



# THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

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GOVERNMENT OF ASSAM  
ORDERS BY THE GOVERNOR  
ASSAM ELECTRICITY REGULATORY COMMISSION

## NOTIFICATION

The 25th August, 2015

## ADDENDUM

**No. AERC. 396/2012/Pt.-III/4.**-Assam Electricity Regulatory commission (Terms and Conditions for determination of Multi Year tariff) Regulations, 2015 issued vide notification No. AERC.396/2012/Pt.-II/13 dated 2<sup>nd</sup> of June, 2015 inadvertently omitted the following Annexures to the Regulations which are now to be added as follows:

(1) Ref. Regulation 33.4 (Page 643):

Annexed as Appendix I to these Regulations at page 695.

(2) Ref. Regulation 71.2 (Page 676):

Annexed as Appendix II to these Regulations at page 697.

**S.K. Roy**  
Secretary,  
Assam Electricity Regulatory Commission

## **Appendix I**

### **Depreciation Schedule**

Sr. No.	Asset Particulars	Depreciation Rate (Salvage Value=10%)
		<b>SLM</b>
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 generating station	3.34%
C	Assets purchased new	
a.	Plant & Machinery in generating stations	
(i)	Hydro electric	5.28%
(ii)	Steam electric NHRB & waste heat recovery boilers	5.28%
(iii)	Diesel electric and gas plant	5.28%
b.	Cooling towers & circulating water systems	5.28%
c.	Hydraulic works forming part of the Hydro-generating stations	
(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	
(i)	Offices and showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%
(iv)	Temporary erections such as wooden structures	100.00%
(v)	Roads other than Kutcha roads	3.34%
(vi)	Others	3.34%
e.	Transformers, Kiosk, sub-station equipment & other fixed apparatus (including plant foundations)	
(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%

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

## Appendix II

### Procedure for Calculation of Transmission System Availability Factor

1. Transmission system availability factor for a calendar month (TAFM) shall be calculated by the respective transmission licensee certified by the SLDC, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges.
2. TAFM, in percent, shall be equal to  $(100 - 100 \times \text{NAFM})$ , where NAFM is the non-availability factor in per unit for the month, for the transmission system / subsystem.
3. NAFM for A.C. systems / sub-systems shall be calculated as follows :

$$\text{NAFM} = \frac{\sum_{i=1}^L (\text{OH}_i \times \text{Cktkm}_i \times \text{NSC}_i) + \sum_{t=1}^T (\text{OH}_t \times \text{MVA}_t \times 2.5) + \sum_{r=1}^R (\text{OH}_r \times \text{MVAR}_r \times 4)}{\text{THM} \times [\sum_{i=1}^L (\text{Cktkm}_i \times \text{NSC}_i) + \sum_{t=1}^T (\text{MVA}_t \times 2.5) + \sum_{r=1}^R (\text{MVAR}_r \times 4)]}$$

Where,

i = identifies a transmission line circuit;

t = identifies a transformer / Inter connecting transformer (ICT);

r = identifies a bus reactor, switchable line reactor or Static VAR Compensation (SVC);

L = Total number of line circuits;

T = total number of transformers and ICTs;

R = total number of bus reactors, switchable line reactors and SVCs;

OH = Outage hours or hours of non-availability in the month, excluding the duration of outages not attributable to the Transmission Licensee, if any;

Cktkm = Length of a transmission line circuit in km;

NSC = Number of sub-conductors per phase;

MVA = MVA rating of a transformer / ICT;

MVAR = MVAR rating of a bus reactor, switchable line reactor or an SVC (in which case it would be the sum of inductive and capacitive capabilities);

THM = Total hours in the month.

**NAFM for each HVDC system shall be calculated as follows :**

$$\text{NAFM} = [\sum (\text{TCR} \times \text{hours})] \div [\text{THM} \times \text{RC}]$$

Where

TCR = Transmission capability reduction of the system in MW

RC = Rated capacity of the system in MW.

For the above purpose, the HVDC terminals and directly associated EHV / HVDC lines of an HVDC system shall be taken as one integrated system.

4. The transmission elements under outage due to following reasons shall be deemed to be available:
  - i. Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the transmission licensee, the SLDC may restrict the deemed availability period to that considered reasonable by it for the work involved.
  - ii. Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of SLDC.
5. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
  - i. 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 with the Transmission Licensee. A reasonable restoration time for the element shall be considered 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 reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.
  - ii. 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 the Transmission Licensee's elements, and tripping of lines, ICTs, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC while normalizing the system following grid incident/disturbance within reasonable time, the element will be considered not available for the period of outage after issuance of SLDC's direction for restoration.

**Note 1:** The detailed computation of availability shall include all details of the input data, methods of recording the data (manual or through electronic modes), formula used for computation and all other details required to establish the current level of availability.

**Note 2:** The level of availability reported by the Transmission Licensee to the Commission should also include a certification from the SLDC, validating the indicated level of availability.

**S.K. Roy,**  
Secretary,  
Assam Electricity Regulatory Commission