RFQ Identification Number TW-IT/OT/01/2015-16

Shortlisting of IT Agencies for Implementation of Metering, Billing & Collection Solution for WESCO, NESCO & SOUTHCO

GRIDCO Limited

Head Office: Janpath, Bhoi Nagar, Bhubaneswar – 751022

May, 2015

The Last date for Submission of Offers is 16th June 2015

RFQ Notification

GRIDCO Limited

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RFQ Identification No.:TW-IT/OT/01/2015-16   Date:22nd May 2015

For and on behalf of GRIDCO Ltd., the undersigned invites sealed envelopes from qualified and eligible IT Agencies for Project titled "Shortlisting of IT Agencies for Implementation of Metering, Billing & Collection Solution for WESCO, NESCO & SOUTHCO".

RFQ brief particulars:

Activity	Date & Time	Particulars
Downloading of RFQ Document	22nd May 2015	From Web Site : www.gridco.co.in Interested IT Agencies may download the Tender from above website and submit along with RFQ Fee as below
RFQ Participation Fee		Rs.25,000/- (Rupees Twenty Five Thousand Only) + VAT 5% payable to DDO, Hqs Office, GRIDCO Ltd., at Bhubaneswar.
Pre-Bid Conference (Subject to production of proof of paying RFQ-Participation fee)	29th May 2015 11:00 HRs	Conference Hall, GRIDCO Ltd. Bhubaneswar
Bid Submission	Up to 1330 Hrs on 16th June 2015	C.G.M.(IT), III Floor, OPTCL Corporate Office, Bhoi Nagar, Bhubaneswar 751022
RFQ Opening	At 1530 Hrs on 16th June 15	Conference Hall, GRIDCO Ltd. Bhubaneswar
Tentative Dates for Bidder Presentations	4th-6th June 2015	Conference Hall, GRIDCO Ltd. Bhubaneswar

**CGM (IT), OPTCL &
I/C DISCOMS-IT**

1. Background

GRIDCO Limited has temporarily taken over the management of three Distribution companies (herein after referred to as **the Discoms**) of Odisha State viz., WESCO, NESCO and SOUTHCO during Apr, 2015. Strengthening the I.T. function of the Discoms is one of the important aspects to improve the operational efficiency of Discoms.

M/S Reliance Utility Engineers Limited (RUEL) has been managing IT functions in the operational management of the Discoms. RUEL is requested to continue to manage the IT functions of the Discoms for some time. In the meanwhile GRIDCO Limited is planning to establish elaborate and comprehensive I.T. contracts for the Discoms to enable them to be self-reliant in terms of I.T. so as to gain leverage out of the I.T and become competitive.

At planning stage, customer base of 20 lakhs for each of the Discoms is estimated for information of the prospective bidders. This will help the bidders in estimating effort and I.T. sizing requirements. At the end of this tendering process, the selected I.T. Implementation Partner (IP) is expected to take complete responsibility of transforming the Discoms from the present I.T status to a position where the Discoms will have individual, formidable and self-sufficient I.T. setups in a planned manner. Such an I.T. initiative should be able to cater to the requirements of Energy Metering, Energy Billing, Revenue Collection, Power Connectivity management, Customer Care, AMR, and Intelligent Analytics etc., utilizing latest state of the art I.T. technologies. The outcome of the I.T intervention should support management to be able turn around these three distribution companies by utilizing the competitive edge the I.T. intervention expected to provide.

Thus the final assignment to the I.T. implementation partner shall include the following broad responsibilities.

    a. To customize a standard proven software solution in the context of the Discoms to support core operational activities viz., Metering, Billing, Collection, Connection Management, AMR and Analytics. To support Management Information needs in decision making.

    b. To establish a centralized I.T. facility for Development and Testing the IP-customized software solution. Such an I.T facility shall act as makeshift production facility until the Discoms are provided with individual Data Centers.

    c. To migrate the operational data of the Discoms from the prevailing systems into the new I.T. system using suitable formats.

    d. To support Production of the new I.T. System for the Discoms for conducting parallel run for User acceptance followed by hand-holding during system operations.

    e. To provide Facility Management Services of the new I.T. Systems for the Discoms for a period of 3 years post Go-Live.

CGM(IT) OPTCL & I/C Discoms-IT on behalf of GRIDCO Limited invites Expression of interest from reputed and experienced Technology service providers-cum-System integrators for implementation of a state of the art Metering, Billing, Collection, Connection Management, AMR and Analytics solutions for implementation in the Discoms.

2. Description of Prevailing System

The existing IT System of the Discoms is predominantly centralised at the individual Discom's level to some extent. The existing Metering-Billing-Collection (MBC) system is based on Oracle RBDMS as the database with the Front end based on the Oracle Developer 2000 toolkit. Operational database of the individual Discom is synchronised with a central Database hosted by M/S Reliance Utilities Engineers Limited, at Mumbai. The three Discoms are presently doing Billing using Spot Billing as well as Mobile Phone based online billing (with photographs) methodologies especially for Single Phase LT customers and are in the process of completely moving over to Mobile Phone based online billing.

Automation initiatives such as AMR and prepaid metering have also been deployed at the Discom's partially. Existing AMR systems are based on GSM technology and are deployed for selective consumers of 10 KW Load and above. Prepaid metering systems are also experimented in SOUTHCO & NESCO in a limited way for Government Consumers. Revenue is collected through online as well as manual systems presently. Web server located at Mumbai is utilized by the Discoms for all online operations presently in vogue.

The Energy Billing of all three phase consumers with Contract Demand in excess of 10 KW is done locally on the Discoms' I.T. Infrastructure based on Oracle Database based billing software. Billing data of three phase consumers is obtained through AMR as well as manual methods.

Loss reduction being primary focus of the Discoms, it is proposed to have a reliable and dependable MBC and connections management systems in place to tackle the commercial losses.

3. Scope of work

a. Supply reputed enterprise level Commercial off-the-Shelf MBC Product having standard practices available in the open market, Customize, Configure and Implement Energy Metering, Energy Billing, Revenue Collection, Connection Management functionalities for the Discoms.

b. Supply and Implement Head End System for online Meter Data Acquisition (AMR).

c. Supply and implement Meter Data Management System.

d. Integrate existing Customer Care System, Spot Billing, Mobile Phone based Billing, Pre-Paid Metering, Revenue collection System etc., into the new I.T. System.

e. Supply and Implement Energy Analytics and Reporting Systems with customizable report building tools.

f. Supply and Setup essential centralized I.T. Computing facility along with associated Networking infrastructure to support the above systems.

g. Prescribe formats for data extraction from RUEL systems, to meet all the User Requirement Specifications of the Discoms in the above areas, migrate the data from the existing systems as on a targeted cut-over date and initiate parallel systems to enable User Acceptance Test over at least three billing cycles before Go-Live.

h. Render Facility Management Services for the I.T. Systems established as above for three years and provide Comprehensive Annual Maintenance Contract for the Customized Software Solution.

4. Preferred Technology Platform and Deployment

Reputed enterprise level Commercial Off the Shelf Metering, Billing and Collection (MBC) Product with a proven footprint in the Indian Power Sector is required to be deployed against this tendering process. It is envisaged that the MBC platform would house the Customer and the meter asset repository and the Meter Data Management Application would house the Meter Data Repository.

The MBC application would need to be integrated with the MDM application and other applications through Web services. A scalable platform to incorporate two way communications in future is preferred so that Advanced Metering Infrastructure applications can be smoothly implemented.

An overall high level reference architecture is shown in the Annexure – I. The current genre of GSM modems used in the field for supporting AMR, may have to be replaced with GPRS based ones in future.

5. Bidders eligibility criteria

Bidders who qualify the following minimum eligibility criteria mentioned below shall be considered for further evaluation. The decision of OPTCL will be final in this regard:

SN	Parameter	Description	Supporting Documents
1	General: Organization Details	a) The Bidder should be a company registered as per the Companies Act in India. Consortiums are not allowed except for AMR integration.	Copy of Certificate of Incorporation by Registrar of Companies, Government of India
		b) The Bidder should be in existence in India for at least 10 years and should have been involved in Software Development/ Software Solution Implementation and/or System Integration, Training, Support and other allied services.	Certificate of Incorporation and copies of Memorandum of Association and Articles of Association
		c) The Bidder should not be blacklisted by any Central Government / State Government / PSU / Government Bodies / Autonomous Bodies / World Bank and multilateral funding agencies.	Self-Certification from Authorized Signatory

SN	Parameter	Description	Supporting Documents
2	Financial Stability, Manpower & Quality	a) The company's turnover for the last three financial years (2012-13, 2013-14 and 2014-15) should be at least INR 500 Crores for each of the three years and should have a positive net worth in each of the last three years.	Audited Financial Statements (Balance Sheet, Profit Loss statement etc.) for the each of three years.
		b) The bidder should have its Delivery Centre / R& D / COE in India with overall employee strength of not less than 5000 employees on its payroll as on 31st March 2015.	Self-certificate from company's authorized signatory.
		c) The bidder should have a CMMI Level 5 Certification	Copy / details of certificate.
		d) The bidder should have ISO 9001, 20000 and 27001 Certifications	Copy / details of certificate
4	Metering, Billing & Collection implementation experience in Energy and Distribution Utilities industry in India	a) Bidder should have executed at least 2 (two) end to end implementation projects of Billing in the Power Distribution sector in India in last 10 years as on date of this Notice, with consumer base in excess of 10 Lakh consumers. b) Bidder should have successfully run MBC solution for a period of at least one year.	(1) Documentary evidence in form of Purchase Order and Go-Live / Completion Certificate from customer (2) Documentary evidence in support of successful running of the MBC solution for at least one year from the date of Go-Live.
5	AMR implementation in India	Bidder should have executed at least 2 implementations of AMR for Power Sector for an excess of 5000 metering points in total during the last five years	Documentary evidence in form of Purchase Order and Go-Live / Completion Certificate from customer

SN	Parameter	Description	Supporting Documents
6	System Integration Experience	Bidder should have executed at least 2 implementations of integration of AMR and Billing System as a turnkey Systems implementer in the power Distribution sector during the last five years with functional experience in, a. Metering, Billing & Collection b. AMR	Documentary evidence in form of Purchase Order and Go-Live / Completion Certificate from customer
7	Product / OEM Capability	The MBC product proposed by the Bidder should have a minimum of 2 implementations in the Power Distribution Industry in India for a retail consumer base in excess of 30 lakhs. The product OEM should have office in India with a support facility for the last 10 years.	Certificate from the Product OEM.

The bidder should submit these pre-qualification criteria in the form of a compliance sheet. Evidences of all points in pre-qualification criteria should be submitted in the form of supporting documents.

The bidder who satisfies the above criteria and found successful in presentation shall be considered as short listed bidder to whom the RFP will be provided.

NOTE: The credentials of **the bidder** shall only be considered for evaluation. The credentials of parent (holding) Company, subsidiary company etc., shall not be considered. Similarly the executions outside India of the bidder shall not be considered. However, the experience of JV only for AMR integration may be considered.

6. Bidders' Submissions

In addition to the above the bidders should also submit detailed write-ups covering the following aspects in support of their capability and maturity in handling such mission critical application systems for the Discoms. Short listed Bidders shall be invited to give a detailed presentation to a committee constituted by GRIDCO Ltd for pre-qualification for RFP.

SN	Capability aspects	Marks
1	Understanding of the Purchaser's requirements	10
2	Key Performance Areas and Key Deliverables	10
3	Technology / Product Options and Bidders' Experience on the same. Solution Deployment options.	10
4	Over all proposed logical Architecture coverings Application, Computing and Networking aspects. BOQ of the overall IT Solution Proposed.	10
5	USPs of the Bidder for the Assignment.	10
6	Project execution Strategy and proposed implementation plan (with Time Lines)	10
7	Description of two Discom MBC projects successfully implemented by the Bidder	10
8	Scalability of the proposed platform to accommodate AMI / Smart grid functionalities in future	10
9	Measures taken in the proposed I.T. Solution to integrate with Standard ERP Packages in future.	10
10	Project Team Structure.	10

NOTE: The bidder shall be declared successful in *Presentation* stage, only on securing a minimum of 70% marks.

7. Functional Expectations

7.1.   Metering-Billing-Collection

An elaborate MBC and Connections-Management solution suiting to the needs of the Discoms is expected to be customized by the IT Implementation Partner. The System has to be self-sufficient in all respects and should be able to meet all the latest industry standard functionalities to support Discoms' Revenue management activities. The existing Call Centres need to be integrated into the proposed solution to ensure large scale improvement of customer care functionality. Tentative but not exhaustive list of functionalities are enclosed herewith as Annexure – II & III for the information of the prospective bidders.

7.2.   Supporting IT Infrastructure

The Bidder is expected to establish a minimum essential IT infrastructure in terms of Servers, Storage, Networking along with necessary Security arrangements to support the Software Development/Customization work, System Testing, User Acceptance Testing, parallel run for three billing cycles etc. Bidder shall have to supply licenses of Off-the-Shelf solution to meet the development, testing and parallel run activities before Go-Live. It is envisaged that the I.T. solution that emerges through the tendering process shall meet the Discoms' I.T. needs for at least next 7 years.

The I.T Infrastructure in terms of installation, licensing, configuring etc., shall be done independently for each of the three Discoms.

7.3.   Data Migration

Presently the M/S RUEL is managing the IT Infrastructure and Automated Business Systems from the headquarters of the three Distribution Companies and from the central facility for the three companies together from Mumbai. The data migration from the existing system into the proposed new IT System shall be the responsibility of the Bidder. GRIDCO Ltd shall do the needful in obtaining the data in the formats to be prescribed by the Bidder selected for the Project.
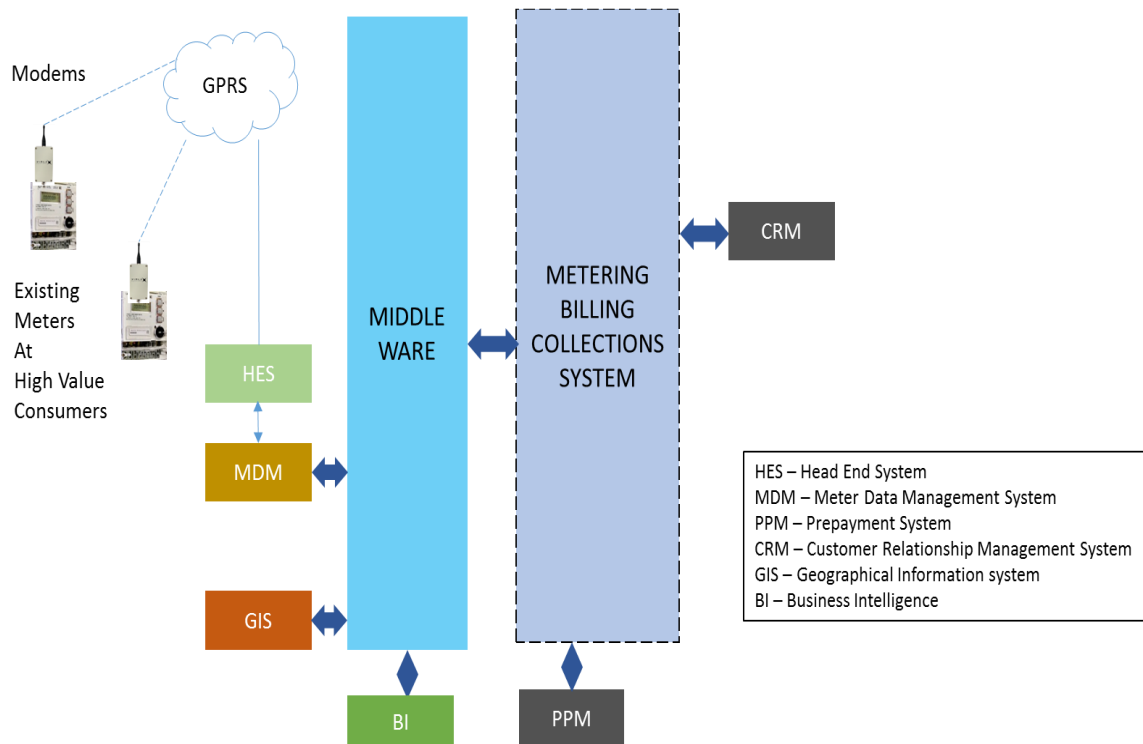
7.4.   Handholding and Facility Management

The Implementation Partner should hand hold the system during the parallel runs and for three years post Go-Live in accomplishing all the operational activities of the new system. The system shall undergo marginal changes as part of fine tuning and realizing the ultimate system. The reporting requirement shall be key focus as the system gets evolved and that is expected to be met by the Implementation Partner.

During this phase of the Project, GRIDCO Ltd has a plan to establish three independent Data Centres for the three companies along with AMR infrastructure so as to totally empower the Discoms in terms of I.T function. The skeletal I.T. infrastructure facilities developed at GRIDCO Ltd may be utilized by the three Discoms as basic Disaster Recovery facility for some time until an alternative is workout comprehensively.

The indicative FMS requirements are enclosed herewith as Annexure – IV.

Annexure – I

OVERALL HIGH LEVEL REFERENCE ARCHITECTURE FOR SUPPORTING MBC and AMR

OPTCL would like to investigate the options of deployment both as a common instance for the Discoms as well as separate distributed instances and invite suggestions from Technology providers on the same. However overall high level reference software architecture is shown in the diagram below:

HES – Head End System
MDM – Meter Data Management System
PPM – Prepayment System
CRM – Customer Relationship Management System
GIS – Geographical Information system
BI – Business Intelligence

Annexure – II

Technical Expectations of the New I.T. System

1. General Technical Requirements		
1	The infrastructure and applications should be flexible to cater to the requirements of NESCO, WESCO and SOUTHCO Utilities. The solution should have a scalable platform to accommodate two way communications in future.	
2	Only proven Off-the-Shelf products which can be configured/enhanced/customized as per the requirement of the individual Utility should be proposed.	
3	Applications, systems and infrastructure are to be characterized as service-oriented, component-based & reusable. The system will be modular in design, operations and implementation.	
4	The software standards should adhere to industry standards and open architecture. The architecture should be such that the hardware/data is not shared across the utilities. There should not be any interdependency of infrastructure or data among the three Utilities.	
5	The application must be deployed centrally and accessible from remote locations through secured connectivity. Data should be stored only at central location. Local data storage should not be organized for.	
6	The applications system should be built upon WS* specifications using open industry standards of Web services using XML, SOAP, WSDL and UDDI and should have the unified access framework compliant to industry standards with single sign-on feature, role based, request based and hybrid user type role based access.	

7	Integration technologies must be industry proven standards. They must be scalable in capacity and provide for extensive functionality. WS* based Web Services Integration specifications shall be used for integrating disparate systems, such as : • Web Services Messaging Specifications including SOAP • Web Services Reliable Messaging • Web Services metadata Specifications including WSDL • Web Services XML Specifications • Web Services Business Process Specifications including BPEL4WS • Web Services Management Specifications • EDIFACT and ANSI • Rich Internet application	
8	The application portfolio and the IT infrastructure are to be vertically and horizontally scalable in size, on-demand with higher capacity, and functionality to meet changing business and technical requirements of all utilities, thereby enabling the utilities to be adaptable to change.	
9	Applications need to be designed for manageability using Enterprise Management System. This needs to encompass: scheduling, backup and recovery, application, database and network infrastructure monitoring, tuning and remote diagnostic management.	
10	It must be possible to deploy various change/enhancement centrally (for example, changing the tariff plan etc.) without any local support/dependency.	
11	Irrespective of the Operation/Outsourcing option adopted for operation of the system, the legal ownership and logical control of the utility data will always remain with the respective Utilities. The application should provide the flexibility of system disintegration / aggregation of information and application in case of outsourcing, acquisition, and merger of Utilities.	
12	The system should be able to grant specific access rights to each login or group of logins, as per the business requirement and policy of the Utilities with unique identify across the enterprise system. The system shall have provision to configure the user login utility wise and a separation needs to be maintained for each utility.	
13	It must be possible to provide restricted access to the Utilities Business Partners / Franchisees as and when required.	

14	The solution should be able to interoperate with multiple industry standard RDBMS platforms like Oracle, MS SQL, MY SQL, DB2, Informix, Sybase or any other RDBMS confirming to ANSI/ISO SQL-200n standards and should be built on WS* based open specifications.	15
15	The system must allow monitoring online all transactions remotely with proper audit trail. All transactions must be stored with the user details and time-stamp in the database which can be easily traced, if required.	
16	The system should support work-flow management for Approvals.	
17	The system should support comprehensive consumer data base with multiple categorization, Industrial / Commercial / Domestic / Agriculture on Administrative aspects (Circle / Div etc.), Electrical Assets (Feeder, DTR etc.)	
18	The System should have facility for giving notifications / alerts through SMS / eMail etc. against different events.	
19	The System should have an inbuilt Audit Trail to track changes, support drills-down etc .	

Annexure – III

Indicative List of Business Information Requirements

	2. Metering
1	The system should be able to store the meter master data such as manufacturer, model / version, serial number, dial number, type of meter, source of the meter, status of the meter etc. and AMR related data.
2	Tracking & reconciliation of meter seals i.e. date, type, no. of seals, sealed by, condition of meter etc. including meter boxes should be available in the system.
3	The system should have the ability to be integrated with AMR, Spot Billing Machines, Mobile Photo Billing, CMRI, Prepaid meters, Hand Held Devices using Industry standard methods and Manual Meter Reading Entry. The system should be able to upload/download data of any set of consumers. It should also allow upload partial set of consumers if the meter reading of the entire set is not complete.
4	Manual meter reading entry (Single and Multiple) should be allowed in the system.
5	There should be provision in the system to configure exception rules based on which the meter readings can be validated and sorted out. The validation rules may be different for various utilities and may be configured as per Utilities requirement.
6	In case the meter reading is not available, average meter readings may be allowed in the system. The average of the consumption would be done based on predefined rules set by the Discoms.
7	Suitable predefined meter reading notes (ex. Door closed, meter not accessible, defective meter etc.) should be available in the system which would be selected during the meter reading entry, if required.
8	System should generate meter-reading/Spot Billing plan for day/week/fortnight by meter readers and provide it to the respective authorities. Also, there should be provision in the system to assign the meter reading plan to predefined group of meter readers. The performance of the meter readers should be monitored / tracked as and when required.
9	The system should be able to track consumer behavior in terms of exceptions through Analytics. For example: The number of times a customer figures in the list of exceptions.
10	The System should be capable of accepting opening, closing and intermediate meter readings for temporary connections for generation of bills for such connection.
11	For all kinds of disconnections (whether a customer requests for termination of connection or utility disconnects due to non-payment), the system should accept the terminating meter reading (which will be out of cycle in most cases) for generating the last bill.

12	The system will track the current status of the installed meter. Various options would include Correct Meter, Stuck-Up Meter, Sluggish Meter, Door Lock etc.	
13	There should be provision in the system to perform meter replacement for a consumer. If a meter is replaced in the middle of the billing period, the consumption recorded in both the meters can be taken into consideration for billing as per the rules provided by the Discoms. Also, the history of the meters should be maintained in the system. In the event of arrear billing all the past meters and related data should be retrievable by the system in calculating exact arrears.	

	3. Billing	
1	Though the billing is done mostly with Spot Billing Machines, mobile devices, there should be provision of doing individual/mass billing as per the meter reading in the system for all categories of consumers. ***Contingency arrangement for off-line billing in the event of failure of communication link. Subsequent synchronization of off-line billing with the central server. Provision to generate, view and print duplicate bills.***	
3	Integration with mobile hand set: The previous period data can be uploaded remotely online & the billing should also take place online.	
2	Meter Reading Schedule should be uploaded in the Spot Billing Machines with the consumer master data, initial meter read and other parameters from the core system.	
3	Every bill should have a unique bill number. Bill Period, consumption, amount to be paid, due date should be clearly printed on the bill.	
4	Integration with Spot Billing: At the end of data collection and billing operation in the field, the information recorded in the spot billing machine should be uploaded into the Base Billing system for updating master database in the system. Support for loading Hand held devices from the Master Database in the system.	
5	The bill should be generated based on the meter reading entered or estimated based on the RST rules and Regulation. No manual intervention should be allowed in the process.	
6	The Billing system should be flexible enough to accommodate changes in Tariff brought about by the Regulator from time to time.	
7	The Billing system should also be able to accommodate assessment of Unmetered Charges Consumption and Penal Bill in case of Consumers that are disconnected due to tamper events	
8	The Billing system shall automatically take into cognizance the new connections successfully provided and recorded in the system.	
9	***The system should support Bill Corrections / Revision in the exceptional cases and suitably account for.***	

	4. Collection	
1	System must be capable of handling centralized or decentralized payment processing. Any consumer can make payment at any collection center including third party collection center which are integrated, irrespective of his/her supply area.	
2	All payments should be associated with the cashier-id, timestamp and the collection center.	
3	The outstanding clearance / Payment allocation should be in accordance with Regulation / Tariff Orders (Regulation 94).	
4	There should be provision of advance payment, partial payment, installment based payment in the system. Installment would be allowed only upon approval by the proper authority.	
5	Payment reversal, change of paid amount would only be allowed upon approval by the proper authority. Cashier, on his/her discretion should not be allowed to make any change in the received amount once the receipt is generated from the system.	
6	The system should generate a receipt whenever money is collected. Each receipt should have a unique receipt number. The system will allow payments to be collected under the payment categories indicated by Utility.	
7	Multiple modes of payment such as by Cash, Cheque, DD, Online Payment, Mobile application based payment, ECS should be allowed. The system should allow to be integrated multiple channels/third party payment systems as and when required.	
8	In case of cheque dishonor - i) Reversal of any payment recognized by the system ii) Levy of handling charges iii) Generation of Notice, if required iv) Blocking of further payment by cheque till a defined timeframe/logic with appropriate message on bill for same.	
9	The system should generate a daily total for the receipts issued for the day. This would enable the daily reconciliation of the cash collected with the amount entered in the system as 'payment received'. The system should also capture all bank remittance details. At the end of a period, the system should reconcile them with the bank statements.	
10	The system should allow special waiver during a collection drive. The waiver may be required for a particular group of consumers as defined by the Discoms. The system should also allow extension of due dates in special cases for a group of consumers.	
11	The system should allow generation of reminders by SMS / eMails at specified dates before the payment due date, and notices for disconnection / dismantlement.	

12	The system should be able to interface with the Discom's over all Financial system for Accounting, generation of Financial Statements and Auditing . The reconciliation with the central finance system may be required on daily basis based on pre-defined synchronized GL codes. No manual intervention should be required in the reconciliation process.	
13	Support for automatic calculation of Additional Security Deposit where necessary as per Regulation and provision for issue of Demand Notice.	
14	Provision for auto calculation of interest in the event of late / non-payment of dues, for reflecting in the bill.	
15	Auto adjustment of revenue collection under different heads as per the Regulation.	
16	Specific formats shall have to be prescribed for all the field level activities such as new connection, revision of the bill, revenue collection etc.	
17	*The system should support off-line revenue collection as an exception and facility to incorporate and account for in the system subsequently along with Audit trail.*	

	5. Service Connections Management	
1	The system should be able to generate and issue different application forms for New connection, Temporary connection, Load extension/reduction, Name change, meter shifting etc. for different categories of users, and the same forms should be available across all delivery channels (Section/ division/circle/ corporate office/ customer service center, over the web etc).	
2	The system should be able to record the registration fee payment details and issue a receipt to the customer.	
3	The system should generate a unique application number for every application form received and registered.	
4	All new connection request details and registration fee details captured should be reconciled with the MBC system in real time/near real time basis.	
5	The system must be able to accept multiple new connection requests by uploading in a specific format which may be required during a special connection drive.	
6	The system should be able to assess the load for each applicant based on the predefined standards and validate the customer's self-assessment of load.	
7	The system should provide the functionality of generating an intimation letter to the customer informing him of the customer premise inspection. The corresponding section office would also be informed of the premise inspection.	
8	The system should be able to prepare an estimate for new connection, temporary connection, load extension/reduction, shifting of meter and / or service line with details as per the Discom defined criteria which may change from time to time. The system should be able to estimate the development cost after field inspection as per the cost data provided by the utility. This database will be modified by the utility from time to time. In case of availability of on line stores and materials management module, system should be able to check materials availability and generate exceptions accordingly.	
9	The system should update the applicant log with the application status (Accepted / Rejected / under process).	
10	The New Connection should have provision to store the network information such as Pole Number, DTR Number etc which can be used in generating several reports as and when required.	
11	The system must be able to generate a Welcome Letter in a specified format informing the consumer about various details.	

6. Consumer Data Change Processes

1	There should be provision in the system to modify various details of the consumers such as - a. Name (spelling change/ownership change) b. Address c. Phone Number/Email Address d. Connected/Contracted load or any other details. The process of changing the details would depend on the Discoms' processes.
2	The modification history of the consumers should be stored in the system and can be viewed if required.
3	The forms for requesting the changes should be generated from the system or can be downloaded from the Discom's portal.

7. AMR

1	The modems should poll the existing meters locally and push the meter data to the HES at predefined intervals
2	The modems should send the tamper events to the central server immediately on occurrence
3	The communication mechanism from the modems to the HES should work as a dynamic/virtual IP assignment being assigned to the modems from the Central Server so that service provider independence is achieved
4	The communication channel from the modems to the central server should be on a secure channel
5	The modems should be configurable remotely from the Central Server.
6	The Head End System should be Web based and display the meter data along with the meter details and administrative hierarchy of the Discom.
7	The HES should have provision of generation of basic reports as per the requirement of the Discoms.
8	The System should have provision of an on-demand poll from the central Server.
9	The modems should poll the existing meters locally and push the meter data to the HES at predefined intervals
10	The modems should send the tamper events to the central server immediately on occurrence

| 11 | The communication mechanism from the modems to the HES should work as a dynamic/virtual IP assignment being assigned to the modems from the Central Server so that service provider independence is achieved

For High Availability of the HES, the HES should have 2 different IP Addresses for the modems to push the data seamlessly.

The Modems at the meter-side should be able to send the data to the Primary IP Address of HES and if the same is not accessible, the modem should send the data to the Secondary IP Address of HES.

Modems should be able download data from the existing Static meter of any make & Model.

Provision for bulk upload of meter dump / load survey data in the HES or MDM in case of data unavailability through AMR. | |

8.	Meter Data Management	
1	The system should have provision of integration with multiple Head End systems over standard interfaces	
2	The System should be an Enterprise level Meter Data Management System scalable to accommodate two million metering points, based on the consumer growth rate for the next 7 years, with a proven footprint of the same globally	
3	The MDM System should have rule based Validation, Editing and Estimation Rules	
4	The MDM System should be scalable enough to accommodate two way communications with Smart Meters in Future	
5	The MDM System should have a reporting engine for generation of Discom Specific reports	

9. Defaulters Management

1	System should be capable of generating the list of defaulting consumers i.e. the consumers who do not make payment of their bills by the due date. System should be capable to accept report of action taken on such consumers and remind further action required to be taken during specified period as decided by Discom.
2	System should have the provision of generating automatically list of disconnection notices as per the Discom defined criteria in the Discom defined template. After expiry of due date of disconnection notice, it should print disconnection advise for disconnection by field staff. The Discom defined criteria may : • Exclude cases with open complaints in customer care module • Classify live and disconnected cases in separate buckets • Prioritize cases based on default amount, aging of debt, tariff category, category of consumer etc. • Option to exclude VIP / Priority Consumer
3	On receiving the disconnection notice, if any customer approaches and requests for help like getting some more time for payment, then the system should have provision for payment due date extensions or accepting payment in installments. (Note: Due data may not be understood as Rebate Date)
4	If the consumer is not disconnected within a defined timeframe even though the payment is not made, the case should be automatically escalated to a predefined higher authority.
5	If the consumer pays his/her dues after disconnection, Disconnection/Reconnection charges shall be booked in the system which customer shall have to pay for restoring the connection.

	10. Discom Portal	
1	Consumers should have a log in facility in the Discom's Portal. The users will have to register with their Consumer Number and other details as necessary. NESCO, WESCO and SOUTHCO may have separate consumer portals. Password will be auto generated and will be sent to their preregistered email address. Consumers should be asked to change the password on their first log in. A Forgot Password link should also be provided to regenerate the password if required.	
2	The user is asked for personal, security and account information in this page before registering.	
3	After logging in, the consumers should be able to view at least last 12 bills, last 12 payment receipts and consumption history for at least last 12 months. Detailed analysis is provided in a tabular format listing the meter reading date, the reading, consumption, number of days, charges etc.	
4	Consumers should be able to make payment online. Provision for partial payment, advance/Adhoc payment should be available in the portal.	
5	There should be a provision for Quick Payment, where consumer can make payment without logging in.	
6	Users should be able to log his complaint using a drop down menu and also enter some text to log a complaint. A complaint number will be generated and the complaint will be forwarded to respective subdivision. Consumer can track the status of the complaint through the complaint number.	
7	The consumer should be able to make advance payment, even if the bill is not visible in the portal due to delay of bill data upload.	
8	Facility for exception reports like Abnormal / Suspicious Consumption, Non-Paying Consumers, Disconnected connections not reconnected for long, Large amount of Credits / Debits, Consumer Tariff Category degradation, Load Reductions etc.	

11. MIS		
1	The proposed MIS should have its own data warehouse and work as a decision support and monitoring tool for the management. This should Cover the maintenance and generation of various management information reports required for top management, middle level management and respective unit offices.	
2	The system should able to generate reports on regular basis. Utility will finalize the periodicity and the format of report.	
3	Data acquisition for MIS should be without any human intervention. The data should be collected only at the lowest level and from the same source and in the standard formats.	
4	The system shall generate reports for all the modules in user-defined formats. The system will have a graphical user interface with a capability for generating customized reports, apart from the regular ones mentioned above, as per the requirement of management and operations staff. Display of statistical data shall be presented additionally in graphical formats such as bar-graph/pie diagram etc. for convenience of management-analysis.	
5	The MIS reports should be published over the portal and should be accessible over internet. There should be no requirement to install any component on client machine.	
6	The detailed MIS requirement should be finalized at a later stage when the Utility would have a better visibility of the requirement. The indicative reports that would be required are: Zone/Subdivision wise Billing and Collection Efficiency Consumer Category wise Outstanding Reporting, Pending new connection reports. Zone/Subdivision wise Meter Status, Meter Reading Errors, Billing Errors, Number of customer complaints, type of complaints etc.	

12. Vigilance Activity monitoring		
1	Ticket generation, after booking the case.	
2	Uploading of signed Physical verification report (PVR)	
3	Generation of Provisional Assessment	
4	Uploading the documents and final assessment report.	
5	Updation of money receipt details and in case of installment, system should have the facility to send SMS alert. In case of non-payment disconnection notice and further activities to be taken care.	
6	Tracking of court cases / relevant information.	

Annexure – IV

Indicative List of Facility Management Services Requirements

	13. Facility Management Services	
1	Maintain and upgrade the software solution owned by the Purchaser for different changes in the software and software versioning.	
2	Formal handover of the software system documents, source code, database etc., to the purchaser.	
3	The IP shall maintain software against bugs and releases by the OEM.	
4	All FMS services shall be rendered as per agreed service level agreements.	
5	Maintain the Central IT facility (Computing and Networking) and manage the IT operations of the Data Center in terms of Operating System, Database, Application Software and such other software, IT Security etc.	