

Bhopal Dated 6 th November, 2004

No-3069-MPERC-04 -In exercise of the powers conferred under Section 181(1) read with 86(1)(b) and 86(1)(g) of the Electricity Act, 2003, the Madhya Pradesh Electricity Regulatory Commission hereby issues the MPERC (Power Purchase and Procurement Process) Regulations, 2004 for compliance by the licensees.

MPERC (Power Purchase and Procurement Regulations), 2004

Part I – General

1. These Regulations shall be called the Madhya Pradesh Electricity Regulatory Commission (Power Purchase and Procurement) Regulations, 2004.
- 1.1 These Regulations shall apply to any person in the territory of the State of Madhya Pradesh.
- 1.2 These Regulations shall come into force from the date of their publication in the Official Gazette.

Part II – Layout of the Regulations

2. The Power Procurement Regulations are divided into two parts (a) Long-term Power Procurement Regulations and (b) Short-term Power Procurement Regulations.

Long-Term Power Procurement Regulations

3. The Long-term Power Procurement Regulations present a framework for long-term forecasting of power demand and supply positions and the need for development of
 - (a) State-owned new generation sources.
 - (b) Power purchase agreements with central sector plants.
 - (c) Power purchase agreements with independent power producers (IPP).

4. For the purpose of the Long-Term Power Procurement Plan, licensee shall consider a time frame of 5 years. Licensee shall approach the Commission every year with its rolling 5-year Long-Term Power Procurement Plan outlining its projections and plans for the coming five-years.

Short-Term Power Procurement Regulations

5. The Short-term Power Procurement Regulations present a framework for short-term forecasting of power demand and supply positions to plan for
 - (a) Short-term power purchase agreements.
 - (b) Annual maintenance schedule of State Generators.
 - (c) Short-term spot trades plan.

6. For the purpose of the Short-Term Power Procurement Plan, licensee shall consider a time frame of one year Licensee shall approach the Commission every year with its Short-Term Power Procurement Plan outlining its projections and plans for the forthcoming year.

Part III – Framework for Power Procurement Planning

7. Licensee shall approach the Commission well in advance of the concerned period with its plans for power generation and procurement and seek explicit approval for undertaking power purchases.

8. The petition of Licensee in this regard must include:

- (a) Projected demand.
- (b) Forecast generation from owned stations and purchases from all stations or sources with which Licensee has long-term PPA's.
- (c) Assessment of the gap.
- (d) Plans with regard to what portion of the gap licensee shall bridge, and the means by which it shall do so.

Part IV – The Long-Term Power Procurement Plan

Long-Term Demand Forecast

9. Licensee shall be responsible for making an assessment of demand for electricity (in MW) for the next five years. The five-year forecast shall include the unrestricted demand forecast for all major categories.

10. For this purpose all categories whose total connected load is more than 5% of total system connected load will be considered a major category and shall include HT Industry, HT Railways, HT Coal Mines, Agriculture, Domestic, SLP, LT Industry, LT Commercial and any other existing, new or merged category.

11. Licensee shall estimate the current demand levels for the Morning Peak hours (06:00-10:00), Evening Peak hours (18:00-22:00), and the remaining Off-peak hours for all categories combined. This estimate shall suitably consider load curtailment plans.

12. The definition of Peak hours may be changed by petition from licensee or by notification by the MPERC.

13. This forecast shall be considered for each year in a 5-year period.

Tools and Techniques to be Used for Forecasting Demand

14. This assessment shall be based on trends and statistical analysis of historical data, future projections and forecasted results of implementation of business plans and efficiency improvement programs, investment plans, maintenance schedules of the self generation plants, the central generating stations and other sources of power.

15. The estimation shall consider the previous year observations, current year projections and econometric and statistical forecasting of demand for the next five years. It shall take into consideration the following among other relevant information and inputs:

- Overall economic growth projections.
- Category-wise forecast for demand growth for five years for morning peak, evening peak and off-peaks.
- Considerations to unrestricted demand and load curtailments.
- Opportunity cost of load curtailment and comparisons with cost of service and the projected marginal cost of power.
- Plans for reducing the requirements in the forecast period through Demand Side Management measures.
- Projected improvements on account of implementation of Business Plans and Efficiency Improvement measures.

Assessment of Availability

16. Along with the demand forecast, licensee shall consider availability of power for the Morning Peak, Evening Peak and Off-peak Periods for all months in the 5-year planning period.

17. The supply forecast shall consider the following among other relevant information and inputs:

- Existing shared resources including state-owned, central owned and IPP owned generating plants.
- Generation with exclusive contracts with the supply licensees.
- Forecast for the plan period of energy and capacity availability from each of the existing sources of power.
- New generation stations due for commissioning.
- Phase out of old stations or extended period of maintenance / upgradation.

Assessment to Involve Consultation

18. Licensee shall make long-term demand and supply availability assessments in consultation with any or all concerned including state sector generating companies, discoms, private distribution licensees, central sector generating companies and transmission companies / Regional Electricity Board, National / Regional Load Dispatch Centers, Central Electricity Authority.

Long-Term Power Procurement Plan

19. On the basis of the above Load Forecast and Assessment of Availability, licensee shall prepare a Long-Term Power Procurement Plan for the next five years.

20. The Long-Term Power Procurement Plan shall consider the balance requirement of power and energy during the plan period after accounting for new stations expected to come on stream from power procurement arrangements already entered into, plans for procuring additional capacity, load curtailments, proposed method of competitive solicitation, including the criteria for evaluation of alternative options.

21. The Long-Term Power Procurement Plan shall be a least cost plan (least financial cost to the licensee), the ultimate objective being to make available secure and reliable power supply at to all consumers with economically viable tariffs while satisfying Power Supply Planning and Security Standards.

21.1 The Licensee shall give month wise details of past years(with year wise totals) indicating power produced by state generators, Central Sector Generating Units, Any other Generator with whom Long term power purchase agreement has been entered into, short term purchases in MU and Lac Rupees along with per unit cost.

21.2 The Licensee will also give the monthwise categorywise sale and losses in his area of operation.

Deadline for Submission of Long-Term Power Procurement Plan

22. The plan for the following year shall be submitted by the 31st day of October each year, duly updating the Long-Term Power Procurement Plan for the previous year as approved by the Commission and included in the annual ARR filing, to take the latest developments into account.

Review by the Commission

23. The Commission may call for such additional information and data as it may deem necessary for reviewing the Long-Term Power Procurement Plan within 2 weeks of receiving the Plan and the Licensee shall furnish such information within 2 weeks of being asked.

24. The Commission may, at its discretion, ask licensee to publish the main details of the Power Procurement Plan in such form and in such manner as the Commission may prescribe, specifying in such notice that any member of the public who desires to file objections, comments or suggestions may do so in the manner indicated in the Conduct of Business Regulations of the Commission. The Commission shall consider such representations.

25. On completion of this process, the Commission shall pass orders accepting the Long-Term Power Procurement Plan with such amendments as it may consider necessary within 60 days from the date of receipt of complete information.

Other Considerations

26. Based on the assessment of requirement, licensee shall effect power purchase or enter into long-term or short-term power purchase agreements or arrangements complying with the criteria to be established with the approval of the Commission. The criteria shall consider the Commission's directives on power purchase, allocation of power from different sources and generation from conventional and non-conventional energy sources within the State.

27. There shall be a mechanism of consultation among licensee, MP Transco, MP Genco and MP Discoms:

- (a) For meeting power shortages
- (b) For providing spinning reserve or frequency control capacity etc
- (c) For spot or bilateral purchase or overdraw / under draw of active and reactive power.
- (d) Other activities related to development of power procurement plan.

28. The criteria for power purchase will in general follow the principle of least cost commensurate with power system stability, system voltage, frequency profile and system losses. The criteria shall also provide for power purchases and load shedding during the under frequency periods.

29. Licensee shall endeavor at all times when the voltage is low, not to import reactive power from the grid. Requirements of reactive compensation in the state power system shall be based mainly on the Regional Electricity Board (REB) or the Regional Load Dispatch Center (RLDC) recommendations.

30. Licensee shall also endeavor not to over-draw from the grid at low frequencies when the UI rate is high.

31. Any new power purchase arrangements and agreements or amendments to existing Power Purchase Agreements (PPA's) entered into by the licensee shall be subject to the prior approval of the Commission in view of necessity, reasonableness of cost of power purchase and promotion of working in an efficient, economical and equitable manner.

Part V – The Short-Term Power Procurement Plan

Overall Framework

32. Licensee shall at all times purchase power from the most economical source and shall undertake the competitive bidding process. For short-term purchases, the Commission shall outline a band of prices for various levels of projected demand so that licensee may undertake short-term purchases expeditiously without needing to consult the Commission every time. However, the Commission may at any time choose to oversee the process in order to ensure that commercial sense and financial prudence is observed at all time. It may also choose to verify the forecast demand and availability that licensee computes and assess the validity of the assumptions made by it.

Assessment of Power Requirement

33. The first step in the process shall be a detailed forecast of demand. licensee shall be responsible for making an assessment of demand for electricity (in MW) for the next one year on a monthly basis. For each month, the demand in the Morning Peak Period, Evening Peak Period and Off-peak Period for unrestricted and restricted demand must be projected for all major categories of consumers. The purpose of this is to forecast the demand in summer, rabi and other season and for any other special reasons (such as festivals, or sudden change in weather impacting demand) so that it is possible to pre-plan procurement.

34. This assessment shall be based on trends and statistical analysis of historical data, future projections and forecasts of results of implementation of business plans and efficiency improvement programs, investment plans, maintenance schedules of the self generation plants, the central generating stations and other sources of power. The analysis must also consider implications of the Electricity Act and possible movement of large consumers to open access and captive generation, parallel operation and open access.

Assessment of Power Availability

35. Along with the demand forecast, licensee shall consider availability of power for the Morning Peak, Evening Peak and Off-peak periods for all months in the ensuing quarter.

36. The supply forecast shall consider the following among other relevant information and inputs:

- Existing shared resources including state-owned, central owned and IPP owned generating plants.
- Generation with exclusive contracts with the supply licensees.
- Forecast for the plan period of energy and capacity availability from each of the existing sources of power.
- New generation stations due for commissioning.
- Trend of frequency in the grid and the possibility of over-drawal without incurring very high UI charges.

Assessment to Involve Consultation

37. Licensee shall also make the assessment of power availability on a monthly basis for peak period, off-peak period and normal period. licensee shall make this assessment in consultation with state sector generating companies, distribution licensees, central sector generating companies and transmission companies / Regional Electricity Board, National / Regional Load Dispatch Centers, Central Electricity Authority. It shall also make enquiries with the Trading Companies and surplus States to estimate the likely availability and price of power across the country for peak, off-peak and normal periods.

Short-Term Power Procurement Plan

38. On the basis of the above Load Forecast, licensee shall prepare an Annual Power Procurement Plan for the forthcoming year and file the same before the MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION for obtaining approval of the Power Procurement Plan.

39. The Short-Term Power Procurement Plan shall consider the balance requirement of power and energy during the year, time when it is required, after accounting for existing arrangements, possibilities of short-term trades, load curtailments, proposed method of competitive solicitation, including the criteria for evaluation of alternative options.

40. The Short-Term Power Procurement Plan shall be a least cost plan (least financial cost to the licensee), the ultimate objective being to make available secure and reliable power supply at to all consumers with economically viable tariffs while satisfying Power Supply Planning and Security Standards.

41. Each annual plan submission shall cover the following for Morning Peak, Evening Peak and Off-peak periods:

- (a) Category-wise unrestricted demand forecast for the coming quarter Morning Peak, Evening Peak and Off-peak periods.
- (b) Category-wise restricted demand forecast for the coming quarter Morning Peak, Evening Peak and Off-peak Periods.
- (c) Forecast for the plan period of energy and capacity availability from each of the existing sources of power.
- (d) Plans for reducing the requirements in the forecast period through Demand Side Management measures.
- (e) Allowed power purchase costs as per the approved ARR of the ongoing year.
- (f) Impact of the above to the ARR filed and approved for the ongoing year in terms of deviations from target purchase and generation of units and on the financial implications of the same.
- (g) Behavior of grid frequency for the past quarter for the ongoing year, current quarter for the ongoing year and the ensuing quarter for the previous year to evaluate possibilities of over-drawing from the grid as a substitute for firm short or long term trade agreements.

42. After approval of the Short-term Power Procurement Plan, the Licensee shall refine and detail it on a month-before and week-before basis. The week-before plan must forecast demand on an hourly basis. These Plans must consider things such likely rainfall, forecasted change of weather, upcoming holiday or festival.

Deadline for Submission of Short-Term Power Procurement Plan

43. The deadlines for submission of Short-Term Power Procurement Plans for the forthcoming 31st October of each year

Review by the Commission

44. The Commission may, within 2 weeks of receipt of the Short-Term Power Procurement Plan call for such additional information and data as it may deem necessary for reviewing it and the Licensee shall furnish such information within 2 weeks from being asked to do so.

45. The Commission shall communicate its views on the Power Procurement Plan within 2 weeks from the date all necessary information requested under the above paragraph has been furnished to the satisfaction of the Commission.. The Commission shall specify a land for cost of power for the forthcoming year under consideration for Morning Peak, Evening Peak and Off-peak periods.

46. Licensee will, then, be free to procure power within such specified limits from any source available as long as a transparent and prudent bidding or institutional mechanism is adopted and commercial considerations are honored.

Criteria for Power Purchases

47. The criteria for power purchase will in general follow the principle of least cost commensurate with power system stability, system voltage, frequency profile and system losses. The criteria shall also provide for power purchases and load shedding during the under frequency periods.

By order of the Commission,

Ashok Sharma, Deputy Secretary

