

# Uttarakhand Electricity Regulatory Commission

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## Notification

July 16, 2007

No. F-9(18)/RG/UERC/2007/362 In exercise of powers conferred under 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.

### Chapter 1: Preliminary

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

- (1) These Regulations may be called the Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Bagasse based Co-generation Projects) Regulations, 2007.
- (2) These Regulations extend to the whole of the State of Uttarakhand.
- (3) These shall come into force on the date of their publication in the official Gazette, and unless reviewed earlier or extended by the Commission, shall remain in force for a period of 5 years.

#### 2. Scope and extent of application

- (1) Where tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government, the Commission shall adopt such tariff in accordance with the provisions of the Electricity Act, 2003.
- (2) These regulations shall apply in all other cases where tariff for the Bagasse based Co-generation projects located in Uttarakhand is to be determined by the Commission based on capital cost.

#### 3. Definitions

- (1) 'Act' means the Electricity Act, 2003 (36 of 2003).
- (2) 'Additional Capitalisation' means the capital expenditure actually incurred after the date of commercial operation of the generating station and admitted by the Commission after prudence check subject to provisions of regulation 15.

- (3) 'Annual PLF' means the PLF corresponding to a period of 1 Year.
- (4) 'Authority' means Central Electricity Authority referred to in section 70 of the Act.
- (5) 'Auxiliary Energy Consumption' in relation to a period means the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within the generating station, and shall be expressed as a percentage of the sum of gross energy generated at generator terminals of all the units of the generating station.
- (6) 'Beneficiary' in relation to a generating station means the person buying power generated at such a generating station on payment of Annual Fixed Charges.
- (7) 'Commission' means Uttarakhand Electricity Regulatory Commission.
- (8) 'Generation business' means the regulated activities of generation of electricity and does not include any other business or activities of the generating company like sugar production, consultancy, telecommunication, etc.
- (9) 'Cut off Date' means the date of first financial year closing after one year of the date of commercial operation of the generating station.
- (10) 'Date of Commercial Operation or COD' in relation to a unit means date declared by the generator after demonstrating the Maximum Continuous Rating (MCR) or Installed Capacity (IC) through a successful trial run, after notice to the beneficiaries, and in relation to the generating station the date of commercial operation means the date of commercial operation of the last unit of the generating station.
- (11) 'Existing Generating Station' means a generating station declared under commercial operation from a date prior to 1.4.2007.
- (12) 'Gross Calorific Value' or 'GCV' in relation to a power generating station means the heat produced in kCal by complete combustion of one kilogram of fuel.
- (13) 'Gross Station Heat Rate' or 'GSHR' means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals.
- (14) 'Historical cost of the asset' means the original cost of creation of the asset excluding that portion of the cost thereof, if any, that has been met directly or indirectly by any other person or authority through grants, gifts, subsidies, etc.

- (15) 'Infirm power' means electricity generated prior to commercial operation of the unit of a generating station.
- (16) '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 approved by the Commission from time to time.
- (17) 'Maximum Continuous Rating' or 'MCR' in relation to a unit of the bagasse based power generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a unit or block of a combined cycle bagasse based power generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water/steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions.
- (18) 'Operation and Maintenance Expenses' or 'O&M Expenses' means the expenditure incurred on operation and maintenance of the generating station, including part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads.
- (19) 'Original Project Cost' means the actual expenditure incurred by the generating company, as per the original scope of the project up to the first financial year closing after one year of the date of commercial operation of the last unit as admitted by the Commission for determination of tariff.
- (20) 'Plant Load Factor' or 'PLF' for a given period, means the total sent out energy (ESO) 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:

$$PLF = \frac{10 \times ESO}{\{IC \times (100 - AUXn) \times h\}}$$

where,

IC = Installed Capacity of the generating station in MW,

ESO = Total Energy sent out (in kWh) during the period,

AUXn = Normative Auxiliary Energy Consumption as a percentage of gross generation,

h = Number of hours in the period.

- (21) 'Project' means a bagasse based power generating station.
- (22) 'State Government' means the Government of Uttarakhand.
- (23) 'Unit' in relation to a bagasse based power generating station means steam generator, turbine-generator and auxiliaries, or in relation to a combined cycle power generating station, means turbine-generator and auxiliaries.
- (24) 'Year' means a financial year.
- (25) Words or expressions used in these regulations and not defined herein but defined in the Electricity Act, 2003 shall have the meaning assigned to them under the Electricity Act, 2003.

## **Chapter 2: General Terms and Conditions for Determination of Tariff for Bagasse based Co-generation projects**

### **4. Application for determination of tariff**

- (1) The generating company may make an application for fixation of tariff in respect of the completed units of the generating stations in such formats and alongwith such information which the Commission may require from time to time.
- (2) In case of a generating station declared under commercial operation on or after 1.4.2007, an application for fixation of tariff shall be made in two stages, namely:
  - (a) A generating company may make an application for determination of provisional tariff in advance of the anticipated date of completion of the project based on the capital expenditure actually incurred up to the date of making of the application or a date prior to making of the application, duly audited and certified by the statutory auditors, and the provisional tariff shall be charged from the date of commercial operation of the respective unit of the generating station.
  - (b) A generating company shall make a fresh application for determination of final tariff based on actual capital expenditure incurred up to the date of commercial operation of the generating station, duly audited and certified by the statutory auditors.
- (3) The generating company shall file with application for determination of tariff duly validated projected annual data for as many years for which it wants the tariff to be fixed but not exceeding 5 years.

## **5. Tariff determination**

- (1) The tariff in respect of a generating station under these regulations shall be determined stage-wise, unit-wise or for the whole generating station.
- (2) For the purpose of tariff, the capital cost of the project shall be broken up into stages and by distinct units forming part of the project. Where the stage-wise or unit-wise break-up of the capital cost of the project is not available and in case of on-going projects, the common facilities shall be apportioned on the basis of the installed capacity of the units. In relation to multi-purpose projects, with sugar, paper and power components, the capital cost chargeable to power component to the project only shall be considered for determination of tariff.

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

- (1) For removal of doubts, it is clarified that the norms of operation specified under these regulations are the ceiling norms and this shall not preclude the Generating Company and the beneficiaries from agreeing to improved norms of operation and in case the improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

## **7. Tax on Income**

- (1) Tax on the income streams of the generating company from its generation business subject to a maximum tax leviable on Return on Equity, shall be computed as an expense and shall be recovered from the beneficiaries.
- (2) Any under-recoveries or over-recoveries of tax on income shall be adjusted every year on the basis of income tax assessment under the Income-Tax Act, 1961 as certified by the statutory Auditors.

Provided that tax on any income stream other than the generation business shall not constitute a pass through component in the tariff and tax on such other income shall be payable by the generating company.

Provided further that the generating station-wise profit before tax as estimated for a year in advance, shall constitute the basis for distribution of the corporate tax liability to all the generating stations.

Provided further that the benefits of tax-holiday as applicable in accordance with the provisions of the Income-Tax Act, 1961 shall be passed on to the beneficiaries.

Provided further that in the absence of any other equitable basis, the credit for carried forward losses and unabsorbed depreciation shall be given in the proportion as provided in the second proviso to this regulation.

Provided further that the income-tax allocated to the generating station shall be charged to the beneficiaries in the same proportion as Annual Capacity charges.

## **8. Tax Escrow Mechanism**

- (1) The beneficiaries shall maintain an interest bearing tax escrow account in a scheduled bank, to which all amounts of interest shall be credited.
- (2) The tax liability shall be estimated two months before the commencement of each year and intimated to the beneficiaries. The generating company shall endeavour to minimize its liability on account of taxes recoverable from the beneficiaries.
- (3) The generating company shall be authorised to withdraw the amounts for settling the income-tax liability on presentation to the escrow holder, a certificate from their statutory auditors that the amounts are immediately due and payable to the taxing authority.
- (4) The generating company shall pay into the tax escrow account any refund received from the taxing authority.
- (5) The refunds, if any, shall not be paid back to the beneficiaries and shall be adjusted in the escrow account. Any balance due or returnable shall be rolled over to the next year.
- (6) The Escrow Accounts shall be reflected in the books of accounts of the beneficiaries as their bank account.

## **9. Recovery of Income Tax**

Recovery of Income Tax shall be done directly by the generating company from the beneficiaries without making any application before the Commission.

Provided that in case of any objections by the beneficiaries to the amounts claimed on account of income tax, the generating company may make an appropriate application before the Commission for its decision.

## Chapter 3: Norms of Operation

### 10. Target Annual PLF for recovery of full Capacity (Fixed) charges

PLFn =45%

### 11. Normative Gross Station Heat Rate

GSHRn=3300 kCal/kWh

### 12. Normative Auxiliary consumption

AUXn= 8.50% of energy generated

### 13. Normative Gross Calorific Value of Bagasse

GCVn= 2275 kCal / kg

### 14. Capital Cost

- (1) Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined based on the admitted capital expenditure by the Commission based on details of each project, but subject to a maximum ceiling of Rs. 3.5 Crore/MW including the cost of dedicated transmission line and the cost of the electrical bay at the receiver's end and shall include capitalised initial spares subject to the ceiling norms of 1.5% as a percentage of the original project cost as on the cut off date.

#### Note

The scrutiny of the project cost estimates by the Commission shall be limited to the reasonableness of the capital cost, financing plan, interest during construction, use of efficient technology and such other matters for the purposes of determination of tariff.

### 15. Additional capitalisation

- (1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation up to the cut off date may be admitted by the Commission subject to prudence check.
  - (a) Deferred liabilities,
  - (b) Works deferred for execution,

- (c) Procurement of initial capital spares in the original scope of works subject to ceiling specified in regulation 14,
- (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 original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.

- (2) Subject to the provisions of sub-regulation (3) of this regulation, 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) Deferred liabilities relating to works/services within the original scope of work,
  - (b) Liabilities to meet award of arbitration or in compliance of the order or decree of a court,
  - (c) On account of change in law, and
  - (d) Any additional works/services which has become necessary for efficient and successful operation of the generating station, but not included in the original capital cost.
- (3) Any expenditure incurred on acquiring minor items/assets like tools and tackles, personal computers, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, T.V, washing machines, heat-convectors, mattresses, carpets, etc. brought after the cut off date shall not be considered for additional capitalization for determination of tariff with effect from 1.4.2007.

**Note**

The list of items is illustrative and not exhaustive.

- (4) Impact of additional capitalisation in tariff revision may be considered by the Commission twice in a tariff period, including revision of tariff after the cut off date.

**Note 1**

Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio arrived at in the manner indicated in regulation 17(1).

**Note 2**

Any expenditure on replacement of old assets shall be considered after writing off the gross value of the original assets from the original capital cost, except such items as are listed in sub-regulation (3) of this regulation.

**Note 3**

Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 17(1).

**Note 4**

Any expenditure admitted by the Commission on renovation and modernization and life extension shall be serviced on normative debt-equity ratio specified in regulation 17(1) after writing off the original amount of the replaced assets from the original capital cost.

**16. Sale of Infirm power**

Any revenue (other than the recovery of fuel cost) earned by the generating company from sale of infirm power, shall be taken as reduction in capital cost and shall not be treated as revenue.

**17. Debt-Equity Ratio**

- (1) In case of all generating stations, debt-equity ratio as on the date of commercial operation shall be 70:30 for determination of tariff. Where equity employed is more than 30%, the amount of equity for determination of tariff shall be limited to 30% and the balance amount shall be considered as the normative loan.

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

- (2) The debt and equity amounts arrived at in accordance with sub-regulation (1) shall be used for calculating interest on loan, return on equity and Advance Against Depreciation.

## Chapter 4: Computation of Capacity (Fixed) Charges

### 18. Components of Tariff

- (1) Tariff (in Rs./kWh) for sale of electricity from a bagasse based power generating station shall comprise of two components, namely, rate of capacity (fixed) charges and rate of energy (variable) charges.
- (2) The annual capacity (fixed) charges shall consist of:
  - (a) Interest on loan capital;
  - (b) Depreciation, including Advance Against Depreciation;
  - (c) Return on equity;
  - (d) Operation and maintenance expenses; and
  - (e) Interest on working capital.
- (3) The energy (variable) charges shall cover fuel cost.

### 19. Interest on loan capital

- (1) Interest on loan capital shall be computed loan-wise including on the loans arrived at in the manner indicated in regulation 17(1).
- (2) The loan outstanding as on 1.4.2007 shall be worked out as the gross loan as per sub-regulation (1) above minus cumulative repayment as admitted by the Commission up to 31.3.2007. Future repayments shall be worked out on normative basis.
- (3) The generating company shall make every effort to swap the loan as long as it results in net benefit to the beneficiaries. The costs associated with such swapping shall be borne by the beneficiaries.
- (4) The changes to the loan terms and conditions shall be reflected from the date of such swapping and benefit passed on to the beneficiaries.
- (5) In case of any dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment as ordered by the Commission to the generating company during pendency of any dispute relating to swapping of loan.

- (6) In case any moratorium period is availed of by the generating company, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and the interest on loan capital shall be calculated accordingly.
- (7) The generating company shall not make any profit on account of swapping of loan and interest on loan.

## **20. Depreciation**

- (1) The value base for the purpose of depreciation shall be the historical cost of the asset.
- (2) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix I to these regulations.
- (3) The residual life of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset.
- (4) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.
- (5) Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on *pro-rata* basis.

## **21. Advance against depreciation (AAD)**

In addition to allowable depreciation, generating company shall be entitled to an advance against depreciation, computed in the manner given hereunder.

AAD = Loan repayment amount as per regulation 19(2) subject to a ceiling of 1/10<sup>th</sup> of loan amount as per regulation 17(1) minus depreciation as per schedule.

Provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year;

Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

## **22. Return on Equity**

- (1) Return on equity shall be computed on the equity base determined in accordance with regulation 17 and shall be @ 14% per annum.

Explanation:

The premium raised by the generating company while issuing share capital and investment of internal resources created out of free reserve of the existing generating station, if any, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such share capital, premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station and forms part of the approved financial package.

## **23. Operation and Maintenance expenses**

- (1) For plants more than 5 years age:
  - (a) The operation and maintenance expenses including insurance, for the existing generating stations which have been in operation for 5 years or more in the base year of 2006-07, shall be derived on the basis of actual operation and maintenance expenses for the years 2001-02 to 2005-06, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.
  - (b) The average of such normalised operation and maintenance expenses after prudence check, for the years 2001-02 to 2005-06 considered as operation and maintenance expenses for the year 2003-04 shall be escalated at the rate of 4% per annum to arrive at operation and maintenance expenses for the base year 2006-07.
  - (c) The base operation and maintenance expenses for the year 2006-07 shall be escalated further at the rate of 4% per annum to arrive at permissible operation and maintenance expenses for the relevant year of tariff period.

- (2) For plants less than 5 years age:

In case of the bagasse based co-generating stations, which have not been in existence for a period of five years, the base operation and maintenance expenses in the year of commissioning shall be allowed at 3.5% of the actual capital cost subject to a ceiling of Rs.

3.50 crore / MW and shall be escalated at the rate of 4% per annum from the subsequent year to arrive at operation and maintenance expenses for the relevant year.

#### **24. Interest on Working Capital**

- (1) Working Capital shall cover:
  - (a) Cost of bagasse for 1 month;
  - (b) Operation and Maintenance expenses for one month;
  - (c) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation, and
  - (d) Receivables equivalent to two months of fixed and variable charges for sale of electricity.
- (2) Rate of interest on working capital shall be the short-term Prime Lending Rate of State Bank of India as on 1.4.2007 or on 1st April of the year in which the generating unit/station is declared under commercial operation, whichever is later. The interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

#### **25. Capacity (Fixed) Charges**

- (1) Annual Capacity (fixed) charges (AFC) shall cover the components listed in Regulations 18(2).
- (2) Income, other than that through charges permitted by the Commission, and involving utilisation of the generating company's assets may be suitably accounted for by the Commission while determining the tariff.
- (3) Capacity (fixed) charges recoverable shall be worked out on the basis of ex-bus energy delivered / sent out from the generating station upto target PLF only as per the following formula:

Capacity (Fixed) Charges (Rs.) = Rate of Capacity (Fixed) Charges (in Rs./kWh) x Energy delivered (ex-bus) (in kWh) upto Target Annual PLF (PLF<sub>n</sub>)

Where,

Rate of Capacity (Fixed) Charges (RFC) shall be computed as under:

$$RFC (Rs./kWh) = \frac{10 \times AFC}{IC \times \{100 - (AUX_n)\} \times d \times 24 \times PLF_n}$$

Where,

AFC = Annual Capacity (Fixed) Charges in Rs.

IC = Installed Capacity in MW.

$AUX_n$  = Normative Auxiliary Energy Consumption as % of gross generation

d = Number of days in the year

PLF<sub>n</sub> = Target Annual PLF in %

## Chapter 5: Computation of Energy (Variable) Charges

### 26. Energy (Variable) Charges

Energy (variable) charges shall cover fuel costs and shall be worked out on the basis of ex-bus energy delivered/sent out from the generating station as per the following formula:

Energy Charges (Rs.) = Rate of Energy Charges (in Rs./kWh) × Energy delivered (ex-bus) in (kWh)

Where,

Rate of Energy Charges (REC) (in Rs./kWh) shall be the cost of normative quantities of fuel namely bagasse for delivering ex-bus one kWh of electricity and shall be computed as under:

$$REC (Rs./kWh) = \frac{100 \times P_b \times Q_n}{\{100 - (AUX_n)\}}$$

Where,

$P_b$  = Cost of bagasse in Rs./kg as per Regulation 27.

$Q_n$  = Quantity of bagasse required for generation of one kWh of electricity at generator terminals in kg and shall be computed on the basis of normative Gross Station Heat Rate and normative gross calorific value of bagasse as fired and shall be equal to 1.45 kg/kWh.

$AUX_n$  = Normative Auxiliary Energy Consumption as % of gross generation

## 27. Cost of Bagasse

- (1) The cost of bagasse shall be taken in terms of Rs./kg equivalent to heat value of coal (including secondary fuel oil) for GCV of 2275/kg for bagasse as approved by CERC for the corresponding period for the pit head station in the Northern region which yields the highest cost of bagasse and shall be calculated as follows:

$$\text{Cost of Bagasse (Rs./kg)} \quad P_b = \frac{(100 - \text{AUX}_c)}{100} \times \frac{\text{GCV}_n}{\text{GSHR}_c} \times \text{REC}_c$$

Where,

$\text{GSHR}_c$  = Gross Station Heat Rate (normative) for coal based plant (kCal/kWh)

$\text{REC}_c$  = Rate of Energy Charges after  $\text{AUX}_c$  (ex-bus) in coal based plant (Rs./kWh)

$\text{AUX}_c$  = Auxiliary Consumption (normative) in coal based plant (%)

- (2) Adjustment of cost of bagasse on account of Fuel Price Adjustment for Pit Head Stations

Any variation in base value of rate of energy charge determined by CERC is adjusted on month to month basis on the basis of actual Gross Calorific Value and cost of coal or liquid fuel burnt through Fuel Price Adjustment (FPA). The base level of cost of bagasse calculated on the basis of rate of energy charge determined by CERC shall be subject to adjustment on the basis of FPA (in Rs./kWh) for the pit head stations in Northern Region for determining the cost of bagasse.

## Chapter 6: Miscellaneous

### 28. Incentive

In addition to rate of energy charge as calculated above, an incentive shall be payable at the rates approved by CERC for thermal generating stations for ex-bus energy delivered in excess of ex-bus energy corresponding to target Plant Load Factor.

### 29. Savings

Nothing in these regulations shall, expressly or impliedly, 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.

### **30. Powers to Remove Difficulties**

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

### **31. Powers to Relax**

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

By order of the Commission

(Anand Kumar)

Secretary

Uttarakhand Electricity Regulatory Commission

## Depreciation Schedule

Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	Allowed Depreciation (%)
1	2	3	4=2*3
<b>A. Land owned under full title</b>	Infinity	---	
<b>B. Land held under lease:</b>			
(a) For investment in land.	The period of lease or the period remaining unexpired on the Assignment of the lease.	---	
(b) For cost of clearing site	The period of lease remaining unexpired at the date of clearing the site.	---	
<b>C. Assets:</b>			
<b><i>Purchased new :</i></b>			
(a) Plant and machinery in generating Stations including plant foundations			
(i) Hydro-electric	35	2.57	90
(ii) Steam-electric NHRS & Waste Heat Recovery Boilers/Plants	25	3.60	90
(iii) Diesel-electric & gas plant	15	6.00	90
(b) Cooling towers and circulating water systems	25	3.60	90
(c) Hydraulic works forming part of hydro-electric system including:			
(i) Dams, Spilways weirs, canals reinforced concrete Flumes & syphons	50	1.80	90
(ii) Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works.	35	2.57	90
(d) Building & civil engineering works of a Permanent character, not mentioned above :-			
(i) Offices & showrooms	50	1.80	90
(ii) Containing thermo- electric generating plant	25	3.60	90
(iii) Containing hydro- electric generating plant	35	2.57	90
(iv) Temporary erection such as wooden structures	5	18.00	90
(v) Roads other than kutchra roads	50	1.80	90
(vi) Others	50	1.80	90
(e) Transformers, transformer (Kiosk) sub-station equipment & other fixed			

Description of Assets	Useful Life (yrs)	Rate (Calculated w.r.t. 90%)	Allowed Depreciation (%)
apparatus (including plant foundations)			
(i) Transformers (including foundations) having a rating of 100 kilo volt amperes and over	25	3.60	90
(ii) Others	25	3.60	90
(f) Switchgear, including cable connections	25	3.60	90
(g) Lightning arrestors:			
(i) Station type	25	3.60	90
(ii) Pole type	15	6.00	90
(iii) Synchronous condensor	35	2.57	90
(h) Batteries:	5	18.00	90
(i) Underground Cable including joint boxes and disconnected boxes	35	2.57	90
(ii) Cable duct system	50	1.80	90
(i) Overhead lines including supports:			
(i) Lines on fabricated steel operating at nominal voltages higher than 66 KV	35	2.57	90
(ii) Lines on steel supports operating at nominal voltages higher than 13.2 Kilo volts but not exceeding 66 Kilo volts	25	3.60	90
(iii) Lines on steel or reinforced concrete supports	25	3.60	90
(iv) Lines on treated wood supports	25	3.60	90
(j) Meters	15	6.00	90
(k) Self propelled vehicles	5	18.00	90
(l) Air conditioning plants:			
(i) Static	15	6.00	90
(ii) Portable	5	18.00	90
(m) (i) Office furniture and fittings	15	6.00	90
(ii) Office equipments:	15	6.00	90
(iii) Internal wiring including fittings and apparatus	15	6.00	90
(i) Street light fittings	15	6.00	90
(n) Apparatus let on hire:			
(i) Other than motors	5	18.00	90
(ii) Motors	15	6.00	90
(o) Communication equipment:			
(i) Radio and higher frequency carrier system	15	6.00	90
(ii) Telephone lines and telephones	15	6.00	90
(p) Assets purchased second hand and assets not otherwise provided for in the schedule	Such reasonable period as the competent Government determines in each case having regard to the nature, age and condition of the assets at the time of its acquisition by the owner.		