

**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
GUIDELINES FOR LOAD FORECASTS, RESOURCE PLANS, AND POWER
PROCUREMENT**

CHAPTER I - GENERAL

These guidelines are to be followed by Licensees as provided in their respective licences, currently by APTRANSCO as provided in its Transmission and Bulk Supply Licence and Distribution and Retail Supply Licence issued in January 2000

- (a) while forecasting the demand for power within their Area of Supply pursuant to Paragraph 17.12 of the APTRANSCO Transmission and Bulk Supply Licence and Paragraph 20.2 of the Distribution and Retail Supply Licence;
- (b) while formulating resource plans and schemes to meet their obligations under Paragraphs 16.4 and 17.1 of the APTRANSCO Transmission and Bulk Supply Licence and Paragraph 18.2 of the Distribution and Supply Licence; and
- (c) in the case of APTRANSCO, while formulating proposals to purchase power pursuant to Paragraph 16 of the APTRANSCO Transmission and Bulk Supply Licence.

CHAPTER II - LOAD FORECASTS

2.1 Each demand forecast to be submitted to the Commission pursuant to Paragraph 17.12 of the APTRANSCO Transmission and Bulk Supply Licence or Paragraph 20.2 of the Distribution and Retail Supply Licence (a "Load Forecast") shall contain a forecast of future demand in the respective areas of supply of each Licensee for a period of 10 years, to include details of the load forecast, year by year, for each customer class, and forecasts of technical and non-technical losses. The Load Forecast should also state the assumptions on which it is based, and the Licensee's explanation of its forecasting methodology.

2.2 For purposes of the Load Forecasts, the year shall begin on April 1st and end on 31st March. Each Licensee shall submit its Load Forecast to the Commission in the month of April of each year, and/or at such other times as the Commission may require.

2.3 The Commission may from time to time specify particular matters which should be dealt with in the Load Forecasts.

2.4 Commission's Review

2.4.1 In reviewing each Load Forecast submitted to it, the Commission may call for clarification, additional information and data as necessary. A Licensee shall furnish any additional information within fifteen days or within such longer period as the Commission may allow which shall in no case be more than two months from the date of first submission.

2.4.2 The Commission may communicate its views on a Load Forecast to the Licensee concerned within three months from the date it was first submitted to the Commission, or within three months of its receipt of additional information requested under paragraph 2.4.1, to the satisfaction of the Commission.

2.4.3 Within this timescale, the Commission may, at its discretion, serve notice for hearing or examination to determine any issue arising out of a Load Forecast.

2.4.4 When steps taken by the Commission under paragraphs 2.4.2 or 2.4.3 have been completed to its satisfaction, or if the Commission takes no such action within the timescale, the Licensee may adopt the Load Forecast for any appropriate purpose.

CHAPTER III - RESOURCE PLANS

3.1 Each Licensee shall formulate Resource Plans in co-ordination with others for the promotion of generation, transmission, distribution and supply of electricity that shall generally conform to the following provisions.

3.2 Standard

3.2.1 Each Licensee must be able to demonstrate to the Commission that its resource planning will ensure, to the maximum extent of its own control and influence, that all consumers connected to its transmission or distribution system will receive an adequate, safe, and economical supply of electricity, having regard to quality, continuity and reliability of service.

3.2.2 Each Licensee must be able to demonstrate, through a process of integrated resource planning, that it has examined the economic, technical, system, and environmental aspects of all available reasonable options to satisfy the energy service needs of its consumers in its Area of Supply, and that such examination has been carried out in accordance with these guidelines.

3.2.3 Each resource plan prepared by a Licensee shall be

(i) reviewable, that is, it shall contain enough information, clear definition of terms and data, and sufficient explanation to allow the Commission to understand fully the specific objectives, methods and assumptions used by the Licensee to prepare the plan;

(ii) robust, that is, firstly it shall identify key uncertainties, the plan's exposure to those uncertainties, and the manner in which those risks are to be managed; and secondly it shall identify sources of finance such that the plan may be judged realistic in those terms.

3.2.4 Power Procurement Plans, Transmission Plans and Distribution Plans as described below shall be prepared by Licensees every second year, or at such other frequency as the Commission may from time to time require. In any event,

Licensees will notify the Commission immediately of any external event or internal development which requires a significant modification to the most recently submitted Plan, for example, revised load forecasts. Unless otherwise agreed by the Commission, the plan period shall be at least ten years from the year of commencement, beginning from 1st April and ending on 31st March and the plans will be submitted to the Commission in the month of April.

3.3 Power Procurement Planning

3.3.1 APTRANSCO shall formulate a resource plan for the State in co-ordination with the Distribution and Generating Companies, and in consultation with the State Government, the Commission, the Regional Electricity Board, the Government of India and the Central Electricity Authority which shall take into account all the available generation resources and shall spell out the additional power required to meet the future energy demand of the State as assessed by the Licensee (a "Power Procurement Plan").

3.3.2 The Power Procurement Plan shall be a least cost plan (least financial cost to the Licensee), the ultimate objective being to make available a secure and reliable power supply at economically viable rates to all consumers while satisfying Power Supply Planning and Security Standards, pursuant to Paragraph 17.2 of the APTRANSCO Transmission and Bulk Supply Licence.

3.3.3 Each Power Procurement Plan shall describe

- (i) existing resources including generating plant exclusively contracted to APTRANSCO, allocation from central sector plants (CSPs), surplus capacity from CSPs, and any other existing sources of bulk power;
- (ii) energy utilisation, peak load and power factor data and annual load factors for the previous 5 year period;
- (iii) available data for each supplying generating station indicating energy and peaking capacity during plan period (as collected from Generating Companies);
- (iv) existing and proposed Demand Side Management (DSM) programmes and their impact;
- (v) annual capacity and energy balance statements for the plan period, showing available net capacity from existing resources, additional net generation capacity to be added indicating year of commissioning, and total capacity as achieved after each addition;
- (vi) the plan for additional power procurement indicating unit sizes, type, gross capacity, year of commissioning, incremental net energy generated, and expected unit cost (to include energy, capacity and where appropriate transmission costs). The plan should show the options that were evaluated, the method of evaluation or proposed competitive solicitation, and the results or expected results of evaluation of alternative options. The plan

should justify, in terms of economic advantage, APTRANSCO's preferred options for meeting new capacity requirements;

(vii) a two year implementation plan, related to the first two years of the Power Procurement Plan. The Licensee shall make explicit the steps it intends to take in the first two years that will enable the acquisition of the resources required in the remaining years of the Power Procurement Plan.

3.4 Transmission Planning

3.4.1 APTRANSCO shall plan the Transmission System in accordance with Paragraph 17 of the Transmission and Bulk Supply Licence.

3.4.2 The objective of the plan shall be to install sufficient capacity to evacuate power from generating stations to Grid substations (having regard to the Load Forecast) while maintaining voltage within the required limits, containing transmission losses at levels consistent with its Load Forecast and providing for the economic exchange of power with contiguous states. For this purpose, APTRANSCO shall carry out a power system analysis covering load flow, short circuit and transient stability studies.

3.4.3 The Transmission Plan shall use planning criteria consistent with, and shall be designated to meet, the Transmission Planning and Security Standards (adopted pursuant to Paragraph 17 of the Transmission and Bulk Supply Licence). It shall also be consistent with the Power Procurement Plan filed pursuant to Section 3.3, and shall take account of the potential for transmission investment to contribute to meeting new demand.

3.4.4 The plan shall include interconnections at which power is exported/imported to other entities, including neighbouring states. It shall take account of any demand on APTRANSCO's existing or planned transmission capacity arising from projected wheeling transactions, that is, the transport of power through APTRANSCO's transmission system for delivery to customers outside the State of Andhra Pradesh.

3.4.5. The Transmission Plan will list proposed new lines, substations, reactive compensation, and other investment proposals, together with planned years of commissioning.

3.5 Distribution Planning

3.5.1 Each holder of a Distribution and Retail Supply Licence shall plan and develop its Distribution System in accordance with Paragraph 18 of its Distribution and Retail Supply Licence so as to ensure that, subject to the availability of adequate generating and transmission capacity, the system is capable of providing consumers within its Area of Supply with an adequate, safe and economical supply of electricity, having regard to quality, continuity and reliability of service.

3.5.2 Each Licensee shall formulate a plan for its Distribution System in accordance with the Load Forecast for the plan period (a "Distribution Plan"). The

Distribution Plan shall adopt planning criteria consistent with, and be designed to meet, the Distribution System Planning and Security Standards adopted pursuant to Paragraph 18 of its Distribution and Retail Supply Licence.

3.5.3 The planning study shall take account of any demand on the Licensee's existing or planned distribution capacity arising from projected wheeling transactions, that is, the transport of power through APTRANSCO's distribution system for delivery to customers outside its service area.

3.6 Commission's Review

3.6.1 In reviewing each Resource Plan submitted to it, the Commission may call for clarification, additional information and data as necessary. A Licensee shall furnish any additional information within fifteen days or within such longer period as the Commission may allow which shall in no case be more than two months from the date of first submission.

3.6.2 The Commission may communicate its views on a Resource Plan to the Licensee concerned within three months from the date it was first submitted to the Commission, or within three months of its receipt of additional information requested under paragraph 3.6.1, to the satisfaction of the Commission

3.6.3 Within this timescale, the Commission may, at its discretion, serve notice for hearing or examination to determine any issue arising out of a Resource Plan.

3.6.4 When steps taken by the Commission under paragraphs 3.6.2 or 3.6.3 have been completed to the Commission's satisfaction, or if the Commission takes no such action within the timescale, the Licensee may adopt the Resource Plan for all appropriate purposes.

CHAPTER IV - POWER PROCUREMENT

4.1 Procedure

4.1.1 Except as otherwise permitted by paragraphs 4.1.2, 4.1.3 and 4.1.4 the Licensee shall not enter into a power purchase agreement as purchaser or solicit offers to supply it with power until 60 days after it has notified the Commission of its proposed purchase and complied with paragraphs

4.2 and 4.3. 4.1.2 APTRANSCO 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 identify 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.

4.1.3 In the case of short-term purchases for emergency support, APTRANSCO shall use its best endeavours to minimise the cost to the consumers.

4.1.4 In compliance with the requirement of Paragraph 16 of the Transmission and Bulk Supply Licence that electrical capacity and/or energy be purchased in an economical, efficient and transparent manner, APTRANSCO shall in all possible cases procure power through a Structured Competitive Procurement Process as described in paragraph 4.3 below. The Commission may, for example in the case of purchases from central plants, permit APTRANSCO to make purchases of power, other than for the purposes set out in paragraph 4.1.2, without requiring that such purchases be subject to a Competitive Procurement Process. APTRANSCO shall not thereby be exempt from the requirement in Paragraph 16.4 of the Licence to demonstrate the need for power, the economic justification for the purchase, and the means whereby, in the absence of competition, APTRANSCO proposes to secure the best possible terms from the supplier. All of the matters must be covered in the Filing required under paragraph 4.2.

4.2 Need for Additional Power

4.2.1 Whenever the Licensee intends to procure power, it must submit a filing to the Commission in accordance with paragraph 4.1.1. In the filing, APTRANSCO shall demonstrate to the Commission's satisfaction that there is a need for the additional power for which it intends to contract, to meet its obligation in Paragraph 16.4 of its Licence. It may do this by referring to its most recent Power Procurement Plan submitted to the Commission and should specify any areas in which its current proposal departs from its most recent Power Purchase Plan, explaining the departure.

4.2.2 If APTRANSCO proposes to procure the power without use of a Competitive Procurement Process, it shall in its filing seek the consent of the Commission and, in accordance with Paragraph 16.4 of the Licence, demonstrate to the Commission's satisfaction that the proposed procurement is the preferred least cost option, with reference to the economic, technical, system and environmental aspects of commercially viable alternatives, including arrangements for reducing the level of demand. APTRANSCO shall describe the procurement procedure which is proposed, including the steps to be taken to ensure the purchase is made on the best possible terms.

4.2.3 In all other cases, APTRANSCO shall include in its filing with the Commission the details specified in paragraph 4.3 below.

4.3 Structured Competitive Procurement Process for Power

4.3.1 Standard APTRANSCO shall demonstrate to the Commission's satisfaction that its proposed procurement process complies with the principles set out in

paragraph 4.3.3 and that it has developed procedures and outline commercial terms that can be reasonably expected to identify the best bid and not expose APTRANSCO and its consumers and customers to undue risk.

4.3.2 In respect of a Competitive Procurement Process, it shall include in its filing the following:

- (i) an explanation of how APTRANSCO intends to advertise the competition and notify potential bidders so as to attract the maximum number of technically qualified bidders to provide the required power;
- (ii) if applicable, a Request for Qualifications (RFQ) setting out the technical grounds on which APTRANSCO proposes to select companies that are deemed qualified to bid to provide the required power;
- (iii) the Request for Proposals (RFP) describing APTRANSCO's requirement for power and the process to be employed to select the company to provide it;
- (iv) a draft PPA setting out the terms on which APTRANSCO proposes to purchase the required power;
- (v) a risk allocation and management plan, which summarises the allocation of major project risks between the parties and describes how the Licensee intends to manage the risks to be allocated to it under the PPA and any other risks associated with the project;
- (vi) the procedures and criteria to be used by APTRANSCO to evaluate bids and select the winner, including an explanation of the way in which the lowest bid secured would be evaluated to test its acceptability;
- (vii) if post-bid negotiations are permitted, a description of the expected post-bid negotiation process, including the scope of issues open to negotiations;
- (viii) the proposed timetable and procedures for conducting the competition and announcing the outcome.

4.3.3 Principles of Competitive

Procurement APTRANSCO's procurement process shall

- (i) conform to the technical, economic, or other criteria laid down by the Commission in accordance with the Act, Regulations, and/or applicable licence;
- (ii) provide for the RFP to be advertised so as to come to the notice of a sufficient number of qualified potential bidders;
- (iii) allow bidders a reasonable time to prepare their bids;

(iv) provide bidders with adequate information to identify APTRANSCO's requirement for power and the terms on which it wishes to purchase it;

(v) secure the integrity, objectivity, transparency and effectiveness of the process, in particular by:

(a) providing for information made available by APTRANSCO to any one bidder for purposes of preparing a proposal or clarification of any aspect of the proposal process to be made available to all bidders; (b) assuring bidders that the proposed procedures for responding to questions from bidders and for evaluation do not favour or disadvantage any bidder unfairly;

(c) adopting a bid evaluation or scoring system that is sufficiently comprehensive and transparent to permit a competitive result which identifies the least cost proposal taking into account risk;

(d) specifying tender terms that are sufficiently open to allow a maximum range of proposals to be submitted, while ensuring that the evaluation criteria for evaluating the proposals are sufficiently well-defined to allow for a comparability across all submitted proposals;

(e) establishing a procedure for notifying the public and other bidders of the outcome of the tender that is transparent and public;

(vi) ensure that the procedures for post-bid negotiations, if permitted, will not produce a contract that deviates materially from the original terms of the tender;

(vii) pay due regard to the requirements of funding agencies in relation to the design and implementation of power projects (including requirements in relation to environmental standards) that may affect the availability of finance for such projects.

4.4 Commission Review of Filing

4.4.1 The Commission may, at any time during the review process, require the Licensee to provide additional information, explanations or justifications relevant to the Commission's evaluation of whether APTRANSCO's proposals satisfy its obligations in relation to power procurement under the Act and its Licence. The Commission may order the Licensee not to proceed with the proposed procurement until further order or for a specified period after the Licensee has supplied the required additional information.

4.4.2 The Licensee may, with Commission approval, modify the proposed Competitive Procurement Process during the Commission's review process.

4.4.3 APTRANSCO may proceed to implement its proposed procurement process in accordance with the proposals submitted to the Commission when authorised to do so by the Commission; or if the Commission has not taken any action in

relation to the proposal for 60 days after APTRANSCO has provided all of the information required by the Commission pursuant to these guidelines.

4.4.4 The Commission may at any time during the implementation of the procurement process consult with APTRANSCO to assure itself that the procurement process is being conducted in accordance with APTRANSCO's proposals.

4.4.5 APTRANSCO shall provide the Commission on demand with a copy of the RFP; proposals and other documents relevant to the procurement (whether received or issued by APTRANSCO) including the Power Purchase Agreement (PPA); and documents reflecting APTRANSCO's review and evaluation of the bids received by it. The Commission shall keep such documents confidential until the procurement process has been completed.

4.4.6 After reviewing APTRANSCO's filing, the Commission, at its discretion, may issue a notice of inquiry to consider any issue relating to the proposed procurement.

4.5 Licensee Notification of Outcome of Competitive Procurement Process

4.5.1 APTRANSCO shall notify the public, all bidders and the Commission of the winning bidder not more than seven days after making any binding commitment to the winning bidder to procure power in accordance with that bid. This notification shall include, at minimum, the following information:

- (a) name and address of the signatories to the PPA;
 - (b) general information on the terms and Paragraphs of the PPA;
 - (c) a brief description of the project including the nature of the technologies employed;
 - (d) "nameplate" capacity;
 - (e) location and other physical characteristics;
 - (f) fuel type; and
 - (g) anticipated operational date.
- 4.5.2 The Licensee shall retain, in clean and legible form, all tender and bid documents, and other documents relevant to the Procurement Process and outcome received by the Licensee as well as all Licensee records of its review and evaluation, for a period not less than 5 years on the Licensee's office premises.

4.6 Intervention in the Procurement Process

4.6.1 Once the Licensee has begun to implement a procurement process in accordance with these guidelines, the Commission shall only issue an order interrupting the process prior to the declaration of the winning bidder

- (a) on grounds of improper conduct; or

(b) on grounds that the manner in which APTRANSCO is conducting the procurement process differs materially from its filing as reviewed by the Commission.

4.6.2 The Commission may investigate any procurement of power following completion of the procurement process but before APTRANSCO commits itself to procuring power from the winning bidder:

(a) if the winning bid is unreasonably high;

(b) in response to a complaint lodged with the Commission from a bidder or other interested party on grounds of improper conduct in the procurement process;

(c) if the Commission has reason to believe that the procurement process was not conducted by APTRANSCO in accordance with its proposal as reviewed by the Commission.

4.6.3 Any investigation of a procurement process will be initiated by a notice of inquiry and conducted in accordance with Chapter II of the Commission's Conduct of Business Regulations. APTRANSCO shall not enter into any commitment to procure power pending the outcome of the investigation.

4.6.4 If the Commission determines that the procurement process was unsatisfactory with reference to the criteria in paragraph 4.6.1, the Commission may order APTRANSCO to take necessary corrective steps, including requiring it temporarily to suspend the procurement process, or to cancel it and declare the results null and void.

4.6.5 If the results of the Procurement Process are declared null and void, APTRANSCO shall so notify the public and bidders.

4.7 Continuing Commission Role

Nothing in this Section 4 shall prevent the Commission from investigating or taking such other action as it deems appropriate with respect to a completed power purchase agreement in the exercise of its responsibilities under the Act.