

Regulatory Framework for Distribution ARR and Tariff Determination

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Distribution ARR & Tariff Determination: West Bengal

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LEGAL FRAMEWORKS under E Act 2003

- **Section 61:** Appropriate Commission shall specify terms & conditions for determination of Tariff.
- **Section 62:** Appropriate Commission to determine tariff for:
 - (i) Supply of electricity by GENCO to DISCOMs or in case of shortage may fix max or min ceiling of tariff for a period not exceeding one year;
 - (ii) Transmission of electricity;
 - (iii) Wheeling of electricity;
 - (iv) Retail sale of electricity;
- **Section 63:** Tariff to be adopted by the Commission if discovered under competitive bidding guideline of GoI
- **Section 64:** Specifies procedure & processing of Tariff order
- **Section 82:** SERCs constituted under ERC Act 1998 (14 of 1998) to be continue under this Act.
- **Section 86(4):** SERCs shall be guided by National Electricity Policy, National Electricity Plan and Tariff Policy
- **Section 181:** SERCs to make Regulations under the Act to carry out the provisions of the Act.

REGULATORY DEVELOPMENTS ON TARIFF

| Notification No | Date | Regulations of WBERC |
|-----------------|------------|---|
| 12 / WBERC | 01.03.2004 | WBERC (Conduct of Business) Regulations 2003 |
| 18 / WBERC | 15.06.2004 | WBERC (Tariff) Regulations 2003 |
| 25 / WBERC | 21.11.2005 | WBERC (Terms and Conditions of Tariff) Regulations 2005 |
| 31 / WBERC | 09.02.2007 | WBERC (Terms and Conditions of Tariff) Regulations 2007 |
| 38 / WBERC | 31.12.2007 | WBERC (Terms and Conditions of Tariff) (Amendment) Regulations 2007 |
| 41 / WBERC | 22.05.2009 | WBERC (Terms and Conditions of Tariff) (Amendment) Regulations 2009 |
| 48 / WBERC | 25.04.2011 | WBERC (Terms and Conditions of Tariff) Regulations 2011 |
| 49 / WBERC | 27.08.2012 | WBERC (Terms and Conditions of Tariff) (Amendment) Regulations 2012 |
| 54 / WBERC | 30.07.2013 | WBERC (Terms and Conditions of Tariff) (Amendment) Regulations 2013 |

MYT FRAMEWORK & PROCESS

- **MYT control period** :Decided by the Commission normally be 5 years or as decided
- **MYT petition**: to be submitted 120 days in advance of effective date of control period with all required documents and applicable fees.
- **Publication of gist** by the Licensee inviting suggestions/ objections;
 - No hearing except in case of rejection of the application.
- Commission may seek for any **additional documents and clarifications**;
- Commission may rely on **any other documents published** by Govt. or any other statutory bodies.
 - Commission shall take views of stakeholders (through website)
- Commission can **consider tariff hike in PPC** if noticed after application is made.
 - Commission shall take views of stakeholders (through website)

- Commission determines the Tariff within 120 days from receipt of composite application
 - Tariff of the 1st ensuing year of the control period;
 - ARR of all the ensuing years of the control period;
 - Approve the perspective plan for the control period;

- In general ARR admitted in MYT petition is not changed except under the conditions listed in Regulations 2.5.3 of the Tariff Regulations

- Before starting of any ensuing year of the control period Commission will determine the Tariff order for that year
 - considering the approved ARR and
 - adjustment on account of APR & FPPCA (truing up of previous years)

- State Govt. may provide subsidy to any consumer category u/s 65 of the Act on the tariff determined by the Commission. [- *to be shown separately in consumer's bill*]

- Licensee shall realise monthly fuel surcharge as per formula in Tariff Regulations.

MAJOR TARIFF COMPONENTS OF DISCOM

| SI No | ARR component | WBSEDCL | CESC |
|-------|---------------------------------------|---------|------|
| 1 | Power Purchase cost | 67% | 54% |
| 2 | Network & System operation charges | 11% | 0% |
| 3 | Employee expense | 8% | 13% |
| 4 | O&M expenses (R&M and A&G) | 7% | 9% |
| 5 | Depreciation | 3% | 9% |
| 6 | Interest on Loan & Finance charge | 3% | 6% |
| 7 | Interest on consumer security deposit | 1% | 3% |
| 8 | Interest on working capital | 0% | 0% |
| 9 | Return on Equity | 2% | 9% |
| 10 | Others | 1% | 0% |
| 11 | Tax | 0% | 0% |
| 12 | Less: Non Tariff Income | -3% | -2% |
| | Total | 100% | 100% |

1. POWER PURCHASE COST

- **Load forecast** : for each consumer category demand and energy based on
 - Trend analysis (generally CAGR & recent trend) of consumer no, connected load & consumption;
 - Seasonal average load curve based on previous years hourly load data and consumer growth;
- **Power available from existing PPAs**
 - Considering plant availability (peak & off-peak hrs) in previous years as well as planned s/d;
 - Both base load, peak-support, RPOs
- **Hourly LGB curve for each season of each ensuing year;**
 - Identify surplus and short fall areas;
 - Plan for mitigating shortfall and utilising surplus;
- **Power purchase cost determination**
 - Requirement as per Energy balance
 - Identify the sources based on Merit order despatch (except radial and must run)
 - Consider latest admitted tariff u/s 62 or 63
 - Consider last years avg peak and off-peak rate in IEX for Short-term power
- **Sale of incidental surplus:** at average power purchase cost

2. EMPLOYEE COST

- **Basis:** This covers salaries & wages of employees, staff welfare exp, terminal benefits, director's remuneration & fees and cost towards terminal benefit funds under statutory obligation. No incentive

- **No of employee:** Avg no of employee in FY considering recruitment and retired
 - There are man/MW ceiling for GENCO and man/ckm ceiling for TRANSCO
 - However no such ceiling for DISCOM (licensee has to justify the manpower)

- **For Govt enterprises:**
 - Per employee basic, DA, HRA, welfare exp are determined from last audited figures
 - Per-employee basic, DA for ensuing years is allowed based on Govt. notifications
 - Per-employee HRA, welfare expenses allowed as % of basic (same as last audited a/c)
 - Total employee cost determined with admitted no of employee.
 - Terminal benefit allowed and cost of fund based on prudence check.

- **For private utilities:** per-employee cost in last audited a/c is increased by CPI and then multiplied with admitted no of employee to get total employee cost.

- **For contracted manpower** using CPI over per-employee cost of audited data.

3. O&M EXPENSES

A. REPAIR & MAINTENANCE

- **Basis:** All R&M expenses including consumables in the accounts of previous years to identify the allowable expenses. Any specific expenses are kept out

- **Business volume parameter:**
 - Consumer numbers in LT mobile maintenance;
 - Distribution line length is considered as BVP for rest of R&M expenditure

- **Inflation index:** Hybrid index (CPI : WPI at 40:60) or CAGR of previous years R&M, whichever less

- **Projection of R&M for ensuing year:**
 - 'allowable R&M per unit of BVP in last year increased by inflation index' X projected BVP
 - If CAGR is considered, then allow some additional margin of 10%.

B. ADMINISTRATIVE & GENERAL EXPENSE

- **Basis** : rent, lease, legal chare, consultancy exp, auditors, fees, security exp, telephone bills, call centers, collection franchise & other overheads from previous years audited a/c. excluding one time expense/ specific expense.

- **Business volume parameters:**
 - Consumer numbers for call centre, legal charge, collection & metering franchise, etc
 - Distribution line length for security expense, rent, auditor's exp, etc

- **Inflation index:** WPI, HI and CPI depending upon nature of expenditure or the CAGR of past audited data, whichever is less

- **Projection for different A&G elements for ensuing year:**
 - 'allowable cost per unit of BVP in last year increased by inflation index' X projected BVP
 - If CAGR is considered, then allow some additional margin of 10%.

4. DEPRECIATION

- **Basis:** Depreciation on historical value of asset. Assets to be depreciated upto 90%. On full loan repayment rest asset value after adjustment of cumulative Depreciation and ADD shall be spread over the useful life.

- **Assets to be capitalised during the year:**
 - Licensee provides plan for capital expenditure as a part of perspective plan with MYT
 - Licensee provides capitalisation schedule (in gross terms i.e HT line, LT line, S/stn, etc)
 - Table specifying CWIP vis-à-vis capitalisation for previous, base and ensuing years;
 - Commission admits the amount of capitalisation based on past performance.

- **Total depreciable asset:**
 - Gross asset value as on 31st March of audited a/c comes to opening gross block;
 - Addition of asset during the year based on approved capitalisation during the year;
 - Reducing this by fully depreciated assets upto previous year to arrive depreciable asset;

■ Different class of assets:

- Licensee provides asset class segregation in specified Form
- If approved capitalisation is less than projected capitalisation, then it is segregated on pro-rata basis as proposed for new assets.

■ Determination of Depreciation amount:

- By applying specified rates to each class of assets (on average of opening & closing).
- Deduct proportionate depreciation for inoperative assets for more than 3 months continuously.
- Commission admits AAD if depreciation fall short in loan repayment.
- Check whether cumulative depreciation and AAD is not crossing 90% of depreciable asset
- In case depreciation is more than loan repayment interest credit on difference amount @ avg interest rate

■ Challenge for DISCOM tariff:

- Checking individual assets loan repayment to uniformly apply depreciation for rest of the life.

5. INTEREST ON LOAN

- **Basis:** Outstanding balance of all long-term loans to purchase or create fixed assets. Interest at terms of loan. Licensee has to justify if rate is higher of bank's PLR.

- **Amount of outstanding loan:** as reflected in the audited a/c of previous year

- **Amount to fresh loan:**
 - As proposed by the licensee adjusted to the extent approved capitalisation vis-à-vis projected capitalisation.
 - considering at least 70% of approved capitalisation during the year

- **Interest on borrowed capital:**
 - Interest rate as per terms of loan. Any interest beyond bank's PLR needs to be justified.
 - Interest on loan related to specific project under CWIP is booked on capital cost
 - Benefit of rebate is pass through but, penal interest not allowed.

- **Provision of Short –term loan** or temporary accommodation to the extent approved un-realised arrears from consumers. (not arises in recent years)

6. RETURN ON EQUITY

- **Basis:** Equity capital is the sum total of paid up equity capital, preferential shares capital, debentures, bonds and share premium amount along with free reserve which have been used for capitalisation in the core business. Excluding any grant, development reserve or consumer contribution.
- **Rate of Return:** For Distribution 1% higher from CERC rate for Generators.
 - On post tax basis upto 2010-11 and pre-tax basis since 2011-12.
- **Determination of equity base:**
 - a) Equity admitted at the APR for the (n-2) year will be equity capital for 1st April of base (n-1) year
 - b) Add: Equity component of approved CAPEX for the base (n-1) year;
 - c) Equity component on 1st April of ensuing (n) year = (a) + (b);
 - d) Add: proposed equity component for the ensuing (n) year, subject to maximum 30% of **approved capitalisation**.
 - e) Equity component at the end of ensuing (n) year = (c) + (d);
 - f) Admitted Equity base for ROE for ensuing year (n) = average of (c) and (e)
- **Return on equity :** rate of return applied on admitted Equity base for the year.
- **Normative loan :** Equity excess 30% of asset treated as normative loan.

7. INTEREST ON WORKING CAPITAL & CONSUMER SECURITY DEPOSIT

A. INTEREST ON WORKING CAPITAL :

- Base amount : $AFC + \text{Fuel \& PPC} - \text{Depreciation} - \text{ROE} - \text{Deferred revenue expenditures (bad debts, reserve for unforeseen exigencies, etc)}$ – **cash security deposit from consumers**
- Working Capital: 10% of base amount
 - This effectively works out as 36 days equivalent O&M expense, PPC,
- Rate of interest: PLR of SBI as on 1st April of year preceding tariff year
- Truing up: Actual interest on WC paid limited to amount arrived in ARR.

B. INTEREST ON CONSUMER SECURITY DEPOSIT

- Base: Cash security deposit made by consumers as per Miscellaneous Regulations of WBERC
- Interest rate Interest on cash security deposit of 6% per annum

8. INCOME TAX

- Basis: Any direct tax or tax on income is pass through in Tariff
- Licensee shall submit assessment order of the concerned year or other valid documents including applicable auditor's certificate along with application for
 - APR application or
 - Tariff order for subsequent year.
- However the amount of MAT and self assessed Tax as deposited for the concerned year will be allowed without the assessment order.

9. NON TARIFF INCOME

- **Meter rental:** Projected based on approved consumer strength, type of meter and meter rent.
- **Disconnection / reconnection charges:** considering past trends;
- **Income from investments & bank balances:** as proposed.
- **Surcharge for late payment:** as proposed considering past trends
- **Income from jobs at consumer's premises:** considering approved consumer numbers, rate and past trends;
- **Wheeling charge:** energy for wheeling as considered in energy balance and the approved wheeling charge.
- **Cross-subsidy surcharge:** projected from open access consumers, if any.
- **Additional surcharge:** projected from open access consumers, if any
- **Income from ancillary services:** 40% of such income after deduction of all costs,
- **Income from other business:** 2/5th of the revenue after deduction of all costs
- **Other NTI:** as per trend of previous years

CHALLENGES

- Keep tracking of actual capitalisation of assets vis-à-vis book value, specially for a big State DISCOM like WBSEDCL:
 - Total consumer strength: about 1.85 Crores and
 - Total Distribution line length : about 604000 ckm

- Benchmark norms for assets to facilitate standard Tariff Projections

- Identify the inoperative assets

- Issues of ROE adjustment with depreciation after loan repayment is over.

- Handling huge amount of off-line data.

ON GOING DEVELOPMENT

- WBERC is in the process of Amendment of Tariff Regulations

- An ERP based solution is taken up covering:
 - On-line data submission for MYT
 - On-line document uploading;
 - Process flow through system;
 - Archiving previous data;
 - Provides analytical tools with imbedded logics, regulatory principles and scenario analysis for ARR elements
 - Having inter portability with PPA module, Investment approval module, RPO module, etc.

THANK YOU

MAJOR TARIFF COMPONENTS

| SI No | ARR component | DISCOM | GENCO | TRANSCO |
|-------|---------------------------------------|--------|-------|---------|
| 1 | Fuel costs | | 60% | |
| 2 | Power Purchase cost | 67% | | |
| 3 | Network & System operation charges | 11% | 0% | 0% |
| 4 | Employee expense | 8% | 8% | 18% |
| 5 | O&M expenses (R&M and A&G) | 7% | 7% | 9% |
| 6 | Depreciation | 3% | 8% | 19% |
| 7 | Interest on Loan & Finance charge | 3% | 8% | 24% |
| 8 | Interest on consumer security deposit | 1% | | |
| 9 | Interest on working capital | 0% | 1% | 1% |
| 10 | Return on Equity | 2% | 8% | 30% |
| 11 | Others | 1% | | |
| 12 | Tax | 0% | 2% | 7% |
| 13 | Less: Non Tariff Income | -3% | -2% | -7% |
| | Total | 100% | 100% | 100% |