

# UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

‘Vidyut Niyamak Bhawan’, Near I.S.B.T., P.O.-Majra, Dehradun-248171

## Notification

September 10, 2015

**No. F-9(25)/RG/UERC/2015/962:** In exercise of powers conferred under section 61 read with section 181 of the Electricity Act, 2003, and all other powers enabling it in this behalf, and after previous publication, the Uttarakhand Electricity Regulatory Commission hereby makes the following regulations, namely:

## PART I

### PRELIMINARY

#### 1. Short Title, extent and Commencement

- (1) These Regulations may be called the Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2015, in short, UERC Tariff Regulations, 2015.
- (2) These Regulations shall extend to the whole of the State of Uttarakhand.
- (3) These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from FY 2016-17, i.e. April 1, 2016 onwards up to FY 2018-19, i.e. March 31, 2019.

Provided, all new Projects commissioned after the notification of these Regulations shall be governed by the provisions of these Regulations.

- (4) Regulation 55A shall be applicable for the years 2015-16 and 2016-17 unless extended further by the Commission.

#### 2. Scope of Regulations

- (1) These Regulations shall apply in the following cases:-
  - a) Supply of electricity by a Generating Company to a Distribution Licensee:

Provided that the Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance

of an agreement, entered into between a Generating Company and a Licensee or between Licensees, for a period not exceeding one year to ensure reasonable prices of electricity;

- b) Intra-State transmission of electricity;
- c) SLDC Charges;
- d) Retail supply of electricity;

Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may, for promoting competition among Distribution Licensees, fix only maximum ceiling of tariff for retail sale of electricity;

Provided further that where the Commission has permitted open access to any category of consumers under section 42 of the Act, the Commission shall determine the wheeling charges, cross-subsidy surcharge, additional surcharge and other open access related charges in accordance with these Regulations and the Uttarakhand Electricity Regulatory Commission (Terms & Conditions of Intra-State Open Access) Regulations, 2015 as amended from time to time.

- (2) These Regulations shall not apply for determination of tariff in case of the following:
  - (a) Generating stations whose tariff has been discovered through a transparent process of bidding in accordance with the competitive bidding guidelines notified by the Central Government and adopted by the Commission under Section 63 of the Act.
  - (b) Generating stations of renewable sources of energy, which shall be governed by UERC (Tariff and Other Terms for Supply of Electricity Renewable Energy Sources and non-fossil fuel based Co-generating stations) Regulations, 2010 and UERC (Tariff and Other Terms for Supply of Electricity Renewable Energy Sources and non-fossil fuel based Co-generating stations) Regulations, 2013 as amended from time to time or any subsequent enactment thereof.
- (3) For all purposes, including the review matters pertaining to the period till the notification of these Regulations, the issues related to determination of tariff shall be governed by the Regulations prevalent during that period.

### 3. Definitions

In these Regulations, unless the context otherwise requires,

- (1) **“Accounting Statement”** means for each financial year, the following statements, namely-

- a) Balance sheet, prepared in accordance with the form contained in Part I of Schedule III to the Companies Act, 2013;
- b) Cash flow statement, prepared in accordance with the Accounting Standard on Cash Flow Statement (AS-3) of the Institute of Chartered Accountants of India;
- c) Cost records prescribed by the Central Government under Section 128(1) of the Companies Act, 2013;
- d) Together with notes thereto, and such other supporting statements and information as the Commission may direct from time to time;
- e) Profit and loss account, complying with the requirements contained in Part II of Schedule III to the Companies Act, 2013;
- f) Report of the statutory auditors’;

Provided that in case of any local authority engaged in the business of distribution of electricity, the Accounting Statement shall mean the items, as mentioned above, prepared and maintained in accordance with the relevant Acts or Statutes as applicable to such local authority.

- (2) “Act” means the Electricity Act, 2003 (36 of 2003), including amendments thereto.
- (3) “Additional Capitalisation” means the capital expenditure actually incurred or projected to be incurred, after the date of commercial operation of the Project and admitted by the Commission after prudence check subject to provisions of Regulation 22.
- (4) “Aggregate Revenue Requirement” means the requirement of the Transmission Licensee or the Distribution Licensee or Generating Company or SLDC for recovery, through tariffs, of all the allowable expenses and return pertaining to its Licensed/Regulated Business for a particular financial year, in accordance with these Regulations;
- (5) “Allocation Statement” means for each financial year, a statement in respect of each of the separate businesses of the Licensees/Generating Company/SLDC, showing the amounts of any revenue, costs, assets, liabilities, reserves or provisions, which has been either;
  - a) Charged from or to each such separate business together with a description of the basis of that charge; or
  - b) Determined by apportionment or allocation between the Licensed/Regulated Business and every other separate business of the Licensee/Generating Company, together with a description of the basis of the apportionment or allocation;

Provided that such allocation statement in respect of a generating station shall be maintained in a manner so as to enable tariff determination, stage-wise, unit-wise or for the whole generating station.

- (6) "Applicant" means a Generating Company or a Transmission Licensee or a Distribution Licensee or SLDC who has made an application/Petition for determination of Aggregate Revenue Requirement and/or tariff or an application for Annual Performance Review in accordance with the Act and these Regulations and includes a Generating Company or a Transmission Licensee or a Distribution Licensee or SLDC whose tariff is the subject of a review by the Commission either suo-moto or on a petition filed by any interested or affected person or as part of an Annual Performance Review;
- (7) "Auditor" means an auditor appointed by the generating company or licensee or SLDC, as the case may be, in accordance with the provisions of Sections 224, 233B 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;
- (8) "Auxiliary Energy Consumption" in relation to a period, in case of generating station means the quantum of energy consumed by auxiliary equipment of the generating station, such as the equipment used being used for the purpose of operating plant and machinery including switchyard of the generating station and transformation losses within the generating stations and shall be 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 the colony consumption and other facilities of a Generating Station and the power consumed for construction works at the Generating Station shall not be included as part of the Auxiliary Energy Consumption for the purpose of these Regulations.

- (9) "Availability" in relation to a transmission system for a given period means the time in hours during that period in which the transmission system is capable of transmitting electricity at its rated voltage to the delivery point and shall be expressed in percentage of total hours in the given period;
- (10) "Base year" means the year which is two financial years preceding the first year of the Control Period and for the Control Period, the base year shall be FY 2014-15;
- (11) "Beneficiary" in relation to a generating station means a person purchasing electricity generated at such generating station whose tariff is determined under these Regulations; and in relation to the transmission business means the person who has contracted the

transmission capacity on payment of transmission charges.

- (12) "Block" in relation to a combined cycle thermal generating station includes combustion turbine – generators, associated waste heat recovery boilers, connected steam turbine – generators and auxiliaries;
- (13) "Capital Cost" means the Capital Cost as determined in accordance with Regulation 21;
- (14) "CERC" means the Central Electricity Regulatory Commission;
- (15) "Change in law" means occurrence of any of the following events having implication for the generating station or the transmission system or distribution system or SLDC's operations covered by these Regulations:
  - a) Enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law; or
  - b) 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 application; or
  - c) 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; or
  - d) Coming into force or change in any bilateral or multilateral agreement/treaty between the Government of India and any other Sovereign Government.
- (16) "Commission" means the Uttarakhand Electricity Regulatory Commission constituted under Section 82 of the Electricity Act, 2003;
- (17) "Control period" means a period of three financial years from April 1, 2016 to March 31, 2019, for which the principles of determination of revenue requirement and tariff are specified in these Regulations;
- (18) "Conventional Power Plants" means gas based thermal, or hydro generating stations of capacity exceeding 25 MW.
- (19) "Cut-off Date" means 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation;  
  
Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalization could not be done within the cut-off

date for reasons beyond the control of the project developer;

(20) "Date of commercial operation" or 'COD' of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

- a) Date of commercial operation in case of a generating unit or block of the thermal generating station shall mean 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, if any, and in case of the generating station as a whole, the date of commercial operation of the last generating unit or block of the generating station:
- b) Date of commercial operation in relation to a generating unit of hydro generating station shall mean the date declared by the generating company from 00:00 hour after the scheduling process in accordance with the 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:

Provided that:

- (i) 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 and scheduling shall commence from 0000 hr after completion of the trial run:
- (ii) 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:
- (iii) In case a 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, and 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:

- (iv) If a run-of-river hydro generating station or a generating unit thereof is declared under commercial operation during lean inflows period when the water inflow is insufficient for such demonstration of peaking capability, it shall be mandatory for such hydro generating station or generating unit to demonstrate peaking capability equivalent to installed capacity as and when sufficient water inflow is available.
  - (v) The certificate regarding commissioning of the generating station and compliance of all the Rules and Regulations in this regard and also of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations, 2010 ,shall be signed by CMD/CEO/MD of the company subsequent to its approval by the Board of Directors in the format enclosed at Appendix V:
- c) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 00:00 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity at rated voltage:

Provided that:

- (i) Clearance from the Electrical Inspector as prescribed in the Rules would be required before charging any transmission line or substation.
- (ii) Where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Transmission Service Agreement in accordance with Regulation 21(7) of these Regulations:
- (iii) In case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof. The Commission in such cases, may approve the date of commercial operation prior to the transmission system or an element coming into regular service.
- (iv) In case of a Distribution Licensee, date of commercial operation shall mean the

date of charging the electric line or sub-station of a Distribution Licensee to its rated voltage level or seven days after the date on which it is declared ready for charging by the Distribution Licensee, but is not able to be charged for reasons not attributable to its suppliers or contractors, whichever is earlier:

Provided that clearance from the Electrical Inspector as prescribed in the Rules would be required before charging any HT/EHT line or substation.

Provided that the date of commercial operation shall not be a date prior to the scheduled date of commercial operation mentioned in power purchase agreement or the implementation agreement or the transmission service agreement or wheeling agreement or the investment approval, as the case may be, unless mutually agreed to by all Parties,

- (21) "Day" means the 24 hour period starting at 0000 hour;
- (22) "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 the relevant Regulation;
- (23) "De-capitalization" for the purpose of the tariff under these regulations, means reduction in Gross Fixed Assets of the project corresponding to the removal/deletion of assets as admitted by the Commission;
- (24) "De-Commissioning" means removal from service of a generating station or a unit thereof or transmission system or element thereof, after it is certified by any authorized agency, either on its own or on an application made by the project developer or the beneficiaries or both, that the project cannot be operated due to non performance of the assets on account of technological obsolescence or uneconomic operation or a combination of these factors;
- (25) "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;
- (26) "Distribution Business" means the business of operating and maintaining a distribution system for supplying electricity in the area of the supply of the Distribution Licensee;
- (27) "Distribution loss" means the energy losses in the distribution system of a distribution licensee including auxiliary power consumption in the sub-station for the purpose of air-conditioning, lightning, battery charging, accessories of sub-station equipments etc;
- (28) "Element" in respect of a transmission system shall mean an asset which has been



distinctively defined under the scope of the project in the Investment Approval;

- (29) “Existing Generating Station” means a generating station, which has achieved COD prior to the date of notification of these Regulations;
- (30) “Existing project” means the project declared under commercial operation on a date prior to the date of notification of these Regulations;
- (31) “Expected Revenue from Tariff and Charges” means the revenue estimated to accrue to the Licensee/Generating Company/SLDC from the Licensed/Regulated Business at the prevailing tariffs;
- (32) “Expenditure incurred” means the fund, whether 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;
- (33) “Extended Life” means the life of a generating station or unit thereof or transmission system or element thereof beyond the period of useful life, as may be determined by the Commission on case to case basis;
- (34) “Financial year” means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- (35) “Force Majeure Event” means, with respect to any party, any event or circumstance which is not within the reasonable control of, or due to an act or omission of, that party and which, by the exercise of reasonable care and due diligence, that party is not able to prevent, including, without limiting the generality of the foregoing:
  - a) Acts of God like lightning, landslide, storm, action of the elements, earthquakes, flood, drought and natural disaster or exceptionally adverse weather conditions;
  - b) Any act of public enemy, wars (declared or undeclared), blockades, embargo, insurrections, riots, revolution, sabotage, terrorist or military action ,vandalism and civil disturbance;
  - c) Unavoidable accident, fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
  - d) Any shutdown or interruption of the grid, which is required or directed by the State or Central Government or by the Commission or the State Load Despatch Centre; and any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure;

- (36) "Generation Business" means the business of production of electricity from a generating station;
- (37) "Generation Tariff" means tariff for ex- bus supply of electricity from a generating station;
- (38) "Generating Unit" in relation to a combined cycle thermal generating station means gas turbine-generator, steam turbine-generator, & auxiliaries including heat recovery unit, or in relation to other thermal generating station means gas turbine-generator and auxiliaries; and in relation to a hydro generating station means turbine-generator and its auxiliaries;
- (39) "Generating Station" means any station for generating electricity, including any building and plant with step-up transformer, switch-gear, switch yard, cables or other appurtenant equipment, if any, used for that purpose and the site thereof; and any building used for housing the operating staff of a generating station, and where electricity is generated by water- power, includes penstocks, head and tail works, main and regulating reservoirs, dams and other hydraulic works, but does not in any case include any sub-station;
- (40) "Grid Code" means the UERC (State Grid Code) Regulations, 2007 as amended from time to time;
- (41) "Gross Calorific Value" or "GCV" in relation to a thermal generating station means the heat produced in kCal by complete combustion of one standard cubic meter of gaseous fuel;
- (42) "Gross Station Heat Rate" or "GHR" means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals of a Thermal Generating Station;
- (43) "Indian Governmental Instrumentality" means the Government of India, Governments of State (where the project is located) and any ministry or department or board or agency or other regulatory or quasi judicial authority controlled by Government of India or Government of State, where the project is located;
- (44) "Infirm Power" means electricity injected prior to commercial operation of the Unit or block of the generating station;
- (45) "Installed Capacity" 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 admitted by the Commission from time to time;
- (46) "Interconnection Point" means the point where the power from the power station switchyard bus of the Seller is injected into the interstate/intrastate transmission system, as

the case may be (including the dedicated transmission line connecting the power station with the intrastate transmission system).

- (47) "Inter-State generating station" or "ISGS" has the meaning as assigned in the Indian Electricity Grid Code specified by the Central Commission;
- (48) "Intra-State generating station" shall mean a generating station or a captive generating plant (CGP) which is not an Inter-State generating station;
- (49) "Investment Approval" means approval by the Commission or in case of a generating Company by the CEA or Board of the generating company, as the case may be, 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 be reckoned from the date of the approval by the Commission or in case of a generating company the date of resolution/minutes of the Board/approval by competent authority;

- (50) "Long-term transmission customer" means a person having a transmission service agreement for more than seven years with the transmission licensee including deemed transmission licensee to use Intra-State transmission system by paying transmission charges;
- (51) "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;
- (52) "New Generating Station or new Project" means a generating station or new Project achieving COD on or after the date of notification of these Regulations;
- (53) "Non-Tariff Income" means income other than income from tariff derived by use of assets of core business and may include proportion of income from other business;
- (54) "Normative Annual Plant Availability Factor" or "NAPAF" in relation to a thermal generating station means the availability factor specified in Regulation 47(1)(a) and in relation to a hydro generating station means the availability factor specified in Regulation 47(1)(b) and 47(1)(c);
- (55) "Operation and maintenance expenses" or "O&M expenses" means the expenditure incurred on operation and maintenance of the Company or of a particular project and

includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads but excludes fuel expenses and water charges;

- (56) "Original project cost" means the capital expenditure incurred by the Generating Company or the Licensees or SLDC, as the case may be, within the original scope of the project up to the date of commercial operation as admitted by the Commission;
- (57) "Other Business" means any business undertaken by a Transmission Licensee under Section 41 of the Act or by a Distribution Licensee under Section 51 of the Act for optimum utilization of the assets of such Transmission Licensee or of such Distribution Licensee;
- (58) "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, reduced by the normative auxiliary energy consumption;
- (59) "Plant Load Factor (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:

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

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;

- (60) "Project" means a Generating station or the Transmission system or a component in case of SLDC or the Distribution system, as the case may be, and in case of a multi-purpose hydro generating station includes all components of generating facility such as dam, intake water conductor system as apportioned to power generation, power generating station and generating units of the scheme;
- (61) "Prudence Check" means scrutiny of reasonableness of capital expenditure incurred or proposed to be incurred, financing plan, use of efficient technology, cost and time over-run and such other factors as may be considered appropriate by the Commission for

- determination of tariff. While carrying out the Prudence Check, the Commission shall look into whether the generating company or transmission licensee or distribution licensee or SLDC has been careful in its judgments and decisions and vigilant in executing the project;
- (62) "Rated Voltage" in relation to a transmission or distribution system means the design voltage at which the transmission or distribution system is designed to operate and include such lower voltage at which the line is charged, for the time being, in consultation with long-term transmission customers or Users;
- (63) "Regular Service" means putting into use a transmission system or element thereof after successful trial operation;
- (64) "Run-of-river generating station" means a hydro generating station which does not have upstream pondage;
- (65) "Run-of-river generating station with pondage" means a hydro generating station with sufficient pondage for meeting the diurnal variation of power demand;
- (66) "Scheduled energy" means the quantum of energy scheduled by the concerned Load Dispatch Centre to be injected into the grid by a generating station over a day;
- (67) "Scheduled Commercial Operation Date" or 'SCOD' shall mean the date(s) of Commercial Operation of a generating station or generating unit or block thereof or transmission system or element thereof as indicated in the investment approval or as agreed in power purchase agreement or transmission service agreement as the case may be, whichever is earlier.
- (68) "Scheduled generation" or "SG" at any time or for any period or time-block means schedule of generation in MW or MWh ex-bus, accepted by the concerned Load Dispatch Centre;

**Note:**

For the open cycle gas turbine generating station or a combined cycle generating station if the average frequency for any time-block, is below 49.52 Hz but not below 49.02 Hz and the scheduled generation is more than 98.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 98.5% of the declared capacity, and if the average frequency for any time-block is below 49.02 Hz and the scheduled generation is more than 96.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 96.5% of the declared capacity.

- (69) "Small gas turbine generating station" means and includes open cycle gas turbine or combined cycle generating stations with gas turbines having capacity of 50 MW or below;
- (70) "Start Date or Zero Date" means the date indicated in the Investment Approval for

commencement of implementation of the project and where no date has been indicated, the date of investment approval shall be deemed to be Start Date or Zero Date;

- (71) "Storage type generating station" means a hydro power generating station associated with storage capacity to enable variation in generation of electricity according to demand;
- (72) "Tariff" means the schedule of charges for either generation or transmission or wheeling and supply of electricity together with terms and conditions for application thereof,
- (73) "Tariff period" means the period for which tariff or the Aggregate Revenue Requirement is determined by the Commission under these Regulations,
- (74) "Time Block" means a block of 15 minutes starting from 00.00 hrs, unless the context requires otherwise,
- (75) "Trading Business" means the business of purchase of electricity by the Trading Licensee or Distribution Licensee for resale of electricity to other Licensee or consumers or category of consumers;
- (76) "Transmission Business" means the business of establishing or operating transmission lines;
- (77) "Transmission Loss" means the energy losses in the transmission system of a Transmission Licensee. Cost of auxiliary power consumption in the sub-station for the purpose of air-conditioning, lighting, battery charging, accessories of sub-station equipments, etc.;
- (78) "Transmission Service Agreement" means the agreement, contract, memorandum of understanding, or any such covenants, entered into between the Transmission Licensee and the user of the transmission service/lines;
- (79) "Transmission system" means a line or a group of lines with or without associated sub-station, and includes equipment associated with transmission lines and sub-stations;
- (80) "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.

- (81) "Trial operation" in relation to a transmission system or an element thereof shall mean successful charging of the transmission system or an element thereof for 24 hours at

continuous flow of power, with requisite metering system, telemetry and protection system in service.

- (82) “Unscheduled interchange” (UI) means unscheduled interchanges as defined in Indian Electricity Grid Code,
- (83) “Useful life” in relation to a unit of a generating station and transmission/distribution system from the COD shall mean the following, namely:-
- a) Hydro generating station – 35 years
  - b) Gas/Liquid fuel based thermal generating station - 25 years
  - c) Transmission line – 35 years
  - d) AC and DC sub-station -25 years
  - e) Gas Insulated Substation (GIS) – 25 year
  - f) Distribution line and distribution systems – 35 years

Provided that the useful life for AC and DC substations and GIS for which Notice Inviting Tender is floated on or after notification of these Regulations shall be considered as 35 years.

Provided further that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission;

- (84) “User” means a Transmission or Distribution Licensee, a Generating Company, a person who has set up a captive generating plant or a consumer availing open access, utilizing the transmission system of a Transmission Licensee or distribution system of a Distribution Licensee.
- (85) “Year” means financial year ending on 31<sup>st</sup> March, and
- a) “Current Year” shall mean the year in which the petition for determination of tariff is filed,
  - b) “Previous Year” shall mean the year immediately preceding the current year,
  - c) “Ensuing Year” shall mean the year following the current year.

Words or expressions used in these regulations and not defined herein but defined in the Act shall bear the same meaning as in the Electricity Act, 2003 or any other regulations of the Commission, as amended from time to time, shall have the meaning assigned to them under the same.

## **PART II**

### **MULTI YEAR TARIFF FRAMEWORK GENERAL PRINCIPLES**

#### **4. Multi-year Framework**

The Multiyear tariff framework shall be based on the following:-

- a) Business plan submitted by the applicant for the entire control period for the approval of the Commission prior to the beginning of the control period;
- b) Applicant's forecast of expected ARR for each year of the control period, based on reasonable assumptions and financial & operational principles/parameters laid down under these Regulations submitted alongwith the MYT petition for determination of Aggregate Revenue Requirement and Tariffs for first year of the control period;
- c) Review of control period ending on 31.03.2016 shall also be taken up alongwith the ARR/Tariff petition for the first year of ensuing control period.
- d) Trajectory for specific parameters as may be stipulated by the Commission based on submissions made by the Licensee, actual performance data of the Applicants and performance achieved by similarly placed utilities;
- e) Annual review of performance shall be conducted vis-à-vis the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;
- f) Sharing of excess profit or loss due to controllable and uncontrollable factors as per provisions of these Regulations.

#### **5. Control Period**

The Control Period under these Regulations shall be of three (3) financial years; the first application under these Regulations shall be made for the control period of three financial years from April 01, 2016 to March 31, 2019.

#### **6. Norms of operation to be ceiling norms**

The norms of operation specified herein are the ceiling norms and this shall not preclude the Commission from stipulating or the Generating Company, Transmission Licensee, Distribution Licensees, SLDC and the Beneficiaries from agreeing to improved norms of operation and in that case such improved norms shall be applicable for determination of tariff.



## 7. Determination of Baseline

The baseline values (operating and cost parameters) for the base year of the control period shall be determined by the Commission and shall be based on the approved values by the Commission, the latest audited accounts, estimates for the relevant year, prudence check and other factors considered by the Commission.

The Commission may re-determine the baseline values for the base year based on the actual audited accounts of the base year.

## 8. Business Plan

- (1) An Applicant shall submit, under affidavit and as per the UERC (Conduct of Business) Regulations, 2014, a Business Plan by November 30<sup>th</sup>, 2015, for the Control Period of three (3) financial years from April 1, 2016 to March 31, 2019,
  - a) The Business Plan for the Generating Company shall be for the entire control period and shall, *interalia*, contain-
    - (i) Capital investment plan, which shall include details of the investments planned by the Generating Company for existing stations, yearly phasing of capital expenditure alongwith the source of funding, financing plan and corresponding capitalisation schedule. This plan shall be commensurate with R&M schemes and proposed efficiency improvements for various plants of the company;
    - (ii) The capital investment plan shall show separately, on-going projects that will spill over into the years under review, and new projects (along with justification) that will commence in the years under review but may be completed within or beyond the tariff period;
    - (iii) The Generating Company shall submit plant-wise details of the capital structure and cost of financing (interest on debt and return on equity), after considering the existing market conditions, terms of the existing loan agreements, risks associated in generation business and creditworthiness;
    - (iv) Details related to major shut down of machines, if any;
    - (v) Trajectory of performance parameters;
  - b) The Business Plan for the Transmission Licenses shall be for the entire control period and shall, *interalia*, contain-

- (i) Capital investment plan which should be commensurate with load growth and quality improvement proposed in the business plan. The investment plan should also include yearly phasing of capital expenditure alongwith the source of funding, financing plan and corresponding capitalisation schedule. The system augmentation/expansion plan to be submitted as a part of Capital Investment Plan by the Transmission Licensee shall be consistent with the load growth forecast/generation evacuation requirement during the control period. Further, the Capital Investment Plan shall be in conformity with the plans made by the CEA/CTU/STU/Distribution Licensee;
  - (ii) The appropriate capital structure of each scheme proposed and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;
  - (iii) Transmission loss reduction trajectory for each year of the control period, including details of the measures proposed to be taken for achieving the target loss;
- c) The Business Plan for the Distribution Licenses shall be for the entire control period and shall, *interalia*, contain-
- (i) Sales/demand forecast for each customer category and sub-categories for each year of the control period;
  - (ii) Distribution loss reduction trajectory for each year of the control period; including details of the measures proposed to be taken for achieving the target loss;
  - (iii) Power procurement plan in case of long term, medium term and short term based on the sales forecast and distribution loss trajectory for each year of the business plan period; the power procurement plan may also include energy efficiency and demand side management measures;
  - (iv) Collection efficiency improvement trajectory for each year of the control period;
  - (v) Capital investment plan considering the sales/demand forecast, power procurement plan, distribution loss trajectory, targets for quality of supply, etc. The capital investment plan shall be consistent with the perspective plan drawn by the State Transmission Utility (STU), and the investment plan should also include yearly phasing of capital expenditure alongwith the source of funding, financing plan and corresponding capitalisation schedule;
  - (vi) The appropriate capital structure of each scheme proposed and cost of financing (interest on debt and return on equity), terms of the existing loan agreements, etc;

- (vii) Details related to availability of power from renewable energy sources and actions proposed for complying with the RPO specified by the Commission.
- d) The Business Plan for the State Load Despatch Centre shall be for the entire control period and shall, *interalia*, contain-
  - (i) Capital Investment Plan including phasing of expenditure and funding pattern;
  - (ii) Estimated budget for the control period;
- (2) The Applicant shall also submit the details in respect of its manpower planning for the Control Period as part of Business Plan.
- (3) The Commission shall scrutinize and approve the business plan after following the due consultation process.

## **9. Specific Trajectory for Certain Variables**

- (1) The Commission shall stipulate a trajectory for certain variables having regard to the past performance as also the performance of similarly situated licensees/generating companies:

Provided that the variables for which a trajectory shall be stipulated, shall include but shall not be limited to,

- a) In case of Generating Stations:  
Generating station's availability, station heat rate, , auxiliary consumption, etc.
- b) In case of Transmission Licensee:  
Transmission losses, transmission system availability, etc.
- c) In case of Distribution Licensee:  
Supply availability, wires availability, distribution losses, collection efficiency, etc.

Provided further that this trajectory should provide for sharing of gains and losses with the consumers on account of superior and inferior performance as against the targets prescribed;

- (2) The trajectory stipulated by the Commission in accordance with these Regulations shall be incorporated by the applicant in its MYT Petition.

## **10. MYT Petition for the Control Period**

- (1) The applicant shall submit under affidavit and in accordance with UERC (Conduct of Business) Regulations, 2014 as amended from time to time, the forecast of Aggregate Revenue Requirement and expected revenue from tariff for each year of the Control Period,

accompanied by fees applicable, latest by 30th November of the year previous to the start of the Control Period in the format specified by the Commission.

Provided in case of new project(s), respective unit(s) and element(s), the applicant shall, in advance, make an application on or before 180 days prior to the anticipated date of commercial operation in the manner specified above.

- (2) Forecast of Aggregate Revenue Requirement for each of the financial year of the Control Period:
  - a) For projecting different components of Aggregate Revenue Requirement for each financial year of the Control Period Applicant shall develop a mathematical model. For this purpose applicant may utilize suitable macro-economic variables, market indexes, past year's trends etc. Applicant shall further submit a soft copy of the above model with all the formulas and linkages along with its MYT petition and petition for Annual Performance Review and Tariff determination.
- (3) Forecast of expected revenue from tariff and charges:
  - a) The applicant shall develop mathematical model for projecting the expected revenue from tariff and charges based on the following:
    - (i) In the case of a Generating Company, based on prevailing generation tariffs as on the date of making the application and estimates of capacity allocated to Distribution Licensees and Open Access Customers and expected energy generation for each financial year of the Control Period;
    - (ii) In the case of a Transmission Licensee, based on prevailing transmission tariffs as on the date of making the application and estimates of transmission capacity allocated to Transmission System Users which includes Open Access Customers for each financial year of the Control Period;
    - (iii) In the case of a Distribution Licensee, based on prevailing retail & wheeling tariffs as on the date of making the application and estimates of quantum of electricity supplied to consumers in different categories and wheeled for open access consumers for each financial year of the Control Period;
    - (iv) In case of SLDC, based on Fee and Charges as applicable on the date of making the application and allocated transmission capacity to users of intra State Transmission System.

- (v) Applicants shall submit a soft copy of the above model with all the formulas and linkages along with its MYT petition and petition for annual performance review and tariff determination.
- (4) After examining the application, the Commission shall either-
  - a) Pass an order approving the forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for the Control Period, subject to such modifications and conditions as it may specify in the said Order; or
  - b) Reject the application for reasons to be recorded in writing.

Provided that the applicant shall be given a reasonable opportunity of being heard before rejecting his application.

- (5) In its MYT Order, the Commission shall specify the variables included in the Aggregate Revenue Requirement and expected revenue from tariff and charges of the applicant that shall be reviewed by the Commission as part of the Annual Performance Review;

Provided that such variables shall be limited to the major items of cost and revenue forecast of the applicant that in the Commission's opinion could have a material impact on the cost of supply of electricity to consumers in the State over the Control Period:

Provided further that the variables, as may be stipulated by the Commission under Regulations below, shall form part of the Annual Performance Review, unless exempted by the Commission from such review in its Order.

## **11. Preparation & submission of Annual Accounts, Reports etc.**

- (1) Every Applicant shall prepare annual statement of accounts and also prepare annual reports and statistics, giving an account of its activities during the current and previous year and likely to be undertaken in the remaining years of the MYT Control Period, including the ensuing year. The report of activities shall also indicate targets and achievements in respect of various performance parameters. These reports shall be furnished to the Commission in duplicate, by 30th November every year.
- (2) The Commission may also direct the Applicants to submit the half yearly accounting statements, as the Commission may require for reviewing their financial performance.
- (3) The Commission may also direct the Applicants to submit to the Commission or such other authority, as it may designate in this behalf, such additional information as the Commission may require for the performance of its functions.

- (4) The Commission at an appropriate time may specify the forms for preparation of separate regulatory accounts.

## **12. Annual Performance Review**

- (1) Under the multi-year tariff framework, the performance of the Generating Company or Transmission and Distribution Licensees or SLDC, shall be subject to an Annual Performance Review.
- (2) The Applicant shall under affidavit and as per the UERC (Conduct of Business) Regulations, 2014 as amended from time to time, make an application for Annual Performance Review by November 30th of every year;

Provided that the Applicant shall submit information to the Commission in such form as may be stipulated by the Commission from time to time, together with the Accounting Statements, 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.

Provided further that the application for Annual Performance Review shall be submitted to and shall be dealt with by the Commission in the manner provided under these Regulations for submission of and dealing with an application for determination of tariff within the time limit specified in the Regulations for such application.

- (3) The scope of the Annual Performance Review shall be a comparison of the actual performance of the Applicant with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise of following:
  - a) A comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenue subject to prudence check including pass through of impact of uncontrollable factors;
  - b) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (un-controllable factors).
  - c) Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;
  - d) Computation of the sharing of gains and losses on account of controllable factors for the

previous year.

- (4) Upon completion of the review, the Commission shall attribute any variations or expected variations in performance, for variables stipulated under this Regulation, to factors within the control of the applicant (controllable factors) or to factors beyond the control of the applicant (uncontrollable factors):
- (5) The “uncontrollable factors” shall include such of the factors which are beyond the control of, the applicant, as determined by the Commission. Some examples of uncontrollable factors are as follows:
  - a) Force Majeure events, such as acts of war, fire, natural calamities, etc.;
  - b) Change in law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
  - c) Economy wide influences such as unforeseen changes in inflation rate, market interest rates, taxes and statutory levies;
  - d) Variation in power purchase expenses for the Distribution Licensees etc.;
  - e) Variation in freight rates;
  - f) Variation on account of change in hydro-thermal mix due to adverse natural events; and
  - g) Variation in number or mix of consumers or quantities of electricity supplied to the consumers.
  - h) Primary fuel cost.
- (6) Some illustrative variations or expected variations in the performance of the applicant which may be attributed by the Commission to controllable factors shall include, but shall not be limited to, the following:
  - a) Variations in capital expenditure on account of time and/or cost overruns on account of land acquisition issues;
  - b) Efficiency in the implementation of a project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events and Delay in execution of the project on account of contractor, supplier or agency of the generating company or transmission licensee or Distribution licensee or SLDC;
  - c) Variations in technical and commercial losses;
  - d) Bad debts;

- e) Variations in performance parameters;
  - f) Variations in working capital requirements;
  - g) Failure to meet the standards specified in the UERC (Standards of Performance) Regulations, 2007 as amended from time to time except where exempted in accordance with those Regulations;
  - h) Variation in financing pattern due to variation in capital expenditure;
  - i) Variation in quality of supply;
  - j) Variation in operation & maintenance expenses;
- (7) Applicants may, as a result of additional information not previously known or available to them at the time the forecast under Regulation 10(2) was developed, apply for a modification in the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for the remainder of the Control Period, as part of the Annual Performance Review.
- (8) The Commission may, as a result of additional information not previously known or available to it at the time the forecast under Regulation 10(2) was developed, if it so deems appropriate, either suo moto or on an application made by any interested or affected party, modify the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for the remainder of the Control Period, as part of the Annual Performance Review.
- (9) The Commission shall treat an application made to it under Regulation 8 and sub-Regulation (2) above in the same manner as the original application for determination of tariff and upon completion of such review, either approve the proposed modification with such changes as it deems appropriate or reject the application made for reasons to be recorded in writing.
- (10) Upon completion of the Annual Performance Review, the Commission shall pass an order recording-
- a) The approved aggregate gain or loss to the Applicant on account of uncontrollable factors and the mechanism by which the Applicant shall be allowed such gains or losses in accordance with Regulation 13;
  - b) The approved aggregate gain or loss to the Applicant on account of controllable factors and sharing of such gains or such losses that may be shared in accordance with Regulation 14;
  - c) The approved modifications to the forecast of the Applicant for the ensuing year, if any;



The surplus/deficit determined by the Commission in accordance with these Regulations on account of truing up of the ARR of Applicant shall be carried forward to the ensuing financial year.

### **13. Sharing of Gains and Losses on account of Uncontrollable factors**

- (1) The approved aggregate gain or loss to the Applicant on account of uncontrollable factors shall be allowed as an adjustment in the tariff/charges of the Applicant over such period as may be specified in the Order of the Commission;
- (2) Nothing contained in sub-regulation (1) above shall apply in respect of any gain or loss arising out of variations in the price of fuel, which shall be dealt with as specified under relevant parts of the Regulations.

### **14. Sharing of Gains and Losses on account of Controllable factors:**

- (1) The approved aggregate gain and loss to the Applicant on account of controllable factors shall be dealt with in the following manner:
  - a) 1/3<sup>rd</sup> of such gain or loss shall be passed on as a rebate or allowed to be recovered in tariffs over such period as may be specified in the Order of the Commission;
  - b) The balance amount of such gain or loss may be utilized or absorbed by the Applicant.

### **15. Periodicity of Tariff determination**

- (1) The Commission shall determine the tariff/charges, of a Generating Company/ Transmission Licensee/Distribution Licensees/SLDC covered under a multi-year tariff framework for each financial year during the Control Period, having regard to the following:
  - a) The MYT principles specified under these Regulations; and
  - b) The approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for such financial year, including approved modifications to such forecast; and
  - c) Impact of truing up for previous financial year and performance review for the current financial year; and
  - d) Approved gains and losses to be allowed as pass through in tariffs,
- (2) The tariff and charges for recovery of ARR for a Transmission Licensee or a Distribution Licensee or a Generating Company or SLDC shall ordinarily be determined not more than once in a year, except in respect of any changes expressly permitted under the terms of fuel

surcharge formula as may be specified under these Regulations on account of fuel cost and power purchase cost.

## **16. Petition for determination of Tariff**

- (1) An application for determination of Tariff under the Act shall be made in such form and in such manner as specified in these Regulations, and accompanied by such fees as may be specified under the UERC (Fees and Fine) (First Amendment) Regulations, 2012 as amended from time to time.
- (2) An application for determination of tariff for first year of the Control Period shall be made along with the Multi Year Tariff Petition for the Control Period under Regulation 10 and the Petition for determination of Tariff for subsequent years of the Control Period shall be made along with Petition for Annual Performance Review under Regulation 12.
- (3) The application for investment approval for the proposed schemes/ projects planned by the licensees or SLDC, for the ensuing year, shall be accompanied with the application for determination of tariff for the ensuing year in accordance with the provisions specified in Chapter VI of UERC (Conduct of Business) Regulations, 2014 as amended from time to time.
- (4) The formats for furnishing information for calculating expected revenue and expenditure and for determining tariff shall be furnished in the formats specified for Generation, Transmission, Distribution and SLDC. Information submitted in these formats should be accompanied by supporting documents/calculations and soft copies.
- (5) The Petition for determination of tariff shall include the following:
  - a) A statement of the current tariff and all applicable terms and conditions and expected revenue from the current tariff for each year of the Control Period.
  - b) A statement of proposed tariffs containing full details of calculation of any subsidy received, due or assumed to be due from the State Government, the purpose/ consumers to whom it is directed, and showing how the subsidy is reflected in the current and proposed tariff applicable to those consumers. This statement shall also include the tariff calculated without consideration of the subsidy for those consumers. The subsidy calculations shall also compare the situation for the period for which the tariff is to be implemented.
  - c) A statement of the estimated change in annual revenues that would result from the proposed tariff changes in the period in which they are to be implemented.

- d) If the proposed tariff is to be introduced after the start of a financial year, a statement of the proportion of revenue expected and quantities of electricity supplied under the proposed tariff modification during the remaining months of the financial year shall be included.
  - e) In case of a Distribution Licensee, detailed calculations of voltage-wise cost of supply, excluding external subsidies and cross-subsidies in respect of each category of consumer.
  - f) In case of a Distribution Licensee, a statement showing calculations of the amount of cross-subsidy in the existing tariff and in the proposed tariff. Such determination shall be as per the guidelines issued by the Commission.
  - g) An explanatory note giving rationale for the proposed tariff changes.
  - h) Any other information, as required by the relevant licence conditions or specified by the Commission.
- (6) If a person holds more than one licence and/or is deemed to be Licensee for more than one area of distribution or transmission, he shall submit separate calculations as above in respect of each licence or area of transmission or distribution. Similarly, a generating company shall submit generating station-wise calculations.
- (7) A Distribution Licensee owning and operating a generating station shall maintain and submit separate accounts for generation business, its licensed business, and other businesses.
- (8) The Transmission Licensee or Distribution Licensees or SLDC are required to file petition in a manner specified in Regulation 21(6) for 'in-principle' approval of all projects/schemes whose capital cost exceed the amount specified by the Commission in conditions of their respective licensee.
- Provided that where the Commission has given an 'in-principle' acceptance to the estimated capital cost and financing plan, it shall act as a guiding factor for applying prudence check on the actual capital expenditure.
- (9) Tariff petitions will be submitted in English. Soft copy of the Petition and the formats along with computations sheets and supporting document in MS Word and MS Excel format will also be submitted to the Commission.
- (10) Notwithstanding anything contained in these Regulations, in case of delay/non-submission of the application for determination of tariff and annual performance review beyond one month from the scheduled date of submission, the Commission may initiate suo-moto

proceedings for filing the said applications.

Provided that in the event of the applicant not filing the application despite the aforesaid proceeding, the Commission may on its own, decide the tariff based on the information available with the Commission and after incorporating suitable adjustments, as deemed appropriate by the Commission.

Provided further that the Commission may also pass directions under Section 129 and/or Section 142 of the Act, if required.

## **17. Review at the End of the Control Period**

- (1) The end of the one control period may be the beginning of the next control period or as decided by the Commission. The Commission shall analyse the performance with respect to the targets set out at the beginning of the control period and shall determine the base value for the next control period, based on actual performance achieved, expected improvement and other relevant factors.
- (2) The Commission shall undertake the annual review of performance of the final year of control period and truing-up of the immediately preceding final year of the control period with the ARR/tariff petition filed for the first year of the subsequent control period. The annual review of performance of the final year of control period and truing-up of the immediately preceding final year of the control period shall be undertaken based on the norms as defined in the Regulations prevalent for the financial year.
- (3) The Commission shall upload the Petition filed under Regulation 8, 10, 12 and 16 above on its website, along with the details of all the information sought and received from the applicant with regard to the Petition for information of all the stakeholders. The Commission may also require the applicant to place such information in its website also.

## **18. Orders by Commission**

- (1) The Commission shall, within one hundred and twenty (120) days from the receipt of a complete application, i.e. its admission and after considering all suggestions and objections received from the public:
  - a) Issue an Order accepting the application with such modifications or such conditions as may be contained in such Order; or
  - b) Reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of the Act and the Rules and Regulations made

thereunder or the provisions of any other Law for the time being in force:

Provided that an applicant shall be given a reasonable opportunity of being heard before his application is rejected.

- (2) The tariff determined by the Commission shall come into force from the date specified in the Tariff Order.

## **19. Publication of Tariff**

The applicants shall publish the tariff or tariffs approved by the Commission in at least two (2) English and two (2) local language daily newspapers having circulation in the area of licence and shall put up the approved tariff/tariff schedule on its website and make available for sale, a booklet containing such tariff or tariffs, as the case may be, to any person upon payment of reasonable reproduction charges;

Provided that where the applicant is a Generating Company, the publication shall be in such newspapers as are widely circulated in the area of supply of the Distribution Licensee to whom the electricity is proposed to be supplied in terms of the Tariff Order and shall also be put up on the website of such Generating Company.

## **20. Communication of Tariff orders**

The Commission shall, within seven days of making the Order, send a copy of the order to the Government of Uttarakhand, the Central Electricity Authority, applicant and respondents.

# **PART III**

## **FINANCIAL PRINCIPLES FOR COMPUTING COSTS AND RETURN**

## **21. Capital Cost and capital structure**

- (1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects of the Generating Company, Transmission Licensee, Distribution Licensee and SLDC.
- (2) The Capital cost of an existing project shall include the following:
  - a) The capital cost admitted by the Commission prior to 01.04.2016 duly trued up as on 01.04.2016;
  - b) Additional capitalization and de-capitalization for the respective year of tariff as

determined in accordance with Regulation 22; and

- c) Expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 23.

(3) The Capital Cost of a new project, i.e. projects achieving Commercial Operation on or after notification of this Regulation shall include the following:

- a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- b) Interest during construction and financing charges, on the actual amount of loan.
- c) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 21(9) & 21(10) of these Regulations;
- d) Capitalised Initial spares subject to the ceiling rates specified in Regulation 21(11) of these Regulations;
- e) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 22 of these regulations;
- f) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the CoD as specified under Regulation 45 of these regulations; and
- g) Adjustment of any revenue earned by the generating company, transmission licensee and distribution licensee by using the assets before CoD.

(4) The capital cost in case of new 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 developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) project in the affected area.

(5) The following shall be excluded or removed from the capital cost of the existing and new project:

- a) The assets forming part of the project, but not in use;
- b) Decapitalisation of Asset;
- c) In case of hydro generating station any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State government by following a two stage transparent process of bidding; and

- d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:

Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;

- (6) Petition for 'in principle' approval of capital cost:

Any licensee intending to establish, operate and maintain or augment capacity of a transmission system or distribution system or SLDC shall file an application/petition under affidavit to the Commission in accordance with UERC (Conduct of Business) Regulations, 2014 as amended from time to time for 'in principle' approval of the project capital cost and financing plan before taking up a project. The application/petition of transmission system or distribution system or SLDC for investment approval shall clearly provide the purpose of the project as follows:

- a) The transmission application /petition shall consist of information on system strengthening, load growth, etc. as may be relevant for particular utility, its cost-benefit analysis and other details such as location of the project, site specific features, break up of capital cost, financial package, performance parameters, commissioning schedule, reference price level, estimated completion cost including foreign exchange component (if any), environment standards prescribed and to be achieved, etc:
- b) The distribution application/petition shall consist of information on system strengthening, loss reduction, to meet load growth, fulfill obligations under UERC (Standards of Performance) Regulations, 2007 etc financial package, performance parameters, commissioning schedule, reference price level, estimated completion cost including foreign exchange component (if any), environment standards prescribed and to be achieved, etc.

Provided that where the Commission has given an 'in principle' approval to the estimated capital cost and financing plan, the same shall act as a guiding factor for applying prudence check on the actual capital expenditure while determining the ARR and Tariffs for a particular utility.

- (7) The approved Capital Cost shall be considered for tariff determination and if sufficient justification is provided for any escalation in the Project Cost, the same may be considered by

the Commission subject to prudence check:

Provided that in case the actual capital cost is lower than the approved capital cost, then the actual capital cost will be considered.

Provided that prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time;

Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff;

Provided further that if the generating station is not commissioned on the SCOD or actual COD whichever is later of the associated transmission system, the generating company shall bear the IDC and IEDC or transmission charges if the transmission system is declared under commercial operation by the Commission in accordance with second proviso of Clause (c) of sub-Regulation (20) of Regulation 3 of these Regulations till the generating station is commissioned;

Provided also that if the transmission system is not commissioned on SCOD of the generating station, the transmission licensee shall arrange the evacuation from the generating station at its own arrangement and cost till the associated transmission system is commissioned.

Provided further that in cases where benchmark norms have been specified, the generating company or transmission licensee shall submit the reasons for exceeding the capital cost from benchmark norms to the satisfaction of the Commission for allowing cost above benchmark norms.

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 a State Government by following a two stage transparent process of bidding, any expenditure incurred or committed to be incurred by the project developer including premium paid/payable for getting the project site allotted shall not be included in the capital cost:

- (8) Where power purchase agreement or transmission or wheeling agreement provides for a ceiling of capital cost, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff.



**(9) Interest During Construction (IDC):**

- a) Interest during construction 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.
- b) In case of additional costs on account of IDC due to delay in achieving the SCOD, the generating company or the transmission licensee or the distribution licensee or SLDC as the case may be, shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds:

Provided that if the delay is not attributable to the generating company or the transmission licensee or the distribution licensee or SLDC as the case may be, and is due to uncontrollable factors as specified in Regulation 12(5) of these Regulations, IDC may be allowed after due prudence check and taking into account prudent phasing of funds.

**(10) Incidental Expenditure During Construction (IEDC):**

- a) Incidental expenditure during construction shall be computed from the zero date and after 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 may be taken into account for reduction in incidental expenditure during construction.

- b) In case of additional costs on account of IEDC due to delay in achieving the SCOD, the generating company or the transmission licensee or the distribution licensee or SLDC as the case may be, shall be required to furnish detailed justification with supporting documents for such delay including the details of incidental expenditure during the period of delay and liquidated damages recovered or recoverable corresponding to the delay:

Provided that if the delay is not attributable to the generating company or the transmission licensee or the distribution licensee or SLDC, as the case may be, and is due to uncontrollable factors as specified in Regulation 12(5), IEDC may be allowed after due prudence check:

Provided further that where the delay is attributable to an agency or contractor or supplier engaged by the generating company or the transmission licensee or the distribution licensee or SLDC, the liquidated damages recovered from such agency or contractor or supplier shall be kept in view while computing the capital cost.

- c) In case the time over-run beyond SCOD is not admissible after due prudence, the increase of capital cost on account of cost variation corresponding to the period of time over run may be excluded from capitalization irrespective of price variation provisions in the contracts with supplier or contractor of the generating company or the transmission licensee or the distribution licensee or SLDC.
- (11) **Initial Spares:** Initial spares shall be capitalized subject to the following ceiling norms as a percentage of the Plant and Machinery cost as per actuals upto the cut-off date:
  - (i) Thermal generating stations - 4.0%
  - (ii) Hydro generating stations - 4.0%
  - (iii) Transmission System
    - (a) Transmission line - 1.00%
    - (b) Transmission Sub-station - 4.00%
- (12) Restructuring of capital in terms of relative share of equity and loan shall be permitted during the tariff period provided it does not affect tariff adversely. Any benefit from such restructuring shall be shared with the persons sharing the capacity charge in case of a generating company and to long term intra-State open access customers of Transmission or Distribution Licensee or consumers in case of such Licensees in the ratio of 2:1, with 2/3<sup>rd</sup> being retained by the Applicant and 1/3<sup>rd</sup> being passed on to the beneficiaries..

## **22. Additional capitalisation and De-capitalisation:**

- (1) The following capital expenditure within the original scope of work actually incurred or projected to be incurred 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;
  - b) Works deferred for execution;
  - c) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 21(11);
  - d) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
  - e) On account of change in law.

Provided that the details included in the original scope of work along with estimates of

expenditure, deferred liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

(2) The capital expenditure of the following nature actually incurred after the cut-off date may be admitted by the Commission, subject to prudence check:

- a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;
- b) Change in law;
- c) Works deferred for execution within the original scope of work;
- d) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;
- e) Any additional capital expenditure which has become necessary for efficient operation of generating station or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;
- f) In case of hydro generating stations, any additional expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company), including due to geological surprises, after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available at the time of occurrence of natural calamities referred to above;

- g) In case of transmission and distribution system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard, equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of

transmission or distribution system:

Provided that, any additional expenditure on acquiring minor items/assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets, etc. brought after the cutoff date shall not be considered for additional capitalization for determination of tariff w.e.f. 01.04.2016.

h) In case of replacement of any asset/equipment (e.g. transformer, circuit breaker, C.T., P.T. etc.) on account of non-performance/failure of the same, the following approach shall be adopted:

- (i) In case of non-performance/failure of assets/equipment, it shall be sent to Store for assessment to check whether it is repairable or not at zero cost;
- (ii) In case the asset is repairable, then such asset/equipment shall not be retired from Books of Assets.

Provided, proper tracking should be available for the material like location, asset number etc.

(iii) In case the asset is not repairable, then following process shall be carried out:

- The asset is retired from the Books of Assets, at depreciated value.
- Transfer the failed assets/equipments from failed to scrap material.
- Dismantle it into of scrap inventory like iron, brass etc.
- Build up scrap inventory.

Provided, exercise of dismantling of scrap inventory and build-up of scrap inventory shall be done simultaneously. Dismantled scrap value would be decided on the basis of last scrap sale value. Control Account (Dismantling) will be expense account. Difference of Control account, i.e. either profit or loss shall be booked accordingly.

(iv) In case a new asset/equipment is issued, then it will be issued at weighted average cost and capitalized respectively, and accordingly, new asset would be created and corresponding entries shall be done in the Books of Accounts.

(3) In case of de-capitalisation of assets of a generating company or the distribution licensee or the transmission licensee or SLDC, as the case may be, 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, duly taking into consideration the year in which it was capitalised.

## 23. Renovation and Modernisation

- (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 shall make an application before the Commission for in-principle 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 the in-principle approval of its proposal for renovation and modernisation, the in-principle 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 writing off the original amount of the replaced assets and deducting the accumulated depreciation including advance against depreciation already recovered from the Original project cost, shall form the basis for determination of Tariff.

## 24. Debt-equity ratio

- (1) For a project declared under commercial operation on or after 1.4.2016, debt-equity ratio shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as normative loan. Where actual equity employed is less than 30%, the actual equity would be used for determination of Return on Equity in tariff computations.

**Explanation:** The premium raised by the Generating Company, or the Transmission Licensee or the Distribution Licensee or SLDC while issuing share capital and investment of internal resources created out of free reserve, if any, shall also be reckoned as paid up capital for the

purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting capital expenditure.

- (2) Equity invested in foreign currency shall be converted to rupee currency based on the exchange rate prevailing on the date(s) it is subscribed.
- (3) 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.
- (4) The generating company or the transmission licensee or SLDC or the distribution licensee shall submit the resolution of the Board of the company or approval from the State Government regarding infusion of fund from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system or distribution system or the SLDC, as the case may be.
- (5) Any expenditure incurred or projected to be incurred on or after 1.4.2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in Regulations 22 and 23 of these Regulations.
- (6) In case of Generating Company, Transmission Licensee, Distribution Licensee, or SLDC where investments have been made prior to 1.4.2016, Debt: Equity Ratio shall be as approved by the Commission in the previous Orders.

## **25. Treatment of Consumer contribution, Deposit works and Grants/ Subsidies**

- (1) The following nature of works carried out by the generating company, Licensees or SLDC shall be classified under this category:
  - a) Works after obtaining a part or all of the funds from the users in the context of deposit works.
  - b) Capital works undertaken by utilising grants received from the State and Central Governments, including funds under RGGVY, APDRP, etc.
- (2) Principles for treatment of the expenses on such capital expenditure shall be as follows:
  - a) Normative O&M expenses as specified in these Regulations shall be allowed.
  - b) Provisions related to Depreciation as specified in Regulation 28, shall be applicable to the extent of financial support, including the loan and equity contribution, provided by the Licensee or SLDC or Generating Company, as the case may be. The depreciation

shall not be allowed on the assets funded through Consumer Contribution or Capital Grants/Subsidies.

- c) Provisions related to return on equity, as specified in Regulation 26, shall be applicable to the extent of normative debt:equity mix of 70:30 or actual equity, whichever is less, on the contribution made by the Licensee or SLDC or Generating Company, as the case may be.

## **26. Return on Equity**

- (1) Return on equity shall be computed on the equity base determined in accordance with Regulation 24.

Provided that, Return on Equity shall be allowed on amount of allowed equity capital for the assets put to use at the commencement of each financial year.

- (2) Return on equity shall be computed on at the base rate of 15.5% for thermal generating stations, transmission licensee, SLDC and run of the river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage and distribution licensee on a post-tax basis.

Provided that:

- (i) In case of generation and transmission projects commissioned on or after 1st April, 2016, an additional Return of 0.5% shall be allowed if such projects are completed within the timeline as specified in **Appendix - I** to these Regulations.
- (ii) The additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for whatsoever reasons:
- (iii) Additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Northern Regional Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- (iv) Additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.

## **27. Interest and finance charges on loan capital and on Security Deposit**

- (1) The loans arrived at in the manner indicated in Regulation 24 shall be considered as gross normative loan for calculation of interest on loan.

- (2) The normative loan outstanding as on 01.04.2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.03.2016 from the approved gross normative loan.
- (3) The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that year. In case of decapitalization 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 decapitalisation of such asset.
- (4) Notwithstanding any moratorium period availed by the Generating Company or the Transmission Licensee or the Distribution Licensee or the SLDC, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the 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 of the previous year after providing appropriate accounting adjustment for interest capitalised:

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 or the transmission system or the distribution system or SLDC, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the Transmission Licensee or the Distribution Licensee or SLDC as a whole shall be considered.

- (6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.
- (7) The Generating Company or the Transmission Licensee or the Distribution Licensee, or the SLDC as the case may be, 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 re-financing shall be borne by the beneficiaries and the net savings on interest shall be shared between the beneficiaries and the Generating Company or the Transmission Licensee or the Distribution Licensee or the SLDC, as the case may be, in the ratio of 1:2.
- (8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.
- (9) Interest shall be allowed on the amount held as security deposit by the Distribution Licensee



from consumers, at the rate as may be decided by the Commission from time to time.

Provided that during truing up proceedings of any year, if it is found that the actual interest paid to the consumer is lower than that provided by the licensee in its accounts, the actual interest paid shall be allowed as interest on security deposit.

## **28. Depreciation**

- (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

Provided that no depreciation shall be allowed on assets funded through Consumer Contribution and Capital Subsidies/Grants.

- (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 in case of generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of site;

Provided further that the capital cost of the assets of the generating station, for the purpose of computation of depreciable value for determination of tariff, under these regulations 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 generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

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.

- (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 - II to these Regulations.

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the date of commercial operation shall be spread over the balance useful life of the assets.

- (5) In case of the existing projects, the balance depreciable value as on 01.04.2016 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.03.2016, from the gross depreciable value of the assets. The difference between the cumulative depreciation recovered and the depreciation so arrived at by applying the depreciation rates as specified in these Regulations corresponding to 12 years shall be spread over the remaining period upto 12 years. The remaining depreciable value as on 31st March of the year closing after a period of 12 years from the date of commercial operation shall be spread over the balance life.
- (6) 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.
- (7) In case of de-capitalization of assets in respect of generating station or unit thereof or distribution licensee or SLDC or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.

## **29. Lease charges**

Lease charges for assets taken on lease by a generating company, SLDC or a Transmission or Distribution Licensee shall be considered as per lease agreement provided they are considered reasonable by the Commission.

## **30. Operation & Maintenance expenses**

- (1) 'Operation and Maintenance or O&M expenses' shall comprise of expenses incurred on manpower, repair & maintenance (R&M) and administrative and general expenses, including insurance expenses.
- (2) Operation and maintenance expenses shall be determined for the Control period based on methodology specified by the Commission subsequently in these Regulations.
- (3) O&M expenses on assets taken on lease and those created out of consumer's contribution shall be considered, if the Generating Company or the Transmission or the Distribution Licensee or the SLDC has the responsibility for its O&M and bears the O&M expenses.
- (4) Annual O&M expenses for gross fixed assets added during the year shall be considered from the date of commissioning on pro-rata basis.
- (5) Increase in O&M charges on account of war, insurgency, change in laws, or like eventualities

may be considered by the Commission for a specified period.

- (6) The variation in normative O&M expenses and actual O&M expenses shall be considered as part of gain/loss on account of controllable factors.

### **31. Bad and doubtful debts**

- (1) The Commission may allow a provision for bad and doubtful debts upto one percent (1%) of the estimated annual revenue of the distribution licensee, subject to actual writing off of bad debts by it in the previous years.

Provided further that where the total amount of such provisioning allowed in previous years for bad and doubtful debts exceeds five (5) per cent of the receivables at the beginning of the year, no such appropriation shall be allowed which would have the effect of increasing the provisioning beyond the said maximum.

### **32. Foreign Exchange Rate Variation (FERV)**

- (1) Cost of hedging for foreign exchange variation towards interest payment and loan repayment shall be allowed on year-to-year basis and shall be payable on the due date of payments and subject to prudent check by the Commission. The Applicant shall provide full particulars of such cost of hedging to the Commission.
- (2) In case hedging has not been arranged due to valid reasons, FERV shall be provisionally estimated by the Commission for the purpose of determining tariff and shall be subject to adjustment as per actuals.

### **33. Interest on Working Capital**

Rate of interest on working capital shall be on normative basis and shall be equal to the State Bank Advance Rate (SBAR) of State Bank of India as on the date on which the application for determination of tariff is made.

#### **(1) Generation, Transmission System & SLDC:**

- a) In case of open cycle Gas Turbine/Combined Cycle thermal generating stations, working capital shall cover:
  - (i) Landed fuel cost for 1 (one) month corresponding to the NAPAF duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel;
  - (ii) Liquid fuel stock for ½ (half) month corresponding to the NAPAF, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;

- (iii) Operation and maintenance expenses for one month;
  - (iv) Maintenance spares @ 30% of operation and maintenance expenses; and
  - (v) Receivables equivalent to 2 (two) months of Capacity Charge and Energy Charges for sale of electricity calculated on NAPAF duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel.
- b) In case of hydro power generating stations and transmission system and SLDC, the working capital shall cover:
- (i) Operation and maintenance expenses for one month;
  - (ii) Maintenance spares @ 15% of operation and maintenance expenses; and
  - (iii) Receivables equivalent to two months of the annual fixed charges.
- c) In case of own generating stations, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with these Regulations.
- d) The cost of fuel in cases covered under sub-Regulation 1(a) above shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month 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 stations covered under sub-Regulation 1(a) above, where the data for preceding three months is not available, the landed cost of fuel and gross calorific value of the fuel shall be taken as that actually incurred by the generating station.

**(2) Distribution:**

- a) The Distribution Licensee shall be allowed interest on the estimated level of working capital for the financial year, computed as follows:
- (i) Operation and maintenance expenses for one month;
  - (ii) Maintenance spares @ 15% of operation and maintenance expenses; plus
  - (iii) Two months equivalent of the expected revenue from sale of electricity at the prevailing tariffs;
  - (iv) Capital required to finance such shortfall in collection of current dues as may be allowed by the Commission; minus

- (v) Amount held as security deposits under clause (a) and clause (b) of sub-section (1) of Section 47 of the Act from consumers and Distribution System Users; minus
- (vi) One month equivalent of cost of power purchased, based on the annual power procurement plan.

### **34. Tax on Income**

Income Tax, if any, on the income stream of the regulated business of Generating Companies, Transmission Licensees, Distribution Licensees and SLDC shall be reimbursed to the Generating Companies, Transmission Licensees, Distribution Licensees and SLDC as per actual income tax paid, based on the documentary evidence submitted at the time of truing up of each year of the Control Period, subject to the prudence check.

### **35. Regulatory Asset**

In case of abnormal variation in income or expenses resulting in substantial revenue gap, full recovery of which in a single year is not feasible, the Commission may allow creation of Regulatory Asset as per guidelines provided in clause 8.2.2 of the Tariff Policy and suitably provide for its recovery through tariff or as a surcharge in more than one year. Amortisation of the regulatory asset so created shall be dealt in accordance with the Tariff Policy, provided that the Commission may allow a carrying cost on Regulatory Asset at such rates as the Commission may deem fit.

## **PART IV**

## **REVENUES**

### **36. Tariff income**

Income of the Generating Company, Transmission Licensee, Distribution Licensee and SLDC arising out of all the charges determined by the Commission for generation, transmission, wheeling and retail supply of electricity, SLDC charges, as the case may be, shall be considered as tariff income.

### **37. Other revenue**

- (1) All revenues including charges for unauthorized use of electricity and money realized through compounding, other than tariff revenue shall be grouped as other revenue.
- (2) For the electricity supply to the housing colonies or townships for its operating staff drawn from the Power Station/Sub-Station bus bar, a separate account shall be maintained by the

Generating Company/Transmission Licensee/Distribution Licensee/SLDC for such energy supply and revenue thereof recognised at the rate as per applicable tariff shall be reported annually to the Commission in the ARR/tariff petition, wherever applicable.

- (3) While determining the generation/transmission tariff, revenue so realised, i.e. the consumer category wise tariff of Distribution Licensee in case of a generating company or where the sub-station is situated in respect of Transmission Licensee, shall be considered by the Commission as one of the components of other income of the Generating Company/Transmission Licensee/SLDC and the same shall be reduced from the Annual Fixed Charges.

### **38. Surcharge and additional surcharge**

Surcharge and additional surcharge under Sections 39, 40 and 42 of the Electricity Act, 2003 shall be considered as income and treated in the manner as may be specified by the Commission.

### **39. Income from Other Business**

- (1) Revenue from other business shall be treated as income to the extent authorized by the Commission under Sections 41 and 51 of the Electricity Act, 2003.
- (2) The Generating Company, Transmission Licensee, Distribution Licensee and SLDC shall submit the following information along with the Petition to the Commission:

Whether the Generating Company or SLDC or the Licensee is engaged in any Other Business within the meaning prescribed under Sections 41 and 51 of the EA 2003?

If yes, then the Applicant should submit the following information

- a) Name and description of all Other Business that the Applicant is engaged in;
- b) For each such Other Business, amount of revenue generated in the previous year, estimated during the current year and projected for the ensuing year;
- c) Assets of the business used by the Applicant to generate the above revenue;
- d) Expenses incurred to generate the above revenue, separately for each Other Business;
- e) Whether these expenses have already been included in the ARR of the Applicant fully or partly? If partly, proportion and basis of apportionment to be submitted.

### **40. Sharing of Clean Development Mechanism (CDM) credit**

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 or the transmission system, as the case may be;
- 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%, whereafter, the proceeds shall be shared in equal proportion, by the generating company or the transmission licensee, as the case may be, and the beneficiaries.

## **PART-V**

### **COMPUTATION OF GENERATION TARIFF**

#### **41. Applicability**

- (1) The Regulations specified in this Part shall apply for determining the tariff for supply of electricity to a Distribution Licensee from generating stations located in Uttarakhand.

Provided that determination of tariff for supply of electricity to a Distribution Licensee from renewable sources of generation including Small Hydel Projects having capacity upto 25 MW shall be in accordance with the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2010 and 2013 or as amended from time to time.

- (2) The Commission shall be guided by the terms and conditions contained in this Part in determining the tariff for supply of electricity by a Generating Company to a Distribution Licensee.

#### **42. Petition for determination of generation tariff**

- (1) A Generating Company may file petition for determination of tariff for supply of electricity to Distribution Licensees complying with the provisions of Part II of these Regulations.
- (2) Tariff in respect of a generating station under these Regulations shall be determined stage-wise, unit-wise or for the whole generating station. The terms and conditions for determination of tariff for generating stations specified in this Part shall apply in like manner to stages or Units, as the case may be, as to generating stations.
- (3) Where the tariff is being determined for stage or Unit of a generating station, the Generating Company shall adopt a reasonable basis for allocation of capital cost relating to common facilities and allocation of joint and common costs across all stages or Units, as the case may be:

Provided that the Generating Company shall maintain an Allocation Statement providing the basis for allocation of such costs, and submit such statement to the Commission along with the application for determination of tariff.

- (4) A Generating Company may file a petition for determination of provisional tariff in advance of the anticipated date of commissioning of a generating station based on the capital expenditure actually incurred up to the date of making the petition or a date prior to making of the petition, duly audited and certified by the statutory auditors and the provisional tariff shall be charged from the date of commercial operation of the generating station.
- (5) A Generating Company for whom the Commission has determined provisional tariff shall have to file a fresh petition as per these Regulations, for determination of final tariff based on the actual capital expenditure incurred up to the date of commercial operation of the generating station duly certified by the statutory auditors based on the annual audited accounts.

#### **43. Components of tariff**

- (1) The tariff for sale of electricity from a thermal Power Generating Station shall comprise of two parts, namely, the recovery of Annual Fixed Charges and Energy (variable) Charges (for recovery of primary fuel cost).
- (2) The tariff for sale of electricity from a Hydro Generating Station shall comprise of two parts, namely, the recovery of Annual Capacity Charge and Energy Charge.
- (3) Recovery of capacity charge, energy charge and incentive by the generating company shall be based on the achievement of the operational norms specified in Regulation 47.

#### **44. Annual Fixed Charges**

The Annual Fixed Charges shall comprise of the following elements:

- a) Interest and Finance Charges on Loan Capital;
- b) Depreciation;
- c) Lease Charges
- d) Operation & Maintenance Expenses;
- e) Return on Equity;
- f) Interest on Working Capital;
- (1) **Less:**
  - a) Non-Tariff Income.



Provided that Depreciation, Interest and finance charges on Loan Capital, Interest on Working Capital and Return on Equity for Thermal and Hydro Generating Stations shall be allowed in accordance with the provisions specified in Part-III of these Regulations.

#### **45. Sale of Infirm Power**

The tariff for sale of infirm power from the thermal generating station to the Distribution Licensee shall be equivalent to the actual fuel cost incurred during that period subject to prudence check. For hydro generating station, the tariff for sale of infirm power shall be Rs. 0.90/kWh which is the specified rate for secondary energy.

Provided that any revenue other than the recovery of fuel cost earned by the Generating Company from sale of infirm power shall be used for reduction in capital cost and shall not be treated as revenue.

#### **46. Non Tariff Income**

The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Net Annual Fixed Charges of the Generating Company.

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 from time to time.

The indicative list of various heads to be considered for non tariff income shall be as under:

- a) Income from rent of land or buildings;
- b) Income from sale of scrap;
- c) Income from statutory investments;
- d) Interest on delayed or deferred payment on bills;
- e) Interest on advances to suppliers/contractors;
- f) Rental from staff quarters;
- g) Rental from contractors;
- h) Income from hire charges from contractors and others;
- i) Income from advertisements, etc.;
- j) Any other non- tariff income.

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company shall not be included in

Non-Tariff Income.

#### 47. Norms of operation for Generating Stations

The norms of operation as given hereunder shall apply to the thermal generating stations:

**(1) Normative Annual Plant Availability Factor (NAPAF):**

- (a) For all thermal generating stations: 85%
- (b) For existing hydro generating stations:

The trajectory for NAPAF fixed by the Commission in case of existing hydro generating stations, in the preceding Control Period would continue to be applicable. However, the NAPAF of the stations undergone RMU would be adjusted accordingly, considering the impact of RMU.

- (c) For new hydro generating stations:

Particulars	Normative Plant Availability Factor
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%
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.
Pondage type plants where plant availability is significantly affected by silt.	85%
Run-of-river type plants.	To be determined plant-wise, based on 10-day design energy data, moderated by past experience where available/relevant.

- (i) A further allowance may be made by the Commission in NAPAF determination under special circumstances, e.g., abnormal site problem or other operating conditions, and known plant conditions.

Provided that in case of new hydro generating station the developer shall have the option of approaching the Commission in advance for fixation of NAPAF based on the principles enumerated in the table above.

Provided further that Generating Companies shall submit plant wise NAPAF alongwith the detailed calculations and reasons thereof as per the guidelines for calculation of NAPAF as laid down in Appendix - III to these Regulations, for seeking approval of the Commission.

**(2) Normative Annual Plant Load Factor (NAPLF) for thermal generating stations for Incentive shall be 85%.**

**(3) Gross Station Heat Rate for Gas-based/Liquid-based thermal generating unit(s)**

= 1.05 X Design Heat Rate of the unit for Natural Gas and RLNG (kcal/kWh)

= 1.071 X Design Heat Rate of the unit for Liquid Fuel (kcal/kWh)

Where the Design Heat Rate of a unit shall mean the guaranteed heat rate for a unit at 100% MCR and at site ambient conditions; and the Design Heat Rate of a block shall mean the guaranteed heat rate for a block at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure.

**(4) Auxiliary Energy Consumption**

i. Gas Turbine/Combined Cycle generating stations:

- Combined cycle: 2.5%
- Open cycle: 1.0%

ii. Hydro generating stations:

(a) Surface hydro electric power generating stations

- i. With rotating exciters mounted on the generator shaft : 0.7%
- ii. With static excitation system: 1%

(b) Underground hydro generating station

- i. With rotating exciters mounted on the generator shaft : 0.9%
- ii. With static excitation system: 1.2%

## **48. Operation and Maintenance Expenses**

The operation and maintenance expenses shall be as follows, namely:

(1) [Normative O&M Expenses for Open Cycle Gas Turbine/Combined Cycle generating stations shall be as under:]<sup>1</sup>

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<sup>1</sup> Subs. by UERC (Terms and Conditions for Determination of Multi Year Tariff) (First Amendment) Regulations, 2017 notified vide No. F-9(25)(I)/RG/UERC/2017/1596 (w.e.f. 18.01.2017)

Year	Gas Turbine/ Combined Cycle generating stations		Small gas turbine power generating stations (less than 50 MW Unit size)	Advance F Class Machines
	With warranty spares for 10 years	Without warranty spares		
2015-16	9.25	13.87	16.83	28.36
2016-17	9.86	14.79	17.95	30.29
2017-18	10.52	15.77	19.14	32.35
2018-19	11.22	16.82	20.41	34.56

**(2) For Hydro Generating Stations**

**(a) For Generating Stations in operation for more than five years preceding the Base Year**

The operation and maintenance expenses for the first year of the control period will be approved by the Commission taking in to account the actual O&M expenses for last five years till base year, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, subject to prudence check and any other factors considered appropriate by the Commission.

**(b) For Generating Stations in operation for less than 5 years preceding the base year:**

In case of the hydro electric generating stations, which have not been in existence for a period of five years preceding the base year, i.e. FY 2014-15, the operation and maintenance expenses for the base year of FY 2014-15 shall be fixed at 2.0% of the capital cost as admitted by the Commission for the first year of operation and shall be escalated from the subsequent year in accordance with the escalation principles specified in clause (e) below.

**(c) For Generating Stations declared under commercial operation on or after 1.4.2016.**

In case of new hydro electric generating stations, i.e. the hydro electric generating stations declared under commercial operation on or after 1.4.2016, the base operation and maintenance expenses for the year of commissioning shall be fixed at 4% and 2.5% of the actual capital cost (excluding cost of rehabilitation & resettlement works) as admitted by the Commission, for stations less than 200 MW projects and for stations more than 200 MW respectively.

**(d) Post determination of base O&M Expenses for the base year, i.e. FY 2014-15, the O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2015-16 shall be approved based on the formula given below:-**

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- O&Mn – Operation and Maintenance expenses for the nth year;
- EMPn – Employee Costs for the nth year;
- R&Mn – Repair and Maintenance Costs for the nth year;
- A&Gn – Administrative and General Costs for the nth year;

The above components shall be computed in the manner specified below:

$$EMPn = (EMPn-1) \times (1+Gn) \times (1+CPIinflation)$$

$$R\&Mn = K \times (GFA\ n-1) \times (1+WPIinflation) \text{ and}$$

$$A\&Gn = (A\&Gn-1) \times (1+WPIinflation) + \text{Provision}$$

Where -

- EMPn-1 – Employee Costs for the (n-1)th year;
  - A&G n-1 – Administrative and General Costs for the (n-1)th year;
  - Provision: Cost for initiatives or other one-time expenses as proposed by the Generating Company and approved by the Commission after prudence check.
  - ‘K’ is a constant to be specified by the Commission %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on Generating Company’s filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- Provided that for the projects whose Renovation and Modernisation has been carried out, the R&M expenses for the nth year shall not exceed 2% of the capital cost admitted by the Commission.
- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
  - WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
  - GFAn-1 – Gross Fixed Asset of the Generating Company for the n-1th year;
  - Gn is a growth factor for the nth year. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on Generating Company’s filings, benchmarking and any other factor that the Commission feels appropriate

Provided that in case of a existing generating station governed by Government pay structure, the Commission may consider allowing a separate provision in Employee expenses towards the impact of VII<sup>th</sup> Pay Commission.

Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.

- (e) O&M expenses determined in sub-Regulation 2(b) & 2(c) above, shall be escalated for subsequent years to arrive at the O&M expenses for the control period by applying the Escalation factor (EF<sub>k</sub>) for a particular year (K<sup>th</sup> year) which shall be calculated using the following formula:

$$EF_k = 0.55 \times WPI_{\text{Inflation}} + 0.45 \times CPI_{\text{Inflation}}$$

- (f) In case of multi-purpose hydroelectric stations, with irrigation, flood control and power components, the O&M expenses chargeable to power component of the station only shall be considered for determination of tariff.

#### **49. Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations**

- (1) The fixed cost of a thermal generating station shall be computed on annual basis, based on the 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.
- (2) [The capacity charge payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

$$CC_1 = (AFC/12) (PAF_1 / NPAF) \text{ subject to ceiling of } (AFC/12)$$

$$CC_2 = (AFC/6) (PAF_2 / NPAF) \text{ subject to ceiling of } ((AFC/6) - CC_1)$$

$$CC_3 = (AFC/4) (PAF_3 / NPAF) \text{ subject to ceiling of } ((AFC/4) - (CC_1 + CC_2))$$

$$CC_4 = (AFC/3) (PAF_4 / NPAF) \text{ subject to ceiling of } ((AFC/3) - (CC_1 + CC_2 + CC_3))$$

$$CC_5 = (AFC \times 5/12) (PAF_5 / NPAF) \text{ subject to ceiling of } ((AFC \times 5/12) - (CC_1 + CC_2 + CC_3 + CC_4))$$

$$CC_6 = (AFC/2) (PAF_6 / NPAF) \text{ subject to ceiling of } ((AFC/2) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5))$$

$CC_7 = (AFC \times 7/12) (PAF_7/NAPAF)$  subject to ceiling of  $((AFC \times 7/12) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6))$

$CC_8 = (AFC \times 2/3) (PAF_8/NAPAF)$  subject to ceiling of  $((AFC \times 2/3) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7))$

$CC_9 = (AFC \times 3/4) (PAF_9/NAPAF)$  subject to ceiling of  $((AFC \times 3/4) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8))$

$CC_{10} = (AFC \times 5/6) (PAF_{10}/NAPAF)$  subject to ceiling of  $((AFC \times 5/6) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9))$

$CC_{11} = (AFC \times 11/12) (PAF_{11}/NAPAF)$  subject to ceiling of  $((AFC \times 11/12) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9 + CC_{10}))$

$CC_{12} = (AFC) (PAF_Y/NAPAF)$  subject to ceiling of  $((AFC) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9 + CC_{10} + CC_{11}))$

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

Where,

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

NAPAF = Normative annual plant availability factor in percentage.

$PAF_N$  = Percent Plant availability factor achieved upto the end of the nth month.

$PAF_Y$  = Percent Plant availability factor achieved during the Year.

$CC_1, CC_2, CC_3, CC_4, CC_5, CC_6, CC_7, CC_8, CC_9, CC_{10}, CC_{11}$  and  $CC_{12}$  are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively.]<sup>2</sup>

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

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

<sup>2</sup> Subs. by UERC (Terms and Conditions for Determination of Multi Year Tariff) (Second Amendment) Regulations, 2017 notified vide No. F-9(25)(II)/RG/UERC/2017/637 (w.e.f. 01.04.2017).

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 State load dispatch centre after the day is over.

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

N = Number of days during the period i.e. the month or the year as the case may be.

**Note:** DC<sub>i</sub> 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.

- (4) Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 47(2).
- (5) The energy charge shall cover the primary fuel cost 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 price adjustment). Total Energy charge payable to the generating company for a month shall be:

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

- (6) 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:
  - (a) For gas and liquid fuel based stations

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX) \}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for gas and liquid fuel based stations.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.



- (7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel, i.e. natural gas, RLNG, liquid fuel etc., as per the forms specified at Annexure-I to these regulations:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. natural gas, RLNG, liquid fuel etc., shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.

- (8) The landed cost of fuel shall include price of fuel corresponding to the grade/quality /calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means for the purpose of computation of energy charges.

## 50. Computation and Payment of Capacity Charges and Energy Charges for Hydro Generating Stations

- (1) The Annual Fixed Charges of 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 percentage share/allocation in the saleable capacity of the generating station, i.e. in the capacity excluding the free power to the home State.
- (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:

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

Where,

AUX = Normative auxiliary energy consumption in percentage

DCi = Declared capacity (in ex-bus MW) for the ith day of the month which the station can deliver for at least three (3) hours, as certified by the Uttarakhand State Load Despatch 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 supplied to the beneficiary, during the calendar month, on ex-power plant basis, at the computed Energy Charge rate. Total Energy Charge payable to the Generating Company for a month shall be:

$$\begin{aligned} & \text{(Energy Charge Rate in Rs. / kWh)} \times \{\text{Energy supplied (ex-bus)}\} \text{ for the month in kWh} \\ & \times (100 - \text{FEHS}) / 100 \end{aligned}$$

- (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 decimal places based on the following formula, subject to the provisions of sub-Regulation (7):

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

Where,

DE = Annual Design Energy specified for the hydro generating station, in MWh,.

FEHS = Free Energy for home State, in percent, as applicable

- (6) In case actual total energy generated by a Hydro Generating Station during a year is less than the Design Energy for reasons beyond the control of the Generating Company, the following treatment shall be applied on a rolling basis on an application filed by generating company:

- a) in case the energy shortfall occurs within ten years from the date of commercial operation of a generating station, the ECR for the year following the year of energy shortfall shall be computed based on the formula specified in sub-Regulation (5) above with the modification that the DE for the year shall be considered as equal to the actual energy generated during the year of the shortfall, till the Energy Charge shortfall of the previous year has been made up, after which normal ECR shall be applicable;

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

design energy of the station.

- b) In case the energy shortfall occurs after ten years from the date of commercial operation of a generating station, the following shall apply:

**Explanation:** Suppose the specified annual Design Energy (DE) for the station is DE MWh, and the actual energy generated during the concerned (first) and the following (second) financial years is A1 and A2 MWh, respectively, A1 being less than DE. Then, the design energy to be considered in the formula in sub-Regulation (5) above for calculating the ECR for the third financial year shall be moderated as  $(A1 + A2 - DE)$  MWh, subject to a maximum of DE MWh and a minimum of A1 MWh.

- c) Actual energy generated (e.g. A1, A2) shall be arrived at by multiplying the net metered energy sent out from the station by  $100 / (100 - AUX)$ .
- (7) In case the Energy Charge Rate (ECR) for a hydro generating station, as computed above, exceeds ninety 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 ninety paise per kWh only:

Provided that in a year following a year in which total energy generated was less than the design energy for reasons beyond the control of the Generating Company, the Energy Charge Rate shall be reduced to ninety paise per kWh after the energy charge shortfall of the previous year has been made up.

- (8) The Uttarakhand State 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.
- (9) The Uttarakhand State Load Despatch Centre shall certify the declared capacity of the generating stations on daily basis and shall also issue a Certificate at the end of the year, validating the PAFM during the year, to the generating company.

## 51. Demonstration of declared capacity

- (1) The Generating Company may be required to demonstrate the declared capacity of its generating station as and when asked by the State Load Despatch Centre. In the event of Generating Company failing to demonstrate the declared capacity within a tolerance limit

specified by State Transmission Utility, the capacity charges due to the Generating Company shall be reduced as a measure of penalty.

- (2) The quantum of penalty for the first mis-declaration for duration or block in a day shall be the charges corresponding to two days capacity charges. For the second mis-declaration the penalty shall be equivalent to capacity charges for four days and for subsequent mis-declarations, the penalty shall be multiplied in the geometrical progression.
- (3) The operating logbooks of the generating station shall be made available for review by the SLDC, as the case may be. These books keep record of machine operation and maintenance, reservoir level and spillway gate operation.

## **52. Scheduling:**

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

## **53. Metering and Accounting**

The provisions of Uttarakhand Electricity Regulatory Commission (State Grid Code) Regulations, 2007 and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time shall be applicable.

## **54. Billing and payment of Charges**

Billing and payment of Charges shall be done on a monthly basis in the following manner:-

- (1) Billing and Payment of Annual Fixed Charges, Energy Charges and Incentive for Generating Stations shall be done on a monthly basis subject to adjustments at the end of the year.
- (2) The Distribution Licensees and persons having power purchase agreement for firm power for more than one year shall pay the fixed/capacity charges in proportion to their percentage share, allocation or contract in the installed capacity of a generating station.
- (3) If any capacity remains un-requisitioned in any period, full capacity charges shall be shared by the persons specified in sub-Regulation (2), subject to sub-Regulation (4).
- (4) If any capacity remains un-requisitioned in any period, the Generating Company shall be free to sell electricity to any person including a person outside the State and such person to whom electricity is sold shall also share the fixed/capacity charges in addition to persons mentioned in sub-Regulation (2) in proportion to the capacity utilized by such person.

## **55. Purchase of Electricity by the Generating station/Start up Power**

- (1) Any person, who establishes, maintains and operates a generating station and normally does not need power from the licensee round the year, i.e. who is not a consumer of the licensee, may purchase electricity from any generating company or a distribution licensee in case his plant is not in a position to generate electricity to meet the its own requirement or for start up and consequently power is required to be drawn from distribution licensee.
- (2) In case of electricity generated from the plant is sold to the State Distribution Licensee, the electricity (in kWh) procured by the Generating Station from the State Distribution Licensee to meet its requirement of startup power, will be adjusted from the electricity sold to the Distribution Licensee. The Distribution Licensee shall make the payment for net energy sold to it by the Generating Company, i.e. difference of the total energy supplied by the Generating Company to the Distribution Licensee and energy supplied by the Distribution Licensee to the Generating Company.
- (3) In case of electricity generated from the plant is sold to third party other than the State Distribution Licensee, then such purchase of electricity by the generating company from the State distribution licensee, shall be charged as per the tariff determined by the Commission for temporary supply under appropriate "Rate Schedule of tariff" for Industrial Consumers considering maximum demand during the month as the contracted demand for that month. The Fixed/Demand charges for that month shall be payable for the number of days during which such supply is drawn. Such Generating Company shall, however, be exempted from payment of monthly minimum charges or monthly minimum consumption guarantee charges or any other charges.

### **55A. Tariff Determination of Gas based generating stations:**

The tariff of gas based generating stations covered under the "Scheme for Utilization of Gas based power generation capacity" issued by the Government of India, Ministry of Power vide Office Memorandum No. 4/2/2015-Th.1 dated 27.3.2015 can be determined in due consideration of the provisions of that scheme in deviation of the relevant regulations.

## **PART - VI**

### **TARIFF FOR TRANSMISSION**

## **56. Applicability**

The Regulations contained in this Part shall apply in determining tariffs for access to and use of

the Intra-State Transmission System of a Transmission Licensee pursuant to a Bulk Power Transmission Agreement or other arrangement entered into by a Transmission System User with the Transmission Licensee.

Provided that the Commission may deviate from the norms contained in this Part or stipulate alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided further that the reasons for such deviation shall be recorded in writing:

Provided further that in case of an existing transmission system, the Commission shall determine the tariffs having regard to the historical performance of such transmission system and on the basis of Business Plan and Multi Year Tariff Petition submitted by the Transmission Licensees at the beginning of the Control Period with reasonable opportunities for improvement in performance, if any.

The Commission shall be guided by the terms and conditions contained in this Part in specifying the rates, charges, terms and conditions for use of intervening transmission facilities pursuant to an application made in this regard by a Licensee under the proviso to Section 36 of the Electricity Act, 2003.

## **57. Annual Transmission Charges for each financial year of the Control Period**

The Annual Transmission Charges for each financial year of the Control Period shall provide for the recovery of the Aggregate Revenue Requirement of the Transmission Licensee for the respective financial year of the Control Period, as reduced by the amount of non-tariff income, income from Other Business and short-term open access charges, as approved by the Commission and shall be computed in the following manner:

Aggregate Revenue Requirement, is the sum of:

- (a) Operation and maintenance expenses;
- (b) Lease Charges;
- (c) Interest and Finance Charges on loan capital;
- (d) Return on equity capital;
- (e) Income-tax;
- (f) Depreciation;
- (g) Interest on working capital and deposits from Transmission System Users; and Annual Transmission Charges of Transmission Licensee = Aggregate Revenue Requirement, as above,

**Minus:**

- (h) Non-Tariff Income;
- (i) Short-Term Open Access Charges and
- (j) Income from Other Business to the extent specified in these Regulations.

Provided that in case of competitively awarded transmission system projects in pursuance of Section 63 of the Act and in accordance with the guidelines for competitive bidding for transmission, the Annual Transmission Charges shall be as per the Annual Transmission Service Charges (TSC) quoted by such competitively awarded transmission projects.

The Annual Transmission Charges of the Transmission Licensee shall be determined by the Commission on the basis of an application for determination of Aggregate Revenue Requirement or application for adoption of Annual Transmission Charges in case of competitively awarded transmission system project, as the case may be, made by the Transmission Licensee in accordance with Part – II of these Regulations.

## **58. Capital investment Plan**

- (1) The Transmission Licensee shall file a detailed capital investment plan, financing plan and physical targets for each financial year of the Control Period, as a part of Business Plan, for meeting the requirement of load growth, reduction in transmission losses, improvement in quality of supply, reliability, metering, reduction in congestion, etc. The capital investment plan along with the Business Plan should be filed at the beginning of the Control Period, detailing all aspects as specified in Regulation 8 contained in Part – II of these Regulations.
- (2) The investment plan shall be a least cost plan for undertaking investments on strengthening and augmentation of the intra-State transmission system for meeting the requirement of load growth, reduction in transmission losses, improvement in quality of supply, reliability, metering, reduction in congestion, etc.
- (3) The investment plan shall cover all capital expenditure projects to be undertaken by the Transmission Licensee in the MYT Control Period and shall be in such form as may be stipulated by the Commission from time to time.
- (4) Separate prior approval of the Commission shall be required for all capital expenditure schemes of the value exceeding the ceiling specified by the Commission in the transmission license.
- (5) The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered,

cost/benefit analysis and other aspects that may have a bearing on the transmission charges. The investment plan shall also include capitalisation schedule and financing plan.

- (6) The Transmission Licensee shall submit, along with the MYT Petition or along with the Petition for Annual Performance Review, as the case may be, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require for assessing such progress.
- (7) The Commission shall consider and approve the Transmission Licensee's capital investment plan, with modifications, if necessary. The costs corresponding to the approved investment plan of the Transmission Licensee for a given year shall be considered for its revenue requirement.

## **59. Capital Cost**

- (1) Only such capital expenditure as is incurred or proposed to be incurred with the approval of the Commission, including that exempted from prior approval, as per the procedure specified in UERC (Conduct of Business) Regulations, 2014 shall be considered after prudence check for tariff purposes.
- (2) The final tariff shall be fixed based on the admitted capital expenditure of the transmission system and shall include capitalised initial spares subject to a ceiling norm.
- (3) The provisions of Accounting Standards (AS10): Accounting for Fixed Assets of the Institute of Chartered Accountants of India, as amended from time to time, shall apply, to the extent not inconsistent with these Regulations, in determining the original cost of capital expenditure projects and/or original cost of fixed assets capitalized.

## **60. Petition for determination of Transmission tariff**

The Transmission Licensee may make an application for fixation of tariff for its Intra-State Transmission System in accordance with the historical performance of such transmission system and on the basis of Order of the Commission on the Business Plan Petition submitted as per Regulation 8, in such formats and along with such information which the Commission may require from time to time, complying with provision of Part – II of these Regulations.

## **61. Norms of Operation**

The norms of operation, subject to modifications thereof from time to time, shall be as under:

- (1) Auxiliary Energy Consumption in the sub-station



a. AC System

The charges for auxiliary energy consumption in the AC sub-station for the purpose of air-conditioning, lighting, consumption, etc. shall be borne by the Transmission Licensee and included in the normative operation and maintenance expenses.

(2) Target Availability for recovery of full transmission charges

(a) AC System : 98%

Note:

(a) *Recovery of fixed charges below the level of target availability shall be on pro-rata basis. At zero availability, no transmission charges shall be payable.*

(b) *The target availability shall be calculated in accordance with procedure specified in Appendix-IV to these Regulations and shall be certified by Uttarakhand State Load Despatch Centre.*

Provided that no incentive shall be payable for availability beyond 99.75%:

Provided also that for AC system, two trippings per year shall be allowed. After two trippings in a year, additional 12 hours outage shall be considered in addition to the actual outage:

Provided also that in case of outage of a transmission element affecting evacuation of power from a generating station, outage hour shall be multiplied by a factor of 2.

## 62. Operation and maintenance expenses

- (1) The O&M expenses for the first year of the Control Period will be approved by the Commission taking into account the actual O&M expenses for last five years till Base Year subject to prudence check and any other factors considered appropriate by the Commission.
- (2) The O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. FY 2015-16, shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- O&M<sub>n</sub> – Operation and Maintenance expense for the nth year;
- EMP<sub>n</sub> – Employee Costs for the nth year;
- R&M<sub>n</sub> – Repair and Maintenance Costs for the nth year;
- A&G<sub>n</sub> – Administrative and General Costs for the nth year;

- (3) The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (1+CPI_{inflation})$$

$$R\&M_n = K \times (GFA_{n-1}) \times (1+WPI_{inflation}) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (1+WPI_{inflation}) + \text{Provision}$$

Where -

- $EMP_{n-1}$  – Employee Costs for the (n-1)th year;
- $A\&G_{n-1}$  – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the Transmission Licensee and approved by the Commission after prudence check.
- ‘K’ is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on Transmission Licensee’s filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPI<sub>inflation</sub> – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPI<sub>inflation</sub> – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- $GFA_{n-1}$  – Gross Fixed Asset of the Transmission Licensee for the n-1th year;
- $G_n$  is a growth factor for the nth year. Value of  $G_n$  shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on Transmission Licensee’s filings, benchmarking and any other factor that the Commission feels appropriate:

Provided that in case of a transmission licensee is governed by Government pay structure, the Commission may consider allowing a separate provision in Employee expenses towards the impact of VII<sup>th</sup> Pay Commission.

Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.

### 63. Non-Tariff Income

- (1) The amount of non-tariff income relating to the Transmission Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the

Annual Transmission Charges of the Transmission Licensee:

Provided that the Transmission Licensee shall submit full details of his forecast of non-tariff income to the Commission in such form as may be stipulated by the Commission from time to time.

- (2) The indicative list of various heads to be considered for non tariff income shall be as under:
- (a) Income from rent on land or buildings;
  - (b) Income from sale of scrap;
  - (c) Income from statutory investments;
  - (d) Interest on delayed or deferred payment on bills;
  - (e) Interest on advances to suppliers/contractors;
  - (f) Rental from staff quarters;
  - (g) Rental from contractors;
  - (h) Income from hire charges from contractors and others;
  - (i) Income from advertisements, etc.;
  - (j) Miscellaneous receipts;
  - (k) Excess found on physical verification;
  - (l) Interest on investments, fixed and call deposits and bank balances;
  - (m) Prior period income.

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Transmission Licensee shall not be included in Non-Tariff Income.

#### **64. Income from Other Business**

Where the Transmission Licensee is engaged in any Other Business under Section 41 of the Act, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the Annual Transmission Charges of the Transmission Licensee:

Provided that the Transmission Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Transmission Business and the Other Business and shall submit the Allocation Statement, duly audited and certified by the Statutory Auditor, to the Commission

along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business for whatever reasons, no amount shall be allowed to be added to the Aggregate Revenue Requirement of the Transmission Licensee on account of such Other Business.

## 65. Computation and Payment of Transmission Charge

- (1) The Annual Transmission Charges for the Transmission Licensee shall be determined, based on the norms as specified in these Regulations and recovered on monthly basis as transmission charge from the users who shall share the Transmission Charge in proportion of the allotted transmission capacity.

Provided that the charges payable by the Transmission System Users may also take into consideration factors such as voltage, distance, direction, quantum of flow and time of use, as may be specified by the Commission in its order.

- (2) The transmission charge (inclusive of incentive) payable for AC System or part thereof for a calendar month shall be computed in accordance with the following equation:
  - (a) For  $TAFM \leq 98\%$   
 $ATC \times (NDM/NDY) \times (TAFM/98\%)$
  - (b) For  $TAFM: 98\% < TAFM \leq 98.5\%$   
 $ATC \times (NDM/NDY) \times (1)$
  - (c) For  $TAFM: 98.5\% < TAFM \leq 99.75\%$   
 $ATC \times (NDM/NDY) \times (TAFM/98.5\%)$
  - (d) For  $TAFM: \geq 99.75\%$   
 $ATC \times [NDM/NDY] \times [99.75\%/98.5\%]$

Where

- ATC = Annual transmission charges specified for the year, in Rupees.
- NATAF = Normative annual transmission availability factor, in percent.
- NDM = Number of days in the month.
- NDY = Number of days in the year.
- TAFM = Transmission system availability factor for the month, in Percent, computed in accordance with Appendix IV.

- (3) The monthly Transmission Tariff as determined by the Commission as per sub- Regulation

- (2) above shall be shared by all long-term and medium-term open access customers on monthly basis (including existing Distribution Licensees) in the ratio of their allotted capacities.
- (4) The transmission licensee shall raise the bill for the transmission charge (inclusive of incentive) for a month based on its estimate of TAFM. Adjustments, if any, shall be made on the basis of the TAFM to be certified by the SLDC within 30 days from the last day of the relevant month.
- (5) The transmission charges shall be calculated separately for part of the transmission system having different NATAF, and aggregated thereafter, according to their sharing by the long term transmission customers/DICs.

## **66. Open Access Transactions**

All the matters related to Open Access Transactions shall be dealt in accordance with Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2015 as applicable and as amended from time to time.

## **67. Transmission losses**

The energy losses in the transmission system of the Transmission Licensee, as determined by the State Load Despatch Centre and approved by the Commission, shall be borne by the Transmission System Users pro-rata to their usage of the intra-State transmission system:

Provided that the Commission may stipulate a trajectory for reduction of transmission losses in accordance with Regulation 9, as a part of Multi Year Tariff framework applicable to the Transmission Licensee.

# **PART – VII**

## **TARIFF FOR DISTRIBUTION RETAIL SUPPLY**

## **68. Applicability**

- (1) These Regulations shall apply for determination of tariff for retail sale of electricity by a Distribution Licensee to its consumers:

Provided that Wheeling charges and distribution losses payable to Distribution Licensee, by an open access customer for usage of its system shall be determined in accordance with Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2015 as applicable and as amended from time to time.

## **69. Aggregate Revenue Requirement for each Financial Year of the Control Period**

- (1) The total annual expenses and return on equity of the Distribution Licensee for each financial year of the Control Period shall be worked out on the basis of expenses and return allowed in terms of these Regulations.
- (2) The retail supply tariff of a Distribution Licensee for each financial year of the Control Period shall provide for recovery of the Aggregate Revenue Requirement of the Distribution Licensee for each financial year of the Control Period, as reduced by the amount of non-tariff income, income from wheeling in respect of open access customers, income from Other Business and receipts on account of cross-subsidy surcharge and additional surcharge for the relevant financial year, as approved by the Commission, and subsidy from the State Government for that financial year, if any, and shall comprise of the following:
  - (a) Cost of power purchase;
  - (b) Transmission charges;
  - (c) System Operation Charges, i.e. Fee and Charges paid to NLDC/RLDC/SLDC
  - (d) Interest and Finance charges on Loan Capital and on consumer security deposit;
  - (e) Depreciation, including and amortisation of intangible assets;
  - (f) Lease Charges
  - (g) Operation and Maintenance expenses;
  - (h) Interest on working capital; and
  - (i) Return on equity capital;
  - (j) Income-tax;
  - (k) Provision for Bad and doubtful debts
- (3) Net Revenue Requirement from sale of electricity = Aggregate Revenue Requirement, as above, minus:
  - (a) Non-tariff income;
  - (b) Income from wheeling charges recovered from open access customers;
  - (c) Income from Other Business, to the extent specified in these Regulations;
  - (d) Receipts from cross-subsidy surcharge from open access consumers; and
  - (e) Receipts from additional surcharge on charges of wheeling from open access consumers.
  - (f) Any revenue subsidy or grant received from the State Government other than the subsidy under Section 65 of the Electricity Act, 2003.

## **70. Business Plan**

- (1) Each Distribution Licensee shall submit a Business Plan by November 30, 2015, for the Control Period of three (3) financial years from April 1, 2016 to March 31, 2019 with full details as stipulated by the Commission from time to time and in the manner specified in Regulation 8 contained in Part II of these Regulations.
- (2) The Business Plan shall comprise among other details capital investment plan, financing plan and physical targets in accordance with guidelines and formats, as may be stipulated by the Commission from time to time.

## **71. Capital Investment Plan**

- (1) The Distribution Licensee shall file a detailed capital investment plan, financing plan and physical targets for each financial year of the Control Period, for meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, consumer services, etc. to the Commission for approval as a part of Business Plan. The capital investment plan should be filed at the beginning of the Control Period.
- (2) The investment plan shall be a least cost plan for undertaking investments on strengthening and augmentation of the distribution system for meeting the requirement of load growth, reduction in distribution losses, improvement in quality of supply, reliability, metering, etc.
- (3) The investment plan shall cover all capital expenditure projects to be undertaken by the Distribution Licensee in the Control Period and shall be in such form as may be stipulated by the Commission from time to time.
- (4) The prior approval of the Commission shall be required for all capital expenditure schemes of the value exceeding the ceiling specified by the Commission in the distribution license.
- (5) The investment plan shall be accompanied by such information, particulars and documents as may be required showing the need for the proposed investments, alternatives considered, cost/benefit analysis and other aspects that may have a bearing on the wheeling tariff and retail tariffs. The investment plan shall also include capitalisation schedule and financing plan.
- (6) The Distribution Licensee shall submit, along with the MYT Petition or along with the application for Annual Performance Review, details showing the progress of capital expenditure projects, together with such other information, particulars or documents as the Commission may require for assessing such progress.

## **72. Power procurement guidelines**

- (1) The Distribution Licensee shall undertake its power procurement during the year in accordance with the power procurement plan for the Control Period, which may include long-term, medium-term and short-term power procurement, approved by the Commission in accordance with these Regulations.
- (2) Distribution Licensee shall follow the guidelines contained in this Part with respect to:
  - a) Procurement of power under any arrangement or agreement with a term or duration exceeding seven (7) years (i.e., long-term power procurement);
  - b) Procurement of power under any arrangement or agreement with a term or duration exceeding one (1) year but not exceeding seven years (i.e., medium-term power procurement); and
  - c) Procurement of power under any arrangement or agreement with a term or duration less than or equal to one (1) year (i.e., short-term power procurement).

## **73. Power procurement plan**

- (1) The Distribution Licensee shall prepare a plan for procurement of power to serve the demand for electricity in its area of supply and submit such plan to the Commission for approval:

Provided that such power procurement plan shall be submitted for the second Control Period commencing on April 1, 2016:

Provided further that the power procurement plan, approved as a part of the Business Plan, shall be submitted along with the application for determination of tariff.

Provided that the power procurement plan submitted by the Distribution Licensee may include long-term, medium-term and short-term power procurement sources of power, in accordance with these Regulations. However, the distribution licensee should as far as possible, not plan for short-term purchases except for conditions specified in Regulations 75 and should endeavor to meet its requirement from long term and medium term power procurement and make a plan accordingly.

- (2) The power procurement plan of the Distribution Licensee shall comprise of the following:
  - a) A quantitative forecast of the unrestricted demand for electricity for each tariff category, within its area of supply over the Control Period;
  - b) An estimate of the quantities of electricity supply from the identified sources of



generation and power purchase;

- c) An estimate of availability of power to meet the base load and Peak load requirement.

Provided that estimate should be monthly estimation of demand and supply expressed both in Mega-Watt (MW) as well as in Million Units (MUs).

- d) Standards to be maintained with regard to quality and reliability of supply, in accordance with the UERC (Standards of Performance) Regulations, 2007, as amended from time to time;

- e) Measures proposed to be implemented as regards energy conservation and energy efficiency;

- f) The requirement for new sources of power generation and/or procurement, including augmentation of generation capacity and identified new sources of supply, based on (a) to (d) above;

- g) The plan for procurement of power including quantities and cost estimates for such procurement:

Provided that the forecast/estimate contained in the long-term procurement plan shall be separately stated for peak and off-peak periods, in terms of quantities of power to be procured (in millions of units of electricity) and maximum demand (in MW / MVA):

Provided further that the forecasts/estimates shall be prepared for each month of the Control Period:

Provided also that the long-term procurement plan shall be a cost-effective plan based on available information regarding costs of various sources of supply.

- h) Short-term power procurement proposed shall be in accordance with Regulation 75 of these Regulations.

- (3) The forecasts/estimates shall be prepared using forecasting techniques based on past data and reasonable assumptions regarding the future:

Provided that the forecasts/estimates shall take into account factors such as overall economic growth, consumption growth of electricity-intensive sectors, advent of competition in the electricity industry, trends in captive power, impact of loss reduction initiatives, improvement in Generating Station Plant Load Factors and other relevant factors.

- (4) Where the Commission has stipulated a percentage of the total consumption of electricity in the area of a Distribution Licensee to be purchased from co-generation and renewable sources

of energy, the power procurement plan of such Distribution Licensee shall include the plan for procurement from such sources at least upto the stipulated level.

- (5) The Distribution Licensee shall be required to forward a copy of the power procurement plan to the State Transmission Utility for verification of its consistency with the transmission system plan for the intra-State transmission system;

Provided that the Distribution Licensee may also consult the State Transmission Utility at the time of preparation of the power procurement plan to ensure consistency of such plan with the transmission system plan.

- (6) The Distribution Licensee may, as a result of additional information not previously known or available to him at the time of submission of the procurement plan under sub-Regulation (1) above, apply for a modification in the power procurement plan, for the remainder of the Control Period, as part of the application for Annual Performance Review:
- (7) The Commission may, as a result of additional information not previously known or available to the Commission at the time of submission of the procurement plan under sub-Regulation (1) above, if it so deems, either on suo motu basis or on an application made by any interested or affected party, modify the procurement plan of the Distribution Licensee, for the remainder of the Control Period, as part of the Annual Performance Review.
- (8) The Commission shall review the power procurement plan of the Distribution Licensee, or any proposed modification thereto, and upon such review being completed, the Commission shall either-
- a) Issue an order approving the power procurement plan, or modifications thereto, subject to such modifications and conditions as it may deem appropriate; or
  - b) Reject the power procurement plan or application for modification thereto, for reasons recorded in writing, if such plan is not in accordance with the guidelines contained in this Part, and direct the Distribution Licensee to submit a revised plan based on such considerations as it may specify:

Provided that the Distribution Licensee shall be given reasonable opportunity of being heard before rejecting its power procurement plan.

#### **74. Approval of power purchase agreement/arrangement**

- (1) Every agreement or arrangement for power procurement by a Distribution Licensee from a Generating Company or Licensee or from other source of supply entered into after the date of effectiveness of these Regulations shall come into effect only with the prior approval of the

Commission:

Provided that the prior approval of the Commission shall be required in respect of any agreement or arrangement for power procurement by the Distribution Licensee from a Generating Company or Licensee or from any other source of supply on a standby basis:

Provided further that the prior approval of the Commission shall also be required for any change to an existing arrangement or agreement for power procurement, whether or not such existing arrangement or agreement was approved by the Commission.

- (2) The Commission shall review an application for approval of power procurement agreement/arrangement having regard to the approved power procurement plan of the Distribution Licensee and the following factors:
  - a) Requirement for power procurement under the approved power procurement plan;
  - b) Adherence to a transparent process of bidding in accordance with guidelines issued by the Central Government;
  - c) Adherence to the terms and conditions for determination of tariff specified under these Regulations where the process specified in (b) above has not been adopted;
  - d) Availability (or expected availability) of capacity in the intra-State transmission system for evacuation and supply of power procured under the agreement/arrangement;
  - e) Need to promote co-generation and generation of electricity from renewable sources of energy.

## **75. Additional Short-term power procurement**

- (1) The Distribution Licensee can undertake additional short-term power procurement during the year, over and above the power procurement plan for the Control Period approved by the Commission, in accordance with this Regulation.
- (2) Where there has been a shortfall or failure in the supply of electricity from any approved source of supply during the financial year, the Distribution Licensee may enter into additional short-term arrangement or agreement for procurement of power (short-term means upto period of one year):

Provided that if the total power purchase cost or quantum for any block of six months including such short-term power procurement exceeds 105% of the power purchase cost or quantum as approved by the Commission for the respective block of six months, the Distribution Licensee shall have to obtain prior approval of the Commission;

- (3) Where the Distribution Licensee has identified a new short-term source of supply from which power can be procured at a tariff that reduces its approved total power procurement cost, the Distribution Licensee may enter into a short-term power procurement agreement or arrangement with such supplier without the prior approval of the Commission.
- (4) The Distribution Licensee may enter into a short-term arrangement or agreement for procurement of power without the prior approval of the Commission when faced with emergency conditions that threaten the stability of the distribution system or when directed to do so by the State Load Despatch Centre to prevent grid failure.
- (5) Within fifteen (15) days from the date of entering into an agreement or arrangement for short-term power procurement for which prior approval is not required, the Distribution Licensee shall provide the Commission, full details of such agreement or arrangement, including quantum, tariff calculations, duration, supplier details, method for supplier selection and such other details as the Commission may require with regard to such agreement/arrangement to assess that the conditions specified in this Regulation have been complied with:

Provided that where the Commission has reasonable grounds to believe that the arrangement or agreement entered into by the Distribution Licensee does not meet the criteria specified in sub-Regulation (2) to sub-Regulation (4) above, the Commission may disallow any increase in the total cost of power procurement (net of additional revenue) over the approved level arising therefrom or any loss incurred by the Distribution Licensee as a result, from being passed through to consumers.

- (6) Subject to the cases specified in sub-Regulation (2) to sub-Regulation (4) above, where the Distribution Licensee enters into any agreement or arrangement for short-term power procurement without the approval of the Commission, any increase in the total cost of power procurement (net of additional revenue) over the approved level arising therefrom shall be deemed to be a variation in performance attributable entirely to controllable factors.

## **76. Petition for determination of Distribution Retail Supply Tariff**

- (1) A Distribution Licensee shall make a petition for determination of retail tariff complying with the provisions of Part II of these Regulations.
- (2) A tariff petition filed by the Distribution Licensee for determination of tariff for the ensuing year shall contain data for the base year, actual and estimated data for the present year, and forecasts and targets for all the years of the Control Period based on the Distribution Licensee's business plan and principles contained in these Regulations.

- (3) The Commission shall determine Aggregate Revenue Requirement of a Distribution Licensee on MYT principles as laid down in these Regulations, for the Control Period specified under these Regulations.

## **77. Sales Forecast**

- (1) Considering the importance of capturing seasonal variation, Monthly Sales Forecast for the Control Period shall be done in respect of each consumer category/sub-category and to each tariff slab within such consumer category/sub-category, based on the past trends, as far as possible and shall be submitted to the Commission for approval along with the Business Plan. Suitable adjustments shall be made to reflect the effect of known and measurable changes with respect to number of consumers, the connected load and the energy consumption, thereby removing any abnormality in the past data.

Provided that where the Commission has stipulated a methodology for forecasting sales to any particular tariff category, the Distribution Licensee shall incorporate such methodology in developing the sales forecast for such tariff category.

- (2) The sales forecast shall be consistent with the load forecast prepared as part of the long-term power procurement plan submitted as a part of Business Plan under these Regulations and shall be based on past data and reasonable assumptions regarding the future.
- (3) The Commission shall examine the forecasts for reasonableness based on growth in number of consumers, the connected load and the energy consumption in previous years and anticipated growth in the next year and any other factor, which the Commission may consider relevant and approve the projected sale of electricity to consumers with such modifications as deemed fit.

## **78. Monitoring of sale of electricity to consumers**

- (1) On the basis of approved sales forecast, the Distribution Licensee shall work out the requirement of monthly sales to different consumer categories, taking into account seasonal variations in demand during the year.
- (2) The Distribution Licensee shall monitor the sales to different consumer categories and ensure that sale to any category of consumer is not unduly restricted.
- (3) The Distribution Licensee shall submit monthly reports to the Commission regarding sale of electricity to different consumer categories.

## **79. Distribution losses**

- (1) Energy loss in the distribution system shall be called Distribution Loss.
- (2) Distribution Loss above and up to a particular voltage level shall be calculated as the difference between the energy initially injected into the distribution system and the sum of energy sold up to that level and energy delivered to next voltage level.

% Distribution Loss above and up to a particular voltage level shall be expressed in terms of Distribution Loss up to that level as a percentage of the energy initially injected into the distribution system.

- (3) The Commission may require information on Circle-wise/Division-wise and/or month-wise Distribution loss calculation.
- (4) To substantiate the Distribution Loss calculations, the Commission may require the Distribution Licensee to conduct proper and reliable energy audit.
- (5) The Distribution Licensee shall also propose voltage-wise losses for remaining years of the control period from FY 2017-18 onwards for the determination of voltage-wise cost of supply. The Commission shall examine the filings made by the licensee for the distribution loss trajectory for each year of the control period and approve the same with modification as it may consider necessary.
- (6) The Commission may ask Distribution Licensee to submit detailed information on voltage-wise Distribution Losses segregating them into Technical loss (i.e. Ohmic/Core loss in the lines, substations and equipment) and Commercial Loss (i.e. unaccounted energy due to metering inaccuracies/inadequacies, pilferage of energy, etc.). The Commission shall examine the filings made by the Distribution Licensee in respect of distribution loss (segregated into technical loss and commercial loss) and approve the same with modification, as it may consider necessary.
- (7) The Commission may fix targets, both long term and short term, for each year of control period for loss reduction to bring down the Distribution loss levels (both technical and commercial) gradually to acceptable norms of efficiency.

## **80. Availability of Power**

- (1) For the tariff year, monthly availability of power shall be ascertained on the basis of the following:
  - i. From Central/State Sector Generating Stations

- (a) Distribution Licensee's share in the allocated and unallocated capacity in the Central/State Sector Generating Stations;
  - (b) Likely availability of energy from each generating station based on projections given by the generators and the historical data of supply from the generators; or
  - (c) The PLF/Generation targets for the Station fixed by Central Electricity Authority; or
  - (d) The historical performance of the Station adjusted for any planned maintenance or shut-downs.
- ii. From other sources:
  - (a) Distribution Licensee's banking arrangement with any other Distribution Licensee, Board or Trading Licensee.
  - (b) Distribution Licensee's agreement with any other Distribution Licensee, Board, Generating Company or Trading Licensee regarding purchase of power.
- (2) The distribution licensee shall also include its yearly requirement of the Renewable Purchase Obligation as specified by the Commission in its UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013 as amended from time to time, and measures to ensure compliance of its RPO for the Control Period.

## **81. Power Purchase Cost**

- (1) The power purchase/banking/trading agreements as approved by the Commission shall be considered to determine the power purchase cost of the distribution licensee.
- (2) For the Control Period, the Distribution Licensee's requirement of power purchase for sale to its consumers shall be estimated based on the sales forecast, the transmission loss and target distribution loss level for the Control Period.
- (3) For the Control Period, the cost of electricity procured from State Generating Stations shall be determined based on tariffs approved by the Commission for purchase of electricity from such generating Station and that of electricity procured from Central Sector Generating Station shall be determined based on tariffs approved by the Central Electricity Regulatory Commission for such Generating Stations. The cost of energy from other sources shall be as per the power purchase/banking/trading agreements as may be approved by the Commission.

- (4) For different years under the Control Period, the power purchase cost of Distribution Licensee's shall be estimated on the basis of merit order principle. All power purchase costs will be considered legitimate unless it is established that the merit order principle has been materially violated or power has been purchased at unreasonable rates.
- (5) For determining the total power purchase cost of the Distribution Licensee for different years of the Control Period, the Commission shall also consider the renewable purchase obligation of the Distribution Licensee and the tariffs determined by the Commission for different types of renewable sources under relevant regulations/orders.
- (6) While the inter-state transmission charges shall be estimated as per orders of the Central Electricity Regulatory Commission, the intra-state transmission charges shall be estimated in accordance with the transmission tariffs approved by the Commission, from time to time. Further, load despatch charges payable to System Operators (National load Despatch Centre, Regional Load Despatch Centre, State Load Despatch Centre etc.) for availing load despatch services shall be estimated in accordance with the Fee & Charges approved by the Appropriate Commission, from time to time. SLDC charges paid for energy sold outside the State shall not be considered as expenses for determining tariff.

## **82. Variation in Power Purchase**

- (1) Any power purchased by Distribution Licensee over and above the requirement of power approved by the Commission or variation in the mix of power purchased in any year shall be considered by the Commission if it is for reasons beyond the reasonable control of the Distribution Licensee and the resultant financial loss or gain shall be adjusted in next years' tariff.

## **83. Fuel Charge Adjustment (FCA)**

- (1) The FCA charge shall be applicable on the entire sale of the Distribution Licensee without any exemption to any consumer.
- (2) The FCA charge shall be computed and charged on the basis of actual variation in fuel costs relating to power generated from own generation stations and power procured during any month subsequent to such costs being incurred, in accordance with these Regulations, and shall not be computed on the basis of estimated or expected variations in fuel costs.
- (3) The FCA charge for the quarter shall be computed within 15 days of quarter end and shall be charged for the quarter from the first month of second quarter itself, without prior approval of the Commission and under or over recovery shall be carried forward to the next



quarter.

- (4) The Distribution Licensee shall submit the details of the fuel cost incurred and to be charged or refunded to all the consumers for the entire quarter, along with the detailed computations and supporting documents as may be required for verification by the Commission within 30 days of the end of quarter for post facto approval of the Commission.
- (5) The Commission shall examine the FCA computations and approve the same with modifications, if required before the end of second quarter. Any variation in FCA charged or refunded by the Distribution Licensee and FCA approved by the Commission will be adjusted in subsequent quarter's FCA computations.
- (6) In case the Distribution Licensee is found guilty of charging unjustified FCA charge to the consumers on regular basis, the Commission shall adjust the unjustified charges along with interest on the same.
- (7) The Distribution Licensee shall upgrade the billing and IT systems to incorporate FCA charge as a component in tariff design.
- (8) The formula for calculation of the FCA shall be as given under:

$$\text{FCA (Rs. Crore)} = C + B,$$

Where

FCA = Fuel Cost Adjustment

C = Change in cost of own generation and power purchase due to the variation in the fuel cost,

B = Adjustment factor for over-recovery / under-recovery for previous quarter

$$C \text{ (Rs. Crore)} = A_{\text{FC,Gen}} + A_{\text{FC,PP}},$$

Where:

$A_{\text{FC,Gen}}$ : Change in fuel cost of own generation. This would be computed based on the norms and directives of the Commission, including heat rate, auxiliary consumption, generation and power purchase mix, etc.

$A_{\text{FC,PP}}$ : Change in energy charges of power procured from other sources. This change would be allowed to the extent it satisfies the criteria prescribed in these Regulations and the prevailing tariff order, and subject to applicable norms.

- (9) The FCA charge for any category shall not exceed 10% of the base energy charge for

respective category, or such other ceiling as may be stipulated by the Commission from time to time:

Provided that any excess in the FCA charge over the above ceiling shall be carried forward by the Distribution Licensee and shall be recovered over such future period as may be directed by the Commission.

- (10) Calculation of FCA charge shall be as per the following formula:

Average FCA Charge (Rs/kWh) =  $(FCA / (\text{Estimated sales within the State for the next quarter as approved by the Commission in the Tariff Order}) \times 10$ .

- (11) Category wise FCA Charge (Rs/kWh) shall be calculated as per the following formula:

Average Billing Rate (ABR) of Consumer Category (in Rs./kWh) as approved in Tariff Order for the year / Average Billing Rate (ABR) of Distribution Licensee (in Rs./kWh) as approved in Tariff Order for the year  $\times$  Average FCA (in Rs./kWh).

#### 84. Operation and Maintenance Expenses

- (1) The O&M expenses for the first year of the Control Period shall be approved by the Commission taking into account the actual O&M expenses for last five years till Base Year subject to prudence check and any other factors considered appropriate by the Commission.
- (2) The O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2015-16, shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where -

- O&M<sub>n</sub> - Operation and Maintenance expense for the nth year;
- EMP<sub>n</sub> - Employee Costs for the nth year;
- R&M<sub>n</sub> - Repair and Maintenance Costs for the nth year;
- A&G<sub>n</sub> - Administrative and General Costs for the nth year;

- (3) The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1 + G_n) \times (1 + CPI_{inflation})$$

$$R\&M_n = K \times (GFA_{n-1}) \times (1 + WPI_{inflation}) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (1 + WPI_{inflation}) + \text{Provision}$$

Where -

- EMP<sub>n-1</sub> - Employee Costs for the (n-1)th year;

- A&G n-1 – Administrative and General Costs for the (n-1)th year;

Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.

- ‘K’ is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on licensee’s filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- GFAn-1 – Gross Fixed Asset of the distribution licensee for the n-1th year;
- Gn is a growth factor for the nth year. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee’s filings, benchmarking, and any other factor that the Commission feels appropriate:

Provided that in case of a distribution licensee being governed by Government pay structure, the Commission may consider allowing a separate provision in Employee expenses towards the impact of VIIth Pay Commission.

Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.

## 85. Non-Tariff Income

The amount of non-tariff income relating to the Distribution Business and/or the Retail Supply Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of his forecast of non-tariff income to the Commission along with his application for determination of tariff.

The indicative list of various heads to be considered for Non-Tariff Income shall be as under:

- (a) Income from rent of land or buildings;
- (b) Income from sale of scrap;
- (c) Delayed Payment Surcharge;
- (d) Rebates for timely payment of bills;
- (e) Income from statutory investments;
- (f) Interest on delayed or deferred payment on bills;
- (g) Interest on advances to suppliers/contractors;
- (h) Rental from staff quarters;
- (i) Rental from contractors;
- (j) Income from hire charges from contractors and others;
- (k) Income from advertisements, etc.;
- (l) Miscellaneous receipts;
- (m) Interest on advances to suppliers;
- (n) Excess found on physical verification;
- (o) Prior period income.

#### **86. Income from Wheeling Charges**

The amount of any income from Wheeling Charges, as approved by the Commission, in accordance with the UERC (Terms & Conditions of Intra-State Open Access) Regulations, 2015, as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee.

#### **87. Income from Other Business**

Where the Distribution Licensee has engaged in any Other Business, an amount equal to one-third of the revenues from such Other Business after deduction of all direct and indirect costs attributed to such Other Business shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement from retail sale of electricity of the Distribution Licensee:

Provided that the Distribution Licensee shall follow a reasonable basis for allocation of all joint and common costs between the Distribution Business and the Other Business and shall submit the

Allocation Statement, duly audited and certified by statutory auditors, to the Commission along with his application for determination of tariff:

Provided further that once the Commission notifies the Regulations for submission of Regulatory Accounts, the applications for tariff determination and truing up shall be based on the Regulatory Accounts:

Provided further that where the sum total of the direct and indirect costs of such Other Business exceed the revenues from such Other Business or for any other reason, no amount shall be allowed to be added to the Aggregate Revenue Requirement of the Distribution Licensee on account of such Other Business.

## **88. Receipts on account of cross-subsidy surcharge and additional surcharge**

- (1) The amount received by the Distribution Licensee by way of cross-subsidy surcharge, as approved by the Commission in accordance with the UERC (Terms & Conditions of Intra-State Open Access) Regulations, 2015, as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement from retail sale of electricity of such Distribution Licensee.
- (7) The amount received by the Distribution Licensee by way of additional surcharge, from consumers of such Distribution Licensee who have chosen to receive supply of electricity from a Generating Company or Licensee other than such Distribution Licensee, as approved by the Commission in accordance with the UERC (Terms & Conditions of Intra-State Open Access) Regulations, 2015, as amended from time to time, shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement from retail sale of electricity of such Distribution Licensee.

## **89. State Government Subsidy**

1. In case the State Government declares subsidy under Section 65 of Electricity Act, 2003 for certain categories of consumers in advance or during tariff filing proceedings, the Commission shall notify two tariff schedules, one with subsidy and other without subsidy.
2. In case the State Government declares subsidy for certain categories of consumers after notification of Tariff Order, the Licensee shall incorporate the same in the tariff and submit the revised Tariff Schedule for approval of the Commission.

Provided that the Government's subsidy provided for or declared shall be supported by documentary evidence of time schedule of payment, mode of payment of the subsidy and

categorization of the subsidy amount into subsidized categories.

3. In case of non-disbursement or delayed disbursement of subsidy by the Government, the Licensee shall charge the consumers as per the tariff schedule which is approved by the Commission without Government Subsidy.

## **90. Revenue at existing Tariff**

- (1) Revenue from supply of electricity to consumers shall be assessed based on current tariff applicable to different category of consumers and the quantity of electricity estimated to be sold to them.
- (2) For the tariff year, the difference between the Net ARR and the Forecasted Revenue at prevailing tariff shall be called the Revenue Gap.
- (3) The revenue gap shall be bridged by measures such as improvements in efficiency, utilisation of reserves, tariff changes, etc. as may be approved by the Commission.

## **91. Cost of Supply**

The tariffs for various categories/voltages shall be benchmarked with and shall progressively reflect the cost of supply based on costs that are prudently incurred by the Distribution Licensee in its operations. The category-wise/voltage-wise cost to supply may factor in such characteristics as the load factor, voltage, extent of technical and commercial losses etc. The consumers availing electricity at higher voltage shall be entitled to receive suitable rebate, as stipulated by the Commission. However, pending the availability of information that reasonably establishes the category wise/voltage-wise cost to supply, average cost of supply shall be used as the benchmark for determining tariffs.

## **92. Determination of Retail Supply Tariff**

- (1) While determining tariff for retail supply of electricity, the Commission shall be guided by the provisions of Section 61 and 62 of the Act.
- (2) The Commission, shall not, while determining the tariff, show undue preference to any consumer of electricity but may differentiate according to consumer's load factor, voltage, total consumption of electricity during any specified period or time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.
- (3) The Distribution Licensee in the tariff petition shall propose the suitable tariff structure for

different category of consumers. The Distribution Licensee may further propose kVAh/ToD based tariffs for categories considered appropriate by it for such implementation.

- (4) The Commission may merge categories and sub categories to evolve a simple, easy to comprehend and logical tariff structure.

### **93. Performance of Distribution Licensee**

- (1) The quality of service provided by the Distribution Licensee to its consumers shall be an important consideration and shall be judged by the extent of adherence by the Distribution Licensee to the standards of performance laid down by the Commission.
- (2) The Commission may by a separate order, lay down long term targets for technical improvement of the distribution system like supply availability, wires availability, reduction in transformer failure rate, reduction in voltage imbalance, reduction in non- working/ defective meters, etc.

## **PART - IX**

### **SLDC CHARGES**

### **94. Applicability**

The Regulations in this part shall apply to the users of intra-State transmission system (i.e. Generating Companies, Licensees (i.e. Transmission, Distribution & Trading Companies) and Open Access Customers), who are monitored/serviced by the State Load Despatch Centre (SLDC) and utilized for determination of Fees and Charges to be collected by the SLDC.

### **95. Application for Registration with SLDC**

- (1) Each of the users of intra-State transmission system, i.e. all generating stations, distribution licensees, intra-State transmission licensees, traders and the buyers and sellers intending to avail the Grid Access, shall register themselves with the SLDC, within a month of coming into force of these Regulations, by filing an application to the SLDC along with the fee of Rs. 10,000 (Rupees Ten Thousand only) or such amended fees as may be decided by the Commission from time to time.

Provided that the generating companies, licensees, buyers and sellers who have been registered as per Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2011 shall be deemed to have been registered with the SLDC, under these Regulations and they shall not be required to pay the registration fee as

required under Sub-Regulation (1) above.

- (2) The new users of intra-State transmission system coming under the purview of SLDC, shall submit an application to the SLDC, at least one month before the proposed date of connection to the Intra-State transmission system, along with the above-mentioned Fee.
- (3) After being satisfied with the completeness and correctness of the information furnished in the application, the SLDC, shall register the application in its records and duly intimate the applicant regarding such registration.
- (4) The SLDC shall maintain consolidated information about all the users connected to the Intra-State transmission system and being monitored / serviced by it, on a separate web-page on their web-site.

#### **96. Petition for determination of SLDC Charges**

- (1) The SLDC shall provide to the Commission, full details of its calculations of its Aggregate Revenue Requirement for the ensuing financial year, not later than four months before the commencement of the said ensuing Year.
- (2) The total annual expenses and return on equity of the SLDC for each financial year of the Control Period shall be worked out on the basis of expenses and return allowed in terms of these Regulations.
- (3) The SLDC shall also file the proposed allocation of charges to all the users of intra State Transmission System being monitored and serviced by it in line with these Regulations. SLDC shall further forward a copy of its petition for determination of Aggregate Revenue Requirement along with the proposal for allocation of charges to all the users of intra State Transmission System being monitored and serviced by it.
- (4) The SLDC shall provide the details of calculation of the expenses and other related information in the formats as specified by the Commission from time to time.
- (5) The SLDC shall also furnish the details of capital investment plan for the control period. For capital investment schemes exceeding the amount specified by the Commission, approval of the Commission shall be obtained in respect of each of such schemes prior to commencement of works.
- (6) The Aggregate Revenue Requirement and other details filed by the SLDC shall be scrutinised and as a result of such scrutiny, the Commission may call for such further information and clarification as may be required.



- (7) Based on the information furnished by SLDC and after due examination, scrutiny and consultation process, the Commission will approve the Aggregate Revenue Requirement covering the expenses of the SLDC and determine the SLDC Charges.
- (8) In the event of non-revision of SLDC charges during any year, any variation (shortfall or excess) in recovery of SLDC charges shall be carried forward to the next financial year and adjusted as may be decided by the Commission.
- (9) The SLDC shall submit periodic returns containing operational and cost data, as may be prescribed by the Commission.
- (10) All filings and application for determination of SLDC Charges shall be made in conformity with the stipulations made in these Regulations.

#### **97. Levy of SLDC Charges**

All expenses incurred by the SLDC, established by the State Government under Section 31 of the Act, shall be accounted for separately;

Provided that if on the date of publication of these Regulations, the State Transmission Utility (STU) is operating the State Load Despatch Centre and performing the functions under the Act, as provided under sub-clause (2) of Section 31 of the Act, the STU shall maintain separate accounts for expenses related to operation of the State Load Despatch Centre;

Provided further that till such time the accounts are not segregated, the STU shall apportion its costs on the basis of an Allocation Statement to be submitted to the Commission with all relevant details.

#### **98. LDC Development Fund:**

- (1) The SLDC shall create and maintain a separate fund called 'Load Despatch Centre Development Fund' ("LDCD Fund").
- (2) All the other income of SLDC like short term open access charges, registration charges, scheduling and operating charges, etc. shall be deposited into LDCD Fund.
- (3) The SLDC shall be entitled to utilise the money available in the LDCD Fund for creation of new assets, meeting stipulated equity portion in asset creation, margin money for raising loan from the financial institutions and funding of R&D projects.
- (4) The LDCD Fund shall not be utilized for revenue expenditure except to meet the short fall, if any, in the annual charges allowed by the Commission or to meet the contingency expenses

which were not foreseen at the time of making the application for fees and charges and are considered necessary for the efficient power system operation. However, such draws from the said fund shall be recouped from the expenditure allowed by the Commission under the respective heads at the time of truing up.

- (5) Any asset created by the SLDC out of the money deposited into the LDCD Fund shall not be entitled for return on equity, interest on loan and depreciation on same principles as in case of grant. SLDC shall submit details of such assets in the CAPEX plan.
- (6) SLDC shall submit the amount accumulated in LDC development fund along with the break-up of sources from where the fund is received. The Commission shall review the LDC development fund every year and issue directions to SLDC for effective utilization of the funds, if required.

## 99. Annual SLDC Charges

The annual charges to be recovered by the SLDC shall include the component of Return on Equity and also the following expenses:

- (a) O&M expenses;
- (b) Return on Equity
- (c) Depreciation;
- (d) Lease Charges
- (e) Interest and Finance charges on Loan Capital;
- (f) Income Tax, if any;
- (g) Interest on working capital, if any;
- (h) Any other expenses incidental to discharging the functions of SLDC as deemed appropriate by the Commission;

## 100. Operation and Maintenance Expenses

- (1) The O&M expenses for the first year of the Control Period will be approved by the Commission taking into account actual O&M expenses for last five years till Base Year subject to prudence check and any other factors considered appropriate by the Commission.
- (2) The O&M expenses for the nth year and also for the year immediately preceding the Control Period, i.e. 2015-16, shall be approved based on the formula given below:-

$$O\&M_n = R\&M_n + EMP_n + A\&G_n$$

Where –

- O&Mn – Operation and Maintenance expense for the nth year;
- EMPn – Employee Costs for the nth year;
- R&Mn – Repair and Maintenance Costs for the nth year;
- A&Gn – Administrative and General Costs for the nth year;

(3) The above components shall be computed in the manner specified below:

$$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (1+CPI_{inflation})$$

$$R\&M_n = K \times (GFA_{n-1}) \times (1+WPI_{inflation}) \text{ and}$$

$$A\&G_n = (A\&G_{n-1}) \times (1+WPI_{inflation}) + \text{Provision}$$

Where -

- $EMP_{n-1}$  – Employee Costs for the (n-1)th year;
- $A\&G_{n-1}$  – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the SLDC and validated by the Commission.
- 'K' is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on SLDC's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPIinflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;
- $GFA_{n-1}$  – Gross Fixed Asset of the transmission licensee for the n-1th year;
- $G_n$  is a growth factor for the nth year. Value of  $G_n$  shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on SLDC's filings, benchmarking, and any other factor that the Commission feels appropriate:

Provided that in case of a SLDC being governed by Government pay structure, the Commission may consider allowing a separate provision in Employee expenses towards the impact of VII<sup>th</sup>

Pay Commission.

Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.

#### **101.Basis for collection of SLDC charges**

- (1) The annual SLDC charges as determined by the Commission shall be allocated between the Beneficiaries using the intra-State transmission system on the basis of contracted transmission capacity.

Provided further that SLDC shall be entitled to levy and collect fee and charges for any other services rendered to the users and power exchanges as specified in any other regulations.

- (2) The Short-term open access customers using the intra-State transmission system shall however pay only such scheduling charges to the SLDC as may be specified by the Commission.

#### **102.Billing of SLDC Charges:**

- (1) The SLDC shall furnish necessary monthly bills at the rate of one twelfth of the annual charges as approved by the Commission, to the users of intra State Transmission System being monitored and serviced by it for each billing month within seven days after the last day of the preceding month;

Provided that for the purpose of billing and collection of the prescribed charges, a fraction of a MW shall be treated as one full MW.

- (2) The Beneficiaries shall make payment to the SLDC of the amounts due within one month of the date of receipt of the bill.
- (3) Disputes arising out of billing of SLDC charges shall be, as far as possible, settled by mutual negotiations. If the disputes are not resolved through mutual negotiations within sixty (60) days of the receipt of the bills, the matter shall be referred to the Commission through a petition by either of the parties. The decision of the Commission shall be final and binding on all the parties.
- (4) Pending resolution of the dispute, 90% of the bill amount shall be paid under protest within the due date.

## **PART X**

### **MISCELLANEOUS**

#### **103.Savings**

- (1) Nothing in these Regulations shall be deemed to limit or otherwise affect the power of the Commission to make such orders as may be necessary to meet the ends of justice.
- (2) Nothing in these Regulations shall bar the Commission from adopting in conformity with provisions of the Act, a procedure which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or a class of matters, deems it just or expedient for deciding such matter or class of matters.
- (3) Nothing in these Regulations shall, expressly or implied, bar the Commission dealing with any matter or exercising any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner, as it considers just and appropriate.

#### **104.Powers to Remove Difficulties**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may by general or special order give directions, not being inconsistent with the Act, which appears to the Commission to be necessary or expedient for the purpose of removing difficulties.

#### **105.Power to Amend**

The Commission may, at any time add, vary, alter, modify or amend any provision of these Regulations.

By Order of the Commission

(Neeraj Sati)  
Secretary  
Uttarakhand Electricity Regulatory Commission

## Appendix - I

### Timeline for completion of Projects

[Refer to first proviso to Regulation 26(2)(i)]

- (1) The completion time schedule shall be reckoned from the date of investment approval by the Board (of the generating company or the transmission licensee), or the CEA clearance as the case may be, up to the date of commercial operation of the units or block or element of transmission project as applicable.
- (2) The time schedule has been indicated in months in the following paragraphs and tables:

i) ***Thermal Power Projects- Combined Cycle Power Plant***

**Gas Turbine size upto 100 MW (ISO rating)**

- (a) 26 months for first block of green field projects. Subsequent blocks at an interval of 2 months each.
- (b) 24 months for first block of extension projects. Subsequent units at an interval of 2 months each.

**Gas Turbine size above 100 MW (ISO rating)**

- (a) 30 months for first block of green field projects. Subsequent blocks at an interval of 4 months each.
- (b) 28 months for first block of extension projects. Subsequent units at an interval of 4 months each.

ii) ***Hydro Electric Projects***

The qualifying time schedule for hydro electric projects shall be as stated in the original concurrence issued by the Central Electricity Authority under section 8 of the Act.

iii) ***Transmission Schemes***

(Qualifying time schedules in months)

Sl. No.	Transmission Work	Plain Area (Months)	Hilly Terrain (Months)	Snow Bound Area/very difficult Terrain (Months)
a.	400 kV D/C Quad Transmission line	38	44	48
b.	400 kV D/C Triple Transmission line	36	42	46
c.	400 kV D/C Twin Transmission line	34	40	44
d.	400 kV S/C Twin Transmission line	30	36	40
e.	220 kV D/C Twin Transmission line	34	40	44
f.	220 kV D/C Transmission line	30	36	40
g.	220 kV S/C Transmission line	26	32	36
h.	132 kV Transmission Line	22	28	32
i.	New 400 kV AC Sub-Station	30	33	36
j.	New 220 kV AC Sub-Station	24	27	30
k.	New 132 kV AC Sub-Station	16	19	22

**Notes:**

- (i) In case a scheme having combination of the above mentioned types of projects, the qualifying time schedule of the activity having maximum time period shall be considered for the scheme as a whole.
- (ii) In case a transmission line falls in plain as well as in hilly terrain/snow bound area/very difficult terrain, the composite qualifying time schedule shall be calculated giving proportional weightage to the line length falling in each area.

## Appendix – II : Depreciation Schedule

[Refer to Regulation 28(4)]

Sr. No.	Asset Particulars	Depreciation Rate (Salvage Value=10%)
		SLM
A	Land under full ownership	0.00%
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 generation station	3.34%
C	<u>Assets purchased new</u>	
(a)	Pl & Machinery in generation stations	
(i)	Hydro electric	5.28%
(ii)	Steam electric non heat recovery boiler (NHRB) & waste heat recovery	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 siphons	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 generation plant	3.34%
(iii)	Containing hydro-electric generation 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	
(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%



Sr. No.	Assert Particulars	Depreciation Rate (Salvage Value=10%)
(iii)	Synchronous condenser	5.28%
h	Batteries	5.28%
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
i	Overhead lines including cable support	
(i)	Line on fabricated steel operating at terminal voltage higher than 66KV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 KV but not exceeding 66KV	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 fitting	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 telephone	6.33%
(iii)	Fibre Optic	6.33%
p	I. T equipments including software	15.00%
q	Any other assets not covered above	5.28%

### Appendix - III

#### Guidelines for Determination of Normative Annual Plant Availability Factor (NAPAF) of various Hydro Generating Stations

[Refer to second proviso to Regulation 47(1)]

Normative Annual Plant Availability Factor (NAPAF) of various Hydro Generating Stations shall be determined based on following criteria / guidelines:

- (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) In case of Storage and pondage type plants with head variation between Full Reservoir Level and Minimum Draw Down Level of more than 8% and 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 Govt.), shall form basis of fixation of NAPAF.

This has been explained with the following example,

**Installed capacity: 4x250 MW**

Month	Expected Avg. of daily 3-hour peaking capacity
April	701
May	448
June	133
July	497
August	544
September	990
October	1000
November	1000
December	1000
January	1000
February	1000
March	693

Weighted average of expected daily peaking capability= 790 MW

Peaking capacity is based on the assumption that one unit shall be under annual maintenance during month of May, July, February and March.

Considering 2% allowance on plant capacity on account of forced outages during the year, expected average peaking capacity= 770 MW.

Thus, NAPAF=  $770/1000 = 77\%$ .

- (iii) Pondage type plants where plant availability is significantly affected by silt, a margin of 5% has been allowed and NAPAF shall be 85%
- (iv) In case of purely Run-of-river type plants, NAPAF shall be determined plant wise, based on its 90% dependable 10-daily inflows pattern as approved in the DPR of the project.
- (v) A further allowance may be made by the Commission while determining the NAPAF under special circumstances i.e. abnormal silt problem or other operating conditions and known plant limitations.
- (vi) When head variation between FRL and MDDL is more than 8%, following multiplying factors shall be applied:

Multiplying factor for head variation =  $(\text{Head at MDDL} / \text{Rated Head}) \times 0.5 + 0.52$

## Appendix - IV

### Procedure for calculation of Transmission System Availability

[Refer Note (b) to Regulation 61(2)]

- (1) The transmission elements shall be grouped into following categories for the purpose of calculation of availability of Transmission Systems:
  - i) AC transmission lines: Each circuit of AC transmission line shall be considered as one element.
  - ii) Inter-Connecting Transformers (ICTs): Each ICT bank (three single phase transformer together) shall form one element.
  - iii) Static VAR Compensator (SVC): SVC along with SVC transformer shall form one element. However, 50% credit to inductive and 50% to capacitive rating shall be given.
  - iv) Switched Bus Reactor: Each switched Bus Reactor shall be considered as one element.
- (2) The Availability of Transmission system shall be calculated as under:

$$\%SystemAvailabilityforACsystem = \frac{o \times AV_o + q \times AV_q + r \times AV_r + s \times AV_s}{o + q + r + s} \times 100$$

Where

- |                 |    |  |
|-----------------|----|--|
| o               | is | Total number of AC lines.                      |
| AV <sub>o</sub> | is | Availability of o number of AC lines.          |
| q               | is | Total number of ICTs.                          |
| AV <sub>q</sub> | is | Availability of q number of ICTs.              |
| r               | is | Total number of SVCs.                          |
| AV <sub>r</sub> | is | Availability of r number of SVCs.              |
| s               | is | Total number of switched bus reactors          |
| AV <sub>s</sub> | is | Availability of s number switched bus reactors |

- (3) The weightage factor for each category of transmission elements shall be as under:
  - (a) For each circuit of AC line
    - (i) Surge Impedance Loading for Uncompensated line (SIL) multiplied by Circuit Km.
    - (ii) SIL rating for various voltage level and conductor configuration is given below. However, for voltage levels and/or conductor configurations not listed here,

appropriate SIL based on technical considerations may be used for availability calculations under intimation to the beneficiary.

#### SURGE IMPEDANCE LOADING (SIL) OF AC LINES

S.No	Line voltage (kV)	Conductor Configuration	SIL (MW)
1	765	Quad Bersimis	2250
2	400	Quad Bersimis	691
3	400	Twin Moose	515
4	400	Twin AAAC	425
5	400	Quad Zebra	647
6	400	Quad AAAC	646
7	400	Tripple Snowbird	605
8	400	ACKC(500/26)	556
9	400	Twin ACAR	557
10	220	Twin Zebra	175
11	220	Single Zebra	132
12	132	Single Panther	50
13	66	Single Dog	10

- (b) For each ICT bank – The rated MVA capacity.
- (c) For SVC – The rated MVAR capacity (inductive & capacitive).
- (d) For switched Bus reactor – The rated MVAR capacity.
- (4) The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of Availability of each category of the Transmission elements are as follows.

$$AV_o \text{ (Availability of } o \text{ no. of AC lines)} = \frac{\sum_{i=1}^o \frac{W_i(T_i - T_{NAi})}{T_i}}{\sum_{i=1}^o W_i}$$

$$AV_q \text{ (Availability of } q \text{ no. of ICTs)} = \frac{\sum_{k=1}^q \frac{W_k(T_k - T_{NAk})}{T_k}}{\sum_{k=1}^q W_k}$$

$$AV_r \text{ (Availability of } r \text{ no. of SVCs)} = \frac{\left[ \sum_{l=1}^r \frac{0.5 \times W_{I_l}(T_{I_l} - T_{NAI_l})}{T_{I_l}} + \sum_{l=1}^r \frac{0.5 \times W_{C_l}(T_{C_l} - T_{NAC_l})}{T_{C_l}} \right]}{\left[ \sum_{l=1}^r 0.5 \times W_{I_l} + \sum_{l=1}^r 0.5 \times W_{C_l} \right]}$$

$$AVs \text{ (Availability of } s \text{ no. of Switched Bus Reactors)} = \frac{\sum_{m=1}^s \frac{W_m(T_m - T_{NA\ m})}{T_m}}{\sum_{m=1}^s W_m}$$

Where  $W_i$  = Weightage factor for  $i$ th transmission line

$W_k$  = Weightage factor for  $k$ th ICT

$W_{il}$  &  $W_{cl}$  = Weightage factors for inductive & capacitive operation of  $l$ th SVC

$W_m$  = Weightage factor for  $m$ th bus reactor

$T_i, T_k, T_{il}, T_{cl}, T_m$  &  $T_n$  - The total hours of  $i$ th AC line,  $k$ th ICT,  $l$ th SVC (Inductive Operation),  $l$ th SVC (Capacitive Operation) and  $m$ th Switched Bus Reactor during the period under consideration (excluding time period for outages not attributable to Transmission Licensee for reasons given in the procedure below in Para 6)

$T_{NAi}, T_{NAk}, T_{NAil}, T_{NAcl}, T_{NAm}, T_{NAn}$  - The non-availability hours (excluding the time period for outages not attributable to Transmission Licensee taken as deemed availability as per the procedure given in Para 5 below) for  $i$ th AC line,  $k$ th ICT,  $l$ th SVC (Inductive Operation),  $l$ th SVC (Capacitive Operation) &  $m$ th Switched Bus Reactor.

- (5) The transmission elements under outage due to following reasons not attributable to the Transmission Licensee shall be deemed to be available:
  - (a) Shut down of Transmission Licensee's transmission elements availed by other agency/agencies for maintenance or construction of their transmission system.
  - (b) Manual tripping of Transmission Licensee's line due to over voltage and manual tripping of switched bus reactor as per the directions of SLDC/RLDC.
- (6) Outage time of Transmission Licensee's transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
  - (a) Outage of elements due to acts of God and force majeure events beyond the control of the Transmission Licensee. However, onus of satisfying the SLDC that element outage was due to aforesaid events and not due to design failure shall rest on the Transmission Licensee. A reasonable restoration time for the element shall be allowed by SLDC and any additional time taken by the Transmission Licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the Transmission Licensee. SLDC may consult the Transmission Licensee or any expert for estimation of restoration time. Circuits restored through ERS (Emergency Restoration

System) shall be considered as available.

- (b) Outage caused by grid incident/disturbance not attributable to the Transmission Licensee, e.g. faults in substation or bays owned by other agency causing outage of Transmission Licensee's elements, tripping of lines, ICTs, HVDC back-to-back stations etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC/RLDC while normalising the system following grid incident/disturbance within reasonable time, the element will be considered not available for whole period of outage and outage time shall be attributable to the Transmission Licensee.
- (7) If the outage of any element causes loss of generation at Central/State Sector Station(s) then the outage period for that element should be deemed to be twice the actual outage period for the day(s) on which such loss of generation has taken place.
- (8) If the outage of any element causes power cut in the area of supply of the distribution licensee, then the outage period for that element shall be deemed to be twice the actual outage period for that day(s) on which such power cut has taken place.
- (9) In case of delay in commissioning of any transmission element beyond the scheduled date given while getting investment plan approved from the Commission, the transmission element shall be deemed to be commissioned from such date and shall be considered to be unavailable due to forced outage for the purpose of calculating the overall availability of the transmission system.

Provided that in exceptional Force Majeure cases where the licensee produces evidence/ reasons to the satisfaction of the Commission that the delay was for reasons beyond its control the delay may be condoned by the Commission to the extent deemed fit by it.

## **Appendix - V**

### **(For Gas based Generating Stations)**

[Refer to Regulation 3(20)(b)(v)]

It is to certify that the (Name of the Station) has fulfilled all the key provisions as prescribed below in accordance with Regulation 3(20) of UERC (Terms and Conditions for Determination of Tariff), Regulations, 2015.

1. All documents as prescribed in Regulation 3(8) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010 have been retained at site and are available at site.
2. All requirements as per Regulation 5 of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010 have been complied.
3. The unit operating capability shall be in conformity to Regulation 14 (2), 14(3), 14(4), 14(5) and 14(7) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010.
4. All requirements as per Regulation 17 and Regulations 9(2), 9(4), 9(9), 9(15), 9(16), 9(18) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations 2010 have been complied for the Steam Turbine.

**Name:**

**(CMD/CEO/MD)**



**(For Hydro based Generating Stations)**

[Refer to Regulation 3(20)(b)(v)]

It is to certify that the (Name of the Station) has fulfilled all the key provisions as prescribed below in accordance with Regulation 3(20) of UERC (Terms and Conditions for Determination of Tariff), Regulations, 2015.

1. All documents as prescribed in Regulation 3(8) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010 have been retained at site and are available at site.
2. All requirements as per Regulation 30(1), 30(2) and 30(5) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010 have been complied.
3. The unit operating capability shall be in conformity to Regulation 32(1), 32(3), 32(4), 32(6) and 32(8) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations - 2010.
4. All requirements as per Regulation 33(6), 33(7) & 33(8) of the CEA Technical Standards for Construction of Electric Plants and Electric Lines Regulations 2010 have been complied for the Hydraulic Turbine.

**Name:**

**(CMD/CEO/MD)**

By Order of the Commission

(Neeraj Sati)  
Secretary  
Uttarakhand Electricity Regulatory Commission