



## **ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

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WEDNESDAY, THE NINTH DAY OF FEBRUARY  
TWO THOUSAND AND TWENTY TWO  
(09-02-2022)

:Present:

**Justice C.V. Nagarjuna Reddy, Chairman**  
**Sri P. Rajagopal Reddy, Member**  
**Sri Thakur Rama Singh, Member**

In the matter of framing of APERC (Terms and Conditions for Short-term Procurement/Sale of Power) Regulation, 2022

### **Statement of Reasons (SoR)**

#### **Introduction**

1. 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.
  - A. Para 16.5 of the APTRANSCO Transmission & Bulk Supply Licence (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.
  - B. 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 realise 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 the Commission in advance of 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 endeavours to minimise the cost to the consumers.

- C. 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.
- D. 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.
2. 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.

3. 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 the SLDC to back down the thermal stations if the sale of the surplus energy is not economically advantageous. Further, the licensees, in order to optimise 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 the per unit landed prices of power from the exchanges.
4. 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 FY19 & FY20 has since then risen to 20 percent during FY21.
5. Keeping in view the various issues discussed above, the Commission has come to 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 stipulations/guidelines/directions which were issued a long time back when the short-term procurement quantities were meagre. However, before the preparation of a draft Regulation in this regard, the Commission felt it appropriate 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.

6. Accordingly, 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, made the draft regulation viz., Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for short term procurement/sale of power) Regulation, 2021 and hosted it on the website of the Commission.

**Public Notice**

7. A public notice was also placed on the website of the Commission on 24.11.2021 inviting views/suggestions/objections from the stakeholders on the draft Regulation. In response to the said public notice, the Commission received views/suggestions/objections from a number of stakeholders. The list of stakeholders is enclosed as Annexure-1 to this order. The views/suggestions/objections received from the stakeholders on the draft Regulation along with the decisions of the Commission are discussed in the following paragraphs. The intention of the Commission in issuing the 'Statement of Reasons (SOR)' is to explain the rationale behind its decisions on the suggestions received from stakeholders on various clauses in the draft Regulation.

**8. Views/suggestions/objections of the Stakeholders & Commission's decisions on various clauses**

**A. Clause 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.

**Suggestions/views  
The DISCOMS**



“A separate clause on the applicability of these Regulations to all Distribution Licensees, Trading Licensees, Deemed Distribution Licensees, License Exemptees, and State Govt, if it undertakes Distribution & Supply of Electricity under section 14 (10) of the Act and other eligible entities as may be prescribed by the Commission, may please be incorporated.”

**Commission’s decision:**

Clause 1 of the draft Regulation already specifies that this Regulation shall extend to the whole state of Andhra Pradesh by which it is applicable to all the entities in the State whose power purchases are regulated by the Commission under 86(1)(b) of the Electricity Act, 2003. Therefore, there is no need to modify the clause.

**B. Clause 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.

**C. Clause 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 immediate 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 analysing 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.

**D. Clause 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 immediate 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.

**E. Clause 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.

**F. Clause 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.

**G. Clause 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.

**Suggestions/Views**

**The DISCOMs**

- a) Under clause 4 of the draft Regulation, regarding the monthly power procurement plan, the DISCOMs have been obligated to prepare time block-wise forecasts and submit them to the SLDC. It is further stated that SLDC has to assess the demand based on its estimate for the State as a whole vis-a-vis demand communicated by all the licensees,*
- b) Clause (3) on Demand Estimation specifies that SLDC carry out the time block wise demand estimation. DISCOMs are involved in power procurement through commercial agreements.*
- c) The DISCOMs shall be allowed to procure power as per their own Demand Forecasts carried out based on their workings. SLDC may provide state-level macro information regarding critical parameters which may affect the forecast based on the best information available to them.*
- d) More clarity is requested to be provided between Clause (3) and Clause (4)*
- e) The Short Term power market is also widening and the new products with a delivery date beyond 11 days/Month are also expected to be initiated consequent to the lifting of the embargo on the issues related to the regulation of electricity derivatives wherein it has been decided that the*

*physical delivery of electricity will be regulated by CERC and the electricity futures will be regulated by the SEBI. The Power Exchanges are on the verge of launching the Long Duration Contracts (LDCs) which will pave the way for entering into exchange based contracts for delivery beyond 11 days similar to that in DEEP. In view of this, the Hon'ble Commission is requested to consider Market Purchases also as one of the options for Fortnight ahead/ Month ahead / Quarter ahead / Half monthly ahead, besides DEEP-e bidding portal.”*

**Prayas, Pune**

*“Regulations 3 to 7 give APERC treatment of STPP. The regulatory procedures mentioned are: monthly (DEEP – approval), weekly (TAM – ratification), daily (DAM – ratification), intra-day (RTM- post review) and bilateral (prior approval). Bilateral purchases can continue to need prior approval, but for the other options, considerations mentioned below could be applied.*

*There is no need for prior approval if:*

- a) the variation of quantum of total power purchase in a reasonable period (say 3 to 6 months) is less than some percentage (say 5%) OR*
- b) if the Average Power Purchase Cost (APPC) of the power purchase plan, which includes STPP is less than the APERC approved APPC OR*
- c) STPP is taken up for grid security reasons.*

*APERC can ensure that the STPP bidding process is transparent as per MoP Guidelines for short-term procurement of electricity i.e. for a period of less than or equal to one year. In cases where prior approval is not needed, DISCOMs should submit details of STPP to APERC within 15 days. Based on APERC assessment STPP purchase cost can be allowed or denied.*

*If prior approval is needed, DISCOMs would apply to APERC in advance and APERC should give approval within a specified time limit, provided all details as per the required format are provided by the DISCOMs. To illustrate: licensee submits information to SLDC on the 10th of the month, SLDC completes reviews in three working days, licensee floats tenders and within three working days of bid closure, submits proposal to APERC for approval. There should be a time limit for APERC to give approval say five working days. APERC would have to develop the required resources – in terms of tools and staff – to ensure this.”*

**Dr. Anoop Singh, CER**

*“a) Short-term Demand Estimation and Procurement Plan (Regulation 3, 4, 5, 6): The draft Regulation provides provisions for the demand estimation and power procurement plan for short-term at three levels i.e. monthly, weekly and daily. It is suggested that the demand estimation as well as the power procurement plan proposed in this Regulation should be carried out at four levels instead of three levels namely: - Monthly demand estimation and power procurement plan Weekly demand estimation and power procurement plan, Day ahead estimation and power procurement plan Demand estimation and power procurement plan for Real-time market (RTM), at least 8 to 10 blocks ahead before the RTM (to make final preparation for buy and sell in the RTM)*

*As per the draft Regulation(Regulation 4), “the licensees shall float tenders on the national DEEP e-bidding portal to procure the power communicated by SLDC”. However, it is suggested that the power procurement from different power market platforms (example: DEEP portal, DAM, RTM etc.) should be more based on the competitiveness of that platform. Limited liquidity and low competitiveness, particularly for power procurement through negotiated bilateral and trading, and DEEP portal, should only be resorted through competitive tenders that do not attract barriers to entry while keeping in mind the relative price rigidity and competitiveness of power procurement. A portfolio approach should allocate power procurement through various platforms.*

- Banking of power*
- Competitive tendering process (that take relatively more time but allow for advanced procurement that can extend up to months)*
- DEEP*
- Bilateral trading*
- Power Exchanges*

*b) A modeling analysis can be performed to identify the relative share of various options in the portfolio based on dynamic nature of the market and need for power procurement.*

*c) Rephrasing the term ‘Whole State’ (Regulation 1, 4, 5): The draft Regulation uses the term “whole state” at several places in this Regulation for the state of Andhra Pradesh. It may be reworded as ‘for the consumers*

of the licensees', that are to be served by them (after adjusting the captive and open access consumers). 'Whole state' includes all of the electricity consumption including that through captive and open access.

d) *Ratification by the Commission (Regulation 5 & 6):* As per the draft Regulation, "all the weekly/Day-ahead power purchases shall be got ratified by the Commission". It is suggested that this Regulation should have some guidelines available regarding the quantum of power, the distribution licensees should generally procure through different market platforms and the average price or the peak price they should be willing to pay. Furthermore, it needs to be clarified whether the ratification will be done against criteria set by the Commission or will it be only paperwork. However, no such ratification is mentioned in the case of Intra-day power purchases. This should not serve as a loophole in the regulation. Any specific reason for the exclusion may be mentioned therein for the same.

e) *Role of Banking in Bilateral Contracts (Regulation 8):* The draft Regulation does not provide any provision for banking. Banking is one of the 'revenue/cost' neutral 'power procurement' offering little risk in terms of availability as well as prices thereof. It is suggested to add a provision for banking in case of bilateral contracts and may not even require ratification of the Commission if there are guidelines specified for the same. Also, note that banking increases the cost only to the extent of intra-/inter-state transmission losses and charges thereof. Guidelines can provide for a framework for the economic evaluation of banking transactions so that there is an overall economic gain for the licensees and hence the final consumers.

f) *The power procurement plan should be comprehensive in nature, and should also provide for a framework to decide how much power the distribution licensees should procure from DEEP portal, DAM/RTM or through trading licensees (keeping in view the reliability margin taking into account of the five percent spinning reserve). The proposed power procurement plan should also include some buffer for reliability. Moreover, the power procurement plan should also account for the overall RPO commitments for the state utilities/DISCOMs and whether they need to procure or sell power in Green Term Ahead Market (GTAM) or Renewable Energy Certificates (RECs).*

*g) Short-term demand forecasting, power procurement planning and unit commitment modelling are important modelling tools that should be utilised by the distribution licensees/SLDC to ensure that the decisions being undertaken are justified based on scientific methodologies taking into account the techno-economic aspects in an optimization framework. Energy Analytics Lab (EAL), IIT Kanpur has developed models for short-term power procurement as well as unit commitment models and applied the same in the case of a previous study for the state of Uttar Pradesh and, for an ongoing study being undertaken for the state of Chhattisgarh. EAL's web portal ([eal.iitk.ac.in](http://eal.iitk.ac.in)) provides access to relevant market information and insights that help state entities to take informed decisions."*

**IEX**

*"Draft Regulations have provided for the creation of a monthly, weekly and day ahead power procurement plan by the SLDC in consultation with the Discoms. It has proposed that based on the demand assessment by the SLDC, and the generation resources available with the Discoms, the SLDC will communicate the short-term power to be procured by the licensees for the ensuing period i.e., month, week, or the day. For the monthly plan, the Draft Regulations have proposed short term procurement only through DEEP portal. For the weekly plan, only the Term Ahead Market (TAM) segment of Power Exchanges has been envisaged as the procurement route. As regards the day ahead plan, it is the Day-Ahead Market (DAM) segment of exchanges that is considered for meeting the demand-supply gap.*

*There are now multiple avenues available before the Discoms to procure power. Discoms can procure power from DEEP or from Exchanges. With the resolution of regulatory jurisdiction issue between SEBI and CERC longer duration forward contract the Exchange may be shortly allowed to introduce longer duration contracts. Further, within the DEEP and Exchange platform, the Discoms have the flexibility to choose different products depending on the demand-supply situation and the overall market scenario. Discoms can decide to procure power through Intraday, Day Ahead Contingency, Daily, Weekly Contracts under the Term Ahead Market etc. In future also, more products may be made available in the Exchange looking at the changes in the market.*

*In view of the above, the specific market segments proposed in the Draft Regulations may be replaced with 'short-term market' in general and allow the Discoms the flexibility to decide on their power procurement plan looking at the demand-supply situation and overall market scenario."*

***Mytrah Energy (India) Private Limited***

*"Instead of floating tenders on the national DEEP e-bidding portal to procure the power communicated by SLDC and placing the same before the Commission, Licensee should take prior approval from Hon'ble Commission before floating the tenders by Licensee for procurement of short-term power with a price band. Any deviation in the price band discovered from DEEP e-bidding may be put up for approval of the Hon'ble Commission. There should be a certain limit in terms of percentage (%) for procuring short term power by the licensees."*

***IWPA AP State Council***

*"The APERC Draft Procurement Regulations 2021 specifies that the power procurement plan (monthly/ weekly/ day-ahead/ intra-day) by the distribution licensees shall be in accordance with the schedule communicated by the APSLDC. In this regard, we request Hon'ble Commission to ensure that Distribution Licensees shall honor Must Run Status accorded to Wind and Solar Plants in line with Indian Electricity Grid Code, Regulations 2010 and also ensure that the Distribution Licensees shall take any procurement only after all the power from Must Run Power plants has been purchased."*

***Sri M. Venugopala Rao & CH. Babu Rao,***

*"a. SLDC's job is confined to see that required grid frequency is maintained and grid safety ensured, by giving orders for backing down or imposing power cuts, depending on supply exceeding demand or vice versa, as the case may be. Whether additional power is to be purchased and when SLDC is not expected to indicate or decide. The Discoms themselves should work out the same through some coordination committee or cell.*

*b. For the monthly requirement of additional power, the Commission has proposed time limits for submission of the proposals by SLDC and the Discoms. At the same time, after submission of the same, the Hon'ble Commission also should adhere to some reasonable time limit to communicate its decision."*



**Sri S.Surya Prakasa Rao,**

*“1. Specific approval of the Commission for each case of power purchase from the market on monthly/shorter periods is not required. It may amount to excessive regulation or assume the character of administrative control.*

*2. It is noticed that SLDC is being made responsible for fixing the quantum of short term purchases, which is not its function u/s 34 of the Act. Discoms being the licensees entrusted with the duty to supply, have to decide the quantum of purchase, but not the SLDC, though it's required to have its own forecast of overall Demand in the State for the safe operation of the Grid and for scheduling/Dispatch in terms of the Grid Code and as per the contracts entered into between Discoms and Suppliers.*

*3. The captions of paras 4,5 and 6 are: 'power procurement plan', but the contents include actual power purchase approval on a case to case basis. Once the annual quantum of market purchases is decided in the Tariff Order, approval of either a periodical plan / actual purchase is not required in a dynamic market mechanism functioning in terms of the Regulations framed by the Central Commission.*

*4. It's not clear how the transparency u/s 86(3) can be ensured by the Commission as the approval may have to be given in a short time under the relevant bidding process.”*

**Commission's decision:** The intent of the Commission to frame this regulation is to reduce the Power Purchase Cost of Distribution Licensees through a process of planned procurement based on transparent guidelines and thus provide benefit to consumers. As per regulation 5.3 of the Indian Electricity Grid Code, the SLDC is responsible for demand estimation on a daily/weekly/monthly/yearly basis for load-generation planning, and hence accordingly the same is incorporated in regulation. Though the DISCOMs demand estimation is at the company level, the market purchases have to be done keeping the D-D transfers and state demand as a whole excluding open access & other factors in view. Therefore, the DISCOMs shall abide by the SLDC decision, and hence they are not permitted to procure on their own estimation in the regulation. In addition to the DEEP e bidding portal, the longer duration contracts are expected to be available through the exchanges and accordingly, the same are incorporated in the final regulation. Though the

quantum of energy proposed to be procured from the market is approved in the Retail Supply Tariff Order for a particular year, the procurement shall be done as per the procedure stipulated in this regulation. As regards the must-run status of the NCE plants, the DISCOMs/SLDC have to follow the regulations and directions of the Commission in vogue and are not the subject of discussions now. Short-term power procurement is inevitable as explained in the introduction. Such procurement on a monthly/weekly/daily basis provides better visibility in all aspects and hence would help to make informed decisions. Further, keeping in view of suggestions stated above, the Commission decided to modify clauses 3-8 in the draft regulation as below and ratification criteria are also included in the regulation:

**Clause 3: Demand Estimation methodology**

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.

**Clause 4: Monthly Power Procurement**

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 immediate following month. SLDC after assessing the demand based on its own estimate for the State (excluding OA demand) 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 and/or

bid from power exchanges 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 if the prices discovered are above the 'Benchmark Price for short-term power procurement' fixed by the Commission. After analysing the above information, the Commission will communicate its decision on whether to proceed with the procurement within a week time indicating 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. However, in cases where the discovered price per unit is less than the 'Benchmark Price for short-term power procurement' fixed by the Commission, the licensees may procure such power and seek ratification from the Commission within a fortnight of placing the orders.

**Clause 5: Weekly Power Procurement**

By the Wednesday of every week, SLDC after assessing the demand based on its own forecast for the whole State (excluding OA demand) 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 immediate following week. The licensees may procure power as communicated by the SLDC in the power exchanges. All such weekly purchases shall be got ratified by the Commission fortnightly.

**Clause 6: Day-ahead Power Procurement**

Every day by 10 AM, SLDC after assessing the demand based on its own forecast all over the State (excluding OA demand) 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 in power exchanges). All such Day Ahead purchases shall be got ratified by the Commission fortnightly.

**Clause 7: Intraday purchases**

The licensees/SLDC shall have modern software tools/models in place to estimate the demand 8 -10 time blocks ahead. 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. The details of the quantum of energy procured time block wise during each day to meet the shortage, save power purchase cost and maintain grid security shall be maintained separately. All such intraday purchases shall be got ratified by the Commission fortnightly.

**Clause 8: Bilateral Purchases & Procurement for more than a month**

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 or through Banking/Swapping/Forward contracts and if the licensees desire 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. Banking/Swapping is permitted bilaterally with the prior approval of the Commission till the guidelines are issued by the Ministry of Power in this regard which the DISCOMs can then follow. The Licensees may also float tenders in DEEP e-bidding portal or bid from power exchanges for a period of more than a month and up to one year if they desire for a base capacity with the prior approval of the Commission.

**New Clause: Criteria for ratification of short term procurement/sales by the Commission**

The short term power procurement shall not result in backing down of cheaper power from thermal power plants approved in the Retail Supply Tariff Order in that year. However, backing down of the approved thermal power plants is permitted when the per unit landed price of short term power at AP state periphery is less than the marginal cost of the approved thermal station(s) in the merit order or there is a threat to grid security. The purchase of short term power in case its unit price exceeds 'the benchmark price' shall be justified by the licensees. Further, the sale of power shall not result in the imposition of load reliefs and additional financial burden on the DISCOMs. In addition to the above, the licensee shall strictly comply with the guidelines of MoP and regulations/directions of the Commission for short-term procurement/sales in all applicable cases.

**H. Clause 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.

**Suggestions/Views**

**The DISCOMs**

*"a) The Licensees are constrained to purchase power at the prevailing market rates, to mitigate the shortfall of availability from committed sources to meet the additional demand than the forecast, for ensuring due compliance with the National Electricity Policy- "Power for All" 24 X 7 policy of the Ministry of Power, in which all state governments including Andhra Pradesh continue to participate.*

*b) If the Licensees limit the exchange purchases to the benchmark price approved by the Commission in all the time blocks, there will certainly be many time blocks in which licensees will not be able to procure power for meeting the entire demand. This may lead to load shedding and thereby compromising the 24\*7 "power for all" policy of the Government of India.*

*c) Therefore, the licensees requesting the Commission to consider and approve the benchmark prices of Market Purchases as the weighted average price of market procurement for the entire year, and not resort to curtailment of expenditure on the transactions exceeding benchmark price*

*and limiting the expenditure to the actual value in case of price is lesser than the benchmark price, while scrutinising the True-Up claims.”*

***Mytrah Energy (India) Private Limited***

*There is no clarity on the short-term power purchase cost if it is over and above the per unit weighted average price of the energy determined by the Commission for monthly/weekly/day-ahead/intraday power procurements by the licensees.*

***Sri M. Venugopala Rao & CH. Babu Rao***

*The benchmark price may be determined by working out an average based on the market trends for the last three months or last one year before issuing the retail supply tariff order.*

***Sri S.Surya Prakasa Rao,***

*Once the Benchmark price is specified either in the Tariff Order or otherwise, a Half-yearly review by the Commission may be sufficient apart from annual review during ARR proceedings.*

***S.Pratap,***

*To procure power from the market in the event of cost optimization, the CGS or State thermal generators will be at RSD/Back down. So, “the weighted average per unit variable cost of the CGS and State thermal generators will be the accurate Benchmark Price for short-term procurements w.r.t to landed cost per unit (LCC).*

**Commission’s decision:** The intent of the Commission is to keep the overall power purchase cost to not exceed the power purchase cost approved in the particular year of tariff order and accordingly the definition of benchmark price is incorporated in the regulation. This benchmark price is not applicable time block-wise as apprehended by the DISCOMs but for purchases during the whole year. If the benchmark cost is fixed at less than the weighted average price of the energy determined by the Commission for that year from the approved sources in the Retail Supply Tariff Order as suggested by some stakeholders, it would put the licensees at a disadvantage and hence the Commission decided not to change the definition of benchmark price. However, it is included under the definitions in the final regulation instead of as a separate clause in the draft regulation.

**I. Clause 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.

**Suggestions/Views**

**Dr. Anoop Singh, CER**

*Since, these are the guidelines, the distribution licensees, if differing from it should identify the reasons thereof and get it approved/ratified by the Commission as applicable.*

**Sri S.Surya Prakasa Rao,**

*“Discoms need not follow the guidelines/instructions of MOP which have no force of law or which are repugnant to the Regulations of the State Commission. Guidelines issued by MOP u/s 63 only are binding if the bid process is initiated under those guidelines.”*

**Commission’s decision:**

The Ministry of power issued the guidelines under section 63 of the Act for short term power procurement of power by the distribution licensees, hence the same have to be followed by the DISCOMs for procurement of power on a short term basis for the adoption of the same by the Commission and the DISCOMs shall have to take prior approval of the Commission if any deviation is required even as per guidelines. However, the Commission decided to modify the clause as stated below:

*“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. These guidelines will not be applicable for energy purchases from the exchanges and through Banking/Swapping arrangements.”*

**J. Clause 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.

**Suggestions/Views**

**Prayas**

*These are good initiatives to ensure proper implementation and analysis, APERC could provide detailed formats for the same.*

**Dr. Anoop Singh, CER**

*It is suggested to add a provision to ensure ease of accessibility of the current as well as archived data/information on the same through SLDC's as well as licensee's website through an identified webpage for the same.*

**Commission's decision:** keeping the above suggestions in view, the Commission decided to modify the clause as stated below:

*"The monthly/weekly/day-ahead power requirement communicated by SLDC to the licensees and the monthly/weekly/day-ahead/intraday power procurements/Sale by the licensees shall be made available on the websites of the licensees and SLDC within 48 hours of such procurements/sale with ease of access to the current as well as archived data."*

**K. Clause 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.

**Suggestions/Views**

**The DISCOMs**

*"a) This condition violates the Commercial Principles under which the Commission shall specify the terms & conditions of Tariff and the Licensees have to operate thereunder, as per the provisions of the Electricity Act-2003 particularly section 61 (b).*

*b) By virtue of placing the committed/approved plants under Reserve Shut Down (RSD), the generating plants are paid the relevant capacity charges to the extent of their declared capacity during the term of RSD period and they have nothing to lose in this regard.*

*Ex. If a Generator has a Per Unit Fixed Cost of Rs 1.50/Unit and a Per Unit Variable Cost of Rs 3.50/Unit aggregating to a total per-unit cost of Rs.5.0/Unit. Since the Merit Order Dispatch (MoD) list is drawn on Per Unit Variable Cost basis, any opportunity which arises with a lesser variable cost than Rs.3.50/Unit of the subject plant, it is commercially prudent to*



*dispatch that opportunity by backing down the subject generator in the interests of optimization of the power purchase cost. If the opportunity is 1 MW at a single part variable tariff price of Rs.3.0/Unit (against Rs.3.50/Unit of the subject plant), the commercial gain for each time block of 15 Minutes is Rs 500.*

*c) The licensees shall be allowed to do the same in the interests of end consumers in order to optimise the power purchase cost.*

*d) The short-term market provides immense opportunities to the Licensees to optimise their power procurement cost, the benefit of which would eventually accrue to the consumers in the state. Licensees should be allowed to replace the costlier generating stations based on the cheaper power available in the market. Licensees should be given the flexibility to take scheduling/dispatch decisions in concurrence with SLDC to ensure merit order dispatch and optimise their power procurement cost on a day-ahead basis.*

*e) In many instances, there may be a sudden drop in the demand forecasted due to weather conditions or a sudden drop in the prices discovered in the day ahead market owing to various reasons across the country. In such cases, licensees having commercial interests as a principle may place any approved generator under shut down as and when it deems fit. In such cases, obtaining prior approval of the Commission at least three days in advance is not possible. In these instances, licensees should be allowed to inform the commission post facto within one day of occurrence of the event.”*

#### **IEX**

*Para 12 of the draft regulations requires the Discoms to take prior approval of the Commission for taking any station under RSD. The RSD procedures issued by the Hon'ble CERC as well as by several other states do not impose any such restriction on the Discoms. Instead, such regulations and procedures only state the principles of taking RSD i.e. timelines, coordination requirements, revival methodology, etc., and have allowed Discoms to operate according to the methodology.*

#### **IWPA AP State Council**

*Incorporate the provisions of curtailment and unplanned shutdown or backing down instructions in Regulations, in accordance with the conditions*

*specified by the Ld. APTEL in Appeal No. 197 of 2019 and Appeal No. 126 of 2020 and a provision regarding compensation to be payable to the Must Run power plants on account of curtailment for reasons other than Grid Security.*

**Dr. Anoop Singh, CER**

*In order to identify generating units for backing down/reserve shutdown, a unit commitment modelling exercise should be undertaken on a weekly basis for proper decision making regarding the reserve shutdown.*

**Commission's decision:** The intent of the Commission is that the approved sources in the RST order of that year shall not be kept under reserve shutdown unless the licensees can conclusively demonstrate the savings due to such reserve shutdowns. In fact, the Commission directed the licensees to avail the opportunities in the real time market by purchasing energy from it when energy prices in the market are cheaper compared to that from the approved sources of RST order without violating merit order through a round the clock dedicated cell to save overall power purchase cost. Therefore, the intention of the clause is not to prevent the DISCOMs from exercising the commercial freedom to save power purchase costs when there is an opportunity. However, keeping the suggestions in view, Commission decided to modify the clause on reserve shutdown as stated below:

**Reserve shutdown**

“Under no circumstances, approved generators shall be kept under reserve shutdown on the pretext of saving power purchase costs unless such shutdowns result in saving of overall power purchase costs. All such “reserve shutdown/revival from shutdown” details shall be placed before the Commission within 48 hours of such shutdowns/revival with a detailed justification report for shutdowns till the Commission finalises regulations/guidelines on reserve shutdown of approved sources and their revival from reserve shutdown. The DISCOMs may conduct “unit commitment modelling exercise” on a weekly basis for taking informed decisions on reserve shutdowns.”

**L. Clause 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.

**Suggestions/Views**

**IWPA AP State Council**

*The distribution licensees must undertake proper planning while procuring electricity and such projections, as reflected in the Retail Supply Tariff Order, shall be evidenced by way of adequate facts and materials for power requirement. This will avoid situations for the distribution licensees to have surplus power and the sale of surplus power thereof. Therefore, if the distribution licensee is undertaking the sale of surplus power, then the distribution licensees must approach the Commission for prior approval instead of waiting for getting the same approved by the Hon'ble Commission in the True-Up or subsequent ARR filings. This will avoid the levy of additional surcharge on open access consumers, even if such surplus is due to the shifting of consumers towards open access.*

**Prayas**

*Should clarify that the planning, approval, ratification, and providing information (on websites and to APERC) processes are similar to that followed for power purchase. If needed, it should be explicitly clear that surplus power sales should not lead to load shedding.*

**Sri M. Venugopala Rao & CH. Babu Rao**

*Experience has confirmed that the Discoms have not been able to sell surplus power outside the State every year, except a very small quantum occasionally. With the availability of relatively cheaper RE in the market, the Discoms will continue to find it difficult to sell their costly surplus power profitably outside the State.*

**Commission's decision:** After examining the above suggestions, the Commission decided to change the clause on the sale of surplus energy as stated below:

“The licensees shall make all efforts to sell the surplus power that is available during certain time blocks/periods through the exchanges, DEEP e-bidding portal or through Banking/Swapping/Forward contracts

provided such sales do not lead to the imposition of load reliefs and/or increase in overall power purchase costs. All such sales shall be got ratified by the Commission fortnightly.”

**M. Clause 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.

**Suggestions/Views**

**The DISCOMs**

*“a) Procurement of power from short term sources to meet the shortages which arise out of short term Load Generation Balance evaluated by AP State Load Dispatch Centre (APSLDC) is presently carried out by a centralised dedicated cell in order to have seamless coordination.*

*b) The dedicated cell in turn has been delegated with powers to undertake the day to day operational decisions such as the bidding for procurement/selling of power from the market sources on Day-ahead or Real-Time basis etc, depending on the inputs given by SLDC, and work as per the collective decisions of the Licensees*

*c) The composition of the dedicated cell constituted by the licensee shall be left to the freedom of the licensee as it is an internal administrative decision of the licensee. However, the modus operandi of the cell will be in the spirit of the regulation”*

**Prayas**

*Each DISCOM having a dedicated cell for monitoring the power market is welcome. The scope of this cell should be for the whole power purchase and sale, not just the market. Since most purchase/sale decisions are taken at a state level, there should be a consolidated cell in the state with the representation of all DISCOMs.*

**Sri S.Surya Prakasa Rao,**

*Dedicated Cells proposed to be constituted under this regulation can be made competent to manage short-term market purchases/sales without requiring approval of Commission in each case.*

**Commission's decision:**

The very purpose of the dedicated cell is to achieve savings in overall power purchase costs of the licensees primarily focussing on opportunities in real time markets for purchase or sale. In view of the volume & huge costs involved in the power purchases, a round the clock dedicated cell is highly desirable. Therefore, keeping the suggestions in view, the clause on dedicated cell is modified as stated below:

“A common round the clock dedicated cell comprising at least one officer of the rank of General Manager from each DISCOM shall be constituted by the three DISCOMs within one month from coming into force of the regulation. Each General Manager shall be assisted by one Executive Engineer and one Deputy Executive Engineer to be available in each shift. The cell shall have the power to purchase/sell the energy in real-time, intraday, day-ahead, week ahead or any longer duration through Power Exchanges. The cell shall prepare weekly reports on the purchases, sales & savings in costs achieved and submit them to the Commission. The licensees shall frame suitable guidelines for the modus operandi of the dedicated cell in line with the spirit of this regulation and seek the approval of the Commission for the same within 45 days from the coming into force of this Regulation.”

**N. Clause 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.

### **Suggestions/Views**

#### **The DISCOMs**

*“a) By virtue of having more coal stocks the Generators could declare more availability and claim more fixed costs. The availability of the plant is limited by the capacity of the machine to generate. Even though the quantum of coal available surpasses the required coal stock for a normative number of days than specified in the Regulation, the Generator could not declare additional availability since the same is limited by the installed capacity of the Generator.*

*b) As per the Regulation, the licensees are obliged to pay the variable costs to the full extent up to the normative parameters specified by the regulations. In case, if due to backing down or partial load operation there*

*is a degradation in the parameters, the compensation can be paid as per the Regulations of Hon'ble APERC.*

*c) The impact of interest, arising out of the advance payments made to the exchanges towards power purchases shall not be considered while taking market purchase decisions, since working capital interest to the extent of 45 days of Coal stock and O&M charges to the extent of one month is also allowed to the committed plants under PPAs. Apart from this, the PPAs provide for a Late Payment Surcharge (LPS) for delayed payments to the Generators. If these two items are also removed in the PPAs, the impact of interest arising out of advance payments can also be considered for Market Purchases by the Licensees.”*

**Prayas**

*Landed cost calculation should include Inter-State Transmission System (ISTS) charges and losses where applicable. This point is important since backing down or RSD of thermal stations could be due to multiple reasons – variation of demand, renewable energy generation or market options including STPP. Hence it is not appropriate to load the costs involved in this to only the STPP landed cost. APERC needs to prepare a methodology to calculate, approve and recover such costs through a separate process.*

**IEX**

*“a) Degradation of GCV values of coal due backing down of stations on account of the short-term market. While the concern is of relevance, as a fact of the matter, the generating stations are mandated to maintain coal stock of 45/60 days for pit-head/non-pit-head station, for which they are also granted interest on working capital in their ARR as per the APERC (Terms and conditions for determination of tariff for supply of electricity by a generating company to a distribution licensee and purchase of electricity by distribution licensees) Regulation, 2008. Since the stations find it difficult to maintain even the normative stock levels in line with the regulatory requirements, the argument of GCV degradation due to increasing stock levels does not seem to hold good.*

*b) Similarly, the backing down/shutdown of the approved thermal stations to accommodate power purchases will lead to a build-up of the coal stocks in the thermal stations and consequently, the stations will declare higher availabilities & impose higher fixed costs which seems to be unlikely and*

*far-fetched. Conversely, some of the factors viz. start-up, shut down costs, energy charges at reduced PLF may be examined to be considered for computation of landed cost.”*

**Sri M. Venugopala Rao & CH. Babu Rao,**

*Various factors narrated in the draft need to be taken into account when power is procured from the market sources by backing down the approved thermal stations. An effective system for taking such relevant factors into account and working out their financial and technical impacts needs to be developed and adopted by the Discoms and the Hon’ble Commission. Inputs from AP Genco and other generators, or even from the CEA, may be taken for this purpose. Such impact, both technical and financial, should be confined to determine whether market purchases are justifiable and beneficial when power from thermal stations under PPAs in force is available, and that should not be considered for paying an additional amount, other than fixed charges, to the thermal stations backed down. They shall not violate the principle of merit order dispatch in order to purchase power in the market.*

**S.Pratap, APSEBAEEA**

*“Finalize the definitions of Landed Cost Calculation (LCC) & Effective Market Per Unit Cost (EMPUC) Evaluation to the Licensee and also an Algorithm to evaluate both Landed Cost Per Unit & EMPUC.*

*Further, the following factors are to be included in the Final Regulation in addition to that mentioned in Draft Regulations to arrive at the landed cost:*

- 1. Auxiliary consumption of thermal generators in RSD, the Deterioration of Heat rate, Auxiliary consumption, and Specific oil Consumption while the generator under Back Down. (As per the compensating mechanism provided by CERC for CGS).*
- 2. Minimum fuel off-take Charges as per Fuel Supply Agreement (If arises due to long period shutdowns of thermal generators, that should be passed on to the licensee).*
- 3. POC Charges, IST charges, IST Losses, NLDC Charges,*
- 4. DSM and Transmission Deviation Charges (as per Sharing of Inter-State Transmission Charges and Losses Regulations, 2020) or POC Charges and Reactive Power impact.*
- 5. GST and IEX fees”*



**Commission's decision:** The intent of the Commission is to have a broad understanding of the landed cost per unit primarily while purchasing the energy from the markets to save power purchase costs by backing down/reserve shut down of approved generators. However, Keeping the suggestions in view, the clause on landed cost is modified as below:

“While computing the per unit landed prices of short-term power at AP state periphery particularly when the power is procured from the power exchanges by backing down/reserve shutdown of the approved thermal stations with the intention of reducing the power purchase costs, the licensees shall add the per unit transmission costs, LDC/scheduling costs, energy losses converted into cash, transmission deviation charges plus 25 paise (towards other incidental/associated costs) to the per unit procurement price in the power exchanges provided that the approved sources under operation shall not be backed down to operate below the technical limits as specified in the Indian Electricity Grid Code (IEGC), till the Commission finalises guidelines on the landed cost. The landed cost is not relevant when energy is purchased to meet the shortages and/or to maintain grid security.”

**O. Clause 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.

**Suggestions/Views**

**Prayas**

*It would be good to provide details of the information that needs to be provided by SLDC to licensees and APERC, with suitable justifications. The requirement for this is not clear, since real-time data is usually relevant for a minute to minute operation of the grid.*

**Commission's decision:** It is only to get updated on the real-time load-generation balance in the State. Hence the same has been retained without any change in the final regulation.

**P.** Further, the following are inserted/included;

(i) At the end of clause 17.

Further, the reports shall clearly indicate day wise/block wise details of the breakup of the energy procured to meet the shortages, maintain grid security (intra-day) and save power purchase costs.

(ii) In Clause 2,

**‘Day’** means the period between 00.00 hrs to 24.00 hrs of any day of the week or a duration of 24 hours if the period overlaps two days of the week;

**‘Year’** means financial year or 365 days if the period overlaps two financial years;

**‘The surplus energy’** means energy available from approved sources in excess of requirement during any time period including the surplus energy from wind and solar power plants due to must-run status.

**Q.** Some definitions in Clause 2 have been modified as below:

(a) **‘Month’** means calendar month or 30 days if the period overlaps two calendar months;

(b) **‘Week’** means the period from 00:00 hours of Monday to 24:00 hours of Sunday or a period of 7 days;

**9.** Accordingly, the Commission finalises the Regulation as shown in the Annexure-2 of this Order.

Sd/-  
**Thakur Rama Singh**  
Member

Sd/-  
**Justice C.V. Nagarjuna Reddy**  
Chairman

Sd/-  
**P. Rajagopal Reddy**  
Member

**ANNEXURE-I**

<b>S.No.</b>	<b>Name of the Objector Sri/Smt.</b>
1	M. Venugopala Rao, Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032
2	CH.Babu Rao, CPI(M) State Secretariat Member, Andhra Pradesh Committee, H.No. 27-28-12, Yamala vari Street, Governorpet, Vijayawada - 520 002.
3	Jogendra Behera, Vice President- Market Design & Economics, Indian Energy Exchange Limited, Plot No.C-001/A/1, 9th Floor Max Towers, Sector 16B Noida, Gautham Buddha Nagar, Uttar Pradesh -201301.
4	The Chief General Manager, PPA, RA & QC, APEPDCL, Corporate Office, Seethammadhara, Visakhapatnam
5	DR. Anoop Singh, Professor, Founder & Coordinator, Centre for Energy Regulation (CER) & Energy Analytics Lab (EAL), Department of Industrial and Management Engineering, Indian Institute of Technology Kanpur, Kanpur - 208016 (India)
6	The Coordinator, Indian Wind Power Association (IWPA), 2nd Floor, Plot no.3, H. No. 6-3-680//8/3, PMR Plaza, Thakur Mansion Lane, Somajiguda, Hyderabad – 500 082.
7	S.Surya Prakasa Rao, Former Director (Commercial), erstwhile APCPDCL and Former Secretary erstwhile, APERC, Flat.no.105, Ashok Chandra Enclave, 11-4-660, Redhills, Hyderabad-500004.
8	The Chief General Manager, Projects & IPC, APSPDCL, Corporate Office, Tirupathi, Andhra Pradesh
9	S. Prathap, Technical Secretary, APSEB Assistant Executive Engineers' Association (APSEBAEEA), Vijayawada
10	Mytrah Energy (India) Private Limited, (Formerly known as Mytrah Energy (India) Limited), #8001, Survey No. 109, Q-City, Nanakramguda, Gachibowli, Hyderabad – 500032, Telangana India.
11	Sreekumar Nhalur, Member, Prayas (Energy Group),Plot 12, Arora Colony-1, Road No 3, Banjara Hills, Hyderabad, 500 034

**ANNEXURE - II**

**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION  
HYDERABAD**

**Regulation 1 of 2022**

**Andhra Pradesh Electricity Regulatory Commission (Terms and Conditions for procurement/sale of power on short term basis by the Distribution Licensees) Regulation, 2022**

**Introduction:**

A draft regulation “for procurement/sale of power on short term basis by the Distribution Licensees” was placed along with the public notice on the website of the Commission on 24.11.2021 inviting views/suggestions/objections from the stakeholders on the same. In response to the said public notice, the Commission received views/suggestions/objections from a number of stakeholders. After considering the views/ suggestions/objections received from the stakeholders on the draft Regulation vide the Commission’s Statement of Reasons Order dated 09.02.2022, the Commission finalised the regulation.

Accordingly, 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, 2022.
- 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/sale.

## 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) **'Benchmark Price for short-term power procurement'** for a particular year means the per unit weighted average power purchase price of the licensees determined by the Commission for that year from the approved sources in the Retail Supply Tariff Order;
- (d) **'Commission'** means Andhra Pradesh Electricity Regulatory Commission;
- (e) **'Day'** means the period between 00.00 hrs to 24.00 hrs of any day of the week or a duration of 24 hours if the period overlaps two days of the week;
- (f) **'Exchanges'** mean the Energy Exchanges that are approved and regulated by the Central Electricity Regulatory Commission;
- (g) **'Licensees'** mean the distribution licensees in the State of Andhra Pradesh;
- (h) **'Month'** means calendar month or 30 days if the period overlaps two calendar months;
- (i) **'Short-term'** means a period up to one year;
- (j) **'SLDC'** means Andhra Pradesh State Load Despatch Center;
- (k) **'State'** means the State of Andhra Pradesh;
- (l) **'Week'** means the period from 00:00 hours of Monday to 24:00 hours of Sunday or a period of 7 days;
- (m) **'Year'** means financial year or 365 days if the period overlaps two financial years;
- (n) **'The surplus energy'** means energy available from approved sources in excess of requirement during any time period including the surplus energy from wind and solar power plants due to must-run status.

(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 methodology**

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**

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 immediate following month. SLDC after assessing the demand based on its own estimate for the State (excluding OA demand) 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 and/or bid from power exchanges 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 if the prices discovered are above the 'Benchmark Price for short-term power procurement' fixed by the

Commission. After analysing the above information, the Commission will communicate its decision on whether to proceed with the procurement within a week's time indicating 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. However, in cases where the discovered price per unit is less than the 'Benchmark Price for short-term power procurement' fixed by the Commission, the licensees may procure such power and seek ratification from the Commission within a fortnight of placing the orders.

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

By the Wednesday of every week, SLDC after assessing the demand based on its own forecast for the whole State (excluding OA demand) 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 immediate following week. The licensees may procure power as communicated by the SLDC in the power exchanges. All such weekly purchases shall be got ratified by the Commission fortnightly.

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

Every day by 10 AM, SLDC after assessing the demand based on its own forecast all over the State (excluding OA demand) 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 in power exchanges). All such Day Ahead purchases shall be got ratified by the Commission fortnightly.

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

The licensees/SLDC shall have modern software tools/models in place to estimate the demand 8-10 time blocks ahead. 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. The details of the quantum of energy procured time block wise during each day to meet the shortage, save power purchase cost and maintain grid security shall be maintained separately. All such intraday purchases shall be got ratified by the Commission fortnightly.

#### **8. Bilateral Purchases & Procurement for more than a month**

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 or through Banking/Swapping/Forward contracts and if the licensees desire 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. Banking/Swapping is permitted bilaterally with the prior approval of the Commission till the guidelines are issued by the Ministry of Power in this regard which the DISCOMs can then follow. The Licensees may also float tenders in DEEP e-bidding portal or bid from power exchanges for a period of more than a month and up to one year if they desire for a base capacity with the prior approval of the Commission.

#### **9. Criteria for ratification of short term procurement/sales by the Commission**

The short term power procurement shall not result in backing down of cheaper power from thermal power plants approved in the Retail Supply Tariff Order in that year. However, backing down of the approved thermal power plants is permitted when the per unit landed price of short term power at AP state periphery is less than the marginal cost of the approved thermal station(s) in the merit order or there is a threat to grid security. The purchase of short term power in case its unit price exceeds 'the benchmark price' shall be justified by the licensees. Further, the sale of power shall not result in the imposition of load reliefs and additional financial burden on the DISCOMs. In addition to the above, the licensee shall strictly comply with the guidelines of MoP and regulations/directions of the Commission for short-term procurement/sales in all applicable cases.



## **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. These guidelines will not be applicable for energy purchases from the exchanges and through Banking/Swapping arrangements.

## **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/Sale by the licensees shall be made available on the websites of the licensees and SLDC within 48 hours of such procurements/sale with ease of access to the current as well as archived data.

## **12. Reserve shutdown**

Under no circumstances, approved generators shall be kept under reserve shutdown on the pretext of saving power purchase costs unless such shutdowns result in saving of overall power purchase costs. All such “reserve shutdown/revival from shutdown” details shall be placed before the Commission within 48 hours of such shutdowns/revival with a detailed justification report for shutdowns till the Commission finalises regulations/guidelines on reserve shutdown of approved sources and their revival from reserve shutdown. The DISCOMs may conduct “unit commitment modelling exercise” on a weekly basis for taking informed decisions on reserve shutdowns.

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

The licensees shall make all efforts to sell the surplus power that is available during certain time blocks/periods through the exchanges, DEEP e-bidding portal or through Banking/Swapping/Forward contracts provided such sales do not lead to the imposition of load reliefs and/or increase in overall power purchase costs. All such sales shall be got ratified by the Commission fortnightly.

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

A common round the clock dedicated cell comprising at least one officer of the rank of General Manager from each DISCOM shall be constituted by the three DISCOMs within one month from the regulation coming into force. Each General

Manager shall be assisted by one Executive Engineer and one Deputy Executive Engineer to be available in each shift. The cell shall have the power to purchase/sell the energy in real-time, intraday, day-ahead, week ahead or any longer duration through Power Exchanges. The cell shall prepare weekly reports on the purchases, sales & savings in costs achieved and submit them to the Commission. The licensees shall frame suitable guidelines for the modus operandi of the dedicated cell in line with the spirit of this Regulation and seek the approval of the Commission for the same within 45 days from the coming into force of this Regulation.

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

While computing the per unit landed prices of short-term power at AP state periphery particularly when the power is procured from the power exchanges by backing down/reserve shutdown of the approved thermal stations with the intention of reducing the power purchase costs, the licensees shall add the per unit transmission costs, LDC/scheduling costs, energy losses converted into cash, transmission deviation charges plus 25 paise (towards other incidental/associated costs) to the per unit procurement price in the power exchanges provided that the approved sources under operation shall not be backed down to operate below the technical limits as specified in the Indian Electricity Grid Code(IEGC), till the Commission finalises guidelines on the landed cost. The landed cost is not relevant when energy is purchased to meet the shortages and/or to maintain grid security.

#### **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 immediate 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. Further, the reports shall clearly indicate day wise/block wise details of the breakup of the energy procured to meet the shortages, maintain grid security (intra-day) and save power purchase costs.

#### **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 with 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

Commission Secretary (1/c)

Date: 09.02.2022.

