

Advisory cum Guiding Principles for Implementation of IT Enablement in Urban non-RAPDRP towns under IPDS

1.0 BACKGROUND:

As per IPDS guidelines, schemes for Enterprise Resource Planning (ERP) and IT enablement of distribution sector is envisaged to be covered as per requirement of Utility. At present IT enablement has been taken up in 1405 towns under R-APDRP, Part-A. However, in order to cover IT enablement of distribution business across entire Urban area, Ministry of Power has approved IT enablement of non-RAPDRP towns (about 2600 Nos.) under IPDS, so that entire Urban area in the country can be IT enabled.

IT enablement in these towns will enable improvement in Consumer satisfaction and power supply reliability, monitoring of all 11 KV Feeders and proper Energy Accounting and Auditing, which will ultimately help in taking measures for reduction of AT&C losses and improvement in financial viability of the DISCOMs.

The IT system established under RAPDRP has enabling provision by way of scalability in the design of Data center (DC) / Disaster recovery center (DR) to meet the ultimate requirement of entire state power Utilities. Hence, to extend the coverage to additional towns, incremental expenditure shall be required and benefit of IT based system can be derived in such towns.

2.0 Guidelines for IT Applications and ERP under IPDS:

The draft guideline on IT implementation and ERP was formulated by Nodal agency and circulated to all the Utilities for their comments and feedback. The detailed guideline was also put on the IPDS web portal for larger dissemination and feedback. Further, with a view to discuss the roadmap for ERP and IT implementation under IPDS across, a Workshop was organized at PFC office in New Delhi, where all the Utilities and implementing agencies were invited to share their feedback on the proposed guideline. All the comments were examined and suitably incorporated in the guideline.

The guidelines for project formulation for IT applications in these towns along with ERP implementation have been approved by 7th IPDS Monitoring Committee, which was circulated to all the States/Utilities and is also available on IPDS web portal. Further, PFC formulated the Model DPR template for preparation of detailed project reports (DPRs) by Utilities, which has been uploaded on IPDS web portal (www.ipds.gov.in). States/Utilities are making use of the DPR template for preparation of DPRs after carrying out As-Is-Study of their existing IT infrastructure created under R-APDRP or their own.

3.0 Recommendation of the Committee constituted for revisiting the Qualifying Requirements and other related conditionality for IT Implementation agency to be selected by Utilities for IT Implementation under IPDS

As per the decision of the 8th IPDS Monitoring Committee, a Committee was constituted by Ministry of Power vide OM No. 20/3/2016-IPDS dated 29.08.2016 for review of Qualifying requirements for selection of IT Implementing Agencies by States/Utilities under IPDS. The existing Qualifying Requirements, Payment terms and other related aspects used for the selection of IT implementing agencies under R-APDRP were reviewed in view of changed requirements and reduced scope of work in these additional towns to be covered under IPDS.

The Report of the Committee constituted to revisit the Qualifying Requirements, Payment terms and other related conditionality of IT Implementation agency for use by Utilities under IPDS was approved by 9th IPDS Monitoring Committee.

The broad areas covered in the report/recommendations are as below:

Sl	Items Description	Gist of Committee report
1	Pre-Qualifying requirements of IT Implementation Agency	<ul style="list-style-type: none"> • Since the project size will be smaller, the cumulative turn over requirements reduced in line with SBD of IPDS/DDUGJY. • The QR requirement of NSP, GSP and MDASP are only technical in nature, since no empanelment is envisaged by Nodal agency. <p>Detailed Eligibility Criteria of ITIA for use under IPDS: Annexure-1A Detailed Eligibility Criteria for ERP Implementation under IPDS: Annexure-1B</p>
2	Payment terms of IT Implementation Agency	<p>Earlier payment terms were back loaded. Now, progressive payment terms proposed, which is linked to town wise completion of the projects.</p> <p>Detailed Payment Terms for ITIA for use under IPDS: Annexure-1C Payment Terms for ERP implementation under IPDS: Annexure-1D</p>
3	User Acceptance/Operational Performance Tests	Requirement of operational performance test removed, since no new solution design is envisaged in the scope of ITIA.
4	Bid evaluation basis	L-1 basis subject to meeting the minimum technical pre-qualifying requirements, since same software solution shall be used in these additional towns.
5	Conditions for release of 10% Mobilization Advance against Bank Guarantee	Aligned in line with SBD of IPDS/DDUGJY.
6	ERP Implementation	ERP implementation should be done through engagement of separate agency through competitive bidding route, since IT projects are to be implemented on a faster pace for the benefit to Consumers and Utility. Also, implementation of IT and ERP projects by a common SI will restrict competition in selection of agency for IT implementation
7	Other conditions	All other terms and conditions are aligned in line with SBD of IPDS/DDUGJY.

Further, Monitoring Committee also agreed for customization as per specific needs of the States with prior approval of State Level Distribution Reforms Committee, keeping in view of their own requirements and procedures.

Detailed Report/recommendation of the Committee is placed at Annexure-1, along with relevant Annexures-1A to 1D.

4.0 PRIORITIZATION OF WORK AND SUGGESTIVE PROJECT TIMELINE FOR IMPLEMENTATION:

The tentative list of works, which may be covered under implementation of priority items during Phase-I of the project, has been undertaken and listed below:

- 1) Town business process integration with Data Center/DR Center/Customer Care Center
- 2) Meter, Modem/DCUs at Feeders and Boundary points along with MDAS (Meter Data Acquisition System)
- 3) Integration of Feeder and Customer Care Data with National Power Portal
- 4) Calculation of reliability indices (SAIDI/SAIFI)

Remaining items of work such as AMR for Distribution transformers as per requirement of Utility, GIS based Asset mapping, any up-gradation of DC/DR/CCC etc. may be implemented subsequently during Phase-II of the project.

Project Implementation plan of priority items (Phase-I) related to availability of energy flow information is as follows:

Sl. No.	Name of the activity	Timeline to start the activities
1	NIT, Bid evaluation and Award by Utility	12 weeks from sanction
2	Mobilization at site with establishment of site office, requisite resource deployment etc.	2 weeks from LOA
3	System design (Pre-implementation plan, sub-vendor approval, testing and development plan) and approval from the owner	4 weeks from LOA
4	Placement of order for materials (hardware, software, accessories and other related components), such as Router, Switches, UPS, Work station PCs, Printers, Modems, DCU etc.	6 weeks from LOA
5	Pre-dispatch inspection and dispatch of materials/components	14 weeks from LOA
6	Receipt and storage of materials/components at site	15 weeks from LOA
7	Installation, testing and commissioning of networking equipment and hardware (Router, Switches, UPS, PC, printer etc.) with operating systems, antivirus etc. including laying of UTP cables at Utility offices	16 weeks from LOA
8	Data migration of towns' data within the existing Applications	12 weeks from LOA
9	Development and customization of new MDAS software, if any	20 weeks from LOA
10	WAN connectivity at Utility offices and GPRS SIMs for Modems/DCUs to be arranged by Utility	20 weeks from LOA
11	Integration of town with DC/DR/CCC to access the existing RAPDRP	20 weeks from LOA

	Applications hosted at data center and running of town business process through IT platform.	
12	Installation, testing and commissioning of AMR system for Boundary points and Feeder Meters at Sub Stations along with associated hardware (Modem/DCU etc.), meters to be installed by Utility	24 weeks from LOA
13	Preparation of feeder and town wise consumer data base for calculation of Feeder wise and Town wise AT&C loss (Feeder and town wise consumer list to be provided by Utility)	24 weeks from LOA
14	Development of System for automated daily calculation of reliability indices (SAIDI/SAIFI)	24 weeks from LOA
15	Integration of Feeder data and Customer Care data with National Power Portal	24 weeks from LOA
	Total time required to complete Phase-I activities:	9 months from sanction

Project Implementation plan of all other items/activities (Phase-II) related to completion of project is as follows:

Sl. No.	Name of the activity	Timeline to start the activities
1	Procurement of satellite imagery of 2.5 m resolution	Granular details to be finalized by Utility (6-24 months from sanction)
2	Field survey for Asset mapping and its approval by Utility	
3	Digitization of assets in the GIS Application	
4	Placement of order for additional materials required for DC/DR/CCC up-gradation (hardware, software, accessories and other related components), such as Servers, RAM, CPU, storage Disks, software licenses, UPS etc.	
5	Pre-dispatch inspection and dispatch of materials/components	
6	Receipt and storage of materials/components at site	
7	Installation, testing and commissioning of additional materials required for DC/DR/CCC up-gradation	
8	AMR for Distribution transformers as per requirement of Utility	
9	Installation, testing and commissioning of AMR system for DT meters, (meters to be installed by Utility) and DT wise energy audit reports	
10	Any other work as per the scope of work	
11	Verification of completion by TPCEA	24-30 months from sanction
	Total time required to complete Phase-II activities:	30 months from sanction

5.0 ONLINE FEEDER MONITORING SYSTEM (INTEGRATION OF FEEDER AND CUSTOMER CARE DATA WITH NPP):

All the 11 KV Feeders including incoming feeders at 66 or 33 KV Sub-stations and Boundary points for Ring fencing shall be installed with AMR compatible meters along with meter data communication facility in entire Urban area and its integration with existing Data Center, if not done till date. The feeder data shall compulsorily be ported to National Power Portal (developed by NIC) and/or any other Web portal / Mobile application as per the requirement to be intimated by Nodal Agency.

On Line Feeder Management System has been developed centrally and hosted in National Power Portal (NPP) by NIC, where all Discoms are regularly uploading monthly Feeder Data (Energy and Collection) and Customer Care Data from Discom's designated white-listed server through FTP to the central NIC server for existing IT enabled R-APDRP Towns. The same dataset is to be extended for feeder data of additional towns also.

The scope of works of prospective bidder also include development of necessary software to generate Formats and Data-structures from Feeder's energy meter data and Discoms MBC (Metering, Billing, Collection) Data and collating them in predefined formats and enable Discom to upload Feeder Data for additional feeders of these non-RAPDRP Towns in an automated manner to NPP.

The Feeder Data contains Energy, Collection and Reliability figures for the Feeder and Customer Care Data contains Complaints Redressal and Connection/Disconnection statistics.

The detailed Formats are available with Utility, which are briefly described below-

1. Excel file contains a) Feeder Master Data, b) Feeder Manager Data and c) Circle Master. These masters are required one time and to be sent in Excel through mail. The codes in Feeder master to be filled from the State, District and Town Code. Standard masters required for this purpose has been provided by NIC. For any future addition and deletion of feeders, same formats are to be used.
2. Additionally, two basic JSON (JavaScript Object Notation) formats are used for transaction data to be uploaded every month from Discom's designated FTP server. Feeder Energy Data will be for the whole year (rolling) and customer care data is for last month. For example-
 - a) In Dec'15, the Feeder Data would be for 01.12.2014 to 30.11.2015 and Customer care data would be for 01.11.2015 to 30.11.2015.
 - b) In Jan'16 the Feeder Data would be for 01.01.2015 to 31.12.2015 and Customer care data would be for 01.12.2015 to 31.12.2015.

6.0 MONITORING OF RELIABILITY INDICES:

IT system in these towns should be able to calculate accurate SAIDI/SAIFI on a daily basis as a measure of reliability index. The SAIDI/SAIFI data should be ported to National Power Portal (developed by NIC) by generation of a JSON (JavaScript Object Notation) file formats without any human interface and/or any other Web portal / Mobile application as per the requirement to be intimated by Nodal Agency.

Utilities may install separate PT at each feeder or re-wire Feeder meters with the bus PT through auxiliary contact of the breaker (in cases where separate PT is not installed for each feeder breaker) or may use any other methodology to calculate reliable and accurate SAIDI/SAIFI without any human interface

7.0 PROJECT MANAGEMENT AGENCY:

Project Management Agency (PMA) is mandatory in line with the IPDS guidelines for providing support and handholding to Utility for implementation of Distribution system strengthening and/or IT/ERP projects under

IPDS, subject to capping of the PMA charges up to 0.5% of the approved project cost. Any additional burden shall be borne by respective Utility.

8.0 OTHER POINTS TO BE INCORPORATED IN THE RFP:

- The scope of IT implementing agency also covers preparation of Feeder and Town wise consumer database / bill book and tagging of Consumers connected with each 11 KV Feeder in GIS system to enable calculation of Feeder wise and Town wise Energy Audit reports (Feeder wise consumer list to be provided to the implementing agency by Utility).
- IT Implementing Agency will complete the GPS based survey of Assets and will update in GIS Application after validation by Utility. Also, tagging of Consumers connected with each 11 KV Feeder shall be done in GIS system by Implementing agency, after Feeder wise consumer list is provided by Utility.
- After completion of one-time activity as mentioned above, Utility will capture the incremental changes in Assets and Consumer data for each of the town separately, except for the latitude and longitude values. The ITIA will have to capture the latitude and longitude values for these incremental changes in Network assets. The data collected for each of the towns will be forwarded by town in-charge to the Nodal officer of the Utility and subsequently after verifying at their end Nodal officer will forward the incremental data changes to IT Implementation agency. ITIA will fill-up the latitude-longitude value captured and upload these data in the GIS database and will be paid at the unit rate of BoQ of the contract. The process will continue till the town Go-Live. Post go-live, Utility will update asset/consumer data in the GIS database through the Business Process Applications and will have to gear up their team and make suitable arrangement to update GIS repository.
- Utilities are required to ensure installation of Meter and Modem at each Feeder and Boundary points, so that Feeder wise & Town wise input energy can be captured to calculate AT&C loss. The capturing of data of complete substations at 33kV and 66kV voltage level, including incoming feeders need to be ensured, so that there would be seamless communication between Sub-stations at all voltage levels.
- The existing application developed for MDAS may not be able to capture the data in case a different modem supplier is selected. Therefore, different modem vendor may provide separate MDAS solution and integrate with existing MDAS/MDM (Meter data management) developed under RAPDRP.
- Roles and responsibility of the ITIA including customization/integration/data migration requirement for new towns is already covered in IT and ERP guideline as well as DPR. Detailed scope of work may be modified suitably by Utility in line with the sanctioned DPRs and IT implementation guidelines.
- After 30% milestone payment for a town (to be released after availability of Feeder data on NPP, Go-Live of town and availability of SAIDI/SAIFI through system), progressive hand-over of the town to Utility should take place for day to day system operation. However, this handing over of system shall not relieve the IT implementing agency from his contractual obligations against the contract.
- Final payment of 10% to be released after **“Acceptance of IT system”** by Utility and **“Verification of Project completion by TPCEA”** (i.e. after demonstration of successful operation of integrated system as per the contract, integration of all the towns with Data center and Go-Live of all the towns covered under the scope of work).
- The nodal agency (PFC) will appoint Third Party Concurrent Evaluating Agency (TPCEA) for carrying out inspections on sample basis for IT and ERP projects also, apart from Distribution System Strengthening

projects. TPCEA would do concurrent and post implementation evaluation of the works under IPDS and will verify compliances, including Quality of materials, Quality of erection and Process of the execution of works in various project areas under IPDS as per their defined scope of work.

- The focus of concurrent and post implementation evaluation would be on the effects of program at Project area/Circle/Town level outcomes. TPCEA will verify the Project completion of IT and ERP implementation in the project areas of Utility.

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Annexure-1

1. **Pre-Qualifying requirements-** The Data center/DR center has already been established under R-APDRP and the scope under IPDS consists of only data migration and integration of additional towns, along with some up-gradation of DC/DR. Hence, Pre-Qualifying Requirements (PQR) of IT implementation agencies are to be designed appropriately to enhance competition, which shall be used by Utilities in selection of IT implementing agency under IPDS. Committee suggested reducing turnover and other requirements of ITIA, since Data center and other related works have already been completed under R-APDRP. Further, the vendors for the various roles (SI, NSP, GSP and MDSP) were empanelled under R-APDRP, but such empanelment is not envisaged under IPDS since the projects are required to be implemented in a short span of time. Overall responsibility shall be of SI (System Integrator) and they may bring partners for the roles of Network Solution Provider (NSP), GIS Solution Provider (GSP) and Meter Data Acquisition Solution Provider (MDSP), in case SI do not meet requirements for such roles. Committee deliberated on the existing Pre-Qualifying requirements used in R-APDRP and following major PQR changes were suggested for selection of IT implementation agency under IPDS-
 - **Turnover of SI-** Size of the project is estimated to vary between Rs.15 crores and Rs.500 crore depending upon the size of the State. Hence, it was decided to keep Minimum Average Annual Turnover not less than 30% of the estimated cost of the project instead of existing requirement of Rs.300 crore of cumulative turnover for the last 3 years.
 - **Positive net worth** – Definition of net worth defined as per latest RBI guidelines.
 - **Cost of project executed in Utility-** It was removed since turnover has already been defined for SI.
 - **Experience of number of modules** – It has been reduced from 5 to 3 modules with only relevant modules.
 - **Separate QR for Power Sector Utility-**It was decided to remove the separate QR requirements for Power Sector Utilities and they need to qualify along with other bidders.
 - **Requirement of turnover, net worth, no of personnel etc. in case of MDSP, GSP and NSP-** Since no vendor empanelment is being done, these requirements are deleted. Only work experience/technical expertise of the partners has been retained.
 - **NSP:** No of multi-location projects has been reduced from 5 to 3, due to work involved in small towns.
 - **GSP-** Since same GIS Application is to be used, requirement of software development & customization is not envisaged, hence deleted.
 - **MDSP-** Since work involved is AMR based meter data acquisition, MRI based experience has been deleted.

The proposed Pre-Qualifying Requirements suggested by Committee for use by Utilities in selection of IT Implementation agency under IPDS is enclosed at Annexure-1A.

2. **Payment terms-** The payment terms of ITIA under R-APDRP is back loaded upto 40%, which is affecting the fund flow of ITIA severely and ultimately leading to slow progress of the work at site. Now, Data Center/DR center has already been established under R-APDRP and the scope under IPDS contains only IT implementation in smaller towns. Committee suggested for simplified payment terms along with release of payment to ITIA at the time of Supply of hardware to ease out fund flow against the project. Committee deliberated on the existing Payment terms used in R-APDRP and following simplified

payment terms against achievement of millstones were suggested for IT implementation agency to be deployed under IPDS-

- DC/DR- (i) 50% against supply, installation, commissioning of Hardware/Software licenses (ii) 30% against integration with all towns (to be released progressively on pro-rata basis of no of towns declared Go-Live)
- Town GIS- 40% against approval of Asset survey by Utility and 40% against mapping and digitization of Assets along with linking of consumers into existing GIS Application
- Town IT Infrastructure- (i) 30% against supply of Hardware (ii) 20% against Integration of town with Data Centre, access of all the applications at DC from town and generation of Energy Audit reports for town and respective Feeders (iii) 30% against Go-Live of the town after availability of Feeder data on NPP and calculation of SAIDI/SAIFI through System.

3. **Release of 10% Mobilization Advance against Bank Guarantee-** It was decided to include terms of release of 10% interest bearing Mobilization Advance against Bank Guarantee in line with Standard Bidding Document for Distribution System Strengthening works for DDUGJY/IPDS as follows:

- 10% Mobilization Advance to be released in 2 installments (5% each)
- Mobilization advance shall be interest bearing and to be released after submission of following- Advance BG of 110% of advance amount, Acceptance of LOA, Contract agreement, site mobilization, furnishing of CPG, Pert network/bar chart
- Advance BG reduction can be done on two occasions- (i) on completion of 50% financial progress and (ii) on completion of 75% financial progress. Advance BG to be proportionately reduced to 50% and 25% value respectively.

The proposed Payment terms suggested by Committee for use by Utilities during IT Implementation under IPDS is enclosed at Annexure-1B.

4. **User Acceptance Tests/Operational Performance Tests-** The Bidder (SI) under R-APDRP was required to design a suitable Data Center to cater the need of the utility, they had to select the suitable hardware to meet the performance criteria specified and in case the offered hardware does not satisfy performance criteria, the vendor was required to provide additional equipment or upgrade the equipment without any additional cost to owner. Now, DC/DR has already been established and the scope under IPDS contains only IT implementation in smaller additional towns. Since, no work related to design of Data center/DR center is under the scope of new ITIA, Committee after detail deliberations decided that the requirements of User Acceptance and Operational Performance tests is not relevant under present context and hence may be deleted. Instead, Go-Live of towns after availability of Feeder level data on NPP, Energy Audit and AT&C loss calculation shall be the final outcome.

5. Further, Committee discussed and deliberated various other relevant and related conditionality for ITIA to be selected for IT implementation under IPDS and the followings were suggested -

- The empanelment undertaken under R-APDRP for the roles of SI, NSP, GSP and MDSP will no longer remain valid for IPDS. Utility has to select implementing agency through competitive bidding process and PQR suggested herewith along with other suggested changes.
- E-tendering to be adopted as per IPDS guidelines.

- Bidding shall be done DC/DR wise (having multiple States/Utilities as established under RAPDRP) though DPRs are Utility wise, so that only one SI is responsible for integration of all the towns in the common Data Center of the States/utilities.
 - Integrity Pact shall form part of Bid document, format of the same is available in Standard Bidding Document for Distribution System Strengthening works for DDUGJY/IPDS.
 - Evaluation of Bid shall be on L-1 basis, subject to technical qualification of bidder.
 - Modification in Technical specifications, if any due to technology change or end of life of equipment etc., to be undertaken by Utility before RFP, considering minimum specification provided in SRS (RFP of ITIA under R-APDRP) or better.
 - Scope of work to be modified suitably in line with the sanctioned DPRs and IT implementation guidelines under IPDS
6. **ERP Implementation under IPDS-** Committee observed that ERP is a new requirement envisaged under IPDS, its Pre-Qualifying Requirements need to be finalized. It was also deliberated and decided that the ERP implementation should be done through engagement of separate agency through competitive bidding route, since IT projects are to be implemented on a faster pace for the benefit to Consumers and Utility. Also, implementation of IT and ERP projects by a common SI will restrict competition in selection of agency for IT implementation. Further, it was deliberated and decided that the States/Utilities will be specifying the ERP requirement /specifications based on their need. Committee deliberated and finalized Pre-Qualifying requirements and Payment terms on the basis of inputs received from Utilities for selection of ERP implementation agency under IPDS, which are enclosed at **Annexure-1C** and **Annexure-1D** respectively.
7. Further, States/Utilities while selecting IT implementation agency through Competitive bidding process, are requested to ensure the following:
- All the provisions relating to GFR and instructions of CVC in the matter of procurement contracts shall be complied with.
 - A clause should be added at appropriate place(s) in the Bid document to the effect that in case of conflict between the provisions (relating to financial criteria/parameters) of the Bid Document and the GFR, the provision of the latter (i.e. GFR) shall prevail.
8. Bidding Documents may be customized as per specific needs of States with prior approval of State Level Distribution Reforms Committee constituted for IPDS programme keeping in view of principles of transparency, financial proprietary, fair competition etc.

List of Annexures:

Annexure 1A	Proposed Eligibility Criteria of ITIA for use under IPDS
Annexure 1B	Proposed Payment Terms for ITIA for use under IPDS
Annexure 1C	Proposed Eligibility Criteria for ERP Implementation under IPDS
Annexure 1D	Proposed Payment Terms for ERP implementation under IPDS

Eligibility Criteria of ITIA for use by Utilities under IPDS

QR for System Integrator (SI)

Overall responsibility shall be of SI (System Integrator) and they may bring partners for roles of Network Solution Provider (NSP), GIS Solution Provider (GSP) and Meter Data Acquisition Solution Provider (MDSP), in case SI do not meet requirements for such roles.

The Lead member (referred as SI-Lead) and the 2nd consortium member (in case of a consortium; referred as SI-2nd) should meet the QR as mentioned below:

The SI must have implemented and completed at least one system integration project, costing not less than the amount equal to 80% of the estimated cost, covering IT applications, Servers and PCs, WAN with connectivity between at least 10 locations, during the last three financial years. In case of a consortium, this requirement needs to be met by the SI-Lead.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the 3 financial years needs to be submitted)

Minimum Average Annual Turnover (MAAT) for best three years out of last five financial years of the bidder should not be less than Rs. Crores i.e. 30% of the estimated cost of the project.

In case of a consortium, the consortium as a whole (SI-Lead and SI-2nd combined) should meet this requirement of turnover, with SI-Lead meeting minimum 90% out of this.

(Proof: Annual Audited Financial Statements)

Net Worth for the each of the last three Financial Years should be positive. In case of a consortium, both the SI-Lead and SI-2nd should have positive net worth in each of the last three audited financial years.

'Net-worth' will consist of 'paid up equity capital, free reserves, balance in share premium account and capital reserves representing surplus arising out of sale proceeds of assets but not reserves created by revaluation of assets' adjusted for 'accumulated loss balance, book value of intangible assets and Deferred Revenue Expenditure, if any'.

(Proof: Annual Audited Financial Statements)

The SI should have been in the IT / Software services for the last 3 years. In case of a consortium, this requirement needs to be met by the SI-Lead.

(Proof for which to be submitted in the form of Incorporation Certificate alongwith Memorandum & Articles of Association)

The SI should have implemented a turnkey Systems Integration project in the last three financial years involving at least 3 of the following modules: GIS, Web Self Service, Billing, Metering, Energy Auditing/Accounting, Customer Care in any Utility (Power/Gas/Water/Telecom sectors) or infrastructure sector (rail/road/port/airport). The total consumer base covered by the SI for such project in the any Utility should not be less than 50,000. This requirement is not applicable for infrastructure sector (rail/road/port/airport) projects as these cater to mass consumers. In case of a consortium, the requirement of at least 3 modules is distributed as follows: SI-Lead needs to meet the above requirement for at least 2 modules, and the SI-2nd for at least 1 module.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the last 3 financial years needs to be submitted)

The SI should be ISO 9001: 2008/latest or have at least CMM/CMMI level 4 certification. In case of a consortium, this requirement needs to be met by the SI-Lead.

(Proof: Copy of certification from authorized certification body)

The SI should have at least 20 personnel on its rolls with a minimum experience of 5 years (either in his/her own or other organization). The roles & responsibilities of the personnel should include system integration of IT applications or software or hardware or network. In case of a consortium, the requirement of at least 20 personnel is distributed as follows: SI-Lead needs to meet the above requirement for at least 15 CVs, and the SI-2nd for at least 5 CVs

(Proof: Signed resume of employees need to be submitted. Scanned signatures shall be accepted.)

QR for Partner-I (Network Solution Provider)

The Network Solution Provider should have implemented at least 3 multi-location WAN projects (installation, integration, maintenance & management) during the last three financial years out of which at least two projects should have involved Leased Lines or ISDN or VSAT or RF or DSL or VPN /MPLS or Fibre Optics or a combination of these technologies for a customer having a minimum of 10 WAN locations.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the last 3 financial years needs to be submitted)

The Network Solution Provider should have been in the Network installation/maintenance services for the last 3 years.

(Proof for which to be submitted in the form of Incorporation Certificate along with Memorandum & Articles of Association)

Network Solution Provider should be an ISO 9001: 2008 or latest certified company.

(Proof: Copy of certification from authorized certification body)

QR for Partner-II (GIS Solution Provider)

The GIS Solution Provider should have executed at least one GIS projects (involving at least mapping and digitization) in utility (Power/Gas/Water/Telecom sectors) or infrastructure sector (rail/road/port/airport) during the last three financial years.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the last 3 financial years needs to be submitted)

Additional Note: In case a company has implemented GIS systems in the last 5 years, and has been maintaining the same system since commissioning till date, such maintenance contracts for the last three years, shall be acceptable as proof.

The GIS Solution Provider should have been in the GIS Software development & customization or mapping or digitization services for the last 3 years.

(Proof for which to be submitted in the form of Incorporation Certificate along with Memorandum &

Articles of Association)

GIS Solution Provider should be an ISO 9001:2008 or latest-certified company.

(Proof: Copy of certification from authorized certification body)

QR for Partner-III (Meter Data Acquisition Solution Provider)

The Meter Data Acquisition Solution Provider must have successfully implemented at least one AMR project or Meter data logging system in the last 3 financial years.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the last 3 financial years needs to be submitted)

In case a company has implemented MDA systems in the last 5 years, and has been maintaining the same system since commissioning till date, such maintenance contracts for the last three years, shall be acceptable as proof.

The Meter Data Acquisition Solution Provider should have been in the business of Meter Data Acquisition (development and customization of software, and/or commissioning AMR/Meter Data logging system) for the last 3 financial years.

(Proof for which to be submitted in the form of Incorporation Certificate along with Memorandum & Articles of Association)

Meter Data Acquisition Solution Provider should be an ISO 9001:2008 or latest certified company.

(Proof: Copy of certification from authorized certification body)

Payment Terms for ITIA for use by Utilities under IPDS

Proposed Payment terms			
Phase	Activity	Payment Schedule	Milestones
(A) Advance Payment		10 % of Project Cost (excluding FMS) in 2 installments of 5% each	On Issuance of Letter of Award by Utility, team mobilization by Vendor, Submission of Advance Bank Guarantee and other conditions as specified below *
(B) Data Centre (DC) up-gradation work	Supply, Installation, testing, Commissioning & Configuration of Hardware, Networks & Operating System including any additional Application Software licenses, as per approved Bill of Quantity	50% of cost quoted for Data Centre including its implementation cost	On System testing by Vendor & management confirmation that material is received & commissioned as per the Work order
	Integration testing with all the towns under scope	30% of cost quoted for Data Centre up-gradation including its implementation cost	On Management approval of Integration testing with all the towns under scope (may be released progressively on pro-rata basis of project cost of towns declared Go-Live)
(C) Disaster Recovery Centre (DRC) up-gradation	Supply, Installation, testing, Commissioning & Configuration of Hardware, Networks & Operating System including any additional Application Software licenses, as per approved BoQ.	50% of cost quoted for Data Centre including its implementation cost	On System testing by Vendor & management confirmation that material is received & commissioned as per the Work order
	Integration testing with all the towns under scope	30% of cost quoted for DR Centre up-gradation including its implementation cost	On Management approval of Integration testing with all the towns under scope (may be released progressively on pro-rata basis of project cost

			of towns declared Go-Live)
Town GIS BoQ	GPS based GIS Survey and mapping of Assets	40% of GIS survey Cost for respective town	On Submission of GPS based GIS Survey of Assets, preparation of Feeder and Town wise Consumer database & approval by Utility (town wise) (Note: Feeder and Town wise Consumer List to be provided by Utility)
		40% of GIS survey Cost for respective town	On GIS mapping and digitization of Assets in GIS Application, and linking of Feeder and Town wise consumer database with existing GIS Application (town wise)
Town wise BoQ	Supply, Installation, testing, Commissioning & Configuration of Hardware, Networks & Operating System	30% of cost quoted for respective town including its implementation cost	On System testing by Vendor & management confirmation that material is received & commissioned as per the Work order
	Integration with all the applications hosted at Data Centre & legacy apps, if any	20% of cost quoted for respective town including its implementation cost	a) On Management approval that the systems are integrated with Data Centre & legacy apps, if any. b) On certification that all the applications hosted at Data center are accessible from respective town as per user defined access rights and Energy Audit reports for town and their Feeders are generated through System.
	Go-Live of the town	30% of cost quoted for respective town including its implementation cost	a) On Management approval that the Feeder data is available on NPP and the town has been declared Go-live b) SAIDI/SAIFI is calculated through System in an accurate

			manner.
After Completion		10 % of Project Cost (excluding FMS)	After 3 months of Go-Live date, based on management confirmation that all towns under BoQ have been integrated with the Data center and thereafter system is running successfully.

***Advance Bank Guarantee:** Initial interest bearing Mobilization Advance of 10% (2 installments of 5% each) of total contract price may be released on presentation of the following:

- a) Unconditional acceptance of the Letter of Award and signing of contract agreement by the Contractor
- b) Submission of detailed invoice for advance payment.
- c) Establishment of site office and certification by Engineer-in-charge that satisfactory mobilization for project work exists.
- d) Submission and acceptance of unconditional & irrevocable Bank Guarantees in favor of Purchaser with total amounting to 110% of total advance amount. The said Bank Guarantees shall be initially valid up to end of ninety (90) days after the scheduled month of completion of total work and shall be extended from time to time till ninety (90) days beyond revised scheduled month of completion of total work, as may be required under the Contract.
- e) An unconditional & irrevocable Bank Guarantee for ten percent (10%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of GCC. The said bank guarantee shall be initially valid up to ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.
- f) Detailed PERT Network/Bar chart and its approval by the Purchaser.

The bidder must utilize first advance installment of 5% before requesting for second advance installment. Second installment of 5% shall be released on presentation of contractor's invoice and satisfactory utilization certificate supported with documentary evidences of first advance installment.

The interest rate on advance payment shall be SBI's Base rate on the date of disbursement of advance payment. The interest accrued on interest bearing advance shall be adjusted first before releasing any payment. The interest rate shall be calculated on the daily progressive balances outstanding as on the date of recovery/adjustment i.e. on daily rest basis.

The Advance bank Guarantee shall be discharged after completion of the work. The advance bank guarantee can be reduced on two occasions. First reduction shall be on completion of 50% work (financial progress) and

second reduction shall be on completion of 75% work (financial progress). The advance BG shall be proportionately reduced to 50% and 25% value respectively of initial advance BG.

Annexure-1C

Eligibility Criteria for ERP Implementation under IPDS

The Bidder (referred as SI-Lead) and the 2nd consortium member (in case of a consortium; referred as SI-2nd) should meet the QR as mentioned below:

Minimum Average Annual Turnover (MAAT) for best three years out of last five financial years of the bidder should not be less than Rs.....Crores i.e. 30% of the estimated cost of the project.

In case of a consortium, the consortium as a whole (SI-Lead and SI-2nd combined) should meet this requirement of turnover, with SI-Lead meeting minimum 90% out of this.

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Performance certificate as proof of services provided for the 3 financial years needs to be submitted)

Net Worth for the each of the last three Financial Years should be positive. In case of a consortium, both the SI-Lead and SI-2nd should have positive net worth in each of the last three audited financial years.

'Net-worth' will consist of 'paid up equity capital, free reserves, balance in share premium account and capital reserves representing surplus arising out of sale proceeds of assets but not reserves created by revaluation of assets' adjusted for 'accumulated loss balance, book value of intangible assets and Deferred Revenue Expenditure, if any'.

(Proof: Annual Audited Financial Statements)

The SI should have at least CMM/CMMI level 4 or above certification. In case of a consortium, this requirement needs to be met by the SI-Lead.

(Proof: Copy of certification from authorized certification body)

The bidder must have a minimum of 100 full time resources. Additionally, bidder must have at least five OEM certified resources of each proposed module of the proposed ERP product.

In case of a consortium, the requirement may be met jointly by SI-Lead and the SI-2nd.

(Proof: Self certification need to be submitted.)

The Bidder should have been in the IT / Software services for the last 3 years. Further, the bidder should have successfully implemented at least two ERP Projects of the offered ERP product in India in last 5 years, which is operational on the date of submission of bid.

(In case of a consortium, this requirement needs to be met by the SI-Lead.)

The Bidder must have implemented and completed at least one ERP project costing not less than the amount equal to 80% of the estimated cost or two ERP projects each costing not less than the amount equal to 50% of the estimated cost.

Further, out of above two projects-

- atleast one number of the offered ERP product must have been implemented in PSU or Govt. Organization in India.
- atleast one number of the offered ERP product shall have more than 100 users base
- atleast 4 modules out of following functions / modules of the offered ERP Product must have been implemented (in single project or jointly in above two referred projects) -
 - a) Finance
 - b) Accounting & Controlling
 - c) Purchasing/Contract and
 - d) Inventory Management
 - e) Payroll &
 - f) Human Resource Management
 - g) Business Intelligence Reporting

(Proof: Necessary Purchase order/LOI/Contract/Certification on client letterhead/Completion certificate/certification for project being operational as on date of Bid as proof of services provided)

Bidder should be authorized system integrator/implementation partner of the offered ERP product for sale, support and services of the offered ERP Product.

(Proof: Letter from OEM of ERP product)

Annexure-1D

Payment Terms for ERP implementation under IPDS

Phase	Activity	Payment Schedule	Milestones
Advance Payment		10 % of Project Cost (excluding FMS) in 2 installments of 5% each	On Issuance of Letter of Award by Utility, team mobilization by Vendor, Submission of Advance Bank Guarantee and other

			conditions as specified below *
(A) Hardware / Equipment Cost	Supply of Hardware/equipment as per approved Bill of Quantity	30% of cost quoted for Hardware/Equipment required for ERP Implementation	On management confirmation that material is received at Site as per the Work order
	Installation, testing, Commissioning & Configuration of Hardware/Equipment along with Operating System installation as per approved Bill of Quantity	30% of cost quoted for Hardware/Equipment required for ERP Implementation	On System testing by Vendor & management confirmation that material installed & commissioned as per the Work order
	Stabilization Acceptance	20% of cost quoted for Hardware/Equipment required for ERP Implementation	On successful completion of 6 months of Stabilization Support (starting from Go-Live) and Issue of Stabilization Acceptance certificate from Utility.
(B) ERP Product and Software Cost	Supply of ERP Product licenses and other Software/OS etc. at site as per approved Bill of Quantity	30% of cost quoted for ERP Product licenses and other Software/OS etc.	On management confirmation that material (required No. of ERP Product licenses and other Software/OS etc.) is received at Site as per the Work order.
	Successful installation of the licenses delivered as per approved Bill of Quantity	30% of cost quoted for ERP Product licenses and other Software/OS etc.	On management confirmation that material (required No. of ERP Product licenses and other Software/OS etc.) has been successfully installed at site and supplied software is along with DR license as per the Work order.
	Stabilization Acceptance	20% of cost quoted for ERP Product licenses and other Software/OS etc.	On successful completion of 6 months of Stabilization Support (starting from Go-Live) and Issue of Stabilization Acceptance certificate from Utility.
(C) Implementatio n and Installation Cost	Finalisation of AS-IS Study and TO-BE process mapping along with Gap Analysis	20% of cost quoted for Implementation and Installation	On management confirmation that all the deliverables up to and including Gap Analysis Report is completed and acceptance as per the Work order and agreed &

			finalized Project Plan.
	Configuration and Testing of the ERP software along with data migration	20% of cost quoted for Implementation and Installation	On management confirmation that all the deliverables up to and including Successful Completion of all Testing of ERP S/w has been completed and accepted by Utility.
	Integration with other legacy system /DC/DR and RAPDRP Applications	10% of cost quoted for Implementation and Installation	On management confirmation that all the deliverables up to and including Integration Development with other legacy system/RAPDRP Applications as required has been completed and Accepted by Utility.
	User Training	10% of cost quoted for Implementation and Installation	Upon Completion of all End User & Technical trainings and on supply of manuals
	Go-live	20% of cost quoted for Implementation and Installation	On successful completion of Go-Live and Issue of Go-Live Acceptance certificate from Utility.
After Completion		10 % of Project Cost (excluding FMS)	On successful completion of 6 months of Stabilization Support and Issue of Stabilization Acceptance certificate from Utility.

***Advance Bank Guarantee:** Initial interest bearing Mobilization Advance of 10% (2 installments of 5% each) of total contract price may be released on presentation of the following:

- a) Unconditional acceptance of the Letter of Award and signing of contract agreement by the Contractor
- b) Submission of detailed invoice for advance payment.
- c) Establishment of site office and certification by Engineer-in-charge that satisfactory mobilization for project work exists.
- d) Submission and acceptance of unconditional & irrevocable Bank Guarantees in favor of Purchaser with total amounting to 110% of total advance amount. The said Bank Guarantees shall be initially valid up to end of ninety (90) days after the scheduled month of completion of total work and shall be extended from time to time till ninety (90) days beyond revised scheduled month of completion of total work, as may be required under the Contract.
- e) An unconditional & irrevocable Bank Guarantee for ten percent (10%) of the total Contract price towards Contract Performance Guarantee (CPG) in accordance with the provisions of GCC. The said bank guarantee shall be initially valid up to ninety (90) days after expiry of the Warranty Period and shall be extended from time to time till ninety (90) days beyond successful completion of warranty period, as may be required under the Contract.
- f) Detailed PERT Network/Bar chart and its approval by the Purchaser.

The bidder must utilize first advance installment of 5% before requesting for second advance installment. Second installment of 5% shall be released on presentation of contractor's invoice and satisfactory utilization certificate supported with documentary evidences of first advance installment.

The interest rate on advance payment shall be SBI's Base rate on the date of disbursement of advance payment. The interest accrued on interest bearing advance shall be adjusted first before releasing any payment. The interest rate shall be calculated on the daily progressive balances outstanding as on the date of recovery/adjustment i.e. on daily rest basis.

The Advance bank Guarantee shall be discharged after completion of the work. The advance bank guarantee can be reduced on two occasions. First reduction shall be on completion of 50% work (financial progress) and second reduction shall be on completion of 75% work (financial progress). The advance BG shall be proportionately reduced to 50% and 25% value respectively of initial advance BG.

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