BIDDING DOCUMENT FOR IMPLEMENTATION OF AN INTEGRATED ENTERPRISE RESOURCE PLANNING SYSTEM FOR CEYLON ELECTRICITY BOARD SRI LANKA

International Competitive Bidding (ICB)

Bid Number: CEB/AGM(CS)/PD(ERP)/ERP/2021/01

Volume 2 of 2

(Request for Proposal - Functional Requirements Specification & Non Functional Requirements Specification)

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Introduction

The Ceylon Electricity Board (CEB) is a body corporate established by the Act No. 17 of 1969. It is empowered to generate electrical energy, transmit it and distribute same to all categories of consumers, to collect revenue as per the tariff approved by the Public Utility Commission of Sri Lanka (PUCSL) and to perform its functions as provided under its Act and in accordance with the licenses issued by the PUCSL. As the Regulator of the industry the PUCSL has issued six licences to CEB, one licence for Generation, one licence for Transmission and four licenses for four Distribution Divisions. Along with these licensee Divisions CEB has four other Divisions namely Assets Management, Projects, Corporate Strategy and Finance. Except the Finance all other Divisions are headed by an Additional General Manager and the Finance Division is headed by the Finance Manager.

CEB has 71 distinct Branches and Units which are performing the whole business functions of CEB. A comprehensive AS - IS study was carried out for those 71 Branches and Units of CEB and the AS-IS business processes were documented for each branch, consisting of about 1000 business processes in total, which adds up to about 12,500 pages of documentation. Further the Business Process Re-engineering also was carried out based on the AS-IS processes.

The FRS study includes 81 number of workshops and group discussions for AS-IS and TO-BE functions. The number of participants for workshops and group discussions was around 1800 staff including Engineers, Accountants, Human Resource Officers, technical staff and other administrative staff.

Annexure A
FORM T9 - FUNCTIONAL REQUIREMENTS SPECIFICATIONS

Notes :

1. The following criteriais used to identify the business requirements in the Functional Reuirement Specification specified below.

Criteria	Description
K	Knockout
B	Business Critical
D	Desirable

2. The Bidders are requested to use the following criteria to submit their responses as described below. Bidders can use the soft form of the FRS to complete their responses.

Criteria	Description
STDD	Standard Functionality
WA	Work Around
MOD	Modified (Customization)
TTP	Third Party Solutions
NA	Not Available

Ref.	Definition	Explanatory Comments
STDD	The requirement can be met by the standard functionality of the solution with non-complex configuration.	State which solution module(s) supports the requirement and include any explanatory comments as appropriate.
WA	The requirement can be met by the solution but will require some complex configuration and/or the use of a workaround (e.g., by re-purposing alternative solution functionality or by requiring specific changes to business process).	State which solution module(s) support the requirement and include additional comments to explain how the requirement can be met.
TTP	The requirement can be met through the use of a third party-solution with standard or pre-built integration into the core ERP solution.	Include comments to explain how the requirement will be met and how the proposed third-party solution is integrated with the core ERP solution.
MOD	The requirement can be met but will require a modification to the standard solution and/or bespoke development of solution functionality.	Include comments to explain what modification or bespoke development is required to meet the requirement and how complex this will be.
NA	The requirement cannot be met by the solution.	

3. If a requirement can be met through a combination of methods (e.g., a mixture of standard functionality and a third-party product), specify both.
4. The proposed product in general shall be a Commercially off the Shelf (COTS) product with proper version/release controlling and not a customer specific Bespoke development.
5. Bidder shall submit supporting technical literature published by the Product Manufactures/ Software vendors to support the confirmed requirements. The supporting technical literature for Form T9, shall be numbered with the respective functional requirement number.
   a. Example : Literature relevant to FRS 1.1.1.2 shall be numbered as; Annex T9-1.1.1.2
6. Module (s) supported** - Bidder must mention which module of the proposed product/ application supports the implementation of the particular functional requirement.

1. Finance

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.1	**General Ledger**								
1.1.1	**Chart of Accounts**								
1.1.1.1	Ability to define account categories when creating Chart of Accounts [Assets, Liabilities, Expenses, Income, Equity]	K							
1.1.1.2	Ability to define multiple levels of account sub categories under each category	K							
1.1.1.3	Ability to define chart of accounts with following attributes:								
1.1.1.3.1	*Name*	K							
1.1.1.3.2	*Account code*	K							
1.1.1.3.3	*Main category*	K							
1.1.1.3.4	*Sub category*	K							
1.1.1.4	Ability to maintain user defined flexible sequence for chart of accounts code	B							
1.1.1.5	Ability to generate automatic accounts codes when creating new accounts according to defined code sequence	B							
1.1.1.6	Ability to segregate account codes between different type of accounts such as assets, liabilities, capital, income and expenses	K							
1.1.1.7	Ability to restrict updating chart of accounts details without proper approval	K							
1.1.1.8	Ability to block posting to an account	B							
1.1.1.9	Ability to restrict posting to an account by user or user group	B							
1.1.1.10	Ability to restrict account closure with balances	B							
1.1.1.11	Ability to account closure with higher approval	B							
1.1.1.12	Ability to restrict posting negative amounts in accounts	K							
1.1.1.13	Availability of audit trail to track changes like Addition, Deletion and Modification to Chart of Accounts	B							
1.1.1.14	Ability to perform period soft & hard closure for books of accounts	K							
1.1.1.15	Facilitate to selectively close or open periods for posting (with adequate security)	B							
1.1.2	**Organization Hierarchy**								
1.1.2.1	Ability to define cost centers and profit centers within the organization	K							
1.1.2.2	Ability to define hierarchical structure for the cost centers and profit centers	K							
1.1.2.3	Ability to link cost centers and profit centers to specific account codes	K							
1.1.2.4	Ability to define cost center and profit center groups	B							
1.1.2.5	Ability to define formulae to apportion common expenses and income to cost centers and profit centers	B							
1.1.2.6	Ability to generate Profit center/Cost center wise TB , Income statement and Balance Sheet, Cash flow Statement and Consolidated Financial Statements through the system	B							
1.1.3	**Regulatory Accounting**								
1.1.3.1	Ability to have multiple books of accounts in addition to Primary book of accounts	B							
1.1.3.2	Ability to share the same chart of accounts across all books	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.1.3.3	Ability to replicate same profit center - cost center hierarchy across all books	B							
1.1.3.4	Ability to enable posting for specified GL codes while the same are blocked in primary accounts	B							
1.1.3.5	Ability to replicate all transactional data from primary books to other books	B							
1.1.3.6	Ability to take reports same as primary books	B							
1.1.3.7	Ability to configure additional reports in the additional books of accounts	B							
1.1.3.8	Ability to auto allocate costs for specified GL and profit centers/cost centers to target profit center/cost centers based on statistical key figures	B							
1.1.4	**Journal Processing**								
1.1.4.1	Ability to generate and print journal vouchers through the system	K							
1.1.4.2	Ability to enter manual journal entries to relevant GL account	K							
1.1.4.3	Ability to enter transaction description/narration at journal header	K							
1.1.4.4	Ability to post journals in real time	K							
1.1.4.5	Ability to post journals single or batch wise	B							
1.1.4.6	Ability to define recurring journals	B							
1.1.4.7	Ability to integrate all the modules to General Ledger for journal posting	K							
1.1.4.8	Ability to generate automatic and continuous journal sequence number based on the selected type.	B							
1.1.4.9	Ability to define/customize journal templates	B							
1.1.4.10	Ability to support the provisional entries	B							
1.1.4.11	Ability to upload journals through a template with active, edit, control, checks and validations	D							
1.1.4.12	Ability to copy existing journals, edit and use them for new input	D							
1.1.4.13	Ability to allow prior period adjustments, with proper control & authorization	B							
1.1.4.14	Ability to define separate approval levels for journal entry reversal	B							
1.1.4.15	Ability to define approval levels for each journal type (Enter-Validate-Approve/ Enter-Approve)	B							
1.1.4.16	Ability to define the threshold limits in the system for journal entry approval	B							
1.1.4.17	Ability to control unbalance journal entry posting (save unbalance journals without posting)	B							
1.1.4.18	Ability to generate warning message when entering unbalance entries and restrict posting unbalance entries	B							
1.1.4.19	Ability to restrict entering negative values as journal entries	K							
1.1.4.20	Availability of Audit trail to track changes such as Addition, Deletion and Modification to transaction data	B							
1.1.4.21	Ability to Mass Reversal of journals	B							
1.1.4.22	Ability to freeze the journals posted to General Ledger from other sub modules/ sub ledgers	B							
1.1.4.23	Ability to print and view posted journal entries by multiple criteria such as journal number, period, amount, journal category etc.	B							
1.1.5	**Inter unit transactions and cost allocation**								
1.1.5.1	Ability to post allocation journals in the system	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.1.5.2	Ability to apply allocations to both actual and budget numbers	B							
1.1.5.3	Ability to select multiple cost centers to allocation of costs	B							
1.1.5.4	Ability to generate unique serial numbers for allocation journals	B							
1.1.5.5	Ability to define user levels for each cost centers to post allocation journals	B							
1.1.5.6	Ability to post cost allocations for internal cost center within same Branches/Divisions	K							
1.1.5.7	Ability to pass cost allocations for internal cost centers in different Branches/Divisions with posting done through higher authority	K							
1.1.5.8	Ability to define cost allocation formulas	B							
1.1.5.9	Ability to provide statistical journals to capture non-financial information such as number of employees, Area etc.	B							
1.1.5.10	Ability to support allocation reversals	B							
1.1.5.11	Ability to create automatic recurring entries to allocate one account balance among several others based on defined allocation bases (headcount, percentages etc.)	D							
1.1.6	**Currency**								
1.1.6.1	Ability to define one base currency and multiple reporting currencies	K							
1.1.6.2	Ability to define currency codes based on international standards	B							
1.1.6.3	Ability to define currency rates manually in the system	K							
1.1.6.4	Ability to define approval levels for define currency rates and codes	B							
1.1.6.5	Ability to capture real-time currency rates from currency rate sources (E.g. CBSL exchange rate portal)	B							
1.1.6.6	Ability to track and report all foreign currency transactions in transaction currency and base currency	K							
1.1.6.7	Ability to set up tolerance limits for currency rate variances	B							
1.1.6.8	Ability to select reporting currency for generate reports for currencies other than base currency	K							
1.1.6.9	Ability to convert base currency values in to foreign currency equivalent at transaction level	K							
1.1.6.10	Ability to convert foreign currency values in to base currency equivalent at transaction level	K							
1.1.6.11	Ability to process transactions entered in foreign currency based on the exchange rates definition, in an on-line mode	B							
1.1.7	**Tax**								
1.1.7.1	Ability to define multiple Tax codes with percentages or fixed amounts per transaction with following fields:								
1.1.7.1.1	*Tax name*	K							
1.1.7.1.2	*Tax code*	K							
1.1.7.1.3	*Tax percentage/Fixed amount*	K							
1.1.7.2	Ability to define tax period (which may or may not differ from the accounting period)	B							
1.1.7.3	Ability to define tax categories pertaining to transaction types (Vendor/Customer)	K							
1.1.7.4	Ability to configure tax parameters and rules for each tax type	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.1.7.5	Ability to support tax reconciliations for taxes with input/output characteristics (e.g. VAT)	K							
1.1.7.6	Ability to incorporate provisions for taxes	B							
1.1.7.7	Ability to define approval levels for defining tax codes	B							
1.1.7.8	Ability to define higher approval levels for amend/update tax rates	B							
1.1.7.9	Ability to compute interest on delayed payment of tax and raise accounting entries and corresponding updating in the return	B							
1.1.7.10	Ability to generate tax schedules based on IRD formats	B							
1.1.7.11	Ability to extract data from financial statements for tax computation	B							
1.1.8	**Business Calendar**								
1.1.8.1	Ability to define working days and non-working days for the year	K							
1.1.8.2	Ability to amend business calendar	B							
1.1.8.3	Ability to define accounting periods (User definable start and end dates for the period)	K							
1.1.8.4	Ability to define tax return filing dates in Business calendar	B							
1.1.9	**Period Closure**								
1.1.9.1	Ability to generate period closing exception reports	K							
1.1.9.2	Ability to separately perform period closure for sub ledgers and General Ledger	K							
1.1.9.3	System should facilitate for soft & hard closure	B							
1.1.9.4	Ability to allow the users to open the next accounting year before the closing of current accounting year	B							
1.1.9.5	Ability to re-open closed period, subject to valid authorization	B							
1.1.9.6	Ability to define approval levels for period open and close (User/Super user)	B							
1.1.9.7	Ability to define higher approval levels for period Re-opening and Re- closing	B							
1.1.9.8	Ability to selectively close or open periods for posting (with adequate security)	B							
1.1.10	**General**								
1.1.10.1	Ability to support drill down facility to initial transaction	B							
1.1.10.2	Ability to upload scanned supporting documents as Doc, PDF ,image or other format	B							
1.1.10.3	Ability to retrieve all supporting documents related to a transaction.	B							
1.1.11	**Consolidation and Reporting**								
1.1.11.1	Ability to automatically generate consolidated Profit Center/Cost Center wise financial statements	B							
1.1.11.2	Ability to define consolidation rules in line with Accounting Standards	B							
1.1.11.3	Ability to capture Subsidiary, Joint venture and any other related party financial statements during consolidation	B							
1.1.11.4	Ability to convert foreign currency transactions into reporting currency during consolidation	B							
1.1.11.5	Ability to upload information from external sources for consolidation	B							
1.1.11.6	Ability to perform manual adjustments during consolidation	K							
1.1.11.7	Ability to request additional information, clarification and comments through system from relevant SBUs during consolidation	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.1.11.8	Ability to create multiple versions of financial statements, customized to user specification with alternative format	B							
1.1.11.9	Ability to support reconciliation with prevailing accounting standards (IFRS/LKAS/SLFRS etc.)	B							
1.1.11.10	Ability to design layouts of financial statements	K							
1.1.11.11	Ability to generate reports in different formats such as in Excel, PDF etc.	B							
1.1.11.12	Ability to define difference comparison parameters in reports	K							
1.1.11.13	Ability to schedule automatic report generation for specific segments (E.g.: Tax reports)	D							
1.1.11.14	Ability to reprint reports for prior periods	B							
1.1.11.15	Ability to view Financial Statements as output on screen	B							
1.1.11.16	Ability to print Financial Statements through the system	K							
1.1.11.17	Ability to drill down to original transaction	D							
1.1.11.18	Ability to generate transaction detail report for a single account or for a range of account by Period to date (PTD), Year to date (YTD), Summarized and Detail	K							
1.1.11.19	Ability to generate following reports based on the user defined period such as Daily/ Monthly/Quarterly etc.								
1.1.11.19.1	*Trial Balance- Summary*	B							
1.1.11.19.2	*Trial Balance- Detail*	K							
1.1.11.20	Ability to generate Financial Statements for the user defined period such as Daily/ Monthly/Quarterly/Annually etc.:								
1.1.11.20.1	*Statement of financial position- Consolidated*	K							
1.1.11.20.2	*Statement of financial position- Profit Center/Cost Center wise*	K							
1.1.11.20.3	*Statement of comprehensive Income - Consolidated*	K							
1.1.11.20.4	*Statement of comprehensive Income - Profit Center/Cost Center wise*	K							
1.1.11.20.5	*Statement of Changes in Equity- Consolidated*	K							
1.1.11.20.6	*Statement of Changes in Equity - Profit Center/Cost Center wise*	K							
1.1.11.20.7	*Cash Flow Statement- Consolidated*	K							
1.1.11.20.8	*Cash Flow Statement - Profit Center/Cost Center wise*	K							
1.1.11.21	Ability to generate total payable reports for each tax type	B							
1.1.11.22	Ability to generate schedules with financial statements	K							
1.1.11.23	Ability to generate notes to Financial statements	B							
1.2	**Accounts Payable**								
1.2.1	**Invoice Processing**								
1.2.1.1	Ability to capture invoice/certified bills and vendor statement information in the system	K							
1.2.1.2	Ability to generate unique sequential number for invoices/bills/vendor statements individually or batch wise	K							
1.2.1.3	Ability to facilitate foreign currency invoices at a rate defined in the system	K							
1.2.1.4	Ability to automatically capture information on related Purchase Order (PO)/Work Order/Service Order/Contract for the received invoice/bill/statement	K							
1.2.1.5	Ability to enter debit/credit memo which applies to specific invoice/invoices	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.2.1.6	Ability to create various invoice category types (E.g.: Local supplier invoices, Foreign supplier invoices, General invoices, etc.)	B							
1.2.1.7	Ability to scan and upload supporting documents	B							
1.2.1.8	Ability to enter direct invoice without PO reference	B							
1.2.1.9	Ability to create an automatic vendor debit notes for goods returns into the system and adjust invoice of the vendor	B							
1.2.1.10	Ability to receive electronic invoices/bills/statements through Electronic Gateways/ interfaces in a Standard format from vendors	D							
1.2.1.11	Ability to allocate an invoice total across multiple accounts according to a percentage of the invoice amount	B							
1.2.1.12	Ability to allocate an invoice total across multiple accounts according to a split value of the invoice amount	B							
1.2.1.13	Ability to process expense reimbursements (e.g., travel, medical claim) through the time & leave by integration with HR module	B							
1.2.1.14	Ability to capture taxes on vendor invoices	B							
1.2.1.15	Ability to capture and charge stamp duties applicable for payment	B							
1.2.1.16	Ability to capture advance payments, retentions and recoveries in invoices	B							
1.2.1.17	Ability to make advance payments and allocate/adjust advances	B							
1.2.1.18	Ability to automatically calculate discounts based on predefined discount rates	B							
1.2.1.19	Ability to generate statutory payable reports (Tax, Stamp duty, etc.)	B							
1.2.2	**Payment Matching**								
1.2.2.1	Ability to support real time integration with the Procurement and Inventory module when matching invoices	B							
1.2.2.2	Ability to set different levels of matching procedures with PO, Quality Inspection and GRN	B							
1.2.2.3	Ability define matching tolerances. E.g.: A user should be allowed to match an invoice with a goods receipt even if the PO price and Invoice price differ within a given limits. Authority should be given to a higher level user to match invoices with a higher variance	B							
1.2.2.4	Ability to match multiple purchase orders against a single supplier invoice	B							
1.2.2.5	Ability to validate invoice date with GRN and PO dates	K							
1.2.2.6	Ability to flag duplicate vendor invoices	K							
1.2.2.7	Ability to populate payment terms and all other vendor references from vendor files / PO	B							
1.2.3	**Payment Approval**								
1.2.3.1	Ability define flexible workflow matrices for payment approval	B							
1.2.3.2	Ability to generate exception reports for held invoices by unit / branch and date wise	B							
1.2.3.3	Ability to attach relevant supporting documents	B							
1.2.3.4	Ability to view related scanned documents, authorized payment certificates and any other relevant documents when approving a payment	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.2.3.5	Ability to support decentralized payment approval with centralized disbursement	B							
1.2.3.6	Ability to support parallel and multi-layer approval hierarchies	B							
1.2.3.7	Ability to re-route the payment documents through approval work flow	B							
1.2.3.8	Ability to add digital signatures for approvals	D							
1.2.3.9	Ability to add comments while approving/rejecting invoices	B							
1.2.4	**Payment Disbursement**								
1.2.4.1	Ability to generate and print payment vouchers	K							
1.2.4.2	Ability to define customized formats for payment vouchers	B							
1.2.4.3	Ability to cancel a payment voucher after generation with approvals	B							
1.2.4.4	Ability to run centralized payment process at day end for all payable vendors	B							
1.2.4.5	Ability to capture vendor credit terms when processing centralized payment process	B							
1.2.4.6	Ability to change vendor credit terms to a user defined value before processing centralized payment process	B							
1.2.4.7	Ability to manually select invoices for payment	K							
1.2.4.8	Ability to pay multiple invoices of a vendor through one payment voucher	K							
1.2.4.9	Ability to perform partial payments for invoices	K							
1.2.4.10	Ability to disburse payment in foreign currency	K							
1.2.4.11	Ability to support following payment modes:								
1.2.4.11.1	*Cheques*	K							
1.2.4.11.2	*Bank transfers*	K							
1.2.4.11.3	*Telegraphic Transfers*	K							
1.2.4.11.4	*Standing Orders*	K							
1.2.4.12	Ability to make payments for single invoice or batches	B							
1.2.4.13	Select group of invoices based on a predefined criterion such as:								
1.2.4.13.1	*Due date*	B							
1.2.4.13.2	*Vendor name*	B							
1.2.4.13.3	*Vendor type*	B							
1.2.4.13.4	*Amount*	B							
1.2.4.14	Ability to set payment schedules for recurring/installment payments	D							
1.2.4.15	Ability to perform automatic cheque printing from the system	B							
1.2.4.16	Ability to maintain different name variants between the vendor's name and the name to be printed on the cheque	D							
1.2.4.17	Ability to add digital signatures to the cheque	D							
1.2.4.18	Ability to void of cheques based on:								
1.2.4.18.1	*Void single cheque after printing*	B							
1.2.4.18.2	*Void range of cheques after printing*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.2.4.19	Ability to re-print duplicate cheque after voiding original cheque	B							
1.2.4.20	Ability to customize cheque layout for each disbursing bank and SLIPs payments	D							
1.2.4.21	Ability to capture cheque book series in the system for each bank account	B							
1.2.4.22	Ability to hold payments for specific vendors	B							
1.2.4.23	Ability to hold payments for specific invoices	B							
1.2.4.24	Ability to define user definable hold types	D							
1.2.4.25	Ability to initiate request for funds from relevant authority for a payment disbursal when allocated funds are exhausted	D							
1.2.5	**Inquiry & Reporting**								
1.2.5.1	Ability to check duplicate invoice based on:								
1.2.5.1.1	*invoice Number*	B							
1.2.5.1.2	*Vendor*	B							
1.2.5.1.3	*Amount*	B							
1.2.5.2	Inquire / report on:								
1.2.5.2.1	*Age analysis of payables outstanding*	K							
1.2.5.2.2	*Historical vendor invoices reports*	B							
1.2.5.2.3	*Goods received but not invoiced report*	B							
1.2.5.2.4	*Vendor statement of account*	K							
1.2.5.2.5	*Overdue invoices by vendor*	K							
1.2.5.2.6	*Vendor Period to Date purchases*	K							
1.2.5.2.7	*Vendor Year to Date purchases*	B							
1.2.5.2.8	*Vendor Period to Date purchases returns*	B							
1.2.5.2.9	*Vendor Year to Date purchases returns*	B							
1.2.5.2.10	*Unapproved invoices report*	B							
1.2.5.2.11	*Invoices on hold report*	B							
1.2.5.2.12	*Approved invoices report*	B							
1.2.5.2.13	*Invoices released from hold report*	B							
1.2.5.2.14	*Outstanding vendor advances/retention at department and total*	B							
1.2.5.2.15	*Outstanding vendor deposits (e.g. electricity, rent, fuel station deposits etc.)*	B							
1.2.5.2.16	*Volume by user*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.2.5.2.17	*Cheque register*	K							
1.2.5.2.18	*Daily cheque issued report (party-wise/user-wise/bank wise)*	B							
1.2.5.3	Ability to generate Ad-hoc reports/queries for different search criteria	K							
1.2.5.4	Ability to generate WHT certificate	B							
1.3	**Accounts Receivables**								
1.3.1	**Customer Account Maintain (For receivables other than supply of electricity)**								
1.3.1.1	Ability to maintain a master customer file	K							
1.3.1.2	Ability to access all customer data online	B							
1.3.1.3	Ability to establish default account distributions for each receivable	B							
1.3.1.4	Customer status to include:								
1.3.1.4.1	*Active*	K							
1.3.1.4.2	*One time*	B							
1.3.1.4.3	*Inactive*	K							
1.3.1.4.4	*Bankrupt*	B							
1.3.1.4.5	*Debarred*	B							
1.3.1.4.6	*Employee*	B							
1.3.1.4.7	*Vendor as a customer*	B							
1.3.1.5	Ability to record following customer information in a centralized customer record:								
1.3.1.5.1	*Open items by date*	B							
1.3.1.5.2	*Contact name*	K							
1.3.1.5.3	*Address by type (i.e. Remittance, bill to, parent company, etc.)*	K							
1.3.1.5.4	*Telephone*	K							
1.3.1.5.5	*Email*	K							
1.3.1.5.6	*Bank account - for auto debit payments*	B							
1.3.1.5.7	*Balance due*	B							
1.3.1.6	Ability to define credit limits for the customer	B							
1.3.1.7	Ability to maintain History of changes to customer record fields maintained as an audit trail	B							
1.3.1.8	Ability to enable customers to maintain their contact information through internet access to their customer record	D							
1.3.1.9	Ability to automatically assign sequential customer number.	B							
1.3.1.10	Ability to Activate/Deactivate customer account	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.3.1.11	Ability to define aging categories for customers	B							
1.3.1.12	Ability to integrate with billing system	K							
1.3.2	**Invoice Approval**								
1.3.2.1	Ability to define flexible workflow matrices for invoice approval	B							
1.3.2.2	Ability to support parallel and multi-layer approval hierarchies	B							
1.3.2.3	Ability to re-route the invoices through approval work flow	B							
1.3.2.4	Ability to add comments while approving/rejecting invoices	B							
1.3.2.5	Ability to make adjustments to credit limit and credit period with relevant approval	B							
1.3.3	**Invoice generation**								
1.3.3.1	Ability to generate and print invoices from the system	K							
1.3.3.2	Ability to define customized invoice templates	B							
1.3.3.3	Ability to define invoice categories	B							
1.3.3.4	Ability to generate sequential invoice number	K							
1.3.3.5	Ability to generate batch wise invoice	B							
1.3.3.6	Ability to schedule invoice generation for recurring invoices	D							
1.3.3.7	Ability to create Pro-forma invoices in the system	B							
1.3.3.8	Ability to electronically send invoices to customers	D							
1.3.3.9	Ability to capture credit limits for customers	B							
1.3.3.10	Ability to raise foreign currency invoices	B							
1.3.3.11	Ability to enter debit/credit memo and apply it to the invoice	B							
1.3.3.12	Ability to attach scanned documents e.g., MS Word, Excel, PDF, JPEG, etc.	B							
1.3.3.13	Ability to capture taxes when generating invoices	K							
1.3.3.14	Automatic detection of advance payments while generating invoices	K							
1.3.3.15	Ability to Include Profit center/Cost center information identifying information associated with each invoice	K							
1.3.3.16	Ability to generate and print duplicate invoice	B							
1.3.3.17	Ability to view the invoice status to include:								
1.3.3.17.1	*Open*	K							
1.3.3.17.2	*Closed*	K							
1.3.3.17.3	*Hold*	K							
1.3.3.17.4	*Disputed*	B							
1.3.4	**Customer settlement**								
1.3.4.1	Ability to record single payment for multiple invoices	K							
1.3.4.2	Ability to record multiple payments for single invoice	K							
1.3.4.3	Ability to validate cheque details in cheques received from customer	B							
1.3.4.4	Ability to apply credit memos against customer files	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.3.4.5	Ability to provide higher authority permission when the customer's credit limit is exceeded.	B							
1.3.4.6	Ability to provide higher authority permission when the customer's credit period is exceeded.	B							
1.3.4.7	Ability to generate a credit memo for adjustments to a customer invoice	B							
1.3.4.8	Ability to generate a debit memo for adjustments to a customer invoice	B							
1.3.4.9	Ability to assign unique sequential numbers for credit/debit memos	B							
1.3.4.10	Ability to print debit and credit memos	B							
1.3.4.11	Ability to generate notices/letters to non-paying customers	D							
1.3.4.12	Ability to initiate customer refund cheques and integrate with Payable module	B							
1.3.4.13	Ability to extend the credit period and credit limit based on an approval	B							
1.3.5	**Inquiry & Reports**								
1.3.5.1	Ability to generate following queries/reports:								
1.3.5.1.1	*Customer outstanding report*	K							
1.3.5.1.2	*Customer Balance Details (Payments, Balance, Invoiced, History) for a selected period*	B							
1.3.5.1.3	*Unsettled Invoices*	K							
1.3.5.1.4	*Collection Report*	K							
1.3.5.1.5	*Debtors aging analysis*	K							
1.3.5.1.6	*Invoice detail report*	K							
1.3.5.1.7	*Report by customer status*	B							
1.3.5.1.8	*Report by invoice status*	B							
1.3.5.1.9	*Age analysis by different category types*	B							
1.4	**Bank and Cash Management**								
1.4.1	**Bank Master**								
1.4.1.1	Ability to maintain the following information for each Bank account:								
1.4.1.1.1	*Bank code*	K							
1.4.1.1.2	*Bank name*	K							
1.4.1.1.3	*Bank address*	K							
1.4.1.1.4	*Branch code*	K							
1.4.1.1.5	*Branch name*	K							
1.4.1.1.6	*City*	B							
1.4.1.1.7	*Type of account*	K							
1.4.1.1.8	*Bank account number*	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.4.1.1.9	*SWIFT code*	K							
1.4.1.1.10	*General ledger account*	K							
1.4.1.1.11	*Account currency*	K							
1.4.1.1.12	*Cheque number range*	B							
1.4.1.1.13	*Date of opening*	D							
1.4.1.2	Ability to define multiple cheque books/cheque ranges per bank	B							
1.4.1.3	Ability to define the maximum and minimum cheque amount authorized to be issued by bank account	B							
1.4.1.4	Ability to integrate Bank accounts with any other verified system	D							
1.4.1.5	Ability to facilitate LC creation in the system with reference to Procurement Module	B							
1.4.1.6	Ability to refer to an existing LC when creating LCs	B							
1.4.1.7	Ability to generate LC utilization report	B							
1.4.1.8	Ability to inquire on LCs based on Reference number, Vendor, Item, Date and Value	B							
1.4.1.9	Ability to maintain LC details in the system	B							
1.4.1.10	Ability to create and maintain bank guarantees	B							
1.4.1.11	Ability to generate bank guarantee utilization report	B							
1.4.1.12	Ability to upload scanned documents related to LCs and bank guarantees	B							
1.4.1.13	Ability to inquire on bank guarantees based on Reference number, Vendor, Item, Date and Value	B							
1.4.1.14	Ability to capture the bank guarantees and bank over draft facility details and send reminders for the users on reaching the limits	B							
1.4.1.15	Ability to capture bank charges and relevant other charges when creating LCs and Bank guarantees	B							
1.4.2	**Petty Cash**								
1.4.2.1	Ability to define location wise Petty Cash books	K							
1.4.2.2	Ability to have petty cash request created from all different departments and different users with user defined criteria	B							
1.4.2.3	Ability to capture invoice/bill details to relevant petty cash books	K							
1.4.2.4	Ability to enter multiple petty cash expense categories in to a single voucher in the system	B							
1.4.2.5	Ability to define location wise petty cash float limits	B							
1.4.2.6	Ability to define category based/location wise maximum floats	B							
1.4.2.7	Ability to generate system notifications / pop ups when the petty cash float reaches the limit (Low balance)	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.4.2.8	Ability to send automated notification to relevant authorized user for replenishment upon float reaching the low balance	D							
1.4.2.9	Ability to upload supporting documents through the system	D							
1.4.3	**Collection**								
1.4.3.1	Ability to capture Pay-in slip information of a customer (for collection other than electricity supply)	K							
1.4.3.2	Ability to capture following Pay-in slip information in system:								
1.4.3.2.1	*Cost center code*	K							
1.4.3.2.2	*GL code*	K							
1.4.3.2.3	*Customer details (Name, Address. Customer code (if applicable))*	K							
1.4.3.2.4	*Amount*	K							
1.4.3.2.5	*Denomination*	D							
1.4.3.2.6	*Narration*	D							
1.4.3.3	Ability to define approval levels for Pay-in slip processing	B							
1.4.3.4	Ability to generate and print acknowledgement in pay-in slip	B							
1.4.3.5	Ability to record foreign currency collection	B							
1.4.3.6	Ability to support following receipting modes:								
1.4.3.6.1	*Cash*	K							
1.4.3.6.2	*Cheques*	K							
1.4.3.6.3	*Direct Deposits*	K							
1.4.3.6.4	*Bank Drafts*	K							
1.4.3.6.5	*Credit Cards*	K							
1.4.3.6.6	*Debit Cards*	K							
1.4.3.6.7	*Bank Transfers*	K							
1.4.3.6.8	*Offset with vendor balance (for vendor as customer)*	B							
1.4.3.7	Ability to capture collection through following collection modes:								
1.4.3.7.1	*POS payments*	K							
1.4.3.7.2	*Mobile payments*	B							
1.4.3.7.3	*Web payment*	B							
1.4.3.7.4	*NFC*	D							
1.4.4	**Receipt Generation**								
1.4.4.1	Ability to generate and print receipts for payments received	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.4.4.2	Ability to generate automatic unique sequential receipt number	B							
1.4.4.3	Ability to generate receipts in user defined formats	B							
1.4.4.4	Ability to capture invoice details in receipt	B							
1.4.4.5	Ability to issue direct receipts with no invoice reference	B							
1.4.4.6	Ability to enter a cash receipt transaction on a decentralized (divisional) or centralized basis	B							
1.4.4.7	Ability to define mandatory fields for receipt processing according to the receipting type	B							
1.4.4.8	Ability to undertake partial payments against individual line items on a receivable	B							
1.4.4.9	Availability of automatic generation of accounting entries upon the confirmation of the receipt.	K							
1.4.4.10	Ability to generate receipts for advance payments	K							
1.4.4.11	Ability to re-print a receipt and identify it as a re-print (e.g., due to a printer jam) with higher authority	B							
1.4.4.12	Ability to process customer refunds through accounts payable with an interfacing to the accounts receivable.	K							
1.4.4.13	Ability to generate single receipt for multiple customer payments	B							
1.4.5	**Receipt Cancellation / Correction**								
1.4.5.1	Ability to cancel a receipt based on a receipt number	K							
1.4.5.2	Ability to select a reason for the receipt cancellation	B							
1.4.5.3	Availability of predefined reasons for receipt cancellation	B							
1.4.5.4	Ability to reverse all corresponding entries of the original transaction (System should generate reversal entries with effect to the current system date. It should not be generated to the original transaction date)	K							
1.4.5.5	Ability to automatically reverse receipts for multiple locations through a single receipt	K							
1.4.5.6	Ability to automatically re-instate invoices which had already been set-off against payment by Cheque or cash	K							
1.4.5.7	Ability to generate a list of cancelled receipts for a given period	B							
1.4.6	**Cash Deposit**								
1.4.6.1	Ability to generate and print deposit slips through the system upon feeding the denomination details	B							
1.4.6.2	Deposit slips generated from the system should include following details:								
1.4.6.2.1	*Deposit Date*	B							
1.4.6.2.2	*Bank Name and Branch*	B							
1.4.6.2.3	*Bank account number*	B							
1.4.6.2.4	*Total amount of Cash*	B							
1.4.7	**Cheque and Bank Draft Deposit**								
1.4.7.1	Ability to generate and print deposit slips through the system for cheque deposits according to the bank account and the clearing date.	B							
1.4.7.2	Deposit slips generated from the system should include following details:								

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.4.7.2.1	*Deposit Date*	B							
1.4.7.2.2	*Cheque Number/s*	B							
1.4.7.2.3	*Bank Name and Branch*	B							
1.4.7.2.4	*Bank account number*	B							
1.4.7.2.5	*Total amount of Cheque*	B							
1.4.7.3	Ability to support and validate postdated cheques	B							
1.4.8	**Cash Flow**								
1.4.8.1	Ability to generate cash movement report for every bank account showing:								
1.4.8.1.1	*Opening balance beginning of the period*	K							
1.4.8.1.2	*Summarized and Detailed Receipts during the period*	K							
1.4.8.1.3	*Summarized and Detailed Receipts month to date and same month last year*	K							
1.4.8.1.4	*Summarized and Detailed Payments during the period*	K							
1.4.8.1.5	*Summarized and Detailed Payments month to date and same month last year*	K							
1.4.8.1.6	*Closing balance for the period*	K							
1.4.8.2	Ability to generate forecasted cash movement report	K							
1.4.8.3	Ability to analyze unit wise working capital requirements	B							
1.4.8.4	Ability to calculate financial ratios for a given point of time (liquidity ratios, ROA, ROE etc.)	B							
1.4.9	**Cheque Return**								
1.4.9.1	Ability to enter cheque return details in the system	K							
1.4.9.2	Ability to automatically restrict payment mode 'cheque' for a client after a cheque return	K							
1.4.9.3	Ability to define time period for cheque payment restriction upon cheque return	B							
1.4.9.4	Ability to remove cheque payment restriction with higher approval	B							
1.4.9.5	Ability to define charges which are chargeable from client for cheque cancellations	B							
1.4.9.6	Ability to select predefined reasons for cheque returns	B							
1.4.9.7	Ability to make mandatory to select a reason for the return of a cheque	B							
1.4.9.8	Ability to re-instate issued invoice/bill upon cheque return	K							
1.4.9.9	Ability to automatically update customer statement and age analysis report upon return of cheque	K							
1.4.9.10	Ability to reverse all corresponding entries of the original transaction. i.e. all corresponding entries of the original receipt	K							
1.4.9.11	Ability to generate notice letters to client, head of units and any other relevant party informing cheque returns	D							
1.4.9.12	Ability to have customized notice letters for cheque returns for different client types and return types	D							
1.4.9.13	Ability to generate a list of returned cheques for a given period.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.4.10	**Bank Reconciliation**								
1.4.10.1	Ability to directly upload electronic Bank Statements to the system in standard formats	K							
1.4.10.2	Ability to run auto-reconciliation process for each bank account separately	K							
1.4.10.3	Ability to generate report with reconciled and un reconciled items after running auto reconciliation process	K							
1.4.10.4	Ability to search transactions using various search criteria such as transaction type, reference no, amount, transaction date & description	B							
1.4.10.5	Ability to manually reconcile when the transactions are not reconciled during the auto reconciliation process	K							
1.4.10.6	Ability to create journal entries relating to bank interest and bank charges	K							
1.4.10.7	Ability to freeze the bank reconciliation to prevent any amendments once the bank reconciliation is confirmed	B							
1.4.10.8	Ability to print the bank reconciliation report for each bank account	K							
1.4.10.9	Ability to identify and generate a listing of outstanding cheques, stale cheques and returned cheques etc.	K							
1.5	**Planning and Budgeting**								
1.5.1	**Budget planning and preparation**								
1.5.1.1	Ability to upload data from Spreadsheet/database applications for planning and budget preparation	B							
1.5.1.2	Ability to configure budget rules and methods	B							
1.5.1.3	Ability to capture budgeting information from other modules for planning	B							
1.5.1.4	Ability to setup base budget and make any changes to base value	K							
1.5.1.5	Ability to supports decentralized budget development through the company Intranet	B							
1.5.1.6	Ability to allow unit level users to submit budget scenarios	B							
1.5.1.7	Ability to retrieve prior period actual values	K							
1.5.1.8	Ability setup parameters for incremental budgets	B							
1.5.1.9	Ability to carry forward unutilized budget allocations for next year	B							
1.5.1.10	Ability to facilitate different types of budget approaches when preparing budget	K							
1.5.1.11	Ability to integrate planning information of other modules as inputs during financial budget preparation (Procurement plan, Material plan, HR plan etc.)	B							
1.5.1.12	Ability to enter capital budgets manually or load automatically to compare actual and planned capital spending	B							
1.5.1.13	Ability to support CAPEX budget revisions with proper authorizations	B							
1.5.1.14	Ability to facilitate 'What-if' analysis scenarios in budget development	B							
1.5.1.15	Ability to conduct break even analysis	B							
1.5.1.16	Ability to develop forecasting models	D							
1.5.1.17	Ability to incorporate seasonal variations for forecasting	D							
1.5.1.18	Ability to prepare graphical representations for the current year and next year budget and budget utilization	D							
1.5.1.19	Ability to setup statistical modules to calculate next financial year budget based on available data	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported **	Comments
			STDD	WA	MOD	TTP	NA		
1.5.1.20	Ability to allocate budget values for cost center wise and expenditure code wise	K							
1.5.1.21	Ability to attach supporting documents (circulars, amendments etc.)	D							
1.5.2	**Budget management and control**								
1.5.2.1	Ability to categorize all budget components as recurring and non-recurring items (Operating and Capital)	K							
1.5.2.2	Ability to capture real time budget utilization upon triggering a transaction	K							
1.5.2.3	Ability to restrict transactions at entry level which are more than the available budget	K							
1.5.2.4	Ability to change utilized expenditure code to unutilized expenditure code to perform a transaction with higher approval	B							
1.5.2.5	Ability to flag unusual expense trends	B							
1.5.2.6	Ability to request additional budget allocations through system	D							
1.5.2.7	Ability to periodically assess and monitor budget	D							
1.5.2.8	Ability to make budget modifications with higher approval	B							
1.5.2.9	Ability to design hierarchical structure for approval of requests and modifications	B							
1.5.2.10	Ability to generate graphical representations of budget utilization	D							
1.5.2.11	Ability to perform trend analysis for all budget components at a given point of time based on budget utilization	D							
1.5.3	**Inquiry & Reports**								
1.5.3.1	Ability to create custom reports to track expenditures, allocations and funding	B							
1.5.3.2	Ability to create ad-hoc reports	B							
1.5.3.3	Ability to extract historical budget information by unit wise, expenditure type wise and funding source wise	D							
1.5.3.4	Ability to inquire budget utilization at a given point of time for any cost center or expenditure code	B							
1.5.3.5	Ability to generate budget report comparing the original vs Revised Budget	D							
1.5.3.6	Ability to generate following comparison reports:								
1.5.3.6.1	*Financial Statements - Current Period vs. Last Year (Corresponding period)- Actual*	K							
1.5.3.6.2	*Financial Statements - YTD vs. Last Year (Corresponding period)- Actual*	K							
1.5.3.6.3	*Financial Statements - Current- YTD (Actual) vs. Budget*	K							
1.5.3.6.4	*Financial Statements - Current- YTD Actual vs. Budget + Last Year (Corresponding period)*	K							
1.5.3.6.5	*Trial Balance- Budgeted*	K							
1.5.3.6.6	*Actual VS Budget variance Report*	K							
1.5.3.6.7	*Income Statement – Budgeted*	K							
1.5.3.6.8	*Balance Sheet –Budgeted*	K							
1.5.3.6.9	*Cash flow Statement -Budgeted*	K							
1.5.3.6.10	Break-even analysis report	K							

2. Procurement and Inventory

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.1	**General**								
2.1.1	Ability to track comprehensive audit trails for master data and procurement and inventory transaction records.	K							
2.1.2	Ability to track approval status (e.g.- Approved, Approval pending etc.) of each transaction (e.g.- Purchase Requisition, Purchase Order etc.)	K							
2.1.3	Ability to define costing methods like FIFO, Standard Cost, Weighted Average.	K							
2.1.4	Ability to handle inventory valuation method changes midway	K							
2.1.5	Facilitate to have authorized users can access multiple organizations (Divisions/Units etc.)	B							
2.1.6	Ability to facilitate multi-currency transactions	K							
2.1.7	Ability to define a calendar in the system to track particular tasks (eg- Procurement initiation etc.)	K							
2.1.8	Ability to update inventory details (eg- After Goods receiving, Goods issuing etc.) real time	K							
2.1.9	Ability to track and monitor stock at various store locations (eg- Divisional Stores, Provincial stores, unit stores etc. at individual store level and at aggregate level	K							
2.1.10	Ability to upload scanned documents to the system	K							
2.1.11	Ability to have a document tree to query the linking of documents (eg- PR, PO, GRN etc.)	B							
2.1.12	Ability to facilitate eProcurement in future	B							
2.2	**Masters**								
2.2.1	**Item Master**								
2.2.1.1	Ability to create/edit items in the system for different types (Consumable, Spare parts, Capital item etc.).	K							
2.2.1.2	System should facilitate to have system generated item ID with a sequential order.	K							
2.2.1.3	Ability to capture details (such as item name, UOM, Item type (Capital item, Consumable, Spare parts), Re order level, Re-Order Quantity, Minimum stock level, lead time, price, etc.)	K							
2.2.1.4	Ability to assign warehouse for an item	K							
2.2.1.5	Ability to support multiple Units of Measure (UOM) for an item	B							
2.2.1.6	Ability to assign unit of conversion	B							
2.2.1.7	Ability to define locator for the item (Bay, Row , Rack , Bin)	B							
2.2.1.8	Ability to capture item by barcode in receiving and issuing items	B							
2.2.1.9	Ability to assign suppliers for an item with pricing details	B							
2.2.1.10	Ability to define alternative items for that particular item	B							
2.2.1.11	Ability to record the hierarchy between the different items	B							
2.2.1.12	Ability to define batch codes for required items.	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.2.1.13	Ability to define/ upload catalogues/specifications for an item	B							
2.2.1.14	Ability to tag whether the item needs quality inspection and if needed define what those quality inspection points are	K							
2.2.1.15	Ability to specify which items should be included in MRP	K							
2.2.1.16	System should facilitate to send SMS/ email to process owner when the stock level reaches minimum level/maximum level	B							
2.2.2	**Supplier Master**								
2.2.2.1	Availability of centralized supplier master records facilitating single supplier description and code across the organization	K							
2.2.2.2	Ability to create/edit suppliers in the system for different types (Contractors, Foreign Suppliers, Registered Supplier, Service Providers etc.)	K							
2.2.2.3	Ability to define multiple supplier types (e.g.- Contractor, Service provider etc.) for the same supplier	B							
2.2.2.4	System should facilitate to have system generated Supplier ID with a sequential order.	K							
2.2.2.5	Ability to maintain separate Supplier ID sequences by supplier type.	D							
2.2.2.6	Ability to capture details (such as Supplier name, BR/ID number, Supplier type (Foreign/Local), Contact details, OEM or not , Servicing area, Credit period, Credit limit, Tax details , Payment terms, Payment methods, item details, status etc.)	K							
2.2.2.7	Ability to avoid duplication of supplier based on user-defined criteria's (e.g., Business registration number, NIC number etc.)	B							
2.2.2.8	Ability to define and maintain onetime suppliers.	B							
2.2.2.9	Ability to maintain LC (Letter of Credit) for suppliers.	K							
2.2.2.10	Ability to blacklist/stop payment to supplier	K							
2.2.2.11	Ability to rank vendors based on pre-defined criteria's (such as late delivery, after sales service, material quality etc.)	B							
2.2.2.12	Ability for online Supplier registration of new suppliers through online interface.	D							
2.2.3	**Service master**								
2.2.3.1	Ability to create/edit different types of services (e.g.- Security, Cleaning etc.) in the system	K							
2.2.3.2	System should facilitate to have system generated Service ID with a sequential order.	K							
2.2.3.3	Ability to capture details (such as Service name, Unit of measurement, remarks etc.)	K							
2.2.3.4	Ability to define service applicable Business Unit	B							
2.2.3.5	Ability to support multiple Units of Measure (Hourly, daily, monthly etc.) for a service	K							
2.2.3.6	Ability to capture service rates for each Units of Measure	K							
2.2.4	**Warehouse master**								
2.2.4.1	Ability to create/edit warehouse and sub warehouses (geographically and function wise (damage, Quality inspection, etc., storage requirement (eg-Temperature etc.)	K							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.2.4.2	Ability to capture details (such as Name, Location, Department/Units which is assigned, Warehouse Area (Shop floor, Reverse, wastage etc.), status etc.)	K							
2.2.4.3	Ability to record the hierarchy between the different warehouses	B							
2.2.4.4	Ability to provide a multi-level location structure (Bin, Bay, Row, Tear)	B							
2.2.4.5	Ability to assign warehouse Officer (e.g.-ES, SK, SA etc.) with contact details	B							
2.2.4.6	Ability to de-activate an existing warehouse / inventory store	B							
2.2.4.7	Ability to display capture storage limits (e.g.-weightage) by warehouse, lot number, or inventory allocation	B							
2.3	**Procurement Planning**								
2.3.1	Ability to support annual procurement planning and budgeting	K							
2.3.2	Ability to define Procurement plan templates/ formats (e.g.- Material plan, service plan etc.) in the System	K							
2.3.3	Ability to upload procurement plans to the system	B							
2.3.4	Ability to generate draft Procurement plan through System based on define criteria (Projects Requirements, Consumption Pattern, Work & Service requirement, Material Status, Previous material movements, Previous Procurement Plan, User Requirements, Item category , Other relevant Plans(Action plan ,) etc.)	K							
2.3.5	Ability to generate consolidated SBU's (e.g.- Unit/Branch /Provincial / Divisional) draft Procurement plan through the System	K							
2.3.6	Ability to edit the relevant SBU's (e.g.- Unit/Branch /Provincial / Divisional) procurement plan through the System	K							
2.3.7	Ability to ensure completeness of Unit level/Branch level/Divisional level procurement plans	K							
2.3.8	Ability to define single level or multiple level approval hierarchy (eg- for Procurement Plan (Unit/Branch/Divisional etc.) based on customizable criteria's	K							
2.3.9	Ability to forward the approved Divisional procurement plan for Budget Approval through the System	K							
2.3.10	Ability to maintain multiple versions of a draft/revised Procurement plan	B							
2.3.11	Ability to generate alert messages through the system regarding								
2.3.11.1	*Notifying to initiate procurement plan preparation*	B							
2.3.11.2	*Notifying to approve the procurement plan*	B							
2.3.11.3	*Delays happen during procurement plan preparation process*	B							
2.3.11.4	*After approving of procurement plan*	B							
2.4	**Purchase Requisition (PR)**								
2.4.1	Ability to automatically generate PR based on Procurement plan, Re Order level, Expiry of contract etc.)	K							
2.4.2	Ability to generate multiple types of PR for each Organization unit (Division/Branch/Unit/Sub Units.)	K							
2.4.3	Ability raise a PR based on the MR Note reference	B							
2.4.4	Ability to limit PR creation by users based on the predefined Authority levels.	B							

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			STDD	WA	MOD	TTP	NA		
2.4.5	Ability to raise PR for the following categories								
2.4.5.1	*Goods (Capex/ Opex)*	K							
2.4.5.2	*Services (Outsourcing/ Contracting)*	K							
2.4.5.3	*Works*	K							
2.4.5.4	*User defined*	B							
2.4.6	Ability to validate PR types with the item category (e.g.- For Capital item PR, validate whether the item is a Capital item)	B							
2.4.7	Ability to automatically generate a system define Unique PR number with a sequential order.	K							
2.4.8	Facility to have a separate PR sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.) and PR Category wise.	D							
2.4.9	Ability to request multiple line items in a single PR.	B							
2.4.10	Ability to select an item/service using specific code, name etc. availability of item masters in a dropdown List of Values(LOV) with multiple search criteria's.	B							
2.4.11	Ability for system to pick up pre-defined master data into PR automatically based on the item/ service code entered by the user.	B							
2.4.12	Ability to overwrite pre-defined master data.	B							
2.4.13	Ability to view the material availability/stock status through the System. (In same or other organization unit (Unit/Branch).)	K							
2.4.14	If required material is not available, ability to suggest alternate material through the system.	D							
2.4.15	Ability to display lead time for purchasing material by material number/ material group before creating purchase requisition	B							
2.4.16	Ability to link the purchase requisition to a valid project or cost center	K							
2.4.17	Ability to capture details (such as item details, Required Quantity, UOM, Requested location, Expected delivery date etc.) In the PR for goods.	B							
2.4.18	Ability to capture the fixed asset classification code, description in the PR for capital items	D							
2.4.19	Ability to capture the details such as service number, description UOM (hours, day etc.) in the PR for services	B							
2.4.20	Validate PR cost is within the budget.	B							
2.4.21	Ability to generate notification, when PR value exceeds budget and define follow through action	B							
2.4.22	Facility to save retrieve & edit a PR before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.4.23	Ability to raise and approve PR using mobile devices	B							
2.4.24	Ability to generate alert messages through the system regarding								

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			STDD	WA	MOD	TTP	NA		
2.4.24.1	*Reorder level reach*	B							
2.4.24.2	*Notifying to approve the PR*	B							
2.4.24.3	*Delays happen during PR approval process*	B							
2.4.24.4	*After approving of PR*	B							
2.4.25	Ability to customize single level or multiple level approval hierarchy (e.g.- for PR approval etc.) based on predefined criteria (e.g.- based on value, type of purchase)	K							
2.4.26	Ability to print approved PR.	B							
2.4.27	System should facilitate to automatically close PR once the PO raised.	B							
2.4.28	Ability to automatically cancel/close the generated PR automatically based on the defined tolerance limit (days).	B							
2.4.29	Ability to manually close PR.	B							
2.4.30	Ability to track PR status through the system.	B							
2.4.31	System should facilitate to retain requisition history	B							
2.4.32	Availability of end to end Audit Trail from PR creation to payment.	K							
2.5	**Quotation Process Management (RFQ)**								
2.5.1	Ability to raise RFQ based on								
2.5.1.1	*Purchase Requisition Note*	K							
2.5.1.2	*Directly*	D							
2.5.2	Ability to capture details (Such as PR details item details, date, remarks etc.) in RFQ	K							
2.5.3	Ability to automatically generate a system define Unique RFQ number with a sequential order.	K							
2.5.4	Facility to have a separate RFQ number sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.)	D							
2.5.5	Ability to split purchase requisition line items and generate RFQ's	B							
2.5.6	Ability to select terms and condition during RFQ generation	B							
2.5.7	Ability to select & send (E mail/letter) system generated RFQ's as per Approved Supplier Lists	B							
2.5.8	Ability to print RFQ through the system	B							
2.5.9	Ability to record multiple quotations received from the suppliers against a single RFQ	B							
2.5.10	Ability to capture the supplier wise selling price/Grade/Sample for each item.	B							
2.5.11	Ability to manage and update supplier's quotes for particular items.	B							
2.5.12	Ability to upload documents (Quotations documents etc.) in to the system	B							
2.5.13	Ability to perform quotation scheduling based on pre-defined criteria (eg-Cost.)	D							
2.5.14	Ability to track the instance where Quotation evaluation conduct without receiving minimum of 3 quotation	B							
2.5.15	Ability to prepare Quotation evaluation report based on the predefined template	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.5.16	Ability to customize single level or multiple level approval hierarchy (e.g.- for Quotation evaluation etc.) based on predefined criteria (e.g.- based item type)	K							
2.5.17	Ability to generate alert messages through the system regarding								
2.5.17.1	*Notifying Quotation opening dates*	B							
2.5.17.2	*Delays happen during Quotation submission and evaluation procedure*	B							
2.5.17.3	*After approving of Quotation Analysis*	B							
2.6	**Bid Process Management**								
2.6.1	Ability to raise Bid initiation based on								
2.6.1.1	*Purchase Requisition Note*	K							
2.6.1.2	*Directly*	D							
2.6.2	Ability to capture details (such as PR details, item details, TEC member details, terms and conditions etc.) in Bid initiation	K							
2.6.3	Ability to automatically generate a system define unique Bid initiation number with a sequential order.	K							
2.6.4	Facility to have a separate Bid initiation number sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.), Tender Board wise etc.	D							
2.6.5	Ability to suggest TEC members through the system based on predefined criteria's (Skill level, Member availability, Member location, Previous experience etc.)	B							
2.6.6	Facility to save retrieve & edit a Bid initiation document/Pre-Qualification/Bid document before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.6.7	Ability to define Pre-Qualification / Bid document template in the system	B							
2.6.8	Ability to prepare and upload Pre-Qualification / Bid documents in to the system	B							
2.6.9	Ability to record/ attach item wise specifications required for Bid documents	B							
2.6.10	Ability to select & send (E mail/letters) approved Pre-Qualification/ Bid documents as per Approved Supplier Lists	B							
2.6.11	Ability to automatically publish advertisement in CEB web site after approval of Bid documents	B							
2.6.12	Ability to record payments received against Bids	B							
2.6.13	Ability issue track the Bid document issuance through the system	B							
2.6.14	Ability to upload documents (Bid documents, Bid evaluation report, meeting minutes, Bid Extension/ Amendment/ Addendum details, Bid evaluation results of external parties, etc.) in to the system	B							
2.6.15	Ability to capture clarification (during Bid submission, Bid evaluation) through the system	B							
2.6.16	Ability to resolve clarification through the system	B							
2.6.17	Ability to request for Extension/ Amendment/ Addendum through the system	B							
2.6.18	Ability to capture Bid documents, samples and received Bid bond details through the system.	B							
2.6.19	Ability to track the Bid document and sample status through the system	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.6.20	Ability to record multiple Bids received from the suppliers against a single Bid document	B							
2.6.21	Ability to capture the supplier wise price/Grade/Sample for each item.	B							
2.6.22	Ability to manage and update supplier's Bids for particular items.	B							
2.6.23	Ability to generate Bid opening schedule through the system based on predefined template	B							
2.6.24	Ability to capture member attendance details through the system	B							
2.6.25	Ability to mark the evaluation results in the system based on pre-defined template	K							
2.6.26	System shall forward for approval once all members provide mark their recommendation	B							
2.6.27	Ability to publish selection results for selected procurement types.	B							
2.6.28	Ability to make an appeal through the system	B							
2.6.29	System should validate whether required payment fully received prior to make an appeal.	B							
2.6.30	Ability to capture appeal process details in the system	B							
2.6.31	Ability to customize single level or multiple level approval hierarchy (eg- for Bid initiation document Approval, Pre-Qualification/Bid document approval, Bid Extension/ Amendment/ Addendum, etc.) Based on predefined criteria (eg- based on Amount, item type etc.)	B							
2.6.32	Ability to generate alert messages through the system regarding								
2.6.32.1	*Notifying Bid opening dates*	B							
2.6.32.2	*Delays happen during Bid submission and evaluation procedure*	B							
2.6.32.3	*After approval of pre-qualification document/ Bid documents*	B							
2.6.32.4	*Clarifications resolved*	B							
2.6.32.5	*Extension/ Amendment/ addendum done*	B							
2.6.32.6	*Completion of Appeal process*	B							
2.6.32.7	*Prior to Expiry of Bid bond*	B							
2.7	**Purchase Order (PO)**								
2.7.1	Ability to raise PO based on								
2.7.1.1	*PR Note*	K							
2.7.1.2	*RFQ number*	K							
2.7.1.3	*Bidding number*	K							
2.7.2	Ability to generate repeat Order based on pre-defined criteria's	K							
2.7.3	Ability to generate different types of PO's. (Local, Foreign, Service, Fixed Asset etc.)	K							
2.7.4	Ability to capture details such (Supplier details, item details, item quantity, Request date, Delivery date, Payment terms, Terms and Conditions, Remarks etc.) in PO	K							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.7.5	Ability to automatically generate a system define Unique PO number with a sequential order.	K							
2.7.6	Facility to have a separate PO number sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.)	D							
2.7.7	Ability to apply more than one delivery dates for a single PO as per partial deliveries	K							
2.7.8	Ability to enter multiple cost code for a line item (e.g., an item maybe split between one or more capital works projects or cost accounts)	B							
2.7.9	Ability to capture supplier discounts in the PO details	B							
2.7.10	Ability to capture taxes and duties for multiple/individual items in the PO details	K							
2.7.11	Ability to attach documents and specifications to PO	B							
2.7.12	Ability to apply more than one delivery addresses for a single PO	B							
2.7.13	Ability to record delivery and shipping information relating to a PO	B							
2.7.14	Ability to capture inspection requirements, acceptance criteria, etc. in the PO	B							
2.7.15	Ability to convert lines of a particular PR/RFQ/Bidding document to multiple purchase Order for different suppliers.	K							
2.7.16	Ability to create one purchase order from multiple requisitions	K							
2.7.17	Ability to generate error message if a PO has already been fully created for a PR. Only a partially fulfilled PR should allow another PO creation	B							
2.7.18	Ability to upload attachments in different formats	B							
2.7.19	Facility to save retrieve & edit a PO before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.7.20	Ability to customize single level or multiple level approval hierarchy (e.g.- for PO approval etc.) based on predefined criteria (e.g.- based on PO type, item type etc.)	K							
2.7.21	Ability to send purchase order through email to the suppliers	B							
2.7.22	Ability to print PO through the system	B							
2.7.23	Ability to maintain purchase order revision history	B							
2.7.24	Ability to hold/restrict of Goods Receiving and invoicing against PO	K							
2.7.25	Ability to record vendor acknowledgement for a purchase order	B							
2.7.26	Ability to maintain the PO status in the system (planned, approval, partial delivery, delivered, invoice received, paid, close etc.) automatically after each major activity as stated.	K							
2.7.27	Ability to automatically cancel/close the generated PO automatically based on the defined tolerance limit (days).	B							
2.7.28	Ability to manually close PO.	B							
2.7.29	Ability to write-off the remaining purchase order balance if Goods receiving is partially completed	B							
2.7.30	Ability to activate the Canceled PO	B							
2.7.31	Ability to capture the PO cancelation /activation reason.	B							
2.7.32	Ability to generate alert messages through the system regarding								

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.7.32.1	*After approving of PO*	B							
2.7.32.2	*Delays happen during Goods Receiving/ Vendor response*	B							
2.8	**Contract management**								
2.8.1	Ability to define contract document templates in the system	K							
2.8.2	Ability to upload documents (e.g.-Performance bond ,Performa invoice , Contract document, payment related documents etc.) in to the system	K							
2.8.3	Ability to attach Contract document to a contractor	B							
2.8.4	Ability to maintain multiple versions of a draft/revised contract document	B							
2.8.5	Ability to create multiple contracts for selected contractor	B							
2.8.6	Ability to create Contract in the system capturing details such as (Contractor name, item/service provide, Contract validity period, Terms and conditions, etc.)	K							
2.8.7	Ability to capture contractor performance details through the system	K							
2.8.8	Ability to certify for initiate the payment through the system.	K							
2.8.9	Ability to change contract status Hold/ Termination	B							
2.8.10	Ability renew/ extend/amend Contract	K							
2.8.11	Ability to define single level or multiple level approval hierarchy (e.g.- for Contract preparation etc.) based on customizable criteria's	K							
2.8.12	Ability to define access rights to the contract as per user roles (Contract creation, Contract edit, Contract approve, Contract Renewal, Contract details view etc.)	K							
2.8.13	Ability to generate alert messages through the system regarding								
2.8.13.1	*Prior to contract expiry*	B							
2.8.13.2	*Achievement of milestones*	B							
2.9	**Quality Inspection / Factory Acceptance Testing (FAT)**								
2.9.1	Ability to upload documents (such as FAT Schedule, FAT Procedure, FAT report ,Photos etc.) in to the system	B							
2.9.2	Ability to waive of the FAT based on the pre define criteria's (such as financial limits, Type of equipment, Time duration/urgency etc.)	B							
2.9.3	Ability to generate Waive off letter through the system based on pre-defined template.	B							
2.9.4	Ability to allocate funds for conducting FAT	K							
2.9.5	Ability to allocate quality inspection team members.	B							
2.9.6	Ability to suggest quality inspection members through the system based on predefined criteria's (Skill level, Member Availability, Previous experience)	B							
2.9.7	Ability to define testing methods and procedures.	B							
2.9.8	Ability to mark the quality inspection results in the system based on pre-defined template	K							
2.9.9	Ability to update quality inspection results using mobile devices	B							
2.9.10	Ability to generate Delivery Authorization letter through the system	B							
2.9.11	System should validate whether FAT evaluation approved prior to generation of Delivery Authorization letter	B							

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			STDD	WA	MOD	TTP	NA		
2.9.12	Ability to define single level or multiple level approval hierarchy (eg- for FAT member selection, FAT procedure approval, FAT results etc.) based on customizable criteria's	B							
2.9.13	Ability to generate alert messages through the system regarding								
2.9.13.1	*After issuing FAT waive off letter*	B							
2.9.13.2	*After selection of members*	B							
2.9.13.3	*Delays happen during FAT evaluation*	B							
2.10	**Pre Shipping Activities**								
2.10.1	System should facilitate to select an insurance service provider using (section 1.2.2 and 1.2.4 RFQ and PO methods)	K							
2.10.2	Ability to upload documents (such as Insurance certificate, Payment document (LC/TT/DA) etc.) in to the system	B							
2.10.3	Ability to capture multiple freight chargers for a given Bid initiation number	B							
2.10.4	Ability to select a freight type (Air, Sea, Courier)	K							
2.10.5	Ability to define multiple templates for different freight type in the system	B							
2.10.6	Ability to generate air freight approval letter through the system	B							
2.10.7	Ability to generate request for quotation letter (for CSC) through the system	B							
2.10.8	Ability to notify if CSC freight charge is higher than Supplier provided freight charge	B							
2.10.9	Ability to generate freight award letter through the system	B							
2.10.10	System should verify whether waive off letter upload to the system in case of sea freight Award to the Supplier	B							
2.10.11	Ability to define multiple payment application templates for different payment types (LC/TT/DA etc.) in the system	B							
2.10.12	Ability to generate payment application forms (LC/TT/DA etc.) through the system.	K							
2.10.13	Ability to capture details (such as Beneficiary details, Payment type, Period, Bank details, Currency, Terms and conditions, Contract details, LC establishment date etc.) in the payment application	K							
2.10.14	Ability to monitor payment (LC/TT/DA etc.) utilization against a predefined limit	K							
2.10.15	Ability to define single level or multiple level approval flow (eg-for Payment application approval, LC funds availability) based on customizable criteria's	K							
2.11	**Custom Clearance**								
2.11.1	Ability to define document check list in the system	K							
2.11.2	Ability to upload documents (Bill of lading, Commercial invoice, packing list, bank memo, Duty exemption letter, Cust Dec, Special approval granting document etc.) in to the system	K							
2.11.3	Ability to capture shipping details such as Item details, PO/Award letter number, Date of receipt of original documents to bank, Date of clearing of clearance of shipment etc. in the system	B							
2.11.4	Ability to generate Duty exemption letter based on the pre-defined templates	B							
2.11.5	Ability to generate Request for shipping guarantee through the system	B							

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2.11.6	Ability to generate Statement of payment through the system based on the pre-defined templates.	B							
2.11.7	Ability to automatically calculates delivery times and dates and prompt delays and deviations occurs	B							
2.11.8	Ability to generate cargo release approval letter based on the pre-defined templates.	B							
2.11.9	System should validate the receiver of required document during generation of Duty exemption letter, Statement for initial payment, Cargo release document etc.)	B							
2.11.10	Ability to identify the status of each shipment for a given day and period	B							
2.11.11	Ability to generate alert messages through the system regarding								
2.11.11.1	*Define milestones in the contract*	B							
2.11.11.2	*After selection of clearing agents/CNF*	B							
2.11.11.3	*Delays happen in the shipment*	B							
2.12	**Goods Receiving**								
2.12.1	Ability to receive goods against following documents								
2.12.1.2	*Purchase Order/ Award letter*	K							
2.12.1.3	*Stock Transfer (Transfer Order)*	K							
2.12.1.4	*Material Requisition Note*	K							
2.12.1.5	*Material Return Note*	K							
2.12.1.6	*Direct receive (Without System generated reference)*	B							
2.12.2	Ability to capture the details such as (GRN date, Reference number, invoice number, warehouse location, remarks, etc.) about the good received details	K							
2.12.3	Ability to automatically suggest the warehouse location based on the space available and item type	D							
2.12.4	Ability to record location details pertaining to warehouse, Bay, Row, Rack, Bin	B							
2.12.5	Ability to capture the quality details during receiving (Quantity received, Quantity damaged, Quantity accepted etc.)	K							
2.12.6	Ability to automatically generate a unique GRN number with a sequential Order.	K							
2.12.7	Ability to define a separate GRN sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.) and GRN Category wise.	D							
2.12.8	Ability to automatically record in the Asset Registry during capital item GRN process.	K							
2.12.9	Ability to generate automatic GL postings on receipt of goods	K							
2.12.10	Ability to raise GRN's for full or partial PO quantity	K							
2.12.11	Ability to generate error message if a GRN has already been fully created for a PO. Only a partially fulfilled PO should allow another GRN creation	B							
2.12.12	Ability to raise and approve GRN using mobile device	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.12.13	Ability to create one GRN from various consignment receipt	B							
2.12.14	Ability to receive goods at zero cost (e.g.- spares)	B							
2.12.15	Ability to move receive items to different warehouses (e.g.-Received damaged items after job completion to disposable warehouse etc.)	B							
2.12.16	System should facilitate to cannibalize some materials into parts and identify them as separate cost items (e.g.-Received damaged items after job completion to disposable warehouse)	D							
2.12.17	Ability to facilitate batch wise receiving of goods	B							
2.12.18	Ability to allow cost of freight, insurance and miscellaneous charges as required to be added to the purchase price	D							
2.12.19	Ability to record the material overheads, the costs other than the cost of material like transportation should be booked under the cost of material	D							
2.12.20	System should facilitate to upload relevant documents (e.g.-invoice, items list, Quality etc.) during Goods Receiving.	B							
2.12.21	Ability to receive goods at inspection stage without updating GL stock account	K							
2.12.22	Ability to reject a consignment receipt and still enter the details into the system	K							
2.12.23	Ability to record the details of the rejected material with a reasoning.	B							
2.12.24	Ability to raise a debit note when the packing slip differs in quantity from the receipt	K							
2.12.25	System should facilitate to maintain tolerance limits for over purchases higher than PO/Award letter	B							
2.12.26	Ability to capture and flag early/late receipts of goods from supplier	B							
2.12.27	Ability to attach barcode, RFID tags in items	D							
2.12.28	Ability to highlight any variance happens during goods receiving against the reference document (e.g.-Purchase Order/ Award letter etc.)	B							
2.12.29	Facility to save retrieve & edit a GRN before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.12.30	Ability to customize single level or multiple level approval hierarchy (e.g.-Goods receive) based on predefined criteria (e.g.- Excess stocks received more than PO quantity etc.)	B							
2.12.31	Ability to generate alert messages through the system regarding								
2.12.31.1	*After receiving of goods*	B							
2.12.31.2	*Not received/Confirmed Orders*	B							
2.12.31.3	*Notifying Material requester about return of goods*	B							
2.13	**Quality inspection during Goods Receive**								
2.13.1	System should facilitate quality inspection process in all types of goods receipts (Procurement, Stock Transfer, Material return, etc.)	K							
2.13.2	Ability to create quality inspection lots/batches per each goods receipt depending on pre-defined criteria (the quantity/volume.)	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.13.3	Ability to allocate quality inspection team members based on predefined criteria.	B							
2.13.4	System should suggest member details for quality inspection based on define criteria's	D							
2.13.5	Ability in defining quality sampling procedures (amounts and tolerance for sampling, condition etc.)	D							
2.13.6	Ability to define equipment in use for quality testing process.	D							
2.13.7	Ability to define testing methods and procedures.	D							
2.13.8	Ability to record test results of each sample and obtain conclusions automatically.	D							
2.13.9	Ability to mark the quality inspection results in the system based on pre-defined templates	B							
2.13.10	Ability to automatically release the quality accepted material quantity to the usable stocks.	B							
2.13.11	Ability to automatically release the quality rejected material quantity to the unusable stocks.	B							
2.13.12	Ability to keep the received goods in a separate location until the quality inspection is completed.	B							
2.13.13	Ability to restrict usage of goods which are not inspected for quality.	B							
2.13.14	Ability to obtain cost incurred in the quality process for each shipment/per month/week…etc.	D							
2.13.15	Ability to evaluate and rank vendor according to the goods supplied.	B							
2.13.16	Ability to generate quality reports per material/shipment.	B							
2.13.17	Ability to customize single level or multiple level approval hierarchy (e.g.- Quality inspection) based on predefined criteria (e.g.- item type etc.)	K							
2.13.18	Ability to generate alert messages through the system regarding								
2.13.18.1	*After receiving of goods (initiate quality inspection)*	B							
2.13.18.2	*Delays in quality inspection*	B							
2.13.18.3	*Completion of quality inspection*	B							
2.14	**Material Requesting (MR) Process**								
2.14.1	Ability to raise a MR Note using								
2.14.1.1	*Job number/work Order number*	K							
2.14.1.2	*User Defined*	B							
2.14.2	Ability to capture the details such as (job number, item details, requested quantity, required date, required location, Reference number etc.) about the Requesting of Materials	K							
2.14.3	Ability to automatically generate a unique MR Note number with a sequential Order.	K							
2.14.4	Ability to define a separate MR number sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.)	D							
2.14.5	System should facilitate to raise MR based on the approved job/work order number.	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.14.6	System should populate item details in the job/work order once job/work order number is selected	B							
2.14.7	Ability displays pending MR details during requesting of Materials	B							
2.14.8	Ability to check the item availability through the system.	B							
2.14.9	If required material is not available, ability to suggest alternate material through the system.	D							
2.14.10	Facility to save retrieve & edit a MR Note before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.14.11	Ability to print approved MR Note.	B							
2.14.12	Ability raise a PR based on the MR Note reference	B							
2.14.13	Ability to raise and approve MR using mobile devices	B							
2.14.14	Ability to reserve requested materials after approving MR	B							
2.14.15	Ability to automatically cancel/close the generated MR automatically based on the defined tolerance limit (days).	B							
2.14.16	Ability to manually close MR.	B							
2.14.17	Ability to customize single level or multiple level approval hierarchy (eg- for MR approval etc.) based on predefined criteria (eg- based item type)	K							
2.14.18	Ability to generate alert messages through the system regarding								
2.14.18.1	*Notifying to approve the MR Note*	B							
2.14.18.2	*After approving of MR Note*	B							
2.14.18.3	*Pending MR*	B							
2.15	**Goods issue (GI) Process**								
2.15.1	Ability to issue goods against following documents:								
2.15.1.1	*MR Note*	K							
2.15.1.2	*Stock Transfer (Transfer Order)*	K							
2.15.1.3	*User Defined*	B							
2.15.2	Ability to capture the details such as (item details, issuing quantity, goods issuing date etc.) about the issuing of Goods	K							
2.15.3	Ability to automatically generate a system define Unique GI number with a sequential order.	K							
2.15.4	Facility to have a separate GI number sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.) and Goods Issue Category wise.	D							
2.15.5	Ability to create user defined different types of issues	B							
2.15.6	Ability to map different types of issues to different types of GL accounts	K							
2.15.7	Ability to track partial issues against MR	B							
2.15.8	Ability to verify the available quantity of the goods before issuing goods	B							
2.15.9	Ability to validate issuing quantity with the requested quantity	B							
2.15.10	Ability to restrict any issues resulting in negative quantity	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.15.11	Ability to update of stock account automatically upon issue of goods from stores	B							
2.15.12	Ability to move items to Transit stores during Good issues against GTN	B							
2.15.13	Ability to issue goods multiple times against one document	B							
2.15.14	Ability to raise and approve GI using mobile devices	B							
2.15.15	Ability to generate the picking list capturing details such as (Warehouse Location code, Item No, [Bay, Row, Rack, Bin number with relevant quantities)]	B							
2.15.16	Ability to update the respective bin quantities upon generating the GI Note	B							
2.15.17	Ability to define tolerance levels for goods issuing for specific materials	B							
2.15.18	Ability to reconcile value of stocks issued with works orders completed and in progress.	B							
2.15.19	Ability to customize single level or multiple level approval hierarchy (e.g.- for goods issuing) based on predefined criteria (e.g.- based item type)	B							
2.15.20	Ability to generate alert messages through the system regarding								
2.15.20.1	*Notifying to issue Goods on a reserved date*	B							
2.15.20.2	*Delays happen during GI*	B							
2.15.20.3	*Issue goods lesser than Minimum Order Quantity*	B							
2.15.20.4	*After issuing of goods*	B							
2.16	**Goods Transfers (GTN)**								
2.16.1	Ability to raise Goods transfer notes between SBU's or inventory locations	B							
2.16.2	Ability to transfer inventory between sub-inventories	B							
2.16.3	Ability to view the item availability in other stores	B							
2.16.4	Ability to capture details (such as Suppling warehouse, item details, Quantity etc.) during Goods transfer	K							
2.16.5	Ability to automatically generate a system define Unique GTN number with a sequential order.	K							
2.16.6	Facility to have a separate GTN sequence for Business Unit wise (Division/ Branch/ Unit/ Sub Units.)	D							
2.16.7	Ability to raise and approve GTN using mobile devices	B							
2.16.8	Facility to save retrieve & edit a GTN before being sent for Approval. Post Approval, it should not be editable for the maker but by the approver. Should be available for editing by maker when rejection by approver or withdrawal of approval.	K							
2.16.9	Ability to customize single level or multiple level approval hierarchy (e.g.- GTN approval etc.) based on predefined criteria (e.g.- based item type)	K							
2.16.10	Ability to generate alert messages through the system regarding								
2.16.10.1	*Notifying to approve the GTN*	B							
2.16.10.2	*After approving of GTN*	B							
2.17	**Material Return to Vendor**								

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.17.1	Ability to raise Material Return Note against								
2.17.1.1	*Goods Receive Note*	K							
2.17.1.2	*Purchase Order*	K							
2.17.1.3	*User Defined*	B							
2.17.2	Ability to capture details such as (item details, return quantity, date, reason, reference number etc.) in Material Return Note to Vendor	K							
2.17.3	Ability to transfer damage items to a separate store location (e.g.- Damage store).	K							
2.17.4	Ability to generate notification message during moving an item with in the warranty period to damaged stores	B							
2.17.5	Ability to raise Material Return Note to supplier if the item is in damaged stores	B							
2.18	**Gate Pass**								
2.18.1	Ability to raise gate pass against								
2.18.1.1	*Good Issue Note*	B							
2.18.1.2	*Return Note*	B							
2.18.2	Ability capture delivery details (Transportation details, item details, date, Carrier details etc.) during gate pass generation	B							
2.18.3	Ability to customize single level or multiple level approval hierarchy (eg- for Gate pass release) based on predefined criteria (eg- based item type)	B							
2.18.4	Ability to print gate pass	B							
2.18.5	Ability to track Gate pass status (Open/Delivered etc.)	B							
2.19	**Physical Verification & Inventory Adjustments**								
2.19.1	Ability to define physical counting cycle dates in the system for different SBU, locations	K							
2.19.2	Ability to specify a detail time line or a date for different location to perform inventory count	B							
2.19.3	Ability to allocate members for the stock verification	B							
2.19.4	Ability to freeze inventory in the system for physical stock verification	K							
2.19.5	Ability to Freeze inventory based on								
2.19.5.1	*location wise*	B							
2.19.5.2	*item Category wise*	D							
2.19.6	Ability to generate snapshot of the inventory position on hand by freezing inventory movements	B							
2.19.7	Ability to generate item master list for physical stock verification	B							
2.19.8	Ability to capture details such (as warehouse, item, Batch, count, status, remarks etc.) during inventory verification	K							
2.19.9	Ability to enter actual quantity in the system by physically verifying stocks	B							
2.19.10	Ability to automatically update the actual quantity using RFID/Barcode system	D							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.19.11	Ability to compare the snapshot position with the actual inventory on hand and generate report about mismatching items	B							
2.19.12	Ability to unfreeze the inventory movement and proceed to continue upon higher approval	B							
2.19.13	Ability to capture recount details (e.g.- item, count etc.)	B							
2.19.14	Ability to select members to provide reasoning's for inventory mismatches	B							
2.19.15	Ability capture reasons for inventory mismatches	B							
2.19.16	Ability to initiate disciplinary process if reasoning is not satisfied.	B							
2.19.17	Ability to record the adjustment related to the differences between on-hand quantity and physically verified quantity	B							
2.19.18	The system should allow to clear/ move out items in the selected store types (e.g.- disposal store)	B							
2.19.19	Ability to generate trend analysis for inventory mismatch items	D							
2.19.20	Ability to customize single level or multiple level approval hierarchy (e.g.- for member allocation for stock verification, Stock adjustment etc.) Based on predefined criteria (e.g.- based item type, Variance etc.)	K							
2.19.21	Ability to generate alert messages through the system regarding								
2.19.21.1	*Notifying counting cycle dates*	B							
2.19.21.2	*Notifying to approve the member allocation,*	B							
2.19.21.3	*After selection of team/ members*	B							
2.19.21.4	*Delays happen during stock verification process*	B							
2.19.21.5	*Explain reasoning for inventory mismatches*	B							
2.20	**Disposal**								
2.20.1	Ability to transfer/move items from warehouse (e.g.- usable stores to disposable location)	K							
2.20.2	Ability to define disposal cycle dates in the system for different SBU, locations, items	B							
2.20.3	Ability to define maximum and minimum item quantity available in the selected store (e.g.- Quality inspection store, disposal store etc.)	B							
2.20.4	Ability to allocate members for disposal process	B							
2.20.5	Ability to generate disposable item list through the system	B							
2.20.6	Ability to define survey report and board of survey templates in the system	B							
2.20.7	Ability to enter survey/inspection details to the system	B							
2.20.8	Ability to create board paper through the system	B							
2.20.9	Ability to convert survey report details to board paper template after receiving approval for survey report	B							
2.20.10	Ability to clear/move out disposal items from the System	K							
2.20.11	The system should allow to clear/ move out items in the selected store types (e.g.- disposal store)	B							
2.20.12	Ability to update the relevant Journal Entries based on clearing/moving out of items from the system	K							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.20.13	Ability to customize single level or multiple level approval hierarchy (e.g. - for member allocation for Disposal, Survey results, Board paper Approval etc.) based on predefined criteria (e.g.- based item type)	K							
2.20.14	Ability to generate alert messages through the system regarding								
2.20.14.1	*Notifying to initiate disposal process (based on counting cycle dates, exceeding Maximum quantity limit)*	B							
2.20.14.2	*Notifying to approve the member allocation,*	B							
2.20.14.3	*After selection of team/ members*	B							
2.20.14.4	*Delays happen during disposal process*	B							
2.21	**Integration and Transaction Processing**								
2.21.1	Online Integration with the General Ledger Modules	K							
2.21.2	Online Integration with the Asset management Module	K							
2.21.3	Online integration with the Finance Module	K							
2.21.4	Online integrate with HR Module	K							
2.21.5	integrate with internal existing systems	K							
2.21.6	Integration to bar code / RFID management system (ability to capture item details via barcode scanner)	B							
2.21.7	Option to transfer summary or detail costs to the general ledger at the organization level	B							
2.21.8	Direct / Online integration with the weight bridge	B							
2.21.9	Integration to SMS platform/email server	B							
2.21.10	Integration to internet payment gateway	B							
2.22	**Reports and Inquiry**								
2.22.1	Ability to provide inquiry and reporting capability for Purchase requisitions details (PR number wise , Date range wise , status wise , Location)	K							
2.22.2	Ability to provide inquiry and reporting capability for Request for Quotation details	K							
2.22.3	Ability to provide inquiry and reporting capability for Bidding details (Bid number wise, Date range wise , status wise , Location wise)	K							
2.22.4	Ability to provide inquiry and reporting capability for Purchase orders details (PO number wise , Date range wise , status wise , Location)	K							
2.22.5	Ability to provide inquiry and reporting capability for GRN details. (GRN number wise, Date range wise , status wise , Location)	K							
2.22.6	Ability to provide inquiry and reporting capability for purchase returns details (Purchase Return Note number wise, Date range wise, status wise , Location wise)	K							
2.22.7	Ability to provide inquiry and reporting capability for Material return details (MRN number wise, Date range wise, status wise , Location wise)	K							
2.22.8	Ability to provide inquiry and reporting capability for transfer details (item, item type, batch wise, warehouse wise)	B							
2.22.9	Ability to provide inquiry and reporting capability for quality check status base on supplier wise, item wise, item type wise, warehouse wise	B							

Serial No	Criterion	K / B / D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
2.22.10	Ability to provide inquiry and reporting capability for inventory transactions by item, item type, supplier, location, and transaction type	K							
2.22.11	Ability to inquire on the accounting entries associated with the receipts/issues	K							
2.22.12	Ability to provide inquiry and reporting capability for inventory status by item, item type, supplier, location, and transaction type.	K							
2.22.13	Ability to inquire on inventory transfers by transfer note and item batch	B							
2.22.14	Ability to inquire about on-hand stock availability (Warehouse wise / item wise / WIP / Contractor)	K							
2.22.15	Ability to generate stock overview report showing goods received, goods issued and inventory status for all items in a store	K							
2.22.16	Ability track inventory by the original GRN relating to different location and to generate ageing of inventory for all types of inventory categories	B							
2.22.17	Ability to provide inquiry and reporting capability for slow moving and obsolete inventory	B							
2.22.18	Ability to provide capability to track items by lot or batch number/barcode number	B							
2.22.19	Ability to provide inquiry and reporting capability for scrapped, removed, expired items (supplier, warehouse wise)	K							
2.22.20	Ability to provide inquiry and reporting capability for goods in transit details (Transfer number, location, item wise)	B							
2.22.21	Ability to generate inventory valuation reporting by item, item type, supplier, location	K							
2.22.22	Ability to provide inquiry and reporting capability for stock adjustment (Based on reason, warehouse wise, Date range wise)	B							
2.22.23	Ability to provide inquiry and reporting capability for scrap items available in a storage location (Based on warehouse wise, Date range wise)	B							
2.22.24	Ability to inquire on price revision.	B							
2.22.25	Ability to track vendor's history (Quality of delivery, Outstanding orders etc.)	B							
2.22.26	Ability to generate detailed item wise report of material information	B							
2.22.27	Ability to generate stock consumption statistics based on goods issue for the items over time	B							

3. Project Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.1	**Master**								
3.1.1	***Project Definitions/Structure***								
3.1.1.1	Ability to define project types (such as *construction, augmentation, etc.*).	K							
3.1.1.2	Ability to define portfolio and project hierarchy.	K							
3.1.1.3	Ability to maintain master level data project wise, including: *Project Name, Project Number/Version, owning division/province/district, Sub-project, Program/Project Title, Company Name, Bill of Quantity (BOQ), Type of Work (e.g., power plant construction, line construction, substation construction), Tender Reference, Reference and Attachments (e.g. Acceptance letter, etc.), Project Contract, Project Groups, etc.*	K							
3.1.1.4	Ability to define project dates covering: *Approval date/Actual commencement date, planned start date, Actual start date, Planned completion date, Other user defined dates, Project completion date, etc.*	K							
3.1.1.5	Ability to define project status (such as; *active, inactive, hold, cancelled, etc.*)	K							
3.1.1.6.	Ability to define funding sources including external funding agencies such as ADB, JICA, World Bank, etc.	K							
3.1.1.7	Ability to define funding codes (e.g., number 11 - budget, 12- loan, 13 - grant, 14 - government funding etc.)	B							
3.1.1.8	System should facilitate multiple units of measurements: Volume/Distance/Weight/Time (e.g. Cubic Meters, Liters, KM, Kg, Hours, Days, etc.)	B							
3.1.1.9	Facilitate creation of user defined fields for functions including Projects, Documents, WBS, Activity, Resource, Risk, formulas, etc.	K							
3.1.1.10	Ability to define and assign calendars at project/activity/resource levels.	B							
3.1.2	***Project Documentation***								
3.1.2.1	Ability to tie-up all documents related to a project in the relevant control folder.	K							
3.1.2.2	Ability to track every document in the project - to trace who is the current owner of the file/document, for how long and why.	K							
3.1.2.3	Comprehensive project database to capture data pertaining to all aspects of projects.	B							
3.1.2.4	Support attachments such as drawings, specs, instructions etc., in formats such as PDF, CAD, Visio, text/flat files, PPT, XLS, DOC, RTF, TIF, GIF, JPEG etc.,	K							
3.1.3	***Coding & Naming Conventions***								
3.1.3.1	Support auto-generation of project codes with predefined codification, and preserve uniqueness.	K							
3.1.3.2	Ability to support alpha-numeric characters for project codes.	K							
3.1.3.3	Ability to define a coding convention that can reflect the structure of the project.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.1.3.4	Ability to re-use defined coding convention as template for other project definition.	B							
3.1.4	***Template Creation (Emails, Activities, Reports, etc.)***								
3.1.4.1	Ability to facilitate template library for project tasks (charter, issue log, request forms, etc.), which could be user defined.	B							
3.1.4.2	Ability to define templates for WBS based on projects types.	B							
3.1.4.3	Ability to define standard milestone templates based on projects types.	B							
3.1.4.4	Support for template based feasibility reports, detailed project reports, etc.	B							
3.2	**Project Planning & Scheduling**								
3.2.1	***Project Management Plan***								
3.2.1.1	Ability to capture Ad hoc project requirements.	K							
3.2.1.2	Ability to integrate with project management tools for project planning purposes.	D							
3.2.1.3	Ability to index and categorize proposals for new projects to keep track of the stage at which a new proposal presently is or to get a view of all the proposed projects.	B							
3.2.1.4	Ability to identify project based on proposals for each year, for each division/branch/unit.	B							
3.2.1.5	Ability to create planning support repository which will consist of documents related to standard templates of resources, risk and effective mitigation strategies, learning from other projects, other historical data etc.	B							
3.2.1.6	Ability to revise project plans with relevant approvals and versioning.	B							
3.2.1.7	Ability to suggest financing plan at the project planning stage.	B							
3.2.1.8	Ability to include schedule for material management at the project planning stage.	B							
3.2.1.9	Ability to prioritize projects for commencement based on pre-defined criteria.	B							
3.2.1.10	Ability to support single/multiple approval levels for project plans.	K							
3.2.1.11	Ability to generate post approval alerts to relevant stakeholders of the project once plan is approved.	B							
3.2.1.12	Ability to configure user defined alerts for planning related tasks, for multiple platforms (mobile, system & email).	B							
3.2.1.13	Ability to automatically trigger system alerts when plans are delayed, with escalation to higher authority.	B							
3.2.2	***Project Creation***								
3.2.2.1	Ability to create a new project based on predefined template or existing projects.	K							
3.2.2.2	Ability to create project profile - Name, type (internal, turn-key), project type (construction, augmentation, etc.) capacity, mode of funding (funding source), project cost center, location, beneficiaries, work breakdown structure, major milestones, timelines, technical details, financial details, etc.	K							
3.2.2.3	Ability to create a project cost profile for recording different types of project related costs.	K							
3.2.2.4	Ability to capture project specific taxes or tax exemptions.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.2.2.5	Ability to associate multiple funding sources for a given project: *Local funded, internationally funded (ADB, JICA, etc.), capital and grants, etc.*	K							
3.2.2.6	Ability to generate project id that represents the type of project, location (division/district/province) and other user defined needs.	K							
3.2.2.7	Ability to select members of PMU based on pre-defined technical requirements of relevant project.	D							
3.2.2.8	Ability to assign project owner, project manager, accountable person and key stakeholders.	K							
3.2.2.9	Ability to upload necessary project documents during creation such as feasibility report, surveys, design documents, etc.	B							
3.2.2.10	Ability to generate draft estimate based on project plan/proposal and capture user amendments to estimate at the time of project creation.	B							
3.2.2.11	Ability for single/multiple level approvals with alerts from the system requesting new project approval, fund allocation and notification after approval.	B							
3.2.2.12	Ability to trigger alerts to all relevant members of the project team once project initiation/creations is approved and project is created.	B							
3.2.2.13	Ability to create pre-award schedule (timeline for NIT, pre bid, bid opening and bid evaluation).	K							
3.2.2.14	Facilitate automatic tracking of the tendering process and update relevant activity status of the project.	B							
3.2.3	***Resource Management***								
3.2.3.1	Ability to capture all people resource categories and allows segmentation based on geography, organizational unit, resource pool, etc.	D							
3.2.3.2	Ability to capture necessary information for characterizing all individual resources (e.g., skills, certifications, education, rates, interests).	D							
3.2.3.3	Facilitate dashboard view with drill down to individual resource availability (e.g., by time, skill, location, assignments).	B							
3.2.3.4	Ability to add, remove or replace resources within project, with approval.	K							
3.2.3.5	Ability to assign resources to project roles.	K							
3.2.3.6	Ability to create group/teams of resources based on the assigned roles.	B							
3.2.3.7	Ability to assign charges/rates for defined roles or at individual resource level.	B							
3.2.3.8	Ability to allocate individual resources to single/multiple activities or tasks.	K							
3.2.3.9	Ability to track and allocate Resources across projects.	B							
3.2.3.10	Ability to obtain time-to-complete estimates directly from individuals (which may provide more accurate availability estimates).	B							
3.2.3.11	Ability to support a formal resource request system (preparation of requests, aggregate views by demand categories and over time, etc.).	B							
3.2.3.12	Ability to support approval processes for the assignment of resources.	B							
3.2.3.13	Ability to perform resource leveling and trigger approvals and alerts for any delays due to leveling.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.2.3.14	Ability to track resource over- and under-utilization and redundant resources across projects.	B							
3.2.3.15	Ability to request for material resources using Project Id.	B							
3.2.3.16	Ability to track status of material issues and delivery based on material requests for a particular project.	B							
3.2.4	***Time Tracking***								
3.2.4.1	Facilitate capturing of time sheet of resources in respective projects.	K							
3.2.4.2	Facilitate web/mobile based capturing of time sheets.	B							
3.2.4.3	Ability to enter Off-line timesheet entry.	D							
3.2.4.4	Ability to capture vacation, time-off, overtime, and sick days.	B							
3.2.4.5	Ability to attach and append notes to the timesheet.	D							
3.2.4.6	Ability to approve or reject entered time sheet by relevant higher authority at multiple levels in project.	K							
3.2.5	***Work Breakdown Structure (WBS)***								
3.2.5.1	Ability to capture WBS element details such as, *name, description, type, responsible person, estimated level of effort, priority, requested start date, requested due date, scheduled start date, scheduled completion date, indication flags, user defined fields, etc.*).	K							
3.2.5.2	Ability to allow the user to define WBS that divides the project into Levels, Phases and Layers.	K							
3.2.5.3	Ability to allow the user to define WBS from template.	B							
3.2.5.4	Ability to assign level wise numbering for WBS elements and maintain parent-child relationship.	B							
3.2.5.5	Ability to add/edit/delete WBS elements and move WBS elements up and down the structure.	B							
3.2.5.6	Ability to assign project documents to respective WBS elements.	B							
3.2.5.7	Ability to define milestone WBS elements, and calculate completion percentages based on activity completion and other weights.	B							
3.2.5.8	Ability to define milestones with categorizations like HOLD point, CHECK point, etc., required actions at the milestones, and authority responsible for action.	B							
3.2.5.9	Ability to tag budget control/uncontrolled WBS elements.	B							
3.2.5.10	Ability to define budget thresholds and approving authority for WBS elements.	B							
3.2.6	***Activity Definition/Scheduling***								
3.2.6.1	Ability to create and maintain an activity list project wise.	K							
3.2.6.2	Ability to capture activity attributes such as; *WBS Element, activity information, start date, completion date, resource, status, type (ex: milestone activity) other user defined fields, etc.*	K							
3.2.6.3	Ability to further breakdown activities into discrete steps.	K							
3.2.6.4	Ability to group/sort activities that share common attributes such as resource, responsibility or date.	B							
3.2.6.5	Ability to sequence and schedule activities, to view and edit the predecessors and successors of the activity(s).	B							

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			STDD	WA	MOD	TTP	NA		
3.2.6.6	Ability to enforce and define scheduling rules (e.g. dependent step cannot be executed before required step).	B							
3.2.6.7	Ability to network project activities using networking techniques, illustrated in diagram form.	B							
3.2.6.8	Facilitate project timing and scheduling via Gantt charts and PERT Charts.	B							
3.2.6.9	Ability to provide mobile interface for activity definition and scheduling.	D							
3.2.7	***Cost Estimation & Budgeting***								
3.2.7.1	Ability to record project cost estimates during project set up.	K							
3.2.7.2	Ability to forecast costs based on resource estimates/forecasts.	B							
3.2.7.3	Ability to define cost allocation basis specific to project and apply during project capitalization.	B							
3.2.7.4	Ability to indicate any taxes or tax exemptions specific to projects.	B							
3.2.7.5	Ability to specify/assign funding sources to a single or multiple projects.	K							
3.2.7.6	Ability to maintain budget by Project/Program, Sub project, type of work (construction, augmentation, etc.), Project groups, etc.	B							
3.2.7.7	Ability to spread project costs among sub-project items on a % basis.	K							
3.2.7.8	Ability to spread project costs by different % for different phases of the BOQ.	K							
3.2.7.9	Ability to reallocate costs/budgets.	K							
3.2.7.10	Ability to classify project budget according to task (i.e., inspection, design).	K							
3.2.7.11	Ability to spread project costs in a hierarchical structure, using absolute amounts.	K							
3.2.7.12	Ability to record and update total planned cost estimates based on relevant plan with approval.	B							
3.2.7.13	Ability to create project-wise and department-wise cost estimates for various projects/sub-modules.	B							
3.2.7.14	Ability to display project total/accumulated costs in terms of actual revenue, capitalization costs, future commitments etc.	B							
3.2.7.15	Budget and record project financial activity over the months and multiple number of years.	B							
3.2.7.16	Budget and record project cash balances over the months and multiple number of years.	B							
3.2.7.17	Prior to project funding approval, the system should allow managers and department heads to revise cost estimates in their own area of responsibility.	K							
3.2.7.18	Ability to revise project cost estimates post approval for each revision.	K							
3.2.7.19	Control mechanism to track changes made to the cost estimates after project funding approvals.	B							
3.2.7.20	Ability to maintain multiple versions of budgets, project wise.	B							
3.2.7.21	Ability to highlight total plan budgets, based on notional plans.	B							
3.2.7.22	Facilitate budgetary control mechanisms to verify project fund availability.	K							
3.2.7.23	Ability to trigger approval based on delegation of authority when budget thresholds are exceeded.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.2.7.24	Set up budgets and budget checking based on year-to-date balance and period to date balance.	B							
3.2.7.25	Ability to flag specific projects exceeding the estimated budget for the year.	B							
3.2.7.26	Option to carry forward outstanding commitment to the next year budget.	B							
3.2.7.27	Option to carry forward budget available to the next year for selected project.	B							
3.2.7.28	Facilitate support for multiple currency budgeting.	B							
3.2.7.29	Ability to support NPV (Net Present Value) and SVA (Shareholder Value Added) analysis for projects and sub-projects.	B							
3.2.7.30	Ability to reflect inflation in project cost.	D							
3.2.7.31	System should facilitate copying from existing budget to a new budget.	B							
3.2.7.32	Allow to import budgets from excel and Microsoft project.	B							
3.2.8	***Risk Identification and Planning***								
3.2.8.1	Ability to capture risk details, such as name, type (ex: threat, opportunity), status, owner, probability, cost, category (ex: weather, contractor/supplier, etc.) in a centralized risk register.	K							
3.2.8.2	Ability to identify regulatory risks and probable mitigation strategies.	B							
3.2.8.3	Ability to capture mitigation strategies defined in contracts, for external funding agency agreements, contractors' terms, etc.	B							
3.2.8.4	Facilitate creation of risk response plan that defines actions items to mitigate negative risk/utilize positive risks.	B							
3.2.8.5	Ability to maintain a database stating technological options/solutions available in the market with financial cost involved for risk mitigation/elimination.	D							
3.2.8.6	Ability to assign risks and response plan action items at project level, WBS elements, activity, etc.	B							
3.2.8.7	Ability to quantify project risks and deferral risks.	B							
3.2.8.8	Ability to support evaluation of risk-reward trade off analysis.	D							
3.2.8.9	Ability to add issues and track issue status in activities, WBS elements, and Project as a whole.	K							
3.3	***Project Funding Agency Management***								
3.3.1	Facilitate all procedures and activities required by relevant funding agencies (ADB, JICA, World Bank, etc.) based on standard guidelines.	K							
3.3.2	Ability to maintain relevant funding agency (such as ADB, JICA, World Bank, AFD etc.) checklists (for example payment checklists, reimbursements, etc.).	B							
3.3.3	Ability to capture specific funding agency requirements for LC creation, amendments, payments, request for commitments, disbursement procedures, etc. based on respective agency handbook.	B							
3.3.4	Ability to capture specific funding agency formats for application forms, request letters, disbursement reports, etc.	B							
3.3.5	Ability to capture relevant reports from external entities (ex: ERD report, funding agency reports, disbursement reports, etc.).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.3.6	Ability to define workflows for relevant approvals of funding agency transactions.	B							
3.3.7	Facilitate automatic interest calculations based on the funding agency contract for fund utilization.	D							
3.3.8	Facilitate calculation of commitment fee based on funding agency contract for unutilized funds.	D							
3.3.9	Ability to track defect liability period for a given period based on contract terms and conditions.	B							
3.3.10	Ability to automate reporting and communication needs with funding agencies by generating relevant letters, report formats, etc.	K							
3.4.0	***Project Contractor Management***								
3.4.0.1	Facilitate all procedures and activities required for contract management.	K							
3.4.0.2	Ability to capture specific contract requirements for LC creation, amendments, payments, disbursement procedures, etc. based on respective practical scenarios.	B							
3.4.0.3	Ability to capture relevant reports from external entities (ex: ERD report, disbursement reports, etc.).	B							
3.4.0.4	Ability to define workflows for relevant approval required for transaction.	B							
3.4.0.5	Facilitate automatic interest calculation based on the contract agreements for fund utilization.	D							
3.4.0.6	Facilitate calculation of commitment fee based on contract agreement for unutilized funds.	D							
3.4.0.7	Ability to track defect liability period for given period based on contract terms and conditions.	B							
3.4.0.8	Ability to automate reporting and communication needs with contractor by generating relevant letters, report formats, etc.	K							
3.4.1	***Project Change/ Variation Management***								
3.4.1.1	Ability to create change requests through pre-defined form and generate a trigger to the relevant authorized project officer on changes in project plans.	K							
3.4.1.2	Ability to incorporate security measures to limit changes by project owners to only their respective projects.	K							
3.4.1.3	Ability to capture relevant costs due to change and simulate overall project cost/schedule impact through the system.	B							
3.4.1.4	Ability to upload change proposals and provide approval through the system using a workflow.	B							
3.4.1.5	Facilitate Audit trail for all changes in project plan.	B							
3.4.1.6	Ability to notify requirement to update the contract due to new changes (ex: change in scope, changes in terms & conditions, and any other change).	B							
3.4.1.7	Ability to notify all relevant personnel, departments, external entities, etc. on changes to update the relevant contract/project documents (ex: performance bond, LCs, etc.).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.5	**Project Approvals/Clearance/Design/Feasibility**								
3.5.1	Facilitate creation of feasibility, inspection, survey, fact finding reports and design documents (architectural design, structural design, electrical design, etc.) through pre-defined forms.	B							
3.5.2	Ability to upload necessary documents related to project feasibility, design and approval.	B							
3.5.3	Ability to generate letters for clearance approvals based on predefined templates.	B							
3.5.4	Ability to record land acquisitions/routing clearances and support for template-based formats for different clearances.	B							
3.5.5	Ability to initiate relevant pay-out/compensations through finance for clearance and land acquisitions.	B							
3.5.6	Ability to capture the timelines for clearances, approval and the reason for delay, if any.	B							
3.5.7	Ability to record environmental assessment and surveys undertaken for all projects.	B							
3.5.8	Ability to maintain environmental status at different stages of projects related to equipment, space etc.	B							
3.5.9	Ability to record delay in activities attributed to externalities (Legal cases etc.).	B							
3.5.10	Ability to generate status report on land acquisition for projects underway.	B							
3.5.11	Ability to update draft estimate into a final estimate from the relevant report.	B							
3.6.0	**Project execution**								
3.6.0.1	Ability to revise project schedule including splitting, stretching and crashing of activities.	K							
3.6.0.2	Ability to monitor all projects at consolidated, individual or task level.	B							
3.6.0.3	Ability to monitor projects resource wise, timeline wise, department wise and funding agency wise.	B							
3.6.0.4	Enable project managers to gain insight into the performance of overall projects by identifying relevant project trends and problem areas using powerful analysis tools.	B							
3.6.0.5	Ability to track and capture completion of each module/activity/task/BOQ item, from resources leading to overall commissioning of the project.	K							
3.6.0.6	System should provide mobile or web interface for online project management processes by enabling team members to easily manage, track, and report on their project activities through familiar tools.	B							
3.6.0.7	Ability to identify resources needed to maintain the operability, suitability, and value of the physical assets given their current function (capital/plant renewal).	B							
3.6.0.8	Ability to compute/display estimates of remaining work (days/hours to completion, percent of work completed, end-date forecasting, etc.).	B							
3.6.0.9	Ability to create interruption request through interruption module during project execution	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.6.1	***Bidder/Contractor/Project Quality management***								
3.6.1.1	Ability to record bidder/contractor deliverables, inspection and test results.	B							
3.6.1.2	Ability to incorporate feedback from random inspection teams from corporate office for major projects.	B							
3.6.1.3	Ability to issue compliance certificate, and post quality assurance report based on pre-defined templates based on inspection of bidder/contractor work.	B							
3.6.1.4	Ability to compare quality checks against quality plans and checklist.	B							
3.6.1.5	Ability to maintain online quality assurance during project execution, with mobile alerts for quality deviations.	B							
3.6.1.6	Ability to record and track quality deviations	B							
3.6.1.7	Ability to record manpower deployment by contractors.	B							
3.6.1.8	Enable management to achieve organization-wide compliance and greater efficiencies in project delivery by capturing and deploying best practices and continually improving processes.	B							
3.6.2	*Cost Management*								
3.6.2.1	Ability to capture and manage all related costs such as: Project management cost, Material cost, Human resource cost, Plant and equipment cost, Direct overhead cost, Monetary cost (interest, different types of bank charges), Other overhead cost, Subcontracting cost, etc.	K							
3.6.2.2	Ability to schedule payments against key milestones.	B							
3.6.2.3	Ability to transmit captured cost for accounting purpose.	K							
3.6.2.4	Ability to monitor cost estimates usage against project expenditure to enable an early indication of cost-overrun.	B							
3.6.2.5	Ability to conduct project wise/sub project wise cash flow analysis for a minimum of 5 years.	B							
3.6.2.6	Ability to update financial progress of the project.	K							
3.6.2.7	Ability to track utilization of funds sourced from funding agencies.	B							
3.6.2.8	Facilitation of triggering request letter for fund replenishment for sending to Finance.	B							
3.6.2.9	Ability to notify on all payment related transactions (delays, due dates, remaining time period, etc.) with alerts (including mobile).	B							
3.6.3	***Monitoring***								
3.6.3.1	Facilitate earned value management throughout the project lifecycle for informed decision making.	B							
3.6.3.2	Ability to monitor critical path activities and manage the activity floats.	K							
3.6.3.3	Ability to restrict/allow progress based on completion of required actions at milestones (HOLD point, CHECK point, etc.).	B							
3.6.3.4	Change in individual task completion dates should reflect in overall project milestone dates.	K							
3.6.3.5	Ability to track changes, with reasons, time and moderator.	B							
3.6.3.6	Ability to balance resource usage in a given timeframe, to ensure optimal usage.	B							
3.6.3.7	Ability to generate alerts for slippages at all levels (post and anticipatory).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.6.3.8	Ability to generate alerts for delay in project related payments.	B							
3.6.3.9	Ability to generate alerts for delay in starting/completion of major activities/milestones.	B							
3.6.3.10	Ability to generate alert for initiating notification to regulators on certain issues.	B							
3.6.3.11	Ability to raise alerts for need to liaison with local authorities to resolve external issues.	B							
3.6.3.12	Ability to monitor estimates versus actual: money, services, labor (internal & outsourced), time span, vehicles used, plants used etc.	K							
3.6.3.13	Ability to maintain project percentage completed status (for physical progress) - based on work to date.	K							
3.6.3.14	Ability to highlight and correct errors, if detected in project management with proper notifications and authorization controls.	B							
3.6.3.15	Ability to capture baseline/snapshot of a project at any given time as benchmark to measure project performance.	B							
3.6.4	***Risk Management/Issue Tracker***								
3.6.4.1	Provide a central tracking system that enables project teams to record, assign, and resolve issues and capture related risks pertaining to project.	K							
3.6.4.2	Facilitate web/mobile interfaces for issue logging and tracking.	B							
3.6.4.3	Ability to calculate schedule, parameter uncertainty, perform probabilistic schedule risk analysis, probabilistic cost risk analysis, risk simulations, risk analysis reports.	B							
3.6.4.4	Ability to identify and document current status condition deficiencies/delays and corrective actions against the deficiencies/delays.	B							
3.6.4.5	Ability to classify, rank and prioritize all deficient conditions and delays.	B							
3.6.4.6	Ability to Identify and quantify all deficient conditions/delays in terms of deferred construction, capital repair/plant renewal, and unavailability of resources etc.	B							
3.6.4.7	Ability to classify, rank and prioritize correction projects by severity and anticipated life-cycle.	B							
3.6.4.8	Ability to capture risks pertaining to weather conditions.	B							
3.6.4.9	Ability to escalate issues based on pre-defined time durations to higher authority.	B							
3.6.5	***Project Commissioning***								
3.6.5.1	Ability to generate alerts for project completion and request relevant department/unit to attend for project commissioning.	B							
3.6.5.2	Ability to upload commissioning test results and other related documents into the system.	B							
3.6.5.3	Ability to amend, change project plan based on commissioning results to undertake corrective action (System should be integrate to Quality Management, Project Plan/Change request, Contract Management and Project Risk Management functions and available to amend, update or change define details)	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.6.5.4	Ability to capture project related items and other items (ex: spares, balance material, documents, OEM manuals, drawings, etc.) to be transferred to the relevant department/unit.	B							
3.7.0	**Project Completion**								
3.7.0.1	Ability to indicate all pending payments and pending activities before actual completion of project.	K							
3.7.0.2	Ability to capture and maintain project closure checklist including items such as: handover of deliverables, acceptance sign off, final status report, review reports, termination of contract, staff performance evaluation, etc.	B							
3.7.0.3	Ability to notify relevant higher management, external entities of completion of project through email/letter.	B							
3.7.0.4	Ability to schedule meetings with related stakeholder for closure review, project debrief, etc.	D							
3.7.0.5	Ability to integrate with contract management module for contract closure, compliance checks, etc.	K							
3.7.0.6	Ability to integrate with HR module for staff performance evaluations, payroll, etc.	B							
3.7.1	***Project Capitalization***								
3.7.1.1	Ability to capitalize project once completed/handed over for maintenance to relevant owning departments/divisions.	K							
3.7.1.2	Ability to allocate Capital work in progress (CWIP) costs to relevant BOQ items during capitalization.	B							
3.7.1.3	Ability to integrate with asset management module for project capitalization.	K							
3.7.1.4	Ability to trigger partial/full retention payment on project completion.	B							
3.7.2	***Warranty Maintenance Monitoring***								
3.7.2.1	Ability to track warranty maintenance period within the system.	B							
3.7.2.2	Ability to record and capture defects identified within the period.	B							
3.7.2.3	Ability to trigger workflows for warranty extensions.	D							
3.7.2.4	Ability to track resource and budget requirements for managing minor outstanding project work during warranty maintenance period.	B							
3.7.3	***Closure***								
3.7.3.1	Ability to measure project performance based on captured project baselines.	B							
3.7.3.2	Ability to support verification of project deliverable acceptance criteria.	B							
3.7.3.3	Ability to provide project outcome performance monitoring/reporting (e.g., project payback, benefits tracking).	B							
3.7.3.4	Ability to close project, and provide higher approval for forced termination of projects.	K							
3.7.3.5	Ability to provide security measures, to ensure that the project closure is done by authorized personnel only.	K							
3.7.3.6	Ability to trigger workflows for project extension with higher approval.	B							
3.7.3.7	System should automatically dissolve the project team.	B							
3.7.3.8	System should facilitate creation of a project completion report based on pre-defined template.	B							

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			STDD	WA	MOD	TTP	NA		
3.7.3.9	Ability to remove and archive the project and related documents for future reference.	B							
3.7.3.10	Ability to support project management knowledge database.	B							
3.7.3.11	System should facilitate re-opening of a project with higher approval.	B							
3.7.3.12	Ability to capture all information related to completed construction/project work as part of construction/project history database.	B							
3.8	**Integration**								
3.8.1	Integration with the Materials Management module to trigger material requirement based on Reorder level, availability of material for a project, etc.	K							
3.8.2	Ability to record purchasing of goods and services (purchase orders, goods received notes etc. for goods and services) through the Purchasing system.	K							
3.8.3	Ability to integrate with finance/treasury module for Standard accounting journals for areas such as interest capitalization and overheads, budget, fund allocations on approval of project plan, etc. and facilitating project related payment and receipts.	K							
3.8.4	Integration with contractor management module for triggering payments, amendments, compliance checks/reporting, etc.	K							
3.8.5	Integration with Fixed Asset and maintenance modules on project closure for capitalization and asset maintenance	K							
3.8.6	Integration with Human Resource Management modules for employee skill database, payroll, performance evaluations, etc.	K							
3.8.7	Import/Export to industry standard project managements software applications such as SynerGI /Primavera/Project Scheduler/MS Project etc.	D							
3.8.8	Ability to perform upload/ download of data from and to other systems, e.g., handheld devices or mobile devices for analysis and graphical report/ presentation.	B							
3.8.9	Interface with GIS systems by using OGIS (Open GIS) standards, to enhance the quality of estimation, graphical/geographical location information.	D							
3.9	**Reporting and Inquiry**								
3.9.1	Facilitate ad hoc reporting needs at any given time using a report builder.	K							
3.9.2	Facilitate generation of project report based on a given data range.	K							
3.9.3	Facilitate generation of project reports based on defined periods.	B							
3.9.4	Ability to generate report based on project/jobs stage/phase (Designing, Construction, Energizing, etc.).	B							
3.9.5	Ability to generate reports indicating the distribution of project/jobs by region, district, etc.	B							
3.9.6	Ability to generate work in progress reports project wise, sub project wise, project type wise on periodic basis for on-going projects/jobs.	B							
3.9.7	Ability to inquire project/jobs based on district, electorate, region, etc.	B							
3.9.8	Ability to inquire on projects/jobs based on status, on-going, on hold, completed, etc.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.9.9	Ability to inquire resource requirements for project/jobs in terms of shortages, excess, etc.	B							
3.9.10	Ability to inquire material status report for tasks requiring material from stores.	B							
3.9.11	Ability to inquire unallocated tasks of a project/jobs.	B							
3.9.12	Ability to inquire average waiting times for project/jobs initiation, allocation, id creation, estimate preparation, planning etc.	B							
3.9.13	Ability to inquire number of projects/jobs completed within a given time period based on project type (such as construction jobs completed, etc.).	B							
3.9.14	Capture all project management activities for the entire cycle of projects i.e. from the point of proposal of a new project to final testing & commissioning of the project.	K							
3.9.15	Data on a project must be kept throughout the life of a project.	K							
3.9.16	Ability to generate reports, charts, graphs, etc. similar to standard project management software.	K							
3.9.17	Ability to list all works/projects being carried out during the year along with the fund required. Further, ability to store the following but not limited to: • Data of the spill over works/projects from previous year(s) to be completed during the year. • Data of all the new works/projects to be carried out during the year. • Data of all the new works/projects to be started during the year which will spill over to the next year.	B							
3.9.18	Ability to generate the following: • Report on all projects being carried out during the year. • Report on all the projects held up due to fund/resource constraints in a year. • Report on all projects delayed during a year, along with the reasons for delay.	B							
3.9.19	Support for dash boarding requirements providing holistic view of all active projects and the status with drill down options.	K							
3.9.20	Support for template-based project progress reports to be submitted to different funding agencies like ADB, JICA, World Bank etc.	B							
3.9.21	Ability to generate periodic reports based on different funding agencies.	B							
3.9.22	Ability to generate funding agency wise loan utilization reports.	B							
3.9.23	Ability to generate project/sub project wise loan utilization report.	B							
3.9.24	Ability to generate relevant funding agency disbursement forecast report based on cost planning.	B							
3.9.25	Ability to generate template-based project progress (schedule, financial, etc.) status reports on periodic basis (Monthly, Quarterly, Bi-Annually, Annually etc.) for management review.	B							
3.9.26	Ability to print/remote print project reports at summary level and detailed level and report the completed status of all the projects under execution in the year.	B							
3.9.27	Ability to generate project completion reports, both physical and financial.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
3.9.28	Ability to generate project/job handed over reports, including information of relevant project, handed over to unit, date completed, date handed over, etc.	B							
3.9.29	Facilitate generation of specific reports such as P&L, earned value, cost analysis reporting etc.	B							
3.9.30	Ability to generate report on key project milestones and scheduled payments.	B							
3.9.31	Ability to generate report on estimated time-based expenditure on each project.	B							
3.9.32	Ability to generate report on critical paths in projects.	B							
3.9.33	Ability to generate reports conforming to technical, operational, regulatory, statutory and other business requirements.	B							
3.9.34	Facilitate contractor specific reporting such as: - Contractor work progress report - Contractor invoice wise payment report/cumulative invoice reports - Contractor pending payment report - Contractor related advance payments, retentions, recoveries, etc. - Contractor project milestones delay report - Contractor related LC reports (such as LC remaining amount, utilized amount, etc.)	K							

4. Workflow and Document Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
4.1	**Workflow definition**								
4.1.1	Ability to define standard workflow processes as templates in the system	K							
4.1.2	Ability to define workflows for ad-hoc process requirement	K							
4.1.3	Ability to define automated workflows based on schedule (daily, weekly, monthly, etc.)	B							
4.1.4	Ability to define transition and validation rules for automated workflows	B							
4.1.5	Ability to capture details of defined workflows in the system such as; name, description, number of steps, etc.	B							
4.1.6	Ability to generate a unique system generated code (alpha numeric) for each workflow that reflects the main purpose/type of the workflow	B							
4.1.7	Ability to maintain multiple versions of the modeled workflow	D							
4.1.8	Ability to create variants of template-based workflow processes	D							
4.1.9	Ability to change workflows with higher approval	B							
4.2.0	**Workflow Task Definition**								
4.2.0.1	Facilitate selection of various types of workflow tasks such as: general activity, web-based activity, notification/alert, form activity, approval decision, conditions, loops, etc.	K							
4.2.0.2	Ability to define sub tasks within task activity that capture, task id, description, events, etc.	B							
4.2.0.3	Ability to define any number of process steps both sequentially and parallel	B							
4.2.0.4	Ability to define business rules, formulas and validations for each workflow steps	B							
4.2.0.5	Ability to define routing logic for each workflow task, with triggers for initiation and termination	B							
4.2.0.6	Ability to set custom conditions for task approval and task closure	B							
4.2.0.7	Ability to allocate individual user/ user roles to a particular task	B							
4..2.0.8	Ability to facilitate checklist generation based on the tasks defined in the workflow	B							
4.2.0.9	Ability to track completion progress of each task in the workflow and update checklist status	B							
4.2.1	***Graphical Modeling***								
4.2.1.1	Ability to model complex workflows with unlimited number steps in a graphical manner	B							
4.2.1.2	Facility for a visual workflow editor, with feature for dragging and dropping elements to setup a workflow	D							
4.2.1.3	Ability to simulate the defined workflow process during the modeling stage	D							
4.2.2	***Form Modeling***								
4.2.2.1	Ability to define multi column, flexible skeleton structure of the form with title, description, name, sub-sections, tabs and tables	K							
4.2.2.2	Facilitate modeling forms with wide variety of fields such as Text, Number, Currency, Date, time, Dropdown, check box, etc.)	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
4.2.2.3	Ability to add advance features to forms including: file upload/attachment, list of users, master files, signature fields, lookup, etc.	B							
4.2.2.4	Ability to indicate if the field is mandatory or optional	B							
4.2.2.5	Facilitate general form validation for specific fields, such as email format, contact number digit validation	B							
4.2.2.6	Ability to define calculations and formulas within any field during form designing	B							
4.2.2.7	Ability to define rules for showing and hiding form elements dynamically (ex: when a particular field is checked, then display additional fields)	B							
4.2.2.8	Ability to create re-usable form parts containing fields or other form objects that can be re-used in existing or any new forms	D							
4.2.2.9	Facilitate drag drop feature during form modelling	D							
4.2.2.10	Ability to draft save form for later completion	B							
4.2.2.11	Ability to save form as template to be re-used	B							
4.2.2.12	Ability to facilitate pre-filled form feature for frequent and duplicating form data entry	D							
4.2.2.13	Ability to export filled in form data in standard formats for word processing and spreadsheet	B							
4.2.3	***Role based accessibility & approvals***								
4.2.3.1	Ability to define multiple user levels, based on organizational hierarchy	K							
4.2.3.2	Ability to facilitate single/multiple user approval levels for define workflow steps	K							
4.2.3.3	Ability to automatically trigger alerts to defined higher authorities during delays in the workflow process	B							
4.2.3.4	Ability to automatically escalate to next user for review based on time limitations.	B							
4.2.3.5	Within the workflow approval request, have the ability to provide all necessary supporting documentation for review of the request.	B							
4.2.3.6	Ability to make notations, comments, etc. during the workflow approval process.	B							
4.2.3.7	Ability to seamlessly merge all approved items into a final agenda packet	B							
4.2.3.8	Ability to create a summary list of items pending approval for a particular workflow	B							
4.2.4	***Email/ SMS Notification & Alerts***								
4.2.4.1	Ability to define customizable email/SMS templates	B							
4.2.4.2	Ability to generate event-based email/SMS notification (to do, to assign, delay, request closed, etc.)	B							
4.2.4.3	Ability to define and trigger time and condition-based notification for both email/SMS	B							
4.2.4.4	Ability to define logic for alert messages/notification	B							
4.2.4.5	Ability to facilitate generation of reminder alerts based on user defined parameters	B							
4.2.5	***Workflow Integration***								
4.2.5.1	Ability to integrate with modules of the ERP system	K							
4.2.5.2	Ability to trigger defined workflows from all modules of the ERP	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
4.2.5.3	Ability to seamlessly integrate with MS Outlook for email notifications, collaboration of user, meeting scheduling, etc.	B							
4.2.5.4	Ability to integrate with Identity and Access Management of the system for user/role identification	B							
4.2.5.5	Ability to begin workflow automation upon acceptance of documents and/or data from multiple sources (i.e., Email, email attachment (PDF, DOC, etc.), forms submission, tab delimited file.)	B							
4.2.6	***Report Generation***								
4.2.6.1	Facilitate defining and generation of tailor-made dashboards	B							
4.2.6.2	Generate dashboard with ability to arrange panels/views according to user needs	B							
4.2.6.3	Ability to monitor progress of workflows real time, with indication to bottlenecks and delays	B							
4.2.7	***Document Management Input***								
4.2.7.1	Ability to capture documents from the following sources and methods: Scanner, Email, manual upload, bulk upload, mobile application, web services, etc.	K							
4.2.8	***Bulk upload***								
4.2.8.1	Ability to scan multiple pages into a batch for later processing	B							
4.2.8.2	Document creation from batch: multiple page selection, range selection, individual selection	B							
4.2.8.3	View multiple pages of a batch in the same window(pane)	B							
4.2.9	***Scanning***								
4.2.9.1	Scan and display images simultaneously	B							
4.2.9.2	Scan and index document concurrently or batch scanning documents for later filing	B							
4.2.9.3	Support for scanner image enhancement software	D							
4.2.10	***Image View options***								
4.2.10.1	Magnification: Zoom in/out including fit width, 25%, 50%, 75%, or 100%	D							
4.2.10.2	Viewing formats: 2D & 3D	D							
4.2.10.3	Panning: Left, right, up and down	D							
4.2.10.4	Rotation: 0, 90, 180, 270 degrees	D							
4.2.10.5	Grey scale/Fast scale support	D							
4.2.10.6	Contrast: lighten, darken images	D							
4.2.10.7	Paging: page up, page down, go to	D							
4.2.10.8	Generate Thumbnail images	D							
4.2.11	***Document Indexing***								
4.2.11.1	Ability to tag documents with specific user defined search terms.	K							
4.2.11.2	Ability to index all types of document-by-document upload date, type and other specific definable identifier	B							
4.2.11.3	Ability to generate automatic document numbering based on custom definition	K							
4.2.11.4	Ability to index text documents for full text search, to find phrases within the document	D							
4.2.11.5	Enable indexing of documents using meta data (Ex: file size, created date, name of author, recent modifier, total edit time, etc.)	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
4.2.11.6	Ability to index revisions of the documents	B							
4.2.11.7	Ability to OCR in different language (ex: Sinhala, Tamil)	D							
4.2.12	***Document Search & inquiry***								
4.2.12.1	Ability to search using the following generic fields: Document Name, Document Number, Doc type, Division/Project, Author, Assigned Person	B							
4.2.12.2	Ability to filter search results	B							
4.2.12.3	Ability to sort documents based on different criterion	K							
4.2.12.4	Ability to search phrases in text document	D							
4.2.12.5	System should provide a scalable document search engine	B							
4.2.13	***Document Management***								
4.2.13.1	Ability to maintain following details about an individual document includes: *Document Number, Name, Version, Author, Assigned Person/s, Division/Project, Status - Read & Write, Read Only, Locked, Deleted, Date Created, Date/s & Time modified, Person modified, Date Time of archival, Date Time of Deletion, Description*	K							
4.2.13.2	Ability to link document to specific records in the system	K							
4.2.13.3	Ability to maintain pre-defined document templates	K							
4.2.13.4	Ability to create document based on system templates	B							
4.2.13.5	Ability to define & maintain folder structures	K							
4.2.13.6	Ability to maintain document structure & hierarchy	K							
4.2.13.7	Ability to perform following activities for a document within the System, mainly Create, Edit/Change/Write, Display/Read & Delete	K							
4.2.13.8	Ability to perform printing functions of uploaded documents	K							
4.2.13.9	Ability to support different formats such as DOC, PDF, EXCEL, CAD, BIM etc.	B							
4.2.13.10	Ability to support different format conversions	D							
4.2.13.11	Ability to read documents in different formats (E.g.: PDF reader facility)	B							
4.2.13.12	Remote access to DMS - Web based	K							
4.2.14	***Sharing & version control***								
4.2.14.1	Ability to define authorization matrix for document sharing	K							
4.2.14.2	Ability to define read/write authority for different users sharing same document	K							
4.2.14.3	Ability to freeze write permission once a user has locked the document for editing	B							
4.2.14.4	Ability to forward, move & route documents based on defined authorized matrix	B							
4.2.14.5	Ability to directly email documents	B							
4.2.14.6	Ability to maintain different versions of the same document	K							
4.2.14.7	Ability to maintain different formats of the same document name	K							
4.2.14.8	Ability to show a comparison of content once a user uploaded a same document (with different version number or same version number)	D							
4.2.14.9	Ability to approve the comparison by uploading user	B							
4.2.14.10	Ability to stop committing the upload until approval of comparison	B							
4.2.14.11	Ability to automatically unfreeze of editing for other users once committed by downloaded user	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
4.2.14.12	Ability to override above access rights anytime by higher level user	B							
4.2.14.13	Ability to audit all current and historic actions on documents and routing	K							
4.2.15	***Folder Features***								
4.2.15.1	Ability to Create, Rename, Move & Delete folders	K							
4.2.15.2	Ability to drop/select/assign files to a folder	B							
4.2.15.3	Ability to display folder tree like File Manager	B							
4.2.15.4	Retrieval: pull up documents for display	K							
4.2.15.5	Ability to scan directly into a folder	B							
4.2.15.6	Ability to apply folder level authorizations	K							
4.2.16	***Security Features***								
4.2.16.1	Feature Rights - control access to scanning, printing, indexing	K							
4.2.16.2	Object Rights - control access to folders and documents	K							
4.2.16.3	Object Rights can be set either by user level, group of users, batch level, folder level or file level	K							
4.2.16.4	Facility to encrypt documents	B							
4.2.16.5	Support SSL for viewing documents over the web	B							
4.2.17	***General Integration***								
4.2.17.1	Ability to integrate with all other modules in ERP system	K							
4.2.17.2	Ability to interface with authorized 3rd party software	K							

5. Business Intelligence and Reporting

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
5.1	**Data Processing**								
5.1.1	Ability to maintain up to date comprehensive business data	K							
5.1.2	Ability to continually generate and share new business data	B							
5.1.3	Ability to permit access to variety of data sources	K							
5.1.4	Ability to minimize the time taken re-enter and reconcile data from different systems	B							
5.1.5	Ability to maintain pre-formatted query templates	B							
5.1.6	Ability to save/store commonly used queries/calculations for re-use	D							
5.1.7	Ability to easy to learn and easy to use BI capabilities that are available	B							
5.1.8	Ability to integrate business applications that operate on the same data set	K							
5.1.9	Ability to provide the option to access the BI solution from any mobile device.	B							
5.1.10	Ability to conduct search on the entire data set	B							
5.1.11	Ability to create access rights groups and provide access at different privilege levels	K							
5.1.12	Ability to navigate the data up, down, and sideways, exploring data any way wanted	B							
5.2	**Data Analysis**								
5.2.1	Ability to perform powerful, accurate, reliable and easy analysis of the data								
5.2.1.1	*Descriptive*	K							
5.2.1.2	*Predictive*	K							
5.2.1.3	*Prescriptive*	K							
5.2.1.4	*Proactive*	K							
5.2.1.5	*Ad-hoc analysis*	K							
5.2.1.6	*Data mining*	K							
5.2.1.7	*Benchmarking*	K							
5.2.1.8	*Comparative analysis*	K							
5.2.2	Ability to facilitate real time visibility with collaboration capabilities	B							
5.2.3	Ability to perform complex analytics on large data volumes	K							
5.2.4	Ability to have interactive visualization, platform customization with user friendly feature	K							
5.2.5	Ability to represent the data analysis in the visual medium								
5.2.5.1	Tables	K							
5.2.5.2	Charts and graphs	K							
5.2.5.2.1	Line	K							
5.2.5.2.2	Bar	K							
5.2.5.2.3	Combo	K							
5.2.5.3	Pivot and cross tables	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
5.2.5.4	Story boarding	K							
5.2.5.5	Drag and drop creation	K							
5.2.5.6	Freehand SQL commands	K							
5.2.6	Ability to optimize business processes to generate critical data	K							
5.2.7	Ability to rapidly analyze the data in support of business decisions	B							
5.2.8	Ability to track the actual performance against the strategic plan	B							
5.2.9	Ability to analyze both historical and real time data to spot trends, threats and business opportunity	B							
5.2.10	Ability to design and execute what if analysis	B							
5.2.11	Ability to use the most granular level of data for what if scenarios								
5.2.11.1	Input boxes	D							
5.2.11.2	Slider bars	D							
5.2.11.3	Direct entry into tables	D							
5.2.11.4	Exporting from external resources	B							
5.2.11.5	Calculation results	B							
5.2.12	Ability to perform online data processing	B							
5.2.12.1	Multi-dimensional analysis	B							
5.2.12.2	Drill down (Customizable)	B							
5.2.12.3	Data exploration	B							
5.2.12.4	Time series	B							
5.2.13	Ability to perform forecasting and budgeting process efficiently	B							
5.2.14	Ability to generate alerts and notifications that enable users to focus on exceptions as well as on routine or steady state operations	B							
5.2.15	Ability to have analytical features								
5.2.15.1	Ranking	B							
5.2.15.2	Filtering	B							
5.2.15.3	Sorting	B							
5.2.15.4	Group by	B							
5.2.16	Ability to use advanced charting capabilities								
5.2.16.1	Bubble chart	D							
5.2.17	Ability to facilitate the introduction of 3rd party web developed objects, such as charts and graphs to extend and enhance its visualization capability	D							
5.3	**Reports and Dashboards**								
5.3.1	Ability to maintain BI dashboards and generate reports that can visualize and present KPI, trends and other meaningful data	B							
5.3.2	Ability to generate reports and dashboards without involving the IT professionals	D							
5.3.3	Ability to generate various types of reports								
5.3.3.1	*Web based*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
5.3.3.2	*Customized*	B							
5.3.3.3	*Graphical*	B							
5.3.4	Ability to archive and backup the reports (PDF, XLS, HTML etc.)	B							
5..3.5	Ability to export reports into different documents formats	B							
5.3.6	Ability to place objects anywhere in the dashboard (Drag and drop)	B							
5.3.7	Ability to customize the default templates	B							
5.3.8	Ability to create customized dashboards	K							
5.3.9	Ability to save reports and bookmarks	B							
5.3.10	Ability to create controlled user and group level security access for different reports and dashboards	K							
5.3.11	Ability to generate reports for a specified period of time								
5.3.11.1	Daily	B							
5.3.11.2	Weekly	B							
5.3.11.3	Monthly	B							
5.3.11.4	Yearly	B							
5.3.11.5	Rolling data	D							
5.3.12	Ability to take a snapshot of data in time and interact through the dashboard(s) off-line	D							
5.3.13	Ability to use conditional formatting to set data alerts which highlight data exceptions	D							
5.3.14	Ability to have audit trail capability on specific activities and/or objects	K							

6. Human Resource Management

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.1	**General**								
6.1.1	Ability to create/change/maintain organizational hierarchy/structures (E.g.:- Structure of corporate, Area Office, Site Office etc.), job hierarchies, work flow(Approval levels) etc.,	K							
6.1.2	Ability to generate tree structure giving details of all unique role holders and reporting employees (defining reporting and reviewing relationship) - including dual reporting mechanism for a specific set of employees	K							
6.1.3	Ability to define employee's division/branch/unit/employee level wise	K							
6.1.4	Ability to define multiple organizational structures (positions) and multiple reporting relationships and integrate with the respective employee data	K							
6.1.5	Ability to track costs with respective to user-defined element (e.g., candidate, position etc.)	B							
6.1.6	Ability to track total cost (e.g., advertising, overhead, interview costs, out-reach, job fairs, etc.)	B							
6.1.7	Ability to define customizable work flow	K							
6.1.8	Ability to obtain approval based on the workflow to the authorized personnel via SMS, e-mail etc.	B							
6.1.9	Ability to send alerts to the concerned authorities according to work flow	B							
6.1.10	Ability to save or submit approval requests	B							
6.1.11	Ability to provide justification for rejection of request at each and every step of the workflow	K							
6.1.12	Ability to modify any changes and include comments before approval	K							
6.1.13	Ability to display the status of each and every request at any point of time	B							
6.1.14	Ability to define/update the status of employee (e.g., On probation, Confirmed)	K							
6.1.15	Ability to extract information from the system in the form of MS word, excel or PDF	K							
6.1.16	Ability to mass upload information using MS word, excel, PDF etc.	K							
6.1.17	Ability to attach/upload scanned documents where necessary (Eg: Mobile upload)	K							
6.1.18	Ability to allow access to reporting functionality for authorized personnel	K							
6.1.19	Ability to self-update personal details, employment history details, academic qualifications etc. by employee (with appropriate security restrictions)	K							
6.1.20	Ability to provide a quick employee profile	K							
6.1.21	Ability to fetch/view data from other authorized personnel with appropriate restrictions	K							
6.1.22	Ability to maintain a folder structure per employee to scan & upload all documents, pictures & contract agreement etc.	K							
6.1.23	Ability to send reminders when required	K							
6.1.24	Ability to upload & archive the standard set of forms (e.g., At the point of recruitment)	B							
6.1.25	Ability to have trilingual feature (E.g.:-Output letters)	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.1.26	Ability to maintain/provide templates for various types of Letters & notifications (E.g.:-Promotion letter)	D							
6.1.27	Ability to manually set the approver by authorized personnel upon the unavailability of designated approver	D							
6.1.28	Ability to provide a quick dashboard view with the required areas	K							
6.1.29	Ability to illustrate the summary in a graphical view	B							
6.1.30	Ability to drill down the summary up to the operational level	B							
6.1.31	Ability to change/restore/rollback changes to a previous (given) date and report inconsistencies	K							
6.1.32	Ability to date and time stamp all changes in the database enabling data availability on 'as on date/time' basis	K							
6.1.33	Ability to update only authenticated data reflected in the employee master on prompt	K							
6.1.34	Ability to remind the employee through e-mail/SMS regarding modification or requirement of additional data	B							
6.1.35	Ability to upload all the manuals related to HR into the system (E.g.:-Leave manuals)	B							
6.2	**HR Policies, Rules & Regulations**								
6.2.1	Ability to define/modify/view all policies & guidelines related to HR (e.g. Leave, Performance management ,Resignation etc.) based on approval	K							
6.2.2	Ability to define delegation of powers to different authorities	K							
6.2.3	Ability to define all norms relating to medical credit letter and Medical re-imbursement in respect of employees and their dependents	K							
6.2.4	Ability to define all applicable labor laws and ability to monitor compliance/enforcement of such laws	K							
6.2.5	Ability to process matters relating to employees (including action taken reports against resolution passed)	K							
6.2.6	Ability to include Policies, Rules, Procedures, Regulations for Contractual and Outsourced employees	K							
6.2.7	Ability to define all applicable laws (e.g. Labor laws for contracts)	K							
6.2.8	Ability to define all Rules, Procedures, Regulations for outsourced employees	B							
6.2.9	Ability to notify employees about the nominations (E.g.: -Transfer board, Training program)	K							
6.2.10	Ability to draw a competency matrix in the system and define the competencies / skills/roles/responsibilities required at each level/position	K							
6.3	**Manpower Planning**								
6.3.1	Ability to analyze the unit/branch/division-wise resources available and required and do a gap analysis with specific time frame for which recruitment is required	K							
6.3.2	Ability to generate a forecasted & consolidated manpower plan (Division/Branch/Unit) for approval	K							
6.3.3	Ability to modify the forecasted manpower plan when required	K							
6.3.4	Ability to automate manpower requirement/planning based on competencies, skills, experience, qualification, designation and other criteria	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.3.5	Ability to project cadre-wise/grade-wise manpower requirements for a specified period based on data relating to new upcoming units/resignations/dismissals/future retirement etc.	K							
6.3.6	Ability to make provisions for direct employment/ promotion/ recruitment to specialist categories/part time or contractual employees	K							
6.3.7	Ability to review and revalidate the plan in the mid-year	B							
6.4	**Recruitment Requisition**								
6.4.1	Ability to initiate a recruitment requisition by an authorized officer	K							
6.4.2	Ability to match requisitions against man power planning for the period/ division/branch/unit	K							
6.4.3	Ability to create new posts or modify existing posts through appropriate approval	K							
6.4.4	Ability to include the designation vacant, skills and scope of work	K							
6.4.5	Ability to issue alerts before any position falling vacant due to retirement/term of temporary or contractual employee getting over	B							
6.4.6	Ability to identify critical posts (e.g.by division, branch, unit)	B							
6.4.7	Ability to define positions for internal or external recruitment (define vacancies based on sanctioned strength and existing employee strength for each unit/branch/division)	K							
6.4.8	Ability to define the requirements for recruitment of deceased dependents(While in duty, Long service)	K							
6.5	**Vacancy Posting**								
6.5.1	Ability to create recruitment sources (e.g. Internal, CEB Web Site, Job portals, Newspapers etc.)	K							
6.5.2	Ability to generate job advertisements based on a predefined criterion (internal / external/job portal, Media and websites)	K							
6.5.3	Ability to inform vacancies to internal employees through e-mail, notices etc.	K							
6.5.4	Ability to define the eligibility criteria/specifications of the vacancy in terms of qualifications, work experience, preferred location, skills/competencies required, additional certifications / professional qualifications, etc.	K							
6.5.5	Ability to define Job Descriptions, Work Titles, Reporting Supervisors etc.	K							
6.5.6	Ability to specify mandatory details that should be submitted along with the application	K							
6.5.7	Ability to set expiry date for posted jobs	K							
65.8	Ability to view vacancy list & status of vacancy (Filled/vacant/abolished)	K							
6.5.9	Ability to automatically/manually remove posted jobs after deadline or amend if necessary	K							
6.6	**Application Reception**								
6.6.1	Ability to apply for a job via CEB career web page, 3rd party job portals, E-mails (Internal, External) , Manual application (Upload to the system by SC) etc.	K							
6.6.2	Ability to send an automated reply as soon as a candidate submits an application	K							
6.6.3	Ability to auto generate unique identity number for each new applicant	K							
6.6.4	Ability to filter and archive applications received for different job postings	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.6.5	Ability to filter emails received for different jobs - Email format should be informed along with the job posting	B							
6.6.6	Ability to attach resumes/credentials in soft form along with the application	K							
6.6.7	Ability to reject any application received after deadline - should be stored separately for future reference	K							
6.6.8	Ability to sort the applications based on a few key selection criteria as predefined	K							
6.6.9	Ability to record the details of the applicants of deceased dependents	K							
6.6.10	Ability to maintain the list of applicants of deceased dependents found eligible for being called for interview/selection	K							
6.6.11	Ability to short-list the applications based on a predefined criterion (1st level selection)	K							
6.6.12	Ability to create separate candidate profiles for candidate who has been short-listed for the next level (interview/Exam stage)	K							
6.6.13	Ability to send an email for the short-listed candidates regarding exams and interviews	K							
6.6.14	Ability to maintain the database of applications for future reference	K							
6.6.15	Ability to send an automated reply as soon as a candidate gets rejected	K							
6.6.16	Ability to import resumes from external job sites into the resume database	D							
6.6.17	Ability to internally apply for a job and view the status of the application	K							
6.7	**Candidate Assessment**								
6.7.1	Ability to draw recruitment schedule in accordance with the requirement plan	K							
6.7.2	Ability to schedule exams, track results against candidates & capture any remarks of the evaluating personnel	K							
6.7.3	Ability to coordinate interviews with email option to candidate and panel members	K							
6.7.4	Ability to define interview panels & send acknowledgement to the panel members	K							
6.7.5	Ability to define recruitment stages - exams, no. of interviews, presentations etc.	K							
6.7.6	Ability to define the evaluation criteria for each job	K							
6.7.7	Ability to maintain various types of tests and maintain a question/answer database of each type of test (functional, psychometric, analytical etc.) to be administered as part of the selection process	K							
6.7.8	Ability to design tests to be conducted in written or online modes	K							
6.7.9	Ability to create a competency framework (matrix) for various competency types (functional/ behavioral/ leadership) with desired proficiency levels for each position/grade	K							
6.7.10	Ability to maintain rejected applications	K							
6.7.11	Ability to maintain Short Listed applications	K							
6.7.12	Ability to record interviewer's feedback on the profile of applicants	K							
6.7.13	Ability to track interview results / Applicant's progression	K							
6.7.14	Ability to generate system driven call letters (Interview/test), acknowledgement or regret letters and offer / appointment letters through both	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
	manual as well as electronic modes (with terms and conditions for appointment)								
6.7.15	Ability to blacklist candidates (with reasons) & maintain in the data base	K							
6.8	**Candidate Selection & Recruitment**								
6.8.1	Ability to set minimum no. of candidates required for the final selection as per job posting	B							
6.8.2	Ability to submit candidate profile (with selection process history) for the final selection	K							
6.8.3	Ability to acknowledge authorized personals/candidate once the candidate has been selected for the position	K							
6.8.4	Ability to acknowledge candidate who were in the final round of selections and got rejected	D							
6.8.5	Ability to maintain a separate list of the candidate who has not got through in the final selection process (with reasons)	B							
6.8.6	Ability to automatically transfer applicant information into employee information for candidates selected (after candidate selection)	K							
6.8.7	Ability to capture details of the Recruitment Policy and to alert users if there is any violation of the policy	K							
6.8.8	Ability to send letter of appointment on contract basis, letter of re-engagement (or extension) of retired officers, on contract basis with re-employment terms etc.	K							
6.8.9	Ability to maintain a checklist of details to be mentioned in each employee's personnel file	K							
6.8.10	Ability to maintain a checklist for verification and acknowledgement of various aspects (e.g., medical reports, testimonials, other relevant certificates, etc.)	B							
6.9	**HR Master Data**								
6.9.1	Ability to create, modify/update and delete (or inactive) an Employee Profile (e.g., Grade, carder, qualification etc.)	K							
6.9.2	Ability to store & maintain details related to an employee personal profile (Employee ID, Full name, Details of parents, Marital status, Details of spouse, Address(Permanent, current), contact details, Gender, Religion, Medical & Health details & history, Date of Birth, NIC, Passport details, Educational qualifications, Professional qualifications, Membership details, Prior work experience, Languages known, Dependent details, Emergency contact details, dependent details, Employee's recent photograph, Bank account details, Sports activities , etc.)	K							
6.9.3	Ability to create & modify a Job Profile for an employee (past to present job profiles with dates)	K							
6.9.4	Ability to capture following details related to an employee Job Profile (EPF number , CEB ID, Appointment date, Place of previous appointment, Position held, Start-End date, Reason for leaving, Entry cadre/designation, Entry salary, Grade of joining, probation period, Date of confirmation, Current cadre, Current designation, Current salary, Employee class Executive Staff, Non-executive Staff, Contract-basis, Consultants), Name of unit/branch/division, Cost/Profit center, Reporting hierarchy, Vehicle details(Vehicle registration	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
	number, Make, Mode, Remarks), Promotion details , Transfer details , Contract details (Contract date, Contract expiry date), etc.								
6.9.5	Ability to capture account details of employees (E.g.: -Bank, Branch, Account number, Payment method etc.)	B							
6.9.6	Ability to capture the membership details of the employees (E.g.: -Trade unions, Professional bodies etc.)	K							
6.9.7	Ability to maintain employee's recruitment category like physically handicapped/ sportsperson /ex-servicemen / specialist/ Others	K							
6.9.8	Ability to maintain the details of spouse and relatives in the service of the organization including name, employee no., unit where working, designation with provision for automatic updating of records of the relative as and when it is updated for him by his controlling establishment	K							
6.9.9	Ability to change employee job status (Trainee, Probation, Extended probation, Permanent, Contractual, Suspended, absconding, Exit Resigned, VOP, Terminated)	K							
6.9.10	Ability to maintain the awards for which nominated / received by the employee including the name of the award, year of award, in which discipline/field and date of receipt of award and special status/ privilege, if any, to be given to him/her for the award	K							
6.9.11	Ability to link employee data with the position based standard responsibility (Job) Matrix	K							
6.9.12	Ability to maintain concurrent jobs for employees with additional responsibilities/special duties in addition to regular responsibilities	K							
6.9.13	Ability to provide details of employees applying for higher education (Abroad/Local)	K							
6.9.14	Ability to provide details of employees going abroad for employment	K							
6.9.15	Ability to maintain the details of assets owned by the employee (e.g. Laptops, dongles, mobile phones)	K							
6.10	**On-Boarding Process**								
6.10.1	Ability to notify authorized personnel, Once a candidate has been Selected	K							
6.10.2	Ability to maintain a checklist to check all the documents (Required from new employee) has been uploaded/updated & forms has been completed	K							
6.10.3	Ability to request for E-mail address creation, login creation, Finger-print login/attendance record creation & enroll for attendance system, Staff ID creation, Membership etc.	B							
6.10.4	Ability to print the Employee Identity Card based on the predefined template	B							
6.10.5	Ability to record relevant details in the case of recruitments for international projects/assignments (e.g. Status of passport/Visa, Remarks etc.)	B							
6.10.6	Ability to notify Training branch on new recruitment with all details necessary to arrange training & induction programs	K							
6.11	**Employee Contract Management**								
6.11.1	Ability to maintain a list of documents relevant to employee contract	K							
6.11.2	Ability to maintain standard set of forms/templates/ for each employee contract type (permanent, contract-base, internship, training, external consultants etc.) & generate bond calculations based on predefined formulae	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.11.3	Ability to scan & upload signed copies of employee contracts under particular employee profile	K							
6.11.4	Ability to maintain different versions of same contract document	K							
6.11.5	Ability to track date uploaded, date certified/approved etc.	K							
6.11.6	Ability to define who should receive notifications on employee contract expiry & renewal	K							
6.11.7	Ability to generate alert messages on reaching the end period (E.g.: -End date of abroad travel either for education or employment)	B							
6.11.8	Ability to flag renewed contracts	B							
6.12	**Confirmation**								
6.12.1	Ability to generate alert messages on employee completing his/her probation/trial period before a certain period of time (Parameterized)	K							
6.12.2	Ability to send confirmation letter on successful completion of probation period	K							
6.12.3	Ability to change employment status from probation to confirmed/not confirmed after the defined period from the date of joining	K							
6.12.4	Ability to maintain a checklist & generate reminders to employees when not received (E.g.:-Asset & liability form)	K							
6.12.5	Ability to integrate with the Performance Appraisal results of the employee on probation	K							
6.13	**Time & Attendance Management**								
6.13.1	Ability to capture the date and time from the system clock	K							
6.13.2	Ability to capture attendance data from Biometrics (Thumbprints) ,Swipe Cards , System log in, Time sheet etc.	K							
6.13.3	Ability to insert/upload attendance records via web interface	K							
6.13.4	Ability to capture various types of attendance data as 'In time' and 'Out time' for each day, More than one set of In and Out times for each day, In time on one day and Out time on the following day etc.	K							
6.13.5	Ability to identify attendance data captured from different devices separately	K							
6.13.6	Ability to send notifications to employees/authorized personnel when the attendance is not captured via e-mails/SMS either to mark the attendance manually or to apply for leave	K							
6.13.7	Ability to mark the attendance manually by entering in and out times for unsupported days by stating a reason with defined approvals	K							
6.13.8	Ability to update work schedule/shift pattern of employees	K							
6.13.9	Ability to track more than one set of in/out times	B							
6.13.10	Ability to escalate manually entered in and out times to the superior for approval.	B							
6.13.11	Ability to calculate the total hours actually worked by accumulating inputs from different sources/different sessions	K							
6.13.12	Ability to calculate OT hours based on the In/Out time	K							
6.13.13	Ability to enter OT hours worked manually in the system with defined approvals	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.13.14	Ability to auto deduct the leave by the system if the leave is not applied by the employee within a specific period of time (must be able to impose deadline to clear unsupported attendance)	B							
6.13.15	Ability to allocate of an alternate supervisor	K							
6.13.16	Ability to send reminders to authorized personnel to approve manually entered attendance periodically	K							
6.13.17	Ability to create/update rosters with the fields such as EPF No, Name, Branch, Location of work, Time slot etc.	K							
6.13.18	Ability to allocate roster based employees to the relevant roster each day	D							
6.13.19	Ability to send notifications to employees once they are allocated to a roster and should be able to accept/if not acknowledge the supervisor	D							
6.13.20	Ability to send notifications about the roster updates	D							
6.13.21	Ability to check attended location against roster and update attendance data	D							
6.13.22	Ability to send alert messages to the authorized officer when an employee is absent continuously for a period of time without informing	D							
6.13.23	Ability to track attendance and map it with applied leave (between applied and leave granted)	K							
6.13.24	Ability to generate an email to IT division to block Systems access	B							
6.14	**Leave Management**								
6.14.1	Ability to define different types of leave (e.g., Annual, Medical, Short, Casual, Lieu, Maternity etc.)	K							
6.14.2	Ability to allocate different types of leave to each designation/EPF No	K							
6.14.3	Ability to define leave carry-forward restrictions to leave types and designations/EPF No/employee category/leave type	K							
6.14.4	Ability to automatically generate leave entitlements/limitations at beginning of year, monthly, bi-weekly, etc. based on designation/employee category/leave type/joined date	K							
6.14.5	Ability to define holidays for the year at the beginning of the year	K							
6.14.6	Ability to request/apply for leave with the fields such as From, To, leave type, Half day/Full day, No of days, Reason, Covering employee, Supervisor etc.	K							
6.14.7	Ability to view leave entitlements/available balances by employees	K							
6.14.8	Ability to generate a notification to the employee when the superior accepts/rejects a leave application	B							
6.14.9	Ability to calculate the leave applicable for carrying forward based on leave balances and designation rules	K							
6.14.10	Ability to generate a notification to employees displaying the leave that can be carried forward	B							
6.14.11	Ability to select carrying forward or encashment option (this option should be activated up to certain employee level)	B							
6.14.12	Ability employee to enter the number of days for each option with restrictions imposed by the system & update the leave balances as per the employee’s response	B							
6.14.13	Ability to calculate leave balances on a pro-rated basis for new employees	B							
6.14.14	Ability to calculate new leave balances based on carried forward leave and pro-rating if an employee is promoted and is entitled to additional leave types	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.14.15	Ability to deduct defined holidays from leave periods & update leave balances if a holiday is defined in the calendar after the leave is approved	K							
6.14.16	Ability to cancel/modify leave applied /approved by supervisor (prior to the leave date) & after the date applied for only if attendance data is shown for that day with approvals	K							
6.14.17	Ability to obtain authorization from authorized personnel for any type of special leave (E.g.:-Overseas leave)	B							
6.14.18	System should generate a notification to the employee's superior and the covering employee once the leave is approved	K							
6.14.19	Ability to correct attendance & leave details of employees	K							
6.14.20	Ability to maintain and view employee leave details	K							
6.15	**Allowances**								
6.15.1	Ability maintain/define different types of allowances in the system	K							
6.15.2	Ability to create allowance groups	K							
6.15.3	Ability to tag/add individual employees/*entire category for an allowance group*	K							
6.15.4	Ability to raise allowance request by an employee/authorized personnel *with type of allowance ((holiday allowance, night shift allowance etc.), Date-Time range, Duty performed, Remarks etc.*	K							
6.15.5	Ability to automatically update monthly payroll details with the details of allowance once it has been approved	K							
6.15.6	Ability to notify employees regarding the ineligibility for professional allowances based on the designations on a predefined criteria (Eg: Engineer not eligible to claim professional membership for CIMA)	D							
6.15.7	Ability to attach and remove allowances and deductions for an employee	B							
6.15.8	Ability to view the pending requests for which the approvals are due from supervisors	B							
6.16	**Overtime**								
6.16.1	Ability to request to work OT followed by approval	K							
6.16.2	Ability to generate &forward the overtime schedule to the top management for approval	B							
6.16.3	Ability to automatically update monthly payroll details with the details of OT once it has been approved	K							
6.16.4	Ability to define normal working hours in the system	K							
6.16.5	Ability to define different set of overtime formulae/ overtime rates in the system e.g. based on employee levels	K							
6.16.6	Ability to capture Over time hours of employees with date wise break down	K							
6.16.7	Ability to calculate over time amount from the system	K							
6.16.8	Ability to approve date wise over time hours of an employee by a responsible officer	K							
6.16.9	Ability to set overtime entitlements/constraints per employee/per overtime group	B							
6.16.10	Ability to manually over-ride overtime constraints by higher authorities	B							

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			STDD	WA	MOD	TTP	NA		
6.17	**Bonus**								
6.17.1	Ability to define bonus categories (e.g. Yearend bonus, Festival bonus etc.)	K							
6.17.2	Ability to define the periods(dates) of bonus payment in the financial year	K							
6.17.3	Ability to link with Performance module and receive variable portion of bonus entitlement from performance appraisal process	B							
6.17.4	Ability to link bonus amount to be paid in payroll processing per employee	K							
6.17.5	Ability to access the employee folder to check warning letters, no-pays issued before approving the bonus	B							
6.18	**No Pay**								
6.18.1	Ability to define/modify "No pay" according to company policies	B							
6.18.2	Ability to calculate number of No pay days based on leave and attendance record of employees	B							
6.18.3	Ability to enter number of no pay days to the system by the user if necessary	B							
6.18.4	Auto calculation of No pay amount per month/per year	K							
6.18.5	Ability to generate alert messages to employees as well as management if the employee is not reporting on the no-pay ending period	B							
6.18.6	Ability to notify employee on No pay amounts	B							
6.19	**Medical claim**								
6.19.1	Ability to define all norms/limit relating to Medical Advance and Medical re-imbursement in respect of employees	K							
6.19.2	Ability to maintain medical history and capture the details (integrate with payroll for reimbursement amount)	D							
6.19.3	Ability to request for medical claim re-imbursement/credit letter(Indoor, Outdoor)	B							
6.19.4	Ability to track current and unlimited history of accident types, injury types, physical restriction types etc. with Employee Name, ID & division, Date and time of injury or accident/Spectacle Requisition Raised, Date and time State was notified of injury or accident, Employee to whom notification was made & Supervisor, Last day worked, Estimated & actual dates of return, Description/Remarks, Compensation Amount, Reef No., Paid Date,	B							
6.19.5	Ability to grant special medical compensations with defined limits via a workflow	K							
6.19.6	Ability to send notification to employee once his/her claim is approved & payment instruction has been given to finance	B							
6.19.7	Ability to remind when payment dates are due	K							
6.19.8	Ability to view pending payments per employee	K							
6.19.9	Ability to maintain the list of recommended medical practitioners in the system	D							
6.19.10	Ability to maintain employee data with regards to claims, etc.	K							
6.20	**Loans**								
6.20.1	Ability to define & process different types of loans such as Housing loans (Land purchase, Construction of residential house, addition/alteration of constructed house and repair of house), Distress loan, Vehicle loans, etc.	K							

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			STDD	WA	MOD	TTP	NA		
6.20.2	Ability to maintain the loan details with the fields Loan Number/ID, Loan Type/category, Employee ID (Loan Requester), Date Applied, Approved/grant Date, Period, Bank account details, Received Date, Repayment Date, Settled Date, Amount Paid. Loan deducted amount, Balance Amount, Interest Rate, Terms, Loan amount, Repayment method, Approved by ,Guarantee details ,etc.	K							
6.20.3	Ability to process charges of interest and other terms and conditions of tie up arrangements with scheduled banks in respect to loans	B							
6.20.4	Ability to define loans and its various characteristics such as periodicity, interest rate etc.	B							
6.20.5	Ability to attach loan sanctioning rules to every loan type	B							
6.20.6	Ability to view loan entitlement by employee category	B							
6.20.7	Ability to generate an amortization schedule	B							
6.20.8	Ability to check the available balance of loan of employees	K							
6.20.9	Ability to request for loan with the details of Applicant, Previous Loans obtained etc.	K							
6.20.10	Ability to view necessary details by approvers on each stage of work-flow	D							
6.20.11	Ability to maintain a checklist including Employee service eligibility, Supporting Documentations of the facility, Required approval , Payment instruction to finance etc.	D							
6.20.12	Ability to add remarks on each stage	D							
6.20.13	Ability to establish deduction limits for each deduction based on various parameters like: Employee, Job Classification, Company, Benefit plan, Salary & /determine deduction amount(E.g.:- Amount of earnings, Percent of earnings, Number of hours)	B							
6.20.14	Ability to apply or stop various deductions based on employee status changes	D							
6.20.15	Ability to send payment instruction to Finance	B							
6.20.16	Ability to notify employee once the loan is approved/rejected	B							
6.20.17	Ability to reschedule a loan	B							
6.20.18	Ability to extend a loan	B							
6.20.19	Ability to cancel a loan application by employee	B							
6.20.20	Ability to define sureties as per the loan requisition (E.g.: -2 sureties for employees under probation) & link the surety details with payroll & PF fund	B							
6.20.21	Ability to view the details/Number of the guarantees signed by the particular person	D							
.6.20.22	Ability to provide loan advances	B							
6.20.23	Ability to generate alerts regarding the loan advances provided when processing the loans	D							
6.20.24	Ability to release the sureties when the loan amount is settled & notify the sureties	B							
6.20.25	Ability to integrate with payroll & PF	K							
6.20.26	Ability to early settle the loan amount	B							
6.20.27	Ability to acknowledge relevant parties (Eg: payroll, relevant employee etc.) once the loan is fully settled	B							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.20.28	Ability to check the balance loan capital during employee separation	B							
6.21	**Transfers**								
6.21.1	Ability to raise transfer requisition by employee/authorized personnel with the fields such as Employee name, EPF No, Current designation, Current location, Appointment date, Effective start date, Desired location & designation, Reason, Planned starting date at new location, /designation, Allowances Applicable (Select from drop down menu: Accommodation, Remote Area Allowance etc.)	K							
6.21.2	Ability to request for appeal	K							
6.21.3	Ability to identify possible transfers based on predetermined criteria	B							
6.21.4	Ability to notify relevant personnel upon raising of a transfer requisition	K							
6.21.5	Ability to approve a transfer requisition and then escalate the approval flow to higher authority	D							
6.21.6	Ability to maintain & view status of transfer requisition	K							
6.21.7	Ability to acknowledge employee on approval/rejection of transfer requisition with remarks	K							
6.21.8	Ability to send transfer letters to relevant parties (E-mail)	K							
6.21.9	Ability to notify all stake-holders of the transfer/appointment	K							
6..21.10	Ability to integrate with the performance appraisal module	K							
6.21.11	Ability to maintain change in designation due to transfers	K							
6.21.12	Ability to maintain the transfers to be considered list	K							
6.21.13	Ability to restrict transfers between based on predetermined criteria (E.g.: From Generation to Transmission)	B							
6.21.14	Ability to link with skill matrix	B							
6.21.15	Ability to maintain full transfer history of the employee including the current & new location, nature of transfer (self-initiated / company initiated), date of joining and date of relieving at different locations, number of times cancelled but kept in abeyance etc.	K							
6.22	**Promotion & Demotion**								
6.22.1	Ability to define rules for promotion eligibility in terms of seniority, trainings, exams, service, performance, achievements, disciplinary actions, skills etc.	K							
6.22.2	Ability to generate a list of eligible candidates for promotion of different grades and streams in consideration of period spent under suspension, extra ordinary leave without pay etc.	K							
6.22.3	Ability to carry out the entire promotion process through work flows including on-line preparation/printing of Promotion Appraisal Forms/ Recording of Recommending Authorities Comments/generation of scores	K							
6.22.4	Ability to record interview ratings of employee short listed for promotion	K							
6.22.5	Ability to capture the following details for employee promotion/Demotion (g:- Employee name, EPF No, Current designation, Branch, Current location, Appointment date of the current designation, New designation, Effective start date at new designation, Remarks etc.)	B							
6.22.6	Ability to consider the employees performance evaluation details.	B							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.22.7	Ability to arrive at the surplus and vacant positions based on Division/Branch/unit	B							
6.22.8	Ability to update new designation, change of cadre/class, salary details etc. in Promotion Database	K							
6.22.9	Ability to record the promotion orders cancelled, approved or deferred	K							
6.22.10	Ability to record transfer option of an employee at the time of promotion	K							
6.22.11	Ability to maintain details of promotion from one grade / employee level to another including any reappointment through internal selections	K							
6.22.12	Ability to accept/deny the promotions by the employees	K							
6.22.13	Ability to maintain change in designation due to promotions	B							
6.23	**Disciplinary & Grievance Management**								
6.23.1	Ability to maintain unlimited grievance types such as harassment, discrimination, contract violation, unfair labor practice, failure to promote, unsafe conditions, violence in workplace, forced resignation, failure to compensate, failure to represent, failure to accommodate, other user-defined grievance types	K							
6.23.2	Ability to track complaints from employees with employee ID	D							
6.23.3	Ability to track complaints against employees	K							
6.23.4	Ability to add employees involved by name or employee ID	B							
6.23.5	Ability to track multiple witnesses (Name, Phone Number etc.)	B							
6.23.6	Ability to flag an employee record as having prior or pending disciplinary action	D							
6.23.7	Ability to set the status of complaint (e.g., logged, active, closed)	K							
6.23.8	Ability to track point of views from different parties in concern	B							
6.23.9	Ability to add remarks of person that resolves the complaint	B							
6.23.10	Ability to maintain/revoke black-listed employee list	D							
6.23.11	Ability to maintain action/punishment for each grievance/disciplinary category	D							
6.23.12	Ability to notify any relevant process on punishments (no-pay during suspension)	D							
6.23.13	Ability to record the cost incurred due to wrong act & cost of re-alignment	D							
6.23.14	Ability to notify relevant branches on action taken (e.g., If employee is banned from premises send notification to IT & HR to remove any access rights)	K							
6.23.15	Ability to define investigation officers, Inquiry panel etc. as predefined	K							
6.23.16	Ability to send notifications to authorized personnel on any relevant activity	K							
6.23.17	Ability to maintain history of disciplinary actions taken / initiated against the employee including date of charge, nature of charge, amount of financial loss to organization, date of punishment and nature of punishment.	K							
6.23.18	Ability to maintain details of suspended employees (reasons of suspension, time duration of suspension, restricted privileges etc.)	K							
6.24	**Performance Management**								
6.24.1	Ability to define, modify and delete appraisal cycle(time period)/hierarchy with appraiser ,appraisee ,peer, subordinate etc.	K							
6.24.2	Ability to define, modify, delete a performance plan (e.g., Budgeted cost/man hours for performance review)	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.24.3	Ability to capture variances on performance plan (budget, Time)	K							
6.24.4	Ability to create different Appraisal hierarchies based on the employee levels/designation	B							
6.24.5	Ability to create, modify, delete a performance period	K							
6.24.6	Ability to capture details related to performance period (e.g., Date of Goal Setting, Date of Mid-year Review, Date of Year-end Review etc.)	K							
6.24.7	Ability to create user defined time-periods for employee reviews	K							
6.24.8	Ability to create, modify & delete appraisal guidelines	K							
6.24.9	Ability to define/weight individual goals for each employee by authorized personnel by inheriting the goals of the superior officers. (E.g., Created Date, Goal/Objective ID, Division/Branch, Employee ID, Description (Link with Key Process Areas(KPA)/ Key Performance Indicators (KPI)), Feedback of subordinate etc.)	K							
6.24.10	Ability to define cascading levels for each organizational group	K							
6.24.11	Ability to cascade and assign objectives for each group/level	K							
6.24.12	Ability to assign ID for each cascaded objective/goal	K							
6.24.13	Ability to see the cascading of objectives/goals within each group (e.g.: 2 Supervisor levels & Subordinate goal cascading)	K							
6.24.14	Ability to capture details related to feedback given by each group on the goals set by the Team Leaders/Managers/Supervisors etc. (e.g., Date, Employee ID, Objective ID, Feedback, Comments etc.)	K							
6.24.15	Ability to approve goals/objectives	K							
6.24.16	Ability to define rating Methods (Numbers, Alphabets, other text)	K							
6.24.17	Ability to define KPA in the performance evaluation system	B							
6.24.18	Ability to define KPI to assess performance in each KPA	K							
6.24.19	Ability to automatically generate ID's for KPA & KPI s	B							
6.24.20	Ability to define weightages for KPA/KPIs	K							
6.24.21	Ability to capture details related to KPA & KPIs (e.g., KPA/KPI ID, Description etc.)	K							
6.24.22	Ability to define threshold weightages for KPA/KPI	K							
6.24.23	Ability to calculate total weightages of KPA/KPI	K							
6.24.24	Ability to define rating scale for KPIs (numbering system)	K							
6.24.25	Ability to assign rating scales for KPI (e.g., Excellent, Very Good, Good, Moderate, Needs Improvement etc.)	K							
6.24.26	Ability to define/weight personnel/self-goals by the employees with the details such as Date, Time period, Employee ID, Appraise ID, Goal description, Appraiser feedback etc.)	D							
6.24.27	Ability to send self-goals/competencies to Performance supervisor and get the approval from relevant authorities	B							
6.24.28	Ability to set goals by the performance supervisors to his/her responsible parties	K							
6.24.29	Ability to define reviewing time periods of the year (Mid-year, Year End Review)	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.24.30	Ability to automatically generate notifications in the system regarding due reviews for the relevant authorities (i.e., Deadlines.)	B							
6.24.31	Ability to rate the goals by the appraise (e.g.: Year Beginning/Midyear rating)	B							
6.24.32	Ability to rate Goals/KPI (Functional, Individual) levels achieved, by the appraiser (e.g.: Year Beginning/Midyear rating)	B							
6.24.33	Ability to appraise personal goals achieved by the employee (e.g., Goal Status: (Achieved/Not Achieved)	K							
6.24.34	Ability to select peers & subordinates to perform appraisal	K							
6.24.35	Ability to appraise the appraise by peers/subordinates	B							
6.24.36	Ability to check personal performance status of the employees by themselves	B							
6.24.37	Ability to get feedbacks from employee upon an appraisal (By peer/Supervisor)	B							
6.24.38	Ability to view final score given by appraiser	K							
6.24.39	Ability to agree/disagree with scores provided by the appraiser	K							
6.24.40	Ability to escalate to a superior with notifications to employee and the appraiser, if employee disagrees with the scores	B							
6.24.41	Ability to generate reminders if performance appraisal has not been done	D							
6.24.42	Ability to generate reminders to employees if response on ratings is not given	K							
6.24.43	Ability to revise Goals/Objectives/KPI if necessary, at Mid-Year review	K							
6.24.44	Ability to define number of days allocated for revision purposes	K							
6.24.45	Ability to capture details related to revised objectives/goals/KPI (e.g., Modified date, Goal/Objective/KPI/KPA ID, Reasons to modification, Comments etc.)	K							
6.24.46	Ability to retrieve the summary of revisions taken place on the mid-year review (Revision of goals, Objectives)	K							
6.24.47	Ability to track Performance Objectives/Goals of the appraisal groups Branch/Designation/Region/Individual-wise or any user defined group: (Mid-year, Yearend)	B							
6.24.48	Ability to graphically illustrate the past, present performance review for each appraisal group (e.g., Branch/Designation/Region/Individual-wise or any other user defined group	K							
6.24.49	*Ability to send Year end Performance review results to authorized personnel*	K							
6.24.50	Ability to capture details related to a performance summary rating (e.g., Rating from appraise/Appraiser/Peer, Over all final rating etc.)	B							
6.24.51	Ability to retrieve effective transfers occurred during the appraisal time period	K							
6.24.52	Ability to conduct scenario planning Using appraisal ratings (e.g., Bonus, Promotions, Increments)	K							
6.24.53	Ability to send formulated scenarios for the further approval process	B							
6.24.54	Ability to update the HR Master data upon successful promotion/bonus/increments	K							
6.24.55	Ability to send successful promotion/bonus/increments to relevant authorities	K							
6.24.56	Ability to create corrective action plan after mid-year review (For the residual year) with the details of Date, Created by (Emp ID),Time framework, Identified Gaps/limitations, Category of the limitation (Skill limitation,	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
	Training issue etc.) ,Suggested resolutions, recommended training programs(Integrate with training module) etc.								
6..24.57	Ability to evaluate the success rate of the correction plans taken on the midyear review (This is done at the Yearend review)	B							
6.24.58	Ability to create, modify, delete an Employee Development Scheme	K							
6.24.59	Ability to capture & process details related to an Employee Development Scheme such as Appraise & appraiser details (Employee ID (EPF No), Name with initials, Branch, Designation, etc.)	K							
6.24.60	Ability to create, update, maintain a talent pool for the employees with competencies, skills, talents etc.	K							
6.24.61	Ability to maintain performance appraisal rating/feedback of last all years and promotion /Increment details	K							
6.25	**Skill Matrix/Mapping**								
6.25.1	Ability to maintain skill data base (E.g.: Designation wise)	K							
6.25.2	Ability to define the special skills which should be transferred within/between SBUs	K							
6.25.3	Ability to map skills & competencies of employees with the requirements	B							
6.25.4	Ability to define career paths	K							
6.25.5	Ability to identify roles in the career tracks	B							
6.25.6	Ability to define roles and responsibilities for the roles	B							
6.25.7	Ability to define KRAs for each role	K							
6.25.8	Ability to define weightage for the KRAs	B							
6.25.9	Ability to draw a competency matrix in the system and define the competencies / skills required for each role	K							
6.25.10	Ability to define certifications & trainings required to complete the skills	B							
6.25.11	Ability to capture and validate historical list skills of the employees	B							
6.25.12	Ability to generate seniority list of all officers and staff (with particulars like Date of Birth (DoB), Date of Joining (DoJ), Qualifications) on any date/time	B							
6.25.13	Ability to identify the eligibility of employees to roles in divisions based on skills	B							
6.25.14	Ability to add additional responsibilities to employees	D							
6.25.15	Ability to add additional skills required for the employees	B							
6.25.16	Ability to track completion of additional skills	D							
6.25.17	Ability to map employees to roles	B							
6.25.18	Ability to identify skills required for employees in their roles	B							
6.25.19	Ability to develop IDP based on incomplete skills	B							
6.25.20	Ability to track and monitor completion of required skills	D							
6.25.21	Ability to ensure employees are fit for current role	B							
6.25.22	Ability for employees to review career paths and roles in the company	B							
6.25.23	Ability for employees to chart their career path in the company and build required skills	B							
6.25.24	Ability for employees to view their default aspirational role within their track	B							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.25.25	Ability to compare their skills to required skills for an aspirational role if different from default	B							
6.25.26	Ability to record request for change in role through employee self-service	D							
6.26	**Succession Plan**								
6.26.1	Ability to capture/update SP Policy	K							
6.26.2	Ability to record and maintain various career options/paths available to employees in the organization	B							
6.26.3	Ability to define Vacancy and Talent Database	K							
6.26.4	Ability to identify key positions & critical roles (employees who are retiring in a span of next predefined years) to formulate the vacancy list	K							
6.26.5	Ability to define the eligibility criteria (Age, Performance Appraisal Rating, Attendance Records, Vigilance Records) for employees to be included in Talent Database	B							
6.26.6	Ability to define the list of employees eligible for the Talent Assessment Process and capture their professional experience details, age, location, past Appraisal rating etc.	B							
6.26.7	Ability to provide list of employees short listed for Talent Evaluation Process	B							
6.26.8	Ability to update Interview Assessment Sheet Format including the rating scale	D							
6.26.9	Ability to update list of Interviewing Authority for each function	B							
6.26.10	Ability to inform short listed employees and Interviewing authority for date, time and venue for conducting interviews of short listed employees	B							
6.26.11	Ability to identify employees with matching skills for the roles	B							
6.26.12	Ability to track employee fitness to the critical role	B							
6.26.13	Ability to update list of questions for interview	D							
6.26.14	Ability to update interview ratings of employees in Talent Assessment Database under Evaluation Criteria	B							
6.26.15	Ability to update list of top successors for each positions in Vacancy and Talent Database	D							
6.26.16	Ability to define Individual Development Plan (IDP) Database	K							
6.26.17	Ability to update list of Successors of last years	D							
6.26.18	Ability to notify administrator to update successor details after deployment	D							
6.26.19	Ability to record history of succession planning process of all years	B							
6.27	**Training & Development**								
6.27.1	Ability to create/ update/delete details about the trainings(e.g. Training program Name, Type (In-house, Local, Foreign), Category (Technical-theory, Technical-Practical, Soft Skill, Team work etc.),Organizer (Internal, External Entity) ,Duration (days/hours),Target Employee Group, Planned/Actual Start Date-Time, Planned/Actual Finish Date-Time, No. of participants (Total/For each session),Nominated, Attended/Participated, Absent (Auto calculate) - Reason must be able to capture, No. of training sessions per year, Course Sponsor Details (if applicable),Remarks etc.	K							
6.27.2	Ability to create/ update/delete details about the trainers/Institutes (e.g. Trainer Name, Internal/External, EPF (For Internal),Affiliated Institute, Address,	B							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
	Contact No, Training Category/Product, Training Course Titles, Date of each training carried out (auto update),								
6.27.3	Ability to request for any other supplies needed (e.g., Material, Food & Beverages, Lodging, Travelling etc.)	B							
6.27.4	Ability to maintain a white-lists & black-lists for entities such as Trainers & Institutes, Air Ticketing & VISA processing agents etc.	B							
6.27.5	Ability to amalgamate individual employee-wise training cost	B							
6.27.6	Ability to amalgamate individual branch-wise/division-wise training cost	K							
6.27.7	Ability to notify if the individual training cost is reaching individual's allocated budget	K							
6.27.8	Ability to flag the employees who's training cost has exceeded the allocated budget	K							
6.27.9	Ability to record Training Budgets including training investments for External training programs, Local, Foreign, Internal training programs, Technical, Soft skills,etc.	K							
6.27.10	Ability to record /maintain Training Budgets& actual expenses for different employee groups/training programs	K							
6.27.11	Ability to maintain budget revisions	K							
6.28	**Training Need Analysis(TNA)**								
6.28.1	Ability to maintain different sections of TNA (e.g., Corporate, Functional, Individual)	K							
6.28.2	Ability to cascade individual training needs under TNA classification	B							
6.28.3	Ability for superior to view the following details of each employee (e.g., Qualifications, Current Designation & Job Role, History of promotions, Training attended, Evaluation on those training programs, Examination Results (pass/fail status & marks), Customer complaints on service etc.)	D							
6.28.4	Ability to enter a list of training needs based on performance appraisal & skill matrix	K							
6.28.5	Ability to link with Succession plan	B							
6.28.6	Ability to identify the process relating to the training need	K							
6.28.7	Ability to specify if training need should be satisfied with an internal, local or foreign training	K							
6.28.8	Ability to view previously entered training needs	K							
6.28.9	Ability to link training needs to employees (e.g. One training need to several employees, Several training needs to one employee, Several training needs to several employees etc.)	K							
6.28.10	Ability for individual employees to identify training needs	K							
6.28.11	Ability for superior to approve/reject training needs identified by employees	B							
6.28.12	Ability to capture training needs identified during performance appraisals (e.g., Training needs identified by Appraiser/Appraise, Training needs due to customer/other complaints etc.)	K							
6.28.13	Ability to view summary of training needs by type, category, product etc.	K							
6.28.14	Ability to for branch managers & other superiors to link their divisions individual training needs with their divisions KPIs (with integrations to Performance Module)	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.29	**Request/Nominations & Approvals**								
6.29.1	Ability for superior to nominate employees for training, including the details(e.g. EPF No, Employee Name, Employee level, Benefits to the employee, Benefits to the company etc.)	B							
6.29.2	Ability for superior to approve/reject nominations/requests - Send notifications to Training Branch on approval/rejection	B							
6.29.3	Ability for superior to state a reason for rejection	B							
6.29.4	Ability to send periodic reminders to superior for approval	D							
6.29.5	Ability to view pending approvals from superiors	K							
6.29.6	Ability for system to notify if nominated employee has applied for leave on the training dates.	D							
6.29.7	Ability to cancel nomination and inform superior if nominee doesn't approve before the deadline	B							
6.29.8	Ability for superior to nominate a different employee for the training	B							
6.29.9	Ability to apply for higher education	B							
6.29.10	Ability to have online registration/request, cancellation, reminder, and confirmation of training programs	K							
6.30	**Training Plan**								
6.30.1	Ability to generate a training plan for the year based on budget & TNA	K							
6.30.2	Ability to link training budget with training plan	B							
6.30.3	Ability to compare training plan with previous years' plans	K							
6.30.4	Ability to revise the training plan	K							
6.30.5	Ability to maintain several versions of the same training plan after revisions	B							
6.30.6	Ability to facilitate approval of training plan from higher authority	K							
6.30.7	Ability to approve/reject the Training requests for specific programs which were not included as training needs	K							
6.30.8	Ability to allow higher authority to suggest amendments to training plan	K							
6.31	**Training Calendar**								
6.31.1	Ability to formulate/define and update Annual Training Calendar with list of Training Programs, Batch size, target group etc.	K							
6.31.2	Ability to view calendar - by month, by week etc.	K							
6.31.3	Ability to define various views for training calendar (e.g., Admin, Authorized personnel, Employees etc.)	B							
6.31.4	Ability to auto update calendar once a training course is approved	K							
6.31.5	Ability to fetch & display following details of a training course in the calendar (e.g. Training Name, Category, Learning Outcome, Recommended Level (Manager etc.),Trainer, No. of Sessions, Status, Location, Time etc.)	B							
6.31.6	Ability to auto-update status in the calendar once training is "in-progress", "finished" etc.	B							
6.31.7	Ability to send automatic reminders (email/on calendar) to all registered trainees & internal stake-holders on prior to start a course (calendar admin should be able to set a time to send reminders per each session)	K							
6.31.8	Ability to warn if a calendar entry is over-lapping with previously entered course	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.32	**Training Registration**								
6.32.1	Ability to register to training program	K							
6.32.2	Ability to link email correspondence to registration	K							
6.32.3	Ability to generate a notification to superiors and nominee on successful registration	K							
6.32.4	Ability for system to identify number of registered participants	K							
6.32.5	Ability for system to generate reminders on nominated participants who haven't been registered	B							
6.32.6	Ability to cancel registration for one, many or all participants	K							
6.32.7	Ability to inform all participants of cancellation.	B							
6.32.8	Ability to upload external brochures or training program received from external institutes	B							
6.32.9	Ability to support the process of Induction Training for new employees by integrating with the recruitment module	K							
6.33	**Foreign Training Approval Process**								
6.33.1	Ability to maintain a checklist for foreign training approval (per each trainee) with items such as Course Registration Details, Course Invoice & payment, Scanned copy of Air Tickets, Hotel Reservations - invoices/payment slips etc.	K							
6.33.2	Ability to flag the employee once the VISA is approved	K							
6.33.3	Ability to send automatic notification to employee, supervisor & authorized personnel once employee is flagged	B							
6.33.4	Ability to insert duty-leave entitlement in "Attendance & Leave" sub module for the employee once VISA is approved	B							
6.33.5	Ability to apply for duty leave (including the travelling dates) once notification is received	D							
6.34	**Training evaluation**								
6.34.1	Ability to update list of Trainers/Institutes for various training programs	B							
6.34.2	Ability to record/extract participant's attendance in training programs and employees nominated but did not attend a training program	K							
6.34.3	Ability to enter employee attendance manually for each training course	B							
6.34.4	Ability to auto-enter a duty-leave against the employee once his/her attendance for the training is captured in the system	D							
6.34.5	Ability to provide feedback on the training program/trainers by the attendees	B							
6.34.6	Ability to view history of past trainings attended	B							
6.34.7	Ability to provide training feedback by the employee's supervisor 6 months post training for training effectiveness	B							
6.34.8	Ability to provide input to Finance Module for payment to Trainers/Institutes	K							
6.34.9	Ability to maintain the history of training attended in training data base (E.g.: - Name of the course, Name of the institution, Duration etc.)	K							
6.35	**Payroll**								
6.35.1	Ability to create unlimited number of payrolls (Pay groups such as Executive, Non-executive, etc.)	K							
6.35.2	Ability to automatically & manually allocate unique number for Payroll / pay groups	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.35.3	Ability to configure multiple payroll calendar	K							
6.35.4	Ability to evaluate different scenarios for change in pay-roll structure	B							
6.35.5	Ability to provide for inline ad-hoc calculation of employees' salary amount	K							
6.35.6	Ability to configure, view, edit payroll calculation rules with higher authority	K							
6.35.7	Ability to attach/ detach any number of employees within each payroll group	K							
6.35.8	Ability to provide an impact analysis tool for analysis of impact of revision of any / all components like pay, allowances, deductions etc.	B							
6.35.9	Ability to automatically update payroll details with salary increments after approval	K							
6.35.10	Ability to define an effective date for salary changes, allowances, deductions, etc.	K							
6.35.11	Ability to automatically update payroll based on an effective date with salary increments/ allowances/ deductions, etc. after approval	K							
6.35.12	Ability to track salary history on an employee record	K							
6.35.13	Ability to apply an increase based on either a flat amount or a percentage of base salary. Eg:-Based on basic salary	K							
6.35.14	Ability to define multiple payment method &instructions (e.g., bank deposits, cash, cheque payment etc.)	K							
6.35.15	Ability to parameterize the deduction percentages of EPF, ETF etc.	B							
6.35.16	Ability to define/automatically compute statutory items such as EPF, ETF, PAYE, Stamp duty, etc. when processing the payroll	K							
6.35.17	Ability to handle advance payments	B							
6.35.18	Ability to integrate with different attendance tracking systems (E.g.: -biometric, System login, web interface etc.)	K							
6.35.19	Ability to automatically compute allowances, salary increments, overtime, no-pay, medical re-imbursement, Loan related payments, deductions, Mobile bills, Membership dues etc. when processing the payroll	K							
6.35.20	Ability to auto update payroll database on new recruitments, extensions, absorptions, transfers, promotions etc. once it has been updated by the designated personnel (e.g.: upon receiving details on a new recruitment, payroll officer must be able to view his salary & other entitlements and update payroll database)	K							
6.35.21	Ability to submit/ update declarations for Income Tax calculation and support/ maintain multiple tax tables Law/Rules & PF details	K							
6.35.22	Ability to view compensation and benefit details (Pay Slip)	B							
6.35.23	Ability to view the Performance Linked Incentives (PLI) earned during a year	B							
6.35.24	Ability to support for transactions in multiple currencies and cross currencies	K							
6.35.25	Ability to pay bonus and other lump sum amounts based on approval (E.g.: -Festival bonus, Yearend bonus etc.)	B							
6.35.26	Ability to allow for the computation of the elements (E.g.: Fixed Pay elements applicable to all employees Like Basic, PF, Special Allowance etc.)	B							
6.35.27	Ability to maintain/handle/compute employee data with respect to PF, Gratuity, Pension etc. and the nominations for the same	K							
6.35.28	Ability to have provision to define tax rates (including available deductions, exemptions, taxation slab rates, standard deduction, surcharge etc.)	B							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.35.29	Ability to handle tax exemptions as per the prevailing Income Tax Law/Rules & PF details	K							
6.35.30	Ability to maintain information of the account details where salary gets deposited	K							
6.35.31	Ability to automatically update Payroll database for changes in employee record without interfering with payroll processing (e.g., Promotions in the middle of month)	B							
6.35.32	Ability to allow provision to suspend Payroll runs or control final settlement processing on a case-to-case basis	B							
6.35.33	Ability to maintain/update/view each month payroll status (e.g., Processed, Audited, Executed)	B							
6.35.34	Ability to calculate retroactive pay and process retroactive payment in the next payroll period	B							
6.35.35	Ability to have read-only access to employee records while payroll is processing	B							
6.35.36	Ability to generate e-pay slips with finalized payroll per each month & send it to each employees(E.g.:-for each pay period, including gross pay, taxes, other deductions and net pay, with pay period etc.)	K							
6.35.37	Ability to perform on-line calculation of pay and benefits for terminated employee based upon termination date	K							
6.35.38	Ability to Post salary payment advice including multiple payment methods such as bank, cash and Cheque	K							
6.35.39	Ability to support multiple banks or savings institutions per employee	B							
6.35.40	Ability to conduct full and final settlement of employee during Exit	B							
6.35.41	Ability to notify (flag) individuals of any outstanding balances when employee is separated	B							
6.35.42	Ability to record an employee's selection of benefit, retirement and deduction options	D							
6.35.43	Ability to automatically recover salary advances	K							
6.35.44	Ability to run payroll for multiple days/times	K							
6.35.45	Ability to post the amount of salary paid for each element of pay for an employee, based on the relevant GL account code and employee cost center information to General Ledger. Financial postings include: Element, Amount, GL Account, Cost Centre	K							
6.35.46	Ability to consider the noncash benefits for the calculation of PAYE tax	B							
6.35.47	Ability to apply manual arrears payments if necessary, with relevant approval process	B							
6.35.48	Ability to support manual adjustments to earnings, taxes, and deductions with restricted to authorized personals only. System should automatically update related fields based on the changes made	B							
6.35.49	Ability to perform year-end corrections/adjustments by individual employee or groups of employees	K							
6.36	**Employee Separation**								
6.36.1	Ability to notify employee& authorized personnel on upcoming separation within a specified period of time (E.g.:-Retirement)	K							
6.36.2	Ability to send resignation/retirement requests by employee	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.36.3	Ability to send special termination orders by authorized personnel	B							
6.36.4	Ability to approve/reject separation requests by authorized personnel	B							
6.36.5	Ability to notify relevant authorities once a separation is approved	B							
6.36.6	Ability to maintain a work-flow for branch clearance linked to Asset management module	B							
6.36.7	Ability to upload exit forms, Gratuity Settlement form, departmental clearance forms etc. by authorized personnel	B							
6.36.8	Ability to inquire pending loan settlements	B							
6.36.9	Ability to notify (flag) individuals of any recoveries/ outstanding balances such as loan when employee exits	B							
6.36.10	Ability to capture outstanding payments to employee and instruct payroll processing	D							
6.36.11	Ability to inquire on employee recoveries (e.g., Generating Financial summary of employee liabilities)	D							
6.36.12	Ability to fill & submit Exit Feedback Form by employee (E.g.: -Resignation)	K							
6.36.13	Ability to record planned exit date & actual exit date	K							
6.36.14	Ability to capture hours worked after termination (in special cases) & instruct finance for payments	K							
6.36.15	Ability to maintain an Exit Check List and authorized officer should not be able to complete the exit process till all the items in the list are checked off	B							
6.36.16	Ability to deactivate employee's profile from the system upon completion of each check list item from the system	K							
6.36.17	Ability to auto update ex-employee database upon deactivating the employee profile	K							
6.36.18	Ability to notify all relevant parties on the termination at the point of deactivation	K							
6.36.19	Ability to maintain the details of suspended employees	B							
6.36.20	Ability to maintain/retrieve case details of the employees reinstated/reappointed after being separated	B							
6.36.21	Ability to integrate with Email Client	K							
6.36.22	Ability to integrate with CEB intranet	B							
6.36.23	Ability to integrate with 3rd party web portals	B							
6.37	**Controls**								
6.37.1	Ability to provide restricted access to different classes of employee master data	K							
6.37.2	Ability to restrict making changes in the system to authorized persons only	K							
6.37.3	Ability to maintain Audit trial of all changes made to sensitive information	K							
6.37.4	Ability to seek confirmation after every change made in the structure, changes to be made permanent only on authentication by the controller of the authorized person.	B							
6.37.5	Ability to allow restriction of administrative functions to a few select payroll users	K							
6.37.6	Ability to restrict applicants from attaching resumes over a certain file size	K							
6.37.7	Ability to set maximum no. of resumes accepting for each job posting	K							
6.37.8	Ability to move all the applications filtering out in a separate database	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.37.9	Ability to define different authorization types in the system	K							
6.37.10	Ability to define and assign different authorize levels in the system	K							
6.37.11	Ability to control rates, ratings based on the predefined threshold limits	K							
6.37.12	Ability to impose penalties on the late submissions of performance review	K							
6.37.13	Ability to provide a complete audit log of all changes and deletions, including records of who made the changes (Midyear revisions etc.)	K							
6.37.14	Ability to track the status of the authorization level	K							
6.37.15	Ability to prevent selecting black-listed vendors for any services unless approved by higher authority	K							
6.37.16	Ability to impose deadlines for approval/rejection (e.g. Training need)	K							
6.37.17	Ability to ensure that every employee should have at least 1 training need	D							
6.37.18	Ability for system to prevent nominating suspended employees, employees on long leave etc. for training program	K							
6.37.19	Ability for system to ensure that all employees are nominated for at least one training	K							
6.38	**Inquiries**								
6.38.1	Ability to inquire budgetary data by: Year, category, monthly break-up, divisional etc.	K							
6.38.2	Ability to inquire training needs by employee level, role, training category, branch/division etc.	B							
6.38.3	Ability to inquire pending, approved & cancelled requests	B							
6.38.4	Ability to inquire the status of requests	B							
6.38.5	Ability to inquire the revision taken place	B							
6.38.6	Ability to inquire the history of an employee	B							
6.38.7	Ability to inquire the reporting hierarchy of a particular employee	K							
6.38.8	Ability to inquire black-listed ex-employees/candidates	B							
6.38.9	Ability to inquire employees whose contracts are about to be expired	B							
6.38.10	Ability to inquire turn-around time for each activity such as loan approval, medical claim approval, holiday allowance approval etc.	K							
6.38.11	Ability to inquire history (grievance/disciplinary) by date, employee name, by follow-up action take etc.	K							
6.38.12	Ability to inquire membership payment due dates per each institution, club etc.	B							
6.38.13	Ability to inquire about Division/Branch/Unit (e.g., Manpower plan)	B							
6.38.14	Ability to inquire applications received via different sources	B							
6.39	**Reports**								
6.39.1	Ability to capture statistical data from manual entry, external electronic media, interfacing with external databases.	D							
6.39.2	Ability to capture the different screen as per the user category.	B							
6.39.3	Ability to analyze the performance of standard jobs against the estimates contained within the standard.	B							
6.39.4	Ability to list the total costs incurred due to recruitment, training etc.	K							
6.39.5	Ability to report on frequency of employee turnover	K							

Serial No	Criterion	K/B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
6.39.6	Ability to provide reporting tools for the users to create their own Ad hoc reports	K							
6.39.7	Ability to generate summary reports on Division/Branch/Unit wise	B							
6.39.8	Ability to provide reports on list of vacant positions	K							
6.39.9	Ability to provide reports of employees based on blood group, length of service, age, qualification, experience, salary level etc.	B							
6.39.10	Ability to provide reports on all employee details as per SBUs, location in specified period	B							
6.39.11	Ability to provide reports on employee counts retired, resigned, suspended, terminated or left in specified period	B							
6.39.12	Ability to provide reports on status of details of disciplinary proceedings, time, progress, status	B							
6.39.13	Ability to generate report monthly/quarterly /half yearly and yearly statements covering sector wise activities of Loan and retrieve relevant data of recoveries made and outstanding amount	B							
6.39.14	Ability to generate report on attendance & leave details	B							
6.39.15	Ability to provide report on past salary slips & income tax statements	K							
6.39.16	Ability to analyze on the training feedback	D							
6.39.17	Ability to run report showing role fitness of all employees identified as successors for critical roles.	K							
6.39.18	Ability to provide reports on list of employees due for retirement in a span of predefined years	B							
6.39.19	Ability to provide reports on number and details of Vacancies	B							
6.39.20	Ability to provide reports of employees eligible/rejected for Talent Assessment Process	B							
6.39.21	Ability to provide reports of employees short listed/rejected for Talent Evaluation Process	B							
6.39.22	Ability to provide reports of top successors for each position	B							
6.39.23	Ability to provide reports on employees undergoing/completed IDP	B							
6.39.24	Ability to provide reports on assessment rating of interviewed employees	B							
6.39.25	Ability to provide reports on employees participated/selected/rejected in succession planning process	B							
6.39.26	Ability to generate MIS reports based on payroll data	K							

7. Fleet Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
7.1	**General**								
7.1.1	Ability to create, update, maintain vehicle details	K							
7.1.2	Ability to maintain accurate history of the records of vehicles	K							
7.1.3	Ability to check vehicle related costs, monitor transaction Progress and status	K							
7.1.4	Ability to identify expenses which exceeds budget	K							
7.1.5	System should facilitate different approval levels based on the limits	K							
7.1.6	Ability to generate alerts/ notifications/ emails from the system when required	K							
7.1.7	Ability to generate reports based on predefined/ customized format	K							
7.2	**Vehicle Master**								
7.2.1	Ability to create vehicle (object) with unique serial number	K							
7.2.2	Ability to update and maintain the following information	K							
7.3	**General Details**								
7.3.1	Vehicle Type (Car/Van/etc.), Vehicle Number, Vehicle Plate Number, Vehicle registration Date, Engine Number, Chassis Number, Warranty Details (Start date, End date), Manufactures serial Number, License Plane, Fuel UOM (Liter), Vehicle Value, Vehicle color, Last emission test date, details of substitute vehicles, etc.	K							
7.4	**Technical Details**								
7.4.1	Capacity, Make, Model, Model Number, Odometer Value, Number of Wheels, Number of doors, GPS software details (Location, Start time, End time), etc.	K							
7.5	**Other Details**								
7.5.1	Insurance Premium Details (Name of the Insurance Company, Insurance (Start Date, Policy No, End Date)), Revenue License details (last paid date/ due date/ amount paid), Vehicle Service details (last service date/ meter reading of last service/ next service date/next service KM limit/ recommended service station), Details of the registered contractors (garage, fuel stations), Competency certificate details, emission test details, etc.	K							
7.6	**Vehicle allocation and monitoring**								
7.6.1	Ability to maintain details of the vehicle pool in the system	K							
7.6.2	Ability to allocate and maintain details of the dedicated vehicles	K							
7.6.3	Ability to request/ cancel vehicles	K							
7.6.4	Ability to generate draft vehicle schedule based on the requests with the following fields (Allocation CEB division/Branch/ Unit, Person in charge, Usage from date, Charging rate (daily, weekly, monthly), Vehicle number, Date and time, Meter reading/ Mileage, Fuel consumption, Consumption of Oil, Cost of Fuel, Cost of Oil, Total Cost)	K							
7.6.5	Ability to allocate vehicles based on predetermined criteria (Priority based)	K							
7.6.6	Ability to share vehicles based on a predetermined criterion	K							
7.6.7	Ability to generate unique reference number for vehicle schedule	K							
7.6.8	Ability to suggest optimized routes to reduce fuel costs	K							
7.6.9	Ability to assign a driver to a vehicle	K							

7.6.10	Ability to capture tyre and other spare parts replacement cost details per vehicle for given period	K							
7.6.11	Ability to track the details of the vehicle through a 3rd party software (GPS tracker)	K							
7.7	**Hired Vehicles(Vehicle/ Driver)**								
7.7.1	Ability to store the details of the agreement details in the system	K							
7.7.2	Ability to generate alert when the end date of agreement is reached regarding the extension, new procurement, etc.	K							
7.7.3	Ability to provide feedback on the performance of the hired party	K							
7.7.4	Ability to cross check the invoice details with the agreement details	B							
7.8	**Running Chart**								
7.8.1	Ability to generate running chart based on the user requests (Daily, weekly, monthly)	K							
7.8.2	Ability to maintain details related to running chart (Vehicle registration number, Month, Date, Name of the Driver, Fuel tank capacity (Fuel Consumption), Meter Reading Details (Start meter reading/End Meter Reading), Start/End Location, Purpose of the trip))	K							
7.8.3	Ability to generate running chart for cranes based on the operating hours	K							
7.9	**Vehicle Maintenance, Repair and Fuel Management**								
7.9.1	Facilitate to update and maintain related information on vehicles (Last service date, contractor details, Meter reading of last service, Next due service date, Next service KM limit, repair cost, maintenance cost, fuel consumption, fuel cost, millage, etc.)	K							
7.9.2	Ability to generate a request regarding maintenance, repair, fuel when required	B							
7.9.3	Ability to generate and modify maintenance schedule	B							
7.9.4	Ability to upload/ enter the details of invoices of external repairs/services	K							
7.9.5	Ability to notify the user upon reaching due date (Insurance, revenue license, emission test, periodic service)	K							
7.9.6	Ability to generate fault report	K							
7.9.7	Ability to maintain records of fuel bill settlements	K							
7.9.8	Ability to notify account branch once the invoice is approved	K							
7.9.9	Ability to generate fuel order	K							
7.10	**Vehicle Disposal (Maintenance)**								
7.10.1	Ability to maintain related details vehicle to be disposed (Vehicle Registration Number, Engine Number, VIN/Chassis Number, New Operator' name or Organization Name, Selling prices/ Market Price, Other Details)	D							
7.10.2	Ability to Pop-up last disposal details of similar vehicle when required	B							
7.11	**MIS reports**								
7.11.1	Ability to capture statistical data from manual entry, external electronic media, interfacing with external databases.	B							
7.11.2	Ability to capture the different screen as per the user category.	B							
7.11.3	Ability to analyze the performance of standard jobs against the estimates contained within the standard.	D							
7.11.4	Ability to capture the vehicle down time	D							
7.11.5	Ability to list the total costs incurred due to repair, maintenance, fuel, etc.	D							
7.11.6	Ability to report on frequency of vehicle failures	B							
7.11.7	Ability to provide reporting tools for the users to create their own Ad hoc reports	B							

7.12	**Integrations**								
7.12.1	Human Resource Management	K							
7.12.2	Finance module	k							
7.12.3	Procurement and inventory management	K							
7.12.4	Asset Management Module	K							
7.12.5	Projects and constructions	K							

8. Asset Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.1	**General**								
8.1.1	Ability to track comprehensive audit trails for master data; and maintenance and asset management transaction records.	K							
8.1.2	Ability to track approval status (e.g., Approved, Approval pending etc.) of each transaction (e.g. asset creation, condition monitoring, conducting root cause analysis, asset retirement etc.).	K							
8.1.3	Ability to identify asset acquisition details (e.g., PO number, Vendor, acquisition date, received date, owned/leased).	K							
8.1.4	Ability to define proper authorizations (CAPEX approval, PO approval, disposal approval, asset transfer approval and other workflow related approval hierarchies).	B							
8.1.5	Ability to define costing methods like FIFO, Standard Cost, Weighted Average.	K							
8.1.6	Ability to handle asset inventory valuation method changes midway.	K							
8.1.7	Facilitate to allow authorized users to access multiple organizations (Divisions/Units etc.).	B							
8.1.8	Ability to define a calendar in the system to track particular tasks (e.g., Schedule Work Order starts etc.)	B							
8.1.9	Ability to update asset inventory details real time (e.g., Goods receipt, Goods issue etc.).	K							
8.1.10	Ability to upload scanned documents on the system.	K							
8.1.11	Ability to have a document tree to query the linking of documents (e.g., incidents, inspection reports etc.).	B							
8.1.12	Ability to generate checklist based on user requirements and attach to the process flow.	B							
8.2	**Asset Registration and Capitalization**								
8.2.1	The system must enable registration of assets with the following details:								
8.2 1.1	*Asset manufacturer's details (Serial number, model, year, etc.)*	B							
8.2 1.2	*Asset number*	K							
8.2 1.3	*Asset description (type, condition, acquisition date)*	K							
8.2 1.4	*Asset sub category (user define sub categories)*	B							
8.2 1.5	*Item classification code (multiple sub-class code)*	B							
8.2 1.6	*Asset owner (internal / external or both)*	B							
8.2 1.7	*Asset user / assignee*	B							
8.2 1.8	*Asset specifications of safety methods, license etc.*	B							
8.2 1.9	*Budget item*	B							
8.2 1.10	*Cost Centre / Profit Centre*	B							
8.2 1.11	*Purchase date/Completion date (for built asset)*	B							
8.2 1.12	*Depreciation start date*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.2 1.13	*Vendor from whom the asset is procured*	B							
8.2 1.14	*Employee to which the asset is tagged*	D							
8.2 1.15	*PO reference*	D							
8.2 1.16	*Invoice reference*	D							
8.2 1.17	*Warranty period, e.g., start and end dates*	B							
8.2 1.18	*Original cost*	B							
8.2 1.19	*Salvage value*	B							
8.2 1.20	*Useful life in month*	K							
8.2 1.21	*Replacement description*	B							
8.2 1.22	*Depreciation method*	B							
8.2 1.23	*Replacement request reference*	D							
8.2 1.24	*Scrap sales description*	D							
8.2 1.25	*Scrap sales reference*	D							
8.2 1.26	*Betterments*	D							
8.2 1.27	*Lease Asset Information (if applicable)*	B							
8.2 1.28	*Replacement Cost – This field can be updated as needed by users*	D							
8.2 1.29	*Disposal description*	B							
8.2 1.30	*Disposal reference*	B							
8.2 1.31	*Asset GL control account*	K							
8.2 1.32	*Asset GL accumulated depreciation account*	K							
8.2 1.33	*Asset GL depreciation expense account*	K							
8.2 1.34	*Asset Tag number*	D							
8.2 1.35	*Asset Insurance details*	B							
8.2 1.36	*Policy Number*	D							
8.2 1.37	*Amount Insured*	D							
8.2 1.38	*Date Insured*	D							
8.2 1.39	*Insurance Company Name*	D							
8.2 1.40	*Policy expiry date*	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.2 1.41	*Asset Status (operating asset, non-operating asset, etc.)*	B							
8.2 1.42	*User definable fields to capture any other Organization specific information*	D							
8.2.2	If an asset is with a sub-contractor, subsidiary or 3rd party, ability to capture followings:								
8.2.2.1	*Location (Sub-contractor/Subsidiary/3rd party)*	D							
8.2.2.2	*Amount of assets dispatched for each location*	B							
8.2.2.3	*Availability of current fixed asset amount in each sub-contractor/3rd party*	B							
8.2.2.4	*Sub-contractor/Subsidiary/3rd party details*	B							
8.2.2.5	*Sub-contractor /Subsidiary/3rd party reference number*	B							
8.2.3	The system shall provide support for lease and loan administration, including:								
8.2.3.1	*Lease term information*	B							
8.2.3.2	*Strategic planning of assets (identification, selection and development)*	B							
8.2.3.3	*Capital planning*	B							
8.2.3.4	*RFP and lease analysis*	D							
8.2.3.5	*Lease administration (e.g., integration with accounts receivable and accounts payable)*	B							
8.2.4	Ability to define safety details and steps to be followed and attached to asset and Work Orders.	K							
8.2.5	Ability to link component units (parent/child relationship) whereby each component maintains a financial life of its own.	B							
8.2.6	Ability to have the capability of auto numbering assets upon registration.	K							
8.2.7	Ability to facilitate Bar code identification for fixed asset.	D							
8.2.8	Ability to define non-depreciable fixed assets.	B							
8.2.9	Ability to charge the cost of non-depreciable assets to respective accounts as expense.	B							
8.2.10	Ability to track physical location of assets such as building, department, floor, area (system should maintain location history of the asset).	K							
8.2.11	Ability to capture market value of asset items.	D							
8.2.12	Ability to upload legacy information to the fixed asset database through mass upload program.	B							
8.2.13	Ability to support document attachment facility (e.g. MS Word, Excel, PDF, JPEG, etc.).	B							
8.2.14	The system must allow for definition of asset groups with values for the following details: - Asset group ID - Description - Depreciation method - Depreciation rate - Useful life - Depreciation frequency	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.2.15	The assets upon registration must automatically take on the details of the asset groups to which they belong but the module must also allow for amendment of these asset details at the individual asset level during registration.	B							
8.2.16	Ability to integrate with procurement and payables modules respectively - details are automatically picked up by the asset module for completion of registration.	B							
8.2.17	Ability to integrate with the human resources module such that employees from the asset register can be attached to assets which they use and are directly responsible for.	B							
8.2.18	Ability to integrate with a GIS module for tracking of physical location of assets.	B							
8.2.19	Ability to copy an asset record to create a similar asset record.	D							
8.2.20	Ability to split asset record entries for identical items and then assign separate property tag / inventory control numbers.	K							
8.2.21	Ability to create asset specific maintenance schedules or flags based on routes, condition assessment, code values, or criticality.	K							
8.2.22	Ability to maintain pertinent data on both capitalized and non-capitalized assets, which can be either portable or non-portable as follows:								
8.2.22.1	*Capitalized assets based upon a user-specified criteria, including amount threshold by asset type*	K							
8.2.22.2	*Track assets (non-capitalized equipment) that are not to be capitalized per Country policy but have been deemed to be secured by Country or department policy (e.g., mobile phones).*	B							
8.2.23	Ability to allow modification of asset capitalization and control rules per Country policy, as necessary (i.e., no hard coding of rules).	K							
8.2.24	The system must allow for simulation of capitalization and generate a statement showing the following details: - Asset ID - Asset Name - Date of capitalization - Capitalized amount - Department - Division - Accounting entries - User definable fields to capture any other Organization specific information	K							
8.2.25	The module must have the capability for both automatic and manual capitalization of assets after registration.	B							
8.2.26	Ability for asset transactions for depreciation, revaluation, disposal and transfer to be performed on only capitalized assets.	B							
8.2.27	Ability to notify asset capitalization status (capitalized or not, revalued asset etc.).	D							
8.2.28	The system must automatically execute accounting entries involved in capitalization.	K							
8.2.29	Ability to track detailed cost for each item that makes up a whole asset.	B							
8.2.30	Ability to activate the warranty periods and other trigger points when asset is capitalized.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.3	**Work In Progress Management**								
8.3.1	The system must enable posting of all commissioning / construction expenses on a project to a single WIP control account.	K							
8.3.2	Ability to capture all WIP works by respective maintenance or project modules (Account code, Account description, Job description, Project description etc.)	K							
8.3.3	Ability to capture all costs of the project and visible for asset capitalization with the approvals.	B							
8.3.4	Ability to retrieve all costs of the project for capitalization (sub category wise).	B							
8.3.5	Ability to capitalize WIP costs for recognition as an asset when the project is completed.	B							
8.3.6	Ability to capitalize WIP components for the individual departments, thus recognizing assets for the individual departments.	B							
8.3.7	Ability to generate work in progress job variance report from respective module.	K							
8.3.8	Ability to generate work in progress valuation report from respective module.	K							
8.4	**Asset Transfers and Sharing**								
8.4.1	**Asset Transfers**								
8.4.1.1	If an asset is transferred to a sub-contractor/subsidiary/3rd party:								
8.4.1.2	*Ability to obtain corresponding sub-contractor/subsidiary/3rd party details*	K							
8.4.1.3	*Ability to obtain corresponding sub-contractor/subsidiary/3rd party reference number*	K							
8.4.1.4	*Ability to maintain asset transfer history corresponding to the sub-contractor/subsidiary/3rd party*	B							
8.4.1.5	If an asset is transferred within the Company:								
8.4.1.6	*Ability to facilitate transfer of assets - Inter-locations, Cost Centers, Profit Centers etc.*	K							
8.4.1.7	*Ability to transfer all the related attributes of the transferred asset e.g., Department, Sub-Department, Cost Centre, Profit Centre*	K							
8.4.1.8	*Ability to transfer a group of assets*	B							
8.4.1.9	Ability to transfer asset temporally basis	D							
8.4.1.10	Ability to automatically update the location upon transfer.	D							
8.4.1.11	Ability to post automatic journal entries for asset Transfers for inter SBU transfers.	B							
8.4.1.12	Ability to review on-line information regarding transferred assets.	B							
8.4.1.13	Ability to maintain asset transfer history.	B							
8.4.1.14	Ability to transfer fixed assets within or between organizations at the individual asset level and to generate appropriate accounting entries.	B							
8.4.1.15	Ability to store accumulated depreciation in a static field for purposes of transferring the asset.	B							
8.4.2	**Asset Sharing**								

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.4.2.1	Ability to share asset throughout the units, branches, divisions, cost centers etc.	K							
8.4.2.2	Ability to check the availability of assets through the system.	B							
8.4.2.3	Ability to reserve asset from other units, branches, divisions, cost centers etc.	B							
8.4.2.4	Ability to provide approval for the reserve assets by approving authorities.	B							
8.4.2.5	Ability to notify through SMS or alerts from the system.	D							
8.4.2.6	Ability to issue asset from the system.	K							
8.4.2.7	Ability to update asset location and responsible person from the asset issuance.	B							
8.4.2.8	Ability to attach condition check before asset issue and return.	B							
8.4.2.9	Ability to given approval for the asset conditions when the asset issue and return.	B							
8.4.2.10	Ability to return asset from the system.	K							
8.4.2.11	Ability to attach gate passes to the issue and return assets.	B							
8.4.2.12	Ability to automatically charge the cost to the asset request cost center, unit, division etc.	B							
8.4.2.13	Ability to check variance of asset condition issue and return time.	B							
8.5	**Asset Life Cycle Management**								
8.5.1	**Condition Monitoring**								
8.5.1.1	Ability to identify crucial assets and assign a risk rating to individual or groups of assets.	K							
8.5.1.2	Ability to define multiple risk elements (domain) to associate with each asset.	K							
8.5.1.3	Ability to assign notes/briefs on risk elements for each asset.	B							
8.5.1.4	Ability to define threshold-based measurements.	K							
8.5.1.5	Ability to define risk assessment guides and definitions to help users identify and use risk elements appropriately.	B							
8.5.1.6	Ability to define condition rating guides and definitions to help users identify and use rating and assessment values correctly and uniformly.	B							
8.5.1.7	Ability to define relationships (quantifiable) between risk and condition ratings and other asset attributes as related to service lifecycle.	B							
8.5.1.8	Ability to feed data from instruments (excel, text etc.) to a standard template.	B							
8.5.1.9	Ability to integrate SCADA system and other available measurement instruments to the system and get information from these.	K							
8.5.1.10	Ability to manually enter data to the predefined standard templates.	K							
8.5.1.11	Ability to track measured data and history associated with an asset and compare with user defined warnings and action limits for an assortment of attributes (e.g. heat rate testing, wear and tear measurements).	K							
8.5.1.12	Ability to generate reports based on measurement evaluations.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.1.13	Ability to generate risk alerts to relevant authorities.	K							
8.5.1.14	Ability to trigger Work Order creation when a user defined measurement threshold is reached (e.g. inspection after run time is reached).	K							
8.5.1.15	Ability to assign and modify a condition rating to each asset.	B							
8.5.1.16	Ability to develop unique condition assessment functions based on templates for use with specific types of assets which may monitor various assessment attributes to trigger actions or notifications.	B							
8.5.1.17	Ability to assign notes/briefs on condition elements for each asset.	B							
8.5.2	**Asset Maintenance**								
8.5.2.1	Ability to enable users to predefine common defects (problem codes) or incident ID associated with each asset or equipment eligible for maintenance.	K							
8.5.2.2	Ability to define checklists for identifying defects when maintenance crew is checking the condition of assets.	B							
8.5.2.3	Ability to record defects, their criticality and the date on which the defect was detected.	K							
8.5.2.4	Ability to facilitate analysis and prioritization of defects identified so that most critical defects can be addressed first.	K							
8.5.2.5	Ability to identify the root cause and impact of each defect.	K							
8.5.2.6	Ability to define business specific risk assessment or asset specific risk assessment.	K							
8.5.2.7	Ability to generate root cause analysis based on what if analysis, logic tree, cause and effect diagrams, etc.	K							
8.5.2.8	Ability to develop maintenance programme for the execution of maintenance activities (action codes) to rectify identified defects by linking with root cause analysis.	K							
8.5.2.9	Ability to simulate maintenance work and must have tools and skill for analysis and optimization of maintenance programme.	B							
8.5.2.10	Ability to link corrective and preventive maintenance Work Orders.	K							
8.5.2.11	Ability to define corrective and preventive maintenance tasks/ activities.	B							
8.5.2.12	Ability to define duration for corrective and preventive maintenance tasks.	B							
8.5.2.13	Ability to link corrective maintenance tasks with conditions and recommend corrective action based on condition.	K							
8.5.2.14	Ability to have predictive maintenance tools (alarm triggering) integrated in the system.	B							
8.5.2.15	Ability to trigger preventive maintenance (PM) by time event, condition or equipment, using a separate field.	K							
8.5.2.16	Ability to have alarm tables for indicators that are color coded.	B							
8.5.2.17	Ability to have a maintenance routine triggered on a preferred day or date if within tolerance.	B							
8.5.2.18	Ability to forecast when the next reading must occur based on historical readings.	B							
8.5.2.19	Ability to override corrective work that covers equipment maintenance due work.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.2.20	Ability to define safety procedures that have to be carried out before any maintenance activity is carried out on an asset.	K							
8.5.2.21	Ability to filter and display all defects identified by asset and equipment.	B							
8.5.2.22	Ability to provide a complete traceability of the defects found, when they were found and when and in which Work Order they were corrected.	B							
8.5.2.23	Ability to display corrective, routine and preventive maintenance schedule for each asset.	B							
8.5.2.24	Ability to drill down each asset and equipment to view details of maintenance activities, tasks, resources required, maintenance costs, outage period, maintenance duration, etc.	K							
8.5.2.25	The system must generate an alarm, text message, or e-mail for the following user-defined circumstances: When asset downtime exceeds a threshold value; When measurements on equipment exceed control limits; When measurements trend within certain percentage of control limits; When average mean time between failures (MTBF) is outside a given range of values; When equipment is due for warranty work; and When a failure has repeated within a user-defined period.	K							
8.5.2.26	Ability to track and report equipment maintenance actually carried out and those missed and reasons.	K							
8.5.2.27	Ability to complete financial monitoring throughout the entire process, from the initial budget to finally incurred, and notify the deviations during each work process.	K							
8.5.2.28	Ability to integrate materials management for record of withdrawals and returns to the stores allowing complete control of the equipment maintenance and associated materials.	K							
8.5.2.29	Ability to provide configurable maintenance workflow that allows the user to define different situations during each work life, according to the type or the budget of each one. The workflow will establish the line to follow for each work type.	K							
8.5.3	**Asset Replacements and Refurbishment**								
8.5.3.1	Ability to classify replacements separately.	K							
8.5.3.2	Ability to generate Disposal requests with unique IDs upon replacements.	B							
8.5.3.3	Ability to generate Repair requests with unique IDs upon replacements.	B							
8.5.3.4	Ability to indicate reasons for replacement.	D							
8.5.3.5	Ability to obtain replaced asset details corresponding to the previous asset details.	B							
8.5.3.6	Ability to track and associate incident costs by category: All costs incurred by the asset e.g. Installation costs, date of costs, description of costs, maintenance costs etc.	B							
8.5.3.7	Ability to enhance value of existing assets with additional expenditure and calculate depreciation from the date of existing asset capitalized.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.3.8	Ability to handle asset repairs through the inventory repairs (integration of inventory module and procurement module).	K							
8.5.3.9	Ability to change useful lifetime of asset.	K							
8.5.3.10	Ability to track periodic maintenance status and warranty management.	B							
8.5.3.11	Ability to support CWIP (Capital Work in progress) in Asset accounting.	B							
8.5.3.12	Ability to support mass additions through data templates.	B							
8.5.3.13	Ability to create one asset record from a combination of multiple invoice line items.	B							
8.5.3.14	Ability to create multiple assets from single invoice line items.	B							
8.5.3.15	Ability to automatically populate asset record with information related to purchase (from Purchasing and Accounts Payable) such as purchase order number, cheque number, invoice information, vendor details, GL account, etc.	K							
8.5.3.16	Ability to provide capitalization of incidental costs like freight & forward, insurance, etc. against primary asset.	B							
8.5.3.17	Ability to generate automatic journal entries upon asset addition.	B							
8.5.4	**Disposal/ Scrap sale**								
8.5.4.1	Ability to scrap sell / dispose assets.	K							
8.5.4.2	Ability to scrap sell / dispose a group of assets.	B							
8.5.4.3	Ability to auto-compute profit or loss on disposal.	B							
8.5.4.4	Ability to link scrap sale proceeds/disposal cost to Finance module.	K							
8.5.4.5	Ability to partially dispose assets.	B							
8.5.4.6	The system must enable registration of assets with the following details: - Asset ID - Asset Name - Net book value (auto filled by the system) - Date of disposal - Disposal description - Proceeds from disposal - Cost of disposal - Salvage value (auto filled by the system) - Department - Division	K							
8.5.4.7	Ability to Automatically calculate the gain / loss from sale of an asset and generate all related journal entries.	K							
8.5.4.8	Ability to create specific retirement / disposal reasons.	D							
8.5.4.9	Ability to enable approval of disposal transactions online at different levels.	B							
8.5.4.10	Ability to transfer ownership to retired status.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.4.11	Ability to reinstate assets.	B							
8.5.4.12	Ability to track proceeds of the sale of a retired/disposed asset.	D							
8.5.4.13	Availability of mass disposal or Transfer based on Department, Sub department.	B							
8.5.4.14	Ability to dispose asset based on user defined workflow (approval flow for the sale of asset for a selected set of buyers through tender process).	B							
8.5.4.15	Ability to maintain disposal agent details in the system	D							
8.5.4.16	Ability to flag assets with disposal restrictions and display the restriction message for user handling (e.g., federal grant items that must be returned to the federal government).	B							
8.5.4.17	Ability to automatically post entries to the relevant accounts upon approval of the disposal transaction.	B							
8.5.4.18	Ability to generate a disposal statement for the disposed assets.	B							
8.5.5	**Revaluation and Reclassification**								
8.5.5.1	Ability to revalue assets.	K							
8.5.5.2	Ability to adjust the cost of an asset, e.g. Capitalization of renovation cost.	K							
8.5.5.3	Ability to generate revaluation statement and send for higher approval.	K							
8.5.5.4	Ability to maintain asset revaluation history.	B							
8.5.5.5	Ability to reclassify the assets (change in categorization of the assets - Held for sale etc.).	B							
8.5.5.6	Ability to reclassify group of assets.	B							
8.5.5.7	Ability to maintain asset reclassification history.	B							
8.5.5.8	Ability to enable approval of revaluation transactions online and a revaluation must only be effective upon full approval.	B							
8.5.5.9	Ability to automatically post entries to the relevant accounts upon approval of revaluation.	B							
8.5.5.10	Ability to automatically adjust the net book value of an asset upon addition.	B							
8.5.5.11	Ability to automatically capitalize the added amount and add it to the original asset amount.	B							
8.5.5.12	Ability to automatically post additional transactions to the relevant accounts.	B							
8.5.5.13	Ability to produce an assets revaluation report.	K							
8.5.5.14	Ability to produce an asset additions report.	K							
8.5.6	**Depreciation**								
8.5.6.1	Ability to maintain depreciation policies by Asset category / sub-category.	B							
8.5.6.2	Ability to maintain history for depreciation policy changes.	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.6.3	Ability to support applicable depreciation methods like straight line, reducing balance, sum of year digits, Hours / mileage and user defined.	B							
8.5.6.4	Ability to support 'what if' scenarios based on varying depreciation methods for capital budgeting.	D							
8.5.6.5	Ability to provide depreciation schedules on fixed assets.	B							
8.5.6.6	Ability to generate monthly depreciation by asset for any element in the classification structure.	B							
8.5.6.7	Ability to automatically calculate depreciation in accordance with the depreciation method and convention where designated for an asset.	D							
8.5.6.8	The system shall prevent depreciating of an asset's value below zero.	B							
8.5.6.9	The system shall provide the ability to record different conventions for depreciable assets, such as beginning of month, half year, mid-month, etc.	B							
8.5.6.10	Ability to process depreciation of the following: - Single assets - Group of assets - Entire class of assets - Specified period - Assets transferred to subcontractors / subsidiary / 3rd party	K							
8.5.6.11	Ability to calculate the difference in depreciation and post if the depreciation type is changed mid-way.	K							
8.5.6.12	Ability to record assets that are put to use on a previous period. The system should facilitate depreciation calculation prospectively.	B							
8.5.6.13	Ability to facilitate depreciation roll back.	B							
8.5.6.14	Capability to write-off amounts at any given point during the year.	B							
8.5.6.15	Ability to define/change the depreciation methods / rates based on asset category and calculate depreciation accordingly.	B							
8.5.6.16	Capability to allocate amortization for each asset.	B							
8.5.6.17	Ability to derive amortization start date.	B							
8.5.6.18	Capability to specify an amortization period.	B							
8.5.6.19	Ability to interface automated depreciation journal entries to General Ledger upon authorization.	B							
8.5.6.20	Ability to maintain multiple depreciation registers.	B							
8.5.6.21	Ability to close depreciation period independently for each asset book.	B							
8.5.6.22	Ability to facilitate default depreciation rules e.g.: Straight Line by asset category / sub category.	B							
8.5.6.23	Ability to run model depreciation for budgeting / forecasting purposes.	B							
8.5.6.24	Ability to define specific depreciation start date, which may be different from the capitalization date (e.g: depreciation should start from the beginning of the period even if capitalization is mid-period).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.6.25	Ability to facilitate asset impairment.	B							
8.5.6.26	Ability to charge depreciation across multiple cost centers.	B							
8.5.7	**Reconciliation between sub ledger and General Ledger**								
8.5.7.1	Ability to track asset sub ledger to GL accounts/ cost centers.	K							
8.5.7.2	Ability of real time integration of asset sub ledger with asset GL accounts.	K							
8.5.8	**Physical verification of assets**								
8.5.8.1	Ability to upload the results of physical verification in asset module.	B							
8.5.8.2	Ability to compare the results of physically verified assets with actual asset records.	B							
8.5.8.3	Ability to produce a physical inventory worksheet to be sorted, grouped and aggregated based on user defined criteria (i.e. Boolean criteria can be applied) to assist in conducting physical inventory.	D							
8.5.9	**Inquiring and Reporting**								
8.5.9.1	Ability to provide a standard set of maintenance management, inventory control, and asset management reports.	K							
8.5.9.2	Ability to create custom reports from any data within the asset management system and provide access to reports based on user profile (e.g. AGM, AFM, DGM, CE, etc.).	K							
8.5.9.3	Ability to provide Graphical reports on asset attributes: age, condition, rating, risk.	K							
8.5.9.4	Ability to provide capital investment vs. rating and criticality graphs (e.g. Nessie Curves) on asset and asset group.	K							
8.5.9.5	Ability to provide inquiry and reporting capability to generate a report showing the extent (outage duration, energy lost, revenue lost, risk events) of defects identified for a selected group of assets.	K							
8.5.9.6	Ability to search Asset details through: Asset number, Asset category, suppler, Acquisition date, value etc.	K							
8.5.9.7	Ability to generate fixed assets register by:								
8.5.9.7.1	*Department*	B							
8.5.9.7.2	*Location*	B							
8.5.9.7.3	*Cost Centre*	B							
8.5.9.7.4	*Category / Sub Category*	B							
8.5.9.8	Ability to generate asset depreciation register (detailed and summary).	K							
8.5.9.9	Ability to provide inquiry and reporting capability for fixed asset transactions history i.e. fixed asset movements.	B							
8.5.9.10	Ability to generate unposted depreciation calculation report before transferring them to GL but after running depreciation in the asset management module.	B							
8.5.9.11	Ability to provide inquiry and reporting capability for asset transfer detail report (both internal and external transferring).	K							
8.5.9.12	Ability to provide inquiry and reporting capability for revalued assets detail report.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.9.13	Ability to provide inquiry and reporting capability for asset conditions based on the testing data	K							
8.5.9.14	Ability to provide inquiry and reporting capability for asset condition status	B							
8.5.9.15	Ability to provide inquiry and reporting capability for root cause analysis reports	K							
8.5.9.16	Ability to provide inquiry and reporting capability for reclassified assets detail report.	K							
8.5.9.17	Ability to provide inquiry and reporting capability for impaired assets detail report.	K							
8.5.9.18	Ability to provide inquiry and reporting capability for amortized assets detail report	K							
8.5.9.19	Ability to provide inquiry and reporting capability for reinstated asset detail report.	K							
8.5.9.20	Ability to provide inquiry and reporting capability for asset retirement in the form of sale, scrap, write off etc.	K							
8.5.9.21	Ability to provide inquiry and reporting capability for physical verification report.	K							
8.5.9.22	Ability to provide inquiry and reporting capability for insurance status of assets, with alerts when renewal is due and all insurance information.	B							
8.5.9.23	Ability to provide inquiry and reporting capability for asset transaction.	K							
8.5.9.24	Ability to provide inquiry and reporting capability for available fixed assets outside CEB.	K							
8.5.9.25	Ability to provide inquiry and reporting capability for percentage wise depreciated assets.	B							
8.5.9.26	Ability to provide inquiry and reporting capability to create customized reports along with standard reports.	K							
8.5.9.27	Ability to provide inquiry and reporting capability for asset sub ledger ensuring it is always tallied with General Ledger.	K							
8.5.9.28	Ability to provide inquiry and reporting capability for current year vs. prior year value comparison by asset category and asset master level.	K							
8.5.9.29	Ability to provide inquiry and reporting capability for Annual Maintenance Contract expiring report.	B							
8.5.9.30	Ability to provide inquiry and reporting capability for Asset's value more than Asset Requisition value.	B							
8.5.9.31	Ability to provide inquiry and reporting capability to drill down to payables cost history for a particular asset (internally and externally).	B							
8.5.9.32	Ability to provide inquiry and reporting capability for view journal entries, detailed and summarized, by date, asset balance etc. via online reporting.	B							
8.5.9.33	Ability to provide inquiry and reporting capability to view acquisition cost, capitalized taxes (VAT, NBT etc.), Service life, net book value, residual value etc.	B							
8.5.9.34	Ability to provide inquiry and reporting capability to view all assets by department, sub department, sub-contractors/subsidiary/3rd party.	B							
8.5.10	**User Interface**								
8.5.10.1	Ability to use web-based interface.	K							
8.5.10.2	Ability to have a GIS viewer component.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
8.5.10.3	Ability to modify user interface based on workflow (e.g., object combinations).	D							
8.5.10.4	Ability to have standard Windows menu items.	B							
8.5.10.5	Ability to support standard Windows navigation (keyboard and mouse).	B							
8.5.11	**Data Import/Export Capability**								
8.5.11.1	Ability to use find function using multiple user-selectable search criteria.	K							
8.5.11.2	Ability to use spatial search functions to identify records based on proximity, buffer, and overlay.	B							
8.5.11.3	Ability to clarify the format(s) that data can be exported to (e.g., excel, shape file).	K							
8.5.11.4	Ability to interface with SCADA systems and other data acquisition systems.	K							
8.5.12	**Notification/Alert Management and Calendar**								
8.5.12.1	Ability to ensure that assigned staff or work units are automatically notified through email, SMS to commence their assigned tasks associated with a Work Order.	B							
8.5.12.2	Automatically notify all assigned workgroups through email, SMS when in progress Work Orders are changed.	B							
8.5.12.3	Include 24/7 calendar for working days and hours by employee tracking availability, holidays, vacations, etc. for master scheduling.	K							
8.5.12.4	Ability to tracks injury and safety records by resource and job.	D							
8.5.12.5	Ability to have a customized calendar for specific facilities.	D							
8.5.13	**Interoperability and Data Integration**								
8.5.13.1	Ability to integrate to the GL for Accounts Receivables and Accounts Payables.	B							
8.5.13.2	Option to transfer summary or detailed costs to the general ledger at the organization level.	B							
8.5.13.3	Ability to integrate to the Procurement and Inventory management modules.	B							
8.5.13.4	Ability to integrate to the Project systems module.	B							
8.5.13.5	Ability to support integration of an external (doc/image management).	K							
8.5.13.6	Ability to support wireless data entry and processing.	K							
8.5.13.7	Ability to use minimum wireless bandwidth for field level use (please mention minimum bandwidth).	B							
8.5.13.8	Ability to support all mobile devices and operating systems (IOS, Android, etc.).	K							
8.5.13.9	Ability to have a data synchronization process for disconnected edits.	B							
8.5.13.10	Ability to support bar-coding for inventory, equipment, parts, labor tracking.	B							
8.5.13.11	Ability to support RFID for assets, inventory, equipment, parts tracking (GPS).	B							
8.5.13.12	Ability to store non-redundant, spatially enabled asset data	B							
8.5.13.13	Ability of asset database to provide direct use of GIS modeling, analysis and location tools (i.e. SQL Server, Google or Bing Maps API)	B							

9. Maintenance Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.1	**General**								
9.1.1	Ability to track comprehensive audit trails for master data and maintenance and asset management transaction records.	K							
9.1.2	Ability to track approval status (e.g. - Approved, Approval pending etc.) of each transaction (e.g., Work Order creation, resource / material allocation etc.).	K							
9.1.3	Ability to define costing methods like FIFO, Standard Cost, Weighted Average.	K							
9.1.4	Ability to define inventory issuing method for FIFO or FILO.	K							
9.1.5	Ability to handle inventory valuation method changes midway.	B							
9.1.6	Facilitate to allow authorized users access multiple organizations (Divisions/Units etc.).	B							
9.1.7	Ability to facilitate multi-currency transactions.	K							
9.1.8	Ability to define a calendar in the system to track particular tasks (e.g. - Schedule Work Order starts etc.).	B							
9.1.9	Ability to update inventory details (e.g. After Goods receiving, Goods issuing etc.) real time.	K							
9.1.10	Ability to upload scanned documents to the system.	K							
9.1.11	Ability to have a document tree to query the linking of documents (e.g. incidents, inspection reports etc.).	B							
9.1.12	Ability to generate checklist based on the user requirements and attached to the process flow.	B							
9.2	**Recommend Schedule of work/ Forecast Maintenance Activities/ Periodic Maintenance Plan**								
9.2.1	Ability to forecast planned/preventive maintenance for next 12 months / user definable period; based on maintenance strategies/triggers and various inputs.	K							
9.2.2	Ability to automatically schedule Preventive Maintenance Work Orders based on unique criteria or status of asset (running hour based, Period based, Condition Monitoring based, OEM guidelines, etc.	K							
9.2.3	Ability to schedule Preventive Maintenance Work Orders against assets, group of assets, or specific location.	K							
9.2.4	Ability to analyze various data / reports (Last year progress reports, manufacturer recommendation information, asset condition monitoring report, historical incident reports) to make informed decision before planning.	B							
9.2.5	Ability to generate Prioritized reports based on various conditions (outage, interruption, incident, geographical location wise, economical etc.).	B							
9.2.6	Ability to define Preventive Maintenance - must be able to name and have description (template pick list).	B							
9.2.7	Historic Preventive Maintenance Work Orders are accessible, including notes/briefs during current Preventive Maintenance cycle.	B							
9.2.8	Ability to report (dashboard view) on Preventive Maintenance backlog.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.2.9	Ability to review the backlog to see which Work Order can be accommodated in the current schedule.	B							
9.2.10	Ability to define Preventive Maintenance Work Orders - should have parent/child relationships.	K							
9.2.11	Ability to define Preventive Maintenance Work Orders - should be interruptible and modifiable.	K							
9.2.12	Ability to define Preventive Maintenance Work Orders - should support downtime functionality (change asset status).	B							
9.2.13	Ability to update the plan according to user's monthly progress.	B							
9.2.14	Ability to send alert messages through mobile/system automatically to higher approving authority / relevant officials.	B							
9.2.15	Ability to trigger the finance process for allocation of funds, after approval of budget for annual maintenance plan.	B							
9.2.16	System should allow the users to change the plan.	B							
9.2.17	Ability to break the entire maintenance plan into monthly / weekly for regular monitoring and linked with the KPI of the individuals.	D							
9.2.18	Ability to pick Preventive Maintenance Work Orders not completed by assigned date and clearly indicate as such (e.g. visible difference).	D							
9.2.19	The recommended and approved work plan should be made in seamless integration with financial Budget function.	B							
9.2.20	Ability to provide facility to update the annual plan for the Unit / Power Station / Complex / division wise.	B							
9.2.21	Ability to support approvals of budgets, plans and work requests through mobile/system. The approval hierarchy shall be based on CEB's hierarchy.	B							
9.3	**Incident / Fault Reporting / Breakdown Maintenance**								
9.3.1	The system must have the capability to be operated from any portable computer or web-enabled mobile device.	K							
9.3.2	The system must be integrated with Inventory management to check availability of parts, materials and Work Order Management Module to create Work Orders for restoration works or resolution of incidents.	K							
9.3.3	Ability to Service Request / Fault Reporting for quick entry of subset Work Order fields.	K							
9.3.4	Integrate IVR (e.g. Teleworks) for automated / Fault Reporting creation and queue assignment.	D							
9.3.5	Ability to create Service Request / Fault Reporting queues based on Request type.	B							
9.3.6	Ability to generate a unique reference ID for each new incident registered.	K							
9.3.7	To avoid multiple entries of the same incident, the system must allow multiple reporting employees to be tied to the same incident. Thus, when the incident is corrected, all reporting parties can be notified.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.3.8	Ability to capture below details of an incident: - Reported by - Asset / equipment / spare part details - Location - Type of Incident - Date and time of incident occurrence - Cause of incident - Effect of occurrence - Defects caused - Action taken - User definable fields to capture any other Organization specific information	K							
9.3.9	Ability to record type of service requested by whoever has reported the incident (request for service, request for incident).	D							
9.3.10	Ability to classify the incident depending on its nature in order to facilitate accurate and orderly assignment of incidences to the correct work group (grid failure, turbine failure, governor failure etc.).	B							
9.3.11	Ability to record the medium through which the incident was reported - by telephone call, communication radio, etc.	B							
9.3.12	Ability to identify when an incident is being recorded to automatically search on the system for similar incidents. If the incident has already been reported, the system must allow a user to update existing information with any new facts that the reporter might have.	B							
9.3.13	Ability to identify and display similar incidents already recorded based on incident details registered. Enable users to determine whether the incident being registered is new or already exists in the system.	B							
9.3.14	Provide field to insert digital images (e.g., plans, photos, letters, and documents). Tie to incident number etc. Allow capability to attach images to other modules with a user friendly process for attachment.	K							
9.3.15	The system must automatically assign status of every registered incident on the system depending on the stage at which the incident is.	K							
9.3.16	Ability to notify users of incidents that need reviewing using the next review date.	B							
9.3.17	Ability to generate alerts and emails when incident is updated.	K							
9.3.18	Ability to maintain audit trails for any changes made by a user.	K							
9.3.19	Ability to obtain a list of incidents registered into the system.	B							
9.3.20	Ability to match existing similar incidents to this new incident as reference.	D							
9.3.21	Ability to allow the user to proceed to incident resolution if actions have been identified to resolve a similar incident.	B							
9.3.22	If no actions are identified for resolution of an incident, the user must be allowed to assign the incident to an appropriate Work Group.	K							
9.3.23	Ability to send email and text message alerts to the Work Group leader when the incident has been assigned to the Work Group.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.3.24	The system must allow the Work Group Leader to assign it to personnel within his/her work group to carry out investigation and resolve the incident.	K							
9.3.25	Ability to send email and text message alerts to the personnel whom the incident has been assigned.	B							
9.3.26	Ability to generate report of incidents assigned per Work Group.	B							
9.3.27	Ability to generate report of incidents assigned per personnel.	B							
9.3.28	Ability to generate report of unassigned incidents.	B							
9.4	**Incident Investigation**								
9.4.1	Ability to record investigations carried out for finding solutions for an incident.	K							
9.4.2	Ability to record investigation results from any investigations carried out.	K							
9.4.3	Ability to generate tasks (escalate issues) and assign these tasks to other personnel required to carry out further investigations.	B							
9.4.4	Ability to search for related incidents that were resolved so as to form a basis for investigation.	B							
9.4.5	The system should allow related incidents to be linked to a particular incident to form the basis for investigation and resolution of that incident.	B							
9.4.6	Ability to produce a list of incidents that have been investigated (Incident ID, Nature of Incident).	B							
9.4.7	Ability to view investigation details of an incident that has been investigated (Incident ID, Nature of Incident, result of investigation, etc.).	D							
9.5	**Incident Resolution**								
9.5.1	Ability to record actions taken to resolve an incident.	K							
9.5.2	Ability to determine the time taken to resolve an incident.	K							
9.5.3	The system must update the knowledge base of resolved incidents for future reference whenever an incident has been resolved.	B							
9.5.4	Ability to produce a list of incidents that have been resolved (Incident ID, Nature of Incident, Action taken, Time & Date, etc.).	B							
9.5.5	Ability to narrow down and view information for a particular incident (Incident ID, Nature of Incident, Action taken, Time & Date, etc.).	B							
9.6	**Incident Closure**								
9.6.1	The system must allow a user to close the incident. The system must ensure the incident attains the status "Closed".	K							
9.6.2	The system must not accept any updates to an Incident with status as "Closed".	K							
9.6.3	Ability to produce a list of incidents that have been Closed.	B							
9.6.4	Ability to view details of one single closed incident.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.7	**Work Order Creation**								
9.7.1	The Work Order module must integrate with Incident Management, Inventory Management, Fleet Management, Customer Management Services and Asset Management systems to enable creation of Work Orders from these modules.	K							
9.7.2	Ability to automatically generate predefined unique Work Order number comprising of Power station, Complex, equipment type, component, type of maintenance and date etc.	K							
9.7.3	Ability to support Work Order, Task, Activity hierarchy or has multi-level relationships and roll-ups with unlimited resources assignment at each level.	K							
9.7.4	Ability to define Work Orders and related tasks have definable priority values.	K							
9.7.5	Ability to define Work Orders and related tasks have definable status values (e.g. pre-planning, planning, waiting for approval, approved, current, hold, waiting parts, waiting equipment, waiting labor, work completed, closed etc.)	K							
9.7.6	Ability to define Work Orders and related tasks that have definable category values.	K							
9.7.7	Ability to define Work Orders and related tasks that have definable type values.	B							
9.7.8	Ability to define Work Orders that have pre-defined tasks, resources, schedules based on type/category.	B							
9.7.9	Ability to define Unique identifier for all Work Orders.	K							
9.7.10	Ability to define Work Orders that have cascade relationships to individual and group assigned tasks.	K							
9.7.11	Ability to define Work Orders linked and identifiable to GIS based features (map interface).	B							
9.7.12	Ability to define Work Order creation throughout organization not limited to maintenance work, survey work, construction work, testing and inspection etc.	K							
9.7.13	Ability to define Work Order creation not limited to Annual Maintenance, Service Requests, Breakdown, Running Hour based, Condition Monitoring, Period Based records	B							
9.7.14	Ability to issue an emergency Work Order number that does not require approval. An audit trail should record the user who authorized the Work Order number.	K							
9.7.15	Ability to define Work Orders that can be linked to Service Requests, Maintenance Schedule, Breakdown Request, Condition Monitoring etc.	K							
9.7.16	Ability to define Work Orders that can be linked to other Work Orders.	K							
9.7.17	Ability to define if Work Permit required or not for the job.	K							
9.7.18	Ability to define Work Orders that can be linked to Projects / Major Overhaul etc.	K							
9.7.19	Ability to track a group of Work Orders and tasks as a Project / Major Overhaul etc.	K							
9.7.20	Ability to define multiple Work Orders or Project creation from Single Request, Plan etc.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.7.21	Ability to create Work Order without a Request.	B							
9.7.22	Ability to create Work Order without associating with an Asset.	B							
9.7.23	Ability to create Work Orders for a contract service.	B							
9.7.24	Allow contract services to be monitored for on-time delivery, actuals, parts, equipment, labor, and service provider SLA/contract parameters.	B							
9.7.25	Ability to record warranty duration, warranty period end date, warranty number, and any warranty notes. The system should have the facility to flag asset under warranty.	B							
9.7.26	Ability to generate draft estimate based on the type of equipment and type of fault.	B							
9.7.27	Ability to update draft estimate into a final estimate when inspection reports filed/uploaded into the system.	K							
9.7.28	Ability to interrogate inspection results to determine maintenance work required and update draft estimate into a final estimate. Also maintain user defined criteria for maintenance.	K							
9.7.29	Ability to suggest if the Work Order is to be carried out by Internal CEB Staff or External Contractor based on predefined criteria.	B							
9.7.30	The system should have the ability to create a Work Order number by estimating the Work Order duration, resource requirements, material requirements, and contractor requirements; and allocate a work priority and mode of request.	K							
9.7.31	Ability to define/ display Work Orders or task related instructions (e.g. special tools).	B							
9.7.32	Ability to set "warning" (e.g. safety, inspection requirements) flags on Work Orders.	K							
9.7.33	Ability to trigger safety tasks or instructions such as Work Permits to be attached against Work Orders	K							
9.7.34	Ability to allow reassignment of tasks left unfinished on Work Orders to new Work Orders.	B							
9.7.35	Ability to allow reference documents, images, videos, audios to be linked to Work Orders.	B							
9.7.36	Ability to assign a Work Order against any defined element of an asset (e.g. part, tool, location).	B							
9.7.37	Ability to view Work Orders by multiple criteria (e.g. user, group, assigner, asset, date, type, status).	B							
9.7.38	Ability to use any past or current Work Order as a template for future work (e.g. copy work order records and change attributes or components to meet current situation).	B							
9.7.39	Ability to enter staff time sheet data only once in order to meet Work Order close out and payroll requirements.	B							
9.7.40	Ability to enter all Work Order related attributes, tasks, activities and associated Work Plan resources into a single-entry screen or dashboard.	B							
9.7.41	Ability to develop and assign business rules to each Work Order status.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.7.42	Ability to provide optimal driving directions/route for a field worker's daily activities (Work Orders, inspections, service requests).	B							
9.7.43	Ability to automatically determine cost centers to charge Work Order costs to them.	B							
9.7.44	Ability to forecast the costs based on resource estimates/forecasts.	B							
9.7.45	Work Orders must display costs related to materials/ parts, labor, supervision, equipment/ vehicle cost.	B							
9.7.46	Ability to generate total Work Order costs (i.e. for labor, machine time and materials/ parts) to be used in establishing approval levels.	B							
9.7.47	Ability to define complete workflow configuration and create new tasks and transitions for each type of Work Order.	B							
9.7.48	Ability to generate and print quotations for external customer jobs.	K							
9.7.49	The system must have a graphical schedule showing resource workload per department.	B							
9.7.50	The system must display a graphical schedule showing workload capacity per department.	B							
9.7.51	The system must enable users to generate a report on Work Orders, planned costs per week, per month, per quarter and other user selectable periods.	B							
9.8	**Material Management**								
9.8.1	Ability to trigger Material Management function to check the material availability.	K							
9.8.2	Ability to raise MR automatically for materials and contractors, after the work has been scheduled.	K							
9.8.3	Ability to provide tools for quick and easy access to real time information regarding material and labor availability.	K							
9.8.4	Ability to select equipment to be used for the tasks and duration for which it will be in use.	B							
9.8.5	Ability to assign personnel category to carry out Work Order tasks.	B							
9.8.6	Ability to integrate with material management system to be able to review the stock availability, material delivery dates, identification of delivery etc.	B							
9.8.7	Ability to drill down on standard parts to view nameplate details from the inventory control module.	B							
9.8.8	Ability to view stock levels of parts or materials from within the Work Order screen.	K							
9.8.9	Ability to flag materials or parts that are out of stock when the material is added onto the Work Order and automatically initiate PR.	B							
9.8.10	Ability to select parts from multiple stores from within the Work Order screen.	B							
9.8.11	Ability to forecast material requirements and support materials planning based on Annual Maintenance Plan.	K							
9.8.12	Ability to monitor and track material stock. Ability to see the material availability in the system at any store in CEB.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.8.13	Ability to capture returning of used/unused/leftover material.	B							
9.9	**Permit to Work and Isolation**								
9.9.1	The system must allow users to note if a Work Permit is required or not for the job.	K							
9.9.2	Ability to enable safety tasks or instructions such as Work Permits to be attached against Work Orders.	K							
9.9.3	Ability to add safety tasks or instructions to particular Work Permit.	K							
9.9.4	Ability to generate safety request (PTW) for a particular Work Order.	B							
9.9.5	Ability to view and acknowledge/approve receipt of Work Permits prior to carrying out any work and closure after work is completed in cases where Work Permits are required.	B							
9.9.6	Ability to send email or text message based on milestones (permit request approval, permit request review, permit cancel request).	B							
9.10	**Interruption / Outage**								
9.10.1	Ability to generate a requisition of Permit to Work in order to isolate equipment for maintenance.	K							
9.10.2	Ability to check the predefined logic and compile and prepare draft interruption schedule based on interruption requests received from various sections.	K							
9.10.3	Ability to check Holiday/Festival Calendar and previous interruption reports at the time of preparation of draft interruption schedule.	K							
9.10.4	Ability to send alert messages to the relevant authorities.	B							
9.10.5	Ability to check multiple PTW requests in the same circuit/network while closing the PTW.	B							
9.10.6	Ability to capture the PTW records for future reference.	B							
9.11	**Maintenance Work Execution**								
9.11.1	Ability to define preventive maintenance plan for a single or a group of maintenance objects.	K							
9.11.2	Ability to provide a default estimate of costs using average unit rates and estimated number of work units.	K							
9.11.3	Ability to estimate task requirements for Work Order by listing out required staff, equipment, parts, materials, and contracts expected to be needed to complete the work. Estimates to be given for review prior to issue of a Work Order in a predefined template.	K							
9.11.4	Ability to distribute the work based on the nature of Work Order and availability of skilled resources as per predefined criteria.	B							
9.11.5	Ability to assign Work Orders to alternative resources based on availability (e.g. over allocated, vacation).	B							
9.11.6	Ability to view key employee attributes to enable selection of appropriate labor.	B							
9.11.7	Ability to create rotation/prioritization scheduling (e.g. schedule full time employees ahead of temporary, rotating crews, volunteers).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.11.8	Ability to define and track various employee attributes (e.g. hourly rates, operator certificates, professional certificates, special trainings, safety training).	B							
9.11.9	Ability to assign any staff to Work Orders and related tasks.	B							
9.11.10	Ability to issue Work Permit (if attached to Work Order) to carry out isolation and recording following data: attached Work Order details, description of isolation, isolation area, safety instructions and check lists, etc.	B							
9.11.11	Ability to issue Work Order for work to be carried out in the field and recording following data: type of Work Order, Work Order description, issue name and description, authorized issuer, etc.	B							
9.11.12	Ability to generate alert massages (acknowledge receipt) of Work Orders assigned to relevant users / user groups.	K							
9.11.13	Ability to add more tasks to Work Order (not delete) in a practical situation by authorized person (Superintendent etc.), and send notifications/ alerts to relevant personnel.	K							
9.11.14	Ability to record the status of the Work Order number via user defined variables (i.e. stand by awaiting materials, partially closed, closed etc.)	B							
9.11.15	Ability to update scheduled commencement and completion dates in a Work Order number.	B							
9.11.16	Ability to record actual duration taken to complete Work Order tasks.	K							
9.11.17	Ability to record actual hours of personnel involved to complete Work Order tasks.	B							
9.11.18	Ability to record actual equipment/machines used and machine hours used.	K							
9.11.19	Ability to record the actual quantity of materials or parts used.	B							
9.11.20	Ability to record goods not used returned back to stores.	K							
9.11.21	Ability to record all costs including wages, materials etc. against a Work Order number.	K							
9.11.22	Ability to log notes/briefs on a work entry; automatically assigning a date/time stamp and user identification.	B							
9.11.23	Ability to review any technical information stored against the equipment.	B							
9.11.24	Ability to support predictive maintenance, where specific equipment data can be recorded and monitored for automatic creation of maintenance notification/ order.	B							
9.11.25	Ability to gather breakdown information from SCADA output.	D							
9.11.26	Ability to check predefined priority set and suggest to remedy and resolve the breakdown (most economical way or fastest) with the available resources.	D							
9.11.27	Ability to automatically send the information to the concerned dept. based on mapping of the breakdown area.	B							
9.11.28	Ability to send alert messages automatically to higher authorities and relevant officials.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.11.29	Ability to record work that has been delayed due to unavailability of material or insufficient labor resources or lack of permit or any user definable fields.	D							
9.11.30	Ability to consider the following for recommending the breakdown team: Skills of the available team, Resources available at that time, Resource available near the site etc.	D							
9.12	**Completion of Work Order**								
9.12.1	Ability to record failure/maintenance cause against the Work Order number.	K							
9.12.2	Ability to attach archives as photos or drawings on the mobile or back office systems, allowing the attached documents to be sent to the field technician or dispatcher.	B							
9.12.3	The system should have the ability to maintain history of component that had a Work Order number against it and the equipment which the component has association with.	B							
9.12.4	Ability to capture all the information relating to completed maintenance work as a part of maintaining history database.	K							
9.12.5	Ability to flag/warn Work Order numbers based on predefined criteria (such as the job number costs exceeding the work estimate or budgets for the year).	K							
9.12.6	Ability to close Work Orders by an authorized user.	B							
9.12.7	Ability to close Work Order number and send the alert messages to user/Finance.	B							
9.12.8	Ability to close Work Order with a temporary solution and with proper reason.	B							
9.12.9	The system should allow the users to fill up the interim job completion report.	B							
9.12.10	Ability to send information about Work Order completion automatically to the relevant dept. (HR, Finance etc.) for OT, Salary and payment etc.	B							
9.12.11	The system must prevent re-opening of a closed Work Order without approval.	K							
9.12.12	The system must prevent charging labor and other costs to a closed Work Order.	K							
9.12.13	The system must prevent charging material to a closed Work Order.	K							
9.13	**Components, Equipment and Tools**								
9.13.1	Ability to trace certain components in order to optimize operation of assets and maintenance strategies.	D							
9.13.2	Ability to capture user's feedback on the performance of material (such as quality deficiency).	B							
9.13.3	Ability to view the performance of material (such as quality deficiency).	D							
9.13.4	Ability to trace movement and usage of certain components.	B							
9.13.5	Ability to assign individuals responsibility for maintenance equipment / tools for ease of tracking and monitoring.	B							
9.13.6	Ability to review equipment and tools available for staff.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.14	**Maintain Bill of Material and vendor details**								
9.14.1	Ability to maintain history of change of part list of equipment.	B							
9.14.2	Ability to review and modify/reconfigure the maintenance teams / work staff based on skills / competency requirements as predefined criteria.	B							
9.14.3	Ability to maintain manufacturer recommended skills required for maintenance of plant/equipment/ component.	D							
9.14.4	Ability to record vendor recommendations for equipment/component based on predefined criteria.	D							
9.14.5	Ability to record history of changes in recommended performance / operational specifications.	B							
9.14.6	Ability to record and maintain history of maintenance frequency, type and procedures recommended by the vendor.	B							
9.14.7	Ability to capture cost of labor from Job Numbers.	B							
9.15	**Cost Management**								
9.15.1	Ability to capture minor maintenance expenses through manual data entry.	B							
9.15.2	Ability to allocate cost to different maintenances and asset types.	B							
9.15.3	Ability to automatically update cumulative cost of maintenance together with all cost related details.	B							
9.15.4	Ability to view through mobile/system cost information for checking and monitoring purposes.	B							
9.15.5	Ability to record maintenance costs broken down by resource type.	B							
9.15.6	Ability to record actual versus budget and forecast information.	B							
9.15.7	Ability to send mobile/system/e-mail alert on maintenance expenses before / when it reaches the limit.	B							
9.15.8	Ability to monitor dormant maintenances i.e. No transactions for the maintenance over defined period.	B							
9.15.9	Ability to display cost and resource information in a manner that facilitates analysis, tracking and decision making.	B							
9.16	**Inquiry and Reporting**								
9.16.1	Ability to capture statistical data from manual entry.	B							
9.16.2	Ability to capture statistical data from external electronic media, interfacing with external databases.	D							
9.16.3	Ability to capture and display data from different screens as per the user category.	B							
9.16.4	Ability to analyze performance (KPI) of standard jobs against standard estimates:								
9.16.4.1	*Ability to generate reports to determine number of completed jobs (Work Orders) in a specified period of time say 1 month per asset, per department, per division, per station, per region.*	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.16.4.2	*Ability to generate reports that provide time taken to complete jobs and average time taken for jobs carried out within specified period of time say 1 week, or 1 month per station, per department, per division, per region.*	K							
9.16.4.3	*Ability to generate reports that display average man hours and machine hours taken to complete jobs carried out within a specified period of time say 1 week, or 1 month, per station, per department, per division, per region.*	K							
9.16.5	Ability to list amount of time taken to complete a job. This should be able to be compared with the planned/ estimated duration	B							
9.16.6	Ability to list the total costs incurred due to internal labor, issue of materials to Work Order numbers, contractor work charged to Work Order numbers, usage of equipment or tools etc. during work.	K							
9.16.7	Ability to analyze labor utilization by comparing internal labor capacity to actual work performed by quantity and cost.	B							
9.16.8	Ability to generate equipment utilization report.	B							
9.16.9	Ability to display maintenance costs for a range of plants/ equipment/ components.	B							
9.16.10	Ability to generate reports comparing planned costs against actual costs per Work Order or a combination of Work Orders for a particular type, of a department, of a region, etc.	B							
9.16.11	Ability to analyze and report the mean time between failures (MTBF) for an item of equipment. It should be able to summarize for a group of equipment.	B							
9.16.12	Ability to generate temporarily closed job details.	B							
9.16.13	Ability to analyze and report mean time to repair (MTTR) for an item of equipment. This involves calculating the average of the job number durations for an item of equipment.	B							
9.16.14	Ability to report how many times an item of equipment has failed within specified time periods (Frequency of failure).	B							
9.16.15	Ability to display what affects the failure of a plant/equipment/component. There should also be statistics linking the cause of failure and effects of failure.	B							
9.16.16	Ability to simulate life cycle maintenance costs for an item of equipment when different operational conditions and maintenance strategies are entered as parameters.	D							
9.16.17	Ability to report backlog. One of the components of the planning performance is to keep the backlog of jobs to a minimum; hence the ability to review backlog job numbers is crucial.	K							
9.16.18	Ability to review all preventive maintenance, which has been missed, rescheduled or postponed.	K							
9.16.19	Ability to compare the amount of work and the costs of preventive work with repair and modification work incurred over a set period of time.	B							
9.16.20	Ability to print graphical representations of the progress of maintenance work like Actual against planned progress and Usage of actual resources against allocation.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.16.21	Ability to support various analysis options on maintenance history. There should also be a flexible tool for collecting, condensing and evaluating maintenance data automatically.	B							
9.16.22	Ability to perform analysis of reliability of supply network giving clear information on any outage or breakdown.	B							
9.16.23	Ability to provide reporting tools for the users to create their own Ad hoc reports.	K							
9.17	**User Interface**								
9.17.1	Ability to use web-based interface.	K							
9.17.2	Single entry of data is preferred using a dashboard style interface.	B							
9.17.3	Ability to have a GIS viewer component?	B							
9.17.4	Ability to modify user interface based on workflow (e.g. object combinations).	D							
9.17.5	Ability to have standard Windows menu items.	D							
9.17.6	Ability to support standard Windows navigation (keyboard and mouse).	D							
9.18	**Data Import/Export Capability**								
9.18.1	Use a find function using multiple user-selectable search criteria.	K							
9.18.2	Use spatial search functions to identify records based on proximity, buffer, overlay etc.	B							
9.18.3	Clarify the format(s) that data can be exported to (e.g. excel, shape file).	K							
9.18.4	Ability to interface with SCADA systems and other data acquisition systems.	K							
9.19	**Notification/Alert Management and Calendar**								
9.19.1	Ability to plan Work Order through workflow, where assigned staff or work units are automatically notified through email, SMS to commence their assigned tasks associated with a Work Order.	B							
9.19.2	Automatically notify all assigned workgroups through email, SMS when in progress Work Orders are changed.	B							
9.19.3	Includes 24/7 calendar for working days and hours by employee tracking availability, holidays, vacation, etc. for master scheduling.	K							
9.19.4	Ability to track injury and safety records by resource (man power, material) and job.	D							
9.19.5	Ability to have a customizable calendar for specific facilities.	D							
9.19.6	Ability to Provide Work Order scheduling calendar by supervisor, resource, asset, tool, equipment.	B							
9.19.7	Ability to use Work Order calendar to forecast future workforce needs and standards.	B							
9.20	**Interoperability and Data Integration**								
9.20.1	Ability to support integration of an external (doc/image management).	K							
9.20.2	Ability to support wireless data entry and processing.	K							
9.20.3	Ability to use minimum wireless bandwidth for field level use (please mention minimum bandwidth).	B							
9.20.4	Ability to support all mobile devices and operating systems (IOS, Android, etc.).	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.20.5	Ability to have a data synchronization process for disconnected edits.	B							
9.20.6	Ability to Support bar-coding for inventory, equipment, parts, labor tracking.	B							
9.20.7	Ability to Support RFID for assets, inventory, equipment, parts tracking (GPS).	D							
9.20.8	Ability to store non-redundant, spatially enabled asset data	B							
9.20.9	Ability of the asset database to provide direct use of GIS modelling, analysis and location tools (i.e. SQL Server, Google or Bing Maps API)?	B							
9.21	**Transmission & Distribution**								
9.21.1	**Recommend Schedule of work/ Forecast Maintenance Activities/Annual Maintenance Plan**								
9.21.1.1	Ability to forecast planned/preventive maintenance for next 12 months (user definable period) based on maintenance strategies/triggers and various inputs.	K							
9.21.1.2	Ability to review the backlog to see the which jobs can be absorbed to the current schedule	K							
9.21.1.3	Ability to analyze the various reports (Last year progress reports, Manufacturer recommendation report, asset condition monitoring report, Historical incident reports) to make informed decision before planning.	K							
9.21.1.4	Ability to generate Prioritized report based on various condition (Failure prone Substation/Line/Equipment, Geographical Location wise, Season wise, Festival wise, Economical)	K							
9.21.1.5	Ability to update the plan according to user’s monthly progress.	B							
9.21.1.6	Ability to send the alert messages through mobile/system automatically to higher approving authority / relevant officials.	B							
9.21.1.7	Ability to trigger the finance process for allocation of fund , after approval of budget for annual maintenance plan	B							
9.21.1.8	System should allow the users to change the plan.	B							
9.21.1.9	Ability to break the entire maintenance plan into monthly packages for reguler monitoring and linked with the KPI of the individuals.	D							
9.21.1.10	The recommended and approved work plan should be made in seamless integration with financial Budget function.	K							
9.21.1.11	Ability to provide facility to update the annual plan for the division / department.	B							
9.21.1.12	Ability to support approvals of budgets, plans and work requests through mobile/system. The approval hierarchy shall be based on CEB's hierarchy.	B							
9.21.2	**Job Number**								
9.21.2.1	Ability to automatically generate predefined unique Job number comprising of substation name, equipment type, line length/span, component type of maintenance and date etc.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.21.2.2	Ability to review/search for equipment and define work request problems.	K							
9.21.2.3	Ability to generate the draft estimate based on the type of equipment and type of fault	K							
9.21.2.4	Ability to edit with proper approval and audit trail.	B							
9.21.2.5	Ability to check the status of AMC of that particular equipment	B							
9.21.2.6	Ability to update the draft estimate into a final estimate when inspection reports fill up into the system.	K							
9.21.2.7	Ability to suggest, the job to be carried out by Internal CEB Staff or External Contractor based on predefined criteria.	B							
9.21.2.8	Ability to linked complaint number with job number creation activity in case of breakdown maintenance.	K							
9.21.2.9	Ability to avoid duplicating job request and job. The status of job request should also be maintained.	B							
9.21.2.10	The system should have the ability for a planner/ scheduler to review Job requests and close/reschedule them if not required.	B							
9.21.2.11	The system should have the ability to create a job number by estimating the job duration, resource requirements, material requirements, and contractor requirements and allocate a work priority and mode of request.	K							
9.21.2.12	Ability to generate job number based on maintenance triggers. Job number for preventive maintenance can be generated automatically/on approval/ manually.	B							
9.21.2.13	Ability to issue an emergency job number that does not require approval. An audit trail should record the user who authorized the job number.	K							
9.21.2.14	The system should have the ability to review for the history of a specific item or equipment and/or on a particular manufacturer. Also check for current warranties on equipment and service.	K							
9.21.2.15	Ability to capture the total infrastructure details	B							
9.21.2.16	Ability to check pre-defined maintenance activity as per equipment type.	K							
9.21.2.17	Ability to issue job numbers to work staffs / individuals. This can be done using work flow and/or hard copy.	K							
9.21.2.18	Ability to forecast the costs based on resource estimates/forecasts.	K							
9.21.2.19	Ability to interrogate the inspection results to determine the maintenance work required and update the draft estimate into a final estimate. Also maintain user defined criteria for maintenance	K							
9.21.2.20	Ability to record the warranty duration, the warranty period end date, the warranty number, and any warranty notes.The system should have the facility to flag asset under warranty.	K							
9.21.3	**Material Management**								
9.21.3.1	Ability to trigger the Material management to check the material availability.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.21.3.2	Ability to raise the MR automatically for materials and contractors, after the work has been scheduled.	K							
9.21.3.3	Ability to provide tools for quick and easy access to real time information regarding material and labor availability.	K							
9.21.3.4	Ability to integrate with material management system to be able to review the stock availability, material delivery dates, identification of delivery etc.	K							
9.21.3.5	Ability to forecast material requirements and support materials planning based on Annual Maintenance Plan	K							
9.21.3.6	Ability to monitoring and tracking the material stock. Ability to see the material availability in the system at any stores in CEB.	B							
9.21.3.7	Ability to capture returning of used/unused material.	B							
9.21.4	**Interruption**								
9.21.4.1	Ability to generate a requisition of permit to work in order to isolate equipment for maintenance.	K							
9.21.4.2	Ability to check the predefine logic and compile and prepare the draft interruption schedule based on interruption requests received from various Departments.	K							
9.21.4.3	Ability to check Holiday/Festival Calendar and previous interruption reports at the time of preparation of draft interruption schedule.	K							
9.21.4.4	Ability to send the alert messages to the relevant authorities.	B							
9.21.4.5	Ability to check multiple PTW request in a same circuit/network while closing the PTW	K							
9.21.4.6	Ability to capture the PTW records for future reference.	B							
9.21.5	**Maintenance works execution**								
9.21.5.1	Ability to define preventive maintenance plan for a single or a group of maintenance objects.	B							
9.21.5.2	Ability to forecast labor requirements and support labor planning in terms of both quantities and skills based on work forecasts	B							
9.21.5.3	Ability to distribute the job based on the nature of job and availability of skilled resources as per predefined criteria.	B							
9.21.5.4	Ability to forecast contractor requirements and support contractor planning based on annual maintenance plan	B							
9.21.5.5	Ability to record the status of the job number via user defined variables (i.e. stand by awaiting materials, partially closed, closed etc.)	K							
9.21.5.6	Ability to update schedule commencement and completion dates in a job number.	B							
9.21.5.7	Ability to record all costs including wages, materials etc. against a job number.	K							
9.21.5.8	Ability to review any technical information stored against the equipment.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.21.5.9	Ability to support predictive maintenance, where specific equipment data can be recorded and monitored for automatic creation of maintenance notification/ order.	B							
9.21.5.10	Ability to gather the breakdown information from the SCADA output	D							
9.21.5.11	Ability to check the predefined priority set and suggest to restore the breakdown (most economical way or fastest) with the available resources.	B							
9.21.5.12	Ability to automatically send the information to the concern dept. based on the mapping of the breakdown area.	B							
9.21.5.13	Ability to send the alert messages automatically to higher authorities and relevant officials.	B							
9.21.5.14	Ability to record the work that has been delayed may be due to unavailability of material or insufficient labor resources or lack of permit or any user definable fields	K							
9.21.5.15	Ability to consider the following for recommending the breakdown team- Skills of the available team, Resources available at that time, Resource available near the site etc.	D							
9.21.6	**Completion of work and sign off work**								
9.21.6.1	Ability to record the failure/maintenance cause against the job number.	K							
9.21.6.2	The system should have the ability to maintain the history against component that had a job number against it and the equipment which the component has association with.	K							
9.21.6.3	Ability to capture all the information relating to completed maintenance work as a part of maintaining history database	K							
9.21.6.4	Ability to flag/warn job numbers based on predefined criteria (such as the job number costs exceed the work estimate, budgets for the year.)	K							
9.21.6.5	Ability to close the job number and send the alert messages to user/finance.	B							
9.21.6.6	Ability to close the job with a temporary solution and with proper reason.	B							
9.21.6.7	The system should allow the users to fill up the interim job completion report	K							
9.21.6.8	Ability to send an information about job completion automatically to the relevant dept.(HR, Finance etc.) for OT, Salary and payment etc.	B							
9.21.7	**Components, Equipment and Tools**								
9.21.7.1	Ability to trace certain components in order to optimize the operation of assets and maintenance strategies.	D							
9.21.7.2	Ability to capture the user's feedback on the performance of material (such as quality deficiency)	K							
9.21.7.3	Ability to view the performance of material (such as quality deficiency)	K							
9.21.7.4	Ability to trace movement and usage of certain components.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.21.7.5	Ability to assign individuals responsibility for maintenance equipment / tools for ease of tracking and monitoring	B							
9.21.7.6	Ability to review the equipment and tools available for staffs	B							
9.21.8	**Maintain Bill of materials and vendor details**								
9.21.8.1	Ability to maintain the history of change of part list of equipment.	B							
9.21.8.2	Ability to review and modify/configure of the maintenance teams / work staffs including skills / competency requirements as predefined criteria.	B							
9.21.8.3	Ability to maintain the manufacturer recommended skills required to maintain the plant/equipment/ component	D							
9.21.8.4	Ability to record against the equipment/component vendor recommendations based on the predefined criteria.	B							
9.21.8.5	Ability to record history of changes to recommended performance / operational specifications	B							
9.21.8.6	Ability to record and maintain history of the maintenance frequency, type and procedures recommended by the vendor	B							
9.21.8.7	Ability to captured the cost of labor from the job numbers	K							
9.21.9	**Cost management**								
9.21.9.1	Ability to capture the minor maintenance expenses through manual data entry.	B							
9.21.9.2	Ability to allocating cost to different maintenances and asset type	B							
9.21.9.3	Ability to update automatically the accumulated cost for maintenance together with all cost related details	B							
9.21.9.4	Ability to view through mobile/system the cost information for checking and monitoring purposes.	B							
9.21.9.5	Ability to record the maintenance costs broken by resource type.	B							
9.21.9.6	Ability to record actual versus budget and forecast the information.	B							
9.21.9.7	Ability to send mobile/system/e-mail alert on maintenance expenses before / when it reaches the limit.	B							
9.21.9.8	Ability to monitor dormant maintenances, i.e. No transactions over the maintenance over defined period.	B							
9.21.9.9	Ability to display cost and resource information in a manner that facilitates analysis, tracking and decision making.	K							
9.21.10	**MIS Reports**								
9.21.10.1	Ability to capture statistical data from manual entry.	B							
9.21.10.2	Ability to capture statistical data from external electronic media, interfacing with external databases.	D							
9.21.10.3	Ability to capture the different screen as per the user category.	B							
9.21.10.4	Ability to analyze the performance of standard jobs against the estimates contained within the standard.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
9.21.10.5	Ability to list the amount of time taken to complete the job number. This should be able to be compared against the planned/ estimated duration	B							
9.21.10.6	Ability to list the total costs incurred due to internal labor, issue of materials to job numbers, contractor work charged to job numbers, usage of equipment or tools etc. during work.	K							
9.21.10.7	Ability to analyze labor utilization by comparing internal labor capacity to actual work performed by quantity and cost.	K							
9.21.10.8	Ability to display the maintenance costs for a range of plants/ equipment/ components.	K							
9.21.10.9	Ability to analyze and report the mean time between failures (MTBF) for an item of equipment. It should be able to summarize for a group of equipment.	B							
9.21.10.10	Ability to generate SAIFI/SAIDI Reports to be decided after finalizing input and output at the time of development.	K							
9.21.10.11	Ability to generate the temporarily closed job details.	B							
9.21.10.12	Ability to analyze and report mean time to repair (MTTR) for an item of equipment. This involves calculating the average of the job number durations for an item of equipment.	B							
9.21.10.13	Ability to report how many times an item of equipment has failed within nominated time periods (Frequency of failure)	B							
9.21.10.14	Ability to display what affects the failure of a plant/equipment/component. These should also be a statistic linking the cause of failure and the effects of the failure.	B							
9.21.10.15	Ability to simulate the life cycle maintenance costs for an item of equipment, when different operational conditions and maintenance strategies are entered as parameters.	D							
9.21.10.16	Ability to report backlog. One component of the planning performance is to keep the backlog of jobs to a minimum; hence the ability to review backlog job numbers is crucial.	K							
9.21.10.17	Ability to review all the preventive maintenance, which has been missed, rescheduled or postponed	K							
9.21.10.18	Ability to compare the amount of work and the costs of preventive work to corrective and modification work incurred over a set of time period	B							
9.21.10.19	Ability to print graphical representations of the progress of the maintenance like Actual against planned progress and Usage of actual resources to allocation.	K							
9.21.10.20	Ability to support various analysis options on maintenance history. These should also be a flexible tool for collecting, condensing and evaluating maintenance data automatically.	B							
9.21.10.21	Ability to perform analysis on the supply network reliability, giving clear information on any outage or breakdown.	B							
9.21.10.22	Ability to provide reporting tools for the users to create their own Ad hoc reports	K							

10. Fuel Management

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.1	**General**								
10.1.1	Ability to track comprehensive audit trails for master data; and procurement and inventory transaction records of fuel / coal.	K							
10.1.2	Ability to track approval status (e.g., Approved, Approval pending etc.) of each transaction (e.g., Purchase Requisition, Purchase Order etc.).	K							
10.1.3	Ability to define costing methods like FIFO, Standard Cost, Weighted Average.	K							
10.1.4	Ability to define inventory issuing method for FIFO or FILO.	K							
10.1.5	Ability to handle inventory valuation method changes midway.	B							
10.1.6	Facility to allow authorized users to access multiple organizations (Divisions/Units etc.).	B							
10.1.7	Ability to facilitate multi-currency transactions.	K							
10.1.8	Ability to define a calendar in the system to track particular tasks (e.g., Procurement initiation etc.).	B							
10.1.9	Ability to update inventory details real time (e.g., After Goods receiving, Goods issuing etc.).	K							
10.1.10	Ability to upload scanned documents on the system.	K							
10.1.11	Ability to have a document tree to query the linking of documents (e.g., PR, PO, and GRN etc.)	B							
10.2	**Masters**								
10.2.1	**Item Master**								
10.2.1.1	Ability to create/edit items in the system for different types (HFO, LFO, LDO items etc.).	K							
10.2.1.2	System should have the facility for system generated item ID with a sequential order.	K							
10.2.1.3	Ability to capture details (such as item name, UOM, Item type (e.g. Capital item, Consumable), Reorder level, Reorder Quantity, Minimum stock level, lead time, price, etc.).	K							
10.2.1.4	Ability to assign warehouse for an item.	B							
10.2.1.5	Ability to support multiple Units of Measure (UOM) for an item.	B							
10.2.1.6	Ability to assign unit of conversion.	B							
10.2.1.7	Ability to define locator for the item (Warehouse, Bay, Row, Rack, Bin).	B							
10.2.1.8	Ability to capture item by barcode in receiving and issuing items.	B							
10.2.1.9	Ability to assign suppliers for an item with pricing details.	B							
10.2.1.10	Ability to define batch codes for required items.	B							
10.2.1.11	Ability to define/ upload catalogues/specifications for an item.	B							
10.2.1.12	Ability to tag whether the item needs quality inspection and if needed define what those quality inspection points are.	K							
10.2.1.13	Ability to specify which items should be included in MRP.	B							
10.2.1.14	System should facilitate sending SMS/email to process owner when the stock level reaches minimum level/maximum level.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.2.2	**Supplier Master**								
10.2.2.1	Availability of centralized supplier master records facilitating single supplier description and code across the organization.	K							
10.2.2.2	Ability to create/edit suppliers in the system for different types (Local Suppliers, Foreign Suppliers, Registered Suppliers etc.)	K							
10.2.2.3	System should facilitate system generated Supplier ID with a sequential order.	K							
10.2.2.4	Ability to maintain separate Supplier ID sequences by supplier type.	D							
10.2.2.5	Ability to capture details (such as Supplier name, BR, Supplier type (Foreign/Local), Contact details, OEM or not, credit period, credit limit, payment terms, payment methods, item details, status etc.)	K							
10.2.2.6	Ability to maintain LC (Letter of Credit), TT, Slips etc. for suppliers.	K							
10.2.2.7	Ability to blacklist/stop payment to supplier.	K							
10.2.2.8	Ability to rank vendors based on predefined criteria (such as late delivery, after sales service, material quality etc.)	B							
10.2.2.9	Ability for online Supplier registration of new suppliers through online interface.	D							
10.2.3	**Warehouse/ Stockyard Master**								
10.2.3.1	Ability to create/edit warehouses/stockyards and sub warehouses/stockyards (geographically and function wise), reserve, quality inspection, etc., storage requirement (e.g. Temperature etc.).	K							
10.2.3.2	Ability to capture details (such as Name, Location, Department/Units which is assigned, Warehouse/Stockyard Area (shop floor, reserve etc.), status etc.	K							
10.2.3.3	Ability to assign Warehouse/Stockyard Officer.	B							
10.2.3.4	Ability to de-activate an existing warehouse / stockyard / inventory store.	B							
10.2.3.5	Ability to capture / display storage limits (e.g., weightage / quantity) by warehouse/stockyard, lot number, or inventory allocation.	B							
10.2.4	**Bill of Material (BOM) Master**								
10.2.4.1	Ability to crate Bill of Material (BOM) in the system.	D							
10.2.4.2	Ability to create multiple BOM for each ash / sludge product type.	D							
10.2.4.3	Ability to define details in a BOM (BOM ID, BOM version number, BOM description, BOM status, Material, BOM validity period, etc.)	D							
10.2.4.4	Ability to identify component materials and quantity.	D							
10.2.4.5	Ability to identify corresponding materials and quantity.	D							
10.2.4.6	Ability to identify corresponding units of measure.	D							
10.2.4.7	Ability to edit the BOM with defined level of authority.	D							
10.3	**Coal Procurement Planning**								
10.3.1	System should have capability to generate report on stock of coal required on normative basis as defined by CEB.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.3.2	System should monitor all past and current coal requirements, forecast future coal requirements as need to satisfy norms. The forecasted and the ordered quantity should be maintained for future references and trend analysis. — Station Heat Rate, Gross Calorific Value — SCADA System Performance Data (each Plant Average Performance) — Historical Coal Data, Previous month coal waste quantity (each Quality grade) — Planned Outage Schedule of next year (month-wise) for coal units — Rolling Plan of Next Year month-wise for generation from coal units (refer transmission demand planning processes) — Coal price index data (excel sheet upload) — Available Coal Quantity from Fuel Management module — Pending coal quantity for coal season	K							
10.3.3	Ability to retrieve previous coal specifications and convert into draft specifications suitable for the current forecast	K							
10.3.4	Ability to analyze various reports (Plant Factors, Unit Consumptions, last year progress reports, asset condition monitoring report) to make informed decisions before planning.	K							
10.3.5	Ability to generate Coal Forecasted Quantity based on various conditions (Coal Quality and Grade wise).	K							
10.3.6	Ability to generate Draft Annual Coal Quantity Purchase Order – month wise (based on selected criteria).	K							
10.3.7	Ability to edit Draft Annual Coal Quantity Purchase Order – month wise (based on selected criteria).	K							
10.3.8	Ability to send alert messages through mobile/system automatically to higher approving authority / relevant officials.	B							
10.3.9	Ability to trigger the finance process for allocation of funds, after approval of budget for forecasted coal quantity.	B							
10.3.10	The recommended and approved Coal purchase order should be made in seamless integration with financial Budget function.	B							
10.3.11	Ability to support approvals of budgets, plans and work requests through mobile/system. The approval hierarchy shall be based on CEB's hierarchy.	B							
10.3.12	Ability to review coal quantity forecast any mid changes and versions	B							
10.4	**Fuel Procurement Planning (HFO, LFO, etc.)**								
10.4.1	Ability to support annual procurement planning and budgeting.	K							
10.4.2	Ability to define Fuel Procurement plan templates/ formats in the System.	K							
10.4.3	Ability to upload procurement plans on the system.	B							
10.4.4	Ability to upload data from external analysis system/tools such as NCP, SDDP, etc. for fuel forecasting.	B							
10.4.5	Ability to forward draft plan to involved entities for approval before finalization.	B							
10.4.6	Ability to define single level or multiple level approval hierarchy (e.g. for Fuel Procurement Plan Unit/Branch/ Division etc.) based on customized criteria.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.4.7	Ability to forward approved fuel procurement plan for Budget Approval through the System.	K							
10.4.8	Ability for periodic updates (user defined) of fuel forecasting plan.	B							
10.4.9	System should allow the users to change the plan.	B							
10.4.10	Ability to provide facility to update the annual plan for the division / department monthly wise.	B							
10.4.11	Ability to maintain multiple versions of a draft/revised Procurement Plan.	B							
10.4.12	Ability to generate alert messages through the system.	B							
10.5	**Fuel Purchase Request (HFO, LFO, etc.)**								
10.5.1	Ability to automatically generate PR based on Fuel Procurement Plan, Reorder level, minimum quantity etc.	K							
10.5.2	Ability to raise a PR based on the MR Note reference.	B							
10.5.3	Ability to limit PR creation by users based on the predefined Authority levels.	B							
10.5.4	Ability to raise PR for the following categories:								
10.5.4.1	*All fuel types*	B							
10.5.4.2	*All Oil types*	B							
10.5.5	Ability to automatically generate a system defined unique PR number with a sequential order.	K							
10.5.6	Facility to have a separate PR sequence for Unit wise Business (Division/ Branch/ Unit/ Sub Units.) and category wise PR.	D							
10.5.7	Ability to requisition multiple line items in a single PR.	B							
10.5.8	Ability for system to pick up pre-defined master data into PR automatically based on the item/ service code entered by the user.	B							
10.5.9	Ability to view material availability/stock status through the System (within Branch or outside the Branch).	B							
10.5.10	Ability to display lead time for purchasing material by material number/ material group before creating purchase requisition.	B							
10.5.11	Ability to link the purchase requisition to a valid cost center.	K							
10.5.12	Ability to capture details (such as item details, Required Quantity, UOM, requested location, Expected delivery date etc.) In the PR for goods.	B							
10.5.13	Validate PR cost is within the forecasted planned (budget) monthly wise.	K							
10.5.14	Ability to generate notification when PR value exceeds budget and define follow through action.	B							
10.5.15	Facility to save, retrieve and edit a PR before being sent for Approval. Post Approval, it should not be editable by the originator but by the approver. Should be available for editing by originator when rejected by approver or withdrawal of approval.	K							
10.5.16	Ability to raise and approve PR using mobile devices.	B							
10.5.17	Ability to generate alert messages through the system regarding:								
10.5.17.1	*Reorder level reached*	B							
10.5.17.2	*Notifying to approve the PR*	B							
10.5.17.3	*Delays occurs during PR approval process*	B							
10.5.17.4	*After approval of PR*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.5.18	Ability to customize single level or multiple level approval hierarchy (e.g. for PR approval etc.) based on predefined criteria (e.g. based on value, type of purchase).	K							
10.5.19	System should automatically close PR once the PO is raised.	B							
10.5.20	Ability to manually close PR.	B							
10.5.21	Ability to track PR status through the system.	B							
10.5.22	System should retain requisition history.	B							
10.5.23	Availability of end to end Audit Trail from PR creation to payment.	K							
10.6	**Fuel / Coal Purchase Order**								
10.6.1	Ability to raise PO based on:								
10.6.1.1	*PR Note*	K							
10.6.1.2	*Forecasted Coal Quantities (period wise)*	K							
10.6.1.3	*Forecasted Fuel Quantities (period wise)*	K							
10.6.1.4	*Workflow milestones*	K							
10.6.2	Ability to generate standard letter based on PO confirmation.	K							
10.6.3	Ability to generate repeat order based on predefined criteria.	B							
10.6.4	Ability to generate different types of POs (Local, Foreign etc.).	K							
10.6.5	Ability to capture details such as supplier details, item details, item quantity, request date, delivery date, payment terms, Terms and Conditions, remarks etc. in PO.	K							
10.6.6	Ability to automatically generate a system defined unique PO number with a sequential order.	K							
10.6.7	Facility to have a separate PO number sequence for Unit wise Business (Division/ Branch/ Unit/ Sub Units).	D							
10.6.8	Ability to apply more than one delivery dates for a single PO as per partial deliveries.	B							
10.6.9	Ability to enter multiple cost codes for a line item (e.g. an item maybe split between one or more capital cost accounts).	B							
10.6.10	Ability to capture taxes & duties and other charges for multiple/individual items in the PO details.	K							
10.6.11	Ability to attach documents and specifications to PO.	B							
10.6.12	Ability to apply more than one delivery addresses for a single PO.	B							
10.6.13	Ability to record delivery and shipping information relating to a PO.	B							
10.6.14	Ability to capture inspection requirements, acceptance criteria, etc. in the PO.	B							
10.6.15	Ability to create one purchase order from multiple requisitions.	B							
10.6.16	Ability to upload attachments in different formats.	B							
10.6.17	Facility to save retrieve and edit a PO before being sent for Approval. Post Approval, it should not be editable by the originator but by the approver. Should be available for editing by originator when rejection by approver or withdrawal of approval.	K							
10.6.18	Ability to customize single level or multiple level approval hierarchy (e.g. for PO approval etc.) based on predefined criteria (e.g. based on PO type, item type etc.).	K							
10.6.19	Ability to maintain purchase order revision history.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.6.20	Ability to hold/restrict Goods Receiving and invoicing against PO.	B							
10.6.21	Ability to record vendor acknowledgement for a purchase order.	B							
10.6.22	Ability to maintain PO status in the system (planned, approved, partial delivery, delivered, invoice received, paid, closed etc.) automatically after each major activity as stated.	K							
10.6.23	Ability to automatically cancel/close the generated PO automatically based on the defined tolerance limit (days).	B							
10.6.24	Ability to manually close PO.	B							
10.6.25	Ability to write-off the remaining purchase order balance if Goods receiving is partially completed.	B							
10.6.26	Ability to activate cancelled PO.	B							
10.6.27	Ability to capture PO cancelation /activation reason.	B							
10.6.28	Ability to generate alert messages through the system.	B							
10.7	**Fuel Procurement** **Follow Standard procurement guidelines; refer procurement and inventory module for procurement specifications.**								
10.8	**Coal Procurement** **Procurement done by a third party (on behalf of CEB). Following information needs to be available in the system; and based on the information, suitable trigger points should be defined.**								
10.8.1	Ability to integrate Contract Management Model for handling the contractors. - lightering contractors - Quality testing contractors - Freight Contractors - Coal Contractors - Other user specific contractors	K							
10.8.2	Ability to integrate Fleet Management for shipping schedule creation and monitoring.	K							
10.8.3	Ability to integrate Finance module for Payments.	K							
10.8.4	Ability to define contract document templates in the system.	K							
10.8.5	Ability to define workflow for the processes.	B							
10.8.6	Ability to define milestones, tasks, sub task for the workflow.	B							
10.8.7	Ability to define time periods for the tasks.	B							
10.8.8	Ability to define alerts for the workflows.	B							
10.8.9	Ability to link milestones and document templates in the system.	B							
10.8.10	Ability to define One to One, One to Many, Many to One, Many to Many relationships for the task-based milestones.	B							
10.8.11	Ability to upload documents (e.g. Performance Bond, Performa Invoice, Contract Document, payment related documents etc.) on the system.	B							
10.8.12	Ability to maintain multiple versions of a draft/revised contract documents.	B							
10.8.13	Ability to create multiple contracts for selected contractors.	B							
10.8.14	Ability to define payment methods based on price indexes.	B							
10.8.15	Ability to define payment types based on quality of fuel and type of fuel.	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.8.16	Ability to hold payments until workflow approval.	B							
10.8.17	Ability to allow partial payments.	B							
10.8.18	Ability to allow LC creation for contractor.	K							
10.8.19	Ability to allow LC creation on Milestone based information.	D							
10.8.20	Ability to allow advance payments on Milestone based information.	B							
10.8.21	Ability to define single level or multiple level approval hierarchy based on customized criteria.	K							
10.8.22	Ability to define access rights to the contract as per user roles (Create, Edit, Approve, Renew, view details etc.).	K							
10.8.23	Ability to support maintenance of Fuel Management related Agreements/Contracts incorporating terms and conditions of coal receipt, payment, sampling, claims, disputes, etc.	K							
10.8.24	Ability to show status of payments to be made and claims raised to the suppliers. It should automatically generate required notifications to concerned persons for follow-up in case of delay or discrepancy.	K							
10.8.25	Ability to maintain master data of coal prices, taxes, duties, sales tax, royalties etc. applicable to transporters and coal companies. This master data should be posted automatically while executing purchase transactions for fuel.	B							
10.8.26	Document Management system should allow storage & retrieval of circulars and notifications with version management and search facilities. These documents should be attachable with system documents like contracts, purchase orders etc.	B							
10.8.27	Ability to have flexibility to incorporate all types of fuel management related agreements e.g. freight paid basis, freight to pay basis. The system should have a list of approved payment and delivery conditions. Addition/deletion/modification of agreement conditions should be allowed with requisite approvals.	B							
10.8.28	Ability to provide the user a list of approved payments and delivery conditions for contracts / agreements. System should also maintain a record of past and current Payment schemes.	B							
10.8.29	Ability to monitor and ensure that all payments are issued in accordance with the contact/agreement only.	B							
10.8.30	Ability to capture all extra charges / variances for the contract (overload charge, demurrage charge, etc.).	B							
10.9	**Shipping Schedule Creation (Coal)** **Refer Fleet Management Module for Detailed Specifications of Fleet Management**								
10.9.1	Ability to define different ship details in the system.	K							
10.9.2	Ability to upload shipping schedule on the fleet management module.	K							
10.9.3	System should maintain shipping schedule from the fleet management module.	K							
10.9.4	Ability to allocate ships to the shipping schedule.	K							
10.9.5	Ability to monitor ship starting dates, anchoring dates, sailing dates, ETAs as per the destinations.	K							
10.9.6	Ability to check the variance or overlaps in the shipment schedules by changing shipping details.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.9.7	Ability to interfacing with global ship positioning module for update ship sailing process (marine traffic, vessel finder, etc.)	D							
10.10	**Fuel / Coal Quality testing**								
10.10.1	Ability to integrate condition monitoring and testing function with fuel / coal quality testing.	K							
10.10.2	Ability to upload documents (such as Coal Load Port Report, Coal Unload Port Report, Fuel Test Report etc.) on the system.	B							
10.10.3	Ability to define quality measurements in the system.	K							
10.10.4	Ability to allocate quality testing team members.	B							
10.10.5	Ability to suggest quality testing members through the system based on predefined criteria (skill level, member availability, previous experience).	B							
10.10.6	Ability to allocate funds for testing. (External testing agencies and internal testing)	K							
10.10.7	Ability to get threshold-based risks / approval report from the system (defied parameters).	K							
10.10.8	Ability to mark quality testing results in the system based on predefined template.	K							
10.10.9	Ability to generate Delivery Authorization letter through the system.	B							
10.10.10	System should validate whether quality evaluation approved prior to generation of Delivery Authorization letter.	B							
10.10.11	Ability to override the quality evaluation by higher authorities.	K							
10.10.12	Ability to keep versions of the quality testing reports.	K							
10.10.13	Ability to keep history of testing details.	B							
10.10.14	Ability to link testing details to the PO, GRN and workflow-based milestones (batch wise).	K							
10.10.15	Ability to recalculate coal price based on the coal quality	K							
10.10.16	Ability to adjust the payments and other charges based on the contract management milestones and payment plans	K							
10.10.17	Ability to hold payments until Quality Testing approved.	B							
10.10.18	Ability to waive off Quality based on predefined criteria (such as financial limits, type of equipment, time duration/urgency etc.).	B							
10.10.19	Ability to generate Waive Off letter through the system based on predefined template.	B							
10.10.20	Ability to generate alert messages through the system for every transaction point and approval point.	B							
10.10.21	Ability to customize single level or multiple level approval hierarchy (e.g. Quality testing) based on predefined criteria (e.g. based on item type etc.).	B							
10.10.22	The system should aid in testing and comparison of coal / fuel quality from various suppliers. All past and current details on testing parameters (Gross Calorific Value (GCV), Ash Content, Moisture, Volatile Matter, and Surface Moisture) should be maintained. Reports should be made available to the user in the desired format as and when required.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.11	**Fuel / Coal Payments** **Refer Finance Module for detailed payments specifications**								
10.11.1	Ability to link payments based on defined payment methods and types of coal procurement.	K							
10.11.2	Ability to make partial payments based on contract agreements.	K							
10.11.3	Ability to change payments based on coal quality variance	K							
10.11.4	Ability to capture penalties and contract variance based on the contract agreements - Quality changes - Quantity changes - Delivery time - Credit period - Other contract specific penalties	K							
10.11.5	Ability to generate alerts based on payment variations against agreements.	K							
10.11.6	Ability to hold payments until workflow approval.	K							
10.11.7	Ability to allow LC creation for contractor.	K							
10.11.8	Ability to allow LC creation for Milestone based information.	K							
10.11.9	Ability to allow advance payments made on Milestone based information.	K							
10.11.10	Ability to finalize payments based on GRN quantity.	K							
10.11.11	Ability to finalize batch wise payments.	K							
10.11.12	Ability to make final payments based on quantity wise GRN.	K							
10.11.13	Ability to make payments based on quantity wise GRN.	K							
10.11.14	Ability to capture currency exchange lost or gain for contractor wise, coal batch wise, coal quantity wise, period wise, etc.	K							
10.11.15	Ability to generate cheques, letters (standard template), LC, TT and Slips based on the payments output.	K							
10.11.16	Ability to generate alert messages through the system for every transaction point and approval point.	B							
10.11.17	Ability to customize single level or multiple level approval hierarchy (e.g. advance payments, final payments) based on predefined criteria (e.g. based on Coal Shipping Charges, FOB, etc.).	B							
10.12	**Goods (Fuel / Coal) Receiving**								
10.12.1	Ability to receive goods against following documents:								
10.12.1.1	*Purchase Order/ Award letter/ Unload port report/ Load port report*	K							
10.12.1.2	*Stock Transfer(Transfer Order)*	K							
10.12.1.3	*Direct receive(Without System generated reference)*	B							
10.12.1.4	*Sludge Production*	D							
10.12.2	Ability to capture details such as GRN date, reference number, invoice number, warehouse location, remarks, etc. about the goods received.	K							
10.12.3	Ability to get average quality as GRN value from the Load Port and Unload Port quantities	K							
10.12.4	Ability to automatically suggest warehouse location based on the space available and item type.	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.12.5	Ability to record location details.	D							
10.12.6	Ability to capture quality details during receiving (Quantity received, Quantity damaged, Quantity accepted etc.).	K							
10.12.7	Ability to automatically generate a unique GRN number with a sequential Order.	K							
10.12.8	Ability to move quantities to consignment GRN	B							
10.12.9	Ability to define a separate Unit wise Business GRN sequence (Division/ Branch/ Unit/ Sub Units) and category wise GRN.	D							
10.12.10	Ability to generate automatic GL postings on receipt of goods.	K							
10.12.11	Ability to raise GRNs for full or partial PO quantity.	K							
10.12.12	Ability to generate error message if a GRN has already been fully created for a PO. Only a partially fulfilled PO should allow another GRN creation.	B							
10.12.13	Ability to raise and approve GRN using mobile device.	B							
10.12.14	Ability to create one GRN from various consignment receipt.	B							
10.12.15	Ability to move received items to different warehouses.	B							
10.12.16	Ability to facilitate batch wise receiving of goods.	B							
10.12.17	Ability to allow cost of freight, insurance and miscellaneous charges as required to be added to the purchase price.	D							
10.12.18	Ability to record material overheads (Costs other than the cost of material like transportation should be booked under the cost of material).	D							
10.12.19	System should facilitate uploading of relevant documents (e.g. invoice, items list, Quality etc.) during Goods Receiving.	B							
10.12.20	Ability to receive goods at quality testing stage without updating GL stock account.	K							
10.12.21	Ability to reject a consignment receipt and still enter the details into the system.	K							
10.12.22	Ability to record details of the rejected material with reasons.	B							
10.12.23	System should facilitate maintenance of tolerance limits for over purchases higher than PO/Award letter.	B							
10.12.24	Ability to capture and flag early/late receipts of goods from supplier.	B							
10.12.25	Ability to highlight if any variance happens during goods receiving against the reference document (e.g. Purchase Order/ Award letter etc.).	B							
10.12.26	Facility to save, retrieve and edit GRN before being sent for Approval. Post Approval, it should not be editable by the originator but by the approver. Should be available for editing by the originator when rejection by approver or withdrawal of approval.	K							
10.12.27	Ability to customize single level or multiple level approval hierarchy (e.g. Goods received) based on predefined criteria (e.g. based on Excess stocks received more than PO quantity etc.).	B							
10.12.28	Ability to generate alert messages through the system regarding:								
10.12.28.1	*After receiving of goods*	B							
10.12.28.2	*Not received/Confirmed Orders*	B							
10.12.28.3	*Notifying Material requester about return of goods*	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.13	**Quality testing during Goods Receipt (Fuel / Coal)**								
10.13.1	Ability to integrate condition monitoring and testing functions with fuel quality testing.	K							
10.13.2	Ability to create quality inspection lots/batches for each goods receipt depending on pre-defined criteria (the quantity/volume).	B							
10.13.3	Ability to upload documents (such as Coal Load Port Report, Coal Unload Port Report, Fuel Test Report etc.) on the system.	B							
10.13.4	Ability to define quality measurements in the system.	K							
10.13.5	Ability to allocate quality testing team members.	B							
10.13.6	Ability to suggest quality testing members through the system based on predefined criteria (skill level, member availability, previous experience).	B							
10.13.7	Ability to allocate funds for testing.	K							
10.13.8	Ability to get threshold-based risk / approval report from the system (defied parameters).	K							
10.13.9	Ability to mark quality testing results in the system based on predefined template.	K							
10.13.10	Ability to define equipment in use for quality testing process.	D							
10.13.11	Ability to define testing methods and procedures.	D							
10.13.12	Ability to record test results of each sample and obtain conclusions automatically.	D							
10.13.13	Ability to automatically release quality accepted material quantity to the usable stocks.	B							
10.13.14	Ability to automatically release quality rejected material quantity to the unusable stocks.	B							
10.13.15	Ability to keep received goods in a separate location until the quality inspection is completed.	B							
10.13.16	Ability to restrict usage of goods which are not inspected for quality.	B							
10.13.17	Ability to obtain cost incurred in the quality process for each shipment/per month/week…etc.	D							
10.13.18	Ability to evaluate and rank vendor according to the goods supplied.	B							
10.13.19	Ability to generate quality reports for each material/shipment.	B							
10.13.20	Ability to generate alert messages through the system for every transaction point and approval point.	B							
10.13.21	Ability to customize single level or multiple level approval hierarchy (e.g. quality testing) based on predefined criteria (e.g. based on Fuel Type etc.).	B							
10.14	**Material Requesting (MR) Process (Fuel / Coal)**								
10.14.1	Ability to raise a MR Note using:								
10.14.1.1	*Periods*	K							
10.14.1.2	*User Defined*	B							
10.14.2	Ability to capture the details such as unit number, requested quantity, required date, Reference number etc. about Material Request.	K							
10.14.3	Ability to automatically generate a unique MR Note number with a sequential Order.	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.14.4	Ability to define a separate MR number sequence for Unit wise Business (Division/ Branch/ Unit/ Sub Units).	D							
10.14.5	System should facilitate raising of MR based on the generating unit.	B							
10.14.6	Ability to display pending MR details during Material Request.	B							
10.14.7	Ability to check item availability through the system.	B							
10.14.8	Facility to save, retrieve and edit a MR Note before being sent for Approval. Post Approval, it should not be editable by the originator but by the approver. Should be available for editing by the originator when rejection by approver or withdrawal of approval.	K							
10.14.9	Ability to print approved MR Note.	B							
10.14.10	Ability to raise a PR based on MR Note reference.	B							
10.14.11	Ability to raise and approve MR using mobile devices.	B							
10.14.12	Ability to reserve requested material after approval of MR.	B							
10.14.13	Ability to automatically cancel/close the generated MR based on the defined tolerance limit (days).	B							
10.14.14	Ability to manually close MR.	B							
10.14.15	Ability to customize single level or multiple level approval hierarchy (e.g., for MR approval etc.) based on predefined criteria (e.g., based on item type).	K							
10.14.16	Ability to generate alert messages through the system regarding:								
10.14.16.1	*Notifying to approve the MR Note*	B							
10.14.16.2	*After approving of MR Note*	B							
10.14.16.3	*Pending MR*	B							
10.15	**Goods issue (GI) Process (Fuel / Coal)**								
10.15.1	Ability to integrate with SCADA systems.	K							
10.15.2	Ability to issue fuel online from the stock based on SCADA system quantities. (Belt, feeders, etc.)	B							
10.15.3	Ability to issue goods against following documents:								
10.15.3.1	*MR Note*	K							
10.15.3.2	*Stock Transfer (Transfer Order)*	K							
10.15.3.3	*User Defined*	B							
10.15.4	Ability to capture details such as item details, issuing quantity, goods issuing date etc.	K							
10.15.5	Ability to automatically generate system defined unique GI number with a sequential order.	K							
10.15.6	Facility to have a separate GI number sequence for Unit wise Business (Division/ Branch/ Unit/ Sub Units) and category wise Goods Issue.	D							
10.15.7	Ability to create user defined different types of issues.	B							
10.15.8	Ability to map different types of issues to different types of GL accounts.	K							
10.15.9	Ability to track partial issues against MR.	B							
10.15.10	Ability to verify the available quantity of goods before issuing goods.	B							
10.15.11	Ability to validate issuing quantity with the requested quantity.	B							
10.15.12	Ability to restrict any issues resulting in negative quantity.	B							
10.15.13	Ability to update stock account automatically upon issue of goods from stores.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.15.14	Ability to move items to Transit stores during good issue against GI.	B							
10.15.15	Ability to issue Goods multiple times against one document.	B							
10.15.16	Ability to raise and approve GI using mobile devices.	B							
10.15.17	Ability to update respective stock quantities upon generation of the GI Note.	B							
10.15.18	Ability to define tolerance levels for Goods issue for specific material.	B							
10.15.19	Ability to customize single level or multiple level approval hierarchy (e.g. for Goods issue) based on predefined criteria (e.g. based on item type).	B							
10.15.20	Ability to generate alert messages through the system regarding:								
10.15.20.1	*Notifying to issue Goods on a reserved date*	B							
10.15.20.2	*Delays happen during GI*	B							
10.15.20.3	*Issue goods lesser than Minimum Order Quantity*	B							
10.15.20.4	*After issuing of goods*	B							
10.16	**Goods (Fuel) Transfer (GTN)**								
10.16.1	Ability to raise Goods transfer notes between SBUs or store locations.	B							
10.16.2	Ability to transfer inventory between sub-inventories.	B							
10.16.3	Ability to view item availability in other stores.	B							
10.16.4	Ability to capture details (such as Store, item details, Quantity etc.) during Goods transfer.	K							
10.16.5	Ability to automatically generate a system defined Unique GTN number with a sequential order.	K							
10.16.6	Facility to have a separate GTN sequence for Unit wise Business (Division/ Branch/ Unit/ Sub Units).	D							
10.16.7	Ability to raise and approve GTN using mobile devices.	B							
10.16.8	Facility to save, retrieve and edit a GTN before being sent for Approval. Post Approval, it should not be editable by the originator but by the approver. Should be available for editing by originator when rejection by approver or withdrawal of approval.	K							
10.16.9	Ability to customize single level or multiple level approval hierarchy (e.g. GTN approval etc.) based on predefined criteria (e.g. based on item type).	K							
10.16.10	Ability to generate alert messages through the system regarding:								
10.16.10.1	*Notifying to approve the GTN*	B							
10.16.10.2	*After approval of GTN*	B							
10.17	**Goods (Fuel / Coal) Return to Vendor**								
10.17.1	Ability to raise Material Return Note against:								
10.17.1.1	*Goods Receipt Note*	K							
10.17.1.2	*Purchase Order*	K							
10.17.1.3	*User Defined*	B							
10.17.2	Ability to capture details such as (item details, return quantity, date, reason, reference number etc.) in Material Return Note to Vendor.	K							
10.17.3	Ability to transfer return items to a separate store location (e.g. return store).	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.17.4	Ability to raise Material Return Note to supplier if the item is in return stores.	B							
10.17.5	Ability to integrate with the contract management module.	B							
10.17.6	Ability to define the workflow milestones based on rejection.	B							
10.18	**Material (Fuel / Coal) Usage Variance**								
10.18.1	Ability to capture stock variance based on process stages:								
10.18.1.1	*Ability to capture quantity variance between PO (Load Port Report) to GRN for item wise, batch wise*	K							
10.18.1.2	*Ability to capture quantity variance between GRN (average of Unload Port Report and load port report) to GIN for item wise, batch wise*	K							
10.18.1.3	*Ability to handling belt quantity variance (jetty belt quantity vs feeding belt quantity variance)*	B							
10.18.1.4	*Ability to capture quantity variance between GRN to GTN for items wise, batch wise*	K							
10.18.2	Ability to maintain online count of available quantity, actual usage quantity, loss quantity.	K							
10.18.3	Ability to generate exception reports based on the variance.	K							
10.18.4	Ability to allocate the quantity loss to separate GL and identify the cost of loss.	K							
10.18.5	Ability to isolate usage of fuel and loss of fuel and incorporate both at the forecasting stage.	K							
10.19	**Physical Verification and Inventory Adjustments (Fuel / Coal)**								
10.19.1	Ability to define physical counting cycle dates in the system for different SBUs, locations.	K							
10.19.2	Ability to specify detailed time line or a date for different locations to perform stock count.	B							
10.19.3	Ability to allocate members for stock verification.	B							
10.19.4	Ability to freeze inventory in the system for physical stock verification.	K							
10.19.5	Ability to Freeze inventory based on:								
10.19.5.1	*Location*	B							
10.19.5.2	*Item Category*	D							
10.19.6	Ability to generate snapshot of the inventory position on-hand by freezing inventory movements.	B							
10.19.7	Ability to generate item master list for physical stock verification.	B							
10.19.8	Ability to capture details (such as warehouse, item, Batch, count, status, remarks etc.) during inventory verification.	K							
10.19.9	Ability to enter actual quantity in the system by physically verifying stocks.	B							
10.19.10	Ability to compare snapshot position with the actual inventory on-hand and generate report about mismatched items.	B							
10.19.11	Ability to unfreeze inventory movement and proceed to continue upon higher authority approval.	B							
10.19.12	Ability to capture recount details (e.g. item, count etc.).	B							
10.19.13	Ability to select members to provide reasons for inventory mismatches.	B							
10.19.14	Ability to maintain transit loss, and internal loss based on usage variance reports.	B							
10.19.15	Ability to capture reasons for inventory mismatches.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.19.16	Ability to record adjustments related to the differences between on-hand quantity and physically verified quantity.	B							
10.19.17	The system should allow to clear/ move out items in the selected store types.	B							
10.19.18	Ability to generate trend analysis for inventory mismatched items.	D							
10.19.19	Ability to customize single level or multiple level approval hierarchy (e.g. for member allocation for stock verification, stock adjustment etc.) based on predefined criteria (e.g. based on item type, variance etc.).	K							
10.19.20	Ability to generate alert messages through the system.	K							
10.20	**Ash / Sludge Production Planning**								
10.20.1	Ability to create master production plan in the System.	B							
10.20.2	Ability to split the master plan into sub components (e.g. monthly, quarterly, etc.).	B							
10.20.3	Ability to create new production plan using existing production plan (copy paste capability).	B							
10.20.4	Ability to forecast ash production for each month (user definable period) based on Coal consumption in each month and various inputs: — Station Heat Rate, Gross Calorific Value — Coal Consumption for next month — Load Port report (ash content information) — Historical Coal Data, Previous month coal usage quantity (each Quality grade) — Planned Outage Schedule of next year (month-wise) for coal units — Rolling Plan of Next Year (month-wise) for generation from coal units (refer transmission demand planning processes) — Available Coal Quantity from Fuel Management module — Pending coal quantity for coal season	K							
10.20.5	Ability to forecast sludge production for each month (user definable period) based on fuel consumption in each month and various inputs: — Station Heat Rate, Gross Calorific Value — Fuel Consumption for next month — Historical Fuel Data, Previous month fuel usage quantity (each type of fuel) — Planned Outage Schedule of next year (month-wise) for generating units — Rolling Plan of Next Year (month-wise) for generation from generating units (refer transmission demand planning processes) — Available Fuel Quantity from Fuel Management module	K							
10.20.6	Ability to retrieve previous actual ash / sludge production and convert into a draft production forecast.	K							
10.20.7	Ability to generate Ash / Sludge Production Forecasted Quantity based on various conditions (Ash Content and Grade wise).	K							
10.20.8	Ability to send alert messages through mobile/system automatically to higher approving authority / relevant officials.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.21	**Batch Creation and Processing (Ash / Sludge)**								
10.21.1	System should facilitate creation of batches with unique batch ID.	D							
10.21.2	System should facilitate defining of unit of measures for each batch.	D							
10.21.3	Ability to define batch size for each production type (Fly Ash, Bottom Ash, Sludge, Lube Oil etc.).	D							
10.21.4	Ability to define batch time period.	D							
10.21.5	Ability to tag product related BOM to a batch.	D							
10.21.6	Ability to allocate resources to each work center operation.	D							
10.21.7	System should be able to calculate amount of estimated production from a single batch from estimated resources.	D							
10.21.8	System should be able to define approval hierarchy for batch initiation.	D							
10.21.9	Ability to initiate batch on scheduled date.	D							
10.21.10	Ability to define monitoring parameters for each monitoring point.	D							
10.21.11	Ability to generate Monitoring Sheet based on monitoring point.	D							
10.22	**Quality Management (Ash / Sludge)**								
10.22.1	Ability to define process quality measuring points/locations in the system.	K							
10.22.2	Ability to define quality parameters as per testing requirements (e.g. characteristics, expected results, tolerances, testing procedures, etc.)	K							
10.22.3	Ability to update quality results against defined parameters.	K							
10.22.4	Ability to enter quality decisions at various quality points during the production process.	B							
10.22.5	Ability to directly enter quality related comments in the system batch wise.	B							
10.22.6	Ability to keep records of samples taken from the production line.	B							
10.22.7	Ability to generate alert messages through the system.	B							
10.23	**Batch Closure (Ash / Sludge)**								
10.23.1	Ability to close the batch with defined level of authority.	D							
10.23.2	Ability to link output produced from the batch with appropriate unit of measurement.	D							
10.24	**Ash / Sludge Pricing**								
10.24.1	Ability to create price lists by attaching items/ item categories.	K							
10.24.2	Ability to create a new price list by copying an existing price list.	B							
10.24.3	Ability to define effective start date of a price list.	B							
10.24.4	Ability to attached price list for different contractors	B							
10.24.5	Ability to deactivate price lists.	B							
10.24.6	Ability to change the price of an item in an active price list with higher authority approval.	B							
10.24.7	Ability to change the status (Active/Inactive) of an item in a price list	B							
10.24.8	Ability to track discount amendments history.	B							
10.24.9	Ability to track the changes in the active price list and deactivated price list.	B							
10.24.10	System should facilitate Collection group pricing.	B							
10.24.11	Ability to maintain a margin for each item and validate discounts not allowed more than that.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.24.12	Allow zero-cost items.	B							
10.25	**Ash / Sludge Customers / Vendors**								
10.25.1	Ability to define ash & sludge vendors / customers as internal and external vendors / customers.	K							
10.25.2	Ability to allocate contracts / agreements for the different vendors / customers.	K							
10.25.3	Ability to integrate contract management module and activate agreement milestones.	B							
10.25.4	Ability to manage penalties and other contractual obligations for customers.	K							
10.25.5	Ability to define tax component of the external vendors.	B							
10.25.6	Availability of system generated customer / vendor ID with a sequential order.	B							
10.25.7	Ability to maintain separate customer / vendor ID sequences by customer type.	B							
10.25.8	Ability to maintain customer information in a centralized customer database (such as Customer type, unique number, addresses, tax registration, credit period, credit amount, default expense account, GL liability control account, payment method etc.).	K							
10.25.9	System must support customer approval workflow.	B							
10.25.10	Ability to setup GL revenue and customer account for each debtor so that it will be defaulted while recording the invoice (maintain parent child relationships among customers).	K							
10.25.11	Ability to establish default accounts for each receivable type.	B							
10.25.12	System should facilitate overriding credit period with proper approvals.	B							
10.25.13	System should facilitate activation of a deactivated customer or temporarily hold or block the customer if the credit period is expired or the limits exceeded.	B							
10.25.14	Ability to generate alert messages through the system.	B							
10.26	**Ash / Sludge Production Sales**								
10.26.1	System should facilitate generation of sales order referring to forecasted ash / sludge production.	K							
10.26.2	System should facilitate defining sales order types; For example: Normal orders, Orders on credit.	B							
10.26.3	System should facilitate customers (internal order / external customer - cash / credit etc.) to place orders real time.	B							
10.26.4	Ability to define order series.	B							
10.26.5	System should support sales order approval flow.	B							
10.26.6	Ability to validate the customer order reference in order to avoid duplication of orders.	K							
10.26.7	Ability to notify and hold the order once customer credit limit is exceeded.	B							
10.26.8	Ability to release held orders only with higher authority approval.	B							
10.26.9	Ability to track the status of sales orders.	B							
10.26.10	Ability to recall incomplete sales orders.	B							
10.26.11	Ability to fully or partly allocate stock for a sales order.	B							
10.26.12	Ability to de-allocate stock from a sales order with higher authority approval.	B							
10.26.13	Ability to maintain status of sales orders (e.g. Pending for approval, Approved, Invoiced, and Delivered).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.26.14	Ability to cancel a sales order with higher authority approval.	B							
10.26.15	Ability to hold/block sales orders manually stating the reasons.	D							
10.26.16	Ability to capture scanned images of the source documents on to a sales order.	D							
10.26.17	Ability to cancel the sales order by a higher-level user.	D							
10.27	**Invoicing for Ash / Sludge Sales**								
10.27.1	System should be able to raise invoice for each sales order using sales order as the base document.	K							
10.27.2	Ability to raise a sales invoice with following methods:								
10.27.2.1	*Invoice against sales order*	B							
10.27.2.2	*Direct Invoice*	B							
10.27.3	Ability to generate single invoice for multiple orders of the same customer.	K							
10.27.4	Ability to notify and hold the invoice once customer credit limit is exceeded.	B							
10.27.5	Ability to release held invoice only with higher authority approval.	B							
10.27.6	Ability to fully or partly allocate stock against an invoice.	B							
10.27.7	Ability to de-allocate stock from an invoice with higher authority approval.	B							
10.27.8	Ability to cancel an invoice with higher authority approval.	B							
10.27.9	Ability to raise one invoice for several orders of the same customer.	B							
10.27.10	Ability to maintain links between invoice number, sales order number and stock item batch/sequence numbers of allocated stock.	B							
10.27.11	Ability to create partial value invoices for partial deliveries of a given sales order.	D							
10.27.12	Ability to raise supplementary forms when SVAT invoice is raised so that the user can enter additional information relevant to SVAT invoicing process.	D							
10.27.13	Ability to automatically raise SVAT credit notes when SVAT invoices are raised.	D							
10.27.14	Ability to automatically post GL entries for SVAT invoices (company practiced accounting policy to be finalized at the implementation stage).	D							
10.27.15	Ability to automatically update GL entries at the time of invoice confirmation.	B							
10.28	**Receipts for Ash / Sludge Sales** **Refer Finance Module for Detailed Specification of receipts**								
10.28.1	Ability to enter advance receipts (e.g. when money is being paid in advance and when the invoice number is not mentioned).	K							
10.28.2	Ability to allocate advance receipts later to one /many invoices.	B							
10.28.3	Ability to generate receipt for cash payment.	B							
10.28.4	Ability to capture any tax at the time of receipt (example: VAT).	B							
10.28.5	Ability to raise receipt against single or multiple invoices.	D							
10.28.6	Ability to re-print a receipt and Identify it as a re-print (e.g. due to a printer jam) with higher authority approval.	D							
10.28.7	Ability to allocate customer advance payments against an invoice at the time of receipt.	B							
10.28.8	Ability to deduct any discounts or any refunds to the customer at the time of receipt.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.28.9	Ability to raise receipt against a single or multiple invoices for the total invoice value or for a partial invoice value.	B							
10.28.10	Ability to alert payment receiving information by the system.	B							
10.28.11	Ability to release dispatch note from the system after payments.	B							
10.28.12	System should be able to maintain vendor accounts for ash / sludge sales.	D							
10.28.13	Ability to view vendor account details from the system to get paid quantity vs. issued quantity.	B							
10.29	**Distribution of Ash / Sludge Refer Fleet Management Module for Detailed Specifications of Fleet Optimization**								
10.29.1	Ability to facilitate tagging a vehicle in the fleet management module with distribution/delivery plan.	K							
10.29.2	Ability to facilitate tagging of external customers dispatch notes with vehicle numbers in the fleet management module.	K							
10.29.3	Ability to integrate fleet management module with dispatch schedule creation.	K							
10.29.4	System should facilitate delivery plan or distribution against the following:								
10.29.4.1	*Sales Order/Invoice*	B							
10.29.4.2	*Product transfer note*	B							
10.29.4.3	*Direct Transfer*	B							
10.29.5	Ability to maintain vehicle capacity for each vehicle or any other asset used for delivery.	B							
10.29.6	Ability to review booked, available for delivery and the vehicles being allocated.	B							
10.29.7	Ability to replace resources for a distribution plan and ability to tag a new resource/asset.	B							
10.29.8	Option to assign resources automatically based on the availability, defined space or capacity.	B							
10.29.9	Ability to generate a Gantt-chart/calendar display of distribution plan.	B							
10.30	**Gate Pass for distribution of Ash / Sludge from the Power Station**								
10.30.1	Ability to raise gate pass against:								
10.30.1.1	*Invoice*	B							
10.30.1.2	*Dispatch note*	B							
10.30.1.3	*Fleet Schedule*	B							
10.30.2	Ability to capture delivery details (transportation details, delivery location, item details, date, carrier details etc.) during gate pass generation.	B							
10.30.3	Ability to manually read and enter bourse tongue levels quantity and sign / approve / submit the sending quantity.	B							
10.30.4	Ability to capture quantity carried from the weighbridge.	B							
10.30.5	Ability to integrate weighbridge.	D							
10.30.6	Ability to update sales against the quantity issued by the weighbridge.	B							
10.30.7	Ability to update customer profile based on issue quantities.	D							
10.30.8	Ability to customize single level or multiple level approval hierarchy (e.g. for Gate pass release) based on predefined criteria (e.g. based on item type).	D							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.30.9	Ability to print gate pass with location details including silo number.	D							
10.30.10	Ability to track Gate pass status (Open/Delivered etc.).	D							
10.31	**Sales Return and Credit Notes for Ash / Sludge sales**								
10.31.1	Ability to manage goods returned by the customers.	K							
10.31.2	System should facilitate sales returns.	K							
10.31.3	System should facilitate raising of sales return note against an invoice or a dispatch note.	K							
10.31.4	Sales Return Note should maintain following information:								
10.31.4.1	*Sales return note number and date*	B							
10.31.4.2	*Customer Details*	B							
10.31.4.3	*Sales Return type (rejected, absence of production, close of location, etc.)*	B							
10.31.4.4	*Reference document number (System Invoice No, Delivery Document Number)*	B							
10.31.4.5	*Return accepted by/Authorized by (Originator/Checker)*	B							
10.31.4.6	*Return note status (Approved, Credit given, rejected)*	B							
10.31.4.7	*Item code and quantity*	B							
10.31.5	Ability to raise a credit note based on the Sales Return Note.	B							
10.31.6	Ability to raise a general credit note where "Sales return note" is not referred, with approval from a higher authority.	B							
10.31.7	Ability to automatically pick the invoice reference values and invoiced price and cost at the time of sales.	B							
10.31.8	Ability to automatically pick if any line discount or any other free issues given at the time of sale. System should automatically pick the details when the invoice reference is picked at the time of raising the sales return note.	B							
10.31.9	Ability to charge for any sales return which can be added at the sales return point.	B							
10.31.10	Ability to automatically post the sales return entries to the General Ledger in the finance module for individual debtor sub ledger and also the other relevant ledgers.	B							
10.32	**User Interface**								
10.32.1	Ability to use web-based interface.	K							
10.32.2	Single entry of data is preferred using a dashboard style interface.	B							
10.32.3	Ability to have a GIS viewer component.	B							
10.32.4	Ability to modify user Interface based on workflow (e.g. object combinations).	D							
10.32.5	Ability to have standard Windows menu items.	D							
10.32.6	Ability to support standard Windows navigation (keyboard and mouse).	D							
10.33	**Data Import/Export Capability**								
10.33.1	Find function using multiple user-selectable search criteria.	K							
10.33.2	Use spatial search functions to identify records based on proximity, buffer, and overlay.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.33.3	Specify format(s) that data can be exported to (e.g. excel, shape file).	K							
10.33.4	Ability to interface with SCADA system and other data acquisition systems.	K							
10.34	**Notification/Alert Management and Calendar**								
10.34.1	Ability to plan Milestone based tasks through workflow, where assigned staff or work units are automatically notified through email/ SMS to commence their assigned tasks associated with a Work Order.	B							
10.34.2	Automatically notify all assigned Work Groups through email/ SMS when in progress activities are changed.	B							
10.34.3	Includes 24/7 calendar for work days and hours by employee tracking availability, holidays, vacation, etc. for master scheduling.	K							
10.34.4	Ability to tracks injury and safety records by resource and job.	D							
10.34.5	Ability to have a customized calendar for specific facilities.	D							
10.35	**Interoperability and Data Integration**								
10.35.1	Ability to support integration of external file sources (doc/image management/ PDF / excel etc.).	K							
10.35.2	Ability to online integrate with the Finance Module.	K							
10.35.3	Ability to online integrate with Procurement Module.	K							
10.35.4	Ability to link BI tool for reporting generation for relevant internal and external requirements (regulatory, ministry etc.)	K							
10.35.5	Ability to integrate with internal existing systems.	B							
10.35.6	Option to transfer summary or detailed costs to the general ledger at the organization level.	B							
10.35.7	Ability to online integrate with weight bridge.	B							
10.35.8	Ability to Integrate with SMS platform/email server.	B							
10.35.9	Ability to Integrate with internet payment gateway.	B							
10.35.10	Ability to integrate with SCADA system.	K							
10.35.11	Ability to support wireless data entry and processing.	B							
10.35.12	Ability to use minimum wireless bandwidth is recommended for field level use (please mention minimum bandwidth).	B							
10.35.13	Ability to support all mobile devices and operating systems (IOS, Android, Windows, etc.).	B							
10.35.14	Ability to have a data synchronization process for disconnected edits.	D							
10.35.15	Ability to Support bar-coding for inventory, equipment, parts, labor tracking.	D							
10.35.16	Ability to Support RFID for assets, inventory, equipment, parts tracking (GPS).	D							
10.36	**Reporting and Analysis Capabilities (internal/external)**								
10.36.1	Ability to provide a standard set of standard fuel management reports.	K							
10.36.2	Ability to carry out fuel requirement trend analysis.	B							
10.36.3	Ability to create customized reports from any data within the system and provide access to reports based on user profile (e.g. AGM, AFM, DGM, CE, etc.).	K							
10.36.4	Ability to provide financial information reporting (e.g. beginning balance, ending balance, movement by fund, work in progress).	K							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.36.5	Ability to provide graphical reports on inventory item attributes; age, condition, rating, risk.	K							
10.36.6	Ability to provide multiple print formats based on department layout requirements.	B							
10.36.7	Ability to create on-screen filters and queries for data retrieval (interface menu items).	K							
10.36.8	Ability to provide inquiry and reporting capability for statistical data from manual entry.	B							
10.36.9	Ability to provide inquiry and reporting capability for statistical data from external electronic media, interfacing with external databases.	D							
10.36.10	Ability to generate reports on a rolling basis for different frequencies as weekly, monthly annual rolling plans.	B							
10.36.11	Ability to provide regulatory monthly fuel consumption reports including actuals and forecasted - Forecasted / Actual fuel requirement - Stock levels of beginning of month and end of the month - Fuel purchases during the month - Fuel lost from the month - Fuel insufficiency	K							
10.36.12	Ability to generate energy charge calculation and reporting from the fuel consumptions - Fuel Unit - Fuel Currency - Fuel Price - Energy Charge	K							
10.36.13	Ability to forecast power plant factor wise fuel requirements.	B							
10.36.14	Ability to provide inquiry and reporting capability for fuel / coal forecasted details (batch wise, period wise).	K							
10.36.15	Ability to provide inquiry and reporting capability for coal procurement milestones.	B							
10.36.16	Ability to provide inquiry and reporting capability for coal tenders.	B							
10.36.17	Ability to provide inquiry and reporting capability for coal shipment schedules.	B							
10.36.18	Ability to provide inquiry and reporting capability for coal other charges per tender.	B							
10.36.19	Ability to provide inquiry and reporting capability for coal tender against shipments and other charges.	B							
10.36.20	Ability to provide inquiry and reporting capability for coal advance payments and final payments.	B							
10.36.21	Ability to provide inquiry and reporting capability for coal payments variances.	B							
10.36.22	Ability to provide inquiry and reporting capability for coal quality and quantity variance.	B							
10.36.23	Ability to provide inquiry and reporting capability for coal usage variance (stock in hand, Quantity Issued, Quantity usage variance).	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.36.24	Ability to provide inquiry and reporting capability for comparing Annual/Monthly/Daily Requirement of Coal for the entire company on normative and unit wise basis for a particular grade of coal.	K							
10.36.25	Ability to provide inquiry and reporting capability for Coal Consumption report unit/plant/company wise at user defined time periods and intervals.	B							
10.36.26	Ability to provide inquiry and reporting capability for Annual/Monthly/Daily analysis, comparing actual and normative consumption of coal for plant/company.	K							
10.36.27	Ability to provide inquiry and reporting capability for coal GRN and coal consignment quantities.	B							
10.36.28	Ability to provide inquiry and reporting capability for coal issue notes (period wise).	B							
10.36.29	Ability to provide inquiry and reporting capability for ash / sludge production forecast.	B							
10.36.30	Ability to provide inquiry and reporting capability for ash / sludge sales orders.	B							
10.36.31	Ability to provide inquiry and reporting capability for ash quality and quantity variance against forecasted quantity.	B							
10.36.32	Ability to provide inquiry and reporting capability for ash / sludge customers' payments history.	B							
10.36.33	Ability to provide inquiry and reporting capability for ash / sludge customers dispatch notes.	B							
10.36.34	Ability to provide inquiry and reporting capability for ash / sludge invoice details.	B							
10.36.35	Ability to provide inquiry and reporting capability for ash / sludge returns and credit notes.	B							
10.36.36	Ability to provide inquiry and reporting capability for total ash / sludge sales per month (gross sale).	B							
10.36.37	Ability to provide inquiry and reporting capability for dispatch schedule for ash/ sludge.	B							
10.36.38	Ability to provide inquiry and reporting capability for fuel forecasted details (batch wise, period wise).	B							
10.36.39	Ability to provide inquiry and reporting capability for Purchase orders details (PO number wise , Date range wise , status wise , Location).	B							
10.36.40	Ability to provide inquiry and reporting capability for GRN details (GRN number wise, Date range wise, status wise, Location)	B							
10.36.41	Ability to provide inquiry and reporting capability for transfer details (item, item type, batch wise, and warehouse wise).	B							
10.36.42	Ability to provide inquiry and reporting capability for quantity variance of GIN and GRN.	B							
10.36.43	Ability to provide inquiry and reporting capability for fuel GRN and fuel consignment quantities.	B							
10.36.44	Ability to provide inquiry and reporting capability for fuel payments history.	B							
10.36.45	Ability to provide inquiry and reporting capability for fuel quality and quantity variance.	B							

Serial No	Criterion	K /B/D	Vendor's Response					Module (s) supported	Comments
			STDD	WA	MOD	TTP	NA		
10.36.46	Ability to provide inquiry and reporting capability for quality check status supplier wise, item wise, item type wise, warehouse wise.	K							
10.36.47	Ability to provide inquiry and reporting capability for inventory transactions by item, item type, supplier, location, and transaction type.	K							
10.36.48	Ability to inquire on the accounting entries associated with receipts/issues.	K							
10.36.49	Ability to provide inquiry and reporting capability for inventory status by item, item type, supplier, location, and transaction type.	K							
10.36.50	Ability to inquire on inventory transfers by transfer note and item batch.	B							

11. Customer Information System – Including Billing

*** Ordinary = Ordinary supplies. Maximum Demand equal or less than 42 kVA, Bulk = Bulk supplies, Maximum Demand higher than 42 kVA. This column indicates whether the requirement applies to Ordinary, Bulk or Both categories of supplies.

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1	**New Connection**										
11.1.1	Standardized formats	The system should be able to generate different application forms for new connection, Temporary connection, Augmentations etc. for different categories (Solar, self-generation, etc.) of users, and the same forms should be available across all delivery channels (division, province, area office, customer service center, over the web & mobile application etc.)	Both	K							
11.1.2	Loan format	In case of loan applications, the system should be able to generate different application forms defined by CEB.	Both	K							
11.1.3	Application form printing	The system should facilitate to print the above form if required.	Both	D							
11.1.4	Accepting application form	The system should be able to accept the form over the web and request the customer to make a payment through any mode specified by CEB before a specified date. The system should also be able to accept forms at customer service center and manual/automatic input (through scanner and OCR software) of customer data from application forms. System should check before accepting a form that all mandatory details and customer declaration specified by CEB.	Both	K							
11.1.5	Accepting registration fee details	The system should be able to record the registration fee payment details and issue a receipt to the customer.	Both	K							
11.1.6		The payments of registration fees may also be accepted through secure on-line payment gateways over the web, authorized third party payments and in such cases receipt and application number will be displayed on the customer browser and the same will be emailed to customer (refer payments in 'Collection')	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.7	Generation of unique application no	The system should generate a unique application number for every application form received and registered.	Both	K							
11.1.8	Reconciliation of collection	All registration fee details captured should be reconciled with the collections for the day.	Both	K							
11.1.9	Distinguish individuals & companies	Ability to distinguishing individuals from companies.	Both	B							
11.1.10	Allow documentation entry	Ability to allow the required documentation entry for a request and the identification of the pending documents. The system should be able to facilitate to reject any submitted document and notify the customer.	Both	B							
11.1.11		Ability to allow required documentation for loan application form.	Both	B							
11.1.12	Generate & printing agreements	Ability to generate & print contract agreements after confirmation of documents and the payment.	Both	B							
11.1.13	Single application for multiple connections	Ability to accept a single application for multiple connections under one customer in special cases (housing schemes, multi storied building, etc.)	Both	B							
11.1.14	Club/group multiple applications	Ability to club/grouping multiple applications for special cases (construction of new line for several connections, etc.)	Both	B							
11.1.15	Enter important notes	Ability to allow the entry of important notes of the new connection requests and new point of connection Terms.	Both	D							
11.1.16	Supporting documents stipulated by law	The system should allow the printing of any communication & supporting documents stipulated by law or regulation, and sending by electronic means.	Both	D							
11.1.17	Charges via service's invoice	The system must allow the collection of the carried-out actions in order to close the request without availing the service. It is also possible that such charges are paid together with the issued service's invoice (can be paid in installments).	Both	D							
11.1.18	Auto generated service request number	The consecutive number of the service request must be automatically generated as well as the new customer connection request.	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.19	Unique service request number	The consecutive number of the service request must be unique in order to identify it with other system options.	Both	K							
11.1.20	Realization of an inquiry via status request	The system must allow the realization of an enquiry by status request, modification date and type of request etc.	Both	D							
11.1.21	Status request modifications	A Record of status modifications must be kept with their corresponding dates of service request.	Both	K							
11.1.22	One user multiple contracts	Ability to allow one user to have multiple contracts in the same or different premises/locations at different tariff or customer categories.	Both	B							
11.1.23		The system must allow that a user with multiple contracts or services, funds the emission and management of collections in a unique global account. This decision can be made by the user in an individual way according to its interests or needs.	Both	B							
11.1.24	Generation of working orders for the completion tasks	The system must allow the generation of working orders for the completion of tasks that are required by the new connection request. Such tasks can be carried out directly by the field staff, based on the current availability of the team.	Both	B							
11.1.25	Select types of work orders	The system should allow the selection of the types of work orders for the new connection request exclusively.	Both	B							
11.1.26	Checking system capability for issuing connection	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. The system should also have provision to accept installation test report to consider the load mentioned as the sanctioned load.	Both	B							
11.1.27		During the verification process, the system shall also validate the current load on the relevant transformer and details of existing 3 phase or bulk connections, whether additional capacity is available. This information is maintained in a separate server (GIS	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
		based customer index and asset coding data base)									
11.1.28		The system should be able to provide a list of exceptions where the self-assessment does not match the standard load or other CEB standards.	Both	B							
11.1.29	Accepting customer details	The system should be capable of capturing the details of the customer from the Application form (electronic/hard copy)	Both	K							
11.1.30	Checking customer details	The system should accept the customer details and then check the applicant's particulars against the set of existing customers, defaulted customers, disconnected and rejected applications. In case of a match in records, an exception should be raised. This exception should be flagged off to the relevant approving authority. After clearance from approving authority, the application will be processed further or the same will be rejected.	Both	K							
11.1.31	Reject the application	The system should have Provision for rejecting the application at any of the process mentioned above.	Both	K							
11.1.32	Application on hold	The system should have the provision for holding the application at any stage, when the information has no clarity, availability or for technical reasons.	Both	K							
11.1.33	Premise inspection schedule	The system should be able to generate inspection schedules based on priority and availability of CEB staff.	Both	B							
11.1.34	Premise inspection check list generation	The system should provide the flexibility of generating mobile app based check list for inspections based on the policies of CEB for ordinary or bulk customers.	Both	B							
11.1.35		The system should allow to add diagrams & additional notes as a part of inspection check list.	Both	B							
11.1.36	Premise inspection intimation	The system should provide the functionality of informing the customer of the premise inspection via CRM. The corresponding office would also be informed of the premise inspection.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.37	Generate Standard	The system should be able to define area-wise standards based on the customer database for the area and a predefined logic. For instance, based on the applicant's locality, category and applicant details (premise floor area). The system should provide the flexibility of modifying the business logic that drives the standards.	Both	D							
11.1.38	Accept customer premise assessment details	The system should accept the customer load details, tariff code, service connection charges, and location details, transformer details etc. from the AEE once the field test has been performed and add these to the customer database.	Both	K							
11.1.39	Waive off the premise inspection to simplify the approval process for a certain set of customers	The system should have the flexibility of waiving off the premise inspection requirements for customers at the discretion of area engineers.	O	B							
11.1.40	Escalation of waive off of activities to be carried.	The system should be able to escalate all the waive off activities to a higher authority.	O	B							
11.1.41	Defining waiving off activities	The system should be able to configure the activities or steps that can be waived off by area engineer which an intimation for the higher authority.	Both	K							
11.1.42	Perform load checks before approving the new customer connection	During the verification process, the system shall also validate the current load on the relevant transformer, whether additional capacity is available, whether poles are available for providing the connection to the applicant, etc.	Both	B							
11.1.43	Additional checks on load applied	The system should check for conditions where if the applied load is more than a specified values, - More than 42 kVA (specified by CEB) treat as a bulk customer - More than 1000 kVA (specified by CEB) treat as a HT bulk customer and customer required to install own transformer etc.	Both	K							
11.1.44		The system should have separate workflow to capture the additional	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
	Separate workflow for network improvements	requirements in case of network improvements.									
11.1.45		The system should be able to assign the responsibility to the workflow (to other relevant units such as, P&D, commercial etc.) in case of network improvements, bulk supplies etc.	Both	B							
11.1.46	Network Improvements customer payments	The System should calculate the charges to be paid by the customer on the network improvements.	Both	B							
11.1.47	Monitor and update status of network improvements	The system should be able to monitor and update the status of various stages involved in case of network improvements.	Both	B							
11.1.48	Entry of electrical address	The system should allow entry of electrical address (SIN, feeder, phase, pole no etc.)	Both	D							
11.1.49	Generate dues settlement slip	In case the application is rejected, the system should generate a due settlement statement and Preparation of voucher and sanction for the balance amount after deducting the charges.	Both	D							
11.1.50	Integration with financial accounting for dues settlement/repaymen ts	The system should be able to integrate with the Financial accounting or the cash management module, where the cash balance should be checked, funds raising if required and issue of cheque to the customer.	Both	K							
11.1.51	Update applicant status	The system should update the applicant log with his status (Accepted/ Rejected).	Both	K							
11.1.52	Estimate new connection costs	Based on pre-defined logic, an estimate of new connection costs for the customer should be prepared by the system. Manual over-ride by the concern of AEE should be possible.	Both	K							
11.1.53	Summary of estimates	System should dispatch a daily report containing the summary of number of new meters required, estimated costs, expected arrival date, etc. to the stores.	Both	B							
11.1.54	Calculation of security deposit (SD)/other deposits	The system should be able to calculate the SD that needs to be collected from the customer depending on the parameters mentioned by CEB.	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.55	Trigger to generate the PIV for development charges and the security deposit	When the Service Order for the New Connection approval is generated, the system should automatically trigger the generation of a PIV inclusive of the new connection charges and security deposit.	Both	K							
11.1.56	Generate payment information	The system will generate payment information (email, sms, via CRM) for the customer to pay the security deposit and the new connection charges.	Both	B							
11.1.57	Dispatch Intimation Letter	The system should generate an intimation letter (along with all relevant cost details) and print it out as per the address given, for dispatch by courier/post. Where email-addresses are available, it shall also electronically mail this letter.	Both	D							
11.1.58	Multiple agreement formats	The system should also have the flexibility of storing multiple agreement formats (between the CEB and the customer) catering to the different customer categories.	Both	B							
11.1.59	Case by Case modifications to the agreement	The system should have the facility for the user to specify a standard agreement and make modifications to the same on a case to case basis on approval.	Both	D							
11.1.60	Allocation of meters	The system should have the provision of accepting the number of meters available (of predefined types) through interfacing with other modules (such as Materials Management). Based on a business logic, the system can then allocate meters to customers.	Both	D							
11.1.61	Installation of meters	The system should ensure that the meter is installed after all the documents are submitted.	Both	K							
11.1.62	Meter Installation route plan	Based on the allocation and the service levels defined, the system should be able to provide meter installation route plan, which is to be printed and given to the line-staff.	Both	D							
11.1.63	Issue of Work Order for providing connection	After receiving the security deposit and new connection charges, a work order for installation of the meter should be issued along with a meter test report.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.64	Issue of Order card for Energization	The system should generate an order card for energization of bulk supply after completion of meter installation, construction work, signing agreements etc.	B	K							
11.1.65	Generation of Unique account number	After the installation of meter and the customer is energized with power, the system should generate a unique Account Number for the customer. This number would form the basis of all transactions by the customer under his account with CEB.	Both	K							
11.1.66	Format of Unique account Number	The logic for defining the account number would be flexible and provided by the CEB.	Both	B							
11.1.67	New Connection Confirmation - connection Report Input	In response to the Work Order for new connection installation, the test report details should be entered into the system as a confirmation via mobile app at the customer premises.	Both	K							
11.1.68	Meter Information	The system should have the provision to enter the meter information, the details of the meter should automatically be taken from the store and the details of the premises like seal and height should be entered.	Both	B							
11.1.69	Track meter History	The system should be able to track the history of the meters. This should contain the list of customers to which it was replaced.	Both	B							
11.1.70	Trigger generation of first bill	Trigger the billing module to generate a permanent receipt for the new customer with the meter details and electrical address particulars.	Both	B							
11.1.71	Maintain history of the customer	The customer history should be maintained for lifetime. The system should be able to handle the data (to provide access to the customer based on a logic decided by CEB via CRM/mobile app).	Both	K							
11.1.72	View customer History	The customer history should be maintained and should be viewed at any point of request. The system should be able to display any of the customer details like address, load etc. and the billing information for the period of selection.	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.1.73	Change customer display name and contact details	The system should have the provision to change the display name, contact details etc. of the customer.	Both	K							
11.1.74	Change customer Name/ownership change	The system should identify customer name/ownership change by changing the account number or any guidelines as per CEB.	Both	B							
11.1.75	Reasons for changes	The system should be able to capture the reason for changing the customer's name and address.	Both	B							
11.1.76	Track customer name and address	The system should have the provision to track the customer old address and the new address and an account's old name & new name should be affected in the next bill issued to the customer.	Both	K							
11.1.77	Change Category, Load and Phase	The system should have the provision to change the category, load and phase etc. of the customer (electrical address). This should also affect in the next billing cycle.	Both	K							
11.1.78	Conversion of ordinary to bulk customer & vice versa	The system should be able to assist in finalizing the old customer and track all past dues for payment.	Both	B							
11.1.79	Rules for changing customer load and category	The system should allow load/category changes depending on the CEB policies.	Both	B							
11.1.80	Track Old category, Load and Phase	The system should have the provision to track the old values of category, load and phase.	Both	D							
11.1.81	Relocating customers	The system should facilitate to relocate customers within the area or among areas by updating consumer and other relevant details defined by the user.	Both	K							
11.1.82	Maintain customer status	The system should be able to maintain the customer status and should have the provision to change the customer status.	Both	K							
11.1.83	Track meter changes	The system should be able to enter the meter changes of a customer and track the meter at any given situation.	Both	K							
11.1.84	Calculate Deposits - For changes	The system should be able to calculate the security deposit/other deposits amounts to be collected from the customer, for changes in category, load and phase etc. of the customer.	Both	B							
11.2	**Disconnection & Reconnection**										

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.2.1	Reasons for disconnection	Ability to specify logic of reasons for disconnection (such as non-payment, customer request, disconnection due to pilferage of power etc.)	Both	K							
11.2.2	Logic for different types of disconnection	Ability to capture user defined logic for different types of disconnection.	Both	K							
11.2.3	Time frame for disconnection	Ability to capture the user specify time frame and ability to send the alert messages after to a concern person after specified time is over.	Both	K							
11.2.4	Generation of defaulting consumer list	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 or the date on which list is generated, whichever is later. System should be capable to accept report of action taken on such consumers and remind further action required to be taken during specified period.	Both	B							
11.2.5		System should be capable to accept report of action taken on such consumers and remind further action required to be taken during specified period.	Both	B							
11.2.6	Inform outstanding	Ability to inform the customer the outstanding amount.	Both	B							
11.2.7	Generate disconnection notice (Red Notice)	Ability to generate disconnection notice (Red Notice)	Both	K							
11.2.8	Inform Responsible person/Customer	Ability to inform about disconnection notice (Red Notice) (Mail/SMS) the concerned person responsible for disconnection as well as customer.	Both	B							
11.2.9		Ability to record and inform concerned person whether the disconnection notice reached to the customer.	Both	D							
11.2.10	Generate disconnection order	Ability to generate the disconnection order after completing the notice period.	Both	B							
11.2.11	Overriding disconnection order	Ability to override the disconnection order/ notice and define the new timeline agreed for disconnection based on proper approvals from respective authority and send alerts.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.2.12	Generate disconnection order for other reasons (emergency etc.)	Ability to generate the disconnection order instantly/ without notice period (e.g.: emergency) (through Mobile Device).	Both	B							
11.2.13	Preparation of 'walk order'	The system should prepare a "walk order" (route) wise Disconnection List.	Both	B							
11.2.14	Disconnection list - defaulted for a specified period	The system should be able to generate the Disconnection list of consumers who have defaulted more than a specified amount of money or for a specified range of period after the expiry of notice period (even for the installment cases).	Both	K							
11.2.15		Disconnection list (order) should not contain the consumers who paid the amount during this period / or due date has not been expired/disconnection notice period has not been expired (through Mobile Device).	Both	K							
11.2.16	Disconnection execution status	Ability to record and report disconnection process execution status (through Mobile Device).	Both	K							
11.2.17	Disconnection/ reconnection processing charge	Ability to link the processing charge for disconnection/ reconnection from the Billing system.	Both	B							
11.2.18	Details of disconnection	Ability to record the disconnection date, time, closing reading, seal details, taking photo etc. at the time of disconnection (through Mobile Device)	Both	B							
11.2.19	Online report	The system should also be able to provide any time online report based on the latest bill payment.	Both	B							
11.2.20	Updates on customer status	At any point of time, the system should be able to provide updates on the customer status-disconnected/live/to-be-disconnected/to-be-reconnected.	Both	K							
11.2.21	Escalation of exceptions to higher authority	Any failure of disconnections should be escalated the case to a user-defined higher authority.	Both	B							
11.2.22	Proper monitoring	Ability to report every step of actions of the disconnection process for proper monitoring.	Both	D							
11.2.23	Data for analysis purpose	Ability to provide historical data for management requirement for analysis.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.2.24	Adjustment of security/ other deposit against arrears	Provision of automatic adjusting the Security/ other deposits available (with proper accounting, authorization) to get the final amount to be recovered.	Both	B							
11.2.25	Payment of the outstanding	Ability to inform concerned person as soon as the outstanding amount is paid by disconnected consumer.	Both	B							
11.2.26	Reconnection order	Ability to generate the Reconnection order based on fulfillment of payment/reason for disconnection is settled (manual intervention). (Link to Projects/New Connection as required, e.g.: reconnection of a dismantled account).	Both	K							
11.2.27	Reconnection list - work order	The system should prepare a walk order-wise Reconnection List.	Both	B							
11.2.28	Capturing of reconnection details	The system should capture the reconnection details which include the reading at time of reconnection and check with the closing reading (if available) at the time of disconnection.	Both	K							
11.2.29	Termination of connection	In case a customer requests for termination of connection, the system should accept the terminating meter reading.	Both	B							
11.2.30	Dismantlement/finalization procedure	Ability to generate list of disconnected accounts (not reconnected) on a user defined logic and generate the notice of dismantling and finalizing (send to customer via CRM).	Both	B							
11.2.31		Ability to generate a list of resettled accounts from the dismantling and finalizing list and for the accounts which are not settled, generate the dismantling order (Link with Projects module for the execution).	Both	B							
11.2.32		Ability to generate a list of resettled accounts for reconnection from the dismantled accounts.	Both	B							
11.2.33		Ability to generate a list of finalizing accounts from the dismantled accounts on a logic defined by the user linking with Finance module, Legal etc. (should inform customer via CRM).	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.2.34	Legal procedure - failure in paying even after disconnection	Even after disconnection and expiry of the notice period to the customer, if the customer fails to clear the dues, the system should escalate the particular cases to billing system legal procedure.	Both	B							
11.2.35	Report Generation	The system must prepare statistical reports, operational reports and MIS reports or any other customized reports related to disconnection & reconnection which must be recorded in the system's data.	Both	B							
11.2.36	Finance & Accounting related report generation	The commercial system must include all the management of accounts that have not yet been paid by the client and this information must be transferred into the Financial System (ERP).	Both	B							
11.3	**Collection**										
11.3.1	Identify, register & update system users	All system users that are cashiers or external agents must be registered, identified & updated.	Both	B							
11.3.2	Allow online payments	Online payment must be allowed in the offices and in external collection centers. This includes payment through Banks, debit accounts, etc.	Both	B							
11.3.3	Different forms of payments	Different forms of payment must be accepted: cash, cheques, credit cards and debit cards. The system should enable payments through electronic transfer of funds (Cash machine, mobile money and internet).	Both	K							
11.3.4	Combined payments	Payment can be combined in different forms (cash and cheques, cash and credit card, etc.) with an only receipt or different receipts. The system should also carry out payments for financial compensation.	Both	D							
11.3.5	Acknowledgment to customer	The system should be able to send customer an acknowledgement of payment (SMS or Email).	Both	K							
11.3.6	Office closure	The cashiers must automatically shut down when the payment office is closed.	Both	B							
11.3.7	Allow temporary closure	The system should allow temporary closure of any counter at any given time (For reasons such as shift changes, lunch breaks, reaching the prescribed insured cash float etc.).	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.3.8	Cash balances of agencies	The system should facilitate to control and monitor the cash balances of agencies and payment terminals.	Both	K							
11.3.9	Historical information for system users/agents	It must be able to record complete historical information about collection for users and agents.	Both	K							
11.3.10	Interface with bank systems	The system should allow the interface with bank systems in order to transmit and receive records related to users that have chosen automatic debit for payment of their invoices. Also should allow interface with Government authorities such as Revenue Authority.	Both	B							
11.3.11	Interface with payment gateways	The system should allow to interface with payment gateways in order to transmit and receive records related to payments through credit/debit cards.	Both	K							
11.3.12	Standing instructions	Invoices from users that have chosen automatic debit (standing instructions) in their bank accounts, must be sent to them.	Both	D							
11.3.13	Connection with external payment agents	The system must allow the connection with external payment agents both online and offline (from its own systems through the enabling enterprise services).	Both	B							
11.3.14	Correct wrong online payments	The system should allow to correct and control of the wrong payments online.	Both	K							
11.3.15	Returned cheques	The system has specific operations for the management of returned cheques: - Charge generation (from the bank), - Status resulting from the paid invoices by the cheques or generation of a new charge of the corresponding amount (decision level configuration) - Customer follow up (letters, messages, etc.) - Block further cheque payments (Configurable).	Both	B							
11.3.16	Different types of agreements	The system should manage different types of agreements (service connection agreement, agency agreements, self-generation agreement, solar, loan etc.).	Both	D							
11.3.17	Authorization levels	The system should handle attributes and official authorization levels	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.3.18	Integration of AMI system & Billing system	The system should handle and integrate AMI system and the billing system. E.g.: reactivation of disconnected consumers, update of balance meter (for prepaid meters), Tariff update (for prepaid meters), etc.	Both	D							
11.3.19	Allow complete & partial payments	The system must allow partial and complete payments. Also it will allow advance payment and customer accounts should be treated as a "balance account" (for advance payment future bills will be deducted from the balance).	Both	K							
11.3.20	Loan to be added separately	The system should also be able to affect the payments of certain loans in the respective invoices.	Both	B							
11.3.21		The system should be able to configure any amount paid by the customer as energy, loan installment, deposits, fines etc.	Both	B							
11.3.22	Finalization with loan TBD	The system should facilitate to configure loan attributes (interest rates, duration, etc.) Also, early settlements should be facilitated.	Both	B							
11.3.23	Collections anywhere	The system should facilitate collections anywhere (Area/ Province/ Division office online/offline through payment gateways etc.).	Both	B							
11.3.24	Capturing payment details	The system should capture all the customer payment details (mandatory and additional). A format for collecting payment details will be specified by the CEB from time to time.	Both	K							
11.3.25	Associating payments with login Ids	All payments should be associated with the login-id of the personnel receiving them and the collection center code at which they were received. The collection-center code would be associated with the concerned Area/ Province/Division etc.	Both	K							
11.3.26	Collections against bills	All collections should be made against specific bills/ forms to enable reconciliation at a later stage.	Both	K							
11.3.27	Collections without bills	In certain cases (e.g. Advance Payments) collections can be accepted without the bill as well. There should be a demand note for advance bill.	Both	B							

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11.3.28	Collections without bill - mandatory reason code	In all instances of collections without bill/ form, the system should make it mandatory for the user to specify a reason from the predefined reason codes embedded in the system, and defined by CEB from time to time.	Both	K							
11.3.29	Issue of Receipt	The system should generate a receipt whenever money is collected. Each receipts should have a unique receipt number.	Both	K							
11.3.30	Search by cheque no	The system should be able to access the payment details of a consumer with the cheque no.	Both	B							
11.3.31	Offline Collections	The system should be an on line cash receipting system with an off-line module to be used in case of server downtime or collections from a remote location.	Both	B							
11.3.32	Generation of Stubs	The system should generate a cash-stub and retain it to be used by the head-cashier. The cash-stub should be linked to the receipt by the same unique number.	Both	K							
11.3.33	Updating of Classified Abstract of Collections (CAC)	Automation of the CAC is a key requirement of CEB.	Both	K							
11.3.34	Internal reconciliation	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'.	Both	K							
11.3.35	External reconciliation	The system should also capture all bank remittance details. At the end of a period, the system should reconcile them with the bank statements.	Both	B							
11.3.36	Capturing payment details: Mode of payment	The system should also allow for different modes of payment, like Cash, Cheque, Draft, through Bank, credit cards, debit cards, direct debit from bank accounts, Internet, etc. Though all of these modes are not present in the current scenario, the system is expected to have the necessary upward compatibility.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.3.37	Payment Categories	The system will allow payments to be collected under the payment categories to be specified by CEB (energy bill, PIV, loans, etc.)	Both	K							
11.3.38	Payment category definition flexibility	The system will allow the user to define various payment categories, which may be different from the ones listed.	Both	K							
11.3.39	Payment Types	The system should have the flexibility to accept full, partial or advance payments. The system should also have the facility to centrally change these settings from time to time (e.g. - not accepting partial payments during the last few months of a financial year).	Both	K							
11.3.40	Field collections	In certain cases (e.g. rural areas, during special collection drives etc.) collections are made in the field and receipts issued there. The system will have the provision for accepting the collections and receipt details for such field collections.	Both	B							
11.3.41	Third Party collections	The system should allow to update any payment made via third party collection agencies, including banks. The data can be in electronic encrypted format which should be taken as part of collections.	Both	K							
11.3.42	Installment payments	The system should permit payment by installment. The system facilitate to enter the number of installments and generate the schedule of payments. Authorization or the user permission should be configurable.	Both	B							
11.3.43	Interest	The system should be able to configure interest added to customers due to disputes, installment payments, high bills, etc.	Both	B							
11.3.44	Installment - Disconnection orders	The system should generate Disconnection orders when there is a default in scheduled payment of the installments.	Both	B							
11.3.45	Part Payments	The system should permit part payments and the surcharges should be calculated based on the amounts paid and defaulted as denied by the CEB. Authorization or the user permission should be taken care so that only some users are authorized for it.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.3.46	Cheque dishonor - Debit consumer	The system should have the provision of debiting of a customer's account where a cheque has been dishonored.	Both	K							
11.3.47	Cheque Dishonor - Payment by Cash or Bank draft	The system should restrict the consumer to pay only cash or Bank draft when the cheque is dishonored for configurable no. of bills. But provision of allowing cheque for consumers should be done for Govt offices etc.	Both	B							
11.3.48	Refunds	The system should allow refund facility for reasons specified by CEB with proper approval authority.	Both	B							
11.3.49	Other Adjustments	The system should be able to capture the debit or credit adjustments for the consumer which should be incorporated in the next month bill.	Both	K							
11.3.50	Collections tracking: Standard codes of payment	All collections will be classified against standard codes of payments that would be specified by the CEBs from time to time.	Both	K							
11.3.51	Customer Credit Rating	The system should be able to give credit rating to the consumer, based on his past history of payments.	Both	D							
11.3.52	Dunning (reminder) letter generation	The system should allow generation of reminder letters at specified dates - before the payment due date, and notices for disconnection, dismantlement.	Both	D							
11.3.53	Disconnection List	Based on the criteria set by CEB (and subject to change as per requirements), the system will print the list of the services which needs to be disconnected.	Both	K							
11.3.54	Processing Charge	The system should automatically add and update the processing charge paid upon a disconnection based on the criteria set by CEB.	Both	K							
11.3.55	Reconnection List	Based on the criteria set by CEB (and subject to change as per requirements), the system will print the list of the services which needs to be reconnected.	Both	K							
11.3.56	Dismantlement List	Based on the criteria set by CEB (and subject to change as per requirements), the system will print the list of the services which needs to be dismantled.	Both	K							

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11.3.57	Finalization of accounts	The system should be able to assist in finalizing the dismantled accounts based on the criteria's set by CEB (e.g.: generating the list, journal adjustments, arrears recovery etc.)	Both	K							
11.3.58	Payment anywhere	Consumer can make the payment anywhere within CEB. Provision to make payment anywhere with proper accounting and posted to the respective area/province/division properly and timely.	Both	K							
11.3.59	All type of payment	System should be able to accept all type of cash / other instruments for any type of demand like energy bill / new service connection / other misc. charges / vigilance / penalty etc.	Both	K							
11.3.60	Security deposit adjustment	Provision of automatic security deposit adjustment (configurable) on accounts of based on the criteria set by CEB (and subject to change as per requirements) e.g.: increased consumption, frequent disconnections, etc.	Both	B							
11.3.61	Interest payout to customer	The system should provide facilities to automatically compute the interests (configurable) payout to consumers on: I. Security Deposit ii. Advance Payment etc.	Both	D							
11.3.62	Decentralized payment processing & centralized reconciliation	System must be capable of handling centralized or decentralized payment processing. And System must be capable of centralized reconciliation of the collection.	Both	K							
11.3.63	Linking payment to logging id	The system should capture all the customer and payment details as specified by the CEB time to time. All payments should be associated with the login-id of the personal receiving them and the collection center codes at which they were received. All collections should be made against specific bills/ forms to enable reconciliation at a later stage.	Both	B							
11.3.64	Mandatory reason code	In all Instances of collections without bill/ form the system should make it mandatory for the user to specify a reason from the predefined reason	Both	K							

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		codes embedded in the system, and defined by the CEB time to time.									
11.3.65	Code based Classification of collection	All collections will be classified against standard codes of payments that would be specified by the CEB from time to time.	Both	K							
11.3.66	Receipt generation	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 CEB.	Both	K							
11.3.67	Adaptability to different mode of collection	System shall be capable to receive payments made by the consumer in either of the following modes: - Cash/ Cheque/ Bank Draft/ Credit Cards/ Debit Cards/ Internet Payment Gateway or Payment made by direct debit from bank accounts on authorization by the consumer (ECS). Any other mode as may be specified by CEB from time to time. In certain cases (e.g. Advance Payments) collections can be accepted without the bill as well. System should have support of accepting payment through a single cheque against multiple bills and keep proper track against respective bills. Further, the system shall also allow the consumer to pay one single bill through multiple modes i.e. through multiple cheques of different banks, by cash & cheque etc. The payments made by the consumers are to be acknowledged and accounted for in the respective databases. For payment made by the consumers at Collection Counter through Cheque/ Bank Draft computerized acknowledgement shall be issued to the consumers. System must be able to generate & send SMS automatically to customer for every payment received.	Both	B							

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11.3.68	Handling of cheque payments, cash and bank advance payment	The system should have following functionalities : a) Holding recovery proceedings based on cheque submission, but recognition of payment on cheque clearance only. b) In case of cheque dishonor - I) Reversal of any payment recognized by the system ii) Levy of handling charges iii) Generation of Notice IFRS 9 iv) Blocking of further payment by cheque till a defined timeframe/logic with appropriate message on bill for same. 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. The system should have the flexibility to accept full, partial or advance payments. The system should also have the facility to centrally change these settings from time to time (e.g. - not accepting partial payments during the last few months of a financial year).	Both	B							
11.3.69	Interfacing with special drives	In certain cases (e.g. during special collection drives, collection by spot billing agent etc.) collections are made in the field and receipts issued there. The system will have the provision for accepting the collections and receipt details for such field collections.	Both	D							
11.3.70	Generation of reminders/ disconnection notice	The system should allow generation of reminders by SMS/ letters at specified dates - before the payment due date, and notices for disconnection, dismantlement.	Both	B							

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11.3.71	System ability to keep track of cancelled receipt	System shall be capable to cancel receipt at cash counters (on approval) due to human errors etc. The details of cancelled receipt to be kept in the system and the same may be printed on the new receipt also upon approval. System should also provide to reverse the payment applied to a particular account in case errors are detected at a later stage, e.g. payment getting applied to a wrong customer.	Both	B							
11.3.72	CRM Notifications	The system should be able to link with the CRM module to send notifications (bill dues, payments, disconnection/reconnection notices, etc.)	Both	B							
11.3.73	CRM reports	The system should be able to link with the CRM module to facilitate data (bill history, payment history, etc.) requested by the customer.	Both	B							
11.3.74	Finance & Accounting	The system should link with Finance & Accounting module in ERP to generate Financial statements, Revenue & other reports according to the following system characteristics. -Energy Revenue (a) Revenue as per tariff: Subsidy/Discount outside normal tariff structure, Penal tariff in case of theft, misuse (b) Electricity Tax - Non-energy revenue (a) Charges for various services: Service Tax (b) Late Payment Surcharge (c) Penalty payout to consumer in case of deficiency of service (d) Interest payout to consumer on: Security Deposit, Advance Payment - FIFO/LIFO settlement logic specific to CEB's requirements on the following buckets, (a) Arrears: i. Prior to certain period, inherited by CEB from SEB as legacy ii. After the certain timeline, as accumulated by CEB	Both	B							

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		(b) Current Demand i. Payment settlement logic should take care of part payment, late payment, surplus payment, advance payment, bill amendment after payment of bill.									
11.4	**Billing**										
11.4.1	Unique Bill Number	All bills generated by the system should be given a unique number.	Both	B							
11.4.2	Date validation	The system should have check in place so that the user cannot enter a previous date as the date of meter reading entry.	Both	B							
11.4.3	Calculation of bills	The system should allow the calculation of bills in line with the user defined tariff categories, rates & any programs.	Both	K							
11.4.4	Highly configurable billing engine	The system must have a highly configurable billing engine (adapt itself in any different tariff categories/rates such as slab based tariff, TOU tariff, net metering, net accounting, net plus, etc. Further, the engine should accommodate any taxes, FAC, fixed charges, etc. related to tariff categories.	Both	K							
11.4.5		The billing engine should be configurable to different bill structures, loans, incentives, interests, credit payments, etc. defined by the user.	Both	K							
11.4.6		Ability to adopt any change is recorded, perform correct billing and retroactive adjustments when needed, including the correct accounting entries)	Both	K							
11.4.7	Format of bill number	The logic for defining the bill number would be flexible and provided by the client. For example the system should be capable of generating bill numbers that are reflective of the Area Office, Province, and Division etc. that the customer falls under. It should also capture the customer category and the billing month.	Both	B							

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11.4.8	Logic for generation of bills	The CEB would provide the billing logic for generation of the bills for all categories of consumers including (temporary, un-metered, group metering, corporate etc.). The system should follow the same for computing the final bill amount. This calculation logic will be flexible and the CEB should be able to revise the billing logic, rates, charges and applicability from time to time as per the regulations.	Both	K							
11.4.9	Maintain Tariffs of Different categories	The system should be able to maintain & configure the categories, type of supply, demand, etc. the charges applicable for those categories, type of supply, demand and the applicable tariff structures and rates as per the regulations.	Both	K							
11.4.10	Maintain History of Tariffs	The system should be able to maintain & configure the history of the previous tariffs, Which should further be available for back billing	Both	K							
11.4.11	Bill Calculation - other dues	The system should calculate other dues for the customer (e.g. late payment charge, electricity duty surcharge, assessed amount, processing charges, loans etc.) and add them to the regular bill amount.	Both	B							
11.4.12	Bill Calculation - past dues	If there are past dues, the system should calculate both the past dues and the fines on past dues as applicable. The system should allow flexibility to define and modify the logic for fine/penalty calculation for different types of arrears as per the prevailing norms.	Both	B							
11.4.13	Bill Adjustments	The system should be able to make modifications in the previous billed values (till a specified period) and adjust it to the current bill for special cases specified by the user.	Both	B							
11.4.14	Bill Calculation - past dues Settlement	System should be able to allow / enforce various compounding / procedure for certain rebates based on pre-defined conditions and rules for a certain period. The authority for such scheme should also be definable.	Both	D							

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11.4.15	Bill Calculation - prepayment credits	If there is a credit on account of prepayment, the system should adjust the credit against the amount payable for the month and generate a zero or a negative bill.	Both	B							
11.4.16	Bill Calculation - manual modification of billing logic	It should be possible to manually modify the billing logic on a case-by-case basis, with alerts and within specified limits. The authority of changing the billing logic should be available on a Corporate HQ level with permissions from the AGM/DGM/AEE defined by the user.	Both	K							
11.4.17	Updating of special payment conditions	Ability to recognize any special conditions granted in the collection module (e.g.: grace periods, part payments, etc.)	Both	B							
11.4.18	Calculation of incentive and its billing	The system should be able to calculate the rebate / penalty based on various norms applicable from time to time and should be billed along with regular bill / or separate bill should be generated as per defined rule.	Both	B							
11.4.19		The system should be able to facilitate configuring incentive billing and collection rules.	Both	B							
11.4.20		The system should maintain multiple incentive types and logics defined by user.	Both	B							
11.4.21	Calculation of interest on security deposits and advance payments	The system should be able to calculate the interest on the security deposit/advance payment available. Where applicable the TDS (Tax Deducted at Source), WHT should be calculated on the interest and deducted.	Both	B							
11.4.22	Adjust Interest in Bills	The system should be able to adjust the interest to be paid to the consumer in their energy bills, at defined intervals (Monthly/Quarterly/ Half yearly/ Yearly)	Both	B							
11.4.23		The system should be able to remove any interest, other extra charges with approvals defined by the user.	Both	B							
11.4.24	Vigilance	All exceptions/manual overrides should be reported & escalated to higher authority separately in a pre-defined format by the user.	Both	K							

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11.4.25	Normal Billing	The system should be capable of generating bills under the normal billing cycle for all the customers whose metering data has been entered in the system.	Both	K							
11.4.26		The system should also generate the final bill for customers after permanent disconnection or period expiry (in case of temporary connection)	Both	B							
11.4.27	Security Deposit	The system should have checks in place so that it checks the security deposit of the consumer against the actual required in a periodic manner as defined by user.	Both	B							
11.4.28		Depending on the position of security deposit the system should be able to raise the amount required as additional security deposits. This should be included in the bills as required.	Both	B							
11.4.29	Common/group billing	The system should allow for generation of common/group bill for a set of customers as defined by users.	Both	B							
11.4.30		The system should allow to configure group rules.	Both	B							
11.4.31		The system should also have provision for generation of bill of multiple premises on a single bill for a same customer, if the customer has opted for the same.	Both	B							
11.4.32	Payments for group billing	Ability to fetch information from the collection module & update each account from a single payment for a group bill.	Both	K							
11.4.33		The system should recognize all accounts incorporated with the group bill and payments, arrears, etc. for each of those accounts separately.	Both	B							
11.4.34	Linking of bills	System should be able to generate consolidated bill for many connections in the name of same consumer (with some restriction of linking).	Both	D							
11.4.35		The system should be able to link net plus account with the normal consumer accounts.	Both	K							
11.4.36	Dishonored cheque billing	Automatic billing of arrears along with surcharge etc. in case of dishonored cheques and setting the flag to disallow	Both	B							

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		the cheque in future for a period defined by the user.									
11.4.37	Additional charges billing	Automatic billing of processing charge (disconnection, reconnection), meter replacement, duplicate bill issue etc. should be done based on the relevant transactions defined by the user.	Both	B							
11.4.38	Feeder wise billing	The system should be able to re-organize the consumer batches to bill the customers feeder wise (e-address).	Both	D							
11.4.39	Transformer wise meter reading	System should be able to generate the distribution transformer wise/feeder wise meter reading records as per requirement (containing the details of meter, last reading, area & consumer details)	Both	D							
11.4.40	Viewing the details	The system should have interface to integrate with web site (CRM) to facilitate consumer to view his own billing details e.g.: last 12 months billing details, reading details, security deposit details, payment details, complaint status, checking, meter replacement details etc.	Both	B							
11.4.41	Meter data validation	The system shall be capable of identifying meter tampering data/abnormalities as per CEB defined criteria and generate flags for operator intimation and further investigation.	Both	B							
11.4.42		The system shall also incorporate multiple meter changes in a single billing cycle, properly accounting old meter final consumption based on final reading.	Both	B							
11.4.43	Meter reading estimation	The billing system shall be capable of identifying faulty meters and preparation of bills considering a defined algorithm for estimation of consumption during such periods of meter faults. The bills shall indicate the estimated consumption separately.	Both	B							
11.4.44	Bar code/QR code generation	The system should be capable of automatic generation of bar code/QR code and printing on the consumer's bill & link with CRM.	Both	B							

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11.4.45	Billing logic download	System should be capable to download the billing logic to mobile app to facilitate spot billing at consumer premises using mobile app as and when required.	Both	B							
11.4.46	Special bills -Self Generation	The system should facilitate to configure special bills - self generation as defined by the user. It should ensure to identify meter details, tariffs, payments, etc. for self-generation accounts as defined by the user.	Both	B							
11.4.47	Special bills -Net metering, Net accounting, Net plus (refer CEB web)	The system should facilitate to distinguish Net metering, Net accounting, Net plus customers and to calculate their bills based on a logic & input as defined by the user.	Both	K							
11.4.48		The system should identify energy import & export for each customer & calculate the net bill/consumer payments as defined by the user.	Both	B							
11.4.49		For net metering customers the system should provide energy units brought forward from the previous month for the bill calculation.	Both	B							
11.4.50	Bills Processing - Batch/ Individual	The system should have the capability to generate the bills either in batches or individually in real time.	Both	K							
11.4.51	Bills Processing - periodicity	The system should have the ability to change the periodicity of bill generation for special customers as defined by users.	Both	B							
11.4.52	Billing Cycle/group Flexibility	The system will have the capability to change billing cycle/group of a customer/s. The changes would include - shifting to another cycle and increasing or decreasing the frequency of billing.	Both	B							
11.4.53	Batch Printing of Bills	The system will provide the flexibility to print bills at any location. The possible locations could be - centrally/ distributed - in respective Province, area office, etc.	Both	B							
11.4.54	Use of preprinted stationary	The system must be able to print the bills either on pre-printed stationary or plain paper in Sinhala/English/Tamil language as per directions of CEB.	Both	B							

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11.4.55	Printing messages	The system should provide means to include some messages as part of the bill	Both	K							
11.4.56	Date of Bill printing	The date at which the bill is generated should be printed in the bill	Both	K							
11.4.57	Separate bill formats	The system should be able to handle separate bill formats for Ordinary and Bulk customers	Both	B							
11.4.58	Dispatch of bills electronically	The system should have the flexibility of dispatching bills in the electronic form with the provision of a receipt confirmation via SMS, email etc. (CRM)	Both	B							
11.4.59	Bill Revision	The system will allow the bill amount to be modified by the designate authorities through their login ids only. All such changes along with the corresponding login ids will be tracked by the system.	Both	K							
11.4.60	Report on bill revisions made	The system should be able to generate the list of customers for which bill revision happened in the cycle. This list should be accessible to higher authority.	Both	B							
11.4.61	Revision report above a certain bill value	The system should have the provision to generate only the list of customers whose bills were revised which is more than a specified bill amount. The user should be able to specify this value.	Both	B							
11.4.62	Bill Revision - Mandatory Reason Code	The system will have a list of all permissible reasons for revision of bill. The list will be compiled based upon the CEB guidelines which can be modified from time to time.	Both	B							
11.4.63	Bill reversal	Once a bill is revised the system should be able to generate a new bill and post a bill reversal in the system equivalent to the disputed bill amount	Both	B							
11.4.64	Maintain log of bill revisions	The system should maintain a log of all the bill revisions made along with the reasons.	Both	K							
11.4.65	Due date calculation	The system should be able to calculate the due date and disconnection date depending on the meter reading entry date (link with CRM)	Both	B							

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114.66	Warning letter generation, disconnection list generation and disconnection notice generation electronically	The system should allow generation of warning letters, disconnection list and disconnection notice.	Both	K							
11.4.67	Generate minimum bill	Ability to generate fixed charged bill even in the case of no consumption/disconnected accounts, etc.	Both	K							
11.4.68	Suspension of bills	The system should have the provision of suspending the generation of bills and taking the arrears as bad debts, after a CEB specified period of time after disconnection.	Both	B							
11.4.69	Report on bill suspensions	The system should be able to generate the list of suspended customers. This list should be accessible to higher authority.	Both	B							
11.4.70	Generate the Final Bill	The system should be able to generate the final bill or the settlement bill based on the logic define by CEB to the consumer at the time of finalization of account.	Both	B							
11.4.71	Adjust Deposits in final bill	While generating the final bill, the system should be able to adjust the available consumer deposits in the final bill.	Both	B							
11.4.72	Restricting SD withdrawal	Checks should be in place so that withdrawal of security deposit can happen only once in the entire lifecycle of a consumer.	Both	B							
11.4.73	Handle multi tariff situation	The system should be able to handle multi-tariff billing where the tariffs change in between the billing cycle.	Both	K							
11.4.74	Assessment Billing - New connection	The system should be able to generate bills in assessment, based on the number of days from date of release of supply to the billing or as defined by the customer.	Both	B							
11.4.75	Pro rata billing - changes	The system should be able to generate bills in pro rata, based on the duration in case of category changes, tariff changes, load changes, phase changes etc.	Both	K							

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					STDD	WA	MOD	TTP	NA		
11.4.76	Time of use (TOU) Billing	The system should be able to handle bills based on the time of use tariffs.	Both	K							
11.4.77	Year-end Bill	The system should be able to generate a consolidated year end bill which shows the consumption pattern of the consumer (link with CRM).	Both	D							
11.4.78	Handle back billing	The system should be able to print bills of the previous billing cycles.	Both	K							
11.4.79	Billing simulation	The system should be able to generate bill simulations of various tariff scenarios possible.	Both	D							
11.4.80	Exception handling	The system should be able to segregate bills which have some exceptions like unusually high/low value, etc. so that the readings can be validated before actual printing.	Both	B							
11.4.81	Interim bill	The system should be able to handle interim billing (based on readings taken in between the normal billing cycle).	Both	K							
11.4.82	Interfacing with manual billing	The system should have the flexibility of capturing inputs manually to update the customer database on bills that have been manually generated, with a reason for the same. Such updates should be limited to specific logins.	Both	B							
11.4.83	Bill on demand	The system should be capable of generating bills on demand by the customers.	Both	B							
11.4.84		The system should have the provision of generating duplicate bills on demand from customer - and have the provision for accepting payment details for the same.	Both	B							
11.4.85		The system shall have provision to print duplicate bill of any past bill up to X years (applicable after the software is rolled out)	Both	B							
11.4.86	Interfacing with special drives	If there is some special scheme for payments (e.g. Installments), then the system will generate the bills taking into account the special scheme provisions.	Both	D							
11.4.87		The system should have codes for all the schemes to track the usage.	Both	D							

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					STDD	WA	MOD	TTP	NA		
11.4.88	Options for level payments	System should have options for level payments where in the customer can pay a fixed amount per month.	Both	D							
11.4.89	Penal Billing for unauthorized use of electricity	System should have provision to compute penal billing for unauthorized use of electricity, as per Sri Lankan Electricity regulations a) Assessment based on sanctioned load, connected load, MDI (Maximum Demand Indicator) b) Assessment based on error in meter accuracy due to tampering c) Penal tariff for theft and misuse etc. (added to the bill & linkage with the vigilance module)	Both	B							
11.4.90	Linking consumer to appropriate tariff	The system should link the customer to the rate applicable to his category. The rate applicable is calculated on the basis of fixed charges, consumed energy, capacity (power consumption limit), taxes applicable, subsidy or support from the government, etc.	Both	K							
11.4.91		System shall also have provision to account for retrospective changes in tariff /discount/subsidy announced by Govt. with effect from back date.	Both	B							
11.4.92		In case of subsidized customer, the system should calculate amount of subsidy payable against each bill and if CEB want the subsidy amount can be printed on the bill for information of customer.	Both	B							
11.4.93	Management of Security Deposit (SD)	The system should have provision of Managing Security Deposit (SD) like: I.) Auto-debit of incremental SD in bill(s), e.g., in case of load enhancement ii.) Refund of SD by adjustment in final Bill iii.) Interest payout on SD through auto-credit in bills or lump sum payout separately iv.) Adjustment of SD in prepaid charges for any consumer shifting from post-paid to prepaid regime	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.4.94	Estimate/Assess billing	After the metering data is validated in the system, it should be capable to generate bill under the normal billing cycle. In case of meter data is not available, the system should generate assessed bill based on the past consumption pattern of the customer.	Both	B							
11.4.95		The system should allow to generate defined Assessed Bill for theft/enforcement cases.	Both	B							
11.4.96		The system should also provide for change in the estimation logic that may happen from time to time. The system should incorporate the estimate for consumption from the metering module.	Both	B							
11.4.97	Reasons for estimate billing	The system will have a list of all standard reasons for estimate billing. The list will be compiled based upon the guidelines, which may change from time to time.	Both	B							
11.4.98		The system should be capable of generating bills for all instances of exceptional readings (temporary connections, voluntary termination, forced termination etc.)	Both	B							
11.4.99		The system will allow the bill amount to be modified by the designate authorities through their login ids only. All such changes along with the corresponding login ids will be tracked by the system.	Both	B							
11.4.100	Special Billing	For special bills like, self-generation, temporary connections, etc. the system should calculate bills as per the guidelines given by CEB. Also, there would be codes for all the schemes so that the system can track their details.	Both	K							
11.4.101		There would be codes for all the schemes (self generation, temporary connections etc.) so that the system can track their details (usage).	Both	B							
11.4.102		The system will keep a record, as to who authorized the scheme and capture the details of the scheme.	Both	D							

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					STDD	WA	MOD	TTP	NA		
11.4.103	Electronic dispatch of bill/ availability of bills on internet portal of CEB	The system should be capable to dispatch the generated bill electronically to customer/payment portals to which customer is registered if desired by customer. (Link with CRM).	Both	K							
11.4.104		The bill in actual format must also be available on CEB's internet portal for customers (Link with CRM).	Both	K							
11.4.105		The system must be able to inform customer regarding new bill along with due date & amount via SMS automatically (Link with CRM).	Both	K							
11.4.106		The system should allow generation of reminder letters/SMS/email at predefined intervals before the due date - over the web/mobile phones/paper formats (Link with CRM).	Both	D							
11.4.107	Billing for temporary connections	The system should have the provision of preparation of Temporary Connection Energy Bill, with CEB defined Category and Charges. Provision for - * Final Bill Proportion * Fixed amount calculation (In case of first bill) * Amount Shifted to next bill (if next bill is prepared in same month) * Debit/Credit Adjustment (Unit or Amount)	Both	K							
11.4.108		The system should have provision for automatic job creation for disconnection and final billing of temporary connections one day prior to the expiry of the duration for which the temporary connection was granted (Link with CRM).	Both	B							
11.4.109		The system should also have option to extend such temporary connections based on CEB defined authorization.	Both	B							
11.4.110	Last bill generation	In case a customer requests for termination of connection, the system should accept the terminating meter reading (which will be out of cycle in most cases) for generating the last bill.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.4.111	Provision for holding bill printing till checked	System should have the provision of not allowing to print any bill of a cycle unless cleared by the system.	Both	B							
11.4.112		System should have post billing filters to out sort abnormal bills based on logic, so that such bills are not printed/sent to consumer by any mode.	Both	K							
11.4.113	Bill distribution walk order generation	The system should have provision to generate optimal bill distributor walk order based on bill distribution jobs & based on pre-defined logic specified by CEB (e.g.: avoid any e-bill subscriber, etc.) in a given area in a given cycle.	Both	B							
11.4.114	Enforcement and Legal Module : Logging of leads	System shall have provision to log leads of theft & misuse by: -Creating automatic leads based on consumption analysis and tamper analysis -Accepting lead through mail, website, phone calls, call center or any other mode (Link with CRM) -Check for consumption analysis and tamper analysis of previously faulted customers.	Both	D							
11.4.115	Enforcement and Legal Module : Lead processing	The system shall have provision of lead processing - workflow and life cycle tracking for : - Assessment billing - Public Hearing and bill revision - Payment and Settlement - Escalation & Legal proceedings - Recovery of installments - Case closure & follow up	Both	B							
11.4.116	Downloading of data in spot billing system	The Spot Billing system shall enable meter reading activities by transferring relevant consumer information data base from Billing system, like service numbers, address, area code, meter number, phase, load, old meter reading, old status, category, arrears if any etc.	Both	B							

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11.4.117	Uploading of data in spot billing system	At the end of data collection and billing operation in the field for each customer, the information recorded in the spot billing machine should be uploaded into the base billing system for updating master database in the system (service number, present meter reading, present status of the meter, billed date and time, units consumed, average units, billed amount, due date, disconnection date etc.)	Both	B							
11.4.118	In case of Network is not available in mobile	The system should be able to generate bills based on the information already downloaded in the mobile device. The bill information will be uploaded in to the base billing server as soon as the network in the mobile device established. The bill to be printed with a special note.	Both	K							
11.4.119	Billing logic in spot billing system	The Spot Billing software to be resident in the mobile app shall be based on the existing billing logic and algorithms in base billing server of the CEB.	Both	K							
11.4.120	Tariff revision cases	The mobile app should be able to calculate the tariff rates accordingly with the previous and present rates during the billing cycle, so as to issue the on date calculated demand to customers under tariff revision period including number of days, slab rates etc.	Both	B							
11.4.121	No meter reading case	The mobile app should prompt for entry of present meter reading. If meter reading is skipped, average/units consumed for previous months from the master shall be calculated/retrieved and average units for billing shall be displayed.	Both	B							
11.4.122	Printing of information slip	In case of no bill is printed the mobile device should be able to print an information slip which is defined by CEB (link with CRM).	Both	B							
11.4.123	Entry of meter status	The mobile app should prompt for entry of meter status and display of calculated units/Avg. Units (Avg. units is to be retrieved from the master data) depending upon the meter status.	Both	K							

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					STDD	WA	MOD	TTP	NA		
11.4.124	Billing with charges/adjustments	The mobile app shall prompt for any other adjustments/charges depending on the category of the customer as defined by CEB.	Both	B							
11.4.125		Net bill is to be calculated after adjustment of above charges and should be displayed and prompt for printout shall be given.	Both	B							
11.4.126	Error checking	The system should facilitate to update & maintain pre-defined list and guidelines of error identification related to billing.	Both	K							
11.4.127	Validation of meter reading data	Field validation for meter reading shall be ensured if the readings are beyond a predefined range and software will have provisions to enter remarks in such cases of abnormality.	Both	B							
11.4.128	Printing of day end summary report	Spot Billing system would print the day end summary report with mobile app serial number (consumer file downloaded to the unit, total number of services, services billed, unbilled, total amount etc.)	Both	B							
11.4.129	Password protection	The mobile app shall have two levels of Password Protection - Supervisory level for functions of upload, download, time setting and other supervisory functions and Meter Reader level for starting and closing the meter reading and updating location/consumer details.	Both	B							
11.4.130	Event logging	All events should be recorded in the event file in mobile app.	Both	K							
11.4.131		The event details should be downloadable for analysis.	Both	B							
11.4.132	Menu driven modular format	The spot billing software shall be user friendly, menu driven, structured and modular format for flexibility (Easy changes / Up gradation etc.)	Both	B							
11.4.133	Time stamping of logged data	Data Logging in the spot billing machine shall be date and time stamped with the system time.	Both	K							
11.4.134	Provision for enhancing the functionality	There should be a provision for enhancing the functionality of the software by adding additional features.	Both	K							
11.4.135	Time setting of mobile app	The mobile app shall have the facility to get its time set from Billing system only	Both	B							

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					STDD	WA	MOD	TTP	NA		
		with proper security and password authentication.									
11.4.136	Calculation parameters	The calculation process must have a minimum parameterizing level that allows the users to change their behavior without changing the software.	Both	B							
11.4.137		Also, the system should be able to create simulation of billing based on parameters being applied.	Both	D							
11.4.138		The billing calculation must be carried out through the definition of amount parameters, according to the existing tariff system.	Both	B							
11.4.139	Information in the database	The system must have information in its base billing system on each and every billing (simulated, real and cancelled) in such a way that they can be visualized and printed at any time.	Both	B							
11.4.140	Records of advances	It must enable to accept the payment that was done in advance in order to include it in the bill as agreed with users belonging to places of difficult access. Afterwards, once the readings have been fulfilled, the modifications that are necessary to be carried out in the bill must be performed (prepayment).	Both	D							
11.4.141	Centralized billing	The system should provide a centralized solution for every transaction irrespective of the types of bills, payments & etc. (normal meter reading, assessed billing, bill revision, etc.)	Both	K							
11.4.142		The system should ensure that there will not be any decentralized transactions/records/processes corresponding to metering, billing, payments etc.	Both	K							
11.4.143	Communication with third parties regarding customer bill	The system should have a provision to produce hard copy with magnetic support or any other adequate formats in order to transfer by electronic data exchange (banks, for instance), etc.	Both	B							
11.4.144	Cancellation of bill	The system should allow the cancellation of a bill in case it is required for pre-defined reasons by CEB with proper approval & escalation.	Both	B							

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11.4.145	Payment accounting for bills	The system should be able to record payments received against each bill no.	Both	D							
11.4.146	Re-billing	The system should allow re-billing (to bill again) based on estimated data or fixed consumptions, real data that comes from a work order and data provided by the user.	Both	B							
11.4.147	Adding outstanding debt	The system should provide any outstanding debt for a given time period.	Both	B							
11.4.148		The system should provide the breakdown of any cumulative arrears for a given time period (e.g.: by comparing each months' bill payment against the bill value).	Both	B							
11.4.149	Display records	The system must be able to display customer's records.	Both	K							
11.4.150	Real time update	The system must update online and on real time, the current account of each customer, according to the billing processes defined by the user.	Both	K							
11.4.151	Bulk real time update	The system must update on real time, the current account of each customer, according to the billing processes defined by the user in case of bulk data uploaded from any source to the central billing system (e.g.: uploading thousands of consumer payment data from a third party server at end of the day)	Both	K							
11.4.152	Billing for street/public lighting	The system should allow the billing of every consumption of public lighting and its related demand as defined by the user.	Both	B							
11.4.153	Report generation	The system must be able to produce reports, statistics and indicators of reading, billing processes, payment collection based on: time, errors, anomalies, etc. as defined by user. Such reports can be exported, published or sent by different means.	Both	B							
11.4.154	MIS reports	The system should be able to provide user defined MIS & other reports which are configurable for management & accounting purposes.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.4.155	Forecasting & Analyzing	The system should able to provide configurable tools for forecasting and analyzing any data related to meter reading, billing & collection as defined by the user.	Both	B							
11.4.156	Updating of financial information	The system must ensure that the financial information (GL accounting, budget and costs) is permanently updated in an automatic and natural way, or through interfaces, with the incoming data from the system.	Both	B							
11.5	**Meter Reading**										
11.5.1	Meter reading plan	The system should have the capability to generate & update a meter reading plan using below, (1) Meter readers available (2) The batches and groups as defined by user (3) As per route map, plan should be generated by the AREA.	O	K							
11.5.2		The system should have the capability to generate separate plans for City and Rural divisions as the meter reading frequency is different for rural and urban areas (As per billing schedule) as defined by the user.	O	B							
11.5.3		The system should also have the facility for the AREA to define algorithms to optimize the walk order and schedule of meter readers. Rotation of meter-readers should be a key configurable parameter of the system	O	B							
11.5.4		The system should provide a unique identification number/name for each meter reading walk order as defined by user.	O	B							
11.5.5		Each route should be assigned to a default meter reader and there can be provision of assigning the routes/walk order to the meter readers randomly by the AEE.	O	B							
11.5.6		The system should be able to reschedule/edit the route, e.g. to add/move a customer(s) premises at the beginning, end or anywhere in between.	O	K							

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11.5.7		During generation of the subsequent meter-reading itinerary, the system should take into account the exceptions recording in the previous itinerary. E.g. door-lock for previous visit should be a key input during the subsequent visits by the meter-reader.	O	B							
11.5.8	Encrypted reading via MRI & AMI	The system should be capable of interfacing with MRI (Meter Reading Instrument) & AMI (Automated Metering Infrastructure) encrypted data for uploading meter readings.	Both	B							
11.5.9		To ensure compatibility with different kinds of MRI & AMI, the vendor would need to define a common protocol for uploading and analysis of MRI & AMI data.	Both	B							
11.5.10	Communication	The system will support data downloading to and uploading from mobile devices used for Spot metering & billing. The mobile app would provide information about the meter number, customer account number, meter reader's employee code, meter reading, billing amount, walk order etc.	O	B							
11.5.11		To ensure compatibility with different types of mobile device, the vendor would need to define a common protocol for uploading / downloading / analysis of Spot-Billing data.	Both	K							
11.5.12		The system should be able to interface with any AMI systems.	Both	B							
11.5.13		The system should be able to fetch all technical data from the meter through MRI or AMI systems (such as VAR, kVA, harmonics, power factor, etc.)	Both	B							
11.5.14		To ensure compatibility with different types of AMI systems and medium types (Radio, GSM, CDMA, etc.), the vendor would need to define a common protocol for uploading / downloading/analysis of AMI data.	Both	K							
11.5.15		The system should be able to interface with remote meter reading for bulk customers where the meter readings can be recorded daily and hence provide the	B	D							

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					STDD	WA	MOD	TTP	NA		
		flexibility of billing the customer daily if necessary.									
11.5.16	Data entry validation	Necessary validations should be built into the interface to ensure minimal data-entry errors from the mobile app. A trace-log should also be maintained to keep a record of the user who had entered particular records.	O	K							
11.5.17	Voluntarily meter reading	The system should also have the facility to enter the voluntarily meter reading as informed by the customer through CRM (validated by a photo) defined by CEB.	O	D							
11.5.18		Such readings should be flagged with a special status and prior electronic approval be obtained from the CE/AEE before data-entry. Suitable logs should be maintained along with reason, mode, time of customer intimation	O	D							
11.5.19	Account transfers	The system should be able to facilitate transfer of customer accounts from one area/division to another (link with CRM).	Both	K							
11.5.20	Relocating customers	The system should facilitate to relocate customers within the area or among areas by updating consumer and other relevant details defined by the user (link with CRM).	Both	K							
11.5.21	Meter data archiving	The system should keep past metering data online for a period specified by the CEB. The minimum time-period to be defined by CEB.	Both	B							
11.5.22	Capturing data from MDMS	The system should be able capture actual meter readings from the MDMS in case monthly readings could not be taken. Such readings should require the electronic approval of the CE/AEE.	Both	D							
11.5.23	Meter reading assessment	The system should also have the facility for the user to choose from algorithms defined by CEB in situations where readings could not be taken. These algorithms should be pre-defined suitable justification needs to be provided for choosing a particular scenario from the system.	Both	K							

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11.5.24		The system should be able to track the details of the person who has done the manual assessment of the consumption for connections in case of defective meters	Both	B							
11.5.25		In case a meter reading becomes overdue/missing, the system would generate the necessary alert. Such alert would be issued to the responsible authority.	Both	K							
11.5.26	Flagging of abnormal consumption	The system should provide the user to choose from pre-defined targeting tools/algorithms (comparison of input versus expected consumption, variance in consumption etc.) to categories cases as 'exceptions' as well as define the different forms of 'exceptions'.	Both	D							
11.5.27	Meter reading journal/correction	The system should provide the facility for designated officials to review the metering data. In case any discrepancy is found, the system will allow the data to be corrected, with proper access rights, audit trails and authority levels.	Both	B							
11.5.28	Temporary connection reading	The System should be capable of accepting opening, closing and intermediate meter readings for temporary connections for generation of bills for such connection.	Both	B							
11.5.29	Performance monitoring	After resolution of the meter reading exceptions, the system should be updated with the results (and the personnel responsible for it) of exception handling.	Both	B							
11.5.30		The system should track the exceptions, for each meter reader to establish performance measures and determine deviations if any (link to HR module).	Both	B							
11.5.31		At any point of time, the system should be able to keep track of the diaries/spot billing equipment each of the reader is using/used.	O	B							
11.5.32		The system should be able to provide details of how many readings each reader has taken. In case of outsourced meter reading this should be linked to the payment module.	O	B							

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11.5.33	Trend analysis	The system should be able to track customer behavior in terms of exceptions. For example: The number of times a customer figures in the list of exceptions.	Both	B							
11.5.34		The system should be able to track the customer usage and see if there are any fixed patterns or major deviations.	Both	B							
11.5.35	Inspection	The system should be able to generate some consumer numbers in random for inspection by the CE/EE. Full audit trail for these consumers (with respect to meter readings) should be available to the CE/EE for review prior to the inspection visit.	Both	D							
11.5.36	Meter testing	The system should be able to capture all the information related to the Meter testing. This includes all the information of the readings taken before and after test.	Both	K							
11.5.37	Tariff adjustments	The system should be able to capture multiple readings, one reading on the date of change of tariff and the regular reading once the tariff has changed, to calculate all the charges based on different tariffs (currently this is applicable to bulk consumers).	Both	B							
11.5.38	Demand Side Management	The system should capture the readings of all other meters used in the premises of customers. The history of these readings should also be maintained. E.g.: sub metering done in electrical loads.	Both	D							
11.5.39	TOU	The system should be able to capture the TOU reading from MRI download as well as through manual entry.	Both	K							
11.5.40	Peak demand	The system should be able to record the peak load of consumers and use it for calculating demand charges.	Both	K							
11.5.41	Meter changes	The system should be able to capture the meter changes and the final readings of old meter and initial reading of the new meter recorded.	Both	K							

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11.5.42	Meter accuracy validation	Ability to check meters are installed outside consumer's premises (in addition to the billing meter) the system should be able to map such meters to consumers and accept the readings for check meters to compare the consumption with billing meters. Also generate the report for billing and check meters.	Both	B							
11.5.43	Bill revision	Once the bill is generated the meter reading should be locked and should not be modifiable from meter reading module. If any changes required it should be allowed from billing module.	O	K							
11.5.44	Second attempt for spot billing	The system should allow to add/print a second attempt bill for special cases defined by CEB (e.g.: issuing a second bill for a gate locked house within the same day).	O	K							
11.5.45	Customer details	The system should be able to capture meter details, sealing details, replacement details, testing details, results validation and revision of billing through billing module.	Both	K							
11.5.46	Special bills -Net metering, Net accounting, Net plus (refer CEB web)	The system should facilitate to provide a different interface for the meter reading of Net metering, Net accounting, Net plus etc. customers.	Both	B							
11.5.47		The system should provide to enter energy import & export from single meter for Net metering & Net accounting customers.	Both	B							
11.5.48		The system should allow to distinguish net plus customer and enter meter reading in a different interface for purchasing of energy under net plus account number.	Both	B							
11.5.49	Manual uploading of encrypted meter data	The vendor/bidder needs to study all the existing bulk meter at CEB (to be provided by CEB) and provide solution for uploading the encrypted data from the meter to the billing system. This is required for an interim period till all the meters are changed to compatible meters.	B	K							

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					STDD	WA	MOD	TTP	NA		
11.6	**Energy Management**										
11.6.1	**New Meter Installation/New Connection**										
11.6.1.1	Selecting the meter type	Ability to select the meter type automatically as per user defined customer category and contract demand.	Both	K							
11.6.1.2	New Meter Installation	Ability to triggered the new meter installation job through **CRM** to relevant Dept.	Both	K							
11.6.1.3	Capture & maintain documents	The system should be able to capture and maintain the details of the various documents submitted in support for the connection.	Both	B							
11.6.1.4		The system should be able to capture and maintain the documents scanned copy in the database including form (for future verification purposes specially the signature of applicant).	Both	B							
11.6.1.5	Highlight missing documents	The system should be able to highlight if any of the essential document is missing or if no of copies submitted is less than what is required.	Both	B							
11.6.1.6		The system should hold/continue the registration process depending on the criticality of the missing document.	Both	B							
11.6.1.7	Mandatory & Non mandatory fields for customer details	The system should offer the flexibility of indicating mandatory and non-mandatory fields for customer details. It should not accept forms where the mandatory fields are left empty.	Both	B							
11.6.1.8	Application form details	The system should be capable of capturing all the details of the customer from the Application form.	Both	K							
11.6.1.9		The system should accept the customer details and then check the applicant's particulars against the set of existing customers and rejected applications. In case of a match in records an exception should be raised. This exception should be flagged off to the relevant approving authority.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.6.1.10	Accepting the application form	The system should be able to accept the form over the internet/email/mobile devices and request the customer to make a payment through online or at one of the collection centers before a specified date.	Both	B							
11.6.1.11	Registration fee details	The system should be able to record the registration fee payment details - Online, Cash, Cheque, Bank Draft, etc.	Both	B							
11.6.1.12	Unique registration number	The system should generate a unique registration number based on which all the further correspondence should be done based on this number till the service connection is released.	Both	K							
11.6.1.13	Service connection	Every step or process handled till the service connection is released should be associated with an expected service/processing time (in terms of days).	Both	B							
11.6.1.14	Work flow for new connection process	The system should have a configurable work flow for the new connection process, where the steps, time lines and authority can be captured.	Both	B							
11.6.1.15	Escalation of Pending New connection requests	The system should be able to escalate the pending new connection requests to higher authorities after a specified period of time.	Both	B							
11.6.1.16	Payments from customers	The system should record all the payments made by the customer, at different stages of release of the new service connection. This payment includes deposits, extension charges, supervision charges etc.	Both	K							
11.6.1.17	Generate alerts	The system should be able to generate the report/alert for the existing connection in the same premises and also the pending arrears against the same name/at same premises by validating the documents.	Both	B							
11.6.1.18		Ability to send the alert messages through mobile/system automatically to higher approving authority / relevant officials.	Both	B							
11.6.1.19	Assess loads	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.	Both	D							

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11.6.1.20	Provision for completed process	The system should have a provision after completion each process, alert messages send to the other process owner to happen soon after it is completed.	Both	B							
11.6.1.21	Provision for holding application	The system should have the provision for holding the application at any of the stages, when the information has no clarity or availability.	Both	B							
11.6.1.22	Validation of the load	During the verification process, the system shall also validate the current load on the relevant transformer, whether additional capacity is available, whether Existing LT network is available for providing the connection to the applicant, etc.	Both	K							
11.6.1.23	Capturing Bulk connection details	The system should be capable of capturing all the details required for HT connection from the HT application form.	Both	K							
11.6.1.24	Meter & Metering circuit	Ability to create meter and metering circuit in the system (If HT Meter then create CT & PT and Meter in the system or if LT-CT Meter then create CT and meter in the system and if direct meter then only create meter in the system.)	Both	K							
11.6.1.25	Calculations	Ability to calculate automatically the Multiplying factor based on the pre-defined formula.	Both	K							
11.6.1.26	Draft estimates	Ability to create draft estimate for new service accordingly.	Both	B							
11.6.1.27	Edit with approval	Ability to edit with proper approval and audit trail.	Both	B							
11.6.1.28	Tagging the customer	Ability to tag the customer account number with meter and metering circuit.	Both	K							
11.6.1.29	New power connection	Ability to break the entire New Power Connection into packages with a timeline for regular monitoring and linked with the KPI of the individuals.	Both	B							
11.6.1.30		The recommended and approved New Power Connection should be made in seamless integration with financial Budget function.	Both	K							
11.6.1.31		Ability to create new power connection as a master job number and for each activity create sub job number.	Both	K							

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11.6.1.32	Annual plan	Ability to provide facility to update the annual plan for the division/ department.	Both	B							
11.6.1.33	Review history	The system should have the ability to review the history of a specific item or equipment and/or on a particular manufacturer.	Both	K							
11.6.1.34	Warranty	Ability to record the warranty duration, the warranty period end date, the warranty number, and any warranty notes. The system should have the facility to flag asset under warranty.	Both	B							
11.6.1.35	Job number	The system should have the ability to create a job number with the estimation of the job duration, resource requirements, material requirements, and contractor requirements and allocate a work priority and mode of request.	Both	B							
11.6.1.36	Issue of an emergency job number	Ability to issue an emergency job number that does not require approval. An audit trail should record the user who authorized the job number.	Both	K							
11.6.1.37	Infrastructure details	Ability to capture the total infrastructure details.	Both	K							
11.6.1.38	Initial reading	Ability to capture the initial reading of the meter and update in the **BILLING SYSTEM**	Both	K							
11.6.1.39	Duplication of job request	Ability to avoid duplicating job request and job. The status of job request should also be maintained.	Both	B							
11.6.1.40	Predefined job criteria	Ability to suggest, the job to be carried out by Internal CEB Staff or External Contractor based on predefined criteria.	Both	D							
11.6.1.41	Approval of budgets	Ability to support approvals of budgets, plans and work requests through mobile/system. The approval hierarchy shall be based on CEB's hierarchy.	Both	B							
11.6.1.42	Inspection report	Ability to capture inspection report accordingly estimate should be generated.	Both	K							
11.6.1.43	PIV generation	Ability to generate the PIV automatically against the customer account number.	Both	K							

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11.6.1.44	Guarantor	Ability to capture Name of the guarantor, who will pay the bill in case the customer is not paying. Guarantor's Customer account number will be tagged automatically with the temporary customer at the time of application entry, in case if the customer does not pay the bill, the due amount will be added to the bill of the guarantor after schedule time frame as designed. It will be an automated process in billing system.	Both	B							
11.6.1.45	Eligible customers for loans	Ability to suggest the eligible customer as per the pre-defined loan criteria.	Both	B							
11.6.1.46	Security deposit	Ability to calculate the security deposit based on the user defined logic.	Both	B							
11.6.1.47	Repayment period	Ability to capture the repayment period completed total loan amount recovered, then loan details shall not be shown in the bill.	Both	B							
11.6.2	**Meter Replacement**										
11.6.2.1	New meter installation	Ability to triggered the new meter installation to replace existing meter job through **CRM** to relevant Dept.	Both	K							
11.6.2.2	Predefined unique job number	Ability to automatically generate predefined unique Job number comprising of customer account number, meter type and date etc.	Both	K							
11.6.2.3		The system should have the ability to create a job number by estimating the job duration, resource requirements, material requirements, and contractor requirements and allocate a work priority and mode of request.	Both	B							
11.6.2.4		Ability to issue job numbers to work staffs/individuals. This can be done using work flow and/or hard copy.	Both	B							
11.6.2.5	Emergency job number	Ability to issue an emergency job number that does not require approval. An audit trail should record the user who authorized the job number.	Both	B							
11.6.2.6	Meter type	Ability to decide the meter type based on the load contract demand and category.	Both	K							
11.6.2.7	Review equipment	Ability to review/search for equipment and define work request problems.	Both	B							

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11.6.2.8	Draft estimate	Ability to generate the draft estimate based on the type of meter.	Both	B							
11.6.2.9	Update draft to final estimate	Ability to update the draft estimate into a final estimate when inspection reports fill up into the system.	Both	K							
11.6.2.10	Meter replacement process	Ability to check the entire meter replacement process into packages with a timeline for regular monitoring and linked with the KPI of the individuals.	Both	B							
11.6.2.11	Create new meter	Ability to create new meter in the system and remove the existing meter from the system and automatically tagged with customer account number.	Both	K							
11.6.2.12	Capture readings	Ability to capture last reading of the Existing meter and initial reading of the new meter and update in the **BILLING SYSTEM.**	Both	K							
11.6.2.13	Linking complaint number with the job number	Ability to link complaint number with job number creation activity in case of Meter Replacement activity.	Both	B							
11.6.2.14	Duplication of job request	Ability to avoid duplicating job request and job. The status of job request should also be maintained.	Both	K							
11.6.2.15	System planner/scheduler	The system should have the ability for a planner/scheduler to review Job requests and close/reschedule them if not required.	Both	B							
11.6.2.16	Review history of equipment's	The system should have the ability to review for the history of a specific item or equipment and/or on a particular manufacturer.	Both	B							
11.6.2.17	Infrastructure information	Ability to capture the total infrastructure details from the customer account number.	Both	K							
11.6.2.18	Maintenance activity	Ability to check pre-defined maintenance activity as per equipment type.	Both	B							
11.6.2.19	Forecasting costs	Ability to forecast the costs based on resource estimates/forecasts.	Both	B							
11.6.2.20	Inspection results	Ability to interrogate the inspection results to determine the meter replacement work required and update the draft estimate into a final estimate.	Both	B							
11.6.2.21	Warranty	Ability to record the warranty duration, the warranty period end date, the warranty number, and any warranty	Both	K							

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		notes. The system should have the facility to flag asset under warranty.									
11.6.3	**Meter Testing**										
11.6.3.1	Meter testing request	Ability to triggered the Meter testing request job through **CRM** to relevant Dept.	Both	B							
11.6.3.2	Review & analyze reports	Ability to check last year progress report, historical report, PUCSL recommendation standard/report, asset condition monitoring report.	Both	B							
11.6.3.3		Ability to analyze the above reports to make informed decision before planning.	Both	B							
11.6.3.4	Draft meter testing plan	Ability to generate the draft meter testing plan.	Both	B							
11.6.3.5	Serial number	At the time of creation job number user need to specify the meter testing equipment serial number.	Both	B							
11.6.3.6	Unique job number	Ability to automatically generate predefined unique Job number comprising of customer account number, meter type and date etc. and automatically system will check calibration date of particular meter testing equipment.	Both	K							
11.6.3.7	Power quality	Ability to integrate with power quality analyzer for updating and analyze the power quality.	Both	B							
11.6.3.8	Meter testing equipment	Ability to integrate with meter testing equipment for updating and analyze the meter testing report.	Both	B							
11.6.3.9	Alert messages	Ability to send the alert messages to relevant dept. when errors are exceeding the limit.	Both	B							
11.6.3.10	Meter type	Ability to decide the meter type based on the load and category.	Both	B							
11.6.3.11	Edit with approval	Ability to edit with proper approval and audit trail.	Both	B							
11.6.3.12	Meter testing process link with KPI	Ability to check the entire meter testing process into a monthly package with a timeline for regular monitoring and linked with the KPI of the individuals.	Both	B							

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11.6.4	**Material Management**										
11.6.4.1	Material Availability	Ability to trigger the Material management to check the material availability.	Both	K							
11.6.4.2	Material request	Ability to raise the MR automatically for materials, after the work has been scheduled.	Both	K							
11.6.4.3	Providing tools	Ability to provide tools for quick and easy access to real time information regarding material and labor availability.	Both	K							
11.6.4.4	Integration	Ability to integrate with material management system to be able to review the stock availability, material delivery dates, identification of delivery etc.	Both	K							
11.6.4.5	Annual maintenance plan	Ability to forecast material requirements and support materials planning based on Annual Maintenance Plan.	Both	K							
11.6.4.6	Monitor & track materials	Ability to monitor and track the material stock. Ability to see the material availability in the system at any stores in CEB.	Both	K							
11.6.4.7	Used/unused material	Ability to capture returning of used/unused material.	Both	K							
11.6.5	**Interruption**										
11.6.5.1	Requisition of permit	Ability to generate a requisition of permit to work (interruption) in order to isolate equipment for field activity. Any time user can cancel the requisition.	Both	K							
11.6.5.2	Transmission interruption	Ability to capture the transmission interruption schedule/status as an input.	Both	K							
11.6.5.3		Ability to check the predefine logic and compile and prepare the draft interruption schedule based on interruption requests received from various Departments.	Both	K							
11.6.5.4		Ability to check Holiday/Festival Calendar and previous interruption reports at the time of preparation of draft interruption schedule.	Both	K							
11.6.5.5	Alert messages	Ability to send the alert messages to the relevant authorities.	Both	B							

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11.6.5.6	Issue, check & capture PTW	Ability to issue the PTW and Requestor need to accept it through the system.	Both	K							
11.6.5.7		Ability to check multiple PTW request in a same circuit/network while closing the PTW	Both	K							
11.6.5.8		Ability to capture the PTW records for future reference.	Both	B							
11.6.6	**Works Execution**										
11.6.6.1	Define meter testing plan	Ability to define meter testing plan/meter replacement for a single or a group of maintenance objects.	Both	B							
11.6.6.2	Forecast labor requirements	Ability to forecast labor requirements and support labor planning in terms of both quantities and skills based on work forecasts.	Both	B							
11.6.6.3		Ability to consider the following for recommending the EM team- Skills of the available team, Resources available at that time, Resource available near the site etc.	Both	D							
11.6.6.4	Job distribution	Ability to distribute the job based on the nature of job and availability of skilled resources as per predefined criteria.	Both	B							
11.6.6.5	Forecast contractor requirements	Ability to forecast contractor requirements and support contractor planning based on annual maintenance plan (meter testing).	Both	D							
11.6.6.6	Status of the job number	Ability to record the status of the job number via user defined variables (i.e. stand by awaiting materials, partially closed, closed etc.)	Both	K							
11.6.6.7	Update schedule	Ability to update schedule commencement and completion dates in a job number.	Both	B							
11.6.6.8	Record costs	Ability to record all costs including wages, materials etc. against a job number.	Both	K							
11.6.6.9	Review technical information	Ability to review any technical information stored against the meter.	Both	K							
11.6.6.10	Pre-defined priority set	Ability to check the predefined priority set and suggest to complete the work (high consumption to low consumption customer) with the available resources.	Both	B							
11.6.6.11	Sending information	Ability to automatically send the information to the concern dept. based on the mapping of the area.	Both	B							

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11.6.6.12	Delayed work	Ability to record the work that has been delayed may be due to unavailability of material or insufficient labor resources or lack of permit or any user definable fields	Both	B							
11.6.7	**Completion of work and sign off work**										
11.6.7.1	Failure of work	Ability to record the failure/maintenance cause against the job number.	Both	K							
11.6.7.2	Maintain history	The system should have the ability to maintain the history against component that had a job number against it and the equipment which the component has association with.	Both	K							
11.6.7.3	Completed work	Ability to capture all the information relating to completed metering work as a part of maintaining history database.	Both	K							
11.6.7.4		Ability to send an information about job completion automatically to the relevant dept.(HR, Finance etc.) for OT, Salary and payment etc.	Both	B							
11.6.7.5	Flagging job numbers	Ability to flag/warn job numbers based on predefined criteria (such as the job number costs exceed the work estimate, budgets for the year)	Both	K							
11.6.7.6	Alert messages to relevant parties	Ability to close the job number and send the alert messages to user/finance.	Both	B							
11.6.7.7	Reason	Ability to close the job with proper reason.	Both	B							
11.6.7.8	Interim job completion report	The system should allow the users to fill up the interim job completion report.	Both	K							
11.6.8	**Components, Equipment and Tools**										
11.6.8.1	Trace components	Ability to trace certain components in order to optimize the operation of assets and maintenance strategies.	Both	D							
11.6.8.2		Ability to trace movement and usage of certain components.	Both	B							
11.6.8.3	User feedback	Ability to capture the user's feedback on the performance of material (such as quality deficiency)	Both	K							

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11.6.8.4	View performance	Ability to view the performance of material (such as quality deficiency)	Both	K							
11.6.8.5	Assign individuals	Ability to assign individuals responsibility for maintenance equipment / tools for ease of tracking and monitoring.	Both	B							
11.6.8.6	Review performance	Ability to review the equipment and tools available for staffs.	Both	B							
11.6.9	**Maintain Bill of materials and vendor details**										
11.6.9.1	History of list of equipment	Ability to maintain the history of change of part list of equipment.	Both	B							
11.6.9.2		Ability to record history of changes to recommended performance/operational specifications.	Both	B							
11.6.9.3		Ability to record and maintain history of the maintenance frequency, type and procedures recommended by the vendor for meter.	Both	B							
11.6.9.4	Review & modify skills	Ability to review and modify/configure of the EM teams/work staffs including skills/competency requirements as predefined criteria.	Both	B							
11.6.9.5		Ability to maintain the manufacturer recommended skills required.	Both	D							
11.6.9.6	Records of equipment	Ability to record against the equipment/component vendor recommendations based on the predefined criteria.	Both	B							
11.6.9.7	Cost of labor	Ability to capture the cost of labor from the job numbers.	Both	K							
11.6.10	**Cost Management**										
11.6.10.1	Minor maintenance	Ability to capture the minor maintenance (Metering) expenses through manual data entry.	Both	B							
11.6.10.2	Allocating cost in different maintenance	Ability to allocating cost to different maintenances (Metering) and asset type.	Both	B							
11.6.10.3	View & monitor via mobile	Ability to view through mobile/system the cost information for checking and monitoring purposes.	Both	B							
11.6.10.4	Metering costs	Ability to record the maintenance (metering) costs broken by resource type.	Both	B							

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11.6.10.5	Actual vs budgeted	Ability to record actual versus budget and forecast the information.	Both	B							
11.6.10.6	Alerts reaching cost limits	Ability to send mobile/system/e-mail alert on maintenance (metering) expenses before/when it reaches the limit.	Both	B							
11.6.10.7	Display cost & resource details	Ability to display cost and resource information in a manner that facilitates analysis, tracking and decision making.	Both	K							
11.6.10.8	Generation hierarchy	The system should define different hierarchy levels of Generation Units, Auxiliary, Power Stations and Generation Complex.	Both	K							
11.6.10.9	Codification of each point	System should be able to generate unique code for each point, which is configurable in the system.	Both	K							
11.6.10.10	Capture meter readings	The system should have the provision to capture meter readings relating to Generation Units, Auxiliary and Power Stations for each month. (for export/import points as well)	Both	K							
11.6.10.11	Defining export import point	The system should be able to define the export / import point of energy exchange between various functional units like Generation and Transmission.	Both	K							
11.6.10.12	Capture meter readings via sums	The system should have the facility to accept meter readings via manual data entry or SMS from Generating Stations in case of electro-mechanical meters or loss of connectivity.	Both	D							
11.6.10.13	Computation of energy sales for desired period	The system should be able to compute the energy sales for required period based on the reading taken and as per tariff between Generation and Transmission.	Both	K							
11.6.10.14	G to T Tariff Configuration	The system should be able to allow configuring the Tariff by CEB.	Both	K							
11.6.10.15	Assessment of Energy and demand	The system should be able to assist in determining pro-rated assessment of energy and demand in case of failure of meter or metering equipment, which will be configured and defined by CEB user.	Both	K							
11.6.10.16	Identify the Generation and Transmission losses	The system should have provision to inform about the percentage of difference of units is within the	Both	D							

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		percentage of pre-determined percentage of Energy Difference or not.									
11.6.10.17	Recording of Start/Stop	The system should be able to allow manual data entry of Generation Units start/stop as defined by CEB.	Both	K							
11.6.11	**MIS Reports**										
11.6.11.1	Statistical data	Ability to capture statistical data from manual entry.	Both	B							
11.6.11.2		Ability to capture statistical data from external electronic media, interfacing with external databases.	Both	D							
11.6.11.3	User defined places	List of user defined places (school, hospitals etc.) and progress should be generate through the system for energy conservation program.	Both	B							
11.6.11.4	User defined presentation & notes	User specific presentation and notes need to upload in the system and access as per the requirement.	Both	B							
11.6.11.5	Different screens	Ability to capture the different screen as per the user category.	Both	B							
11.6.11.6	Analyze performance	Ability to analyze the performance of standard jobs against the estimates contained within the standard.	Both	B							
11.6.11.7	List the time taken	Ability to list the amount of time taken to complete the job number. This should be able to be compared against the planned/estimated duration.	Both	B							
11.6.11.8	Labor utilization	Ability to analyze labor utilization by comparing internal labor capacity to actual work performed by quantity and cost.	Both	K							
11.6.11.9	Cost for labor	Ability to list the total costs incurred due to internal labor, issue of materials to job numbers, contractor work charged to job numbers, usage of equipment or tools etc. during work.	Both	K							
11.6.11.10	Display maintenance costs	Ability to display the maintenance costs for a range of plants/equipment/components.	Both	K							
11.6.11.11	Analyze & report the time failures	Ability to analyze and report the mean time between failures (MTBF) for an item of equipment. It should be able to summarize for a group of equipment.	Both	B							

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11.6.11.12	Generate reports	Ability to generate reports to be decided after finalizing input and output at the time of development.	Both	K							
11.6.11.13	Temporary closed job details	Ability to generate the temporarily closed job details.	Both	B							
11.6.11.14	Mean time to repair (MTTR)	Ability to analyze and report mean time to repair (MTTR) for an item of equipment. This involves calculating the average of the job number durations for an item of equipment.	Both	B							
11.6.11.15	Meter failures	Ability to report how many times a meter in same series has failed within nominated time periods (Frequency of failure)	Both	B							
11.6.11.16		Ability to display what affects the failure of a plant/equipment/component. These should also be a statistic linking the cause of failure and the effects of the failure.	Both	B							
11.6.11.17	Life cycle maintenance cost	Ability to simulate the life cycle maintenance costs for an item of meter, when different operational conditions and maintenance strategies are entered as parameters.	Both	D							
11.6.11.18	Backlog	Ability to report backlog. One component of the planning performance is to keep the backlog of jobs to a minimum; hence the ability to review backlog job numbers is crucial.	Both	K							
11.6.11.19	Review meter testing	Ability to review all the meter testing, which has been missed, rescheduled or postponed.	Both	K							
11.6.11.20	Preventive work	Ability to compare the amount of work and the costs of preventive work to corrective and modification work incurred over a set of time period.	Both	B							
11.6.11.21	Actual vs planned progress	Ability to print graphical representations of the progress of the maintenance like Actual against planned progress and Usage of actual resources to allocation.	Both	K							

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11.6.11.22	Analysis options	Ability to support various analysis options on maintenance (metering) history. These should also be a flexible tool for collecting, condensing and evaluating maintenance (metering) data automatically. Also, user defined meter testing report should generate through the system.	Both	B							
11.6.11.23	Supply network reliability	Ability to perform analysis on the supply network reliability, giving clear information on any outage or breakdown.	Both	B							
11.6.11.24	Reporting tools	Ability to provide reporting tools for the users to create their own Ad-hoc reports.	Both	K							
11.7	**Meter Data Management System**										
11.7.1	**Data Capture**										
11.7.1.1	Meter sources	The system should be able to capture the meter readings from different metering sources like CMRI (Common Meter Reading Instruments), AMR (Automatic Meter Reading systems), and RMR (Remote Meter Reading Infrastructure). The system should also provide GUI (Graphical User Interface) based interfaces to capture the monthly consolidated manual meter readings.	Both	K							
11.7.1.2	Data validation	The system should have in built functionality to do necessary data validations based on the type of meter readings/sources from which readings are received. These include cases such as Invalid data type, Negative values, Basic range checks etc.	Both	B							
11.7.1.3		The system should able to load and validate AMR and non- AMR Meter reads.	Both	K							
11.7.1.4	Data interface points	The system should able to capture the metered data at interface points.	Both	B							
11.7.1.5	Data parameters	The system should able to capture the parameters like meter manufacturing date, meter number, reading download date, reading download time etc. from	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
		each of the meters located at the above-mentioned locations.									
11.7.1.6	Provision for meter read files	The system should have the provision to do checks for the Meter read files received from multiple metering sources such as CMRI/AMR/RMR/Email/Data Logging systems. These checks should also ensure that the file has not been compromised i.e. the data has been received securely without any possibility of tampering in the file.	Both	B							
11.7.1.7	Complete records	The system should obtain a complete record of all meter readings for all time-periods. All readings which are not obtained reliably should be flagged for manual attention. The system should at the end of each upload session provide a list of connections where the meters are not recording or which have evidence of tamper.	Both	B							
11.7.1.8	Information on outage	The system should be able to capture information of an outage from the load survey data of the meters and be able to pass such outage alerts in as close to real time as possible to back end systems for further handling.	Both	B							
11.7.1.9	Seamless data collection	The system should be able to ensure seamless data collection and upload from different meter sources at various levels on a regular basis. Also the readings from a third party software if required should also be captured.	Both	B							
11.7.1.10	Feeder interruptions	The system should be capable of accepting feeder interruptions related data.	Both	B							
11.7.1.11	Feeder load survey data	The system should be capable of accepting feeder load survey data in a predefined format and store it in the data repository, so that specific information can be extracted using queries, depending on the requirement.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.7.1.12	Pre-defined estimation algorithms	The system should have the inbuilt functionality for estimating consumption based on pre-defined estimation algorithms in the event of missing/faulty meter reads. The system should provide an option to configure and select different estimation rules based on the type of meter readings (Monthly/weekly/Interval meter readings). The system should enable such functionality through GUIs to the maximum extent possible.	Both	B							
11.7.1.13	Interval meter data & TOU	The system should be able to aggregate the interval meter data and TOU based monthly meter data for purposes such as billing, reporting and analysis. With respect to billing, the MDM shall aggregate validated Meter Reads into the rate structures used by relevant on a weekly basis.	Both	B							
11.7.2	**Central Database**										
11.7.2.1	Unique reading	The system should have only one set of unique reading for each time period. A user should be able to choose the frequency of the stored reading for each meter (e.g. weekly/monthly for energy readings or 15/30 minute interval for Load Survey Readings).	Both	K							
11.7.2.2	Storage & consolidation of data	The system should handle storage and consolidation of data. It would store all the data in a central location in pre-defined tables. The system would be modular to accommodate addition of tables to store additional information at any later stage.	Both	B							
11.7.2.3		The system should provide the provision to consolidate the interval meter data received from AMR/RMR/CMRI metering systems. The system should also provide an option to capture the consolidated meter data through GUI. All access to the consolidated data for the purpose of entry, edit and generate reports should be controlled through the permissions allocated to each user.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.7.2.4	Map customer meter data	The system should be able to map the customer meter data records transformer/substation/feeder wise for the purpose of consolidation.	Both	B							
11.7.2.5	Pre-defined format	Ability to store all data as per the pre-defined format centrally in the server hosted in HQ.	Both	B							
11.7.2.6	Energy related data	Ability to store energy related data for every 15/30 minutes to be used to provide backup data to software as a contingency plan.	Both	B							
11.7.2.7	GUI	The system should provide necessary GUI to enter the consolidated meter data/meter reading manually.	Both	D							
11.7.2.8	Import/export data	Ability to import/export data from text files, comma separated files, XLS files or MS Access database.	Both	K							
11.7.3	**Distributed Data Collection**										
11.7.3.1	Define POD	Ability to define point of delivery (POD), for data collection. All relevant meter data would be made available in the POD.	Both	K							
11.7.3.2	Upload data from POD	The system should have the facility to upload data from each POD.	Both	B							
11.7.3.3	Customize formats	Ability to standardize and customize the formats for PODs.	Both	B							
11.7.3.4		The system should provide flexible output formats to provide data for other back office functions such as forecasting, planning, etc.	Both	B							
11.7.3.5	Interface modules for uploading/downloading	Ability to create interface modules for uploading and downloading data in electronic data interchange (EDI) formats such as EDIFACT, ANSI X.12, XML, OLE Interfaces, Excel, MS Access etc.	Both	K							
11.7.3.6	Display data	Ability to display all data upload/download errors, with the ability to resolve and track.	Both	B							
11.7.3.7	Provision for syntactic & semantic checks	The system should have the provision to do syntactic and semantic checks for the Meter Read files received from different PODs.	Both	B							

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11.7.3.8	Highlight missing/incorrect data	Ability to highlight missing or incorrect data, with the facility to populate the missing data with estimated consumption or replace existing values with estimated consumption values. The system should have the inbuilt functionality for estimating consumption based on pre-defined estimation algorithms in the event of missing/faulty meter reads. The system should provide an option to configure and select different estimation rules based on the type of meter readings (Monthly/Weekly/Interval meter readings). The system should enable such functionality through GUIs to the maximum extent possible.	Both	B							
11.7.4	**Integration**										
11.7.4.1	Integration	Ability to seamlessly integrate with Maintenance, Planning and MIS modules.	Both	K							
11.7.4.2		Complete integration with SCADA, GIS, AMR, RMR and other ERP modules.	Both	K							
11.7.4.3	Time-slice data	Ability to publish time-slice data on the internet for use by external market players and customers.	Both	B							
11.7.4.4	Configure & maintain output formats	The system should have the facility to easily configure and maintain output formats to any backend system (e.g. load forecasting, energy auditing, asset management, outage management etc.).	Both	B							
11.7.4.5	Different backend systems	The frequency of data output to different backend systems should be user-configurable (e.g. real time transmittal to load forecasting, monthly collated data transmittal to billing etc.)	Both	B							
11.7.5	**Data Analysis**										
11.7.5.1	Load profiles/load shapes	Support for creation and management of load profiles and load shapes/curves.	Both	B							
11.7.5.2	Energy flow & Supply data	Ability to store and analyze energy flow and supply related data.	Both	B							
11.7.5.3	Region & Substation	Ability to store and analyze the Region/Substation wise.	Both	B							
11.7.5.4	Interruptions & outage registers	Ability to generate interruptions and outage registers automatically.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.7.5.5	Power outages	Ability to capture and monitor power outages, scheduled and unscheduled.	Both	D							
11.7.5.6	Time series	Ability to process all types of primary time series, energy and demand time series, load time series, measured load shapes, analytical load profiles, schedules and other relevant calculations	Both	D							
11.7.5.7	Graphical & tabular screens	Ability to visualize and evaluate the data to provide graphical and tabular screens.	Both	D							
11.7.5.8	Demand & energy requirements	Plan long term and short-term demand and energy requirements based on historical and expected events.	Both	D							
11.7.5.9	Energy auditing	The system should be able to support substation wise and feeder wise energy auditing.	Both	D							
11.7.5.10		The system should be able to generate Energy Audit Balance Sheet.	Both	B							
11.7.5.11		Consolidation of loss and energy accounting data.	Both	B							
11.7.5.12	Basic site information	The system should be able to record basic site information including name of substation (SIN), division, province, area and associated accounts.	Both	B							
11.7.5.13	Energy consumption pattern	The system should be able to record energy consumption pattern for a particular area.	Both	D							
11.7.5.14	Energy usage	The system should be able to calculate monthly and yearly energy usage and cost report for a particular area.	Both	D							
11.7.5.15	Pre-defined reports	Plan long term and short term demand and energy requirements based on historical and expected events.	Both	D							
11.7.5.16	Current formats	The system would take into consideration the currently used formats and nomenclature. There would be the flexibility of multiple formats.	Both	D							
11.7.5.17		The reports generated by the system should present the performance information in pre-defined formats. The reports module would ensure the following, - Provide multiple view of the performance - Ability to drill down & focus on	Both	B							

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					STDD	WA	MOD	TTP	NA		
		problem areas - Highlight exceptions - Dynamic generation in multiple standard formats									
11.7.5.18	Predefined calculation logics	The system should be able to calculate the difference between consumption at the outgoing 33kV feeders from the 400, 220, 132 kV substation and consumption at the incoming line to the 400, 220, 132 kV substations from the generating stations, from inter-state interface points and the 220 or 132 kV customers to compute the 400, 220 and 132 kV line losses separately.	Both	B							
11.7.5.19		The system should be able to calculate the difference between the incoming and outgoing feeders' consumption to calculate each substation losses - 400, 220 and 132 kV	Both	B							
11.7.5.20	Analyzing tools	The system should provide a tool for analyzing MDI, P.F, and outage of the day data for each feeder, power transformer and substations.	Both	B							
11.7.5.21	Data repository	The system should act as a data repository for studying any feeder or power transformer case if required.	Both	D							
11.7.5.22	User defined tolerance	The system shall have the capability of storing user defined tolerance parameters.	Both	D							
11.7.5.23	Incremental data	The system should be capable for identifying and storing incremental data while collecting data from a third-party software, rather than updating the entire record.	Both	B							
11.7.6	**Archiving**										
11.7.6.1	Data not of immediate importance	Ability to archive data that is not of immediate importance.	Both	D							
11.7.6.2	Retrieve archived data	Ability to retrieve archived data at any time.	Both	B							
11.7.6.3		The system should be capable for keeping the data for the definable retention period and facility to access the archived data on a request basis.	Both	D							
11.7.6.4	Define retention period	Ability to define the retention period of data, and archive-runs at specific time periods.	Both	D							

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11.7.6.5	Audit control & traceable	The system should provide Audit Control and traceability of any changes to the data.	Both	K							
11.7.6.6	Version control	Each time a meter read subjects to changes due to the process of validation, estimation and/or editing, The system should define and store a new version of that data record.	Both	B							
11.7.7	**Exception Handling**										
11.7.7.1	Software logging via central database	During the uploading process, if for some reason the data could not be acquired from the meter then the software should log the event in the central database table for subsequent uploading or future reference.	Both	B							
11.7.7.2	Reports generation	The system should provide the following reports (but not limited to) at the end of each round of uploading of meter data sessions substation wise, Abnormal/sub normal readings, meters not recording, meters with communication link down (day/age wise), meters with tamper evidence (error code wise), partial or missing reading (division wise), meters with out of synchronism clocks.	Both	B							
11.7.8	**MDM-Master Directory**										
11.7.8.1	Master directory to update & maintain relationships	The system should have a master Directory within the MDM maintaining the relationships between POD, Meters, Transformers, Substation and Feeder.	Both	K							
11.7.8.2		The system should have the provision to update the MDM master directory based on the service level changes initiated from CRM/Billing system viz. Meter change, Disconnection, Reconnection and Meter Reset. The system should have interfaces to a workflow system so that data changes arising because of above operational processes can be recorded automatically.	Both	B							

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11.7.9	**MDM-User Interface**										
11.7.9.1	Graphical user interface	MDM The system should provide the necessary graphical user interface option to the users for the purpose of operate, manage, debug and trouble shoot the MDM.	Both	D							
11.7.9.2	UI screens	The UI screens should be user configurable with provision to set/change field labels for each user.	Both	D							
11.7.9.3		All UI screens provided as part of the solutions should have a provision to query, edit and enter the respective data.	Both	D							
11.7.9.4		The UI screens should provide the option to export the corresponding data into Microsoft Excel format.	Both	B							
11.7.9.5	Set security levels	The system should provide options to set security level, modify, delete and save it with respect to the profile of each user accessing the system.	Both	B							
11.7.9.6		All access should be controlled through the permissions allocated to each User. The Menu functions and the Mode (Edit/Query/Add) in which a User can utilize them should be determined based on the access rights.	Both	B							
11.7.10	**MDM- Open System and Industry based standards**										
11.7.10.1	Standards	Latest industry standard technologies should be used	Both	B							
11.7.10.2	SOA principles	The system should adhere to the SOA principles.	Both	B							
11.7.10.3	Application server architecture	The system should support application server architecture.	Both	B							
11.7.10.4	Data security	MDM- Data Security.	Both	B							
11.7.10.5	Secured socket layer	The system user interface should support Secured Socket Layer (SSL) connectivity.	Both	B							
11.7.10.6	Data transfer via user interface & application server	The data transfer between the user interface and application server should be in an encrypted mode.	Both	B							

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11.7.11	**Remote Disconnection and Reconnection commands**										
11.7.11.1	Disconnection	Ability to send the disconnection command to the meter and meter should sense and act accordingly.	Both	K							
11.7.11.2		Ability to trip the internal mcb after sensing the command by the meter in case of whole/direct meter.	Both	K							
11.7.11.3		Ability to sense the disconnection command by the meter and send it to the breaker.	Both	K							
11.7.11.4	Reconnection	Ability to send the reconnection command to the meter and meter should sense and act accordingly.	Both	K							
11.7.11.5		Ability to operate the internal mcb after sensing the command by the meter in case of whole/direct meter.	Both	K							
11.7.11.6		ability to sense the disconnection command by the meter and send it to the breaker	Both	K							
11.7.11.7	Limiting the demand	Ability to compare the contract demand vs maximum demand.	Both	B							
11.7.11.8		Ability to send the tripping signal if maximum demand higher than contract demand.	Both	B							
11.7.11.9		Ability to trip the internal mcb after sensing the command by the meter in case of whole/direct meter.	Both	B							
11.7.11.10		Ability to sense the disconnection command by the meter and send it to the breaker.	Both	B							
11.8	**Energy Audit & Accounting**										
11.8.1	**Generation to Transmission sales**										
11.8.1.1	Generation hierarchy	The system should define different hierarchy levels of Generation Units, Auxiliary, Power Stations and Generation Complex.	Both	K							
11.8.1.2	Codification of each point	System should be able to generate unique code for each point, which is configurable in the system.	Both	K							

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11.8.1.3	Capture meter readings	The system should have the provision to capture meter readings relating to Generation Units, Auxiliary and Power Stations for each month. (For export/import points as well).	Both	K							
11.8.1.4	Defining export import point	The system should be able to define the export / import point of energy exchange between various functional units like Generation and Transmission.	Both	K							
11.8.1.5	Capture meter readings via sums	The system should have the facility to accept meter readings via manual data entry or sums from Generating Stations in case of electro-mechanical meters or loss of connectivity.	Both	D							
11.8.1.6	Computation of energy sales for desired period	The system should be able to compute the energy sales for required period based on the reading taken and as per tariff between Generation and Transmission.	Both	K							
11.8.1.7	G to T Tariff Configuration	The system should be able to allow configuring the Tariff by CEB.	Both	K							
11.8.1.8	Assessment of Energy and demand	The system should be able to assist in determining pro-rated assessment of energy and demand in case of failure of meter or metering equipment, during transfer of running from one fuel to another which will be configured and defined by CEB user.	Both	K							
11.8.1.9	Identify the Generation and Transmission losses	The system should have provision to inform about the percentage of difference of units is within the percentage of pre-determined percentage of Energy Difference or not.	Both	D							
11.8.1.10	MIS	The system should provide Information of input energy, auxiliary consumption in terms of energy units as well as in rupees.	Both	B							
11.8.1.11	Recording of Start/Stop	The system should be able to allow manual data entry of Generation Units start/stop as defined by CEB.	Both	K							
11.8.2	**Transmission to Distribution sales**										
11.8.2.1	Transmission hierarchy	The system should define different hierarchy levels of Voltage-wise Transmission Lines, Transformers,	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
		Voltage-wise Distribution Feeders and Voltage-wise Substations.									
11.8.2.2	Codification of each point	System should be able to generate unique code for each point, which is configurable in the system like IPPs, NCREs and all Transmission Points.	Both	K							
11.8.2.3	Capture meter readings	The system should have the provision to capture meter readings relating to Voltage-wise Transmission Lines, IPPs, NCRE, Inter-Distribution Divisional Boundary Points, Transformers and Voltage-wise Distribution Feeders for each month. (For export/import points as well).	Both	K							
11.8.2.4	Defining export import point	The system should be able to define the export / import point of energy exchange between various functional units like Generation and Transmission as well as Transmission and Distribution.	Both	K							
11.8.2.5	Capture meter readings via sums	The system should have the facility to accept meter readings via manual data entry or sums from Transmission Meter Reading Points in case of electro-mechanical meters or loss of connectivity.	Both	D							
11.8.2.6	Computation of maximum demand and energy purchases and sales for desired period	The system should be able to compute the maximum demand, energy purchases and sales etc. for required period based on the reading taken and as per tariff/PPA defined by CEB.	Both	K							
11.8.2.7	Tariff/PPA Configuration	The system should be able to allow configuring the Tariff/PPA by CEB.	Both	K							
11.8.2.8	Assessment of Energy and demand	The system should be able to assist in determining pro-rated assessment of energy and demand in case of failure of meter or metering equipment, which will be configured and defined by CEB user.	Both	K							
11.8.2.9	Identify the Transmission losses	The system should have provision to inform about the percentage of difference of units is within the percentage of pre-determined percentage of Energy Difference or not.	Both	D							

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					STDD	WA	MOD	TTP	NA		
11.8.2.10	MIS	The system should provide Information on source-wise purchase of Energy, Sale of Energy at point of sales, profiles, event logs etc. in terms of energy units as well as in rupees.	Both	B							
11.8.2.11	Recording of Start/Stop	The system should be able to allow manual data entry of Generation Units start/stop as defined by CEB.	Both	K							
11.8.3	**Energy Audit**										
11.8.3.1	Define electrical addresses	The system should define the electrical addresses of the network like the substation, feeder, DTR and pole. (Right from EHV feeder to LT poles.	Both	B							
11.8.3.2	Provision to capture meter readings	The system should have the provision to capture meter readings relating to substation, power transformer, and feeder and distribution transformer for each month. (for export/import points as well)	Both	B							
11.8.3.3	Energy exchange	The system should be able to define the export import point of energy exchange between various functional units like division /circle/distribution center/feeders etc.	Both	B							
11.8.3.4	Audit report	The system should have the facility to accept meter readings via sums from substations/ feeders to generate audit report.	Both	B							
11.8.3.5	Energy sales on pro-rata basis	The system should be able to compute the energy sales for required period on pro-rata basis (based on the reading taken or historic data) and also keep the track of computation logic.	Both	B							
11.8.3.6	Billed units data	The system should be able to capture data relating to billed units in respect of all the categories of Low tension and high tension.	Both	B							
11.8.3.7	Differentiate of different units	The system should be able to compute the difference of units in between the units recorded at the feeder and sum of units recorded at each distribution transformers connected to the feeder on a particular date from the input meter readings.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.8.3.8		The system should have provision to inform about the percentage of difference of units is within the percentage of pre-determined percentage of losses or not, to CEB authorities as distribution and transmission loss. (EX-user can define the +20% to -20% out of this range will show as an exception.)	Both	K							
11.8.3.9		The system should be able to compute the difference of units in between the units recorded at the distribution transformer and the units billed against all the service connections connected to each distribution transformer from the input meter readings.	Both	K							
11.8.3.10		The system should have the provision to inform about the percentage of difference of units is within the percentage of pre-determined percentage of losses or not, to CEB authorities as commercial loss.	Both	K							
11.8.3.11	Energy loss & connection loss	The system should be able to provide energy loss and collection loss information at distribution transformer level by taking the values of input energy, billed energy and collected energy.	Both	K							
11.8.3.12	Unpaid customers	The system should provide the information of unpaid customers and exception list of customers.	Both	K							
11.8.3.13	High loss & low revenue collection	The system should have the facility to analyze and highlight distribution transformers and feeders on the basis of ‘High Loss’ and ‘Low Revenue Collection’.	Both	K							
11.8.3.14	Information on energy	The system should provide Information of input energy, billed energy, collected energy, technical & commercial losses and collection efficiency in terms of energy units as well as in rupees and clearly indicate priorities or focus area for curtailing losses and improving revenue.	Both	B							
11.8.3.15	Technical losses vs commercial losses	The system should be able to segregate of technical and commercial losses.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.8.4	**Legal and Audit**										
11.8.4.1	Customer wise audit details	The system should be able to capture the audit details customer wise in a structured manner with pre-defined violations.	Both	K							
11.8.4.2	Supplementary billing	The system should be able to generate the supplementary billing based on pre-defined violations.	Both	K							
11.8.4.3	Take actions	The system should take the action, issue the notice to customer , issue supplementary bill or add the supplementary billing in the regular case or initiate action etc.	Both	K							
11.8.4.4	Track the actions	The system should be able to track the actions being taken by various authorities and recovery of dues and the status of cases / hearing / etc.	Both	K							
11.8.4.5	Legal cases date wise	The system should track the legal cases at various judicial forums with dates.	Both	K							
11.8.4.6	Decision of appeal	The system should also capture the decision of appeal by competent authority and record the actions taken to file the appeal (this will initiate a separate legal case with another judicial authority)	Both	B							
11.8.4.7	Decision of various judicial authorities	The system should track the decision given by various judicial authorities and its implication on business rule change.	Both	D							
11.8.4.8	Track performance of audit parties	The system should track the performance of audit parties for a given period and necessary reports be generated.	Both	B							
11.8.5	**Vigilance and Theft**										
11.8.5.1	List of customers	The system should be able to generate the list of customer for vigilance checking based on certain defined parameters (such as : complaint through CRM, continuous lock cases, customers having less consumption than the average of the area, frequent meter defective / replacement case etc.)	Both	K							
11.8.5.2	Investigating reports	The system should be able to capture the investigating reports of the authorized officer with remarks (set of violations) in structured manner.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.8.5.3	Suggestion/observation	The system should also capture the suggestion/observation of the inspecting authority.	Both	B							
11.8.5.4	Approval	The designated/defined authority should approve the action suggested by the inspecting authority.	Both	B							
11.8.5.5		The system should execute the action approved (as per defined process) like sending notice to customers, additional billing as per defined violation, initiating meter replacement/shifting process, disconnection process, legal process.	Both	B							
11.8.5.6	Estimate bill for theft	The system should generate the estimated billing for Theft case caught by the vigilance officer and capture the legal process (This shall be interfaced with Legal and Audit module for further activities now on wards).	Both	K							
11.8.5.7	Complaints	The system should be able to capture the customer complaint/request for revision of bill assessment and others charges and actions also.	Both	K							
11.8.5.8	Fee/payment plan	The system should also accept necessary fee/payment plan (processing / initial installment as per rule) against the vigilance/theft case.	Both								
11.8.5.9	Escalate requests	The system should be able to track and escalate the request (Theft cases) to the competent authority as per work flow for necessary decision. The system should also be able to produce periodic reports.	Both	B							
11.8.5.10	Inform customer on the decision	The system should be able to convey the decision to customer and initiate the action as per decision (like start of billing / installment the billed amount / compounding the billing etc.)	Both	B							
11.8.5.11	Issuance of supplementary bill	The system should be able to issue supplementary bill / along with the normal bill or through separate bill (in different format). The supplementary bill after certain period/decision shall merge with the normal billing.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.8.5.12	Different types of schemes	The system should be able to work out the cases/amount realized and award/incentive amount to the various agencies/payment made to the courts as per norm or scheme launched from time to time.	Both	D							
11.8.5.13		The system should be able to work out the cases/work done by different agencies/persons for a given period to estimate their performance.	Both	D							
11.9	**Seal Management**										
11.9.1	Record seal numbers	Ability to record the seal numbers in the system at the time purchasing the seal. In case bar code or QR code available in the seal the system should be able to capture.	Both	K							
11.9.2	Issue seals	Ability to issue the seals selecting only from the numbers (number range) already recorded in the system.	Both	K							
11.9.3	Seal movement	Ability to capture the all the steps of seal movement and be recorded in the system from point of procurement to the end user.	Both	K							
11.9.4		Ability to generate the seal movement date wise.	Both	B							
11.9.5	Responsible person for seals	Ability to capture the persons details who responsible for executing sealing job.	Both	K							
11.9.6	Linkage of seals	Ability to link the sealing details with Job completion report. Without updating the seals job completion report can't be submitted in the system.	Both	K							
11.9.7	Define equipment	Ability to define the equipment requires sealing.	Both	K							
11.9.8	Capture equipment/Person	Ability to capture the equipment details where the seals have been used.	Both	B							
11.9.9		Ability to capture the person, who sealed the equipment.	Both	B							
11.9.10	Reason for sealing	Ability to capture the reason for sealing.	Both	K							
11.9.11	Recovered seal details	Ability to record recovered seal details with date.	Both	B							
11.9.12	Storing location	Ability to enter the storing location of the recovered seals.	Both	B							
11.9.13	Generate report	Ability to generate report to display seals in stock with storing location.	Both	B							

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					STDD	WA	MOD	TTP	NA		
11.9.14		Ability to generate reconciliation report of the seals issued, recovered, in stock with the purchasing of the seals.	Both	B							
11.10	**CRM**										
11.10.1	**New Connection**										
11.10.1.1	Standardized formats	The system should be able to generate different application forms for New connection, Temporary connection, Augmentations etc. for different categories (Solar, self-generation, etc.) of users, and the same forms should be available across all delivery channels (division, province, area office, customer service center, over the web & mobile application etc.).	Both	K							
11.10.1.2	Status request	The system must allow the realization of an enquiry by status request, modification date and type of request etc.	Both	D							
11.10.1.3	Status modifications	A Record of status modifications must be kept with their corresponding dates of service request.	Both	K							
11.10.1.4	Reject the application	The system should have Provision for rejecting the application at any of the process mentioned above.	Both	K							
11.10.1.5	Application on hold	The system should have the provision for holding the application at any stage, when the information has no clarity, availability or for technical reasons.	Both	K							
11.10.1.6	Premise inspection intimation	The system should provide the functionality of informing the customer of the premise inspection via CRM. The corresponding office would also be informed of the premise inspection.	Both	B							
11.10.1.7	Update applicant status	The system should update the applicant log with his status (Accepted/ Rejected).	Both	K							
11.10.1.8	Generation of Unique account number	After the installation of meter and the customer is energized with power, the system should generate a unique Account Number for the customer. This number would form the basis of all transactions by the customer under his account with CEB.	Both	K							
11.10.1.9	Change customer display name and contact details	The system should have the provision to change the display name, contact details etc. of the customer.	Both	K							

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11.10.1.10	Change customer Name/ownership change	The system should identify customer name/ownership change by changing the account number or any guidelines as per CEB.	Both	B							
11.10.1.11	Reasons for changes	The system should be able to capture the reason for changing the customer's name and address.	Both	B							
11.10.1.12	Track customer name and address	The system should have the provision to track the customer old address and the new address and an account's old name & new name should be affected in the next bill issued to the customer.	Both	K							
11.10.1.13	Change Category, Load and Phase	The system should have the provision to change the category, load and phase etc. of the customer (electrical address). This should also affect in the next billing cycle.	Both	K							
11.10.1.14	Rules for changing customer load and category	The system should allow load/category changes depending on the CEB policies.	Both	B							
11.10.1.15	Track Old category, Load and Phase	The system should have the provision to track the old values of category, load and phase.	Both	D							
11.10.1.16	Maintain customer status	The system should be able to maintain the customer status and should have the provision to change the customer status.	Both	K							
11.10.1.17	Track meter changes	The system should be able to enter the meter changes of a customer and track the meter at any given situation.	Both	K							
11.10.1.18	Calculate Deposits - For changes	The system should be able to calculate the security deposit/other deposits amounts to be collected from the customer, for changes in category, load and phase etc. of the customer.	Both	B							
11.10.2	**Disconnection & Reconnection**										
11.10.2.1	Dismantlement/ finalization procedure	Ability to generate list of disconnected accounts (not reconnected) on a user defined logic and generate the notice of dismantling and finalizing (send to customer via CRM)	Both	B							
11.10.2.2		Ability to generate a list of finalizing accounts from the dismantled accounts on a logic defined by the user linking with Finance module, Legal etc. (should inform customer via CRM)	Both	B							

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11.10.2.3	Inform outstanding	Ability to inform the customer the outstanding amount (Through CRM)	Both	B							
11.10.2.4	Inform Responsible person/Customer	Ability to inform about disconnection notice (Red Notice) (Mail/SMS) the concerned person responsible for disconnection as well as customer (Through CRM)	Both	B							
11.10.2.5		Ability to record and inform concerned person whether the disconnection notice reached to the customer.	Both	D							
11.10.3	**Collection**										
11.10.3.1	Acknowledgment to customer	The system should be able to send customer an acknowledgement of payment (SMS or Email).	Both	K							
11.10.3.2	Returned cheques	The system has specific operations for the management of returned cheques: - Charge generation (from the bank), - Status resulting from the paid invoices by the cheques or generation of a new charge of the corresponding amount (decision level configuration) - Customer follow up (letters, messages, etc.) - Block further cheque payments (Configurable).	Both	B							
11.10.3.3	Allow complete & partial payments	The system must allow partial and complete payments. Also it will allow advance payment and customer accounts should be treated as a “balance account” (for advance payment future bills will be deducted from the balance).	Both	K							
11.10.3.4	Loan to be added separately	The system should also be able to affect the payments of certain loans in the respective invoices.	Both	B							
11.10.3.5		The system should be able to configure any amount paid by the customer as energy, loan installment, deposits, fines etc.	Both	B							
11.10.3.6	Capturing payment details	The system should capture all the customer payment details (mandatory and additional). A format for collecting payment details will be specified by the CEB from time to time.	Both	K							
11.10.3.7	Interest	The system should be able to configure interest added to customers due to disputes, installment payments, high bills, etc.	Both	B							

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11.10.3.8	Cheque dishonor - Debit consumer	The system should have the provision of debiting of a customer's account where a cheque has been dishonored.	Both	K							
11.10.3.9	Customer Credit Rating	The system should be able to give credit rating to the consumer, based on his past history of payments.	Both	D							
11.10.3.10	Interest payout to customer	The system should provide facilities to automatically compute the interests (configurable) payout to consumers on: I. Security Deposit ii. Advance Payment etc.	Both	D							
11.10.3.11	Linking payment to logging id	The system should capture all the customer and payment details as specified by the Utility time to time. All payments should be associated with the login-id of the personal receiving them and the collection center codes at which they were received. All collections should be made against specific bills/ forms to enable reconciliation at a later stage.	Both	B							
11.10.3.12	Adaptability to different mode of collection	System shall be capable to receive payments made by the consumer in either of the following modes: - Cash/ Cheque/ Bank Draft/ Credit Cards/ Debit Cards/ Internet Payment Gateway or Payment made by direct debit from bank accounts on authorization by the consumer (ECS). Any other mode as may be specified by Utility from time to time. In certain cases (e.g. Advance Payments) collections can be accepted without the bill as well. System should have support of accepting payment through a single cheque against multiple bills and keep proper track against respective bills. Further, the system shall also allow the consumer to pay one single bill through multiple modes i.e. through multiple cheques of different banks, by cash & cheque etc. The payments made by the consumers are to be acknowledged and accounted for in the respective databases. For payment made by the consumers at Collection Counter through Cheque/	Both	B							

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		Bank Draft computerized acknowledgement shall be issued to the consumers. System must be able to generate & send SMS automatically to customer for every payment received.									
11.10.3.13	System ability to keep track of cancelled receipt	System shall be capable to cancel receipt at cash counters (on approval) due to human errors etc. The details of cancelled receipt to be kept in the system and the same may be printed on the new receipt also upon approval. System should also provide to reverse the payment applied to a particular account in case errors are detected at a later stage, e.g. payment getting applied to a wrong customer.	Both	B							
11.10.3.14	CRM Notifications	The system should be able to link with the CRM module to send notifications (bill dues, payments, disconnection/reconnection notices, etc.)	Both	B							
11.10.3.15	CRM reports	The system should be able to link with the CRM module to facilitate data (bill history, payment history, etc.) requested by the customer.	Both	B							
11.10.4	**Billing**										
11.10.4.1	Dishonored cheque billing	Automatic billing of arrears along with surcharge etc. in case of dishonored cheques and setting the flag to disallow the cheque in future for a period defined by the user.	Both	B							
11.10.4.2	Viewing the details	The system should have interface to integrate with web site (CRM) to facilitate consumer to view his own billing details e.g.: last 12 months billing details, reading details, security deposit details, payment details, complaint status, checking, meter replacement details etc.	Both	B							
11.10.4.3	Meter data validation	The system shall be capable of identifying meter tampering data/abnormalities as per utility defined criteria and generate flags for operator intimation and further investigation.	Both	B							
11.10.4.4		The system shall also incorporate multiple meter changes in a single billing cycle, properly accounting old	Both	B							

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		meter final consumption based on final reading.									
11.10.4.5	Bar code/QR code generation	The system should be capable of automatic generation of bar code/QR code and printing on the consumer's bill & link with CRM.	Both	B							
11.10.4.6	Dispatch of bills electronically	The system should have the flexibility of dispatching bills in the electronic form with the provision of a receipt confirmation via SMS, email etc. (CRM)	Both	B							
11.10.4.7	Due date calculation	The system should be able to calculate the due date and disconnection date depending on the meter reading entry date (link with CRM)	Both	B							
11.10.4.8	Pro rata billing - changes	The system should be able to generate bills in pro rata, based on the duration in case of category changes, tariff changes, load changes, phase changes etc.	Both	K							
11.10.4.9	Year-end Bill	The system should be able to generate a consolidated year end bill which shows the consumption pattern of the consumer (link with CRM).	Both	D							
11.10.4.10	Reasons for estimate billing	The system will have a list of all standard reasons for estimate billing. The list will be compiled based upon the guidelines, which may change from time to time.	Both	B							
11.10.4.11		The system should be capable of generating bills for all instances of exceptional readings (temporary connections, voluntary termination, forced termination etc.)	Both	B							
11.10.4.12		The system will allow the bill amount to be modified by the designate authorities through their login ids only. All such changes along with the corresponding login ids will be tracked by the system.	Both	B							
11.10.4.13	Special Billing	For special bills like, self-generation, temporary connections, etc. the system should calculate bills as per the guidelines given by CEB. Also, there would be codes for all the schemes so that the system can track their details.	Both	K							

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11.10.4.14		There would be codes for all the schemes (self generation, temporary connections etc.) so that the system can track their details (usage).	Both	B							
11.10.4.15		The system will keep a record, as to who authorized the scheme and capture the details of the scheme.	Both	D							
11.10.4.16	Electronic dispatch of bill/ availability of bills on internet portal of utility	The system should be capable to dispatch the generated bill electronically to customer/payment portals to which customer is registered if desired by customer. (Link with CRM).	Both	K							
11.10.4.17		The bill in actual format must also be available on utility's internet portal for customers (Link with CRM).	Both	K							
11.10.4.18		The system must be able to inform customer regarding new bill along with due date & amount via SMS automatically (Link with CRM).	Both	K							
11.10.4.19		The system should allow generation of reminder letters/SMS/email at predefined intervals before the due date - over the web/mobile phones/paper formats (Link with CRM).	Both	D							
11.10.4.20	Billing for temporary connections	The system should have provision for automatic job creation for disconnection and final billing of temporary connections one day prior to the expiry of the duration for which the temporary connection was granted (Link with CRM).	Both	B							
11.10.4.21	Enforcement and Legal Module : Logging of leads	System shall have provision to log leads of theft & misuse by: -Creating automatic leads based on consumption analysis and tamper analysis -Accepting lead through mail, website, phone calls, call center or any other mode (Link with CRM) -Check for consumption analysis and tamper analysis of previously faulted customers.	Both	D							
11.10.4.22	In case of Network is not available in mobile	The system should be able to generate bills based on the information already downloaded in the mobile device. The bill information will be uploaded in to	Both	K							

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		the base billing server as soon as the network in the mobile device established.									
11.10.4.23	Printing of information slip	In case of no bill is printed the mobile device should be able to print an information slip which is defined by CEB (link with CRM).	Both	B							
11.10.4.24	Common/Group Billing	The system should allow for generation of common/group bill for a set of customers as defined by users.	Both	B							
11.10.4.25		The system should also have provision for generation of bill of multiple premises on a single bill for a same customer, if the customer has opted for the same.	Both	B							
11.10.5	**Meter Reading**										
11.10.5.1	Voluntarily meter reading	The system should also have the facility to enter the voluntarily meter reading as informed by the customer through CRM (validated by a photo) defined by CEB.	O	D							
11.10.5.2		Such readings should be flagged with a special status and prior electronic approval be obtained from the CE/AEE before data-entry. Suitable logs should be maintained along with reason, mode, time of customer intimation	O	D							
11.10.5.3	Account transfers	The system should be able to facilitate transfer of customer accounts from one area/division to another (link with CRM).	Both	K							
11.10.5.4	Relocating customers	The system should facilitate to relocate customers within the area or among areas by updating consumer and other relevant details defined by the user (link with CRM).	Both	K							
11.10.6	**Functionality**										
11.10.6.1	Establishment of single window computerized customer care center	The specification is for establishment of a centralized and computerized customer care center with single window operation equipped with latest technology & multi skilled customer service representatives. The one point contact service relieves the customer from the inconvenience of visiting or contacting different CEB offices. In	Both	K							

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		addition to Complaints received online through Telephone, email, fax, letters, IVR system, web, SMS and mobile app, many customers may choose a personal visit and therefore the Customer care Centre set up to address their grievances, must be equipped with basic amenities, clean environment and manned by trained personnel, who should be sensitive to customer needs.									
11.10.6.2	System Integration	The vendor should ensure to facilitate necessary linkage/collaboration through the CRM for every core function in the ERP and CIS system such as Billing, New Connection, Disconnection, Meter Reading etc. where such requirements are mentioned under each FRS document.	Both	K							
11.10.6.3	Customer request: Clarification on Premises Found Locked (PFL)	At any point, the system should display the comment recorded by the meter-reader during the last 3 visits to the premises for PFL cases.	Both	K							
11.10.6.4	Online chat window facility	The system should be able to accommodate online chat and BOT facility.	Both	B							
11.10.6.5	Link of CCC to CSC	The CRM should be linked through mobile workforce management or SMS system in a “closed user group” to breakdown staff / mobile maintenance units. Immediately upon receipt of a no-supply complaint, an SMS will be sent by CRM to the breakdown staff/van for fault restoration. After restoration of the fault, the breakdown staff will close the complaint at the CRM.	Both	K							
11.10.6.6	Availability of required functionalities like billing, customer indexing etc. on agent desktop	The CRM infrastructure shall make use/link of the ERP and other CIS applications in such a way that the required functionalities are available on the agent desktop in the following fashion, The screens, features & functionalities of the Billing, customer Indexing and Asset Mapping & Customer Care Solution shall be popped up appropriately as per CEB specifications.	Both	K							

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11.10.6.7	Design of CRM interface to suit CEB requirement	The CRM system should be configurable and provide basic features such as customer profile, supply details, accounts details, etc. defined by CEB. The system should be able to add/remove features as requested by CEB/Customer. E.g. GUI etc.	Both	B							
11.10.6.8	Informing of Assessed bills	The system should be able to inform the customer through different CRM touch points regarding any assessed bill or any reasons for not giving a spot bill. The assessed bill should be able to print through the CRM.	Both	B							
11.10.6.9	Request Cancellation	The system should have the provision where the customer can request to cancel his request/inquiry by giving reasons at any time.	Both	B							
11.10.6.10	Interruption Alerts	The system should be able to send scheduled interruption alerts to pre-configured customer or customer groups by taking inputs from maintenance module (interruption schedule).	Both	B							
11.10.6.11		The system should facilitate to send manual alerts to pre-configured customer or customer groups.	Both	K							
11.10.7	**Management Information System**										
11.10.7.1	System ability to provide real time & historical reports	**Basic Internal Reporting** The system must provide basic low-cost, integrated reporting that does not require administration, external processors or external storage. Both real time reports and historical reports are required.	Both	K							
11.10.7.2	System ability for creation of custom reports	**Custom Reporting** Fast, easy creation of custom reports from scratch is required as is modification of existing reports to customize them for reporting purposes. Report customization must include the ability to create custom data items and define custom calculations.	Both	B							
11.10.8	**Voice Messaging**										

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11.10.8.1	Voice Mail facility	It is used for recording, storing, playing and distributing phone messages to agents and/or group. The voice messages could be attached as e-mail messages and routed to agents. Voice Mail provides the customers the choice to leave their requests e.g. call back requests in times of long time queuing etc.	Both	B							
11.10.8.2	Retrieving of voicemail	Voice mail requests can be retrieved and played back at any time from agent's voice mailboxes or via their desktops.	Both	K							
11.10.8.3	System ability to keep log of all messages	The system should keep a log of all voice messages, senders, receivers date & time etc. for reporting purpose.	Both	K							
11.10.8.4	No. of VR ports	The no. of IVR ports should be equivalent to the incoming voice channels to provide non-blocking facility.	Both	B							
11.10.9	**Telephone Integration**										
11.10.9.1	CTI system	**CTI (Computer telephony integration**) This is the technology that allows interactions on a telephone and a computer to be integrated or coordinated. The following functions are implemented using CTI – • Calling Line Information Display (Caller's Number, Number Called, IVR Options) • Screen Population on answer, with or without using calling line data • On Screen Dialing (Fast dial, preview and predictive dial) • On Screen Phone Control (Ringing, Answer, Hang-up, Hold, Conference etc.)	Both	K							
11.10.9.2	CTI forms	**Forms of CTI – Generally there are two forms of CTI** a) First-party Call control – Here, only the computer associated with the phone can control all the functions of the phone at the computer user's directions. b) Third-party Call control – It requires a dedicated telephony Server to	Both	K							

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		interface between the Telephone network and Computer network. Any computer in the Network has the potential to control any Telephone in the telephone system. The phone does not need to be built into the computer and may only need to have a microphone and Headset in the circuit. **For the proposed Call Centre, the agency should provide CTI with Third party call control.**									
11.10.9.3	CTI ability to transfer information from PBX & IVR to Call Center Agent's CRM screen	The CTI (Computer Telephony Integration) component shall be required for passing all the information from the PBX and IVR, such as the caller identification, dialed number information, Language option service opted by the caller etc., to the Call Center Agent's CRM screens.	Both	B							
11.10.9.4	Integration of agent application to CRM application	The system should provide an agent application integrated with CRM application. It should pop- up along with the caller information, when the call comes to the agent. The CLI should have the capability to popup all.	Both	D							
11.10.9.5	CTI system ability to enable control of telephony features from GUI application	The Agent should be able to control the telephony features from this GUI application like login, logout, away, pick-up, hold, hang-up, conference, and transfer to another agent along with the screen (voice and data). Screen pop-ups should be multi- colored. CRM components, queries or call priorities should be recognizable by the color of the pop-up.	Both	D							
11.10.9.6	CTI system support for login from any workstation	The system should support virtual login e.g. an agent can sit anywhere and login by putting his login id and that becomes his workstation.	Both	K							
11.10.9.7	Report generation capability of CTI system	Entire login, logout, away, total call handled, data of the agent should be captured and produced as reports.	Both	K							
11.10.9.8	Online display of ACD queue	The Agent application should also have the online monitoring display of the ACD queue(s).	Both	B							

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11.10.9.9	Integration of CTI application to billing & customer indexing database	The CTI application should also record a ticket on each call for reporting purpose. The docket shall be opened by the CC Centre and should be closed only after the customer is satisfied. The system shall have the capability to integrate with the CEB's billing and customer indexing database.	Both	K							
11.10.10	**Remote Monitoring**										
11.10.10.1	Remote monitoring ability of ACD status, no. of agents etc.	The system should support remote monitoring of real time ACD statistics, queue, and number of agents, abandoned, and answered calls from their office using the application provided by the system. The application software shall have the facility for fault escalation to various administrative levels of CEB depending upon the delay in clearance.	Both	K							
11.10.11	**Database Integration**										
11.10.11.1	System integration with CIS and ERP system	The System should support retrieval of data from CIS (billing, collection, workforce management, customer indexing etc.) and ERP (material management, asset management etc.) systems e.g. if a caller wants to check his billing status, the IVR should retrieve the data in real time from the CIS.	Both	K							
11.10.11.2	System integration with billing & customer indexing modules	Certain database access, like Billing and customer indexing, should be integrated with CTI for screen pop-up, CRM and priority handling etc.	Both	B							
11.10.12	**CRM Main Features**										
11.10.12.1	Multiple host connectivity	CRM application should support multiple host connectivity- local as well as remote. E.g. Consumers, CEB staff etc.	Both	K							
11.10.12.2	Mobile/Web/API support	CRM system should support web interface, mobile app, APIs etc. for user interactions as defined by CEB.	Both	K							

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					STDD	WA	MOD	TTP	NA		
11.10.12.3	User Access Control	The users of the CRM system would be customers, meter readers, field staff, management, etc. where different user/access levels are available. The system interfaces (screen) for different user/access levels should be configurable as per the CEB guidelines.	Both	K							
11.10.12.4	Compatibility with other Web Applications and devices	The CRM system Web UI should support for all the latest web browsers irrespective of devices. E.g. PC, Laptops, Tabs, Mobile Phones etc.	Both	B							
11.10.12.5	Device OS compatibility	The CRM system mobile app should support and upgrade for all new releases of Android, iOS, Windows, etc.	Both	B							
11.10.12.6	Device external features	The CRM system mobile app should have features to access the external features of mobile devices (camera, GPS, microphone etc.). Also the app should provide the feature to upload and download documentaries, images etc. from and to the device.	Both	B							
11.10.12.7	Device vs User Interactivity	The CRM mobile app should support interactivity with consumers, meter readers, field staff etc. to execute any general function defined by CEB.	Both	K							
11.10.12.8	OCR/ICR support	The CRM system should support Optical Character Recognition (OCR), Intelligent Character Recognition (ICR) and integration with commercially available scanners.	Both	B							
11.10.12.9	Event Logs	The CRM system should keep history records (Event Log) of any data transaction, inquiry etc. made by the customer/user as defined by CEB.	Both	K							
11.10.12.10	Customer generated billing history	The System should be able to download/generate and print any outstanding monthly bill/s by the customer/user for a period specified by CEB. System should give view-only access to the customer from the billing system for the data of transactions and bills for a period (12 months) specified by CEB.	Both	K							

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					STDD	WA	MOD	TTP	NA		
11.10.12.11	QR code support	The system should be able to generate QR code of the profile of each customer through the mobile/web app (containing customer information). Also the system should be able to view and download the QR codes respective for each month's electricity bills (this can be used for bill payment at payment gateways).	Both	D							
11.10.12.12	Attachments in customer-led complaints	The system should facilitate to attach, upload and capture any document/image/GPS coordinate etc. for any inquiry, request or a complaint done through CRM mobile app.	Both	D							
11.10.12.13	CRN generation	The system would provide the facility to log all the customer requests with a unique customer request number (CRN) as per CEB specifications.	Both	K							
11.10.12.14	Customer Segregation/Grouping	System should provide facility for the user to identify/distinguish customers for significance. (E.g. Religious places, specified persons etc.)	Both	B							
11.10.12.15	Array of request types	The system should identify different types of requests inquiries etc. and categorize them and forward them to relevant authorities appropriately as per the specifications of CEB.	Both	K							
11.10.12.16	Single Interface for customer interactions	CRM application should support single user interface for consistent customer interactions through multiple touch points.	Both	K							
11.10.12.17	Customer grouping	The CRM system/app should facilitate to link/group different/multiple accounts of a single customer and to create and maintain corporate accounts where new accounts can be added to the list and old accounts can be removed by the user based on rules specified by CEB.	Both	B							
11.10.12.18	SMS Gateway	The CRM should provide support to consume telecommunication service providers' SMS API/SMPP Gateway to terminate SMS to consumers and CRM users.	Both	B							
11.10.12.19		CRM should support two-way interactivity with consumers and CRM users over SMS.	Both	D							

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11.10.12.20		CRM system should support to push alerts or messages to consumer or CRM user mobile apps.	Both	K							
11.10.12.21	Overview of communications	Consolidated view of the customer to ensure that each agent has complete knowledge of every interaction regardless of the channel of communication.	Both	B							
11.10.12.22	Call Center Agent ability	The Call Center Agent should be able to rapidly create, assign, track, and resolve a complete range of service requests, cases, and trouble calls as per the CEB guidelines. Brief description of all queries should be recorded.	Both	B							
11.10.12.23	Standard features	Should support standard features for e.g. subscribers call history, booking of complaints etc.	Both	K							
11.10.12.24	System ability to permit call center agents to extract information from system	The system should allow call center agents to capture and display contact information, problem descriptions, problem categorization, severity classification, prioritization, and complete status tracking with open and closed dates and times.	Both	B							
11.10.12.25	Retrieval of billing details	System should provide option to view billing details of the customer for a period specified by CEB (through mobile apps, call center etc.)	Both	B							
11.10.12.26	Option to send billing details by e-mail	Should provide option to send the billing record of a period specified by the customer through e-mail.	Both	B							
11.10.12.27	Ability to view customer details	Should be able to view details of the customer with an authentic ID e.g. customer number, Name, Telephone number, Address and with an option to change the required parameters.	Both	K							
11.10.12.28	Ability to build and maintain FAQ database	Should build and maintain a FAQ database for commonly asked query as per the CEB specifications.	Both	B							
11.10.12.29	Search option for most similar answer to FAQ	Search option to find the most similar answer to the queries in the FAQ section with an option to e-mail the same to the customer also.	Both	B							

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11.10.12.30	Report Generation module	Report generation module e.g. billing reports, customer details report etc. CRM application will record the language preference of a customer and his next call will be routed according to his preference.	Both	K							
11.10.12.31	Alerts and Interactivity	The system should be capable of sending alerts on abnormalities of customers (e.g. sudden high energy consumption, couple of unpaid bills etc.), preplanned interruptions, sudden power interruptions, red notices, disconnection notices, payment reminders, service escalations etc. to customers and staff through multiple CRM touch points as per the guidelines by CEB. E.g. Push message to CRM mobile app, or messages to CRM web portal, SMS, Email etc.)	Both	K							
11.10.12.32		The system should be capable of providing responses to customer requests/inquiries made over the multiple CRM touch points on real time by querying CIS and ERP. E.g. Balance checking through SMS, account details checking through IVR, registering to services through CRM mobile app etc.	Both	K							
11.10.12.33	Customer Feedback	The system should facilitate to rate/comment to give feedback about the customer satisfaction over an inquiry/complaint/request etc. made through different CRM touch points.	Both	K							
11.10.12.34		Any negative feedback should be filtered and forwarded to necessary authorities to follow-up as per the CEB specifications.	Both	K							
11.10.13	**Complaints Escalation System**										
11.10.13.1	Escalation policy	In case the issues are not resolved within the defined service levels, it shall be possible to escalate to pre-specified higher authorities. The escalation hierarchy would consist of three or more levels for escalation of complaints to expedite the complaint resolution process. The choice of escalation authorities would be made based on the	Both	K							

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		criticality of the situation as specified by CEB.									
11.10.13.2		The escalation hierarchy, timings should be configurable by CEB.	Both	K							
11.10.13.3		The call Centre software shall have a facility for Automatic diversion of message from the Call Centre Supervisor's desk to the CEB hierarchy as given above, if the complaints are not closed/attended within specified time as per CEB (Those specified times should be configurable by CEB) However, it shall be possible to escalate all the critical complaints like death/accident, etc. immediately to the respective officials (ES/AEE/CE) which can be configurable by CEB.	Both	K							
11.10.13.4	Customer request escalation	If the customer request is not resolved in a specified time period, then the request would be escalated to a higher level and customer request escalation alert would be generated for the concerned authorities.	Both	B							
11.10.13.5	User definition of 'escalation' authorities	The system will allow the user to specify the authority to which a request gets escalated if it is unresolved for a pre-specified period of time (also user-defined).	Both	B							
11.10.14	**Other Services**										
11.10.14.1	Complaint status enquiry	Status Enquiry - customers should be able to know the status of their complaint anytime by calling the CC center or through different touch points of CRM by providing the unique registration number/CRN/token number.	Both	K							
11.10.14.2	Special Payment Reminders	The system should be able to filter/generate a list of customers as specified by CEB to assign for calling/special communication through	Both	K							

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		call centers/CEB offices to remind outstanding dues of the bills.									
11.10.14.3	Customer request: Generation of Service Order post clearance of dues	Once payments have been received against the dues statement (update from collections), the system will issue a Service Order for the resolution of customer request.	Both	K							
11.10.14.4	Request handling: Assigning of responsibilities	The system will, on generating the Service Order, assign responsibilities and timelines for resolution.	Both	B							
11.10.14.5	Request handling: Service levels	The system will accept the Service Levels for different types of requests from authorized users as inputs from a centralized location.	Both	B							
11.10.14.6	Service Order dispatch for request resolution	Once a customer request has been logged, the system would send the necessary Service Order to the responsible authority for resolution of the request.	Both	B							
11.10.14.7	Work allotment	The system has to allocate the work to the field officer / in-charge for that activity to respond. The person should get the alert automatically.	Both	B							
11.10.14.8	Recording Response	The person allotted concerned shall execute the necessary instructions to attend the complaint and then record the response for the complaint.	Both	B							
11.10.14.9	Customer request status updating	After the customer request has been resolved, the system would be updated by the concerned personnel.	Both	D							
11.10.14.10	Tracking customer satisfaction	The system will be capable of seeking, inputting and tracking the customer's satisfaction on resolution of complaint.	Both	D							
11.10.14.11	Customer request cancellation	The system should have the provision where the customer can cancel his request.	Both	B							
11.10.14.12	New connection and other facilities	As the CRM is available at CSC and all other CEB offices, in case of the customer walks in with any request (New connection, CR, Extension/Reduction of Load, Change/Transfer of Name, Address correction, Change of Category, Disconnection & reconnection of	Both	K							

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		power, any adhoc scheme etc.), The system should be able to facilitate assisting the customer in registering the request through CRM by the CEB staff.									
11.10.14.13	Lead generation and marketing of services	Lead generation and marketing of services The above shall be possible through the CSC/ authorized personnel e.g. new payment modalities like direct debit facilities, KIOSK Machines, Bill payment through Credit Card, Cheque Deposit boxes etc. could be explained to the customers. The CSC/Authorized personnel should inform the customers regarding tariff or any new service provided by the CEB.	Both	B							
11.10.14.14	Closing of complaints	**Closing of issues/requests** Once the issue is resolved or the fault has been attended, the concerned Electrical maintenance staff in the field will update the status through CRM as well as mobile workforce management. Once the job is completed, or delayed the status should be informed through CRM to the customer and to relevant CEB officials as specified by CEB.	Both	K							
11.10.14.15	Customer requests log: Maintenance of a requests database	The system will keep a history of the complaints and also their status in a requests information database.	Both	K							
11.10.14.16	Customer request: Dues checking	The system should provide the flexibility of grouping customer queries into those that would be addressed even if there are pending dues against the customer and those that would not be addressed in case the customer has past dues.	Both	B							
11.10.14.17	Access to past billing data	The system should be able to access the historical consumer billing data to resolve the billing complaints.	Both	K							
11.10.14.18	Value Addition through CRM	The vendor should suggest value-added features through different CRM touch points for customers such as alerting any delay to attend to a breakdown, meter reading, any other inquiry and alerting consumers on special requirements etc. (Sending an alert to	Both	B							

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		the consumer when the meter reader is nearby.									
11.10.14.19	Customer Request Handling - Acceptance media	The system will be capable of receiving customer requests over other media like telephone, internet, IVR, fax, letters, through e-mail / registration through web site and mobile applications, etc.	Both	B							
11.10.14.20	Types of requests	The System should be able to handle all kinds of complaints which include - billing / other type / supply related complaints.	Both	B							
11.10.14.21	Customer requests log: Accepting requests with a unique CRN	The system would provide the facility to log all the customer requests with a unique customer request number (CRN).	Both	K							
11.10.14.22	Customer requests log: Definition of request types	The system would have reclassified types of requests which are accepted in the customer request form. The system will provide the user the flexibility to define different types of requests.	Both	K							
11.10.14.23	Customer requests log: Maintenance of a requests database	The system will keep a history of the complaints and also their status in a requests information database.	Both	K							
11.10.14.24	Customer request: Dues checking	The system should provide the flexibility of grouping customer queries into those that would be addressed even if there are pending dues against the customer and those that would not be addressed in case the customer has past dues.	Both	B							
11.10.14.25	Customer request: Generation of dues statement	For customers with outstanding dues, the system will generate a Dues Statement for them.	Both	B							
11.10.14.26	Customer request: Generation of Service Order post clearance of dues	Once payments have been received against the dues statement (update from collections), the system will issue a Service Order for the resolution of customer request.	Both	K							
11.10.14.27	Customer request: Clarification on Premises Found Locked (PFL)	At any point, the system should display the comment recorded by the meter-reader during the last 3 visits to the premises for PFL cases	Both	K							
11.10.14.28	Customer request: Non-credit of payments	Consumers should be able to be furnished tracking details of payments (e.g. cheques) which have not be credited against them.	Both	K							

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11.10.14.29	Request handling: Assigning of responsibilities	The system will, on generating the Service Order, assign responsibilities and timelines for resolution.	Both	B							
11.10.14.30	Request handling: Service levels	The system will accept the Service Levels for different types of requests from authorized users as inputs from a centralized location.	Both	B							
11.10.14.31	Service Order dispatch for request resolution	Once a customer request has been logged, the system would send the necessary Service Order to the responsible authority for resolution of the request.	Both	B							
11.10.14.32	Work allotment	The system has to allocate the work to the field officer / in-charge for that activity to respond. The person should get the alert automatically	Both	B							
11.10.14.33	Recording Response	The person allotted concerned shall execute the necessary instructions to attend the complaint and then record the response for the complaint	Both	B							
11.10.14.34	Customer request status updating	After the customer request has been resolved, the system would be updated by the concerned personnel.	Both	D							
11.10.14.35	Customer request resolution advice	After the customer request has been resolved, the system will subsequently generate a customer request resolution advice for informing the customer about the status of the request.	Both	D							
11.10.14.36	Customer status update	The system should be able to give customers the status of their request resolution on request.	Both	B							
11.10.14.37	Customer request escalation	If the customer request is not resolved in a specified time period, then the request would be escalated to a higher level and customer request escalation alert would be generated for the concerned authorities.	Both	B							
11.10.14.38	User definition of 'escalation' authorities	The system will allow the user to specify the authority to which a request gets escalated if it is unresolved for a pre-specified period of time (also user-defined).	Both	B							

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11.10.14.39	Proactive customer responses	The system should be capable of raising updates, such that people in the centralized cell can proactively respond to changes in customer complaint status. For instance in a new connection request the system should be able to update the status of the applicant when his application form has been approved. The centralized cell can then inform the customer over phone/ e-mail.	Both	D							
11.10.14.40	Tracking customer satisfaction	The system will be capable of seeking, inputting and tracking the customer's satisfaction on resolution of complaint.	Both	D							
11.10.14.41	Customer request cancellation	The system should have the provision where the customer can cancel his request	Both	B							
11.10.14.42	Analyzing customer complaints for patterns/trends	The system should be able to identify patterns/ trends in customer complaints. This can be repetition of a certain type of complaint, frequent complaints from a particular region, seasonal complaints etc.	Both	D							
11.10.14.43	Provision for entering check report	The batch in charge at each EEE/CE should be able to enter the details after inspecting the meter into the check report	Both	K							
11.10.14.44	Access to past billing data	The system should be able to access the historical consumer billing data to resolve the billing complaints	Both	K							
11.10.14.45	Calculation of revised bills	The system should have inbuilt logic (like average billing considering previous months data) for calculating the revised bills depending on the past billing information and the user inputs	Both	D							
11.10.14.46	Interface with meter testing division	The system should have interface with the meter testing division to know the status and other relevant details	Both	D							
11.10.14.47	Interface with billing system	The system should have interface with billing generation module to communicate the details of the consumers so that disputed amount can be adjusted in the next billing cycle	Both	B							
11.10.14.48	Call center operations	The system should be able to support call center operation for complaint handling	Both	B							
11.10.15	**CRM - Call Center**										

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11.10.15.1	Main features	• Easy to remember and easy to access Telephone number like 1987 with multiple lines • Available 24-hours a day, 365 days a year. • Multi-lingual if required (Sinhala, Tamil and English) • Single touch-point for no supply, billing complaints, fire & shock complaints, all other queries and assistance etc.	Both	K							
11.10.15.2	Call Center Features	The system should be able to filter any call according to the guidelines provided by CEB, forward a call respective to a category to a particular location/phone operator according to the guidelines provided by CEB	Both	K							
11.10.15.3	Seating capacity	The seating capacity of the CCC to be defined as per the requirement and service standards of CEB.	Both	B							
11.10.15.4	Call center information	All the information which is generated & maintained in the CC Centre itself such as call center performance, voice recording etc., and the local database will be accessed. All other information like billing, collection, other customer service functions will reside over central server.	Both	K							
11.10.15.5	Use of incoming as well as outgoing calls	The CC Centre will provide facility not only for receiving calls, but also outbound calls. The Agents would be asked to make outbound calls for informing customers about the various power supply positions, payment reminders etc.	Both	K							

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11.10.15.6	PBX features	The PBX system on the incoming trunk side should support both Analog and Digital lines (ISDN PRI). The capacity on the trunks and extensions shall be as per the size of the call center. The PBX should have all features of an advanced PABX System and should be CTI and IP enabled. The PBX should have the following features, Call Transfer, Conference, Call Pickup, Call Monitoring, Call Recording, Call Hunt Groups, Direct Inward System Access (DID), Extension Dialing, Voice Messaging, and ACD (Automatic Call Distribution). The ISDN-PRI interface must support the following features - • Call-by-Call Service Selection • Channel Negotiation • Calling party number (ANI) • Called party number (DNIS) • Billing Number (BN) • Non-Facility Associated Signaling (NFAS) • D-Channel Backup • Administration Connections with Automatic Restoration Temporary Signaling Connections.	Both	K							
11.10.15.7	Ability to support DNIS, ANI & CLI features	Call Switching System should also support standard features like DNIS, ANI and CLI.	Both	B							
11.10.15.8	Server or switch based PBX system	The PBX system can be either switch based or server based system.	Both	B							
11.10.15.9	ACD features	Automatic Call Distributor (ACD) distributes incoming calls to a specific group of terminals used by agents. ACD is a feature used to route calls in a call center environment to the appropriate agents, based on factors such as time available, skill sets and priority levels.	Both	K							
11.10.15.10	System capacity to generate Call Detail Records	The system must be able to generate Call Detail Records (CDRs). CDRs must be generated for both incoming and outgoing calls on trunk facilities, The Bidder must describe: • The information provided in a CDR.	Both	B							

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		• The methods for outputting CDR data. Buffering must be provided in the event that the external call accounting system, or storage device, is unable to accept the CDRs for any period of time. How many CDRs can be buffered? • If the system has the capability to provide a printed listing of CDRs as they are output. • The Bidder must provide samples of Call Detail Records.									
11.10.15.11	Call Delivery to Call Center Agent's by ACD	Calls must be delivered to Call Center Agents in First In / First Out order (order of arrival queuing). Calls must be distributed to the "most-idle" Call Center Agent. The Bidder must describe the algorithm for selecting the "idlest" Call Center Agent.	Both	K							
11.10.15.12	Priority Queuing facility in ACD	It is desirable that calls to certain trunk groups or to certain dialed numbers be assigned a higher priority than other calls and that calls which overflow from another split be queued ahead of other calls. The Bidder must describe this process.	Both	B							
11.10.15.13	Call Queuing facility in ACD	ACD systems place calls into a queue, where they are typically handled in the order received.	Both	B							
11.10.15.14	Handling of calls by ACD	ACD systems may handle routing of inbound or outbound calls, or in some cases a combination of the two.	Both	B							
11.10.15.15	ACD ability to support priority handling etc.	ACD system should support skill base routing, multiple group support, priority handling and Queue status indicator.	Both	D							
11.10.15.16	Monitoring in ACD	The system should provide supervisor assistance and monitoring	Both	K							
11.10.15.17	Real time MIS of ACD status	Real time remote monitoring of ACD queue, agent status, and no call answered, abandoned etc.	Both	B							

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11.10.15.18	ACD system's ability to announce average wait time & music to customer during hold up	Queue Specific Delay Announcement / Music For basic ACD applications, the customers must be provided a queue specific (different for each queue) delay announcement if a Call Center Agent is not immediately available to answer a call. If a Call Center Agent is not available to handle a call, the call must queue for the next available Call Center Agent. The system must be able to announce the average wait time to the caller. The system must offer the caller the option of opting out to automated information (i.e. IVR) or call back facility. The system must be able to provide music and announcements on hold until the call is answered. The Bidder must describe how the proposed system meets these basic announcement requirements.	Both	B							
11.10.15.19	Monitoring of Call Center Agent's availability/non availability	Tracking Call Center Agent Activities by Reason Codes/Automatic Availability/Wrap Up Work. In order to give call center managers detailed information about how Call Center Agents spend their time and to develop precise staffing forecasting models, Call Center Agents must enter a numeric code that describes their reason for entering non-available work modes or for logging out of the system. At least 9 codes must be supported. Call Center Agent sets must have the ability to be automatically available to take the next call upon disconnecting from the current call. Call Center Agent sets must have the ability automatically to go into a wrap- up, unavailable work state at the completion of a call. Call Center Agents must also be able to temporarily remove themselves from the call queue to perform call related tasks. Time spent in this work state (e.g., wrap up, lunch, restroom, etc.) must be included in the individual Call Center	Both	B							

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		Agent and group statistics. In addition, the supervisor must be provided with a visual real time indication of Call Center Agents spending time in this state.									
11.10.15.20	System ability to permit Call Center Agent to activate alarm in case of emergency	Emergency Notification The system must allow Call Center Agent positions to activate an alarm notifying a supervisor of an emergency condition. The system must also have the ability to automatically record the trunk number and/or calling number if provided, the Call Center Agent position involved in the emergency, and to activate a recording of the conversation with recording equipment provided.	Both	B							
11.10.15.21	System capability to permit Call Center Agent to take help from supervisor to deal with an active call	Call Center Agent Request for Assistance The Call Center Agent set will have the ability to directly signal the supervisor when the Call Center Agent requires assistance handling an active call. Answering of Call Center Agent requests for supervisor assistance must be provided on the supervisor's set with special audible and visual notification; so that the supervisor may readily identify that a Call Center Agent requires support. The LCD or alphanumeric display must provide identification of the calling Call Center Agent to the supervisor without referring to the supervisor terminal. To directly signal the supervisor when the Call Center Agent requires assistance handling an active call. Answering of Call Center Agent requests for supervisor assistance must be provided on the supervisor's set with special audible and visual notification; so that the supervisor may readily identify that a Call Center Agent requires support. The LCD or alphanumeric display must provide identification of the calling Call Center Agent to the supervisor without referring to the supervisor terminal.	Both	D							

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11.10.15.22	Supervisors as Call Center Agent's during busy periods	Supervisors As Call Center Agents Supervisors must have the capability to receive ACD calls during busy periods.	Both	B							
11.10.15.23	Supervisor ability to logout Call Center Agent's from its terminal	Logout of Call Center Agents by Supervisor Supervisors must be able to logout Call Center Agents from their own "soft phone" or supervisor terminal without having to go to the Call Center Agent's desk. They must also be able to log a Call Center Agent out from a remote location.	Both	D							
11.10.15.24	System ability to enable monitoring a Call Center Agent's conversation	Monitoring Call Center Agent Conversations T The supervisor must be able to monitor a Call Center Agent's conversation for training or administrative purposes from the supervisor set, without plugging in to the Call Center Agent's "soft phone" set. The proposed system must also meet the following requirements: • Both silent monitoring and tone indication to the Call Center Agent during monitoring must be available. • The system must offer a "soft phone" or supervisor terminal capability for monitoring directly at the Call Center Agent's "soft phone" or supervisor terminal for "ride along" Call Center Agent training. • The "soft phone" or supervisor terminal must be equipped with two jacks in order to permit a supervisor to plug into the "soft phone" set for training purposes.	Both	K							
11.10.15.25	Call Center Agent set ability to view call center MIS regarding ACD statistics on real time basis	Access to Real Time ACD Statistics Each Call Center Agent set must have the ability to view a customizable list of Call Center MIS information on the digital display of the Call Center Agent "soft phone". This information shall be individually configured or selected from a pre-defined list of MIS templates such as current split/skill performance, application performance, and individual performance status. Call Center Agents and supervisors must be notified via the	Both	K							

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		"soft phone" or supervisor terminal indicators when thresholds are reached for individuals and groups. The capability must also exist to notify via email. Call Center Agents must be able to receive continual real-time display updates of ACD statistics via their display including such information as a comparison of individual performance to group averages or objectives. The display of ACD statistics on the "soft phone" or supervisor terminal must include, but is not limited to, the ACD calls, calls abandoned, calls waiting, oldest call waiting, average speed of answer, average time to abandon, percent in service level, Call Center Agents staffed, Call Center Agents available, Call Center Agents on ACD calls, Call Center Agents on extension calls, calls handled by Call Center Agent, calls completed by Call Center Agent.									
11.10.15.26	Provision of read/view only access to CC Centre staff for various databases	The CEB shall provide view only access to various databases related with Computerized Billing, customer indexing and Asset mapping (if any). The agency shall be responsible for designing, procuring and installing necessary software and hardware for accessing the same.	Both	B							
11.10.15.27	System ability to provide real time monitoring of Call Center Agent's to supervisor	Real Time Monitoring Reports The system must support real time monitoring of Call Center Agents, split/skill groups, trunk groups, and applications. Reports must be available in both text based and full color, graphical formats.	Both	D							
11.10.15.28	System ability to support call overflow rerouting	**Call overflow** The system should support call overflow routing e.g. if there is a queue in particular ACD group and another group is sitting idle, system should be able to transfer the calls to another group based on the settings defined by the administrator.	Both	K							

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11.10.15.29	System ability to rate Call Center Agent's on various parameters	Skill Assignment and Preference Levels The proposed system must be able to assign individual skills to each Call Center Agent (i.e. bilingual, training or experience level, product knowledge, customer knowledge, etc.). Individually assigned skills must be able to be ranked and rated in terms of priority, proficiency or preference • the maximum number of simultaneous skills queries and routing requests that can be executed at a time • how call processing is affected with a server or link failure • backup and recovery options	Both	B							
11.10.15.30	System ability to route calls depending on skills of Call Center Agent	Skills-based Routing The proposed system must be able to match the requirements of the caller to a Call Center Agent with the skills to handle the call. The Bidder must explain how this is accomplished. The system must assure that the Call Center Agent will receive a waiting call for his/her primary assignments even if a secondary skill assignment call has been waiting longer. Alternatively, on a Call Center Agent by Call Center Agent basis, the system must provide that a Call Center Agent always receives the highest priority, oldest call waiting for any of the Call Center Agent's skill competencies on a "greatest need" basis.	Both	B							
11.10.15.31	System ability to modify Call Center Agent skills dynamically	Changing Call Center Agent Skill Assignments The ability must be provided to add or remove Call Center Agent skills dynamically while Call Center Agents are on calls. The system must provide the capability for Call Center Agents to be logged into one or more splits/skills when being moved between Call Center Agent groups.	Both	B							

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11.10.15.32	Call Center Agent ability to login on any soft phone	Virtual Seating or Free Seating The proposed system must support the concept of virtual seating. Call Center Agents can log-on from any "soft phone" instrument within the system. Call Center Agents on the proposed system will be logically defined, rather than requiring a "soft phone" extension and termination. Each Call Center Agent and supervisor on the system must have an individually assigned log-on identification number which permits individual statistics to be collected by the ACD management information system. Multiple log-on events by the same individual during a work period at different terminals must be tracked individually as one "shift".	Both	D							
11.10.15.33	System to have integrated auto-attendant routing	**Integrated Auto-Attendant** The system must provide integrated auto-attendant routing functionality such as "If you know the extension of the party you wish to speak with, you may dial it now". The system must have the capability to prompt customers for the type of service they desire. The proposed system should support these capabilities internally within the proposed Switching/ACD system even without requiring an external IVR.	Both	K							
11.10.15.34	System ability to provide announcement to customers in queue	**Announcement Hardware/Capacities** The system must provide customers in queue with a variety of announcements. This capability must be inherent within the ACD architecture avoiding the need for external announcement devices and/or IVR servers.	Both	K							
11.10.15.35	Flexible announcement features in system	General Announcement Features The system must be able to force customers to listen to an entire announcement before being connected to a Call Center Agent. Alternatively, the system must be able to immediately connect a call to the Call Center Agent if a Call Center Agent becomes available before an announcement is completed. The supervisor must have	Both	B							

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		the capability to control which method is being used.									
11.10.15.36	Call Identification Tag facility	**Unique Call Identification Tag** A unique tag must be associated with each call when it originates and remain with the call throughout a multi-site network to facilitate cradle to grave call tracking.	Both	K							
11.10.15.37	Call Routing capacity of ACD	**Call Routing Commands/ Capacity** The system must promote an autopilot approach to call routing by providing routing tables of selectable commands and conditions and using Standard English commands.	Both	K							
11.10.15.38	Database maintenance for call routing	Integrated Routing Database Tables A database must be maintained in the system for specialized routing purposes (e.g., a table of priority customers which would receive priority routing and possibly queue to a dedicated Call Center Agent).	Both	B							
11.10.15.39	Call Routing Comparator facility in ACD	**Call Routing Comparators** Comparison operators such as "less than", "greater than", etc., must be available for constructing vector routing commands.	Both	D							
11.10.15.40	Wildcard Digit matching capability in Call Router	**Wildcard Digit Matching for Call Routing** The system must be able to match ANI or other digits in routing tables using wild card sequences that would identify and route specific calls to a specified destination. Bidder must describe type of wild card digit.	Both	D							
11.10.15.41	General functionality of Call Center Agent & supervisor functionalities	General Functionality The Call Center Agent and supervisor terminals must use open architecture state- of the art technology and be widely used, generally available and standard equipment. Bidder will provide the desktop PCs/ workstations and headsets to interface with the proposed solution. The Bidder must offer ACD "soft phone" and supervisor terminal functionality that is controlled	Both	K							

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		by a PC-based Call Center Agent interface.									
11.10.15.42	Call Center Agent station technology	Call Center Agent Station Bidders must propose "soft phone" technology for the Call Center Agent station. The proposed solution must integrate with PCs provided by Bidder. PC specifications are specified in hardware section. As an option, the Bidder must describe available touch screen operation for Call Center Agents.	Both	K							
11.10.15.43	Call Center Agent ‘soft phone’ support abilities	Call Center Agent Headset/Handset Operation The Call Center Agent "soft phone" set must be able to support both a Call Center Agent headset and a Call Center Agent handset. There must be volume controls for each. The Bidder has to provide soft phone with amplifier and head set.	Both	D							
11.10.15.44	Incoming call announcement capability of system	Incoming Call Announcement The system must provide audible and visual whisper indication prior to the automatic connection of an ACD call to the Call Center Agent. For Call Center Agents that handle calls for multiple applications, a whisper must indicate what type of call is arriving so that the Call Center Agent can greet the caller appropriately. The "soft phone" must also display this information to the Call Center Agent before delivery of the call.	Both	D							
11.10.15.45	Call Hold, Transfer & Conference features of Call Center Agent & Supervisor soft phone	Hold, Transfer & Conference Features A dedicated, fixed feature button, for each function, must be provided on the Call Center Agent and supervisor "soft phone" set. The system must have the capability for Call Center Agents and supervisors to set up conference calls for a minimum of 4 parties (including the Call Center Agent supervisor) without requiring attendant assistance.	Both	B							
11.10.15.46	Personalized Greeting recording capability of Call	Call Center Agent Personalized Greeting The system must offer the capability for Call Center Agents to record	Both	B							

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	Center Agent soft phone	personalized greetings that can be played to the caller prior to connection to the Call Center Agent.									
11.10.15.47	Call Center Agent phone system ability to have & accept event codes	Entering Event Codes (Wrap Up) Call Center Agents must be able to enter codes to identify events that occurred during a call and to enter wrap up codes before becoming available for another call.	Both	B							
11.10.15.48	Call Center Agent phone system ability to have & accept call identification codes	Entering Call Identification Codes Call Center Agents must be able to associate other types of identifying information, such as customer code, to particular calls. The system must support up to sixteen digits per code.	Both	K							
11.10.15.49	Audio fault reporting & tracing ability	Audio Difficulty Trace When a Call Center Agent experiences static or a noisy trunk, the audio difficulty must be easily reported and traced.	Both	D							
11.10.15.50	System ability to route calls based on DNIS	**Routing Based on DNIS** The system must be able to route calls based on Dialed Number Identification Service (DNIS).	Both	K							
11.10.15.51	System ability to route calls based on ANI	**Routing Based on ANI** The system must be able to route calls based on Automatic Number Identification (ANI).	Both	K							
11.10.15.52	System support for network provided customer information digits	**Support for Network Provided CINFO Digits (Caller Information Forwarding)** The system must have the ability to collect caller entered digits (CED) and customer database provided digits (CDPD) supplied by the network in an incoming call's ISDN PRI setup message and provide routing based upon these digits.	Both	K							
11.10.15.53	System ability to divert calls to IVRS based on conditions	**Overflow Destinations** Calls must have the capability to be automatically overflowed to a voice response system based upon conditions in the call center including call volume and time of day.	Both	K							

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11.10.15.54	Ability of ACD system to request & collect customer information & route call	Route by Caller Prompted Information The ACD system must be able to request and collect information, such as a customer no, and then route the call based upon that information. The system must have the ability to prompt a caller for up to 12 fields containing up to 16 alpha/numeric characters of information.	Both	K							
11.10.15.55	Voice logger & CTI server	It should be Voice logger driven, CTI Server based Customer care Center with real time data update. It will act as an interface between the customer and the CEB operations in the entire supply related complaint handling processes. It should use a wide variety of latest technologies to allow them to manage the large volumes of work that need to be managed by the customer care Centre. These technologies will ensure that agents are kept as productive as possible, and that calls are queued and processed as quickly as possible according to the desired levels of service.	Both	D							
11.10.15.56	High-Tech facilities	The centralized Customer Care Center consists of the following components. The components shown are logical blocks, these components can reside on single server or span across multiple servers. 1. Call Switching Equipment (Private Branch Exchange) – Soft PBX / switch based PBX 2. IVRS (Interactive Voice Response System) / Fax on Demand 3. CTI (Computer telephony Integration) - Screen pop-up 4. Automatic Call Distributor 5. Dialer 6. Voice Logger 7. Reporting 8. Call Monitoring and recording 9. CTI Remote monitoring capabilities and remote logging facility 10. Customer Relationship Module (CRM)	Both	K							

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11.10.15.57	System ability to transfer call center data for other applications	**Exporting Data** It is desirable that call center data be exported to file or directly to other applications (e.g., other database systems, web servers).	Both	B							
11.10.15.58	System ability to provide access to MIS from remote	**Remote Access** Supervisors must be able to access the management information system and monitor and administer the call center from a PC at remote locations.	Both	K							
11.10.15.59	'Cradle to Grave' reporting by system	**Cradle to Grave Reporting** The system must support "cradle to grave" reporting which would reveal exactly what happened to a caller from the time they entered the system until the time they hung up, and everything in between.	Both	D							
11.10.15.60	System ability to support call record queries via web browser	**Web Browser Interface** The system must support customized queries of detailed call records via an industry-standard Web browser and/or graphical user interface.	Both	B							
11.10.15.61	Long term record storage	**Long Term Storage of Detailed Call Records** The system must provide for long-term storage of detailed call history records.	Both	B							
11.10.15.62	Comprehensive Historical Reporting	Comprehensive Historical Reporting Historical reports must be available for Call Center Agents, split/skills, trunk groups, and applications in interval, daily, weekly, and monthly formats. Both graphical and text based formats are required. It is required that reports be printed on demand and on a scheduled basis. Historical data must be stored. Real Time reports must update automatically approximately every 3 seconds or less.	Both	D							
11.10.15.63	Graphical PC based reporting	**Basic Graphical PC based Reporting** The system must provide real-time graphical reporting (bar-chart, pie-char).	Both	B							
11.10.15.64	LAN connectivity of Call Center Agent PC's for remote MIS access	**Local Area Network Connectivity** Supervisors must have access to the management information system via a PC connected to a local area network using TCP/IP protocol.	Both	K							

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11.10.15.65	Exceptions & threshold reporting by system	**Exceptions and Thresholds** The following reports capabilities are required : • Real time reports displaying color threshold indications for items that are exceeding desired levels such as number of calls in queue or oldest call waiting time. • Definable exception categories and thresholds. Bidder must fully explain if thresholds can vary between different splits and applications or are they set for the entire system. • Supervisors receive notification of all defined exceptions. • Recent exceptions be displayed on demand.	Both	B							
11.10.15.66	Backup process performance	**Backup Process** Backups must be performed scheduled or on demand.	Both	K							
11.10.15.67	Online Help	**Online Help** The system must provide Browser/GUI-based online Help.	Both	K							
11.10.15.68	Alarm in event of problem or error	**Alarms and Error Conditions** The system must generate an alarm and notify service personnel in the event of system problems or errors.	Both	B							
11.10.16	**CRM - IVRS**										
11.10.16.1	IVRS with ASP features with text to speech & text to fax capabilities	**Interactive voice response system**, or **IVRS** This is a computerized system that should allow a telephone caller, to select an option from a voice menu. The system should play a pre- recorded voice prompts to which the person presses a number on a telephone keypad to select the option chosen, or speaks simple answers such as "yes", "no", or numbers in answer to the voice prompts.									

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		Advanced Speech Processing (ASP). The multiple advanced speech processing technologies (large vocabulary recognition, natural language understanding, speaker verification, and speech-to- text) may be required as features. The ASP technology should be provided with software that runs on an open, industry standard subsystem platform under supplied OS. The platform must permit qualified third party developers to integrate additional ASP technology and functions. ASP shall support English and local language. The latest system of natural language speech recognition shall be used to interpret the questions that the person wants answered. Latest innovations of its ability to speak complex and dynamic information such as an e-mail or any other information using **Text-To-Speech (TTS)**, which is computer generated synthesized speech, shall be used. Real voices are used to create the speech in tiny fragments that are glued together before being played to the caller. Text to FAX capabilities.	Both	K							
11.10.16.2	IVRS system features	IVR systems shall generally be used at the front end of call centers to identify what service the caller wants and to extract numeric information such as electricity payment dues, bill payment status as well as provide answers to simple questions such as completion of fuse off calls or allow pre-recorded information to be heard. The IVR Systems should be properly designed so as to connect callers to their desired service promptly and with a minimum of fuss.	Both	K							

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11.10.16.3	Scalability of IVRS	The IVR System should be scalable as per the locations of customer base. All the calls received at the call center shall first land on the IVRS, the system shall welcome the user and present a voice menu to select the service he requires and also key in and retrieve information from the system. The IVRS shall be CTI supported so that all the information entered by the caller on the IVRS is to be passed to the customer service representative screen as popup.	Both	K							
11.10.16.4	IVRS capability to handle variable call volume	The average call duration is 2 minutes; The IVR system must be able to accommodate fluctuations in call volume.	Both	B							
11.10.16.5	Response Time of IVRS	**Response Time/Performance/Availability** The response time must be no more than 2.0 seconds. The worst-case IVR response time (not the average) must be measured with all phone ports simultaneously speaking different messages (different or the same). The response time must be measured using the following two scenarios: • The time the user completes input until the start of voice output is heard; and • From the time a host message is received until the start of voice output is heard. • The requirement is for the IVR system to be available in a 24 X 7 X 365 for general narrative information and customer billing information.	Both	B							
11.10.16.6	General Architectural Requirements of IVRS	General Architectural Requirements Although the Bidder will propose the general architecture of the system, there are certain overall aspects of the system that the CEB considers important to include. These are: • For effective use of memory capacity, the system must permit multiple applications to use common speech files to handle items unique to an application along with common items.	Both	B							

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		• The IVR system must be built employing open industry standards and widely-used and generally available components and software • The system must be a client– server architecture that is scalable. • The proposed IVR system must interface with the Customer care systems and database.									
11.10.16.7	Redundancy of connections for tele-communication & LAN network	Redundancy/Alternate Call Routing The IVR system must have redundant connections to both the telecommunications network and the Local Area Network (LAN) interfaces. These connections must have failover capability to support both voice and data traffic. These failover connections are to ensure redundancy in the event of failure within the network servicing the IVR, and for the LAN providing the data from the back-end systems. Each of the links must be capable of supporting the emulation of multiple terminals. Recovery from power interruptions and system problems must occur automatically. The system must include provisions to monitor all centers 24 hours per day, 7 days per week and the capability to conduct online, on-demand and routine diagnostics to determine general status of the IVR and its applications without interfering with service. The telephone connections required for this purpose has to be arranged by the bidder and cost of the same shall be reimbursed by the CEB in actual.	Both	K							
11.10.16.8	Processor & system standards for IVRS system	To ensure that the proposed IVR platform can support growing and changing needs, the bidder shall provide a platform based on an industry standard processor and operating system. • The kernel of the operating system must not be modified or use proprietary drivers. • The system must be a modular design	Both	K							

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		to support expansion and enhancement to major components of the IVR system.									
11.10.16.9	Menu tree complexity of IVRS system	IVR Menu Tree Complexity Based on the business process requirement the bidder has to design menu tree structure. The menu structure should not be more than 4 levels with 4 to 5 options per level. Each of the IVR system's menu options will need to be reviewed with the CEB prior to IVR development to ensure that all business functions are implemented as needed.	Both	B							
11.10.16.10	Integration of IVRS with Call center networks	IVR Data Base Interfaces The required method of connectivity is to integrate the proposed IVR to networks located at CC center with the master database of the CEB This connectivity should be through a single point, with redundancy provided through 2 connections at the single point.	Both	B							
11.10.16.11	General Functionality of IVRS system	General Functionality The IVR must be designed with the following parameters to manage / limit the following call transaction and duration characteristics: • total transaction (call length) • individual message input (response to a prompt) The parameters must be configurable by the Bidder and CEB with no interruption of production applications running on the system.	Both	K							
11.10.16.12	IVRS functionality	INTELLIGENT CALL ROUTING REQUIREMENTS If it becomes necessary to shut down an IVR application, the system must be capable of providing an announcement to the caller. CEB must be able to take all lines out of service after the completion of the call in progress on	Both	K							

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		each line. This must be initiated by console command or host command. The IVR system must be able to automatically restart following a power failure. When the host systems are unavailable, the IVR must be capable of responding to incoming calls in various different ways. First, it must offer the capability to answer incoming calls and announce either "Information not available at this time" or "System unavailable" (as examples). Secondly, the system must have the ability to make all ports appear busy. It is desirable to have the system's response to this condition be controlled by the application software, rather than defined at the system level. The following additional functionality is required when a host or IVR application is unavailable to the caller: • Ability to directly route all incoming calls to the Call Center Agents for complaints handling • Ability to route incoming calls to a Call Center Agent when the Customer has difficulty in accurately inputting their customer no. • Ability to route incoming calls to Call Center Agent when the data server or an IVR application is down during business hours and the Customer cannot access specific information during an Information Inquiry.									

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11.10.16.13	Graphical tool for monitoring & Reporting on real time/on demand basis	Monitoring, Statistics and Reporting Each system must provide a graphical tool for supervisors, managers and system administrators for real- time monitoring of the system. CEB requires ad hoc reporting, upon demand. The system must include an administration or management tool for local and remote monitoring and management of every component of the IVR system. The monitoring tool must allow for immediate or progressive shutdowns and for shut down of single or multiple telephone lines, host connections, processors, applications of the entire system. The management tool must be secure from unauthorized users and available to one or more administrators concurrently. The management tool must be accessible via remote access. At minimum, reporting features must capture all of the following criteria and be available on-line, in real time: • Ability to generate traffic and performance reports online on a daily, weekly, monthly and quarterly basis. • Application statistics must be provided on an event basis and accumulated by specific applications in the IVR and by Customer ID. • Application statistics must be provided showing the number of times a Customer is transferred to a Call Center Agent during an Information Inquiry transaction. • Report information to include downtime, system usage by event script application, calls aborted, average length of call, busy hours, average call hold time by script application accessed. • Cumulative data to the previous hour must be available at the half-hour. • System capability to permit automatic scheduling of certain routine tasks at specific intervals. This would include report generation, data collection, and	Both	K							

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		transfer or scripts for administration. A log file provided to review activities. • The reporting system must track historical and real-time information. The reporting system must be capable of creating, saving and printing both standard and customized reports. The real time monitoring and reporting must be accomplished in a windowing environment. Monitoring and reporting must include security features to ensure access only by authorized personnel. • Common monitoring statistics across all systems include call volumes, IVR uptime, utilization, billing, max/min call usage, average length of call, average queue depth, average hold time and logging (for legal traceability).									
11.10.16.14	IVRS announcement changes	The bidder shall keep provision for making changes in the IVRS announcement as per the request of CEB within two days.	Both	K							
11.10.16.15	IVRS ability to respond to each call	IVR will be responsible to answer each and every call and multilingual / multilevel option to be provided to the caller based on the dialed number (DNIS).	Both	K							
11.10.16.16	IVRS ability to provide user defined rule-based information	IVR should provide user defined rule-based routing e.g. IVR can automatically play payment balance, energy used etc. in the current month based on the data captured (CLI) or entered by the subscriber.	Both	B							
11.10.16.17	IVRS ability to route call to requisite ACD group	IVR will route the call to the appropriate ACD group e.g. billing enquiry, fuse off complaints, new payment schemes, technical support etc.	Both	K							
11.10.16.18	IVRS ability to present customer dialing details to ACD	IVR should also capture customer's dialing details and presenting them to ACD or CTI directly to make routing of calls easier by identifying the calls i.e. by identifying the customers from DNIS, CLI, ANI or internal calls etc.	Both	B							
11.10.16.19	Integration of other voice related technologies	Other voice related technologies shall also be integrated to IVR system.	Both	D							

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11.10.16.20	IVRS (all applications) performance testing by bidder	**a) Performance Testing** Because the Bidder will be delivering hardware and software across all applications, the Bidder must provide performance testing for each application before full acceptance of a system by Purchaser. **b) Testing, Diagnostics, and Monitoring** The Bidder must develop, implement and install the new IVR systems. The hardware, software and developed application must be tested prior to full production implementation. The Bidder's must complete the installation and provide pre-installation site preparation to ensure proper environments and adequate space is available for the IVR. The Bidder must ensure that the system is fully integrated with existing database server and equipment. The Bidder is required to perform extensive testing, based upon the requirements for each application, including but not limited to Bidder testing, and acceptance testing. These tests will include load testing, and verification that the application works at each location. Testing must include hardware, software and application full integration and systems testing, stress testing, post implementation testing and parallel testing, where appropriate. The Bidder is responsible to establish the testing environment. The Bidder must coordinate with Purchaser for transition from the existing systems if any to the new systems without interference with production systems. Adequate reporting must be available to allow both the Bidder and Purchaser to measure the system's performance accurately under defined test conditions and in defined environments. The Bidder must develop and submit a Test Plan, including resource requirements and schedules, for complete testing of each of the	Both	K							

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		applications, with test criteria to support all hardware and software performance requirements, IVR system features, interfaces, and architectural, communications and security requirements. The Bidder must include a disaster recovery procedure to insure that the systems are always available. The Test Plan must include the intended plan and justification for the chosen testing environment(s) throughout the entire testing lifecycle. Contingency plans must be defined in the event the Test Plan cannot be carried out, as initially planned. Purchaser must approve each segment of the Test Plan before testing begins.									
11.11	**MIS - Common Dashboard**										
11.11.1	Integration of evidence based decision making	The system should be able to integrate the evidence based decision making from the following sub modules but limited to, such as: Billing System; Metering System; Energy Audit, MDMS and CRM.	Both	K							
11.11.2	Event and Incident management functionalities	The system should be able to provide information and decision support tool for Event Management and Incident Management functionalities that includes the following, but not limited to: Incident Management; Alarm Reporting; Alarm Policies and Business Logic Administration; Standard Operations Procedures (SOP); Events and Directives control; Representation of Historical Alarm Handling for evidence-based policy; and Debriefing tool for the Management to explain to the Engineers.	Both	B							
11.11.3	Mobile application support	The system should be able to support the Field Responder Mobile application and provides the Workforce Management to resolve incidents on the ground and Resource & Route Optimization for Field workers to optimize resolution time.	Both	K							

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11.11.4	Customizable display	The system should be able to provide the functionalities, such as: Integrated User Specific & Customizable Dashboard; GIS Display that Locates and traces spot billing and consumer location devices on the map; and Operational picture of Utility wide Spot billing enabling information sharing in real time between different users filtered according to predefined organization hierarchy.	Both	B							
11.11.5	Integration of components	Ability to integrate the Components using direct feeds, dashboards and sharing of alerts/ actionable inputs.	Both	B							
11.11.6		Ability to integrate the Components using Sensor based or API based integration methodologies and further sharing of alerts/ actionable inputs will take place. MIS Dashboard further allow departments to gather information, make decisions, act, communicate, and cooperate with one another in the accomplishment of a common goal.	Both	K							
11.11.7		Ability to integrate the Components using Sensor based or API based integration methodologies and further sharing of alerts/ actionable inputs will take place. The system shall support accomplishment of a common goal the departments in implementing and operating the solutions either directly or through the SI.	Both	B							
11.11.8	Key objectives and functionalities of the Common MIS Dashboard or Command Centre	Ability to provide department wise KPI Monitoring to measure progress against targets.	Both	B							
11.11.9		Ability to provide users with SOP's, Notifications and Alerts of Incidents with Geographical location which will enable the CEB to respond dynamically and make operations.	Both	B							
11.11.10		Ability to provide Role based access control to provide access to view/edit master data according to department hierarchy.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.11		Ability to provide command and control across all functions to drive actions towards a common goal.	Both	B							
11.11.12		The system must provide facilitation of War room during emergencies with people from various departments coming together to attend to an emergency.	Both	B							
11.11.13		Ability to provide Inter-department coordination for faster issue resolution and clearances to speedup works.	Both	B							
11.11.14		Ability to provide data correlation and analysis to alert on certain events, identify exceptions, observe patterns and predict trouble.	Both	B							
11.11.15		Ability to provide data visualization for easily grasping critical information faster than usual.	Both	B							
11.11.16	Basic features of the Common MIS Dashboard or Command Centre	Ability to provide insights to all decision makers.	Both	B							
11.11.17		Ability to display an executive dashboard with KPIs to monitor various department-level dashboards by analyzing data.	Both	B							
11.11.18		Ability to provide a single consolidated view to help manage multi-vendor environments and supporting infrastructure.	Both	K							
11.11.19		Ability to integrate with the Automated workflow management system of the ERP.	Both	K							
11.11.20		Ability to provide Comprehensive Solution for Reporting	Both	D							
11.11.21		Ability to club the Mobile Workforce Management to enable Actionable Intelligence.	Both	B							
11.11.22		Ability to provide data correlation and analysis to alert on certain events/Incidents, identify exceptions, observe patterns and predict trouble.	Both	B							
11.11.23		Ability to provide real time analytics on live data streams and complex event processing to predict issues and be forewarned.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.24		Ability to provide Unified information access: Portal framework for unified access to information in any format like web content, email, documents, reports, maps, etc.,	Both	K							
11.11.25		Ability to provide Historical Reports to provide trend analysis	Both	B							
11.11.26		Ability to provide Status At-a-Glance to provide an overview	Both	D							
11.11.27		Ability to provide Graphical and Responsive Dashboards	Both	D							
11.11.28		Ability to provide Interactive visual analysis	Both	D							
11.11.29		Ability to provide Convergence of all applications used by CEB through an enterprise portal.	Both	B							
11.11.30		Ability to provide Live operational dashboards by integrating data from various departments.	Both	B							
11.11.31		Ability to provide surveillance on video wall with on screen alerts for important events	Both	D							
11.11.32	Geospatial functionality	The system should be able to provide Web based Geospatial View based on alerts and events from smart elements and incidents from the system will be represented as part of emergency-communications, and it can be used by a multiple operator simultaneously, and supports multi-departmental operation using Region assignments. Geospatial representation by using geospatial-mapping facilities provided through Google Maps, ESRI Aegis, and Bing. Support GML and KML standards for data representation and import.	Both	B							
11.11.33	Analytical functionalities and visualization	The system should be able to ensure that Users are self-reliant and can immediately access, analyze and visualize any data through simple user interfaces resulting in complex analysis.	Both	B							
11.11.34		The system should be able to provide Interactive visual analysis with drill through, lasso filtering, zooming, and attribute highlighting for greater insight.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.35		The system should be able to provide Out-of-the box library of interactive visualizations -- including geo-mapping, heat grids and scatter/bubble charts.	Both	B							
11.11.36		The system should be able to provide Specialized, visualization plug-ins deliver "the art of the possible" for advanced visualizations.	Both	B							
11.11.37		The system should be able to provide Extreme scale in-memory data caching for speed-of-thought analysis of large data volumes.	Both	B							
11.11.38		The system should be able to provide True mobile experience with support for native gestures and complete analytics capabilities, including content creation.	Both	B							
11.11.39	Reporting functionalities	The system should be able to ensure that the reporting capabilities must provide the entire continuum from self-service interactive reporting to high volume, highly formatted enterprise reporting.	Both	K							
11.11.40		The system should be able to ensure Intuitive web-based interactive reporting for business users.	Both	B							
11.11.41		The system should be able to ensure Rich graphical enterprise report designer for power users.	Both	B							
11.11.42		The system should be able to ensure Output in popular formats: HTML, Excel, CSV, PDF and RTF.	Both	K							
11.11.43		The system should be able to ensure In-memory caching for fast results.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.44	Mass notification	The system should be able to ensure Vigorous, easy to use mass notifications for communicating to CEB field and operation team during emergency situations. CEB Control center / CRM operation team can send Mass notification through Email, SMS, Push Notification, VOIP Call to the ground level team as well as operation team based on CEB hierarchy and department hierarchy within CEB. With mass notification, Utility administration keeps their Field team and employees, other stake holders informed during emergency situations. All the essential and vital alerts will reach your teams in minutes, ensuring safety, timely communications.	Both	B							
11.11.45		The system should be able to ensure Messaging for phone, email, SMS and Push notification to mobile.	Both	K							
11.11.46		The system should be able to provide a detailed dashboard and detailed message status.	Both	B							
11.11.47		The ability to send push notification to Android and iOS devices to access alerts.	Both	K							
11.11.48	KPI	The system should be able to provide a comprehensive KPI, which is an assessable value of improvement or deterioration of an organization and it displays how efficiently an organization is achieving vital business objectives.	Both	K							
11.11.49		The system should be able to assist with the help of data visualizations to streamline KPI dashboard complex data sets and provide users with understanding of current performance.	Both	B							
11.11.50		The system should be able to ensure that Dashboards and reports are built using visualizations, or different type of charts and offers visualization for monitoring the various KPIs across the departments with presentation of variations.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.51	Mobile Device Management functionalities	The system should be able to provide Mobile Device Management facility, which is a platform to manage, secure and track mobile devices. Mobile devices connect to enterprise applications and have access to or store confidential organization data. As mobile devices are used by more and more staff, it is imperative that these devices are managed and controlled.	Both	K							
11.11.52		The system should be able to provide features such as Device Registration and management; Enrolled Device tracking; Policy-driven device and profile management for security, data, and device features (Camera, Password Policy); Deploy policies over-the-air; Compliance monitoring for applied policies on devices; Role-based access control (RBAC) for device management; Securely wipe enterprise configurations from Enterprise wipe; Retrieve device information; Facilitate device-owner operations such as registering and unregistering devices, installing, rating, sorting mobile apps etc.	Both	B							
11.11.53		The system should be able to provide features such as Find & Track Devices; Track the routes of employees take to ensure they are using the most efficient routes when visiting the task locations and send them pinpointed locations via Maps; and also In case a phone is lost or stolen, it can be located.	Both	B							
11.11.54	Security features of Mobile Device management	The system shall support the following but not limited to, such as enforcing a strong password policy; Being able to remote lock phones when they are being misused; Wiping corporate data off phones when they are lost or the employee leaves the company; Deleting corporate email accounts and the associated attachments downloaded and stored on the phone; Deleting corporate Wi-Fi networks and associated credentials stored on the phone, etc.	Both	B							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.55		The system shoal be able to manage the applications on the devices by remotely installing apps; deploying Applications that connect to confidential Organization databases that cannot be made public; Generating reports show which apps are installed on each device, allowing easy monitoring for malware or inappropriate apps; The version of approved apps that employees have installed can also be seen in order to ensure apps are all up to date.	Both	D							
11.11.56	Mobile Application management	The system should be able to provide Mobile application management, which provides granular controls at the application level that enable administrators to manage and secure app data. Some of the basic features that the system should offer are mentioned below, but not limited to this list: -Supports app management -App approval process through a lifecycle -Provision and DE provisioning apps to enrolled devices -Provision apps to enrolled devices based on roles -Provision apps to multiple enrolled devices per user -Retrieve list of apps -Discover mobile apps through an Enterprise App Store -Self-provisioning of mobile apps to devices -Rating and sorting applications -Password resets	Both	K							

Serial No	Feature	Description	O = Ordinary, BS = Bulk Supply, Both ***	K /B/ D	Vendor's Response					Module (s) supported	Comments
					STDD	WA	MOD	TTP	NA		
11.11.57		Some of the additional features the system should be able to provide for Mobile Application Management are mentioned below: -Enterprise play Store -Adding/Deleting app -Version controlling -App Retirement -Implementing make-checker concept -Automatic Updates for policies -If policy is not defined the user should have the facility of selecting user or group for installing the App -Whitelist / Blacklist Public Apps	Both	D							
11.11.58		The system should be able to provide Mobile Data Security & App Store; Enforce built-in security features of passcode and encryption; Encryption of data storage; Supports App management for - Enterprise Apps for all platforms; App approval process through a lifecycle; Discover mobile apps through an Enterprise App Store; and Self-provisioning of mobile apps to devices.	Both	D							

Annexure B
FORM T10 - NON-FUNCTIONAL REQUIREMENTS SPECIFICATION

Note : Bidder shall submit supporting technical literature published by the Product Manufactures/ Software vendors to support the confirmed requirements. The supporting technical literature for Form T10 shall be numbered with the respective functional requirement number.

a. Example : Literature relevant to non-FRS 12.1.1 shall be numbered as; Annex T10-12.1.1

12. Standards and Technical Specifications

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.1	**Standard Requirements**			
12.1.1	The hardware platform must be based on state-of-art technology. Bidders must provide detailed descriptions of the hardware components they propose. All ancillary equipment required to support the proposed hardware must be indicated in their proposal. Technical data sheets relating to each hardware component must be provided.	Mandatory		
12.1.2	Application programs and server equipment must use industry standard programming languages and shall run operating systems using industry standard interfaces to these applications.	Mandatory		
12.1.3	Suppliers must supply the latest technology at the time of delivery. All software and technology components to be supplied must have been officially released for a period of not less than 12 months prior to the date of bidding.	Mandatory		
12.1.4	The systems and technologies to be implemented must be based on latest technology architecture with open interfaces and must be from reputable suppliers with availability of support, spare parts, consumables and replacements.	Mandatory		
12.1.5	**Environmental:** The Supplier must specify and certify tolerance levels of the equipment. The supplier must ensure that specifications especially are consistent with tolerance levels of all equipment. Unless otherwise specified, all equipment must operate in environments of: i. temperature between 10 - 40 degrees centigrade, ii. humidity at 10-90 percent relative humidity, iii. dust conditions of 0-40 grams per cubic meter of dust and iv. heat output of not more than 20 degrees centigrade	Mandatory		
12.1.6	**Safety:** Unless otherwise specified, all equipment must operate at very low noise level if any. All electronic equipment that emits electro-magnetic energy must be certified as meeting an internationally recognized standard, e.g., US FCC Class B or EN 55022 and EN 50082-1 or an equivalent, emission standard.	Mandatory		
12.1.7	**Manuals:** All hardware products and services supplied must be provided with appropriate manuals in the English Language. The Supplier must provide system documentation that is clear, concise, and presented in a professional manner both in hard copy and in electronic format. Modifications to hardware and system software carried out either by the manufacturer and/or supplier or third party contractors must be fully specified and documented for the Purchaser.	Mandatory		
12.1.8	Documents provided in electronic format must be accompanied by the licensed software utilities for reading the documentation. Hardware installation manuals and set-up procedures must include: i. System modifications ii. System protocol requirements iii. Conceptual Design	Mandatory		
12.1.9	System should support Database Authorization Management.	Mandatory		
12.1.10	System should support Application Development by the purchaser's IT application development User.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.1.11	System should support release control management.	Mandatory		
12.1.12	System should support menu management.	Mandatory		
12.1.13	System should provide application level workflow control to the user.	Mandatory		
12.1.14	System should facilitate having a central Audit trail lookup	Mandatory		
12.1.15	System should support Data Import/Export Management	Mandatory		
12.1.16	System should support Query Management	Mandatory		
12.1.17	System should support Report Development	Mandatory		
12.2	**Common Requirements**			
12.2.1	Flexible Report Builder for generating MIS reports. The system should have a report writing wizard that provides users with step by step menus and allows them to draw up simple reports	Mandatory		
12.2.2	Ability to print reports directly from the system.	Mandatory		
12.2.3	Ability to generate & print backdated reports.	Mandatory		
12.2.4	Ability to import & export data into preferred formats (MS Word, MS Excel, MS presentation, PDF, etc.).	Mandatory		
12.2.5	Ability to direct the report output as an e-mail attachment.	Desirable		
12.2.6	Ability to provide integrated simple query tool.	Mandatory		
12.2.7	Ability to define user IT policy at the time of first login, which the user has to read and accept.	Desirable		
12.2.8	Ability to configure user specific / definable "information screen" that could be shown when a user logs in.	Desirable		
12.2.9	Ability to provide an inbox of requests, calendar of scheduled tasks for the day on the "information screen" for the user based on the work flow assigned to the user.	Desirable		
12.2.10	System should support document tracking facility to trace the physical documents required for each process and to track the physical document (file) movement.	Desirable		
12.2.11	Ability to support for industry standard protocols.	Desirable		
12.2.12	Ability to interface with standard Middleware.	Mandatory		
12.3	**User Friendliness**			
12.3.1	Ability to define system default values & rules to minimize the data entry requirement.	Mandatory		
12.3.2	Ability to list down all predefined data items in every possible field, so that the data does not need to be remembered.	Mandatory		
12.3.3	Ability to provide on-line & off-line help.	Mandatory		
12.3.4	Ability to generate a meaningful error message rather than simply providing error codes when errors are processed. All error messages should also be fully explained in the documentation.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.3.5	Support for iOS, android and windows based mobile devices.	Mandatory		
12.4	**User Profile Management**			
12.4.1	Requires the user to provide valid identification for access to the System resources (i.e. terminals, transactions, data, report, screen, source programs and other support facilities).	Mandatory		
12.4.2	Availability of initial system generated random password.	Mandatory		
12.4.3	Ability to prompt the user to change the system generated password in the first login.	Mandatory		
12.4.4	Ability to prompt the user to change the password in the first login after password reset.	Mandatory		
12.4.5	Ability to parameterize automatic logoff of User ID after a certain time of inactivity. (Lock out time to be defined by the System Administrator).	Mandatory		
12.4.6	On successful login attempt, the system should display the last login time and date.	Mandatory		
12.4.7	Prevents passwords from being viewed or printed by any user including system administrators. (Passwords should be stored encrypted in application database, 128 bit or 256 bit encryption preferred)	Mandatory		
12.4.8	Ability to disable screen echo when password is keyed (i.e. do not display password).	Mandatory		
12.4.9	Ability to change password by the users (Real-time).	Mandatory		
12.4.10	Ability to parameterize the password complexity requirements.	Mandatory		
12.4.11	Current & historical passwords must always be one-way encrypted when held in storage for any significant period of time or when transmitted over networks.	Mandatory		
12.4.12	Ability to block re-assigning "X" number of previous Passwords. "X" should be parameterized.	Mandatory		
12.4.13	Generates reminders and forces the Users to change password after a predefined interval from the date of last-change. (Security Officer to define the no. of days for the password expiry)	Mandatory		
12.4.14	Ability to reset the password by system administrator in case of loss of password.	Mandatory		
12.4.15	Availability of "forget password" functionality which links with the user e-mail.	Mandatory		
12.4.16	Ability to define an expiry date for user profiles.	Mandatory		
12.4.17	Ability to temporarily or permanently deactivate the user profile.	Mandatory		
12.4.18	Ability to define the maximum number of unsuccessful login attempts per user at a given time.	Mandatory		
12.4.19	On completion of the maximum number of unsuccessful log-in attempts, the system should lock-out access to the user.	Mandatory		
12.4.20	Ability to unlock locked user profiles should be restricted to System Administrator(s).	Mandatory		
12.4.21	Ability to restrict concurrent logins for a single user profile.	Mandatory		
12.4.22	Ability to automatically deactivate user accounts if the user profile is not used for "X" number of days. "X" should be parameterized.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.4.23	Availability of extensive Log of all activities including system administrator activity logs which cannot be deleted even by a system administrator	Mandatory		
12.4.24	User profile should not be allowed to be modified if the user has logged into the system and the System Admin should be able to force logout the user and do the modification when required. The modification should only cover changes to the user profile except the User ID. After the profile modification, the user should be notified of the change at the very first login. Further there should be an option to view profile history.	Mandatory		
12.4.25	The Bidder shall provide workflow to comprehensively manage ERP & CIS user accounts, assignment of privileges, etc.	Mandatory		
12.4.26	The Bidder shall implement the workflow to manage creation of user account, assigning & modifying privileges and termination, disabling & enabling of user accounts with necessary approvals. The successful Bidder shall design the workflow as per the purchaser's requirement.	Mandatory		
12.4.27	The ERP & CIS solutions shall capture all the necessary information of an individual user such as privileges, access details such as time, date and frequency.	Mandatory		
12.4.28	The Bidder shall configure ERP & CIS solutions to generate reports related to user accounts and its privileges in module wise, across multiple modules in a user friendly manner.	Mandatory		
12.4.29	The ERP & CIS solutions shall capture the history of user accounts date of activation, changes made, enable & disable history, termination details, etc.	Mandatory		
12.4.30	The ERP & CIS solutions shall enable reallocation of a user license to a new user, without increasing the licensing usage by the purchaser.	Mandatory		
12.4.31	The User license shall have flexibility and reusability to cater to the staff movement requirements of the organization such as transfers, promotions etc.	Mandatory		
12.4.32	The solution shall support an employee, who needs to access multiple modules with a single user account.	Mandatory		
12.4.33	The User authentication shall be done by the Active Directory, such that the Bidder shall do the necessary integrations.	Desirable		
12.5	**Access Control**			
12.5.1	Ability to create, modify, deactivate user access groups.	Mandatory		
12.5.2	Ability to define access privileges (e.g. add, modify, view, delete etc.) for each menu option for different user groups.	Mandatory		
12.5.3	Ability to define Module wise access rights.	Mandatory		
12.5.4	Ability to have different levels of access within a module. Restrictions should apply to functions, transactions, screens, fields on screens, etc.	Mandatory		
12.5.5	Ability to restrict user access based on terminal ID.	Mandatory		
12.5.6	Able to interface application access with the system access.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.5.7	Ability to control over distribution of reports as per predefined lists	Mandatory		
12.5.8	Ability to restrict/limit the access of storage device/user-catalog for users.	Mandatory		
12.5.9	Ability to confirm the access created based on approvals.	Mandatory		
12.5.10	Ability to create an Access Right report before confirmation.	Desirable		
12.6	**System Monitoring**			
12.6.1	Registers any attempts (successful and unsuccessful) to access restricted resources codes identifying the operator, terminal, security violations, Back-up & restoration events, system failures, date and time.	Mandatory		
12.6.2	Ability to enable and disable different audit logs based on organizational requirements.	Mandatory		
12.6.3	Availability of access rights review reports including all users, user groups & access granted for each user group.	Mandatory		
12.6.4	Availability of complete audit trails for tracking transactions including master data changes through the system showing who entered the transactions, who authorized the transactions, when they were entered and at which terminal.	Mandatory		
12.6.5	Ability to filter audit trails by user, functions, period, etc.	Mandatory		
12.6.6	Provides on-line availability of the audit trail for a specified period of time before being archived.	Desirable		
12.6.7	Ability to define frequency, types and details of exception reports.	Desirable		
12.6.8	Ability to prevent any modifications or deletion of audit logs.	Mandatory		
12.6.9	Ability to track client's IP & Network Interface address.	Mandatory		
12.6.10	Ability to provide session log files. The user should be able to analyze the information (e.g., account id, session time, transactions performed, etc.)	Desirable		
12.6.11	Ability to embed audit module that collect pre-defined information into a special computer file that can be examined/monitored continuously by the auditor.	Desirable		
12.6.12	Ability to print Access logs of defined Users (Security Officer/Administrator to define users)	Mandatory		
12.7	**Remote Access**			
12.7.1	System should be accessible via a web browser.	Mandatory		
12.7.2	Web interface should be compatible with all commonly used web browsers (e.g. Internet Explorer, Firefox, Chrome, Opera, and Safari etc.).	Mandatory		
12.7.3	Web interface should be compatible with mobile browsers for easy access from mobile devices.	Desirable		
12.8	**Architecture of the proposed system**			
12.8.1	Bidder should describe to the purchaser the detailed application architecture	Mandatory		
12.8.2	Should describe to the purchaser the processing, data storage architecture and design.	Mandatory		
12.8.3	Details of the operating system and database platforms for the system.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.8.4	Whether the application is geared to commit Straight Through Processing.	Mandatory		
12.8.5	Details of development tools supported.	Mandatory		
12.8.6	Details of processing architecture (off-line and on-line)	Mandatory		
12.8.7	Integration with Business Intelligence tools, data warehousing and other 3rd party software and hardware requirements	Mandatory		
12.8.8	Details of the preferred platform and sizing calculations	Mandatory		
12.9	**Data center requirements**			
12.9.1	Minimum required configurations of the server (including total number required).	Mandatory		
12.9.2	Proof of scalability for the equipment suggested.	Mandatory		
12.9.3	Data replication strategy and requirements for on-line and real-time availability.	Mandatory		
12.9.4	Proposed architecture.	Mandatory		
12.9.5	Best fit data center environment standards for applications (i. e. On premise or secured cloud) to cater to more than 450 wide area network points.	Mandatory		
12.9.6	Special requirements for the data center (Raised floors, Fire protection, Smoke detection, etc.).	Mandatory		
12.9.7	Power requirements.	Mandatory		
12.10	**Disaster Recovery (DR) Requirements**			
12.10.1	Disaster recovery strategy and proposed solution with: Recovery Point Objective (RPO) = 10 minutes Recovery Time Objective (RTO) = 15 minutes	Mandatory		
12.10.2	As per the data replication strategy, the proposed minimum required configuration of the DR server(s).	Mandatory		
12.10.3	Should describe to the purchaser the processing, data storage architecture and design of the DR.	Mandatory		
12.10.4	Details of the operating system and database platforms for the DR.	Mandatory		
12.10.5	The network bandwidth requirement.	Mandatory		
12.10.7	Data backup procedures, tools used and methods of taking backups.	Mandatory		
12.10.8	Infrastructure requirements for the DR site.	Mandatory		
1210.9	Ability to take full and incremental backups based on the organizational requirement.	Mandatory		
12.10.10	System should revert back the whole record in case of record writing error (Rollback Facility).	Mandatory		
12.10.11	Ability to archive data for minimum 5 years.	Mandatory		
12.10.12	Ability to support online replication to backup site.	Mandatory		
12.10.13	Reliable integrity verification functionality for backups.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.10.14	Ability to be compatible with all types of backup devices (tapes, optical disks, hard drives).	Mandatory		
12.10.15	Ability to handle automatic switchover in cluster environment.	Mandatory		
12.11	**Server Requirements**			
12.11.1	Preferred hardware details including configurations and numbers. The configurations and numbers should be based on specific indications of transaction volumes, number of user accounts and one location to be rolled out that will be supported with such configurations and numbers.	Mandatory		
12.11.2	This should also address any server requirements other than at the Data Centre and DR which was covered earlier	Mandatory		
12.11.3	Server requirement of the test and development system with hardware details including configurations and numbers.	Mandatory		
12.11.4	Hardware parameters (like CPU, Memory, hard disk) recommended should not cross the 75% utilization levels at any point in time.	Mandatory		
12.11.5	Anti-virus software compatibility of the products on all machines & ability to update on a regular basis	Mandatory		
12.11.6	Ability to implement patches / upgrades on all software, firmware.	Mandatory		
12.11.7	Ability to use data migration tools.	Mandatory		
12.11.8	Ability to support for maintenance of data integrity between application and database.	Mandatory		
12.12	**Purchaser Computer requirements**			
12.12.1	Minimum required configurations for the purchaser's computers at the purchaser's and other remote location levels.	Desirable		
12.12.2	Requirement for the purchaser to access lines licenses for both the production and DR systems.	Desirable		
12.12.3	Preferred brand and reasons.	Desirable		
12.13	**Project office requirements**			
12.13.1	Minimum required configurations for project office (if applicable).	Desirable		
12.14	**Network and Communication requirements**			
12.14.1	Requirements at the data center, specifically for the applications surrounding the landscape.	Mandatory		
12.14.2	Should clearly define the interaction between the core system and other existing systems – network and communication setup.	Mandatory		
12.14.3	Bandwidth requirements should be clearly specified for all the recommendations.	Mandatory		
12.14.4	Communication methods/requirements should be clearly defined in the document E.g., 1. Production Data Centre to the respective location 2. For backup requirements, etc.	Mandatory		
12.14.5	Possibility of avoiding single point of failure and a load balancing mechanism.	Mandatory		

Serial No	Specification	Priority	Bidder Response Yes/No	Comment/Remarks
12.14.6	Capability in network monitoring, such as indication of probable network traffic and how to avoid or minimize such situations.	Mandatory		
12.14.7	Details of required network set-up, connectivity and block diagrams.(Note: All the diagrams should be clear and should be properly labeled or explained.)	Mandatory		
12.15	**Security requirements**			
12.15.1	Support of the solution on the purchaser's data retention period of 10 years and security obligations under Sri Lankan law.	Mandatory		
12.15.2	Describe to the purchaser the data access privileges assignments available to the individual users, to maintain the segregation of duties.	Mandatory		
12.15.3	Data encryption mechanism in the application, database and tools.	Mandatory		
12.15.4	Brief description of the security module and its salient features.	Mandatory		
12.15.5	Detailed security architecture of the solution.	Mandatory		
12.16	**Database Requirements**			
12.16.1	Ability to support for maintenance of data integrity between application and database.	Mandatory		
12.16.2	Ability to Patch management/ upgrading of database (vendor has to maintain the application software compatibility with the latest version of Database).	Mandatory		
12.16.3	Ability to support for pooling multiple database connections when the load on the application increases.	Mandatory		
12.16.4	Ability of the database to support clustering. Indicate the number of clusters that can be configured.	Mandatory		
12.16.5	Ability to support online replication.	Mandatory		

In addition to the above, please provide the following information in line with the functional and user volumes specified in **Detailed Scope (Item 1.1) and Annexure C of this Section (Section 6)**.

Sr. No	Specification	Priority	Bidder Response Yes/No	Comments/Remarks
12.17	**System, Application & End user performance requirements**			
12.17.1	Time taken for day-end processing *(if any)*	Mandatory		
12.17.2	Time taken for month-end processing*(if any)*	Mandatory		
12.17.3	Time taken for year-end processing *(if any)*	Mandatory		
12.17.4	Time taken for daily backup	Mandatory		
12.17.5	Time taken for monthly backup	Mandatory		
12.17.6	Time taken for yearly backup	Mandatory		
12.18	Response time for different types of transactions	Desirable		
12.19	Login, authentication, and verification time - [4 Seconds]	Desirable		
12.20	Initial Screen Load - [3 Seconds]	Desirable		
12.21	Screen Navigation: field-to-field - [1 Second]	Desirable		
12.22	Screen Navigation: screen-to-screen - [5 Seconds]	Desirable		
12.23	Regular reports generation - [1 Minute Maximum]	Desirable		
12.24	Monthly reports generation - [5 Minute Maximum]	Desirable		
12.25	Simple inquiry – single table, 5 fields, 3 conditions – without screen rendering - [10 Seconds]	Desirable		
12.26	Complex inquiry – multiple joined table (5), 10 fields, 3 conditions – without screen rendering - [20 Seconds]	Desirable		
12.27	Month End Run - [6 - 8 Hours Maximum]	Desirable		
12.28	The network latency time at the slowest links (assume 64kbps lines) used for remote office connectivity must be take into consideration when calculating the response times.	Desirable		

13. Helpdesk, Warranty and Maintenance

Serial No	Service/ Support Provided	Priority	Bidder Response Yes/No	Comments & Remarks
13.1	**Introduction**			
13.1.1.	After the provisional acceptance of the system, the Bidder shall provide necessary technical assistance and support to ensure the smooth running of the supplied solutions and their associated operating systems and databases.	Mandatory		
13.1.2	The technical support shall include but not be limited to the following:			
13.1.2.1	System warranty & maintenance	Mandatory		
13.1.2.2	On-site technical support	Mandatory		
13.1.2.3	Process and application support	Mandatory		
13.1.2.4	User interface support	Mandatory		
13.1.2.5	Infrastructure support	Mandatory		
13.1.2.6	Integration support	Mandatory		
13.1.2.7	Change request management	Mandatory		
13.1.2.8	Helpdesk management during the warranty period as well as during the Annual Maintenance Support (Service Level Agreement) between the purchaser and the Bidder.	Mandatory		
13.2	**Maintenance during the Warranty Period**			
13.2.1	The Bidder shall provide one year's warranty from the date of acceptance for all supporting software components used for the solution. The Bidder shall propose the details of the warranty program.	Mandatory		
13.2.2	The warranty shall cover application support, without any additional charges to the purchaser.	Mandatory		
13.2.3	The Bidder shall maintain the proposed system after the expiry of the warranty period. A separate agreement (Application Maintenance Contract) to maintain the solution shall be signed at the expiry of the warranty period. The Bidder shall propose any available models.	Mandatory		
13.2.4	The Bidder shall provide any released patches for the solution provided to the purchaser, free of charge during the warranty period.	Mandatory		
13.2.5	The problems arising during the warranty period shall be logged in the Issue Log and the Bidder shall have to clear all issues related to the software provided by him.	Mandatory		
13.2.6	The Bidder shall assist or provide necessary guidance to the implementation partner to install any software / firmware upgrades which shall be released by him, in order to keep the systems with the latest patch/version during the warranty period as well as AMC.	Mandatory		
13.3	**Application Maintenance Contract (AMC)**			

Serial No	Service/ Support Provided	Priority	Bidder Response Yes/No	Comments & Remarks
13.3.1	The purpose of the Application Maintenance Contract shall be to ensure smooth operation of the supplied solution after the expiry of the warranty period.	Mandatory		
13.3.2	The Bidder shall undertake an Application Maintenance Contract (AMC) with the purchaser by complying with all terms and conditions agreed at the time of signing the contract without any deviation.	Mandatory		
13.3.3	Under the terms of the AMC, the Bidder shall be solely responsible for the smooth operation of the application provided by him.	Mandatory		
13.3.4	The Bidder shall prepare a preventive maintenance schedule as appropriate, but at least on a quarterly basis and shall obtain prior approval from purchaser.	Mandatory		
13.3.5	The terms of the AMC shall remain in force for five years from the date of completion of the warranty period.	Mandatory		
13.3.6	The extension of the AMC after the first five years shall be at the sole discretion of the purchaser and negotiable based on the performance of the Bidder during the initial period of 5 years.	Mandatory		
13.3.7	The Bidder shall agree to the second term without any additional charges, if there is no change made to the AMC.	Mandatory		
13.3.8	The Bidder may propose any other AMC options available with them with the relevant charges.	Mandatory		
13.3.9	The purchaser shall have sole authority to terminate the AMC at any point of time according to the terms & conditions in the AMC.	Mandatory		
13.4	**Service Level Agreement (SLA) & Annual Maintenance Support(AMS)**			
13.4.1	The Bidder shall agree to Service Levels stipulated by the purchaser, to ensure on-time technical support and to minimize the down time of the System.	Mandatory		
13.4.2	The Service Level Agreement shall formalize the agreement between the Bidder and purchaser to deliver specific support service, levels of support and agreed cost.	Mandatory		
13.4.3	The SLA shall have different levels of support, based on the nature of the problems that arise in the solution provided to the purchaser.	Mandatory		
13.4.4	The Bidder shall provide a tool to monitor the fulfillment of the Service Level Agreement.	Mandatory		
13.4.5	The SLA shall be applicable during the warranty period as well as during the Annual Maintenance Contract.	Mandatory		
13.4.6	The failure to meet any SLA obligation shall be subjected to penalties.	Mandatory		
13.4.7	The Bidder shall not request any additional payments for resolving any issues during the warranty and AMC.	Mandatory		
13.4.8	The Bidder may propose any other available Service Level Agreement options with applicable charges.	Mandatory		
13.5	**Type of Support to be given by Bidder**			
13.5.1	**Helpdesk Support**			
13.5.1.1	The Bidder shall offer a Helpdesk function with a single point of contact for application related calls.	Mandatory		

Serial No	Service/ Support Provided	Priority	Bidder Response Yes/No	Comments & Remarks
13.5.1.2	The Helpdesk shall take full responsibility and ownership of incidents reported until resolution.	Mandatory		
13.5.1.3	The Bidder shall provide a central helpdesk number, fax number, email address and helpdesk support access through the web for carrying out maintenance and support services.	Mandatory		
13.5.1.4	The Bidder shall provide 24x7x365 helpdesk support to the purchaser on incident reporting and resolving.	Mandatory		
13.5.1.5	The Bidder shall provide the complete process of incident management and problem management.	Mandatory		
13.5.2	**Application Support**			
13.5.2.1	The Bidder shall provide application support that consists of both operation and development.	Mandatory		
13.5.2.2	The operation support for the Application shall consist of day to day management of Operating Systems, Database and application.	Mandatory		
13.5.2.3	The development support shall consist of minor developments and customizations (e.g., reports) without touching the core application software, which should enable the purchaser to add new features and facilities as per its requirements.	Mandatory		
13.5.2.4	In case of upgrade of the application, the Bidder shall ensure the features and capabilities available on the previous version are not compromised in the upgraded version if not enhanced.	Mandatory		
13.5.3	**Interfacing & Integration Support**			
13.5.3.1	Ability to interface with mail server to generate emails to users and customers.	Mandatory		
13.5.3.2	Ability to interface with a payment gateway to accept payments.	Mandatory		
13.5.3.3	Ability to interface with SMS gateway to generate SMSs to users and customers.	Mandatory		
13.5.3.4	The Bidder shall support to integrate any existing or new software system with the ERP and CIS solution, based on the CEB's requirements.	Mandatory		
13.5.3.5	All required major internal and external systems shall be integrated on a continuous basis using an integration middleware layer enabling seamless transfer and information access across the eco system of internal and external modules. The integration shall use a continuous integration middleware layer on multiple technology platforms, utilizing multiple data protocols and standards. This middleware layer could then be used to undertake any future integration between applications. The integration middleware shall be based on Service Oriented Architecture (SOA) and shall use publish / subscribe mechanism. CEB shall not consider to build and maintain point to point integration. Integration middleware shall be open architecture based. Transactional as well as standing or master data to and from the offered system shall be required to be integrated. Data to be integrated must securely connected and be validated by the developer interfaces. The data to be integrated shall be mapped, transformed (based on the requirement) and reconciled automatically.	Mandatory		

Serial No	Service/ Support Provided	Priority	Bidder Response Yes/No	Comments & Remarks
	All interfaces are to be self-checking so that any exception or data validation error are reported by the system. In addition integration logs should be maintained that confirm the success or otherwise of the interface, complete with control totals. The mapping shall be manageable through a GUI based administrative interface. The Scope of integration of external systems include IT systems already existing and functional internal to the CEB, but outside the present scope of work. The integration is expected to be on-line real time or batch where appropriate and shall operate in an automated fashion without manual intervention. The scope of external integration will be, but not limited to 1. Desktop Applications 2. Flat Files / Spreadsheets 3. Databases 4. Xml sources (REST, SOAP...Etc.) The scope of existing and new external systems integration will be, but not limited to, 1. Integration with all Commercial Banks, 3rd Party Payment collectors and mobile money operators. 2. Integration with CEB Electric Vehicle charging system 3. Integration with CEB payment KIOSK system. 4. Integration with CEB AMI/AMR systems 5. Integration with CEB Manual Meter reading system. 6. Integration with CEBAssist system. 7. Integration with CEB e-mail systems 8. Integration with CEB SMS system			
13.5.4	**Change Request support**			
13.5.4.1	The Bidder shall support all change requests (Form C07) arising due to business requirements during warranty and AMC period.	Mandatory		
13.5.4.2	The Bidder shall provide the basis of cost calculations for a Change Request.	Mandatory		
13.5.4.3	The Bidder shall provide impact analysis for all change requests raised.	Mandatory		
13.5.5	**System Audits support**			
13.5.5.1	The Bidder shall support to perform a comprehensive hardware and software audit along with a system performance audits twice a year.	Mandatory		
13.5.5.2	The Bidder shall provide an audit report indicating all findings (specifically, under or over usage of the licenses) of the audit with the relevant recommendations for improvements within a month.	Mandatory		

14. Training

Serial No	Description	Priority	Bidder Response Yes/No	Comments & Remarks
14.1	**Training on ERP product and ERP implementation**			
14.1.1	The Bidder shall provide adequate training to the purchaser's staff to ensure successful utilization of functions and features of the system. All such trainings should be provided in a manner that each trainee gets a dedicated purchaser terminal and with enough "hands on" experience. The Bidder shall propose the training components which are required.	Mandatory		
14.1.2	The Bidder shall provide adequate training to the purchaser's staff to ensure successful implementation, operation and maintenance of the system for the purchaser. The Bidder shall propose the training components which are required.	Mandatory		
14.1.3	Purchaser's IT Department is required to provide 1st level support to the purchaser's users. The training shall be provided to the satisfaction of the purchaser, such that purchaser's staff can perform the operation and maintenance of the systems and database independently. The Bidder shall propose the training components which are required.	Mandatory		
14.1.4	The Bidder shall provide original training manuals and other relevant material to the Trainees.	Mandatory		
14.1.5	The Bidder shall indicate the prerequisite for each training module and shall quote the cost of the same separately.	Mandatory		
14.1.6	The Bidder shall provide training by a professional trainer.	Mandatory		
14.1.7	The Bidder shall provide training by eLearning content.	Mandatory		
14.1.8	The Trainer(s) who conducts the training shall have the following qualifications.	Mandatory		
14.1.8.1	Shall be a certified professional who has a good knowledge of the subject and the theories.	Mandatory		
14.1.8.2	Shall be a product specialist for all equipment and systems proposed for the tender.	Mandatory		
14.1.8.3	Shall have good experience in all areas of Installation, Operation, Maintenance, and Advanced Troubleshooting of all the equipment and systems proposed for this Tender.	Mandatory		
14.1.8.4	Shall have training skills and be fluent in English to conduct the training successfully.	Mandatory		
14.1.8.5	Shall have training skills and be fluent in Sinhala to conduct the training successfully.	Desirable		
14.1.8.6	Shall have training skills and be fluent in Tamil to conduct the training successfully.	Desirable		
14.2	**Training on business processes and change management**			
14.2.1	Shall provide training on the following areas:			
14.2.1.1	Training on business processes	Mandatory		
14.2.1.2	Change management	Mandatory		
14.2.1.3	Best Practices	Mandatory		
14.2.1.4	Capturing and documenting business requirements	Mandatory		

Serial No	Description	Priority	Bidder Response Yes/No	Comments & Remarks
14.2.1.5	Testing against business requirements.	Mandatory		
14.3	**Configuration Testing, Trouble Shooting and Maintenance Training**			
14.3.1	Shall provide training on the following areas:			
14.3.1.1	In depth knowledge training on the System architecture, database structure	Mandatory		
14.3.1.2	Configurations	Mandatory		
14.3.1.3	Report Customizations	Mandatory		
14.3.1.4	Backup, Recovery and Restore	Mandatory		
14.3.1.5	Replication strategy	Mandatory		
14.3.1.6	Install & configure	Mandatory		
14.3.1.7	The Bidder shall cover training on routine operations and maintenance procedures and shall include training on centralized operations and maintenance function	Mandatory		
14.4	**Configuration Testing, Trouble Shooting and Maintenance Training**			
14.4.1	In addition to the abovementioned training requirements, the Bidder shall propose any other specified training requirements which are needed by the purchaser.	Desirable		

15. General

s/n	Description	Priority	Bidder Response Yes/No	Comments & Remarks
1	Data Uploading is the responsibility of the Bidder and Data Cleansing and Data Validation is the responsibility of the Purchaser.			
2	All the interfaces to be identified at the time of project planning and any additional interface cost to be mentioned in the above table.			
3	All integrations with the existing systems must be taken care of the Bidder where it is possible to extract from the intermediate staging area.			

Annexure C - Present Volumetric Information

Sr. No	Application/Module	Users	Statistical & Transaction data	Unit of Measure	Number
1	Finance	3,302	Management Level Usage:	Number	317
			Cash Management, Supply invoice Payment	Per Month	498
			Cash Management , other payments	Per Month	2,100
			General Ledger , Number of Journal entry posted	Number	2,886
2	Procurement	3,872	Management Level Usage:	Number	262
			Products (Item master)	Number	1,000
			Purchase order raised	Monthly	47,069
3	Inventory Management	3,872	Management Level Usage:	Number	262
			Stock items	Number	42,800
4	Billing & Collection	2,605	Management Level Usage:	Number	128
			Retail Customers	Number	6,268,370
			Bulk Customers	Number	12,000
			Customer Bill raised	Per Month	6,268,370
			Number of Receipts generated	Per Month	3,660,000
5	Customer Relationship Management	2,508	Management Level Usage:	Number	128
			Number of new customer applications	Per month	12,400
6	Energy Management	1,760	Management Level Usage:	Number	203
7	Human Resource Management	2,495	Management Level Usage:	Number	317
			Total workforce including contract/ casual/ trainee employees	number	25,000
			Employees on the register	Number	22,000
			Payroll Transactions	Per Month	22,000
8	Project Management	2,961	Management Level Usage:	Number	262
9	Asset Management	1,925	Management Level Usage:	Number	262
10	Maintenance Management	3,018	Management Level Usage:	Number	262
11	Fleet Management	2,496	Management Level Usage:	Number	262
12	Fuel Management	113	Management Level Usage:	Number	30
13	Workflow & Documentation Management	4192	Management Level Usage:	Number	444
14	Business Intelligence & Reporting	4419	Management Level Usage:	Number	317

Annexure D – Present Application System Information

#	System	Age & Developer	Scope	Remarks
1	Billing system (Bulk / Ordinary)	25 years Developed & Maintained by CEB	Distribution billing	Managing and maintaining customer electricity account related data, bill processing, amendments related to those accounts. The associated manual process of meter reading & entering to the system, journals, new meters & replacements are now enabled by CEBAssist.
2	Payment Collection & Distribution System (PCDS)	1 year Developed & Maintained by CEB	All PoS payment collections and distribution	Collect daily POS payments to CEB, reconcile and distribute to relevant revenue ledgers
3	MITFIN System	24 years Developed & Maintained by CEB	Finance related processes	Facilitating to all CEB divisions in the areas of Stocks Management, payments, budgeting, job costing, Ledger
4	Service Provisioning Systems (Bulk/Ordinary)	15 years Developed & Maintained by CEB	Job Costing	Facilitating to all jobs handling for cost centers in CEB
5	Material Management system – FIFO	7 years Developed & Maintained by CEB	Material Management	Facilitating Material management process in AM, Transmission and Generation divisions.
6	Online PIV	5 years Developed & Maintained by CEB	Generate all PIV and tabulate to the ledger	Facilitating to all divisions in CEB
7	CEBINFO	10 years Developed & Maintained by CEB	CEB Internal web portal	Facilitating to all divisions in CEB
8	HRIMS	9 years Purchased from VEndor	All HR related activities	Facilitating to all divisions in CEB
9	Provident Fund Management System	20 years Developed & Maintained by CEB	EPF data management	Facilitate to EPF branch
10	MIS web reports	15 years outsourced and acquired source code	Reporting system of MITFIN, SPS, SMC,PIV	Facilitate to all divisions.
11	CRM system	20 years Developed & Maintained by CEB	Customer service requests and complaints handling	SP and WPS2
12	MANTIS	15 years Open Source software customized to cater CEB requirement	CEB internal IT complaints reporting and issue tracking	Facilitate to all divisions
13	Circuit Bungalow Reservation System – CBRS	6 years Developed & Maintained by CEB	Mange circuit bungalow bookings	Facilitate to all divisions
14	Circular Management System	5 years Developed & Maintained by CEB	Manage all CEB circulars	Facilitate to all divisions
15	Bulk Remote Reading Converter	3 years Developed and maintaining CEB	System to collect and validate heavy supply meter readings remotely and passing to Bulk Supply Billing System	Convert Bulk supply remote meter reading . Facilitate to all area offices, EM units

16	SmartCEB	1 year Developed & Maintained by CEB	Developing as a single sign-on portal to all system functions, including all future developments to this common portal, under same theme.	Facilitate to all Divisions
17	MVMMS	3 years Developed & Maintained by CEB	Monitoring, maintaining, and managing all MV network related assets. Preparing estimates for such maintenance works, and obtaining interruptions for those assets are fully automated through this system	Facilitate to all PHM units
18	Transmission Billing – LECO	15 years Developed & Maintained by CEB	Preparing LECO bill and managing other related resources	
19	Meter Management System – Transmission	1 year Developed & Maintained by CEB	Management of Transmission Meters	
20	Standing order web API service	4 years Developed & Maintained by CEB	Providing online, real-time facility to third parties to collect outstanding balance of customers and facilitating the payment	This facility is used by following banks already Sampath Bank, Commercial Bank, Seylan Bank (testing phase) NTB (integration phase)
21	Cheque Returns System	18 years Developed & Maintained by CEB	Recording and managing dishonored checks throughout the system, and down the line process of managing this function	At revenue accountants positions
22	Corporate Action Plan Automation System	6 months Developed & Maintained by CEB	Automation of recording, monitoring and updating the actions plan - first phase is completed	All divisions
23	SingleSignOn - AD Integration	5 years Designed & Maintained by CEB	User authentication for email and some of the services	
24	Library System	10 years KOHA Open Source project customized & Maintained by CEB	Managing the reservation of books, magazines and other publications online, available in CEB Library	At CEB Library
25	CEBAssist - Customer Relationship Management	3 years Developed & Maintained by CEB	Customer service requests and complaints handling	Has s user base of 3000+

26	CEBAssist - Outage Management System (BreakdownAssist)	3 years Developed & Maintained by CEB	Manage electricity outages and breakdowns	Has s user base of 2000+
27	CEBAssist - Interruption Planning Management System	2 years Developed & Maintained by CEB	Manage electricity interruption planning, scheduling, PTW and customer alerting	Has s user base of 400+
28	CEBAssist - Service Order Management System	3 years Developed & Maintained by CEB	Manage service orders, field jobs and other non-breakdown jobs.	Has s user base of 2500+
29	CEBAssist - Utility Asset Management	2 years Developed & Maintained by CEB	Utility linear asset management, asset GIS, digital asset record	Has s user base of 1000+
30	CEBAssist - Civil Asset Management	0.5 years Developed & Maintained by CEB	Civil asset, land, building management, asset GIS	Has s user base of 100+
31	CEBAssist – Linear Asset Maintenance Management System	2 years Developed & Maintained by CEB	Utility asset maintenance management	Has s user base of 700+
32	CEBAssist - Online Billing System	1.5 years Developed & Maintained by CEB	Customer billing, customer accounts, billing adjustment workflow	Has s user base of 750+
33	CEBAssist - Meter Reading Management System (MeterAssist+)	2 years Developed & Maintained by CEB	Manage smart metering, online manual meter reading operations and reading data.	Has s user base of 550+
34	CEBAssist - Smart Meter Head End System	0.5 years Developed & Maintained by CEB	Unified Smart Meter Head End to interwork with different smart meter types for smart metering functions.	Has s user base of 50+
35	CEBAssist - Revenue Management System (Disconnection Assist)	2 years Developed & Maintained by CEB	Manage revenue analysis, credit measures and disconnection & reconnection operations	Has s user base of 800+
36	CEBAssist - Customer Information System	3 years Developed & Maintained by CEB	Enterprise customer information respiratory, customer GIS, customer activities.	Has s user base of 1500+
37	CEB Care Customer Self Service (CEBAssist)	3 years Developed & Maintained by CEB	Customer self-service facilities via CEBCare App, CEBCare Web, Voice Automated Services (IVR/AVR), SMS and Email to avail CEB services, lodge complaints and tack service requests	300,000 App Users 13,000 IVR Users/Day
38	CEBAssist - Internal Correspondence Management (WorkFlow)	1 years Developed & Maintained by CEB	Digitalize internal office correspondence activities, letter handling and task assignments	Has s user base of 6000+
39	BreakdownAssist Mobile App (CEBAssist)	3 years Developed & Maintained by CEB	Manage breakdown & outage field operations.	Has s user base of 1500+

40	DisconnectionAssist Mobile App (CEBAssist)	2 years Developed & Maintained by CEB	Manage disconnection and reconnection field operations.	Has s user base of 750+
41	MeterAssis+ Mobile App (CEBAssist)	2 years Developed & Maintained by CEB	Manage manual meter reading collection field operations. (This is a revamped & improved version of MeterAssist App introduced in 2016)	Has s user base of 3500+
42	GeoAssist Mobile App (CEBAssist)	0.5 years Developed & Maintained by CEB	Manage utility asset data collection field operations.	Has s user base of 600+
43	Third-Party Payment Webservice	8 years Developed & Maintained by CEB	Secure updating the real time payments from third party agents Account number validation	18+ Payment Service Consumer Agents
44	KIOSK Payment System	7 years	Standalone KIOSKs management, payment distribution	
45	KEPCO Smart Meter System	2 years Purchased from Nuri and Kempco IaaS maintained by CEB	Smart meter remote communication, remote connection/disconnection, customer energy profiling (Billing, Control, Load Monitoring)	Consist of 1000 smart meters
46	KAIFA Smart Meter System	1 year Purchased from Kaifa IaaS maintained by CEB	Substation performance monitoring smart meters	10 000 meters connected
47	Unified Call Center Solutions	2 years Designed & Maintained by CEB		Has s user base of 750+
48	CEB Corporate Website	8 years Outsourced development	company website for communicating with customers and website visitors	Revamped in 2012, 2015, 2019
49	SMS Gateway	8 years Designed & Maintained by CEB		

Annexure E – Organization Structure