scheduled energy in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy charges payable by the beneficiaries shall be zero.

- (5) The Generator shall maintain the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis. The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the capacity charges of the day shall not be payable by the beneficiary. For this purpose, outages of the unit(s)/station including planned outages and the forced outages up to the 15% in a year shall be construed as the valid reason for not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power using energy of pumped water or natural flow of water;

Provided further that the total capacity charges recovered during the year shall be adjusted on prorata basis in the following manner in the event of total machine outages in a year exceeds 15%:

$$(ACC)_{adj} = (ACC) R \times (100 - ATO) / 85$$

Where,

(ACC)<sub>adj</sub> – Adjusted Annual capacity Charges

(ACC) R – Annual capacity Charges recovered

ATO - Total Outages in percentage for the year including forced and Planned outages

Provided further that the generating station shall be required to declare its machine availability daily on day ahead basis for all the time blocks of the day in line with the scheduling procedure of Grid Code.

- (6) The concerned Load Despatch Centre shall finalise the schedules for the hydro generating stations, in consultation with the beneficiaries, for optimal utilization of all the energy declared to be available, which shall be scheduled for all beneficiaries in proportion to their respective allocations in the generating station.

**30. DEVIATION CHARGES:**

- (1) Variations between actual net injection and scheduled net injection for the generating stations, and variations between actual net drawal and scheduled net drawal for the beneficiaries shall be treated as their respective deviations and charges for such deviations shall be governed by the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related matters) Regulations, 2014, as amended from time to time or any subsequent Deviation Settlement Regulations issued by the Commission.
- (2) Actual net deviation of every Generating Stations and Beneficiaries shall be metered on its periphery through special energy meters (SEMs) installed by the State Transmission Utility (STU), and computed in MWh for each 15-minute time block or any duration of time block, as amended from time to time, by the State Load Despatch Centre.

## CHAPTER - 5: NORMS OF OPERATION

### 31. GENERAL

- (1) Recovery of capacity charge, energy charge and incentive by the generating company shall be based on the achievement of the operational norms specified in this Chapter.
- (2) The Commission may on its own revise the norms of Station Heat Rate specified in this Chapter in respect of any of the generating stations at its discretion.

### 32. NORMS OF OPERATIONS FOR THERMAL POWER GENERATION STATIONS

- (1) The norms of operation as given hereunder shall apply to thermal generating station:
  - (a) Normative Annual Plant Availability Factor (NAPAF)
    - (i) The Normative Annual Plant Availability Factor for all thermal generating stations, except those covered under (ii) below is 85%.
    - (ii) The Normative Annual Plant Availability Factor for existing Thermal Generating Stations of OPGC (UNIT-I & II) will be as determined by the Commission from time to time.
  - (b) Normative Annual Plant Load Factor (NAPLF) for Incentive
    - (i) NAPLF for all thermal generating stations except those covered under (ii) below is 85%.
    - (ii) The Normative Annual Plant Load Factor for existing Thermal Generating Stations of OPGC (UNIT-I & II) will be as determined by the Commission from time to time.
  - (c) Gross Station Heat Rate
    - (i) The Gross Station Heat Rate for all existing coal based thermal generating stations, except those covered under (ii) below is

200/210/250 MW Sets	500 MW Sets (Sub-critical)
2430 KCal/kWh	2390 kCal/kWh

### Note 1

In respect of 500 MW and above units where the boiler feed pumps are electrically operated, the gross station heat rate shall be 40 kCal/kWh lower than the gross station heat rate specified above.

### Note 2

For the generating stations having combination of 200/210/250 MW sets and 500 MW and above sets, the normative gross station heat rate shall be the weighted average gross station heat rate of the combinations.

- (ii) The Gross Station Heat Rate for existing Thermal Generating Stations of OPGC (UNIT-I & II) Ltd will be as determined by the Commission from time to time
- (iii) The Gross Station Heat Rate for all coal based thermal generating stations achieving COD on or after 01.04.2014, is to be calculated based on the following formula:

$$= 1.05 \times \text{Design Heat Rate (kCal/kWh)}$$

Where the Design Heat Rate of a unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/back pressure.

Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units:

<b>Pressure Rating (Kg/cm<sup>2</sup>)</b>	150	170	170	247	247	247	247
SHT/RHT (°C)	535/535	537/537	537/565	565/593	565/593	565/593	565/593
Type of BFP	Electrical Driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven	Turbine driven
Max Turbine Cycle Heat rate (kCal/kWh)	1955	1950	1935	1850	1850	1850	1850
<b>Min. Boiler Efficiency</b>							
Sub-Bituminous Indian Coal	0.86	0.86	0.86	0.86	0.86	0.865	0.865
Bituminous Imported Coal	0.89	0.89	0.89	0.89	0.89	0.895	0.895

<b>Max Design Unit Heat rate (kCal/kWh)</b>							
Sub-Bituminous Indian Coal	2273	2267	2250	2222	2151	2105	2081
Bituminous Imported Coal	2197	2191	2174	2135	2078	2034	2022

Provided further that in case pressure and temperature parameters of a unit are different from above ratings, the maximum design unit heat rate of the nearest class shall be taken;

Provided also that where heat rate of the unit has not been guaranteed but turbine cycle heat rate and boiler efficiency are guaranteed separately by the same supplier or different suppliers, the unit design heat rate shall be arrived at by using guaranteed turbine cycle heat rate and boiler efficiency;

Provided also that if one or more units were declared under commercial operation prior to 01.04.2020, the heat rate norms for those units as well as units declared under commercial operation on or after 01.04.2020 shall be lowest of the heat rate norms considered by the Commission during tariff period 2014-20 or those arrived at by above methodology or the norms as per the sub-clause 32(1)(c)(i).

Note: In respect of units where the boiler feed pumps are electrically operated, the maximum design unit heat rate shall be 40 kCal/kWh lower than the maximum design unit heat rate specified above with turbine driven Boiler Feed Pump.

(d) Secondary fuel oil consumption

- (i) The secondary fuel oil consumption for all existing coal based thermal generating stations who have achieved CoD before 01.04.2014 except as mentioned (iii) below is 1 ml/Kwh.
- (ii) The Secondary fuel oil consumption for all coal based thermal generating stations, who have achieved CoD on or after 01.04.2014 is 0.50 ml/kWh.
- (iii) The Secondary fuel oil consumption for existing Thermal Generating Stations of OPGC (Unit - I & II) Ltd. will be as determined by the Commission from time to time.

(e) Auxiliary Energy Consumption

- (i) The Auxiliary Energy Consumption for all coal based thermal generating stations, except those covered under (ii) below is

Sl. No.	Generating Station	With Natural Draft cooling tower or without cooling tower
(i)	200 MW series	8.5%
(ii)	<b>300 MW &amp; above series</b>	
	Steam driven boiler feed pumps	5.75%
	Electrically driven boiler feed pumps	8.00%

Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively:

Provided further that Additional Auxiliary Energy Consumption as follows shall be allowed for plants with Dry Cooling Systems

Type of Dry Cooling System	(% of gross generation)
Direct cooling air cooled condensers with mechanical draft fans	1%
Indirect cooling system employing jet condensers with pressure recovery turbine and natural draft tower	0.5%

- (ii) Note: The auxiliary energy consumption for the unit capacity of less than 200 MW sets shall be dealt on case to case basis. The Auxiliary Energy Consumption for existing Thermal Generating Stations of OPGC (Unit - I & II) Ltd will be as determined by the Commission from time to time.

- (2) The norms of operation as given hereunder shall apply to hydro generating stations:

- (a) Normative annual plant availability factor (NAPAF) for hydro generating stations:

- (i) Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 8%, and where plant availability is not affected by silt - 90%
- (ii) Storage and Pondage type plants with head variation between FRL and MDDL of more than 8%, where plant availability is not affected by silt: the month wise peaking capability as provided by the project authorities in the DPR (approved by CEA or the State Government) shall form basis of fixation of NAPAF.
- (iii) Pondage type plants where plant availability is significantly affected by silt - 85%
- (iv) Run-of-river type plants: NAPAF to be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.
- (v) A further allowance may be made by the Commission in NAPAF determination under special circumstances, e.g. abnormal silt problem or other operating conditions, and known plant limitations.
- (vi) In case of a new hydro electric project the developer shall have the option of approaching the Commission in advance for fixation of NAPAF based on the principles enumerated in Regulation 32(2).
- (vii) The Normative annual plant availability factor (NAPAF) for existing Hydro Generating Stations of OHPC Ltd will be as determined by the Commission from time to time

(b) Auxiliary Energy Consumption (AUX) for hydro generating stations:

(i) Surface hydro generating stations

With rotating exciters mounted on the generator shaft	0.70%
With static excitation system	1.00%

(ii) Underground hydro generating stations

With rotating exciters mounted on the generator shaft	0.90%
With static excitation system	1.20%

## **CHAPTER - 6: SCHEDULING, ACCOUNTING AND BILLING**

### **33. SCHEDULING**

- (1) The methodology for scheduling and dispatch for the generating station shall be as specified in the Grid Code.

### **34. METERING AND ACCOUNTING**

- (1) The provisions of the Grid Code shall be applicable for the purpose of metering and accounting.

### **35. BILLING AND PAYMENT OF CHARGES**

- (1) Bills shall be raised for capacity charge, energy charge and Incentive on monthly basis by the generating company, and payments shall be made by the beneficiaries directly to the generating company, subject to adjustments at the end of the year.
- (2) Payment of the capacity charge for a thermal generating station shall be shared by the beneficiaries of the generating station as per their percentage shares for the month (inclusive of any allocation out of the unallocated capacity) in the installed capacity of the generating station.
- (3) Payment of capacity charge and energy charge for a hydro generating station shall be shared by the beneficiaries of the generating station in proportion to their shares (inclusive of any allocation out of the unallocated capacity) in the saleable capacity (to be determined after deducting the capacity corresponding to free energy to home State as per Note 3 herein).

#### **Note 1**

Shares / allocations of each beneficiary in the total capacity of State generating stations shall be as determined by the State Government, inclusive of any allocation made out of the unallocated capacity. The shares shall be applied in percentages of installed capacity and shall normally remain constant during a month. The total capacity share of a beneficiary would be sum of its capacity share plus allocation out of the unallocated portion. In the absence of any specific allocation of unallocated power by the State Government, the unallocated power shall be added to the allocated shares in the same proportion as the allocated shares.



## **Note 2**

The beneficiaries may propose surrendering part of their allocated firm share to other beneficiaries. In such cases, the shares of the beneficiaries may be prospectively reallocated by the State Government for a specific period (in complete months) from the beginning of a calendar month. When such reallocations are made, the beneficiaries who surrender the share shall not be liable to pay Capacity Charges for the surrendered share. The Capacity Charges for the capacity surrendered and reallocated as above shall be paid by the beneficiary to whom the surrendered capacity is allocated. Except for the period of reallocation of capacity as above, the beneficiaries of the generating station shall continue to pay the full Capacity Charges as per allocated capacity shares. Any such reallocation and its reversion shall be communicated and notified by the SLDC in advance, at least three (3) days prior to such reallocation or reversion taking effect.

## **Note 3**

Free energy for home State, in percent and shall be taken as notified by the Commission from time to time

### **36. Recovery of Statutory Charges:**

- (1) The generating company shall recover the statutory charges imposed by the State and Central Government such as electricity duty, water cess by considering normative parameters specified in these regulations. In case of the electricity duty is applied on the auxiliary energy consumption, such amount of electricity duty shall apply on normative auxiliary energy consumption of the generating station (excluding colony consumption) and apportioned to each of the beneficiaries in proportion to their schedule dispatch during the month.

### **37. LATE PAYMENT SURCHARGE**

- (1) In case the payment of any bill for charges payable under these regulations is delayed by a beneficiary beyond a period of forty five (45) days from the date of receipt of the bill, a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company.

### **38. REBATE**

- (1) The bills of the generating company for payment through letter of credit on presentation or through NEFT/RTGS within a period of 2 working days, a rebate of 2% shall be allowed.
- (2) Where payments are made on any day after two (2) working days and within a period of five (5) working days of presentation of bills by the generating company, a rebate of 1.5% shall be allowed.
- (3) Where payments are made on any day after five (5) working days and within a period of thirty (30) days of presentation of bills by the generating company, a rebate of 1% shall be allowed.

## CHAPTER – 7: OTHER PROVISIONS

### 39. SHARING OF GAINS DUE TO VARIATION IN NORMS

- (1) The generating company shall workout gains based on the actual performance of applicable Controllable parameters as under:
  - (i) Station Heat Rate;
  - (ii) Secondary Fuel Oil Consumption; and
  - (iii) Auxiliary Energy Consumption.
- (2) The financial gains by the generating company on account of controllable parameters shall be shared between generating company and the beneficiaries on annual basis. The financial gains computed as per the following formulae in case of generating station other than hydro generating stations on account of operational parameters as shown in Clause (1) of this Regulation shall be shared in the ratio of 50:50 between the generating stations and beneficiaries.

$$\text{Net Gain} = (\text{ECRN} - \text{ECRA}) \times \text{Scheduled Generation}$$

Where,

ECRN = Normative Energy Charge Rate computed on the basis of norms specified for Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil consumption.

ECRA = Actual Energy Charge Rate computed on the basis of actual Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil Consumption for the month.

Provided that in case of hydro generating stations, the net gain on account of Actual Auxiliary Energy Consumption being less than the Normative Auxiliary Energy Consumption, shall be computed as per following formulae provided the saleable scheduled generation is more than the saleable design energy and shall be shared in the ratio of 50:50 between generating station and beneficiaries.:

- (i) When saleable scheduled generation is more than saleable design energy on the basis of normative auxiliary energy consumption and less than or equal to saleable design energy on the basis of actual auxiliary energy consumption:

Net gain (Million Rupees) = [(Saleable Scheduled generation in MUs) – (Saleable Design energy on the basis of normative auxiliary energy consumption in MUs)] x [1.20 or ECR, whichever is lower]

- (ii) When saleable scheduled generation is more than saleable design energy on the basis of actual auxiliary energy consumption:

Net gain (Million Rupees)= {Saleable Scheduled generation in MUs- [(Saleable Scheduled Generation in MUs x (100-normative AEC in %)/(100- actual AEC in %)]}x [1.20 or ECR, whichever is lower]

**40. SHARING OF SAVING IN INTEREST DUE TO RE-FINANCING OR RESTRUCTURING OF LOAN:**

- (1) If refinancing or restructuring of loan by the generating company results in net savings on interest after accounting for cost associated with such refinancing or restructuring, the same shall be shared between the beneficiaries and the generating company in the ratio of 50:50.
- (2) In case of dispute, any of the parties may make an application in accordance with the Odisha Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 for settlement of the dispute:

Provided that the beneficiaries shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan.

**41. SHARING OF NON-TARIFF INCOME**

- (1) The non-tariff net income in case of generating station from rent of land or buildings, sale of scrap and advertisements shall be shared between the beneficiaries and the generating company, in the ratio 50:50.

**42. SHARING OF CDM BENEFITS**

- (1) The proceeds of carbon credit from approved CDM project shall be shared in the following manner, namely-
- (a) 100% of the gross proceeds on account of CDM to be retained by the project developer in the first year after the date of commercial operation of the generating station
- (b) In the second year, the share of the beneficiaries shall be 10% which shall

be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company, and the beneficiaries.

#### **43. NORMS OF OPERATION TO BE CEILING NORMS**

- (1) Norms of operation specified in these regulations are the ceiling norms and shall not preclude the generating company and the beneficiaries from agreeing to the improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

#### **44. DEVIATION FROM CEILING TARIFF**

- (1) The tariff determined in these regulations shall be a ceiling tariff. The generating company and the beneficiaries, as the case may be, may mutually agree to charge a lower tariff.
- (2) The generating company may opt to charge a lower tariff for a period not exceeding the validity of these regulations on agreeing to deviation from operational parameters, reduction in operation and maintenance expenses, reduced return on equity and incentive specified in these regulations.
- (3) If the generating company opts to charge a lower tariff for a period not exceeding the validity of these regulations on account of lower depreciation based on the requirement of repayment in such case the unrecovered depreciation on account of reduction of depreciation by the generating company during useful life shall be allowed to be recovered after the useful life in these regulations.
- (4) The deviation from the ceiling tariff specified by the Commission shall come into effect from the date agreed to by the generating company and the beneficiaries.
- (5) The generating company and the beneficiaries of a generating station shall be required to approach the Commission for charging lower tariff in accordance with clauses (1) to (3) above. The details of the accounts and the tariff actually charged under clauses (1) to (3) shall be submitted at the time of true up.

#### **45. FOREIGN EXCHANGE RATE VARIATION**

- (1) The generating company, may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired for the generating station, in part or full in the discretion of the generating company.

- (2) Every generating company shall recover the cost of hedging of foreign exchange rate variation corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises and extra rupee liability corresponding to such foreign exchange rate variation shall not be allowed against the hedged foreign debt.
- (3) To the extent the generating company is not able to hedge the foreign exchange exposure, the extra rupee liability towards interest payment and loan repayment corresponding to the normative foreign currency loan in the relevant year shall be permissible provided it is not attributable to the generating company or its suppliers or contractors.
- (4) Every generating company shall recover the cost of hedging and foreign exchange rate variation on year-to-year basis as income or expense in the period in which it arises.

**46. RECOVERY OF COST OF HEDGING FOREIGN EXCHANGE RATE VARIATION**

- (1) Recovery of cost of hedging and foreign exchange rate variation shall be made directly by the generating company, from the beneficiaries, without making any application before the Commission:

Provided that in case of any objections by the beneficiaries to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the generating company, may make an appropriate application before the Commission for its decision.

**47. APPLICATION FEE AND THE PUBLICATION EXPENSES**

- (1) The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company, directly from the beneficiaries.

**48. REIMBURSEMENT OF FEES, CHARGES AND EXPENSES**

- (1) Fees and charges paid by the generating companies under the prevailing Regulation/ Notification on Fees for filing of petitions or applications before the Commission, as amended from time to time, shall be reimbursed directly by the beneficiaries in proportion of their allocation in the generating stations.

- (2) The generating company shall be entitled to recover the fees and charges as mentioned in Regulation 48 of this regulation which have been paid till the notification of these regulations.
- (3) The Commission may, in its discretion and for the reasons to be recorded in writing and after hearing the affected parties, allow reimbursement of any fee or expenses as may be considered necessary.

**49. POWER TO RELAX**

- (1) The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.

**50. POWER TO REMOVE DIFFICULTY**

- (1) If any difficulty arises in giving effect to the provisions of these regulations, the Commission may, by order, make such provision not inconsistent with the provisions of the Act or provisions of other regulations specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these regulations.

**By Order of the Commission**

**(Priyabrata Patnaik)**  
**SECRETARY**

## Appendix-A Depreciation Schedule

Sl. No.	Asset Particulars	Depreciation Rate (Salvage value=10%)
A.	Land under full ownership	0%
B.	Land under lease	
a	for investment in the land	3.34%
b	For cost of clearing the site	3.34%
c	Land for reservoir in case of hydro generating station	3.34%
C.	Assets purchased new	
a	Pl & Machinery in generating stations	
(i)	Hydro electric	5.28%
(ii)	Steam electric NHRB & waste heat recovery boilers	5.28%
(iii)	Diesel electric and gas plant	5.28%
b	Cooling towers & circulating water systems	5.28%
c	Hydraulic works forming part of the Hydro-	
(i)	Dams, Spillways, Weirs, Canals, Reinforced concrete flumes and syphons	5.28%
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge tanks, hydraulic control valves and hydraulic works	5.28%
d	Building & Civil Engineering works of a	
(i)	Offices and showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%
(iv)	Temporary erections such as wooden structures	100.00%
(v)	Roads other than Kutcha roads	3.34%
(vi)	Others	3.34%
e	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant	
(i)	Transformers including foundations having rating of 100 KVA and over	5.28%
(ii)	Others	5.28%
f	Switchgear including cable connections	5.28%
g	Lightning arrestor	
(i)	Station type	5.28%
(ii)	Pole type	5.28%
(iii)	Synchronous condenser	5.28%



<b>Sl. No.</b>	<b>Asset Particulars</b>	<b>Depreciation Rate (Salvage value=10%)</b>
h	Batteries	
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
i	Overhead lines including cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 KV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 KV but not exceeding 66 KV	5.28%
(iii)	Lines on steel on reinforced concrete support	5.28%
(iv)	Lines on treated wood support	5.28%
j	Meters	5.28%
k	Self propelled vehicles	9.50%
l	Air Conditioning Plants	
(i)	Static	5.28%
(ii)	Portable	9.50%
m(i)	Office furniture and furnishing	6.33%
(ii)	Office equipment	6.33%
(iii)	Internal wiring including fittings and apparatus	6.33%
(iv)	Street Light fittings	5.28%
n	Apparatus let on hire	
(i)	Other than motors	9.50%
(ii)	Motors	6.33%
o	Communication equipment	
(i)	Radio and high frequency carrier system	6.33%
(ii)	Telephone lines and telephones	6.33%
p	I.T. equipments	15.00%
q	Any other assets not covered above	5.28%