

REQUIRMENTS / SPECIFICATIONS FOR SINGLE PHASE AMI METERS

1. Supplier will submit requirement of UDIL certificate to the PITC within 14 days from the date of issuance of LOI under intimation to this office. Non submission of requirement by the firm for the UDIL certification within above specified period may tantamount to cancellation of LOI and confiscation of bid security in favour of HESCO. HESCO will issue the Purchase order after receiving the UDIL certification from PITC.
2. All design, equipment, material and workmanship shall comply with and be tested in accordance with requirements of the specifications. Equipment or parts which are not covered by the specifications shall comply with rules, codes and regulations of the international electro-technical commission or approved National Standard bodies.
3. Single phase whole Current AMI Meter programmable Smart Energy Meter (PTA verified) module with the capability of remote disconnect/reconnect relay as per NTDC specification DDS-65:2003, DDS-98:2011, DDS-110:2012 and IEC 62055-31 for relay (All amended to date).
4. HESCO intends to procure plug and play AMI meters with **UDIL Compliance**, data from which will be exposed to the MDM at PITC/HESCO data center. Any kind of support changes requiring exposing of the data from AMI Meter to MDM at the data center will be the vendor's responsibility.
5. The integration of meters, MDM, MDCs will be responsibility of vendor.
6. The smart AMI energy meters data must be compliant with the Universal Data Integration Layer (UDIL) (latest version at the time of issuance of LOI), developed by PITC for multivendor compliance. The supplier will have to obtain a certificate of operation ability from PITC after the issuance of the LOI within 30-days.

UDIL Compliance Testing Tier-1 Certificate:

In this phase, MDCs will be tested for UDIL Compliance as per the request Performa submitted by Vendors.

After successful completion, the UDIL Compliance testing Tier-1 certificate will be issued.

7. All the data feeds are required as per the latest UDIL version. The latest UDIL version can be obtained from the PITC website i.e. <http://pitc.com.pk/index.php/projects/open-architecture-based-ami>.
8. The Smart AMI energy meters data must be compliant with Universal Data Integration Layer (UDIL) latest version, developed by PITC for multivendor compliance and the supplier will have to submit requirements for a certificate of

operation ability from PITC after the issuance of LOI within 14-days and PITC shall issue UDIL certificate within 28-days from submission date.

9. The LOI will be issued to most advantageous bidder. The successful bidder has to submit PITC UDIL compliance request and requirement of Tier-1 Certification to PITC within 14 days of issuance of LOI and obtain the UDIL compliance Tier-1 certificate from PITC within 14 days as per PITC's SOP for UDIL Compliance Testing (from the submission of compliance requirements for Tier-1(extendible if both parties agreed), on latest PITC version applicable at the time of issuance of LOI. . The performance guarantee shall be submitted within 14-days from the issuance of the UDIL certificate from PITC for Tier-1, then PO will be issued.
10. Non-submission of requirement by the beneficiary for UDIL Certificate within the above specified period may be tantamount to cancellation of LOI and confiscation of bid money in favor of HESCO.
11. Certificate of compliance of vendors' driver software with UDIL's latest version and its further integration with HESCO's billing system i.e. CIS/IBS, is compulsory to be obtained from PITC.
12. The supplied Smart AMI Energy Meters will expose data and services as per specifications laid down in UDIL's latest version only. The meter will be created in the respective vendors' driver software to expose data and services in compliance with UDIL's latest version document.
13. The modem of Smart AMI Energy Meter must be PTA verified and it must support at least 4G services downward compatible to 2G without changing SIM.
14. MDC must support SIM identification, installed in AMI Meter which should be identifiable through UDIL Service.
15. MDC must be capable to handle all numbers of awarded meters concurrently.
16. The offered Smart AMI Energy Meters should be equipped with a minimum one battery along with a Supercapacitor; the battery shall be of lithium thin chloride having a minimum cumulative capacity as per specifications. A Supercapacitor will be required for RTC to maintain the date and time.
17. In case of any kind of malfunctioning of EPROM in the Smart AMI Energy Meter, an event must be exposed.
18. The bidder will be responsible for the provision of the functionality of the software in the matter, security of software programming and reprogramming in the field and will provide necessary backup warranty and training (officers/officials) as recommended by HESCO as per clause-14 & 15 of NTDC specification DDS-60(amended to date).

19. Bidders will also be required to provide the facility for data retrieval/downloading of data in case of damage to meter LCD / Display wash or any other critical issue. In case of damage to the meter, the security of EEPROM must be ensured and data should be readable from EEPROM.
20. The bidder will provide Read Only Software in CD/DVD along with essential accessories, gadgets and training to all M&T offices of HESCO.
21. The supplied smart energy meter must have the facility of data downloading as per relevant DDS in case of damage to the meter, display wash or any critical issue.
22. Complete meter serial number along with company manufacturer code (Company Prefix plus MSN-XX98XXXXX) must be printed on nameplate of the meter.
23. Smart AMI Energy Meters must support Import & Export features and shall be programmable for Net-metering applications.
24. DDS-110:2012 (Amended to date). DDS-98:2011 (Amended to date). DDS-65:2003 (Amended to date), IEC-62055-31 and IEC-62053-22 must be followed where applicable.
25. HESCO billing system, IBS is provided by PITC, HESCO wants to ensure that the data from AMI Meter to the HESCO Billing system must be transferred in a fully secure manner. All kinds of support from the meter vendor is required in this regard.
26. The bidder will provide a copy of their "Inspection Call to Chief Engineer (MI) NTDC/PPMC" to this office.
27. The bidder will quote the price including all taxes and duties and excluding 18% GST on FCS basis. The offered price shall not be escalated for any reason whatsoever.
28. The inspection charges @0.5% shall be borne by the bidder and the same will be deposited to the accounts of Chief Engineer (MI) PPMC, Lahore.
29. All the meters MSNs must be created on MDC and MDM properly before delivering to HESCO. The successful bidder is required to configure meters during production for primary and secondary IPs, Ports and Wake up SIM numbers (which will be provided by HESCO/PITC). Wake up, both through SMS & Call must be available. By default, the AMI Meter will be in "Keep-Alive" Mode and after energizing these meters will immediately connect to the MDC driver software and provide instantaneous data as per UDIL specifications.

DRAWINGS

(As per Specification of WAPDA/NTDC/PEPCO/HESCO/PITC)(Amended to date)

- i) DDS-65:2003 (Amended to date)
- ii) DDS-98:2011 (Amended to date)
- iii) DDS-110:2012 (Amended to date)
- iv) IEC-62055-31 (For Relay)
UDIL (Latest Version as time of issuance of LOI)