

# KERALA STATE ELECTRICITY REGULATORY COMMISSION

## THIRUVANANTHAPURAM

### DRAFT

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### GUIDELINES FOR POWER PLANNING AND PROCUREMENT PROCESS

#### **1. Preliminary:**

The cost of power constitutes more than 50% of the total cost of electricity supplied by the distribution licensees in the State. It is the responsibility of distribution licensees to ensure least cost of power so as to minimise the overall cost of supply. With the introduction of trading, gradual development of competitive market for electricity and capability for regional and interregional transfer of power, opportunity exists for distribution licensees to procure power from different sources by analysing the cost.

Section 62 of the Act provides for encouragement of competition, efficiency, economical use of the resources, good performance and optimum investments and safeguarding of consumers' interest. As per Section 86(1), the Commission shall regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State. These provisions enable the Commission to specify procedures for streamlining the power planning and procurement process. Accordingly following guidelines are formulated to provide a framework for ensuring the scheduling and dispatch of power at the lowest cost possible.

#### **2. Forecast of demand**

- a. Every year, the distribution licensee shall make an assessment of demand for power (in MW) and energy (MU) for short term, medium and long term periods adopting a sound methodology. The short term shall cover a

period of one year with monthly forecasts, where as medium term and long term forecasts shall cover a period of five years and ten years respectively on an annual basis. The monthly forecast shall indicate the demand during different periods of the day (peak, off-peak and normal) and the assessment of the seasonal demand which shall be broken down into weekly, daily and hourly forecasts. The Short term forecast shall be integrated in to the medium and long term Forecast. The medium & long term forecast shall cover all consumer categories.

- b. The demand forecast shall take into consideration historical data, changes in market conditions, impact of provisions of law (open access etc.), consumer preferences, investments in the State, impact of load shedding/power cuts and other supply constraints (low voltage, frequency etc.), captive generation and other factors influencing demand including demand side management programmes and energy efficiency.
- c. Licensee shall also study and report on the system load factor and its improvement along with load forecasts.

### **3. Assessment of power availability:**

- a. Along with the demand forecast, the licensee shall prepare power supply plan for meeting the projected demand. The supply plan shall consider among other things the following:
  - Existing plants including state owned, central generating stations, non-conventional sources, captive and IPPs.
  - Availability of power from traders, neighbouring States, Power exchanges and other sources on competitive basis.
  - New generating plants, UMPPs or share due for commissioning
  - Renovation and modernisation, upgradation, phasing out of existing plants
  - Constraints in intra-inter regional/state if any affecting the bulk power transfer and other technical factors.
- b. While assessing the power demand and availability, the licensee shall consult all concerned including State/central Government, state/central

generating stations, IPPs/developers, STUs, CTU State/Regional/National load dispatch centres and Central Electricity Authority.

- c. The licensee shall make all efforts to make enquiries with trading licensees, surplus states and other sources to estimate the likely availability and price of power across the country for all periods.
- d. Based on the assessment of the power availability the licensee shall prepare a power procurement plan as in clause 4.

#### **4. Power procurement plan**

The licensee shall always endeavour to make available power at least cost considering all options available during the following periods.

##### **a. Short term:**

- i) The licensee shall prepare a Short term procurement plan to facilitate arrangements for short term scheduling and or backing down considering:
  - short term power purchase plan
  - annual maintenance schedule of generating stations
  - day ahead/term ahead/spot and other short term trade
- ii) The short term plan shall be the least cost plan strictly following the merit order so as to make available secure and reliable power supply to all consumers with economically viable tariffs while conforming to power supply planning and security standards
- iii) The short term plan shall cover different periods of the day for
  - Restricted and unrestricted demand for power
  - Availability of power from all sources
  - Power purchase/generation costs as per ARR approved by the Commission
  - Adverse impact of cost on the consumers
  - Trend in grid frequency and maintenance of grid discipline
- iv) Except for meeting variations seasonal or daily variations, power supply plan shall be properly secured through contractual agreements for procurement.

- v) The agreements for purchase of power shall be prepared in such a way that flexibility is ensured to leverage from the market conditions. Agreements for purchase of power shall have proper incentive/penalty mechanism to have maximum benefit for the consumers.
- vi) If the Licensee, even after concerted efforts fails to arrange power at reasonable cost, due to high cost or other reasons, the licensee shall report the matter to the Commission as provided in Clause 6(a) with recommendation if any on imposing restrictions on the use of power.

**b. Medium and long term plan**

- i) The objective of the medium term & long term plan shall be :
  - Development and siting of least cost generating plants
  - Power purchase agreements with CGS, UMPPs, IPPs, captive plants and Non-conventional sources
- ii) The medium and long term plan shall be least cost plan so as to make available secure and reliable power supply to all consumers with economically viable tariffs while conforming to power supply planning and security standards

**5. Approval of the plan:**

- a. The Load forecast along with power procurement plan for the ensuing year commencing from the month of April shall be submitted by 30<sup>th</sup> November each year along with ARR.
- b. The long term or medium term plan shall be updated every year so as to take into account the latest developments. All relevant details are to be submitted so as to facilitate the review of the plan.
- c. The additional details if any as required by the Commission for the evaluation of the plan shall be submitted within the reasonable time as may be required by the Commission.
- d. The Commission at its discretion may seek the licensee to publish the details of the forecast and power procurement plan in such form and in such manner as it may order so as to enable the public to file objections or comments or suggestions, to do so in the manner indicated in the Conduct of Business Regulations of the Commission. The Commission shall consider such representations before the approval of the plan.

- e. The Commission shall communicate the approval of the plan as far as possible along with the ARR& ERC of the licensee
- f. To facilitate the approval of the plan, the licensee shall provide following details for the past five years along with the plan before the Commission
  - Month wise details (with year wise total) indicating power produced within the state and purchased from different sources along with detailed costs
  - Month wise category wise sales and losses in the licence area with demand met.

## **6. Procedure for procurement of power**

### **a. Short term**

- The licensee shall have proper mix of long term, medium term and short term (including monthwise or weekly or daily) contractual agreements for procurement of energy for meeting the seasonal and daily variations in demand so as to take advantage of the market conditions.
- Scheduling of power for each month shall be planned in advance taking into consideration availability and cost of power from internal sources and outside, market conditions, expected changes in demand, and cost of power.
- As long as transparent and prudent bidding or institutional mechanism is adopted and commercial considerations are honoured the licensee shall be at liberty to procure power within the specified limit from any source for short term purpose.
- The licensee may undertake short term purchase by entering into contracts for the same on strictly merit order basis.
- Prior approval of the Commission will be necessary for such contracts except for emergency purchases due to natural calamity, failure of generators or transmission lines, which may be got ratified subsequently.

### **Update of monthly procurement procedure:**

- The licensee shall review and update the monthly forecast and power purchase plan after considering changes in demand, availability, cost, market conditions and all other relevant factors.
- The licensee shall evaluate the power position for the subsequent month preferably on the first day of 4<sup>th</sup> week of the current month based on the

expected demand and availability of the generation/purchase from secured resources and other sources on merit order. Merit order stack for each month shall be prepared considering the availability from all sources including internal hydro/thermal sources, power from traders/exchange/neighbouring states/UI etc., Based on such evaluation, the licensee shall update the power purchase and procurement plan to minimise the cost of power.

- The process shall be completed and an updated monthly power plan and procurement plan shall be furnished to the Commission before the commencement of every month.
- After the close of each month, the licensee shall furnish the details to the Commission of actual scheduling of energy along with cost in comparison with the plan.
- If any time during the month, power is available at lower cost from sources such as neighbouring states, traders, exchange/UI etc., the same shall be arranged by deviating from the plan provided merit order principle is followed. The deviation shall be intimated to the Commission with reasons along with the actual details.
- The Commission shall evaluate the procurement plan and may seek clarification if such process is found to be against the principles laid down. In such circumstances, the licensee may be required to substantiate the reasons for such action.
- The Commission after considering the clarification of the licensee, may allow to pass on to the tariff or decline the additional cost of purchase if imprudently incurred as the case may be.
- Short term purchase of power shall be exercised only through transparent competitive bidding process ensuring maximum participation from the sellers of power.

**b. Medium term /long term power procurement procedure**

- Medium term and Long term procurement shall be on competitive bidding procedure guidelines as per Section 63 of the Act by securing the integrity, transparency and effectiveness of the process.
- The power purchase cost of all stations not covered under the above shall be determined by the Commission under section 62.

## **7. Evaluation of Medium and long term Power purchase agreements**

- Any new medium term or long term power purchase agreements and agreements or amendments to existing PPAs entered into by the licensee shall be subject to the approval of the Commission.
- The Commission while approving the proposed agreement shall take into account the following
  - a. Necessity
  - b. Reasonability of cost
  - c. Promoting competition, efficiency and economy
  - d. Conformity with guidelines of investment approval
  - e. Conformity with requirements of quality continuity and reliability of supply
  - f. Conformity with safety and environmental standards
  - g. Conformity with criterion of power purchase as laid down by the Commission
  - h. Conformity with policy directives including national electricity policy, national tariff policy and national power plan

## **8. General conditions**

- While effecting the purchase strict merit order plan shall be adhered to by the licensee all times, by considering availability of power from all possible sources.
- The licensee shall also endeavour not to overdraw from the grid other than the permissible levels duly considering the system stability and applicable regulations so as not to invite penalty.
- The licensee shall endeavour at all times when the voltage is low, not to import reactive power from the grid.

## **9. Intervention in the procurement process**

- Once the licensee begins to implement the procurement process in accordance with these guidelines, the Commission shall issue any order interrupting the process only on the grounds of
  - a) *Malafide* or improper conduct and /or
  - b) The manner in which the licensee is conducting the procurement process differs materially from its proposal as reviewed by the Commission and
  - c) On any other reasonable grounds

- These provisions are without prejudice to the Commissions' right to investigate and take appropriate action on credible information of malpractice becoming available to it as per the Act.
- Any investigation of procurement process will be initiated by a notice of enquiry and conducted in accordance with the provisions of the Act. The licensee shall not enter into any commitment or procure or act upon such a commitment pending the outcome of the investigation.
- If the commission determines that the procurement process was unsatisfactory with reference to the criteria given in these guidelines, the Commission may order the licensee to take necessary corrective steps including requiring it temporarily to suspend the procurement or process or to cancel it and declare it null and void.
- Nothing in these guidelines shall prevent the Commission from investigating or taking such other action deemed appropriate with respect to a completed PPA in exercise of its responsibilities under the Act
- If any difficulty arises in giving effect to these guidelines the Commission may by a general or specific order do or undertake or direct the licensee to do or undertake such measures which in the option of the Commission are necessary or expedient for the purpose of removing difficulties.
- Nothing in these guidelines shall be deemed to limit or otherwise impede the inherent power of the Commission to revise/review and make such orders as may be necessary to prevent abuse of the process of the Commission.

By the order of the Commission

Sd/-

Secretary