**HARYANA ELECTRCITY REGULATORY COMMSSION**

Bays No. 33-36, Sector-4, Panchkula-134112, Haryana

**Notification**

**The 31st January, 2022**

**Regulation No. HERC/46/2019/2nd Amendment/2022**:- The Haryana Electricity Regulatory Commission, In exercise of the powers conferred on it by section 181 of the Electricity Act 2003 (Act 36 of 2003) and all other powers enabling it in this behalf and after previous publication, makes the following regulations to amend the Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2019.

**Short title, commencement, and interpretation.**

(1) These Regulations may be called the Haryana Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Generation, Transmission, Wheeling and Distribution & Retail Supply under Multi Year Tariff Framework) Regulations, 2019, 2nd Amendment Regulations, 2022.

(2) These Regulations shall come into force on the date of their publication in the Haryana Government Gazette.

(3) These Regulations shall extend to whole of the State of Haryana.

**2.2** Provided that threshold limit has been set by the Commission in its order dated 1st June 2021 stating that the intrastate transmission projects costing Rupees one hundred crores and more (Rs. 100 Crores plus) shall be necessarily developed through global Tariff Based Competitive Bidding (TBCB) only.

**15.3** The fixed cost of generating plant (thermal or hydro) shall include the following elements:

a) Return on Equity (RoE)

b) Interest and financing charges on loan capital

c) Interest on working capital

d) Depreciation

e) Operation and Maintenance Expenses (O&M)

f) Foreign Exchange Rate Variation (FERV) , if any

g) All statutory levies and taxes, if any, including taxes on income / MAT on actual basis.

**20. Return on Equity**

20.1. RoE for generation transmission and distribution, shall be allowed, after adding a premium over the 'Base Rate (BR)' based on the performance (both financial as well as operational parameters) of the power utilities, subject to a cap as under: -

a) Hydro Generators: BR + 6.5% = up to 13 %

Provided that the HEP with pondage or pump storage (PSP) will be eligible for an additional 1% RoE.

b) Generators other than Hydro: BR + 5.5% = up to 12%

c) Distribution Business: BR +7.5% = up to 14%

d) Transmission Business: BR + 4.5% = up to 11%.

Provided that the Base Rate (BR) in these Regulationns shall be construed as last 2 years average rate (as on 1st April of the relevant financial year) of 10 years Government of India bond.

Provided, that the RoE for generation, transmission and distribution businesses , shall be allowed, after adding a premium over the 'Base Rate (BR)' .

Provided furter that RoE shall not exceed 14% in any case. SLDC business shall not be eligible for RoE.

Provided where the tariff is determined for the entire useful life of the project the RoE allowed shall not be normally re-visited during the entire tariff period. Hence, the same shall be determined at 13% with additional 1% for HEPs with pondage or pump storage (PSP) and 12% for generators other than HEPs.

**22. Interest on Working Capital**:

Provided that Interest on Working Capital for generators shall be allowed on the basis average PLF / CUF in lthe preceding 3 years .

Provided further that True up of the interest on working capital shall be limited to the actual interest on working capital

**25. Income Tax**

Income tax / MAT , if any, on the income stream of the generating company or the licensee (transmission, distribution) shall be treated as an expense or a pass-through component in the tariff on actual basis limited to the RoE component only.

**28 (5) Operation and Maintenance Expenses (Generation)**

The norms for O & M expenses (in Rs. Lac per MW) for the existing plants and the plants Commissioned on or after 1st April, 2021 shall accordingly be as under:-

| Plant (Unit) | MYT Control Period | | | | |
|---|---|---|---|---|---|
| | **2020-21** | **2021-22** | **2022-23** | **2023-24** | **2024-25** |
| Panipat TPS (Unit 6) | 46.16 | 48.01 | 49.42 | 50.87 | 52.36 |
| Panipat TPS (Unit 7) | 40.21 | 41.81 | 43.04 | 44.30 | 45.60 |
| Panipat TPS (Unit 8) | 40.21 | 41.81 | 43.04 | 44.30 | 45.60 |
| DCR TPS, Yamuna Nagar (Unit-1) | 35.76 | 37.19 | 38.28 | 39.40 | 40.55 |
| DCR TPS, Yamuna Nagar (Unit-2) | 35.76 | 37.19 | 38.28 | 39.40 | 40.55 |
| Rajiv Gandhi TPS(Unit 1) | 21.65 | 22.52 | 23.18 | 23.86 | 24.56 |
| Rajiv Gandhi TPS (Unit 2) | 21.65 | 22.52 | 23.18 | 23.86 | 24.56 |

**31 (c)** Energy charge rate (ECR) in Rs. per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:-

**(i) In case secondary fuel Oil cost is the part of ECR:**

[[{SHR-(SFCXCVSF) X LPPF}/CVPF]+(SFCXLPSF)]x{100/(100-Aux)}

**(ii) In case secondary fuel Oil cost is not the part of ECR**

[{SHR-(SFCXCVSF) X LPPF}/CVPF]x{100/(100-Aux)}

Where
AUX = Normative auxiliary energy consumption in percentage;
CVPF = Gross calorific value of primary **fuel as received**, in kCal per kg or per litre as applicable;
CVSF = Gross calorific value of secondary fuel in kCal per ml;
ECR = Energy charge rate in Rs. per kWh sent out;
SHR = Normative Station Heat rate in kCal per kWh;
SFC = Normative Specific fuel oil consumption in ml/kWh
LPPF =Weighted average landed price of primary fuel in Rs./kg.
LPSF = Weighted average landed fuel cost of Secondary Fuel in Rs./ml during the month.

**31 (d)** Gross Calorific Value of Primary Fuel:

(1) The gross calorific value for computation of energy charges shall be done in accordance with 'GCV as received' basis.

(2) The generating company shall provide to the beneficiaries of the generating station the details in respect of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc.

Provided that the additional details of the weighted average GCV of the fuel on as received basis used for generation during the period, blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall be provided, along with the bills of the respective month;

Provided further that copies of the bills and details of parameters of GCV and price of fuel such as domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company.

**33.** $K_{cm}$ shall be the weighed average GCV of coal on as received basis for the month in Kcal / Kg.

**34 (3) (iii) Oil Consumption per start up (Kl)**

| Unit Size (MW) | Hot start up | Warm start up | Cold start up |
|---|---|---|---|
| 300 MW | 24Kl | 36 Kl | 60 Kl |
| 600 MW | 36 Kl | 60 Kl | 108 Kl |

**43 & 54.3 Late Payment Surcharge (LPS)**

Application-These rules shall be applicable for payments to be made in pursuance of _

a) Power Purchase Agreements, Power Supply Agreements and Transmission Service Agreements, in which tariff is determined under section 62 of the Act; and

(b) such Power Purchase Agreements, Power Supply Agreements and Transmission Service Agreements that become effective after these rules come into force, in which tariff is determined under section 63 of the Act.

**2. Definitions.–**

(b) "base rate of Late Payment Surcharge" means the marginal cost of funds-based lending rate for one year of the State Bank of India, as applicable on the 1st April of the financial year in which the period lies, plus five percent and in the absence of marginal cost of funds-based lending rate, any other arrangement that substitutes it, which the Central Government may, by notification, in the Official Gazette, specify:

Provided that if the period of default lies in two or more financial years, the base rate of Late Payment Surcharge shall be calculated separately for the periods falling in different years;

(c) "due date" means the date by which the bill for the charges for power supplied by the generating company or electricity trader or for the transmission service provided by a transmission licensee are to be paid, in accordance with the Power Purchase Agreement, Power Supply Agreement or Transmission Service Agreement, as the case may be, and if not specified in the agreement, forty-five days from the date of presentation of the bill by such generating company, electricity trader or transmission licensee;

(d) "Late Payment Surcharge" means the charges payable by a distribution company to a generating company or electricity trader for power procured from it, or by a user of a transmission system to a transmission licensee on account of delay in payment of monthly charges beyond the due date;

**3. Late Payment Surcharge**.- (1) Late Payment Surcharge shall be payable on the payment outstanding after the due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default.

(2) The rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than 3 percent higher than the base rate at any time:

Provided that the rate at which Late Payment Surcharge shall be payable shall not be higher than the rate specified in the agreement for purchase or transmission of power, if any:

Provided further that, if a distribution licensee has any payment including Late Payment Surcharge outstanding against a bill after the expiry of seven months from the due date of the bill, it shall be debarred from procuring power from a power exchange or grant of short-term open access till such bill is paid.

**4. Adjustment towards Late Payment Surcharge**.- All payments by a distribution licensee to a generating company or a trading licensee for power procured from it or by a user of a transmission system to a transmission licensee shall be first adjusted towards Late Payment Surcharge and thereafter, towards monthly charges, starting from the longest overdue bill.

**35. Hydro Power Plants (HEPs) :**

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| Definition of Pumped Storage Hydro Generating Station | Insert Regulation 3.44 (a) | Pumped Storage Hydro Generating Station means a hydro generating station which generates power through energy stored in the form of water energy, pumped from a lower elevation reservoir to a higher elevation reservoir; |
| Definition of "Run-of-River Generating Station" and "Run-of-River Generating Station with pondage" | Insert Regulation 3.47 (a)<br><br>Insert Regulation 3.47 (b) | 'Run-of-River Generating Station' means a hydro generating station which does not have upstream pondage;<br><br>'Run–of-River Generating Station with Pondage' means a hydro generating station with sufficient pondage for meeting the diurnal variation of power demand; |
| Definition of 'Storage Type Generating Station' | Insert Regulation 3.52 (a) | 'Storage Type Generating Station' means a hydro generating station associated with storage capacity to enable variation of generation of electricity according to demand; |
| Definition of 'Useful Life' | Insert Regulation 3.59 (a) | 'Useful Life' in relation to a unit of a generating station, integrated mines, transmission system and communication system from the date of commercial operation shall mean the following: |

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| | | (a) Coal/Lignite based thermal generating station 25 years.<br><br>(b) Gas/Liquid fuel based thermal generating station 25 years.<br><br>(c)AC and DC sub-station 25 years.<br><br>(d)Gas Insulated Substation (GIS) 25 years.<br><br>(e) Hydro generating station including pumped storage hydro generating stations 40 years.<br><br>(f) Transmission line (including HVAC & HVDC) 35 years.<br><br>(g) Communication system 15 years<br><br>Provided that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission on case to case basis;<br><br>Provided further that the depreciation schedule (Appendix II) shall be accordingly aligned in case the useful life, as per the present amendment, is different from the said schedule. |
| Multi-Purpose Hydro | Insert Regulation 18 (9) | In case of multi-purpose hydro schemes, with irrigation, flood control and power components, the capital cost chargeable to the power component of the scheme only shall be considered for determination of tariff. |
| Initial Spares- Part of capitalization | Amend Regulation 18 (2)(e)<br><br>3. Hydro Generation Plants 1.50**%** | 3.Hydro generating stations including pumped storage (PSP) hydro generating station 1.5% |
| Interest on Working Capital | Amend Regulation 22.1– Generation Company-III Hydro power plants:<br><br>a) Normative operation and maintenance expenses for 1 (one) month<br>b) Maintenance spares **@ 7.5%** of normative operation and maintenance expenses;<br>c) Receivables equivalent to fixed cost for **2 (two) months** | For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:-<br><br>(i) Receivables equivalent to 1 month of annual fixed cost;<br>(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and<br>(iii) Operation and maintenance expenses, including security expenses for one month |

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| Operation and Maintenance expenses | Amend Regulation 34.4<br><br>a) The Operation and Maintenance expenses including insurance shall be derived on the basis of the average of the actual Operation and Maintenance expenses for the three (3) years ending March 31,2018, subject to prudence check by the Commission.<br>b) The average of such operation and maintenance expenses shall be considered as operation and maintenance expenses for the financial year ended March 31,2020 and shall be escalated at the **escalation factor** of **4%** to arrive at operation and maintenance expenses for subsequent years of the control period. Alternatively, the Commission may peg O&M expenses for the first year of operation at 2% of the project cost admitted by the Commission (excluding cost of rehabilitation and resettlement works and any other cost that may be disallowed by the Commission including on account of delay in CoD).<br>c) The O&M expenses for each subsequent year will be determined by escalating the base expenses determined above, at the escalation factor of 4%. | (b) In case of the hydro generating stations declared under commercial operation on or after 1.4.2019, operation and maintenance expenses of first year shall be fixed at 3.5% and 5.0% of the original project cost (excluding cost of rehabilitation & resettlement works, IDC and IEDC) for stations with installed capacity exceeding 200 MW and for stations with installed capacity less than 200 MW, respectively.<br>(c) In case of hydro generating stations which have not completed a period of three years as on 1.4.2019, operation and maintenance expenses for 2019-20 shall be worked out by applying escalation rate of 2.93% on the applicable operation and maintenance expenses as on 31.3.2019. The operation and maintenance expenses for subsequent years of the tariff period shall be worked out by applying escalation rate of 2.93% per annum. |

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| Pumped Storage Hydro Generating Stations | Insert Regulation 34.5 | Separate norms for Computation and Payment of Capacity Charge and Energy Charge for Pumped Storage Hydro Generating Stations.<br>Computation and Payment of Capacity Charge and Energy Charge for Pumped Storage Hydro Generating Stations:<br>(1) The fixed cost of a pumped storage hydro generating station shall be computed on annual basis, based on norms specified under these regulations, and recovered on monthly basis as capacity charge. The capacity charge shall be payable by the beneficiaries in proportion to their respective allocation in the saleable capacity of the generating station, i.e., the capacity excluding the free power to the home State:<br>Provided that during the period between the date of commercial operation of the first unit of the generating station and the date of commercial operation of the generating station, the annual fixed cost shall be worked out based on the latest estimate of the completion cost for the generating station, for the purpose of determining the capacity charge payment during such period.<br>(2) The capacity charge payable to a pumped storage hydro generating station for a calendar month shall be:<br>(AFC x NDM / NDY) (In Rupees), if actual Generation during the month is >= 75 % of the Pumping Energy consumed by the station during the month and<br>{(AFC x NDM / NDY) x (Actual Generation during the month during peak hours/ 75% of the Pumping Energy consumed by the station during the month) (in Rupees)}, if actual Generation during the month is < 75 % of the Pumping Energy consumed by the station during the month.<br>Where, AFC = Annual fixed cost specified for the year, in Rupees<br>NDM = Number of days in the month<br>NDY = Number of days in the year<br>Provided that there would be adjustment at the end of the year based on actual generation and actual pumping energy consumed by the station during the year.<br>(3) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary in excess of the design energy plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir, at a flat rate equal to the average energy charge rate of 20 paise per kWh, excluding free energy, if any, during the calendar month, on ex power plant basis. |

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| | | (4) Energy charge payable to the generating company for a month shall be:<br>= 0.20 x {Scheduled energy (ex-bus) for the month in kWh – (Design Energy for the month (DEm) + 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month)} x (100 – FEHS)/ 100.<br>Where,<br>DEm = Design energy for the month specified for the hydro generating station, in MWh<br>FEHS = Free energy for home State, in per cent<br><br>Provided that in case the Scheduled energy in a month is less than the Design Energy for the month plus 75% of the energy utilized in pumping the water from the lower elevation reservoir to the higher elevation reservoir of the month, then the energy charges payable by the beneficiaries shall be zero.<br>(5) The generating company shall maintain the record of daily inflows of natural water into the upper elevation reservoir and the reservoir levels of upper elevation reservoir and lower elevation reservoir on hourly basis. The generator shall be required to maximize the peak hour supplies with the available water including the natural flow of water. In case it is established that generator is deliberately or otherwise without any valid reason, is not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power to its potential or wasting natural flow of water, the capacity charges of the day shall not be payable by the beneficiary. For this purpose, outages of the unit(s)/station including planned outages and the forced outages up to 15% in a year shall be construed as the valid reason for not pumping water from lower elevation reservoir to the higher elevation during off-peak period or not generating power using energy of pumped water or natural flow of water:<br>Provided that the total capacity charges recovered during the year shall be adjusted on pro-rata basis in the following manner in the event of total machine outages in a year exceeds 15%:<br>(ACC)adj = (ACC) R x (100- ATO)/85 Where, (ACC)adj – Adjusted Annual Capacity Charges (ACC) R – Annual Capacity Charges recovered ATO - Total Outages in percentage for the year including forced and planned outages<br>Provided further that the generating station shall be required to declare its machine availability daily on day ahead basis for all the time blocks of the day in line with the scheduling procedure of Grid Code. |

<table>
<tr><th>Particulars</th><th>Existing Provision</th><th>Amended Provision</th></tr>
<tr><td></td><td></td><td>(6) The concerned Load Despatch Centre shall finalize 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.</td></tr>
<tr><td>Auxiliary Energy Consumption (AEC)</td><td>Amend Regulation 34.3<br>The following Auxiliary Energy Consumption shall apply to other Hydro Stations<br>(a) Surface hydro generating stations:<br>i. With rotating exciters mounted on the generator shaft: 0.70%;<br>ii. With static excitation system: 1.00%;<br>(b) Underground hydro generating station:<br>i. With rotating exciters mounted on the generator shaft: 0.90%;<br>ii. With static excitation system: 1.20%</td><td>Separate norms for hydro with Installed Capacity above 200 MW and Installed Capacity upto 200 MW.<br><br>Auxiliary Energy Consumption (AEC):<br><br><table><tr><td>Type of Station</td><td>Installed Capacity above 200 MW</td><td>Installed Capacity upto 200</td></tr><tr><td>Surface</td><td></td><td></td></tr><tr><td>Rotating Excitation</td><td>0.7%</td><td>0.7%</td></tr><tr><td>Static</td><td>1.0%</td><td>1.2%</td></tr><tr><td>Underground</td><td></td><td></td></tr><tr><td>Rotating Excitation</td><td>0.9%</td><td>0.9%</td></tr><tr><td>Static</td><td>1.2%</td><td>1.3%</td></tr></table></td></tr>
<tr><td>NAPAF</td><td>Amend Regulation 34.3 (a) and (b)<br>The following Normative Annual Plant Availability Factor CNAPAF) shall apply to other hydro generating stations for recovery of Annual Fixed Charges:<br>34.3 (a) Storage and Pondage type plants with head variation between Full Reservoir Level (FRL) and Minimum Draw Down Level (MDDL) of up to 80%, and where plant availability is not affected by silt: 90%<br>34.3 (b) In case of storage and pondage type plants with head variation between full reservoir level and</td><td>Normative Annual Plant Availability Factor (NAPAF):(1)The following normative annual plant availability factor (NAPAF) shall apply to hydro generating station:<br><br>(a) 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%;<br>b) In case of storage and pondage type plants with head variation between full reservoir level and minimum draw down level is more than 8% and when 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;</td></tr>
</table>

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| | minimum draw down level is more than **8%** and when 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; | |
| Design Energy | Insert Regulation 34.4.5 | Shortfall in energy charges in comparison to fifty percent of the annual fixed cost shall be allowed to be recovered in six equal monthly instalments. |
| Computation and Payment of Capacity Charge and Energy Charge for Hydro Generating Stations | Amendment of Regulation 34 (4) 2, 34 (2) (4) iii | - |
| | 34(4) 2 The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, excluding free energy, if any, during the calendar month, on ex-bus basis, at the computed energy charge rate. Total energy charge payable to the generating company for a month shall be:<br>Energy Charges = (Energy charge rate in Rs. / kWh) x {Scheduled energy (exbus) for the month in kWh} x (100 – FEHS) / 100 | 44(4) The energy charge shall be payable by every beneficiary for the total energy scheduled to be supplied to the beneficiary, excluding auxiliary energy consumption and free energy to home state, if any, during the calendar month, i.e. on ex-bus basis, at the computed energy charge rate.<br><br>Total energy charge payable to the generating company for a month shall be:<br><br>Energy Charges = (Energy charge rate in Rs. / kWh) x {scheduled energy up to saleable energy (exbus) for the month in kWh} x (100 – FEHS) / 100 |
| | 34(4) iii In case the energy charge rate (ECR) for a hydro generating station, computed as per clause (5) of this Regulation exceeds one hundred and twenty paise per kWh, and the actual saleable energy in a year exceeds { DE x ( 100 – AUX ) x ( 100 – FEHS | 34(4) iii In case the energy scheduled, in any month, exceeds design energy, such secondary energy , if scheduled by the beneficiary, shall be billed at Rs. 0.90 / kWh.<br><br>Provided that no payments shall be made / claimed for deemed generation for water spillage or for that matter any other reasons.<br><br>Provided further that no payments / incentives shall be made / payable for secondary unless the same is actually |

| Particulars | Existing Provision | Amended Provision |
|---|---|---|
| | )/10000} MWh, the energy charge for the energy in excess of the above shall be billed at one hundred and twenty paise per kWh only. | scheduled and drawn by the Haryana distribution licensees. |

**45.3 Operation and Maintenance Expenses (Transmission Business)**

The actual audited Employee cost (excluding terminal liabilities) and A&G expenses for the financial year preceding the base year, subject to prudence check, shall be escalated at the **escalation factor of 2.93%** to arrive at the Employee cost (excluding terminal liabilities) and A&G expenses for the base year of the control period. The O&M expenses for the nth year of the control period shall be approved based on the formula given below: O&Mn = (R&Mn + EMPn + A&Gn)* (1-Xn) + Terminal Liabilities

Where,

---

**57.4 Operation and maintenance Expenses (Distribution Business)**

The actual audited expenses for the financial year preceding the base year, subject to prudence check, shall be escalated at the **escalation factor of 2.93%** to arrive at the Employee Costs and Administrative and General Costs for the base year of the control period. The O&M expenses for the nth year of the control period shall be approved based on the formula given below.

O&Mn = (R&Mn + EMPn + A&Gn)* (1-Xn) + Terminal Liabilities

Where :

_____

By the order of the Commission
(Sd.)…,
Director/Tariff
HERC

The 31st January, 2022.