



| No | Clarification Requirement | Description | Answer |
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| 1 | <p>Section 5-5-2 Overview The total scope includes supply, delivery, installation, testing, commissioning & training of Three Phase 4Wire Smart Energy Meters and maintenance during warranty period.</p> | <p>1. Please kindly provide detailed distribution information (Location Map) of these 60,000 meters, which is necessary for Implementation Price estimation. 2. Please indicate the warranty period required.</p> | <p>1. For Location Map you have to follow all over Nepal where NEA Office and Consumer resides. 2. Already mention in document</p> |
| 2 | <p>Section 5-5-2 Overview The Three Phase 4 Wire AC Whole Current Smart Energy Meters shall be an integrated system with existing AMI System (MDA & MDM) & NEA Billing (M-power) System for full-fledged functionalities of Smart Energy Meters</p> | <p>Please kindly provide detailed information of existing AMI system and Billing system, such as interface communication protocol, etc. in case customization needed for integration.</p> | <p>Our AMI System is developed in ASP.Net front End and Database is Oracle 11g. Billing System Front end is Jboss and Database is Oracle 10g</p> |
| 3 | <p>Section 5-5-33 m The meter should be immune to Electro Static Contact discharge: 8kV; Air discharge: 15kV induced by using frequency-generating devices having very high output voltage. N.B.:- Tests in this respect will be conducted by using commonly available devices and during spark discharge test, spark will be applied directly at all vulnerable points of the meter for a period of 10 minutes (at an interval of 1minute between two consecutive strokes) and meter should maintain accuracy after the test under this condition. After application of spark discharge meter should record correctly within the specified limits of errors. Beyond Contact discharge: 8kV, Air discharge: 15kV the meter should record tamper if not immune. Similarly, the meter shall be capable of recording, occurrences and restoration with date and time i.r.o. the following tamper conditions.</p> | <p>Is it obligate to have electrostatic detection and event logging? Is antistatic shock is good enough?</p> | <p>Follow the description of Technical Specification of Section 5-33 NB Test as already given in document</p> |
| 4 | <p>Section 5-5-38 Every meter shall be indelibly marked with a diagram of connections and this diagram shall also show the sequence for which the meter is intended, permanently pasted (manufactured from good quality plastic sticker material) on the inside of the extended transparent terminal cover.</p> | <p>Please specify the connection method, ABCNNCBA symmetrical connection or AABCCNN connection? This is involved with relay design.</p> | <p>Connection diagram inside the cover with all the details of ABCNNCBA and follow as per section 5-5-38</p> |

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| 5 | <p>Section 5 5-39 The Meter shall be guaranteed for the period of 5½ years from the date of commissioning of meter. Meters found defective/ functioning abnormally within the above guarantee period shall be replaced / repaired by the supplier free of cost within one month of receipt of intimation. If the defective meters are not replaced/ repaired within the specified period above, the NEA shall recover an equivalent amount plus 15% supervision charges from any of the bills of the supplier.</p> | <p>Guarantee period 5.5 years, please confirm it, because this is concerned with price quotation</p> | <p>As per description in Section 5 5-39</p> |
| 6 | <p>Section 5 5-50 ♦The system should track the current status of the meter reading. ♦..... ♦..... ♦The Software and overall data communication system must support IPv4, IPv6 and IPv4v6 protocols.</p> | <p>These requirements are for AMI system, not smart meter. Since this project will reuse the existing AMI system, so these requirements should be out of bidder's scope. Please kindly confirm</p> | <p>The meter having GPRS Modem and modem feature must be as per described in Section 5-50. Implementation, Testing and commissioning work is also there so it is in bidder Scope.</p> |
| 7 | <p>Section 5 5-50 Training to NEA Staff for Operation of Software The bidder should provide training to operate and manager offered Smart Meter System to 100 officers of NEA at different Distribution Centers as required</p> | <p>Please kindly clarify the locations of different Distribution Centers for 100 officers, in order to arrange training schedule.</p> | <p>Training should provide by Bidders in 8 location of NEA Regional offices like Kathmandu, Biratnagar, Nepalgunj, Hetauda, Butwal, Pokhara, Janakpur and Attariva</p> |
| 8 | <p>Section 5 5-50 Training to NEA Staff for Operation of Softwareand shall provide handling support for a period equivalent of two billing cycles to ensure accuracy of the system.</p> | <p>1. Please kindly clarify the billing cycle period, how many days is a billing cycle, one month? 2. Please kindly clarify the detailed scope of handling support, is it on-site support or remotely? And the content and requirement of it.</p> | <p>1. Billing cycle means one month. 2. Operation and Handling the problem of Meter as well as Software wherever is required</p> |
| 9 | <p>Section 5 5-50 Training to NEA Staff for Operation of Software The success of the testing shall depend on the extent of independent usage of such technology by NEA officials and hence is important component of this procurement</p> | <p>Please kindly clarify successful criteria for the testing.</p> | <p>As per NEA Requirements.</p> |
| 10 | <p>Section 5 5-54 SPECIFICATION FOR COMMON METER READING INSTRUMENT (CMRI)/HHU</p> | <p>There is no CMRI/HHU requirement column in price bid, please kindly clarify whether it is included in this bid? If yes, please indicate the qty required.</p> | <p>This Device is provided by Bidder and that cost is included in Meter cost</p> |
| 11 | <p>Section 6 6-3 Installation of Meters : Works replacement/installation at existing Three phase electromechanical meter and installation of New Three Phase 4 Wire AC Whole Current Smart Energy Meter with commissioning and testing in all location and their support.</p> | <p>Please clarify the detailed scope of replacement of existing meters, whether bidder's scope include dismantle, packing, transport to NEA's warehouse...etc.?</p> | <p>New meter Installation with Commissioning and Hand over the Old meter with all other details like reading information</p> |

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| 13 | Section 6 6-3 Installation of Meters , Works replacement/installation at existing Three phase electromechanical meter and installation of New Three Phase 4 Wire AC Whole Current Smart Energy Meter with commissioning and testing in all location and their support. | Whether the existing meters have meter box or not? Please share some photo of typical existing meter and meter box. Should the bidder reuse the existing meter box and just replace the meter? Or bidder need provide new meter box to replace the old box also? If only part of existing meters have meter box, please provide their Qty. and distribution area. | New Meter box as per specification required |
| 14 | Section 6 6-3 Installation of Meters , Works replacement/installation at existing Three phase electromechanical meter and installation of New Three Phase 4 Wire AC Whole Current Smart Energy Meter with commissioning and testing in all location and their support. | Please confirm which kind of electric wire are the existing meters using? copper wire or aluminium wire ? | Please follow as per section 6 6-3 and existing electric wire is both copper as well as Aluminium. |
| 15 | | Please kindly afford the word format for the tender docs | concern project office for details. |

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Clarifications submitted By: Genus Power Infrastructures Limited, India.

| Commercial Clause No | Description | Clarification | Remarks/Reasons | NEA Clarification |
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| 2.4.2 Specific Experience (b) Experience in Home Country in last 5 years substantiated with Key Activities) end user certificate. - (a-2) | The bidder must have supplied AMR/AMI system in at least 2 Electricity Utility out of bidders' Home Country in last 5 years substantiated with end user certificate. | It should be related to AMR/AMI Meter supply and not AMR/AMI System | As scope of this tender is - Supply and integration of Smart meters then why PQR is of supply of AMR/AMI system? It should be related with only meters and not AMR/AMI system. | Implementation , Testing and commissioning work is also included So AMR/AMI System is mentioned in PQR |
| Technical Clause No | Description | Clarification | Remarks/Reasons | |

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| SM-2.15 of TS (Demand Side management) | The meter shall have the provision of an additional relay inside the meter to disconnect the nonessential power loads for demand side management, with the use of external contactors. The operation of the extra relay shall be controlled from the remote with the help of software. The extra relay rating shall be either 2A / 5A | What is the use of additional relay Can we provide meter without that | Additional relay only will increase the cost There is no actual use of this relay as per Nepal Geographical conditions. Request you to please amend the specs and allow us to submit without additional Relay. | Should be followed as per in specification. |
| SM-3.3 (Tariff Seasons) | At least 4 seasons shall be definable and configurable. Only one season and one tariff shall be in operation during any time. | As you will use only one Tariff and season then what is the use of 4 seasons option in the meter. | We are providing 8 tariffs in proposed Smart meter with one seasons. Hope it is acceptable as it is currently meeting the requirements of NEA. | Should be followed as per in specification. |
| SM-5.5 (Supply interruption Registration) | Meter to be registered the number and total duration of short-term supply interruptions (supply interruptions shorter than 3 minutes) and long-term supply interruptions (supply interruptions longer than 3 minutes), recorded in the electricity quality log. Supply interruption (short term and long term) shall be configurable. | What is the use of this feature. Can we provide Power outage information with date and time log against it | Request to amend this feature as its of no use and just increasing the complexity of meter measurement. | Should be followed as per in specification. |
| Item | Clause | Description | Question from KAIFA | Answer from NEA |
| 1 | Price Bid-Schedule No.2 | Installation of Meters ; Works replacement / installation at existing Three phase electromechanical meter and installation of New Three Phase 4 Wire AC Whole Current Smart Energy Meter with commissioning and testing in all location and their support. | 1. Where are the meters to be installed? Could you please define a map or a schedule that where the meters to be installed? 2. Will NEA provide the warehouse to stock the meters in each city? 2. Does the installation work include replacement and connection of cable? | 1. All over NEA Through out Country 2. Not Provided by NEA 3. Rplacement of Meter with Existing connetion Cable. |

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| 2 | Technical bid-SM-2.15 | The meter shall have the provision of an additional relay inside the meter to disconnect the nonessential power loads for demand side management, with the use of external contactors. The operation of the extra relay shall be controlled from the remote with the help of software. The extra relay rating shall be either 2A / 5A. | Besides a relay in the meter, Will there be an external relay/switch outside the meter and in the meter box? | No. |
| 3 | Technical bid-Overview | NEA expects the entire Three Phase 4 Wire AC Whole Current Smart Energy Meter system has to be based on 100% GPRS/ 3G based modern telecommunication facilities available in Nepal. | The communication module required is GPRS or 3G, if 3G is mandatory even if GPRS can satisfy the communication effect? | please refer Section 5.1.1.1.34 Data Communication Module & Features |
| 4 | Technical bid-Overview | GSM SIM Cards with GPRS/3G data service or Data Services to read data from Smart meters shall also be provided by the bidder. | Please kindly clarify initial tariff package of data for SIM card, the data flow will be borne by NEA or bidder? For how many years? Can you give any details about dataflow requirement as it is based on the application (daily reading, billing, load profile and so on?) | one billing cycle after testing and commissioning of the system. |
| 5 | Technical bid-Training | The bidder shall provide detail training on testing quality, accuracy, calibration and overall performance of Smart Meter using all available Tools and Test Bench etc., to at least 8 engineers of NEA at manufacturing premises for 7 days at the cost of Supplier. | Please kindly clarify such as air tickets/meal/hotel will be borne by whom? NEA or bidders? | As per given in documents, Everything cost is in Bidder Cost. |
| 6 | Technical bid-Training | The bidder should provide training to operate and manager offered Smart Meter System to 100 officers of NEA at different Distribution Centers as required and shall provide handling support for a period equivalent of two billing cycles to ensure accuracy of the system. | Please kindly clarify how many times for training, how long will one time's training need? Where do the bidders train NEA's officers? All in Kathmandu or all around Nepal, please provide details for local training. | Training is one time but eight different Location of NEA Regional office like Kathmandu, Biratnagar, Butwal, Pokhara, Nepalgunj, Janakpur, Nepalgunj and Attariya. |

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| 7 | Technical bid-SM-2.8 | Meter should have the provision of audio able alarm for low balance (Prepaid), exceed load limit, etc. | Is prepaid function needed on meter itself or it can be realized by the existing AMI system? | Both |
| 8 | Technical bid-SM-9.1 Power Outage Notification | Smart meter shall have functionality that when power goes out for more than 60 second the end point shall send a power outage message to AMI (MDA & MDM) Server which shall be populated on outage map of AMI (MDA & MDM) Server. This functionality shall help utility to identify the power outages on real time basis. | Can 60 seconds be reduced to | Follow as per Amendment. |

1. In technical request, I_{max}=120lb, Ib should be 5A, 120lb=600A, it is cannot be done, Generally I_{max} is 100A, does it typed wrong in technical documents?

Electrical Requirements

- Rated voltage for three phase meter 400V (3P-4W)
- Voltage Variation range -5% to +2%
- Rated current for three phase meter is 60 Amps (Three phase), I_{MAX} = 120lb, Starting Current = 0.004lb.
- Continuous current rating for three phase meter is 60 A

Amendment

3. Meter may not be capable to support both GPRS/3G and RF interface with IPv4, IPv6 communication protocols.

4. Answer: For GPRS/3G with IPv4, IPv6 re update part, it request software update would not affect metering function; at present, metering and other application is developing use single chip, software update could be done locally or remotely.

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| SM-2.8 | Meter Firmware Upgrade | Meter shall support firmware upgrade option. Firmware upgrade option on the meter is realized not to alter in any way the metering |
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| SM-7.1 | Firmware Upgrade | Characteristics (technology) of the meter, data measured in the meter (metering data, status, etc.) | Vital |
| SM-7.2 | Firmware Compatibility | Configuration parameters or operational parameters of the meter all these data remain unchanged even after firmware upgrade. Meter will after receiving the new firmware verify its compatibility in case that verification does not end positively, new firmware will not be accepted. Meter will record time and date of new firmware receipt in the Event Log, as well as time and date of new firmware application. | Vital |
| SM-7.3 | Local Firmware Upgrade | Meter is connected via its local electrical interface with the manual terminal or laptop containing corresponding software for installation of the new firmware on the meter. This process is executed in the manner not affecting at any time the data in the meter. If | Vital |

1.1.1.1 Technical Specifications for Three Phase Smart Meter

Technical specifications of Three Phase 4 Wire AC Whole Current Smart Energy Meter covers the design, manufacture, assembly, inspection, testing at manufacturer work before dispatch, supply and delivery at site for destination in three phase 4 wire AC whole current Smart Energy Meter of Class 1.0 accuracy for current range of 5-60 Amps for tariff purpose along with other associated component as per requirement given in specification which is based on regulations on installation and operation of meters. This specification also covers load control with connection and disconnection through relay facility. The meter shall be integrated with existing AMI (MDA & MDM) System of NEA. The meter shall have inbuilt modular plug-in type GPRS & 3G modem for two way communication with existing AMI (MDA & MDM) System.

In order to ensure that the measurement of meter is accurate, there shall have a separate MCU in CM (Communication Module) that is responsible for the communication part only, and the upgrading of communication software of module will not affect the meter's accurate measurement. The communication software and meter software are separated to ensure that the measurement of meter is accurate, there shall have a separate MCU in CM (Communication Module) that is responsible for the communication part only, and the upgrading of communication software of module will not affect the meter's accurate measurement. The communication software and meter software are separated to

Section 5: Test Requirements

The bidder should submit one sample meter for per meter specification with manufacturer's seal with the offer. Unsealed sample meter shall not be accepted. The sample meter shall be tested in NEA's Central Testing Laboratory for meter error in accordance with IEC 61010-1 with latest amendment from its physical verification. If the error limits of the sample meter exceed the prescribed error limit of IEC then the bid will be considered as technically-substantially non-responsive and shall be rejected.

error inspection be upgraded on here shall have a communication, the design and to high standards performing for chaser, who will