



**Request for Proposal  
For  
Enhancement of Precision Air Conditioning  
Capacity at NOC Visakhapatnam**

**Address:**

**Andhra Pradesh State FiberNet Limited  
3rd Floor, NTR Administrative Block,  
Pandit Nehru Bus Station, NH – 65,  
Vijayawada – 520001**

**Web address: [www.apsfl.in](http://www.apsfl.in)**

**Email address: [apsfl@ap.gov.in](mailto:apsfl@ap.gov.in)**



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## **Background**

AP State FiberNet Limited (APSFL) has been incorporated under the Companies Act, 2013 in the month of October, 2015. It is a fully owned entity of the Government of AP under the control of Energy, Infrastructure & Investment (E,I&I) Department. This Corporation is responsible for undertaking the works of AP Fibergrid, its operations & maintenance and business activities duly partnering with various stakeholders for the benefit of all.

## **VISION**

AP Fiber Grid is the means through which the vision of Hon'ble Chief Minister, Sri N.Chandrababu Naidu to make available highly qualitative and affordable digital services (data, voice and video etc..) to households, Government Offices and private agencies on demand in the State of AP. This endeavor can truly turn the State of AP as Digital AP in the direction of realizing the dream of Digital India. APSFL aims to promote Digital inclusiveness by providing affordable, high-speed broadband connectivity to households, deepening the reach of Internet in the rural areas. It throws up immense possibilities for enhancing the quality of life of the people. The services from AP Fibergrid system can effectively be utilized in education, health, agriculture and allied sectors and also open up new vistas in e-governance and enables delivering citizen-centric services in an efficient and transparent way.

## 1. RFP Notice

AP State FiberNet Limited (APSFL) requires Enhancement of Precision Air Conditioning (PAC) Capacity at NOC Visakhapatnam

<b>1</b>	<b>Issue of RFP</b>	20.04.2017
<b>2</b>	<b>Last date for receiving queries/clarifications</b>	25.04.2017 at 5:00pm
<b>3</b>	<b>Last date for submission of proposals</b>	04.05.2017 at 3:00pm
<b>4</b>	<b>Address for Communication</b>	3rd Floor, NTR Administrative Block, Pandit Nehru Bus Station, NH – 65, Vijayawada – 520001
<b>5</b>	<b>Bid Processing Fee (Non-refundable)</b>	INR 10,000 (Indian Rupees Ten thousand only) In the form of Demand Draft issued by one of the Nationalized / Scheduled Commercial Banks in India drawn in favour of Andhra Pradesh State FiberNet Ltd', payable at Hyderabad. The DD hardcopy must be submitted in APSFL office at Hyderabad before proposal due date.
<b>6</b>	<b>Bid Security / EMD (Refundable)</b>	INR 2,00,000 (Indian Rupees Two Lacs only) In the form of Bank Guarantee issued by one of the Nationalized / Scheduled Commercial Banks in India drawn in favour of Andhra Pradesh State FiberNet Ltd, payable at Hyderabad. Bid Security / EMD should be valid for a period of 180 (One Eighty) days from Proposal Due Date. The Bid Security / EMD will be refunded to unsuccessful Applicant agencies within 30 (Thirty) days of completion of selection process.
<b>7</b>	<b>For any enquiries and clarifications, please contact:</b>	The Executive Director Technical (EDT), Andhra Pradesh State FiberNet Limited, 3 <sup>rd</sup> Floor, NTR Administrative Block, Pandit Nehru Bus Station, Vijayawada-65 Email: edt.apsfl@ap.gov.in
<b>8</b>	<b>Reference No</b>	APSFL/NOC Equipment /190/2017

## **2. Procedure for Bid Submission**

The bidder shall submit his response through Bid submission to the RFP on e-Procurement platform at [www.apecurement.gov.in](http://www.apecurement.gov.in) by following the procedure given below:

The bidder would be required to register on the e-procurement market place [www.apecurement.gov.in](http://www.apecurement.gov.in) or <https://tender.apecurement.gov.in> and submit their bids online. Offline bids shall not be entertained by the RFP Inviting Authority for the RFP s published in e-Procurement platform.

The bidders shall submit their Pre-Qualification Bid and financial bid online in e-Procurement web site. The bidders shall upload the scanned copies of all the relevant certificates, documents etc., in support of their Pre-Qualification and other certificates/documents with clear readability, in the e-Procurement web site. The bidder should sign on all the statements, documents, certificates uploaded in the e-Procurement website, owning responsibility for their correctness/authenticity.

### **Registration with e-Procurement platform:**

For registration and online bid submission bidders may contact HELP DESK on [www.apecurement.gov.in](http://www.apecurement.gov.in) or <https://tender.apecurement.gov.in>

### **Digital Certificate authentication:**

The bidder shall authenticate the bid with the agency's Digital Certificate for submitting the bid electronically on e-Procurement platform and the bids not authenticated by digital certificate of the bidder will not be accepted on the e-Procurement platform.

For obtaining Digital Signature Certificate, you may please contact:

Andhra Pradesh Technology Services Limited, Vijayawada/Hyderabad  
[www.aps.gov.in](http://www.aps.gov.in)

(OR)

You may please contact any Registration Authorities of Certifying Authorities in India. The list of CAs is available in the link provided below.

[https://RFP .apecurement.gov.in/Digital Certificate/signature.html](https://RFP.apecurement.gov.in/Digital%20Certificate/signature.html)

### **Hard copies:**

i) All the bidders shall submit the hardcopy of the DD towards the bid processing fee in APSFL office at Vijayawada before proposal due date. They shall invariably upload the scanned copies of DD/BG in e-Procurement system and this will be the primary requirement to consider the bid responsive.

ii)APSFL shall carry out the technical evaluation solely based on the uploaded certificates/documents, DD/BG towards EMD in the e-Procurement system and open the Price Bids of the responsive bidders.

iii)APSFL will notify the successful bidder for submission of original hardcopies of all the uploaded documents and DD/BG towards EMD prior to entering into agreement.

iv)The successful bidder shall invariably furnish the original DD/BG towards EMD, Certificates/Documents of the uploaded scanned copies to the RFP Inviting Authority before entering into agreement, either personally or through courier or post and the receipt of the same within the stipulated date shall be the responsibility of the successful bidder. APSFL will not take any responsibility for any delay in receipt/non-receipt of original DD/BG towards EMD, Certificates/Documents from the successful bidder before the stipulated time.

On receipt of documents, APSFL shall ensure the genuinity of the DD/BG towards EMD and all other certificates/documents uploaded by the bidder in e-Procurement system in support of the qualification criteria before concluding the agreement.

### **Deactivation of Bidders**

Vide Ref GO Ms. No.174 – I&CAD dated 1-9-2008, if any successful bidder fails to submit the original hard copies of uploaded certificates/documents, DD/BG towards EMD within stipulated time or if any variation is noticed between the uploaded documents and the hardcopies submitted by the bidder, the successful bidder will be suspended from participating in the RFP on the e-Procurement platform for a period of 3 years. The e-Procurement system would deactivate the user ID of such defaulting bidder based on the trigger/recommendation by the RFP Inviting Authority in the system. Besides this, APSFL shall invoke all processes of law including criminal prosecution of such defaulting bidder as an act of extreme deterrence to avoid delays in the RFP process for execution of the development schemes taken up by the government. Other conditions as per RFP document are applicable.

The bidder is requested to get a confirmed acknowledgement from the RFP Inviting Authority a proof of Hardcopies submission to avoid any discrepancy.

#### **a) Payment of Transaction Fee:**

It is mandatory for all the participant bidders from 1st January 2006 to electronically pay a prescribed non-refundable Transaction fee to M/s.APTS, the service provider through "Payment Gateway Service on E-Procurement platform". The Electronic Payment Gateway accepts all Master and Visa Credit Cards issued by

any bank and Direct Debit facility/Net banking to facilitate the transaction. This is in compliance as per G.O.Ms. 13 dated 07.05.2006.

**a) Corpus Fund:**

As per GO MS No.4, user departments shall collect 0.04% of ECV (estimated contract value) with a cap of Rs.10,000/- (Rupees ten thousand only) for all works with ECV up to Rs.50 Crores, and Rs.25,000/- (Rupees twenty five thousand only) for works with ECV above Rs.50 Crores, from successful bidders on e-Procurement platform before entering into agreement / issue of purchase orders, towards e-procurement fund in favour of Managing Director, APTS. There shall not be any charge towards e-Procurement fund in case of works, goods and services with ECV less than and up to Rs. 10 lakhs.

**b) RFP Document:**

The bidder is requested to download the RFP document and read all the terms and conditions mentioned in the RFP Document and seek clarification if any from the RFP Inviting Authority. Any offline bid submission clause in the RFP document could be neglected.

The bidder has to keep track of any changes by viewing the Addendum/Corrigenda issued by the RFP Inviting Authority from time-to-time in the e-Procurement platform. The Department calling for RFP s shall not be responsible for any claims/issues arising out of this.

**c) Bid Submission Acknowledgement:**

The bidder shall complete all the processes and steps required for Bid submission. The system will generate an acknowledgement with a unique bid submission number after completing all the prescribed steps and processes by the bidder. Users may also note that the bids for which an acknowledgement is not generated by the e-procurement system are treated as invalid or not saved in the system. Such invalid bids are not made available to the RFP Inviting Authority for processing the bids. The Government of AP is not responsible for incomplete bid submission by users.

The bidders may contact the Executive Director Technical (EDT), APSFL for any further information / clarifications on e-procurement.

The bidders need to register on the electronic procurement market place of Government of Andhra Pradesh i.e., [www.eprocurement.gov.in](http://www.eprocurement.gov.in). On registration in the e-procurement market place they will be provided with a user ID and password by the system using which they can submit their bids on line.

While registering on the e-procurement market place, bidders need to scan and upload the required documents as per the RFP requirements on to their profile. The e-



procurement market place provides an online self-service registration facility to such of the Contractors who are already registered with respective participating departments for supply of specified goods and services.

All the bidders shall invariably upload the scanned copies of DD/BG in e-Procurement system and this will be the primary requirement to consider the bid as responsive. The Department shall carry out the Technical bid evaluation solely based on the uploaded certificates/documents, DD/BG towards EMD in the e-procurement system and open the Price Bids of the eligible and responsive bidders. The Department will notify the successful bidder for submission of original hard copies of all uploaded documents and DD/BG towards EMD prior to entering into agreement.

The bidders shall furnish a declaration in online stating that the soft copies uploaded by them are genuine. Any incorrectness/deviation noticed will be viewed seriously and apart from cancelling the work duly forfeiting the EMD, criminal action will be initiated including suspension of business.

### **3. Instructions to the Bidder**

#### **Queries Format**

All enquiries from the Bidders relating to this RFP must be submitted to the Executive Director (Technical), APSFL, Hyderabad. These queries should be e-mailed to [edt.apsfl@ap.gov.in](mailto:edt.apsfl@ap.gov.in). The queries should necessarily be submitted in the following Format:

#	RFP Part No.	Section No.	Page no.	Content of the RFP requiring clarification	Clarification Sought

#### **Language of the Bid**

The bids prepared by the Bidder and all subsequent correspondence and documents relating to the bids exchanged by the Bidder and APSFL shall be written in English language. Any printed literature furnished by the Bidder, written in another language, shall be accompanied by an accurate English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

#### **Hand written documents, Erasures or Alterations**

The offers containing erasures or alterations will not be considered. There should be no hand-written material, corrections or alterations in the offer. Filling up of the

information using terms such as “OK”, “noted”, “as given in brochure/manual” is not acceptable and may lead to the disqualification of the Bid.

### **Earnest Money Deposit (EMD) / Bid Security**

Bidders should submit EMD of Rs. 2,00,000 (Rs. Two Lakhs Only), in the form of a Demand Draft / Bank Guarantee issued by any Nationalized bank or Scheduled Commercial Bank, in favour of the “Andhra Pradesh State FiberNet Limited” which should be valid for 180 days from the last date of submission of bids.

The Bid security of all unsuccessful bidders would be refunded by APSFL within 120 days of the Bidder being notified as being unsuccessful. The Bid security amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it. Bid Security shall be returned to the Successful Bidder upon signing of contract. The Bid submitted without Bid Security, mentioned above, will be summarily rejected. The Bid Security may be forfeited:

- If a Bidder withdraws its Bid during the period of bid validity
- If the Successful Bidder fails to sign the contract within the stipulated period.
- In case the documents submitted or the information furnished by the bidder are found to be not genuine/false.

### **Bid Prices**

The Bidder shall indicate in the proforma prescribed, the unit rates and total Bid Prices for the equipment / services, it proposes to provide under the Contract. Prices should be shown separately for each item as detailed in this document.

The Bidder shall prepare the Bid based on details provided in the RFP document. It must be clearly understood that the Scope of Work is intended to give the Bidder an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by the Bidder. The Bidder shall carry out all the tasks in accordance with the requirement of the RFP document & with due diligence. It shall be the responsibility of the Bidder to fully meet all the requirements of the RFP document and to meet objectives of the Project. If during the course of execution of the project any minor revisions to the work requirements like technical specifications, equipment sizing, etc. are to be made to meet the goals of the Project; such changes shall be carried out within the proposed price. If any deviation has a major impact on the Project Cost, the Authority shall take appropriate decision and such decisions would be binding on the Bidder.

## **Firm Prices**

Prices quoted in the Bid must be firm and final and shall not be subject to any modifications, on any account whatsoever. The Bid Prices shall be indicated in Indian Rupees (INR) only.

The Price Bid should clearly indicate the price quoted without any ambiguity / qualifications whatsoever and should include all applicable taxes, duties, fees, levies, and other charges as may be applicable in relation to the activities proposed to be carried out. Should there be a change in applicable taxes, the actual taxes on the date of billing would prevail.

Prices in any form or by any reason before opening the Price Bid should not be revealed, failing which the offer shall be liable for rejection. If price change is inevitable due to any factor external to the bidders, the bidders may be given chance to submit revised Bids in a separate sealed cover. Decisions of the Authority shall be final in this regards.

## **Amendment of the RFP Document**

At any time prior to the submission of bids, Authority for any reason whatsoever, may, modify any element of the RFP Document by issuing a corrigendum. For the sake of interpretation, the content of any corrigenda issued by the Authority shall be read as a part of the original RFP Document. In each instance in which provisions of the Corrigenda contradict or are inconsistent/ inapplicable with the provisions of the RFP, the provisions of the Corrigenda shall prevail and govern, and the contradicted or inconsistent/inapplicable provisions of the RFP shall be deemed amended accordingly.

The Authority may in its sole discretion consider extension of deadlines for submission of the bids, in order to allow prospective bidders reasonable time in which to take the amendment into account while preparing their bids. All the communications with regards to the clarifications / corrigendum shall be uploaded in the website of APSFL on [www.apsfl.in](http://www.apsfl.in) and on e-procurement platform.

## **Inspection of Site and sufficiency of RFP**

Bidder is expected to work out their own rates based on the detailed description of scope of work items, the specifications, SLA conditions, etc. and should judiciously arrive at the commercials. The Bidder shall be deemed to have satisfied itself before Bid submission as to correctness and sufficiency of its RFP. The rates and prices quoted shall cover all its obligations under the contract necessary for proper completion and maintenance of the Works/Services.

If necessary, before submitting its Bid the Bidder s

ould inspect and examine various sites and its surroundings and shall satisfy itself about form and nature of the Site, and in general, obtain all necessary information which may influence or affect Project implementation and operationalization. No extra charges consequent on any misunderstanding or otherwise shall be allowed.

## Evaluation Framework

### Pre-Qualification Bid Evaluation Criteria

**Note:** Only the bids of those Bidders, who submitted the prescribed Bid processing fee and EMD, shall be considered for evaluation. The bids not accompanied with a valid Bid processing fee/EMD towards the security deposit shall summarily be rejected.

Sl. No	<i>In case of Single Bidder</i>	
	<i>In case of Single Bidder</i>	<i>In case of Single Bidder</i>
1	<p>LEGAL ENTITY</p> <p>a. The Bidder should be a Company registered in India under the Indian Companies Act 1956 / 2013 existing for the past 3 years as on 31/03/2016</p>	<ul style="list-style-type: none"> <li>• A copy of the Certificate of Incorporation.</li> <li>• Relevant certificate copy(s) to be attached</li> </ul>
2	<p>VAT, SERVICE TAX REGISTRATION</p> <p>The bidder should have valid Service tax and VAT registration in India</p>	<p>Certified copy of valid service tax and VAT registration certificates issued by competent authority.</p>
3	<p>POWER OF ATTORNEY / BOARD RESOLUTION</p> <p>The bidder should submit an authorization letter for authorizing the tender signing authority for signing and submission of the tender.</p>	<p>A Board Resolution / authorization letter from the board of directors or Power of Attorney authorizing the tender signing authority</p>
4	<p>EXPERIENCE</p> <p>Supply of equipment to Central/State Govt. /any Govt. PSU/Local Bodies</p>	<p>Copy of Work Orders/Contracts/ Work Completion Certificates from Clients (or) Certificate (s) from statutory auditor with all relevant details.</p>

Sl. No		
	<i>In case of Single Bidder</i>	<i>In case of Single Bidder</i>
5	<p><b>FINANCIAL CAPABILITY</b></p> <p>The Bidder firm shall have minimum annual turnover of INR 1 Crore each during last three financial years i.e. 2013-2014, 2014-15 and 2015-16. The bidder shall submit the Annual Report/ audited accounts certified by Auditor for the above three years to establish the turnover.</p>	<p>Certificate (s) fro statutory auditor with all relevant details from the bidder/the respective consortium members.</p>
6	<p><b>NON-BLACKLISTING</b></p> <p>The Bidder should not have been blacklisted by any Government (<i>Central / State / PSU</i>) Organization in India as on the date of bid Submission</p>	<p>Self- Certification from the authorized signatory of the Bidder and respective Consortium member(s)</p>

**Important Note(s):**

- The bidders shall submit necessary documentary proof showing that they meet the eligibility criteria along with their tender bid. All documents submitted will also be self-attested by the bidder.
- Proposals without necessary supporting documents or without meeting the prescribed qualification criteria will be treated as ineligible and will not be considered for further evaluation.

**Conditional bids/Offer by the bidders**

The Bidder should abide by all terms and conditions specified in the RFP Document. Conditional bids/offers shall be liable for disqualification.

**Late Tender bids**

Any tender offer received by APSFL after the deadline for submission of tender offer prescribed by the Authority, will be summarily rejected.

**Bid Validity Period**

Bids shall be valid for a period of 180 days (One hundred and eighty days) from the date of opening of the bids. A Bid valid for shorter period may be considered as non-responsive. In exceptional circumstances, at its discretion, Authority may solicit the

bidder's consent for an extension of the validity period. The request and the responses thereto shall be made in writing or by fax or email.

### **Address for Communication**

Bids should be addressed to the Authority and submitted at below given address:

The Executive Director – Technical,  
Andhra Pradesh State FiberNet Limited,  
3rd Floor, NTR Administrative Block,  
Pandit Nehru Bus Station,  
Vijayawada, NH-65  
520001  
Email Id: [edt.apsfl@ap.gov.in](mailto:edt.apsfl@ap.gov.in)

### **Opening of Bids**

Bids received within the prescribed closing date and time will be opened on the e-procurement platform, on the date, time and at the address mentioned in the RFP Documents.

### **Clarification of Bids**

To assist in the scrutiny, evaluation and comparison of bids, Authority may, at its discretion, ask some or all bidders for clarifications with regards to their Bid. The request for such clarifications and the response will necessarily be in writing (by letter / fax / email). Failure of a Bidder to submit additional information or clarification as sought by Authority within the prescribed period will be considered as non-compliance and the Proposal may get evaluated based on the limited information furnished along with the bids.

### **Right to accept any Bid and reject any or all Bids**

Authority reserves the right to accept or reject any Bid, and to annul the RFP process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for such action.

## **Notification of Award**

Authority will notify the Successful Bidder via letter / fax /email of its intent of accepting the bid. The notification of award will constitute the formation of agreement. APSFL will notify each unsuccessful bidder and return their EMD.

## **Signing of Contract**

APSFL notifies the successful bidder that it's proposal has been accepted and APSFL shall enter into an agreement with the successful bidder .Failure of executing the Agreement within the prescribed time shall cause the EMD of the Successful Bidder to be liquidated. In such event, APSFL shall negotiate with the next eligible bidder. The Successful Bidder will be liable to indemnify APSFL for any additional cost or expense, incurred on account of failure of the Successful Bidder to execute the Agreement.

Notwithstanding anything to the contrary mentioned above, the Authority at its sole discretion shall have the right to extend the timelines for execution of Agreement on the request of the Successful Bidder, provided the same is bonafide

## **Rejection criteria**

Besides other conditions and terms highlighted in the RFP Document, bids may be rejected under following circumstances:

### **General rejection criteria**

- a) Conditional Bids;
- b) If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the RFP Evaluation Process;
- c) Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or contract award decisions;
- d) Bids received after the prescribed time & date for receipt of bids;
- e) Bids without signature of person (s) duly authorized on required pages of the bid;
- f) Bids without power of attorney/ board resolution or its certified true copy.
- g) Bids received without submission of the prescribed Bid processing fee/EMD.

## **Concessions permissible under statutes**

Bidder, while quoting against this RFP, must take cognizance of all concessions permissible, if any, under the statutes and ensure the same is passed on to the Authority, failing which it will have to bear extra cost. In case Bidder does not avail concessional rates of levies like customs duty, excise duty, sales tax, etc. APSFL will not take responsibility towards this. However, the Authority may provide necessary assistance, wherever possible, in this regard.

## **Taxes**

The Bidders shall fully familiarize themselves about the applicable domestic taxes (such as value added or sales tax, service tax, income taxes, duties, fees, levies, GST etc.) on amounts payable by APSFL under the Agreement. All such taxes must be included by Bidders in the Price Bid. (Bidder needs to find out applicable taxes for the components being proposed.)

## **Right to vary the scope of Work at the time of Award**

The Authority reserves its right to make changes to the scope of the work which is capped to 25% at the time of execution of the resultant Agreement. If any such change causes an increase or decrease in the cost of, or the time required for the performance of any part of the work under the Agreement, whether changed or not changed by the order, an equitable adjustment (if required) shall be made in the Contract Value or time schedule, or both, and the Agreement shall accordingly be amended.

## **Fraud and corruption**

Authority requires that Bidder must observe the highest standards of ethics during the entire process of RFP evaluation and during execution of the contract. In pursuance of this policy, APSFL defines, for the purpose of this provision, the terms set forth as follows:

- a. "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the Authority in contract executions.
- b. "Fraudulent practice" means a misrepresentation of facts, in order to influence a procurement process or the execution of a contract, to the Authority, and includes collusive practice among bidders (prior to or after Proposal submission) designed to establish Proposal prices at artificially high or non-competitive levels and to deprive the Authority of the benefits of free and open competition.



- c. “Coercive Practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the execution of contract.

Authority shall reject the Bid proposal for award of contract, if it determines that the Bidder recommended for award, has been found to have been engaged in corrupt, fraudulent or unfair trade practices. Once the contract is signed and if it is noticed that the Bidder has indulged into the Corrupt / Fraudulent / Unfair / Coercive practices, it will be a sufficient ground for APSFL for termination of the contract and initiate black-listing of the Bidder.

#### **4. Introduction**

APSFL service connectivity to households and Enterprises has commenced. Reliability of the network and related infrastructure is of paramount importance with increasing number of customers and the scope of services to be offered. The precision air conditioning system capacity available at the NOC, Visakhapatnam is 3 X 10 Ton. These PAC systems were designed for the loads considered with the initial design.

NOC is the nerve center for the complete network and the overall load on the power and air conditioning is substantially increasing due to:

- Inclusion of more electronic equipment such as Telecom servers, DRM servers, Multiplexers, Content servers, etc. in addition to the originally planned equipment with increased capacities.
- Additional racks provision was made to accommodate interim Data center needs for Microsoft Azure servers.
- Likely addition of equipment in view of the increase in IPTV channel head ends, more & more content servers, and equipment related to wi-fi control centre etc.

To augment the existing air conditioning capacity and meet the increased requirement, additional 2 X 10 Ton plus 1 X 10 Ton, floor mounted precision air conditioners are proposed to function in a 5+1 redundancy factor. Based on the field conditions and analysis of maintenance and future requirements, the procurement of certain additional equipment shall serve the following important aspects:

- Overall reliability of the network
- Adequate redundancy of the critical equipment
- Near future expansion and increase in services / facilities
- Protection of critical equipment against damages due to ambient and input conditions.

## 5. Scope of Work

1. Copper piping works
2. Power cabling & MCB provision for new PAC
3. False floor tile cutting as per the new PAC placement
4. Grid Ceiling works
5. Air balancing in the grills
6. Synchronizing the new units with existing units
7. Outdoor MS structure to mount the new condensers
8. Civil works for copper pipe and drain pipe routing
9. Scaffolding for cat walk to do copper piping on external wall
10. Lifting, shifting and positining of existing PAC units and installation of new units
11. Commissioning activities
12. Humidifier piping
13. Plenum (ducting works) for new units
14. Indoor stands supply.
15. Details of existing PAC system:
  - a. Emerson Network Power (Libert.Pex) PAC's – 2 \* IOT
  - b. Model: Pex 135 EC, with ICOM+IR HUM.
  - c. Part Code: 5060E0513509
  - d. Power Supply: 415V/ 3Ph/ 50 Hz

## 6. Location

AP Fiber Network Operations Center, Platinum Jubilee Guest House Road, opposite andhra university, Kirlampudi Layout, Chinna Waltair, Visakhapatnam, Andhra Pradesh 530017

## 7. Deliverables

The following items must be delivered along with installation & commissioning within a week from date of release of P.O.

S.No	Item Description
1.	Equipment specification: PEX135EC Bottom Flow
2.	10 TR Floor Mounted, Bottom discharge Air Cooled DX type Precision Air conditioners Model : PEX ( Bottom Flow ) (Actual Capacity at return air

	temperature of 21 deg C DB & 50% RH and Outdoor Ambient Condition @ 42 Deg C with R-407C Refrigerant Gas)
3.	The Indoor unit shall comprise of Scroll Compressor , Evaporator Fan complete with Backward Curve EC fan, Evaporator DX Cooling Coil ("A' / "V" Shape), Microprocessor controllers, Expansion valves, Driers, G4 Filter, Suction and Discharge piping, Internal power and Control wiring, Crankcase heaters, Humidifiers, Heaters, HP/LP Cutouts, Power and Control contacotrs and Other Electrical accessories.
4.	The Outdoor Condenser unit shall comprise of Condenser fans & motor, Condenser cooling coil (Copper coil with aluminium fins), Isolater switch.
5.	The unit shall be suitable for operation on 415 Volts, 50 Hz, 3 Phase, 4 Wire AC supply. Each unit should be having individual display panel, which shall display date, time, actual & set values, operating conditions, signal faults, collective faults, limiting values and PAC wellness alarm / service alarm to reduce the down time and unit memory shall hold the 400 most recent events with ID number, time and date stamp for each event.
6.	Supply of PEX ( Bottom Flow ), as per above specification.
7.	Model of Indoor Unit: : PEX135 EC ( Bottom Flow ), Dim : 850W x 850D x 1950H
8.	Model of Outdoor Unit: 1XLS70CC2
9.	The Break-up of Pricing is as under:
10.	Basic Unit Price of Each Unit
11.	<p>Items included are:</p> <ul style="list-style-type: none"> <li>- Copeland Scroll Compressor</li> <li>- BACKWARD CURVE EC FAN</li> <li>- Evaporator Cooling Coil</li> <li>- Hydrophilic Coated coil</li> <li>- Air cooled condenser</li> <li>- Bottom Flow</li> <li>- Microprocessor (Global I - COM)</li> <li>- Heater</li> <li>- Humidifier -INFRA RED TYPE</li> <li>- Power Panel &amp; starter for all drives</li> <li>- Filter</li> <li>- Water leak detector sensor</li> <li>- SS drain Tray</li> <li>- Condenser with fan speed controller</li> </ul>
12.	<p><b>Operation &amp; Control Features</b></p> <p>" - Return Air Set points &amp; Operational Capabilities: 20 Deg.C to 35 Deg C, 20% to 60% RH, 38 Deg C in case of Cold Aisle containment &amp; Smart logics "</p> <ul style="list-style-type: none"> <li>- Relative / Compensated / Predicttive method for humidity control</li> <li>- Temperature &amp; Humidity graphs for the system (Avg. value of all the connected units) &amp; for each single unit</li> <li>- Record of Peak &amp; Low temperature/humidity of the current day</li> <li>- Choice of display: Graphical / Simple / Graphical Comma / Simple Comma</li> </ul>

	<ul style="list-style-type: none"> <li>- Display shows SET / ACTUAL / SET+ACTUAL Values</li> <li>- Records total run hours for all main components</li> <li>- Team Mode operation for synchronising upto 32 units in room by any of the unit controller</li> <li>- Sequencing &amp; Stand-by rotation</li> <li>- Cascading, Lead-Lag functions</li> <li>- 16 days record of controlled parameters</li> <li>- Unit memory shall hold 200 recent alarms with date and time for each alarm</li> <li>- Status report of last 400 event logs</li> <li>- 3 types of access; User, Service &amp; Advanced to protect all settings</li> <li>- Auto restart after a power failure</li> <li>- Graphical display of status of operation of all major components like Compressor, Fan, Heater &amp; Humidifier on screen in an idle mode</li> <li>- Contains key contact info for local service including names and phone numbers</li> <li>- 254 types of Alarms / Warnings</li> <li>- Monitoring card should be able to support any one of the protocol (Bacnet/Modbus/SNMP)</li> <li>- Each unit Controller should be capable of controller, monitoring, sharing set points and alarms upto 32 units.</li> <li>- Each Unit controller should have feature of avoiding fighting of operation modes for multiple units thus saving upto 15% power at larger sites</li> <li>- Onboard unit diary provides maintenance history</li> </ul>
13.	<p>Team Mode feature for PAC units controller for synchronising the Multiple No. of units to work as single system for all above units.</p> <p>Load sharing mode feature</p> <p>Cascading Effect</p> <p>Sequencing of above Units</p>

## 8. Warranty

Comprehensive Warranty of three years including accessories shall be provided for all the equipment supplied.

## 9. Price Bid Format

S.No	Item Description	Quantity	Unit Rate (Rs.)	Total Cost (Rs.)
1.	Floor mounted Bottom type DX 10 ton precision air cooled single circuit Precision Air Conditioners of 30.1 KW along with outdoor condenser fan & motor suitable for 415V, 50Hz, 3 Ph AC supply	3		
2.	Accessories Copper piping, gas line, MS Stands, drain pipe etc. including Installation and Commissioning	3		
Total Cost				

- The rates quoted shall be inclusive of all taxes and duties applicable as on date.
- The bidders who quotes the lowest Total Project Cost in the format mentioned above shall be declared as L1 and considered for award.

## 10. Payment Terms

Payment shall be made by APSFL to the Supplier only after the following conditions are satisfied:

- Invoice shall be submitted in duplicate.
- Supply and commissioning of required equipment as mentioned in the P.O. shall be completed in all respects.
- Certificate from the authorised signatory on successful commissioning need to be submitted.
- 90% of the payment shall be released on submission of the above documents.
- 10% of the payment shall be released after the completion of warranty period (or) on submission of Bank Guarantee for the period of warranty.