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### **Draft Regulation**

## **Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for short term procurement/sale of power) Regulation, 2021**

**[Regulation No. of 2021]**

### **Preamble**

As per section 86 (1) (b) of the Electricity Act, 2003, the Commission shall regulate the electricity purchase and procurement process of distribution licensees. Presently, the following stipulations/guidelines/directions issued by the erstwhile APERC (adopted by the present APERC) of the undivided AP State govern the short-term power procurement process by the licensees. Para 16.5 of the APTRANSCO Transmission & Bulk Supply License (Licence No. 1 of 2000) issued on 31.01.2000, stipulates, inter alia, that the licensee can procure short-term power (less than six months in duration), provided that such short-term purchases are made in accordance with guidelines, if any, issued by the Commission and the details of such purchases shall be submitted to the Commission in the manner the Commission directs. Para 4.1 of “Andhra Pradesh Electricity Regulatory Commission guidelines for load forecasts, resource plans, and power procurement’ issued on 28.02.2000 stipulates that APTRANSCO (bulk supply licensee at that time) may make short-term purchases of power as defined in Paragraph 16 of its Transmission and Bulk Supply Licence for emergency support and to realize short-term operating cost savings without being required first to notify the Commission and provide the information required by paragraphs 4.2 and 4.3. However, APTRANSCO should specifically notify to the Commission in advance the possibility and nature of potential short-term purchases, in the context of (a) contingency plans notified to the Commission in support of the Power Supply Planning and Security Standards; (b) general power purchase agreements with suppliers which allow for on-call purchases of short-term power; (c) generation options identified in the Power Procurement Resource Plan. In the case of short-term purchases for emergency support, APTRANSCO shall use its best endeavors to minimize the

cost to the consumers. Para 4.1.3 of the “Guidelines for load forecasts, resource plans, and power procurement” issued in December 2006 stipulate that in respect of procurement of power for a period not exceeding one year, the licensees shall be guided by the short-term power procurement guidelines issued by the Commission from time to time. Para 36 (vi) of the “Andhra Pradesh Electricity Regulatory Commission (Distribution Licence) Regulations, 2013” notified on 21.08.2013 permits the licensees to procure short-term power (for the duration of less than one year) in accordance with guidelines, if any, issued by the Commission and the details of such purchases shall be submitted to the Commission in the manner the Commission directs.

The present APERC has also been issuing specific directions to the distribution licensees in the Retail Supply Tariff Orders on procurement of short-term power which include the directions issued in the RST Order for FY22 to have in place a dedicated cell to monitor round the clock market prices to ensure that the overall power purchase cost is optimized. Further, the Commission, in the order dated 15.04.2019 on the resource plans of distribution licensees for the 4th Control period ( FY20-FY24), has not approved the proposal of the licensees to meet the reserved demand, i.e., 5% of the total demand through short-term purchases by means of bilateral purchases or through Power Exchange upfront without any regard to the contingencies justifying such purchase as the Commission felt that such purchases are generally to be resorted to only in the event of an emergency due to contingencies or forced outages, etc. beyond the control of the licensees.

The present share of renewable energy tied up by the licensees, in terms of the installed capacity, is about 50 percent of the total power portfolio of the licensees. The bulk of the above installed capacity is contributed by wind and solar power plants. Integration of the intermittent and unpredictable nature of such disproportionate renewable energy into the grid has been posing severe challenges to the licensees in terms of matching the supply and demand and the need to procure high cost energy from the market on a short-term basis to meet the gap between supply and demand. This intermittent and unpredictable nature of renewable energy is also causing a surplus energy situation during some time periods in the year forcing the licensees to either sell this surplus energy on a short-term basis through the exchanges or SLDC to back down the thermal stations if selling of the surplus energy is not economically

advantageous. Further, the licensees, in order to optimize the overall power purchase costs, may sometimes need to resort to purchases from the exchanges by backing down the thermal stations if the per unit variable costs from these sources are more than what the exchanges offer.

The short-term power procurement by the licensees has been on the rise in recent years as can be seen from the share of short-term power procurement in the overall power purchases. The short-term power procurement which was around 10 percent in FY 19 & FY20 has since then risen to 20 percent in FY21.

Keeping in view the various issues discussed above, the Commission is of the view that there is a need to issue a comprehensive and exclusive Regulation on short-term power procurement in place of the existing short-term power procurement guidelines/regulations/directions which were issued a long time back when the short-term procurement quantities were meager. However, before the preparation of this draft Regulation, the Commission felt it necessary to seek the suggestions of the experts on the short-term procurement and accordingly it has constituted an expert committee to study and offer their suggestions on various aspects related to short-term power procurement. The Committee submitted its report in March 2021. On examining the report, the Commission decided to make the Regulation.

In the above backdrop, the Andhra Pradesh Electricity Regulatory Commission, in exercise of the powers conferred on it by section 181 of the Electricity Act, 2003 read with section 86 (1) (b) and all other powers enabling it in that behalf, hereby makes the following Regulation:

#### **1. Short title, Extent and Commencement**

- i. This Regulation may be called the Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for short-term procurement/sale of power) Regulation, 2021.
- ii. This Regulation shall extend to the whole State of Andhra Pradesh.
- iii. This Regulation shall come into force from the date of its publication in the AP State Gazette.
- iv. This Regulation supersedes all the stipulations/guidelines/directions issued by the Commission in the matter of short-term power procurement.

#### **2. Definitions –**

(1) In this Regulation, unless the context otherwise requires:

- (a) **'Act'** means the Electricity Act, 2003;
- (b) **'APTRANSCO'** means the Transmission Corporation of Andhra Pradesh Limited, a State Transmission Utility, fully owned by the Government of Andhra Pradesh State;
- (c) **'Commission'** means Andhra Pradesh Electricity Regulatory Commission;
- (d) **'Exchanges'** mean the Energy Exchanges that are approved and regulated by the Central Electricity Regulatory Commission;
- (e) **'Licensees'** mean the distribution licensees in the State of Andhra Pradesh;
- (f) **'Month'** means calendar month;
- (g) **'SLDC'** means Andhra Pradesh State Load Despatch Center;
- (h) **'State'** means the State of Andhra Pradesh;
- (i) **'Short-term'** means a period up to one year;
- (j) **'Week'** means the period from 00:00 hours of Monday to 24:00 hours of Sunday;

(2) Save as aforesaid and unless repugnant to the context or if the subject-matter otherwise requires, words and expressions used in this Regulation and not defined, but defined in the Act or other Regulations made thereunder by the Commission shall have the meanings assigned to them in the Act or other Regulations made by the Commission.

(3) Reference to any Act, Rules, Regulations, or Guidelines shall include amendments.

### **3. Demand Estimation**

The monthly estimation of demand for each block of 15 minutes duration shall be carried out by SLDC based on historical data, demand forecasts by the licensees, latest available Artificial Intelligence (AI) tools like deep/machine learning (to be used by both the licensees and SLDC), etc. The weekly and day-ahead demand estimations by SLDC shall take into consideration weather forecasts also in addition to the above data. The efficacy of AI tools to forecast the demand accurately vis-a-vis the actual

demand shall be assessed periodically and if necessary, improvements to algorithms may be carried out to improve the accuracy of the estimates.

#### **4. Monthly Power Procurement Plan**

By the 10th of every month, each licensee shall separately communicate to SLDC its estimation of demand for each block of 15 minutes duration for the immediately following month. SLDC after assessing the demand based on its own estimate for the State as a whole vis-a-vis demand communicated by all the licensees and availability of power from all the approved sources (after taking into account the maintenance schedules of generating stations, transmission constraints, generation and transmission capacities likely to be added in the next month) shall communicate to the licensees the power required to be procured by each of them on a short-term basis for the following month within three working days from the date of receipt of demand estimations from the licensees. Upon receipt of the communication from SLDC, the licensees shall float tenders on the national DEEP e-bidding portal to procure the power communicated by SLDC. Within three working days of the close of the bidding, the licensees shall place before the Commission the details of the quantum of power and prices offered by each of the bidders in response to their tenders along with the licensees' analysis on the bids received and also the quantum of power and the prices at which they intend to purchase the same. After analyzing the above information, the Commission will communicate its decision on whether to proceed with the procurement and if so, the quantum of power and the prices at which the power should be procured and the conditions, if any, to be complied with by the licensees. Based on the above approval, the licensees shall place necessary orders on the successful bidders.

#### **5. Weekly Power Procurement Plan**

By the Wednesday of every week, SLDC after assessing the demand based on its own forecast for the whole State and availability of power from all the approved sources including the availability of power from the sources on a short-term basis under the monthly power procurement plan and after taking into account the maintenance schedules of generating stations, transmission constraints, generation and transmission capacities likely to be added in the next week, shall communicate to the licensees the short-term power

requirement for the immediately following week. The licensees may procure power as communicated by the SLDC in the TAM (Term Ahead Market) from the exchanges. All such weekly purchases shall be got ratified by the Commission.

#### **6. Day-ahead Power Procurement Plan**

Every day by 10 AM, SLDC after assessing the demand based on its own forecast all over the State and availability of power from all the approved sources including the availability of power from the sources on a short-term basis under monthly & weekly power procurement plan after taking into account the maintenance schedules of generating stations and transmission constraints shall communicate the power requirement for the next day to the licensees. The licensees may procure power as communicated by the SLDC in the DAM (Day-Ahead Market). All such Day Ahead purchases shall be got ratified by the Commission.

#### **7. Intraday purchases**

When there is less generation from approved sources compared to the forecast/schedule leading to a gap between supply and demand during intraday, the licensees may meet the gap by procuring the required power from the Real-Time/intraday market of the exchanges.

#### **8. Bilateral contracts**

Under no circumstances, the licensees shall purchase energy through bilateral contracts except from the sources expressly approved by the Commission. For example, those sources where the PPAs have expired and procurement of power from them leads to an overall reduction of purchase costs by the licensees, if the licensee(s) desire(s) to procure power from such sources, they shall first approach the Commission with the proposal at least 15 days in advance before the date of commencement of power procurement. The Commission will then examine the proposal of the licensee(s) case by case and grant approval, if necessary, after considering all the relevant factors.

#### **9. Benchmark Price for short-term power procurement**

The Benchmark Price for short-term procurement for a particular year shall be the per unit weighted average price of the energy determined by the

Commission for that year from the approved sources in the Retail Supply Tariff Order.

#### **10. Ministry of Power Guidelines on short-term power procurement**

The guidelines/procedure prescribed by the Ministry of Power, GoI for short-term power procurement in various orders issued from time to time shall be scrupulously followed by licensees while procuring short-term power.

#### **11. Placing of information on websites**

The monthly/weekly/day-ahead power requirement communicated by SLDC to the licensees and the monthly/weekly/day ahead/intraday power procurements by the licensees shall be made available on the websites of the licensees and SLDC within 48 hours of such procurements.

#### **12. Reserve shutdown**

Under no circumstances, approved generators shall be kept under reserve shut-down on the pretext of saving power purchase costs except with the prior approval of the Commission. Any proposal for reserve shutdown of any approved generator(s) shall be placed before the Commission at least three working days in advance of the proposed date of shutdown accompanied by a detailed justification for such reserve shutdown.

#### **13. Sale of Surplus power:**

The licensees shall make all efforts to sell the surplus power (conventional/RE Power) that is available during certain time blocks/periods through the exchanges and DEEP E-bidding portal if such sales lead to the reduction of overall power purchase costs by the licensees.

#### **14. Constitution of a dedicated cell**

Each licensee shall constitute a dedicated cell to monitor the energy prices in the market Round the Clock. The cell shall have the power to purchase the energy in the Real-Time Market of the exchanges when the per unit landed prices of energy in the exchanges are below the per unit variable costs of energy from the approved stations in the margin under dispatch. The cell shall also be empowered to sell surplus energy including the surplus energy from wind and solar power plants [in Green Term Ahead Market (GTAM)] in real-time, intraday, day-ahead/week ahead market if such sales lead to the reduction of overall purchase costs. The marginal per unit variable costs from

the approved sources under despatch shall be the basis for such sale of surplus power. The dedicated cells constituted by the licensees shall consist of a minimum of three officers headed by an officer of the rank of not less than General Manager (one) assisted by one Executive Engineer and one Deputy executive engineer in each shift. Suitable guidelines shall be framed by the licensees for the modus operandi of the dedicated cell in line with the spirit of this Regulation and seek the Commission's approval.

#### **15. Computation of landed prices of short-term procurement**

While computing the per unit landed prices of short-term power particularly when the power is procured from the market sources by backing down the approved thermal stations with the intention of reducing the power purchase costs, the licensees shall broadly consider the following factors also:

- a. The reduction in the GCV values of coal when stored for longer periods due to the backing down/shutdown of the approved thermal stations to accommodate market purchases. This reduction in GCV of coal will increase the variable costs of the approved sources which ultimately are passed on to the licensees.
- b. The frequent backing downs/shutdown of approved thermal stations to accommodate market purchases will lead to a reduction in the life of their equipment necessitating their replacement more frequently which in turn imposes an additional financial burden on the licensees in the form of additional capital expenditure.
- c. The backing down/shutdown of approved thermal stations to accommodate market purchases will lead to the build-up of more coal stocks in the thermal stations with the result that these stations will declare higher availabilities (without there being a need to deliver corresponding higher energy) than what is possible if these stations are despatched fully. These higher availabilities declared by the thermal stations will impose an additional financial burden on the licensees in the form of higher fixed costs.
- d. The impact of interest, arising out of the advance payments made to the exchanges towards power purchases.

#### **16. Real-Time Data**



The SLDC shall make available the real-time data of generation from all the sources/generators and demand to the dedicated monitoring cell of the licensees, and the Commission.

#### **17. Furnishing of the information to the Commission**

The licensees shall submit the following periodical information on short-term procurement to the Commission through email:

- a. The details of real-time/intraday/day-ahead market power procurements and sales (block-wise quantum of power and rate per unit) by the end of every day.
- b. The details of weekly power procurement and sales in TAM (Term Ahead Market) for the next week and power supply status for the immediately previous week by the end of Wednesday of the present week.
- c. The details of power procurements and sales for the next month and power supply status for the immediate previous month by the end of the 10th day of the present month.

The daily/weekly/monthly reports of the licensees shall also include the shut down/breakdown/generation details of the approved sources in the Retail Supply Tariff Order supported by the data furnished by the generators.

#### **18. Power to relax time limits**

The Commission may relax the time limits specified in this Regulation for various activities for sufficient reasons to be recorded in writing.

#### **19. Powers to remove difficulties**

If any difficulty arises in giving effect to the provisions of this Regulation, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

#### **20. Power to amend**

The Commission may, at any time, add, vary, alter, modify, delete or amend any provisions of this Regulation.

#### **21. Power to dispense with the requirement of the Regulation**

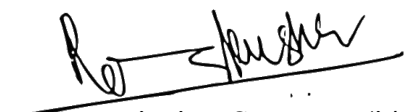
The Commission shall have the power, for reasons to be recorded in writing and with notice to the affected parties, to dispense with the requirements of any provision of this Regulation in a specific case or cases subject to such terms and conditions as may be specified.

## **22. Savings**

- (i) The provisions of this Regulation shall be in addition to and not in derogation of the provisions of any other law or rules or regulations or scheme or contract for the time being in force.
- (ii) Subject to the provision of the Act and this Regulation, the Commission may, from time to time, issue orders and practice directions in regard to the implementation of this Regulation and procedure to be followed on various matters which the Commission has been empowered by this Regulation to specify or direct.
- (iii) Nothing in this Regulation shall bar the Commission from adopting a procedure which is at variance with any of the provisions of this Regulation, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing deems it necessary or expedient.

Place: Hyderabad

Date: 23-11-2021.

  
Commission Secretary(i/c).