STATE ENERGY CONSERVATION MISSION (APSECM)

(A Society registered under AP Societies Registration Act 2001)

Department of Energy, I&I, Government of Andhra Pradesh

TENDER SPECIFICATION FOR

Selection Of Energy Auditing Agency(S) For Carrying Out Investment Grade Pre-Energy Audit & Post Installation Energy Audit For The Selected Pump Sets Of Rural Water Supply & Sanitation (RWS &S) Department In 10 Districts of Andhra Pradesh

ANDHRA PRADESH
STATE ENERGY CONSERVATION MISSION(APSECM)

2nd Floor, 33/11kV Indoor Substation Building, Museum Road, Vijayawada-520002.
Mobile : 8332959029,9963015797, 0866-2577620

NOTICE INVITING TENDERS THROUGH e-PROCUREMENT

APSECM/Tender-1/ EA/ RWS PUMP SETS/ 2019-20

Andhra Pradesh State Energy Conservation Mission, Govt of A.P & SDA under the EC Act, 2001 invites accredited energy auditing firms empanelled with APSECM and BEE, GoI, Ministry of power to carry out Investment Grade Energy Audit & Post installation Energy Audit for selected Pump sets of Rural Water Supply & Sanitation (RWS&S) Department in 10 Districts of A.P.

Tender documents regarding details of bidding process, eligibility criteria, previous Experience, Turnover of the agency and other conditions may be downloaded from the websites of AP Power utilities i.e., **www.apsecm.ap.gov.in** (or) **www.aptransco.gov.in** (or) **www.apeasternpower.com** (or) **www.apspdcLin** (or) **www.apgenco.gov.in** (or) from **24.06.2019, 5 PM** onwards or through email by sending a request to **ceo.secm@gmail.com .** Also Tender documents are available on e-procurement website i.e., **www.apeprocurement.gov.in**

Last date of submission of filled in Tender Documents is: **23.07.2019, 5 PM.**

Place: Vijayawada
Date: 24-06-2019.

R.o .No: 14/2019 Dt: 19-06-2019

Sd/-
A. Chandra Sekhara Reddy
CEO/APSECM-Vijayawada

size: 8x7 sq.cm.

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ENERGY AUDITING FOR CARRYING OUT INVESTMENT GRADE PRE-ENERGY AUDIT & POST INSTALLATION ENERGY AUDIT FOR THE SELECTED PUMP SETS OF RURAL WATER SUPPLY & SANITATION (RWS &S) DEPARTMENT IN 10 DISTRICTS OF ANDHRA PRADESH.

1. NOTICE INVITING TENDERS

1.	Department Name	:	APSECM
2.	Bid Number	:	APSECM -e- 01 /2019
3.	Bid Subject	:	Selection of Energy Auditing Agency(S) for Carrying out Investment Grade Pre-Energy Audit & Post Installation Energy Audit for the Selected pump sets of Rural Water Supply & Sanitation (RWS &S) Department In 10 Districts of Andhra Pradesh.
4.	Package No.	:	APSECM-e- 01 /2019
5.	Period of Contract	:	6 months
6.	Form of Contract	:	**WORK**
7.	Bid Type	:	Open Competitive Bidding
8.	Bid Category	:	Works
9.	Bid Validity	:	90 days from Scheduled Bid submission closing date i.e. up to **21-10-2019.**
10.	EMD / Bid Security	:	**Rs 25,000/-**
11.	EMD/Bid Security Payable to	:	In the shape of Demand Draft in favour of Chief Executive Officer, APSECM, Vijayawada issued by any Nationalized Bank and payable at Vijayawada (or) Bank Guarantee issued by a Nationalized Bank/ Scheduled Bank (as per the list enclosed) in favour of the Chief Executive Officer, APSECM, Vijayawada, and shall cover a period of 45 days over and above the period of bid validity. i.e., up to **05-12-2019**
12.	Transaction Fee	:	0.03% on ECV (Estimate Contract value) or with a cap of Rs.10000 /- excluding GST. Refer e-procurement web-site.
13.	Transaction Fee Payable to	:	Payable to **APTS, Vijayawada**.
14.	Schedule Sale opening Date	:	**24.06.2019 at 05:00 PM (IST)**
15.	Schedule sale Closing Date	:	**23.07.2019 at 4.30 PM (IST)**
16.	Pre-Bid meeting opening date	:	**01.07.2019 at 3.00 PM (IST)**
17.	Pre-Bid meeting closing date		**01.07.2019 at 4.00 PM (IST)**
18.	Bid Submission Closing Date	:	**23.07.2019 at 5:00 PM (IST)**
19.	Bid Submission	:	Online
20.	Pre-Qualification/ Technical Bid Opening Date (Q.R stage)	:	**02.08.2019 at 11.00 AM (IST)**
21.	Price Bid Opening Date	:	**13.08.2019 at 11:00 AM (IST)**

22.	Place of Bid Opening	:	O/o. Chief Executive Officer, APSECM, Vijayawada.
23.	Officer Inviting Bids	:	Chief Executive Officer, State Energy Conservation Mission, Vijayawada.
24.	Address	:	Govt. of Andhra Pradesh, Energy, I&I Dept, 2nd Floor, 33/11 KV Indoor substation, Museum Road, Vijayawada-520002.
25.	Contact Details/ Telephone/Mail ID	:	0866-2577620 ceo.secm@gmail.com
26.	Eligibility Criteria	:	Refer Clause No.20 'Qualification Requirements'
27.	Procedure for Bid Submission	:	Refer Instructions to the bidder
28.	General Terms & Conditions	:	Refer General Terms and conditions of specification Note: Bidders are requested to go through all the clauses and contents of specification thoroughly and quote the bid. Ignorance of clauses will not be entertained by the purchaser at later date.

APSECM (**Andhra Pradesh State Energy Conservation Mission)** invites tenders on e-procurement platform for Selection of Energy Auditing Agencies for carrying out Investment grade Energy Audit (IGEA) of old pump sets and post installation Energy Audit for the new Energy Efficient Pump sets of various capacities at CPWS Schemes of (Srikakulam, Vizianagaram ,Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur ,Nellore, Chittoor, Anantapur) Rural Water Supply& sanitation Department (RWS&S) in the 10 districts. The source of funding for the project is Bureau of energy efficiency.

2. **SCOPE OF WORK**

The scope of work include carry out site survey , taking the details of the existing pump sets and conducting field measurements and carrying out thorough Investment Grade Energy audits (IGEA) for the old pump sets and conducting post Energy Audit after replacing the recommended pump sets with Energy efficient pump sets for all the 10 districts. The key deliverables shall include the following.

- Location wise details of the existing Pump sets with all parameters such as Head & Flow measured, consumption in kW , Avg current, Avg Voltage and Power factor , Existing Transformer Capacity and complete details of Existing starter condition, Panel Board, Capacitor Bank .
- Details of Electrical service connection and consumption pattern as per DISCOM records.
- Executive Summary with brief details of the recommendations & payback period
- Location wise Detail analysis of the data obtained through field survey, trial measurements by portable instruments and discussion with concerned personnel/ Engineer- In- charge of Departments.

- Recommendations on the proposed EE pump set with energy saving potential for each pump set and in all other possible areas with cost-benefit analysis for part 1(a) to (i). The indicative format with minimum details expected is herewith
  attached but the bidder shall incorporate any further details or observations which are required for assessment of energy saving potential on the pump set concerned or any other conventional appliances /technologies which can be replaced or retrofitted in the premises for improving the overall energy savings.
- Technical Specifications for any replacement / retro fit options,
- List of suppliers / manufacturers of energy efficient pump sets/ technologies recommended
- Ready to use bidding document for implementation of Energy efficiency measures for the selected pump sets in RWS Dept for recommendation.

3. **DETAILS & LOCATION OF SELECTED PUMPSETS**

The RWS&S department has engaged its field functionaries and obtained the district wise information on the old pump sets (of 10 yrs or more) for undertaking the energy audit and identify the energy inefficient pump sets having considerable energy saving potential if replaced with EE pump sets. The details are as follows.

Details of exiting old pump sets under CPWS Schemes of RWS Dept					
Sl.No	**District**	**No of Schemes**	**No of Pump Sets**	**Total HP**	**Remark**
1	2	3	**4**	**5**	
1	Srikakulam	13	**62**	**2807.5**	Pump sets are older by 10 yrs or more (As per the name plate details)
2	Vizayanagaram	7	**51**	**722**	
3	Vishakapatnam	1	**44**	**548.5**	
4	East Godavari	13	**142**	**3256.02**	
5	West Godavari	7	**53**	**1259.5**	
6	Krishna	19	**58**	**882.5**	
7	Nellore	3	**5**	**350**	
8	Chittoor	2	**9**	**87.5**	
9	Anantapur	28	**28**	**728.5**	
10	Guntur		**76**	**649**	
	Total	**93**	**528**	**11291.02**	
Cost Estimate					
		Total Pump sets			**528**

Total HP	**11291.02**

Individual location wise details are also furnished in the Annexures which are indicative and provided for the purpose of reference to the bidders.

4.1 DISCUSSIONS WITH KEY FACILITY PERSONNEL

The first step is a set of initial discussions between the Identified Agency and key personnel such as, Divisional Engineer, Chief Engineer and the Field Engineers on the proposed methodology and preparatory arrangements to be made by the RWS dept to undertake field measurements.

The purpose of these discussions will be to ensure that the key personnel thoroughly understand and support the process, and that staff have adequate understanding of the process since they will be extending necessary support and coordination for enabling the energy audit by the Audit agency.

4.2. SITE VISITS TO UNDERSTAND THE REQUIREMENTS

Following the above, the Identified Agency shall visit all facilities involved in the Project locations to ascertain the availability of data and system complexity; formulate a data collection strategy, and other issues. The bidder shall make field Visit and map the system in the following manner, including the distribution networks, pump design details, and suction discharge pipe lines:

4.2.1 Layout of the systems including the intake arrangements, clarifiers, and filters, indicating their sizes, capacities, connected loads, etc.

4.2.2 Layout of the pumping stations including the location of the pumps, their design details, suction, and discharge pipe sizes, and routing.

4.2.3 Sketch the water distribution system indicating pipe lines, pipe line sizes, branching points, approximate lengths, bends, and valves up to the overhead tank or to the main end user points, in case of direct pumping

4.2.4 Identify the points where pressure measurements and flow measurements are to be done and intimate well in advance on the points where RWS dept has to **make provision /provide nipples for fixing of pressure gauges.**

4.3 DATA TO BE COLLECTED (INCLUDE BUT NOT LIMITED TO)

4.3.1 Water sources of the Dept

4.3.2 If the source is outside the RWS Dept

- Number and locations of the main water sources
- Distance between the main source and the Dept storage facility

4.3.3 Number and locations of pumping stations in the Dept

4.3.4 For all the pumps at the source, pumping stations throughout the system and handling facilities:

- Pump design details
- Operation hours of the individual pumps on a daily basis for the past 12 months.
- Quantity of water pumped, as available from records/ computed from operating hours and tank size etc
- Operational details including flow, head, power and power parameters

4.3.5 Quantity pumped from each of the stations on a daily basis for the past 24months.

4.3.6 Electricity bills of the individual pumping stations for the past 24 months

4.3.7 Maintenance expenses of the individual pumping stations for the past 24 months

4.3.8 Number of overhead tanks connected with each of the pumping stations or the number of domestic, public and commercial connections in each of the pumping stations

4.3.9 Water distribution system single line diagram, if available

4.3.10 Sizes of the pipe lines in the distribution system, including for the source water if any

4.3.11 Population under the water served are on an annual basis for the past three years. If not available, collect the census details of the previous census and derive the population

4.3.12 Ground water levels at various seasons of the year for the past 3 years, if the pumping is through bore wells.

4.3.13 Reservoir levels for the different seasons

4.4 PREPARATORY WORK FOR AUDIT

4.4.1 The Energy Auditing Agency shall identify the sampling points and the RWS dept shall bear the cost and arrange for providing nipples for the pressure measurement wherever possible. The Agency shall have Ultrasonic flow meter shall for flow measurement.

4.4.2 Evaluate the Head and Flow of the pump set , kW consumption and its overall efficiency.

4.4.3 Evaluate the performance of an entire pumping system

4.4.4 Establish the pressure profile along the pipelines

4.4.5 Measure flow in the major branch lines

4.4.6 Establish the application of booster pumps at certain strategic locations

4.4.7 Prepare data sheets to capture operational details of the pumps in more detail than those are available in the log book.

4.5 ENERGY AUDIT & MEASUREMENTS

Measurements must be done for all the pumps individually as well as for the whole operating system to establish the performance of both. The following is the minimum that must be measured:

4.5.1 Flow and head measurements of individual pumps at various intervals. If the pumps are running continuously during daytime and evening hours measure at three hour intervals. If the pumps are running at pre-specified times, at least four readings are to be taken at different time intervals. Further measurements may be taken depending upon the site and operating conditions.

4.5.2 Flow and head measurements of the entire system as described above

4.5.3 Power measurement using the Power Analyzer for those pumps for which the flow measurements are made simultaneously. This shall include kW, three phase Amperage , Voltages and Power factor.

4.5.4 Electrical parameters of all the pumps

4.5.5 Power parameters of the pumping station continuously for 24 hours

4.5.6 In exceptional cases wherever fixing of pressure Gauge was found impossible, the agency has to invariably measure the exact length and diameter of pipe lines at suction& discharge and compute the Head required for sizing of the new Pump set to be installed.

4.5.6 Other measurements as needed to characterize the system

4.6 DATA ANALYSIS

Conduct the following analysis to calculate the baseline of the entire project as well as for individual projects making up the whole:

4.6.1 Historical data analysis to establish the power consumption trends

4.6.2 Analyze design parameters and actual operational parameters with a view to identify problems

4.6.3 Analyze pressure and voltage profiles with a view to identify losses payback Period

4.6.4 Analyze distribution network with a view to identify system resistance and whether pipes and cables are the correct size

4.6.5 Evaluate the performance of the individual pumps, or combination of pumps in case of parallel operation, and the pumping system as whole, including

transformers, lighting system etc .An indicative format is provided in the Annexure-1 with minimum details to be provided in the IGEA report.

4.7 LIST POSSIBLE EFFICIENCY PROJECTS

The detailed energy audit carried out at the various facilities will identify energy efficiency measures. The measures that have the best technically economic potential will be further developed into saving project that will be listed in the IGEA report. Based on the analysis, the list of projects with good potential for saving energy that includes the following information:

4.7.1 Configuration of the existing system

4.7.2 Configuration of the proposed system

4.7.3 Estimate of the energy savings and other benefits

4.7.4 Financial projections including the estimated investment annual energy saving potential and the Payback period.

4.7.5 Energy Saving potential and investment along with R&M costs shall be supported from recommendations from at least 2 nos. of pump manufacturers

4.8 BASELINE

4.8.1 The Baseline of energy use for water pumping is calculated from all relevant information, such as operating conditions, measurements of various system equipment, log book trends, historical data, information from pump operators and mechanics, and any previous test reports on the existing operating conditions.

4.8.2 While establishing this, care will be taken to identify any major loads that are introduced or deleted during the period under consideration. The baseline may be determined by comparing the three year monthly average with that of the immediate past 12 months and taking the higher of the two.

4.8.3 The energy baseline has to include the following parameters, wherever applicable, to avoid ambiguity during the M&V:

- Water flow (m3/hr) from each pumping station
- Pump discharge pressure (kg/cm2)
- Header discharge pressure (kg/cm2)
- Pressure at various points in distribution system(kg/cm2)
- Ground water level (m) (in the case of bore wells and submersible pumps)
- Reservoir levels (m)
- Motor kWh, kVAh, PF , frequency and speed.
- Power consumption (kW) of individual pumps in the system
- Operating hours per day of each pump
- Power failure of electricity (hours per month)
- Monthly electricity bills for the pumping station (if available)
- Cost of water, if available

- Individual pump performance

4.8.4 The Energy Baseline may undergo change if the machinery of the undergoes changes between the Study and actual implementation. Such changes may be in operating hours, energy consuming equipment, operating parameters such as head and flow, overhaul of energy consuming equipment, etc. which shall be considered as changes in field conditions once the same is established.

4.8.5 In such a case, probable baseline modification and adjustments shall be proposed in the IGEA by using empirical formulas, which shall be Considered at the time of actual implementation of the Project. Variables outside the Project boundary that can affect the baseline shall also be considered. Such empirical formulas shall be mutually decided by the implementing Agency , APSECM and RWS dept.

4.8.6 Adjustments are any adjustments, positive or negative, that need to be made to the baseline to bring energy use at the current point in time to the set of conditions as the baseline set.

4.9 MEASUREMENT & VERIFICATION (M&V)

It involves the measurement of parameters in accordance to standard engineering protocols, codes & practices, at a predefined periodicity and term. Since the savings are calculated relative to the baseline, M&V needs to be consistent with the calculation of baseline. As needed, APSECM and RWS dept shall nominate and appoint their representative(s) to witness and verify the baseline measurement. Such M&V protocol shall be included in the IGEA report.

4.10 RISK RESPONSIBILITY MATRIX

Risks such as Financial, Operational, Technical, Performance, Social, Environmental, etc. shall be indicated in the IGEA along with responsibility and risk mitigation measures.

4.11 PROJECT FINANCIALS

The Project Financials (cost benefit and financial analysis) are to be calculated using the detailed cost estimates obtained for all equipment and projected savings rates. This allows the potential projects to be classified according to their cost-effectiveness. Cash flow considerations are also to be taken into account along with sensitivity analysis.

4.12 IGEA REPORT

The audit report is not only the foundation for the Tri-partite agreement, but is the key document used by financial institutions to assess the technical and financial viability of the Projects. The broad content of the IGEA report should be as follows:

4.12.1 Executive Summary shall include brief description of the facilities covered, measures evaluated, analysis methodology, results and a summary table presenting the cost and savings estimates for each recommended measure. It also includes a summary of the recommended measures and costs as well as the financial indicators of the Project.

4.12.2 Background: More extensive background about the Client Agency and the Project.

4.12.3 Facility Description: Details of the existing facilities targeted, such as water treatment & supply systems and handling systems.

4.12.4 Energy Scenario: Energy consumption details of all facilities included in the audit and their energy sources.

4.12.5 Baseline parameters and Adjustments: Methodology followed in establishing the baseline parameters and criteria. Provide the baseline parameters and the calculation procedure in an annex.

4.12.6 Data Collection: List the various types of data collected and their sources. Include the data in the annex.

4.12.7 System mapping: Describe the methodology followed for system mapping and include the maps and process flow diagrams in the annexure.

4.12.8 List of Potential EEMs: A list of all identified measures with estimates of the savings and payback periods on investments, and a summary of the selected EEMs chosen for further development.

4.12.9 Reporting: 3 copies of the IGEA report with soft copies shall be submitted which shall be signed location wise by the respective AEs/AAE, DEE ,and DE/RWS in toke acceptance of the details furnished therein..

5.0 Post Energy Audit – After Installation of New Energy Efficient Pump sets

- Based on the recommendation under the IGEA Report, APSECM shall take up replacement of old pump sets with EE pump sets through energy financing under ESCO route and the cost of investment will be recovered from the RWS dept from deemed energy savings as per mutually agreed terms and conditions which will emerge from the energy audit report.

- Post Energy Audit will be undertaken by the Agency soon after the successful installation of new pump sets in order to assess the actual savings accrued and accordingly submit the EA report along with correction factor(s) to be adopted if any in the cost recovery amounts subjected to further analysis and mutual agreement between the stake holders.

6 . Procedure for Submission of Bids:

In the above context, RWS&S dept has requested APSECM to take up replacement of 528 No's of Old energy inefficient Pump sets with BEE Five star rated/Equivalent standard Pump sets in the 10 districts as stated above. The RWS&S dept has further requested APSECM to implement the project including project financing, extend the services as Project Management Consultancy (PMC) agency and the total cost of investment may be recovered from the deemed energy savings on mutually agreed terms between the two Departments.

Under this scheme, it is now proposed to carry out Investment Grade Energy audits (**IGEA)** & post installation energy audit for the working pump sets which are old by 10 years or more in the 10 districts including submission of **IGEA** Report containing recommended sizing of the new pump sets and specifications of new energy efficient pump sets and the list of quality suppliers/ manufacturers of those EE pump sets from whom **APSECM** can procure.

Interested bidders, preferably from among the technically qualified and specifically experienced Energy Auditing firms empanelled with the APSECM may download the TENDER document from the website www.apsecm.ap.gov.in (or) www.aptransco.gov.in (or) www.apeasternpower.com (or) www.apspdcl.in (or) www.apgenco.gov.in (or) www.apeprocurement.gov.in through a request mail to ceo.apsecm@gmail.com from the Office of the State Energy Conservation Mission (SECM), Department of Energy, I&I, Govt. of Andhra Pradesh, 2nd Floor, 33/11 kV Indoor Substation Building, Museum Road, Governor Pet, Vijayawada – 520002, Andhra Pradesh, Tel: 0866 – 2577620 during office working hours.

Interested bidders may contact SDA, Andhra Pradesh at Tel: 0866– 2577620, Email: ceo.secm@gmail.com for any clarification.

TENDER issuing authority details:

Shri A. Chandra Shekara Reddy,
Chief Executive Officer,
State Energy Conservation Mission,

Govt. of Andhra Pradesh, Energy, I&I Dept, 2nd Floor, 33/11 KV Indoor substation, Museum Road, Vijayawada-520002

Contact Person for queries / submission of Proposals:

Mrs. K. Lakshmi Bhanu, DGM, Cell No 8332959029

Mr. Venkat Raju , District Project Manager ,Cell: 9963015797

7 .TIMELINE FOR SUBMISSION OF IGEA REPORT:

The broad timeline for the Project is as under:

Issue of order	Submission of IGEA Report	Submission of Post Audit report
By SECM within 7 working days of opening of price bid of TENDER.	**Within five weeks from the date of award of Work (LoA).**	**Within five weeks of installation of new Pump sets.**

8 . Payment Schedule

- 10% of the payment will be made after issue of award while 50% of the payment will be made after receipt of Investment Grade Energy Audit Report(s).
- Balance 40% payment shall be made after receipt of energy audit report post installation of the new energy efficient pump sets.
- The report(s) should contain all the aspects and deliverables as mentioned in this tender document. Applicable taxes as deductable at source will be deducted from the bill amount.
- If number of pump sets to be audited increases more than the indicated 528 Nos , payment will be considered on pro rata basis.

9. Cost of tender

The Bidder shall bear all costs associated with the preparation and submission of its bid, including cost of presentation for the purposes of clarification of the bid, if so desired by the Purchaser. APSECM will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Tendering process.

10. Contents of the tender specification

The Bidder is expected to examine all instructions, forms, and terms and conditions and Statement of Work in the tender documents. Failure to furnish all information required or submission of an tender Document not substantially responsive to the bid in every respect will be at the Bidder's risk and may result in the rejection of the bid.

11. Language of Bids

The Bids prepared by the Bidder and all correspondence and documents relating to the bids exchanged by the Bidder, shall be written in English language, provided that any printed literature furnished by the Bidder may be written in another language so long the same is accompanied by an English

translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

12 . Confidentiality

SECM requires that recipients of this document to maintain its contents in the same confidence as their own confidential information and refrain from any public disclosure whatsoever.

13 . Disclaimer

SECM and/or its officers, employees disclaim all liability from any loss or damage, whether foreseeable or not, suffered by any person acting on or refraining from acting because of any information including statements, information, forecasts, estimates or projections contained in this document or conduct ancillary to it whether or not the loss or damage arises in connection with any omission, negligence, default, lack of care or misrepresentation on the part of SECM and/or any of its officers, employees.

14. Authorized Signatory (Bidder)

The "Bidder" as used in the tender shall mean the one who has signed the tender document forms. The Bidder should be the duly Authorized Representative of the Company/firm. All certificates and documents (including any clarifications sought and any Subsequent correspondences) received hereby, shall, as far as possible, be furnished and signed by the Authorized Representative.

The power or authorization, or any other document consisting of adequate proof of the ability of the signatory to bind the Bidder shall be annexed to the bid in case of a bidder not being a Government body/undertaking/PSU. SECM may reject outright any proposal not supported by adequate proof of the signatory's authority.

15. Corrigendum to the tender document

At any time prior to the last date for receipt of bids, SECM, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the tender Document by a corrigendum. In order to provide prospective Bidders reasonable time in which to take the corrigendum into account in preparing their bids, SECM may, at its discretion, extend the last date for the submission of Bids and/or make other changes in the requirements set out in the Invitation for tender.

16. Earnest Money Deposit (EMD)

- The Earnest Money amounting to Rs. 25,000/- shall be paid by each bidder, in the form of crossed Demand Draft drawn in favor of Chief Executive Officer, APSECM , Vijayawada issued by any Nationalized Bank and payable at Vijayawada, to be enclosed along with the sealed Tender;) Bank Guarantee issued by a Nationalized Bank/ Scheduled Bank (as per the list enclosed) in favour of the Chief Executive Officer, APSECM, Vijayawada, and shall cover a period of 45 days over and above the period of bid validity.
- Any category of bidders specifically exempted by the Government from the payment of Earnest Money Deposit are not required to make such a deposit provided they enclose copies of documents proving exemption;

- The Earnest Money Deposit will be refunded to the successful bidder only after satisfactory completion of the ordered works and on proper fulfillment of contract;

- In the case of unsuccessful renderers, the Earnest Money Deposit will be refunded to them within three months of finalizing the Tender;

- The Earnest Money Deposit will not carry any interest.

Tenders received without the Earnest Money Deposit other than specified in sub-clause under EMD above will be summarily rejected.

17. Liquidated Damages

Should the Bidder(s) fail to complete the work within the period prescribed for, APSECM shall be entitled to recover 50% of the Earnest Money Deposit on expiry of the first week of delay and the rest 50% of the Earnest Money Deposit on expiry of the second week of delay, for the delays beyond the control of the Contractor, the reasonability of which shall be judged by the monitoring committee consisting RWS and APSECM. Quantum of liquidated damages as assessed for realization by APSECM shall be final and not challengeable by the Bidder(s).

18. Force Majeure

If, at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to as events) provided notice of happenings of any such eventuality is given by either party to the other within 5 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this contract nor shall either party have any claim for damages against other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such an

event come to an end or cease to exist, and the decision of APSECM as to whether the deliveries have been so resumed or not shall be final and conclusive. Further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reasons of any such event for a period exceeding 30 days, either party may, at its option, terminate the contract.

19. Evaluation of Proposals

The proposals would be evaluated on the basis of the pre-qualification criteria and Bidder's prior experience in the areas mentioned above. The specific experience of the Bidder would be evaluated on the basis of the following information provided along with the prescribed documents:

- Evidence of having successfully carried out similar assignments.
- Evidence of having successfully carried out assignments with Government.
- Sufficient size, organization, and management to carry out the entire project.
- Specialized skills and creativity related to the assignment.
- Satisfactory financial turn over for the last 3 years

- However, APSECM in its sole/absolute discretion can apply whatever criteria deemed appropriate in determining the responsiveness of the bid submitted by the respondents. **The price bid for all pre-qualified bidders will be opened and the contract will be awarded to the lowest price bidder.**

20. GENERAL TERMS & CONDITIONS

20.1 Qualifying Requirements:

The Bidder interested in being considered for this project must fulfill the following criteria:

- Should be a firm/company registered/incorporated in India.
- Should be empanelled with APSECM for carrying out Energy Audit works.
- Should have adequate number of energy auditors on pay roll to carry out the works within 60 days in all ten districts.
- Should have a successful track record of carrying the full scope of activities outlined in the scope of work.
- Should have experience in working with Governments and Public Sector Undertakings and a minimum of 3 Nos Successful Energy Audits involving various types and capacities of pump sets in the past 3 years,
- Out of the above 2 Nos Projects,. at least one Project should have covered minimum of 50 Nos Pump sets with average capacity of the replaced pump set being 20 HP or higher and the project was implemented successfully by the Implementing Agency on the basis of the Audit report.
- should submit the client certificate as evidence in the above regard.
- Should not be involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract
- Should not have the track record of de-listing or black-listing by any Central / State Government / Public Sector Undertaking in India, an Undertaking to this extent has to be furnished along with the TENDER.

20.2 APSECM reserves the right to verify/confirm all original documentary evidence submitted by the bidder in support of mentioned clauses of qualification requirement/ evaluation criteria, failure to produce the same within the period as and when required and notified in writing by SECM shall result in summary rejection of the bid.

20.3 APSECM reserves the right to accept or reject any proposal and also award of the work, without assigning any reason.

20.4 APSECM reserves the right to waive off any shortfalls; accept the whole, accept part of or reject any or all responses to this Tender.

20.5 APSECM reserves the right to cancel the Tender at any stage and call for fresh TENDER and/or Tender for this project.

20.6 APSECM reserves the right to call for fresh Tenders at any stage and/or time for any and /or all of the categories as per the present and/or envisaged SECM project requirements, even if the Tender is in evaluation stage.

20.7 APSECM reserves the right to add / delete / modify the Scope of Work, as per requirement of the Project.

20 .8 Applicants shall have tie-ups with Pump Manufacturers for soliciting energy saving potential recommendations along with investment and Repair & Maintenance (R&M) costs involved, so as to include in the IGEA reports.

20.9 The qualified bidder has to provide the names and contact details of the Team to be deployed at site, to SECM, in writing, upon award of work.

20.10 The qualified bidder has to bear all the costs related to photocopy, print outs, stationary, etc. while conducting the Energy Audit at site.

20.11 The RWS&S Dept has to bear all costs related to filing of pipes for measurement of flow.

20.12 The qualified bidder shall be provided feasible pressure tapping's by the RWS&S Dept.

20.13 The qualified bidder (s) shall provide professional, objective and impartial advice, at all times holding SECM, State Govt. and/ or the RWS&S Dept interests paramount, strictly avoiding conflicts with other assignments or its own corporate interests, and acting without any consideration for future work.

20.14 The qualified bidder (s) has an obligation to disclose to the RWS&S Dept any situation of actual or potential conflict that impacts its capacity to serve the best interest of SECM, State Govt. and/ or the RWS&S Dept. Failure to disclose such situations may lead to the disqualification of the qualified bidder or the termination of the project of the qualified bidder and / or sanctions by SECM.

20.15 The Language of the Technical Proposal, Financial Quotations and IGEA reports shall be English. All the correspondences and documents relating to the IGEA shall be written in English. If any document of the RWS&S Dept is in language other than English, the qualified bidder has to bear the costs of translations.

20.16 AP SECM reserves the right to withdraw the work and get it completed at the risk & cost of the agency, if performance of the agency is unsatisfactory, to whom work has been awarded. Further, the said agency may be de-listed for a period of one year or more for participating in any of the bids invited by SECM. Also, AP SECM would be free to intimate such de-listing / banning to various state/central utilities/ Ministry of Power/ PSU's/ State Governments/ Other agencies not to consider the said agency for any assignment including of the same on websites.

21.QUALITY AND REPORTING

21.1 All the instruments such as Ultrasonic Flow Meter, Three Phase Power Analyzers, Single Phase Power Analyzers, Data Loggers, etc. shall be duly calibrated and carry calibration certificate from NABL accredited laboratory valid on the date of carrying out energy audit.

21.2 Daily reporting to the APSECM / RWS&S Engineer-In-Charge regarding status of energy audit. The daily progress may be communicated over telephone, text messages, and messages over internet or e-mails to ensure smooth and timely completion of the work.

21.3 Weekly reporting to the SECM Engineer-In-Charge during preparation of IGEA report.

21.4 The IGEA and job cards shall be in the format as provided by SECM.

21.5 Three nos. of hard copies (in color) of draft and final IGEA report and post Energy audit Reports shall be submitted by the Identified Agency along with soft copies.

22. KEY PERSONNEL

22.1 Each team should comprise of minimum 10 persons, having at-least 5 Nos BEE Accredited Energy Auditor (AEA) or BEE Certified Energy Auditor (CEA) or BEE Certified Energy Manager (CEM) and 5 to 10 Engineers having at-least 2 years of work experience. The manpower is only indicative; the bidder has to deploy the sufficient personnel to complete the Energy Audit in all districts with the stipulated time of five weeks.

22.2 The team has to arrange for its travelling, lodging, boarding, local Transportation, accessories for carrying out energy audit, etc.

22.3 The local transportation shall be compulsorily in a four wheeler, so as to increase the efficiency work output of the team.

23 TENDER FORMS

TENDER is to be submitted in the following format along with the necessary documents as listed. The TENDER shall be liable for rejection in the absence of requisite supporting documents. TENDER should provide information against each of the applicable requirements. In absence of the same, the TENDER shall be liable for rejection.

TENDER Form 1 : TENDER Letter Proforma

To

Chief Executive Officer,
State Energy Conservation Mission, Vijayawada

Sub: Carrying out of Investment Grade Energy Audit & Post Energy Audit of Water Supply Pump sets for 10 districts in the state of Andhra Pradesh.- regarding

Sir,

The undersigned Bidders, having read and examined in detail all the TENDER documents in respect of appointment of a Bidder for carrying out Investment Grade Energy Audit (IGEA) & Post Energy Audit for selected Pump Sets of Rural Water Supply & Sanitation (RWS&S) Department in Srikakulam ,Vizianagaram ,Visakhapatnam'East Godavari,West Godavari, Krishna, Guntur ,Nellore,Chittoor, Anantapur , Andhra Pradesh do hereby express their interest to carryout Investment Grade Energy Audit & Post Energy Audit as specified in the scope of work.

S.No	Description	Bidders information
1.	Name of the Bidder	
2.	Address of the Bidder	
3.	Name of the contact person to whom all references shall be made regarding this Tender	
4.	Designation of the person to whom all references shall be made regarding this Tender Address of the personto	
5.	whom all references shall be made regarding this Tender	
6.	Telephone (with STD code)	
7.	E-Mail of the contact person	
8.	Fax No. (with STD code)	

Document forming part of EoI:

- Form 2 : Minimum Eligibility
- Form 3 : Prior Experience
- Form 4 : Declaration Letter
- Form 5 : Financial Bid
- We hereby declare that our bid is made in good faith and the information contained therein is true and correct to the best of our knowledge and belief.

Thanking you.

Yours faithfully

(Signature of the Bidder)

Name:

Designation:

Seal:

Date:

Place:

Business Address:

Witness:	Bidder:
Signature	Signature

24. **EoI Form 2: Minimum Eligibility**

[The Bidder should not include the figures of the subcontractors for EoI Form 2]

1.1	Name of Firm/Company	
1.2	Year of Registration/ Incorporation	
1.3	Year of Registration/ Incorporation *	
1.4	Number of Employees as on March 31, 2018	
1.5	Annual Turnover from Consultancy Services**	F.Y 2015-2016, F.Y 2016--2017 , F.Y. 2017- 2018
1.6	Annual Profits **	

*Enclose a copy of Registration document

**Enclose a copy of Audited Financial Statement with respect to information furnished in 1.5 and 1.6 (in case of a bidder not being a Government body/undertaking/PSU)

Witness:

Signature

Name

Address

Date

Bidder:

Signature

Name

Designation

Company/Firm

Date

25. **<u>EoI Form 3: Prior Experiences</u>**

i. [Using the format below, provide information on each

assignment for which your firm, and each associate for this assignment, was legally contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out energy audit/ consulting services similar to the ones requested under this assignment. The Bidder should give information about minimum of three projects covering the area of energy Audit of water Pump sets.

Name of Bidder/Firm:

Assignment/job name:

Nature of Assignment:

Description of Project

Approx. value of the contract (in Rupees):

Country:

Location within country:

Duration of Assignment/ job (months) :

Name of Employer:

Address and contact details:

Total No of staff-months of the

Assignment/job:

Approx. value of the Assignment/job provided
by your firm under the contract (in Rupees):

Start date (month/year):

Completion date (month/ year):

Name of associated Bidders, if any:

No of professional staff- months

provided by associated Bidders:

Name of senior professional staff of your firm involved and functions performed.

Description of actual Assignment/job

provided by your staff within the

Assignment/job:

Witness:	Bidder:
Signature	Signature
Name	Name :
Address	Designation :
	Company/Firm:
Date	Date

EoI Form 4: Declaration Letter.

i. [Declaration of sub-contractor including parent company is also needed if the relevant Memorandum of Understanding (MoU) is submitted]
Declaration Letter on official letter head stating the following:

ii. We are not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract

iii. We are not black-listed by any Central / State Government / Public Sector Undertaking in India

Witness:	Bidder:
Signature_____	Signature_____
Name _____	Name _____
Address_____	Designation_____
Company_____	Company _____
Date _____	Date _____

Tender Form 5 : Tender Financial Bid

To

Chief Executive Officer,
State Energy Conservation Mission,
Vijayawada.

Sub: Carrying out Investment Grade Energy Audit (IGEA) & Post Energy Audit for selected Pump Sets of Rural Water Supply & Sanitation (RWS&S) Department in the 10 Districts of Andhra Pradesh

Sir,

The undersigned Bidders, having read and examined in detail all the tender documents in respect of appointment of a Energy Bidder for carrying out Investment Grade Energy Audit (IGEA) & Post Energy Audit for selected Pump Sets of Rural Water Supply & Sanitation (RWS&S) Department in the Srikakulam ,Vizianagaram ,Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur ,Nellore, Chittoor, Anantapur of Andhra Pradesh do hereby express their interest to provide Consultancy Services as specified in the scope of work

The undersigned Bidder will charge a lump sum amount of Rs……/- (Rupees……..only)

(I*nclusive* of applicable taxes), for the entire work as in the scope of work.

1.	Name of the Bidder	
2.	Address of the Bidder Lump sum amount in words (inclusive of taxes) in Rs.	
3.	Lump sum amount in figures (inclusive of taxes) in Rs.	

In case of any difference of lump sum amount in figures and words, the amount in words will be considered

PROFORMA FOR PERFORMANCE BANK GUARANTEE

Bank Guarantee No.	_____
Bank Guarantee Amount	_____
Expiry Date	_____
Claim	_____
Amount	M/s .
Account	

THIS GUARANTEE AGREEMENT

executed at_ this_____day of_____Two Thousand Nineteen

BY:

_____Bank, a body corporate constituted under Banking Corporation (Acquisition and Transfer of Undertakings) Act, 1970/1980, having its Registered Office/ Head Office at _____, and a Branch Office at ____(Hereinafter referred to as "the Guarantor", which expression shall, unless it be repugnant to the subject or context thereof, be deemed to mean and include its successors andassigns)

IN FAVOUR OF:

ANDHRA PRADESH STATE ENERGY CONSERVATION MISSION, STATE DESIGNATED AGENCY (SDA) first state of Andhra Pradesh under the provisions of Energy Conservation Act 2001 and having its registered office at APSECM, 2nd Floor, 33kv/11kv Indoor SS, Governor pet, Vijayawada (hereinafter referred to as "APSECM" which expression shall unless it be repugnant to the subject, meaning or context thereof, be deemed to mean and include its successors and assigns),

WHEREAS APSECM pursuant to the Tender Documents, general terms and conditions of Contract, the Agreement and the Purchase Orders (hereinafter collectively referred to as "the said documents", the Bank has agreed to purchase from M/s…… and M/s…… has agreed to supply to APSECM certain items of equipment(s), tools and machinery, more particularly described in the Schedule/Annexure to the said documents (hereinafter collectively referred to as "**the Equipment**"), subject to payment of the purchase price as stated in the said documents and also subject to the terms, conditions, covenants, provisions and stipulations contained the said documents.

AND WHEREAS pursuant to the above arrangement, APSECM, has placed work Order No.dated, for purchasing the Equipment and execution of work (here in after referred to as "**thework Order**"), with M/s. ……(Hereinafter referred to as

"**Supplier**" which expression shall unless it be repugnant to the subject or context thereof, be deemed to mean and include its successors), subject to the terms and conditions contained in the said documents and the Supplier has duly confirmed thesame.

AND WHEREAS the Supplier has returned the duplicate of the Purchase Order duly signed in token of its unconditional, unqualified and absolute acceptance, vide its letter datedand has confirmed the performance/ execution of the Purchase Order and the saiddocuments.

AND WHEREAS the said documents and the unconditional, unqualified and absolute acceptance by the Supplier are hereinafter collectively referred to as **"the Contract**".

AND WHEREAS in terms of the Contract, the Supplier has agreed to procure an unconditional and irrevocable performance bank guarantee, in favor of APSECM, from a Bank acceptable to APSECM for securing. Towards faithful observance and performance by the Supplier of the terms, conditions, covenants, stipulations, provisions of the Contract.

AND WHEREAS at the request of the Supplier, the Guarantor has agreed to guarantee the Bank, payment of the 10% of the Contract value amounting to ……..(*in words*) towards faithful observance and performance by the Supplier of the terms of the Contract.

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:

In consideration of the premises, the Guarantor hereby unconditionally, absolutely and irrevocably guarantees to APSECM as follows:

The Guarantor hereby guarantees and undertakes to pay, on demand, to APSECM at its office at Vijayawada forthwith, the …….or any part thereof, as the case may be, as aforesaid due to APSECM from the Supplier, towards any loss, costs, damages, etc. suffered by APSECM on account of default of the Supplier in the observance and performance of the terms, conditions, covenants, stipulations, provisions of the Contract, without any demur, reservation, contest, recourse or protest or without any reference to the Supplier. Any such demand or claim made by APSECM, on the Guarantor shall be conclusive and binding notwithstanding any difference or any dispute between APSECM and the Supplier or any dispute between APSECM and the Supplier pending before any Court, Tribunal, Arbitrator, or any other authority.

- The Guarantor undertakes not to revoke this Guarantee during the currency of these presents, without the previous written consent of APSECM and further agrees that the Guarantee herein contained shall continue to be enforceable until and unless it is discharged earlier by APSECM, in writing.

- APSECM shall be the sole judge to decide whether the Supplier has failed to perform the terms of the Contract for supply of Equipment by the Supplier to APSECM and on account of the said failure what amount has become payable by the Supplier to APSECM under this Guarantee. The decision of APSECM in this behalf shall be conclusive and binding on the Guarantor and the Guarantor shall not be entitled to demand APSECM to establish its claim under this Guarantee but shall pay the sums demanded without any objection, whatsoever.

- To give effect to this Guarantee, APSECM, may act as though the Guarantor was the principal debtor to APSECM.
- The liability of the Guarantor, under this Guarantee shall not be affected by_
- Any change in the constitution or winding up of the Supplier or any absorption, merger or amalgamation of the Supplier with any other Company, Corporation or concern; or
- Any change in the management of the Supplier or takeover of the management of the Supplier by the Government or by any other authority; or

Acquisition or nationalization of the Supplier and/or of any of its undertaking(s) pursuant to any law; orany change in the constitution of the Bank; or

any change in the setup of the Guarantor which may be by way of change in the constitution, winding up, voluntary or otherwise, absorption, merger or amalgamation or otherwise; or

The absence or deficiency of powers on the part of the Guarantor to give Guarantees and/or Indemnities or any irregularity in the exercise of such powers.

Notwithstanding anything contained hereinabove, the liability of the Guarantor hereunder shall not exceed the rupee equivalent of …….(*in words*) being the 10 % of the Contract value.

This Guarantee will expire on_____. Any demand or claim under this Guarantee must be received by the Guarantor by_____and if no such demand or claim has been received by the Guarantor by the date mentioned as aforesaid, then all the rights of APSECM under this Guarantee shall cease.

For all purposes connected with this Guarantee and in respect of all disputes and differences under or in respect of these presents or arising there from the courts of Vijayawada city where APSECM has its Head Office shall alone have jurisdiction to the exclusion of all other courts.

IN WITNESS WHEREOF the Guarantor has caused these presents to be executed on the day, month and year first herein above written as hereinafter appearing.

SIGNED AND DELIVERED BY

the within named Guarantor,

_____,

by the hand of Shri._____, its authorized official.

Note: -a) The Name and Designation of the Authorized officer(s) of the bank should be compulsorily mentioned.

b) A copy of the resolutions/power of attorneys authorizing the officer(s) for executing the aforesaid guarantee.

ANNEXURE-1 (Pre-Energy Audit)

Name of the District:

Sl No	Mandal	Name of the scheme/ Location	Type of the Pump set (stages if pump set is	Type of facility (raw water /clear water/intermediate	Complete Name plate details of the old Pump set		Suction Head in meters	Discharge Head in Meters as per Pressure gauges	Total Head	Flow measured in cu .meters per hour	kW measured	Avg 3phase current drawn	Avg Voltage	Remarks
					Pump	Motor								

Note : 1. **Remarks should indicate any badly damaged starter panels, NRV Valves, existing Pressure gauges , Cables ,mounting base which are badly damaged and need replacement .**

2. Any pump set that was not original but brought and installed from some other place

3. **Any pump set that underwent motor re –winding and mention number of times it was re wound if so. Life of the pump set in service (in years) from the date of installation**

4. Pump set not working due to water source dried up .

5 Water tank capacity in cu meters and water filling time

6 .Length of Pipe line-Suction & discharge, number of bends in the pipe line etc

7. Pump ser type should specify whether it is Centrifugal mono block, HSC, End suction, Vertical turbine pump ,Open well submersible. Bored well submersible etc

8. Should also include Pump efficiency, Motor Efficiency and overall efficiency computation

9. Recommended Pump set details (Q,H and HP ,specifications, cost benefit analysis to be given separately)

10 Any other Energy saving measures for the Pump sets / pump house shall also be brought out separately with cost benefit analysis.

11 Any other observations requiring set right actions for improving energy conservation and energy efficiency

Sign of the Sign of the Sign of the

AE/AAE RWS DEE EE/RWS

Annexure 2 -BOQ

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system of Srikakulam District									
Sl No	**District**	**Name of work**	**Name of the Village/Location**	**Existing HP of the Pump set**	**No of pumpsets**	**Age of the Pump set in years**	**Hourly consumption in kWh, if energy Meter is existing.**	**Whether the pump set is working (Yes/No)**	**Remarks ,if any**
1	Srikakulam	O&M of CPWS Scheme to Gara and other 82 habitations	Salihundam	40 HP 30HP 25 HP 2NOS 10HP 7.5 HP	6	12 Years	-	Yes	
2	Srikakulam	O&M of CPWS Scheme to Uddanam	Infiltration well -I at T.Sasanam	20HP (2 Nos)	2	18 Years	-	Yes	
3	Srikakulam		Infiltration well -II at T.Sasanam	20HP (2 Nos)	2	18 Years	-	Yes	
4	Srikakulam		Infiltration well -III at T.Sasanam	20HP (2 Nos)	2	18 Years	-	Yes	
5	Srikakulam		Infiltration well -IV at T.Sasanam	20HP (2 Nos)	2	18 Years	-	Yes	
6	Srikakulam		T.Sasanam Head works	120 HP(2 Nos)	2	18 Years	-	Yes	
7	Srikakulam		Haripuram	25 HP (2 Nos)	2	18 Years	-	Yes	
8	Srikakulam		Ambugam Booduluru	15 HP(2 Nos)	2	18 Years	-	Yes	
9	Srikakulam		Makarajola, Towards Sariapalli	40 HP (2 Nos)	2	18 Years	-	Yes	
10	Srikakulam		Towards Kosangiprua m	40 HP (3 Nos)	3	18 Years	-	Yes	

11	Srikakulam		Makanapalli	750 HP (2 Nos)	2	18 Years	-	Yes	
12	Srikakulam		Rajam	25 HP (2 Nos)	2	18 Years	-	Yes	
13	Srikakulam		Rittapadu	35 HP (2 Nos)	2	18 Years	-	Yes	
14	Srikakulam		Pundi	3 HP (2 Nos)	2	18 Years	-	Yes	
15	Srikakulam		Pundi towards PM Puram	20 HP (2 Nos)	2	18 Years	-	Yes	
16	Srikakulam		Garudabadra	5 HP (2 Nos)	2	18 Years	-	Yes	
17	Srikakulam	O&M of CPWS Scheme to Sompeta & other habitations	Infiltration well at T.Sasanam	10 HP (2 Nos)	2	18 Years	-	Yes	
18	Srikakulam		Infiltration well at T.Sasanam	15 HP (2 Nos)	2	18 Years	-	Yes	
19	Srikakulam		Baruva towards Sompeta	35 HP (2 Nos)	2	18 Years	-	Yes	
20	Srikakulam		Baruva towards Baruva	25 HP (2 Nos)	2	18 Years	-	Yes	
21	Srikakulam	O&M of CPWS Scheme to T.Sasanam & Other Habitations	Infiltration well -I at T.Sasanam	10 HP (2 Nos)	2	28 Years	-	Yes	
22	Srikakulam		At T.Sasanam head works	25 HP (2 Nos)	2	28 Years	-	Yes	
23	Srikakulam	O&M of CPWS Scheme to Neelavathi & Other Habitations	At Rangoi Head works	2 HP	1	12 Years	-	Yes	

24	Srikakulam	O&M of CPWS Scheme to Manikyapuram & Other Habitations	Source	20H.P. - 1no.	1	20 Years	-	Yes	
25	Srikakulam	O&M of CPWS Scheme to Ch.Balliputtuga & Other Habitations	Source	10H.P. - 1no.	1	10 Years	-	Yes	
26	Srikakulam	O&M of CPWS Scheme to Idduvanipalem & Other Habitations	Source	25H.P. - 1no.	1	20 Years	-	Yes	
27	Srikakulam		Head works	7.5H.P. - 2nos.	2	10 Years	-	Yes	
28	Srikakulam	O&M of CPWS Scheme to Kaviti & Other Habitations	Source	20H.P. - 1no.	1	20 Years	-	Yes	
29	Srikakulam	O&M of CPWS Scheme to Ch.Meliaputtuga & Other Habitations	Source	15H.P. - 1no.	1	20 Years	-	Yes	
30	Srikakulam	O&M of CPWS Scheme to Edupuram & Other Habitations	Source	25H.P. - 1no.	1	20 Years	-	Yes	

31	Srikakulam	O&M of CPWS Scheme to Kapasukuddi & Other Habitations	Source	15.H.P. - 1no.	1	20 Years	-	Yes	
32	Srikakulam	O&M of CPWS Scheme to Bhavanapadu & Other Habitations	Sump at Suryamanipuram of V.Kotturu Mandal	15.H.P. - 3 no,s.	3	23 Years	-	Yes	
			Total	**2807.5**	**62**				

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system. Vizianagaram District										
Sl No	**District**	**Name of the CPWS Scheme**	**Name of the Village / Location**	**Existing HP of the Pump set**	**No.of pump sets**	**Age of the Pump set**	**Hourly consumption in KWH, if energy Meter is existing.**	**Whether the pump set is working (Yes/ No)**	**Remarks ,if any**	HP
1	2	3	4	5		6	7	8	9	
1	Vizianagaram	CPWS Scheme to Cheepurupalli, Garividi & Geddapuvalasa	SSR Peta Collection well	40	1	12	18	Yes	Getting frequent repairs	40
	Vizianagaram	CPWS Scheme to Cheepurupalli, Garividi & Geddapuvalasa	Gujjingivalasa Sump	30	1	12	18	Yes		30
2	Vizianagaram	CPWS Scheme to Ramatheertham & Other Habitations	SSR Peta Collection well	25	1	12	20	Yes	Getting frequent repairs	25
	Vizianagaram	CPWS Scheme to Ramatheertham & Other Habitations	Vallapuram Sump	30	1	12	20	Yes		30
3	Vizianagaram	Cpws Scheme to	**Tatituru-1**							

		Bhogpuram and other 76 Habitations								
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	IF Well.1	25-**2nos**	2	17	12	Yes		50
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	IF Well.2	10	1	17	12	Yes		10
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	IF Well.3	6.5	1	17	12	Yes	Getting frequent repairs	6.5
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	**Tatituru-2**	20-**2nos**, 5hp-**2nos**	4	17	12	Yes		50
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	K.Satram-2nos	25hp-**4nos**,10hp-**2nos**	6	17	12	Yes		120
	Vizianagaram	Cpws Scheme	Mopada-1no	5hp-**2nos**	2	17	7	Yes		10

		to Bhogpuram and other 76 Habitations								
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	Jonnada-1no	15hp-**2nos**,7.5-**nos**	3	17	7	Yes		37.5
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	Avanam-1no	7.5hp-**1no**,5hp-**1no**	2	17	7	Yes		12.5
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	Savaravilli-1no	7.5hp-**1no**, 5hp-**1no**, 3hp-**2nos**	4	17	7	Yes		18.5
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	Jogapeta-1no	3hp-**2nos**	2	17	7	Yes		6
	Vizianagaram	Cpws Scheme to Bhogpuram and other 76 Habitations	Rellipeta-1no	5hp-**2nos**,3hp-**2nos**	4	17	7	Yes		16

4	Viziana garam	CPWS Scheme to Gudiwada and other Habitations	Head works at T.Nagarapalam	10hp	1	12	14	YES	Getting frequent repairs	10
5	Viziana garam	CPWS Scheme to Gotlam Drinking water Project	Seetharampuram IF Well	10	1	13	20	Yes		10
	Viziana garam	CPWS Scheme to Gotlam Drinking water Project	Seetharampuram (Pump House)	40	1	13	20	Yes	No stand by motar	40
	Viziana garam	CPWS Scheme to Gotlam Drinking water Project	Neliwada (Pump House)	15	1	13	20	Yes	No stand by motar	15
	Viziana garam	CPWS Scheme to Gotlam Drinking water Project	Bondapalli (Pump House)	5	1	13	20	Yes	No stand by motar	5
7	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Mamidipalli IF well 2	12.5	1	11	16	Yes	No stand by motar	12.5
	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Mamidipalli IF well 1	7.5	1	11	16	Yes	No stand by motar	7.5

	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Mamidipalli (Pump House)	40	1	11	16	Yes	No stand by motar	40
	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Mamidipalli (Pump House)	5	1	11	16	Yes	No stand by motar	5
	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Kondatamarapalli (Pump House)	7.5	1	11	16	Yes	No stand by motar	7.5
	Viziana garam	CPWS Scheme to Gostani Drinking water Project	Boodipeta (Pump House)	25	1	11	16	Yes	No stand by motar	25
	Viziana garam	CPWS Scheme to Gostani Drinking water Project	M.Venkatapuram IF well	32.5	1	11	16	Yes	No stand by motar	32.5
8	Viziana garam	Operation & Maintenance to CPWS Scheme to Suvarnamukhi and other habitations	At source Suwarnamukhi river - Chemudu(V) , IF well	15	1	10	10	Yes	No stand by motar	15

	Vizianagaram	Operation & Maintenance to CPWS Scheme to Suvarnamukhi and other habitations	At source Suwarnamukhi river - Chemudu(V), IF well	15	1	10	10	Yes		15
9	Vizianagaram	Operation and Maintenance of CPWS Scheme at Dabburuvalasa and Other Habitations	At source Suwarnamukhi river - Dabburuvalasa(V), IF well	10	1	10	10	Yes	No stand by motar	10
	Vizianagaram	Operation and Maintenance of CPWS Scheme at Dabburuvalasa and Other Habitations	At source Suwarnamukhi river - Dabburuvalasa(V), IF well	10	1	10	10	Yes		10
			Total Pumps sets	**722**	**51**					722

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system Visakhapatnam Dist										
S. No.	District	Name of CPWS Scheme	Name of the Village/Location	Existing HP of the Pump set	No.of pumpsets	Age of the Pump set in years	Hourly consumption in Kwh, if energy Meter is existing	Whether the pump set is working (Yes /No)	Remarks, if any	HP
13	Visakhapatnam	CPWS UPPARAPALLI	At SOURCE near Varaha River bank (BW)	5.0 HP	1	10	3.73	Yes		5
14	Visakhapatnam	CPWS CHINAGUMMULURU	At SOURCE near Varaha River bank (BW)	7.5 HP	1	19	5.6	Yes		7.5
	Visakhapatnam	CPWS CHINAGUMMULURU	At SOURCE near Varaha River bank (BW)	10 HP	1	10	7.46	Yes		10
	Visakhapatnam	CPWS CHINAGUMMULURU	At SOURCE near Varaha River bank (BW)	7.5 HP	1	10	5.6	Yes		7.5
	Visakhapatnam	CPWS CHINAGUMMULURU	At SUMP(chinagummurulu)	10 HP	1	10	7.46	Yes		10
	Visakhapatnam	CPWS CHINAGUMMULURU	At SUMP(Thimmapuram)	5HP	1	10	3.73	Yes		5
	Visakhapatnam	CPWS CHINAGUMMULURU	At SUMP(Nakkapalli)	7.5HP	1	10	5.6	Yes		7.5
	Visakhapatnam	CPWS CHINAGUMMULURU	At SUMP(Nakkapalli)	5.0 HP	1	10	3.73	Yes		5
15	Visakhapatnam	CPWS Revupolavaram	At source in fields	5.0HP	1	15	3.73	Yes		5
16	Visakhapatnam	Kadapalem	Near Nalla Maramma temple 2 Nos of Scheme	5	1	15	3.73	Yes		5

			Souces							
	Visakhapatnam	Kadapalem	Pothuraju Chenu 2 Nos of Scheme Souces	7.5,5	2	16	3.73 per 5hp 5.6 per 7.5 hp	Yes		12.5
	Visakhapatnam	Kadapalem	Near Pudi Water Tank 2 Nos of Scheme Souces	5	1	20	3.73	Yes		5
17	Visakhapatnam	CPWS Nakkapalli and other habs	At SUMP(Devavaram)	3.0 HP	1	15	2.24	Yes		3
	Visakhapatnam	CPWS Nakkapalli and other habs	At SUMP(CH R B Puram)	2.0 HP	1	15	1.5	Yes		2
	Visakhapatnam	CPWS Nakkapalli and other habs	At SUMP(Godicherla)	3.0 HP	1	15	2.24	Yes		3
	Visakhapatnam	CPWS Nakkapalli and other habs	At SUMP(Uddanadpuram)	3.0 HP	1	15	2.24	Yes		3
18	Visakhapatnam	CPWS Scheme Seetharampuram in Payakaraopeta Mandal	At source (bw near Thandava)	10.00 HP	1	15	7.46	Yes		10
	Visakhapatnam	CPWS Scheme Seetharampuram in Payakaraopeta Mandal	At Sump(Rekhavanipalem)	10.00 HP	1	15	7.46	Yes		10
	Visakhapatnam	CPWS Scheme Seetharampuram in Payakaraopeta Mandal	At SUMP(Payakaraopeta)	10.00 HP	1	15	7.46	Yes		10

	Visakhapatnam	CPWS Scheme Seetharampuram in Payakaraopeta Mandal	At SUMP(Seetharampuram)	10.00 HP	1	15	7.46	Yes		10
20	Visakhapatnam	Operation & Maintenance to CPWS Scheme to Paravada and Other habitations	Head works at Megadrigedda	35 HP - 3 nos	3	10	26.11 per 35 hp	Yes		105
21	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	30.00HP	1	10	22.38	Yes		30
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	30.00HP	1	10	22.38	Yes		30
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	30.00HP	1	10	22.38	Yes		30
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	7.50 HP	1	10	5.6	Yes		7.5
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	7.50 HP	1	10	5.6	Yes		7.5
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Head works Gudiplova (Collection well)	7.50 HP	1	10	5.6	Yes		7.5
	Visakhapatnam	CPWS Scheme TO Payakaraop	At Sump(Upmaka)	10 HP	1	10	7.46	Yes		10

		eta II								
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Sump(Upmaka)	10 HP	1	10	7.46	Yes		10
	Visakhapatnam	CPWS Scheme TO Payakaraopeta II	At Sump(Upmaka)	10 HP	1	10	7.46	Yes		10
27	Visakhapatnam	O&M of CPWS scheme paderu and other habitations		25 HP-1 NO , 30HP -1 NO ,	3	15 years old 15years old	47	Yes		55
28	Visakhapatnam	O & M of Kuridi and other habitation in Dumbriguda mandal. KURIDI (Infilteration well)		7.5 HP (02 Nos)	2	1)10 Year old 2) 6 months old	11.25	YES		15
	Visakhapatnam	KURIDI SUMP		10 HP (02 Nos)	2	10 Years	7.5	YES		20
29	Visakhapatnam	O & M of CPWS scheme at Rolugunta and other habitations.	At source(IF well at Janakirampuram)	30HP	1	10	0.00	No	Condmned	30
	Visakhapatnam	O & M of CPWS scheme at Rolugunta and other habitations.	At source(IF well at Janakirampuram)	30HP	1	10	22.38	Yes		30

	Visakhapatnam	O & M of CPWS scheme at Rolugunta and other habitations.	Clear sump (200 KL at Rolugunta)	7.5HP	1	10	0.00	No	Condmned	7.5
	Visakhapatnam	O & M of CPWS scheme at Rolugunta and other habitations.	Clear sump (200 KL at Rolugunta)	7.5HP	1	10	5.60	Yes		7.5
			Total	548.5	44					548.5

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system E.G.Dist										
S. No	District	Name of the CPWS	Name of the Village/Location	Existing HP of the Pumpset	No. of pump sets	Age of the Pump Set	Hourly Consumption in kWH,if Energy Meter is existing	Whether the pump set is working Yes/No	Remarks, if any	HP
1	E.G.Dist	CPWS Scheme to Nagulapalli	Moolapeta booster station	15.00HP -3No	3	10	6	Yes		45
2	E.G.Dist	Komarada	Source	20 HP (3 Nos)	3	15	20	Yes		60
3			Intake Well @ SS Tank	10 HP (3 Nos)	3	15	16	Yes		30
4			Head Works	20 HP(2 Nos) + 10 HP (1 No)	3	15	16	Yes		50
5			Gas Chlorinations	5 HP (1 No's)	1	10	16	Yes		5
6	E.G.Dist	P Gannavaram	Intake Well @ SS Tank	12.5 HP (2 No's)	2	10	14	Yes		25
7			Gas Chlorinations	5 HP (1 No's)	1	10	14	Yes		5
8	E.G.Dist	Edarada	Gas Chlorinations	5 HP (1 No's)	1	10	14	Yes		5
9	E.G.Dist	pattavala	Raw waterintake	15HP-2no	2	17	16 hrs	Yes		30
10			intake well	15HP-2no	2	12	16 hrs	Yes		30
11			pumphouse	20HP -2no	2	17	16 hrs	Yes		40
12	E.G.Dist	Tallarevu unit-3	pump house	5HP-2no	2	20	16 hrs	Yes		10
13	E.G.Dist	Guthinadeevi	Pump house	15 HP - 1 Nos	1	17	16 hrs	Yes		15
14			SS tank Intake Well	15 HP - 2 Nos	2	17	16 hrs	Yes		30

15			canal Intake	15 HP - 2 Nos	2	17	16 hrs	Yes		30
16	E.G.Dist	Katrenikona	SS tank Intake Well	10 HP -2 No's,	2	17	16 hrs	Yes		20
17			SS tank Intake Well	15 HP - No	1	17	16 hrs	Yes		15
18	E.G.Dist	CPWS Scheme at Pedapudi	At Source	60HP	1	10	16	Yes		60
19			At Source (stand by)	60HP	1	10	16	Yes		60
20			Head works (Intake well at SS tank)	25HP	1	10	16	Yes		25
21			Head works (Intake well at SS tank)-Stand by	25HP	1	10	16	Yes		25
22			Clear water sump	25HP	1	10	16	Yes		25
23			Clear water sump	25HP	1	10	16	Yes		25
24			Clear water sump(stand by)	25HP	1	10	16	Yes		25
25			wash water pumps OHSR	5HP	1	10	4	Yes		5
26			wash water pumps(Stand by)	5HP	1	10	4	Yes		5
27			At RSF - Alum mixer pump sets	1HP	1	10	8	Yes		1
28			At RSF - Alum mixer pump sets(standby)	1HP	1	10	8	Yes		1
29			At RSF-Clarifoculator-Bridge Motor	3HP	1	10	4	Yes		3
30			At RSF-Clarifoculator-Srapper	1HP	1	10	4	Yes		1

			Motor-1							
31			At RSF-Clarifoculator-Srapper Motor-2	1HP	1	10	4	Yes		1
32			At RSF-Clarifoculator-Srapper Motor-2	1HP	1	10	4	Yes		1
33			Blower Motors	20HP	1	10	1	Yes		20
34			Blower Motors(stand by)	20HP	1	10	1	Yes		20
35			vaccum Pump at Intake well at SS tank	1.02	1	10	0.5	Yes		1.02
36	E.G.Dist	Godi	IW @ SS Tank	9	1	20	19	Yes		9
37			Clear water Sump @ Head Works	10	1	20	19	Yes		10
38	E.G.Dist	Uppalaguptam	IW @ Canal	20	1	20	18	Yes		20
39	E.G.Dist	CPWS Scheme Gudimellanka.	Intake well at canal	3x75 HP	3	15 years-3		Yes	4 *75 HP 15 years-3, 5 years-1	225
40			Pump house at Gudimellanka	3x 50 HP	3	15	15	Yes		150
41	E.G.Dist	CPWS Scheme to Dangeru and Other habitation	Source	10-2Nos	2	12		Yes		20
42			SSTank	5-2 Nos	2	12		Yes		10

43		s	Head Works	7.5-4 Nos	4	12		Yes		30
44	E.G.Dist	CPWS Scheme to Gollapalem	Source	15/11-3Nos	3	12		Yes		45
45			SSTank	5/3.75-3Nos	3	12		Yes		15
46			Head Works	15/11-3Nos	3	12		Yes		45
47	E.G.Dist	CPWS Scheme to Kunavaram and Other 29 habitations	At Source	15	1	24		YES		15
48			At Head Works	10+10	2	24		YES	New motors erected in 2016	20
49			At Intermediate Sump at Peddarkur	7.5	1	24		YES		7.5
50	E.G.Dist	CPWS Scheme to Nellipaka and Other 22 habitations	At Source	25	1	14			New motors erected in 2016	25
51	E.G.Dist	Sri Satya Sai CPWS Scheme(Line-1)	Intakewell at Kutrawada	40HP - 1Nos, 35HP - 2Nos	3	11		Yes		110
52			Headworks at Kutrawada	75HP - 2Nos	2	11		Yes		150
53			Pumphouse at Maredumilli	25HP - 2Nos, 5HP - 2Nos	4	11		Yes		60
54			Pumphouse at Sunnampadu	75HP - 2Nos	2	11		Yes		150

55			Pumphouse at Pedavillumpadu	40HP - 2Nos	2	11		Yes		80
56			Pumphouse at Chavitidibbalu	40HP - 2Nos	2	11		Yes		80
57			Pumphouse at Tallapalem	1HP - 2Nos	1	11		Yes		2
58			Pumphouse at Usirijonnalu	10HP - 2Nos	2	11		Yes		20
59			Pumphouse at Gangavaram	2HP - 4Nos	4	11		Yes		8
60			Pumphouse at Pidathamamidi	2HP - 2Nos	2	11		Yes		4
61	E.G.Dist	Sri Satya Sai CPWS Scheme(Line-1) at Mangampadu	Borewell-1 at Mangampadu	7.5HP - 1Nos	1	11		Yes		7.5
62			Borewell-2 at Mangampadu	3HP - 1Nos	1	11		Yes		3
63			Borewell-3 at Mangampadu	5HP - 1Nos	1	11		Yes		5
64			Borewell-4 at Mangampadu	5HP - 1Nos	1	11		Yes		5
65			Borewell-5 at Mangampadu	5HP - 1Nos	1	11		Yes		5
66	E.G.Dist	Sri Satya Sai CPWS Scheme(Line-2)	Intakewell at Purusothapatnam	50HP - 3Nos	3	11		Yes		75

67			Headworks at Purusothapatnam	180HP - 3Nos	3	11		Yes		540
68			Pumphouse at Indukurupeta	60HP - 3Nos	3	11		Yes		180
69			Pumphouse at Ravilenka	5HP - 2Nos	2	11		Yes		10
70			Pumphouse at Indukuru	3HP - 2Nos	2	11		Yes		6
71			Pumphouse at Kothapalli	5HP - 4Nos	4	11		Yes		20
72			Pumphouse at R.Errampalem	5HP - 2Nos	2	11		Yes		10
73			Pumphouse at Narasapuram	15HP - 2Nos, 7.5HP - 2Nos	4	11		Yes		45
74			Pumphouse at Korukonda	40HP - 2Nos	2	11		Yes		80
75	E.G.Dist	CPWS Scheme Chagalnadu	I/W at Godavari	15 HP - 2 Nos	2	12		Yes		30
76		CPWS Scheme Chagalnadu	**Clear water** Headworks	50 HP - 2 Nos, 60 HP - 1 No	3	12		Yes		160
77		CPWS Scheme Chagalnadu	Booster station @Lalacheruvu	15 HP - 1 No	1	12		Yes		15
			Total	3256.02	142					3256.02

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system in RWS&S Circle, Eluru									
Existing Pumpset detais (as per name plate details) more than 10 years old									
S. No.	**District/Division**	**Village / CPWS SHEME NAME**	**Location of pump sets(at Source: Head works, Clear Sump, Intermediate Sump and others**	**Existing HP of the Pump set**	**No of Pumps**	**Age of Pump sets**	**Hourly consumption in kWh ,if energy Meter is existing.**	**Whether the pump set is working (Yes/ No)**	**Remarks ,if any**
1	2	3	3a	4	4a	5	6	7	8
1	WGD/ Kovvuru	CPWS Scheme at Rustumbada & 22 other habitations in Narasapuram Mandal	Head Works	15	1	12			
			Raw Water	10	1	13			
2	WGD/Kovvuru	CPWS Scheme at K.P.Palem & 48 other habitations in Mogalthur Mandal	Head Works	20	1	11			
			Raw Water	25	1	12			
3	WGD/Kovvuru	CPWS Scheme at Kalipatnam & 14 other habitations in Mogalthur Mandal	Head Works	20	2	12			
			Head Works	1.5	2	13			
4	WGD/Eluru	CPWS Scheme to Maheswarapuram and 5 other habitations in Eluru Mandal	Sump	7.5	1	18			
			Stand By	7.5	2	18			
5	WGD/Eluru	CPWS Scheme to	Head Works Raw water	10	1	18			

		Prathikolla Lanka 7 other habitations in Eluru Mandal	Head Works Raw water	10	1	18			
			Raw water at source	10	1	18			
6	WGD/Eluru	CPWS Scheme to Bhimadolu and other habitations in Bhmadole Mandal	Head Works	10	3	11			
				5	1	11			
			SS Tank	10	2	11			
			Canal	10	2	11			
				5	1	11			
7	WGD/Eluru	SSS CPWS Scheme West godavari	Intake Well at Polavaram	180.0	1	11			
		SSS CPWS Scheme West godavari	Bangaram peta 1.2 MLD WTP.	7.5	1	11			
		SSS CPWS Scheme West godavari	Polavaram (PR)	15.0	1	11			
		SSS CPWS Scheme West godavari	Hukkumpeta - CW PH	300.0	1	11			
		SSS CPWS Scheme West godavari	Kovvada	180.0	1	11			
		SSS CPWS Scheme West godavari	BodiGudem Village	2.0	1	11			
		SSS CPWS Scheme West godavari	Bodigudem to Barkethnagar	2.0	1	11			
		SSS CPWS Scheme West	GopalaPuram	60.0	1	11			

		godavari							
		SSS CPWS Scheme West godavari	Kamavarapu kota PH	100.0	1	11			
		SSS CPWS Scheme West godavari	Kamavarapu kota to D Thirumala	12.5	1	11			
		SSS CPWS Scheme West godavari	Deverapalli	10.0	1	11			
		SSS CPWS Scheme West godavari	Surapavari gudem	1.0	1	11			
		SSS CPWS Scheme West godavari	Kanaka Puram	10.0	1	11			
		SSS CPWS Scheme West godavari	Pragadavaram	60.0	1	11			
		SSS CPWS Scheme West godavari	D N Rao peta	15.0	1	11			
		SSS CPWS Scheme West godavari	Medumettira vari Gudem	12.5	1	11			
		SSS CPWS Scheme West godavari	Pattannapalem	5.0	1	11			
		SSS CPWS Scheme West godavari	Prakashrao palem	3.0	1	11			
		SSS CPWS Scheme	Pothunedu palem	40.0	1	11			

		West godavari							
		SSS CPWS Scheme West godavari	Recherla	5.0	1	11			
		SSS CPWS Scheme West godavari	Erragunta palli	5.0	1	11			
		SSS CPWS Scheme West godavari	Nallajerla - Dubacherla	10.0	1	11			
		SSS CPWS Scheme West godavari	Nallajerla - Nallamadu	15.0	1	11			
		SSS CPWS Scheme West godavari	a) Kethavaram - Verabadravaram	7.5	1	11			
		SSS CPWS Scheme West godavari	b) Kethavaram - T Narasapuram	5.0	1	11			
		SSS CPWS Scheme West godavari	Reddyganapavaram	5.0	1	11			
		SSS CPWS Scheme West godavari	Bayyannagudem	5.0	1	11			
		SSS CPWS Scheme West godavari	Gangavaram	5.0	1	11			
		SSS CPWS Scheme West godavari	K R Puram	3.0	1	11			
		SSS CPWS	Monagogula	2.0	1	11			

		Scheme West godavari							
			Total	1259.5	53				

INFORMATION ON OLD AND ENERGY INEFFICIENT PUMPSETS IN CPWS SCHEMES IN RWS&S CIRCLE,VIJAYAWADA										
Sl .No	**Distrcit**	**Name of the CPWS Scheme**	**Name of the Village/Location**	**Existingt HP of Pumpset**	**HP**	**No. of pumpsets**	**Age of the Pump set**	**Hourly consumption in KWH, if energy meter existing**	**Whether Pump set is working(Yes/ No)**	**Remarks, if any**
1	2	3	4	5			6	7	8	9
1	Krishna	CPWS Scheme Kanchikacherla	At Chevitikallu Headwork	20 HP(Monoblock)	20	1	18 years	14.90	No	
2	Krishna		At Kanchikacherla Sump(office tank)	10 HP(Monoblock)	10	1	18 years	7.45	Yes	
3	Krishna		At Kanchikacherla Sump(Bhavana tank)	10 HP(Monoblock)	10	1	18 years	7.45	No	
4	Krishna		At Ithavaram Pumphouse	15 HP(Submerssible)	15	1	16 years	11.18	No	
5	Krishna		At Ithavaram Pumphouse	20 HP(Submerssible)	20	1	18 years	14.90	No	
6	Krishna		At Perakalapadu Pumphouse	10 HP(Monoblock)	10	1	12 years	7.45	Yes	
7	Krishna		At Chevitikallu Headwork	12.5 HP(O/W Submerssible)	12.5	1	18 years	9.31	No	
8	Krishna	CPWS Scheme Katrenepalli	At Headwork	30HP(Monoblock)	30	1	12 years	8.94	Yes	
9	Krishna	CPWS Scheme Bathinapadu	At Chevitikallu Headwork	12.5HP(O/W Submerssible)	12.5	1	18 years	8.94	Yes	
10	Krish		At Chevitikallu Headwork	15HP Monoblock	15	1	18 years	11.175	yes	

	na									
11	Krishna		At Jujjuru Pumphouse	10 HP(Monoblock)	10	1	15 years	7.45	No	
12	Krishna		At Jujjuru Pumphouse	12.5HP(Monoblock)	12.5	1	15 years	11.175	Yes	
13	Krishna	CPW Scheme to Mylavaram	Head Works Clear Water Sump	100 HP	100	1	2004 (14 Years)	Not Existing	Yes (Working)	Working But they are old & Ineffi cient
14	Krishna		Head Works Clear Water Sump	100 HP	100	1	2004 (14 Years)	Not Existing	Yes (Working)	
15	Krishna		Head Works Clear Water Sump	25 HP	25	1	2004 (14 Years)	Not Existing	Yes (Working)	
16	Krishna		Head Works Clear Water Sump	25 HP	25	1	2004 (14 Years)	Not Existing	Yes (Working)	
17	Krishna		Head Works Clear Water Sump	25 HP	25	1	2004 (14 Years)	Not Existing	Yes (Working)	
18	Krishna	CPW Scheme to Agiripalli	Clear water sump Agiripalli	25 HP	25	1	Above 10 years	-	NotWorking	
19	Krishna		Intake Well at S S Tank - Agiripall	7.50 HP	7.5	1	Above 10 years	-	Not working	
20	Krishna		Clear water sump at Ravicharla	5HP	5	1	Above 10 years	-	Not working	
21	Krishna	CPW Scheme to Chillakallu	Munneru River (Filter Point -1)	20.00 HP(SUBMERSIBLE)	20	1	10 Years	-	Working	
22	Krishna		Makkapeta Sump - 1	20.00 HP Monoblock	20	1	10 Years	-	Working	
23	Krishna		Makkapeta Sump -2	20.00 HP Monoblock	20	1	10 Years	-	Working	
24	Krishna	CPW Scheme to Malkapuram	Indugapalli Sump - 1	12.50 HP Monoblock	12.5	1	10 Years	-	Working	
25	Krishna			12.50 HP Monoblock (Stand By)	12.5	1	10 Years	-	Working	
26	Krishna			12.50 HP Monoblock	12.5	1	10 Years	-	Working	

27	Krishna			12.50 HP Monoblock (Stand By)	12.5	1	10 Years	-	Working	
28	Krishna	CPW Scheme to Indugapalli	Munneru River (Filter Point -2)	10.00 HP SUBMERSIBLE	10	1	10 Years	-	Working	
29	Krishna			10.00 HP SUBMERSIBLE (Stand By)	10	1	10 Years	-	Working	
30	Krishna			10.00 HP SUBMERSIBLE (Stand By)	10	1	10 Years	-	Working	
31	Krishna	O&M of CPW Scheme to Kollikulla	Munneru River (Filter Point -1)	12.50 HP SUBMERSIBLE	12.5	1	10 Years	-	Working	
32	Krishna		Munneru River (Filter Point -2)	12.50 HP SUBMERSIBLE	12.5	1	10 Years	-	Working	
33	Krishna		Munneru River (Filter Point)	7.50 HP SUBMERSIBLE	7.5	1	10 Years	-	Working	
34	Krishna	CPW Scheme to Lingala	Munneru River (Filter Point-1)	12.50 HP SUBMERSIBLE	12.5	1	10 Years	-	Working	
35	Krishna		Munneru River (Filter Point-2)	10.00 HP SUBMERSIBLE	10	1	10 Years	-	Working	
36	Krishna		Munneru River (Open Well)	10.00 HP SUBMERSIBLE	10	1	10 Years	-	Working	
37	Krishna	CPW Scheme to Polampalli	Munneru River (Filter Point-1)	7.50 HP SUBMERSIBLE	7.5	1	10 Years	-	Working	
38	Krishna	Kaikaluru	Kolletikota head works	20 Hp -2 Nos	40	2	11 Years	14.92	Yes	–
39	Krishna		Kolletikota head works	5 Hp -2 Nos	10	2	11 Years	3.73	Yes	–
40	Krishna	Nagayalanka	CPWS Kammanamolu - at Sump	7.5 HP - 2 No's	15	2	10 Years	3.73	1 No Working	1 No Repair

41	Krishna		CPWS Kammanamolu - at Canal	10 HP - 2 No's	20	2	12 Years	10.92	Yes	-
42	Krishna		CPWS Pedakammavaripalem - at Canal	7.5 HP - 1 No	7.5	1	13 Years	5.6	Yes	-
43	Krishna	CPWS Malleswaram	Intake well at canal	7.5	7.5	1	16	5.595	Yes	-
44	Krishna		At Inlet at SS filters	5	5	1	16	3.73	Yes	-
45	Krishna	CPWS Akumarru	at tarakaturu (raw water) 2 Nos	15	15	1	16	11.19	Yes	-
46	Krishna		at OHSR (head works)	10	10	1	16	7.46	Yes	-
47	Krishna		at Raw water (Head works)	7.5	7.5	1	13	5.595	Yes	-
48	Krishna		B.V Thota	5	5	1	11	3.73	Yes	-
49	Krishna		Chinapuram	10	10	1	26	7.46	Yes	-
50	Krishna		Yadara	5	5	1	11	3.73	Yes	-
51	Krishna		V D Puram	5	5	1	11	3.73	Yes	-
52	Krishna	CPWS Chorampudi	SS Filters	5	5	1	11	3.73	Yes	-
53	Krishna		Sump to OHSR	7.5	7.5	1	11	5.595	Yes	-
54	Krishna		Raw water	5	5	1	11	3.73	Yes	-
			Total		**882.5**	**58**				

Information on Old and Energy Inefficient CPWS Pump sets in the Drinking Water Supply System of SPS Nellore Circle.									
Sl No	**District**	**Division**	**Name of the Village/Location**	**Existing HP of the Pump set**	**No.of Pumpsets**	**Age of the Pump set**	**Hourly consumption in kWh ,if energy Meter is existing.**	**Whether the pump set is working (Yes/No)**	**Remarks ,if any**
1	SPS Nellore	Nellore	Podalakur	40	1	10	-	yes	
2	SPS Nellore	Nellore	Podalakur	60	1	10	-	yes	
3	SPS Nellore	Nellore	Surveypalli	75	1	10		Yes	Raw water pumpsets
4	SPS Nellore	Nellore	Surveypalli	75	1	10		Yes	Raw water pumpsets
5	SPS Nellore	Nellore	Surveypalli	100	1	10		Yes	Raw water pumpsets
			Total	350	5				

Information on old and energy inefficient CPWS Pump sets in the Drinking water supply system. Chittoor District										
Sl No	**District**	**Name of the Scheme**	**Name of the Village/ Location**	**Existing HP of the Pump set**	**No.of pump sets**	**Age of the Pump set in years**	**Hourly consumption in kWh ,if energy Meter is existing.**	**Whether the pump set is working (Yes/ No)**	**Remarks ,if any**	**HP**
1	Chittoor	O & M of CPWS Scheme to Illathur and other Habitations in Vijayapuram Mandal	At Source	15HP/11 KW	1	11	11.19	yes		15
	Chittoor		At Source	15HP/11 KW	1	11	11.19	yes		15
2	Chittoor	O & M of CPWS Scheme to Nindra and other Habitations in Nindra Mandal	At Aroor sump	10HP/7.35KW	1	11	7.46	yes		10
	Chittoor		At Aroor sump	10HP/7.35KW	1	11	7.46	yes		10
	Chittoor		At Padiri Sump	5HP/3.6KW	1	11	3.73	yes		5
3	Chittoor	CPWS Scheme to Narayanavanam and other 10 Habitations in Narayanavanm Mandal	BW near Siddartha College	7.5 HP	1	11	5.595	yes		7.5
	Chittoor		BW Near Joomanu	7.5 HP	1	11	5.595	yes		7.5
	Chittoor		BW Near MRC Building	7.5 HP	1	11	5.595	yes		7.5

4	Chittoor	CPWS Scheme to T. Sodum and 15 other habitations in PTM Mandal	At Sump	10 HP	1	18	7.46	yes		10
			Total	87.5	9					87.5

Information on Old and Energy inefficient CPWS Scheme Pump sets in Drinking water supply schemes in Ananthapuram division										
S. No	**Name of the CPWS Scheme**	**Name of the Mandal**	**Name of the Village/Location**	**Existing HP of the Pumpset**	**No. of Pumpsets**	**Age of the Pumpset in year**	**Hourly Consumption in KWh ,if Engegy meter is existing**	**Whether the Pumpset is working (Yes/No)**	**Remarks,if any**	**HP**
1	CPWS Scheme to Vidapanakal and other 8-Villages	Vidapanakal	Vidapanakal	30	1	18	-	Yes	-	30
2	CPWS Scheme to Vidapanakal and other 8-Villages	Vidapanakal	Vidapanakal	25	1	18	-	No	-	25
3	CPWS Scheme to Vidapanakal and other 8-Villages	Vidapanakal	Vidapanakal	20	1	15	-	Yes	-	20
4	CPWS Scheme to Vidapanakal and other 8-Villages	Vidapanakal	Vidapanakal	10	1	12	-	Yes	-	10
5	CPWS Scheme to Vidapanakal and other 8-Villages	Vidapanakal	Vidapanakal	10	1	14	-	Yes	-	10

6	CPWS Scheme to Havaligi and other 4-Villages	Vidapan akal	Balangudam near Havaligi	15	1	18	-	Yes	-	15
7	CPWS Scheme to Havaligi and other 4-Villages	Vidapan akal	Balangudam near Havaligi	15	1	18	-	No	-	15
8	CPWS Scheme to Havaligi and other 4-Villages	Vidapan akal	Havaligi	10	1	12	-	Yes	-	10
9	CPWS Scheme to Havaligi and other 4-Villages	Vidapan akal	Havaligi	10	1	12	-	Yes	-	10
10	CPWS Scheme to Kanagan apalli, Ramagir i and 54 other habitati ons	Kanaga napalli	Kondapalli Pump House	50	1	15	-	Yes	Regu lar burn ed out of Pum pset & Pann el Boar ds	50

11	CPWS Scheme to Kanaganapalli, Ramagiri and 54 other habitations	Kanaganapalli	Narsampalli Pump House	100	1	15	-	Yes	Regular burned out of Pumpset & Pannel Boards	100
12	CPWS Scheme to Kanaganapalli, Ramagiri and 54 other habitations	Kanaganapalli	Narsampalli Pump House	100	1	15	-	Yes	Regular burned out of Pumpset & Pannel Boards	100
13	CPWS Scheme to vanganur and other habitations	Peddavadugur	Vanganur	7.5	1	10		Yes		7.5
14	CPWS Scheme to Uravakonda	Uravakonda	Nimbagal Head Works Raw Water Well	4 Nos-30 HP	4	40		Yes (2 Nos Coundumned)		120

15	CPWS Scheme to Uravakonda	Uravakonda	Nimbagal Head Works Raw Water Well	3 Nos 20 HP	3	35		Yes (1 No Coundumned)		60
16	CPWS Scheme to Uravakonda	Uravakonda	Nimbagal Head Works Raw Water Well	1No 25 HP -1Nos	1	40		Yes		25
17	CPWS Scheme to Uravakonda	Uravakonda	Uravakonda Clear Water well	2 Nos-30 HP-	2	40		Yes (1 No Coundumned)		60
18	CPWS Scheme to Uravakonda	Uravakonda	Nimbagal Clear Water well	2 Nos-30 HP	2	40		Yes (1 No Coundumned)		60
19	CPWS Scheme to Uravakonda	Uravakonda	Uravakonda Clear Water well	1 No 15 HP	1	40		Yes		15
20	CPWS Scheme to Uravakonda	Uravakonda	Budagavi	2Nos 20 HP	2	35		Yes		40
			Total	782.5	28					782.5

Proforma for Existing Pump Sets Inventory Details of CPWS Schemes in RWS & S Circle, Guntur										
Sl.No	Name of CPWS Scheme	Existing Pump Set Details (As per Name Plate details) more than 10 years old								Daily Pump Operating Hours
		Location of Pump Sets (At Source, Head Works, Clear Sump, Intermediate Sump and Others)	Type of Pump Set (VT, Submersible, HSC, Others specify the name)	Capacity of Pump (HP/KW)	HP	No. of pump sets	Pump Head / Installation Depth (Meters)	Flow of Pump (LPS)	Age of the Pump	
1	2	3	4	5			6	7	8	9
1	CPWS Scheme to Dasupalem and 3 others habitations in Guntur (R) Mandal.	Pump house at Head works	Mono Block	7.50 HP	7.5	1	16-27M	16.60	15	4
		Raw water collection well at SS tank	Mono Block	5.00 HP	5	1	8 - 23 M	15.50	15	4
2	CPWS Scheme to Varagani and 2 others habitations in Pedanandipadu Mandal.	At canal	Centrifugal Mono block pump sets	10 HP	10	1	11.5	50	10	24 (At Canal Running period only)
				5.00 Hp	5	1	14	12	10	24 (At Canal Running period only)
				5.00 Hp	5	1	14	12	10	24 (At Canal Running period only)

		At SS tank	Centrifugal Mono block pump set	5.00 Hp	5	1	11.2	11.3	10	15
				5.00 Hp	5	1	11.2	11.3	10	15
				5.00 Hp	5	1	18	16	10	15
		At Clear water sump at head works	Centrifugal Mono block pump set	10.00 HP	10	1	34.5	14	10	15
				10.00 HP	10	1	28.5	18.5	10	15
				7.50 HP	7.5	1	33.5	12.6	10	15
3	CPWS Scheme to Tadikonda and other habs	Head works (HC Puram)	Centrifugal MonoBlock	25.0 /15	25	1	32	34	17	20
		Head works (HC Puram)	Centrifugal MonoBlock	25.0 /16	25	1	32	34	18	20
		Head works (HC Puram)	Centrifugal MonoBlock	7.5/5	7.5	1	38	6.5	24	8
		Head works (HC Puram)	Centrifugal MonoBlock	3.0/1.75	3	1	30	3.3	17	8
		Head works (HC Puram)	Centrifugal MonoBlock	3.0/1.76	3	1	30	3.3	17	8
		Intermediate Sump (Vaddamanu)	Centrifugal MonoBlock	40.0/50.0	40	1	32	30	17	10
		Intermediate Sump (Tadikonda)	Centrifugal MonoBlock	20.0/15.0	20	1	36	28	13	8
4	CPWS Scheme to DAMMALAPADU other habitations	Intakewell	Centrifugal Monoblock	5.00HP	5	1	10.00	13	10	16
		Pump house	Centrifugal Monoblock	10.00Hp	10	1	30.00	17	10	16
5	CPWS Scheme to Bellamkonda and 16 other habitations	Near Raw water well	Cerntrifigal Monoblock	7.5/1	7.5	1	14	22	12	20
		Near Clear water sump	Cerntrifigal Monoblock	20/2	20	1	30	30	12	16

6	CPWS Scheme to Utukur and 4 other habitations	At river Kastala	Submersible Monoblock	7.5/1	7.5	1	10	12	18	16
		Near OHBR	Cerntrifigal Monoblock	7.5/1	7.5	1	28	7	19	12
		at Head works Kastala near OHSR	Cerntrifigal Monoblock	5/1	5	1	12	8	19	12
		At Utukur sump cum pum house	Cerntrifigal Monoblock	5/1	5	1	13	15	19	8
		At Bayyavaram sump cum pump house	Cerntrifigal Monoblock	5/1	5	1	13	15	19	8
		At Balamarru sump cum pump house	Cerntrifigal Monoblock	5/1	5	1	13	15	19	8
		At Vipparla sump cum pump house	Cerntrifigal Monoblock	5/1	5	1	13	15	19	8
7	CPWS Scheme to JUPUDI	Clear water sump	Cerntrifugal Monoblock	12.5	12.5	1	40	6	14	12
8	O&M of CPWSS to Maruproluvaripalem & 25 other habs. in Bapatla Mandal	At Raw Water IW (Canal water to SS Tank)	Monoblock	7.50	7.50	1	14	30	16	16
		At Headworks	Monoblock	10.00	10.00	1	22	20	16	16
		At Intermediate Sump (Nagendrapuram	Monoblock	7.5	7.5	1	18	8	16	4
		At Intermediate Sump (Basivireddypalem	Monoblock	7.5	7.5	1	18	8	16	5
		At Intermediate Sump (Pandurangapuram	Monoblock	7.5	7.5	1	18	8	16	7
		At Intermediate Sump (Kankadrinagar)	Monoblock	7.5	7.5	1	22	8	16	4

		At Intermediate Sump (Muthayapalem)	Monoblock	7.5	7.5	1	22	8	16	4
		At Intermediate Sump (Ram Nagar)	Monoblock	7.5	7.5	1	22	8	16	4
		At Intermediate Sump (Ram Nagar to Suryalanka)	Monoblock	7.5	7.5	1	22	8	16	4
9	O&M of CPWSS to Maruproluvaripalem & 25 other habs. in Bapatla Mandal	At Raw Water IW (Canal water to SS Tank)	Monoblock	10.00	10.00	1	14	24	10	16
		At Raw Water IW (Canal water to SS Tank)	Monoblock	5.00	5.00	1	14	12	10	16
		At Raw Water IW (Canal water to SS Tank)	Monoblock	5.00	5.00	1	14	9	10	16
10	O&M of CPWSS to Pedagollapalem &15 other habs. in Karlapalem Mandal	At Raw Water IW Sammetavariplem (Canal water to SS Tank)	Monoblock	7.50	7.50	1	14	30	16	16
		At Raw Water IW Pedagollapalem(Canal water to SS Tank)	Monoblock	10.00	10.00	1	22	20	16	16
		At Intermediate Sump (Pedagollapalem	Monoblock	7.5	7.5	1	18	8	16	4
		At Intermediate Sump (Yaramvaripalem	Monoblock	7.5	7.5	1	18	8	16	5
		At Intermediate Sump (Marpuchennayavaripalem)	Monoblock	7.5	7.5	1	18	8	16	7
		At Intermediate Sump (Kattawada)	Monoblock	7.5	7.5	1	18	8	16	7

		At Intermediate Sump (Pedapuluguvaripalem)	Monoblock	7.5	7.5	1	22	8	16	4
		At Intermediate Sump (Thummalapalli)	Monoblock	7.5	7.5	1	22	8	16	4
		At Intermediate Sump ( )	Monoblock	7.5	7.5	1	22	8	16	4
11	O&M of CPWSS to Dundivaripalem & 5 other habs. in Karlapalem Mandal	At Raw Water IW (Canal water to SS Tank)	Monoblock	10.00	10.00	1	14	24	10	16
		At Raw Water IW (At Headworks)	Monoblock	5.00	5.00	1	14	12	10	16
		At Raw Water IW (Dhamanavaripalem)	Monoblock	5.00	5.00	1	14	9	10	16
12	O&M of CPWS Scheme to Sangupalem,Koduru & Komali Villages in PV Palem Mandal.	Located at Nizampatnam Canal (at Infiltration Gallery)	Sub Mergible	7.50	7.50	1	22	30	16	16
13	CPWS Scheme to Tummala and27 other habitations (at Mrutyunjayapalem) in Repalle Mandal	At Repalle Bank Canal at Gangadipalem	Cntrifugal Monoblock Pumpset	20-2nos	40.00	2	20	50	10	16
		At Head works Mrutyunjayapalem	Cntrifugal Monoblock Pumpset	20-2nos	40.00	2	40	25	10	16
		At Venkanna Channel at Mrutyunjayapalem	Cntrifugal Monoblock Pumpset	20.00	20.00	1	20	50	10	16
14	O&M of CPWS Scheme to Dindi and 25 other habitations at Alaparru	Canal bund	Cntrifugal Monoblock Pumpset	5.00	5.00	1	8	34.5	10	20
		Canal P/M	Cntrifugal Monoblock	5.00	5.00	1	23.5	10	10	12

			Pumpset							
		Raw water P/M	Cntrifugal Monoblock Pumpset	5.00	5.00	1	12.00	23.2	10	12
		HS SS tank to filters	Cntrifugal Monoblock Pumpset	5.00	5.00	1	18.00	16	10	0
15	O&M of CPWSS to Allurivaripalem & 1 other habs in Narasaraopet Mandal	Clear water sump	Centrifugal mono block pumpset	7.5 HP/5.5 KW	7.5	1	30/3.5	11	13	16 Hours
16	O&M of CPWSS to Peddaturakapalem & 3 other habs in Narasaraopet Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	22/3.00	13	11	16 Hours
17	O&M of CPWSS to Kondakavuru & 5 other habs in Narasaraopet Mandal	Raw water sump	Centrifugal mono block pumpset	15HP /11 KW	15	1	25/4.00	21	16	16 Hours
18	O&M of CPWSS to Kakani & 3 other habs in Narasaraopet Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	21/3.00	14	16	16 Hours
19	O&M of CPWSS to Jonnalagadda	Raw water sump	Centrifugal mono block	3 HP/2.0K	3	1	15/3.00	12	13	16 Hours

	& 1 other habs in Narasaraopet Mandal		pumpset	W						
20	O&M of CPWSS to Yellamanda & 1 other habs in Narasaraopet Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	24/3.00	14	16	16 Hours
21	O&M of CPWSS to Gonepudi & 2 other habs in Narasaraopet Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	22/3.00	14	10	16 Hours
22	O&M of CPWSS to Nalagarlapadu & 2 other habs in Rompicherla Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	21/3.00	13	12	16 Hours
23	O&M of CPWSS to Veeravatnam & 2 other habs in Rompicherla Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	20/3.00	11	12	16 Hours
24	O&M of CPWSS to K.K.palem & 4 other habs in Rompicherla Mandal	Raw water intake well	Centrifugal mono block pumpset	7.5 HP/5.5 KW	7.5	1	32/3.00	12	13	16 Hours
25	O&M of CPWSS to Subbaiahpalem & 1 other hab in	Raw water intake well	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	20/3.00	12	13	16 Hours

	Rompicherla Mandal									
26	O&M of CPWSS to Vipparlapalli & 3 other habs in Rompicherla Mandal	Clear water sump	Centrifugal mono block pumpset	5 HP /3.7 KW	5	1	21/3.00	12	12	16 Hours
			Total		**649**	**76**				**Total**