

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/ETBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE** Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271

Tender Enquiry No.: CPRI/BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
<b>A. Scope</b>				
1	Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications	One set		
<b>B. Technical specifications</b>				
1	AMI Head End System (HES) / Meter Data Acquisition System (MDAS) with Meter Data Management System (MDMS) System functionalities / features	1		
1.1	Remote meter data reading at configurable intervals / on demand			
1.2	Time of Day (ToD) / Time of Use (ToU) metering			
1.3	Alarm / Event detection, notification and reporting			
1.4	Remote load connection / disconnection			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
1.5	It shall have in built simulator module to simulate at least 100 smart meters complying to IS15959 (part-1 & 2), with variable values of the data.			
1.6	Network topology for visualization of quoted AMI system			
1.7	Consumer portal for all simulated meters including physical deployed meters (about 50 Nos) as per IS 15959 / IS 16444.			
1.8	Security features: It shall be able to demonstrate to prevent unauthorized access to the AMI MDAS/HES/MDMS system.			
1.9	Scalable and flexible to allow for expansion to integrate additional 100 numbers of physical smart meters.			
1.1	Demonstration of various events as per IS 15959 (part 1 & 2) in AMI system.			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003  
Issued by : P A  
Documents : PPM

Section : Formats  
Topic : e-Tender Technical Specification Document

FORMAT NO.:CPRI/PUR/ETBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: www.cpri.in, www.tenderwizard.com/CPRI, Tele: 080-2207 2271**

Tender Enquiry No.: CPRI/BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
1.11	MDAS shall communicate with all GPRS meters & DCUs by using DMLS / COSEM protocol.			
1.12	The quoted system shall have capability to demonstrate the following functionalities on real-time as well as simulated meters' data:			
	a) It shall be able to read the meter readings from the meters provided by CPRI and the simulated meters on demand and at predefined intervals on every day basis. This feature shall be available on programmed dates also.			
	b) It shall have the features of Audit trail & Event logging (tamper event, Maximum demand etc.).			
	c) The process of encryption of data shall be as per the Standard IS16444 for secured communication.			
	d) It shall keep record of network failure, no. of packet dropped, retry attempt, missed periodic reading, number of failures to connect and report of network failure.			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003  
Issued by : P A  
Documents : PPM

Section : Formats  
Topic : e-Tender Technical Specification Document

FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE** Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
	e) MDAS shall able to communicate to MDMS, in standard format.			
	f) It should have interactive communication topology display for connectivity of devices. (Smart meters, DCUs etc.)			
1.13	The System should support storage, archiving, retrieval & analysis of meter data. The system shall act as a central data repository.			
1.14	The System shall also have capability to perform functionalities including:			
	a) MDM shall store the meter data along with load profile in database.			
	b) It shall provide complete history and audit trail for all meters.			
	c) It shall execute on-demand read processes.			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
	d) It shall display consumption/load profiles by configurable period.			
	e) It shall generate peak & off-peak load patterns			
	f) It shall perform DT/feeder wise energy audit.			
	g) It shall perform error management like: Missed reads and intermittent meter reads before taking into forecasting, load research or demand response			
	h) It shall configure system receive and store outage and restoration event data from smart meters and outage systems and to log all such events for analysis.			
	i) It shall demonstrate both Demand Side Management & Demand Response.			
	j) It shall capture and log data exceptions, problems and failures to generate management reports, provide trend analysis, automate generation of service requests and track corrective actions.			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/ETBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
	k) It shall demonstrate tamper events (both capture & logging).			
	l) It shall able be to connect & disconnect smart meters through the supplied software system.			
1.15	Suitable database software required for the implementation shall be supplied and integrated with the system.			
1.16	The System shall generate report through user driven options in GUI. Which shall include:			
	a) Usage exceptions, VEE validation features, missing read with date and times, physical meter events, defective meters,			
	b) Summaries consisting of energy usage profile of meter based on parameters selected by user.			

## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM  
FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
	c) Report containing Event data.			
1.17	Consumer portal shall provide following information to consumer through rich graphical and user friendly interface:			
	a) Create consumer account for viewing user data profile.			
	b) Load Profile (daily, weekly, monthly)			
	c) Billing/Unbilled, due date, Payment history, history of previous bills (with details of billed amount, no. of units consumed, start and end reading for that month, maximum demand etc.).			
	d) Dynamic Pricing / TOD Tariff			
	e) Energy Saving Tips.			

**PROCUREMENT PROCEDURE OF CPRI (NON WORKS)**

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/eTBID/GTP

**Section II - Technical Specification**

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
<b>2. AMI Communication &amp; IT Infrastructure</b>				
2.1	CPRI will provide communication infrastructure and Smart Energy meters as per IS16444 which are based on RF (License Free band)/ PLC / GPRS. The Smart Energy Meters will communicate with DCU (in case of RF & PLC) / HES (in case of GPRS / 4 G). This part will be either from other independent vendor or CPRI supplied system.	-		
2.2	The required number of SIM cards for GPRS / 4 G meters & DCUs will be provided by CPRI to communicate with this system.	-		
2.3	The required Server(s) and computers will be proved by CPRI for the purpose of commissioning of supplied software. The bidder shall provide the detailed specification of the Servers, Computers, Operating System, accessories and other software required for completion of installation and commissioning of the quoted system.	-		



## PROCUREMENT PROCEDURE OF CPRI (NON WORKS)

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM

FORMAT NO.:CPRI/PUR/eTBID/GTP

## Section II - Technical Specification

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: www.cpri.in, www.tenderwizard.com/CPRI, Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
3. General				
3.1	The item quoted shall be designed to interface with other supporting system / equipment and shall support at least 200 physical meters. The supplied software perpetual license if any shall be in favour CPRI.	-		
3.2	All other required items for completion of the project shall be provided by the bidder	-		
3.3	All required operating manuals and any other relevant documents for the supplied software system shall be submitted at the time of supply of the software system.	-		
3.4	The quoted system shall be Supplied, Installed and Commissioned at CPRI, Bangalore. All required standard accessories for the installation of software and demonstration including training of system shall be provided.	-		
3.5	Training : Training of all the operations and maintenance of software at CPRI, Bangalore for 2 days.	-		

**PROCUREMENT PROCEDURE OF CPRI (NON WORKS)**

Revision No. : 03  
Dt of Revision : 25.07.2017

Issue No : 2  
Issue Dt. : 30.06.2003

Section : Formats  
Topic : e-Tender Technical Specification Document

Issued by : P A  
Documents : PPM  
FORMAT NO.:CPRI/PUR/eTBID/GTP

**Section II - Technical Specification**

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE Web: [www.cpri.in](http://www.cpri.in), [www.tenderwizard.com/CPRI](http://www.tenderwizard.com/CPRI), Tele: 080-2207 2271**

Tender Enquiry No.: CPRI BLR20MUAD34C590

Description of the Equipment/Goods/Services: Supply, Installation, Commissioning and Training of Software (MDAS/HES/MDMS) for Advanced Metering Infrastructure (AMI) applications

Note : 1) The Offers should be submitted only in this format otherwise the offer will be liable to be rejected.

2) All blue fields are mandatorily to be filled in.

3) Pre-despatch Inspection & Training expenses shall be borne by CPRI. Information regarding the readiness of the equipment/machinery for the Pre-despatch Inspection should be communicated in writing by the supplier at least 70 (Seventy) days in advance, to obtain clearance from the Ministry, Government of India for deputation of nominated CPRI officers.

Name of the Vendor

Quotation Number and Date

Sl.No.	Parameters	Qty	To be completed by the Bidder	
			Guaranteed Technical Particulars (GTP)	Specify deviations/Remarks if any
3.6	Delivery Period : 8 Weeks from the date of our PO.	-		
3.7	Warranty/ Support : 1 year from the date of successful commissioning and hand over at CPRI Bangalore.	-		

PN: 1) Bidder shall indicate complete details/information how the CPRI GTP are complied with against each and every specification parameters & mere statement of 'complied' do not suffice the requirement.

2) A detailed technical/catalogue/literature/phamplet and any other details shall be submitted in hard copy in a sealed cover superscribing enquiry number and due date so as to reach the following address within the due date and time.

3) The Indian representative of the foreign/overseas firms shall submit the Letter of Authorization issued by their principals.

4) The bidder shall submit the quotation / offer in the above prescribed format of Section IA, IB and II only. Informations any other forms shall be rejected.

**Address** : Joint Director (Purchase), Purchase Authority, Central Power Research Institute, Sadashiva Nagar P.O., P.Box.No.8066, Bengaluru-560 80.

Tele: 080-2207 2271, email: [purchase@cpri.in](mailto:purchase@cpri.in), web: [www.cpri.in](http://www.cpri.in)