



*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P.*

Invitation for Bids (IFB)

REPUBLIC OF MOÇAMBIQUE
ELECTRICIDADE DE MOÇAMBIQUE, E.P.



BIDDING DOCUMENT (SINGLE-STAGE)

for the

Procurement of the

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

IFB No: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

Project: *EDAP IDA-Integrated Business Management
System (SIGEM ERP-IRMS-CMS)*

Credit Number.: *IDA 4681-0 MZ*

Purchaser: *Electricidade de Moçambique, E.P.
(EDM), Republic of Mozambique*

Maputo, December 2011

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Section I. Instructions to Bidders

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SECTION I. INSTRUCTIONS TO BIDDERS (ITB)
(Single-Stage Bidding)



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Instructions to Bidders

A. GENERAL

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- 1. Scope of Bid and Bidding Process**
- 1.1 The Purchaser named in the BDS and the SCC for GCC Clause 1.1 (b) (i), or its duly authorized Purchasing Agent if so **specified in the BDS** (interchangeably referred to as “the Purchaser” in these Bidding Documents), invites bids for the supply and installation of the Information System (IS), as briefly **described in the BDS** and specified in greater detail in these Bidding Documents.
- 1.2 The title and identification number of the Invitation for Bids (IFB) and resulting Contract(s) are **provided in the BDS**.
- 1.3 Throughout the Bidding Documents, the term "in writing" means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt, and the term "days" means calendar days unless a different meaning is evident from the context.
- 1.4 If the BDS so provides, alternative procedures forming part or all of what is commonly known as e-Tendering are available to the extent **specified in, or referred to by, the BDS**.
- 2. Source of Funds**
- 2.1 The **Borrower named in the BDS** has applied for or received a loan or credit (as identified in the BDS, and called a “loan” in these Bidding Documents) from the International Bank for Reconstruction and Development or the International Development Association (called “the Bank” in these Bidding Documents) equivalent to the amount indicated in the BDS toward the cost of the Project specified in the BDS. The Borrower intends to apply a portion of the proceeds of this loan to eligible payments under the Contract for which these Bidding Documents are issued.
- 2.2 Payment by the Bank will be made only at the request of the Borrower, or the Borrower’s executing agency, and upon approval by the Bank in accordance with the terms and conditions of the Loan Agreement, and will be subject in all respects to the terms and conditions of that agreement. The Loan Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the



United Nations. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the loan proceeds.

3. Fraud and Corruption

3.1 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), as well as bidders, suppliers, and contractors and their subcontractors under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts.¹ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice"² is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice"³ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "collusive practice"⁴ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) "coercive practice"⁵ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

¹ In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.

² "Another party" refers to a public official acting in relation to the procurement process or contract execution]. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ A "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

⁴ "Parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

⁵ A "party" refers to a participant in the procurement process or contract execution.



- (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 3.1 (e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur;
- (d) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract; and
- (e) will have the right to require that a provision be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers, and contractors and their sub-contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have



them audited by auditors appointed by the Bank.

- 3.2 Furthermore, Bidders shall be aware of the provision stated in Clause 9.8 and Clause 41.2 of the General Conditions of Contract.
- 3.3 Any communications between the Bidder and the Purchaser related to matters of alleged fraud or corruption must be made in writing.
- 3.4 By signing the Bid Submission Form, the Bidder represents that it either is the owner of the Intellectual Property Rights in the hardware, software or materials offered, or that it has proper authorization and/or license to offer them from the owner of such rights. For the purpose of this Clause, Intellectual Property Rights shall be as defined in GCC Clause 1.1 (c) (xvii). Willful misrepresentation of these facts shall be considered a fraudulent practice subject to the provisions of Clauses 3.1 through 3.4 above, without prejudice of other remedies that the Purchaser may take.

4. Eligible Bidders

- 4.1 A Bidder, and all parties constituting the Bidder, may have the nationality of any country, subject to the restrictions specified in Section III, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country.
- 4.2 If a prequalification process has been undertaken for the Contract(s) for which these Bidding Documents have been issued, only those Bidders may participate that had been prequalified and continue to meet the eligibility criteria of this Clause. A prequalified Joint Venture may not change partners or its structure when submitting a bid.
- 4.3 A firm may be excluded from bidding if:
 - (a) it was engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, or other documents to be used for the procurement of the Information System described in these Bidding Documents; or
 - (b) it is a government-owned enterprise in the Borrower's country, unless it can establish that it (i) is legally and financially autonomous and (ii) operates under commercial law. No dependent agency of the Borrower or Sub-



Borrower shall be permitted to bid.

- 4.4 A firm that has been determined to be ineligible by the Bank in relation to the Bank Guidelines On Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants shall be not be eligible to be awarded a contract.
- 4.5 A firm or individual is or will be disqualified from participation in this bidding if, at any time from advertisement of the bidding until and including contract award, the firm or individual is under:
- (a) a suspension by the Purchaser agreed by the Bank as a result of execution of a Bid-Securing Declaration pursuant to ITB Clause 17.6 in another Bank-financed procurement, or under a suspension by the Purchaser for other reasons that have been agreed by the Bank; or
 - (b) a declaration of ineligibility by the Bank in accordance with ITB Clause 3.1 (d). The list of individuals and firms debarred from participating in World Bank projects is available at <http://www.worldbank.org/debarr/>, or
 - (c) a sanction imposed by the United Nations Security Council, as mentioned in ITB Clause 2.2.
- 4.6 A firm or other entity that is ineligible according to any of the above provisions of this Clause, may also not participate as a Joint Venture partner, or as Subcontractor for or supplier of goods, works or services. If a bid becomes materially incomplete after removing ineligible entities, the bid may be disqualified.
- 4.7 Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

5. Eligible Goods and Services

- 5.1 For the purposes of these Bidding Documents, the Information System means all:
- (a) the required information technologies, including all information processing and communications-related hardware, software, supplies, and consumable items that the Supplier is required to supply and install under the Contract, plus all associated documentation, and all other materials and goods to be supplied, installed, integrated,



and made operational (collectively called “the Goods” in some clauses of the ITB); and

- (b) the related software development, transportation, insurance, installation, customization, integration, commissioning, training, technical support, maintenance, repair, and other services necessary for proper operation of the Information System to be provided by the selected Bidder and as specified in the Contract.

5.2 Funds from Bank loans are disbursed only for expenditures for an Information System made up of goods and services provided by nationals of, and produced in or supplied from, eligible source countries as defined in Section III, Eligible Countries. An Information System is deemed to be produced in a certain country when, in the territory of that country, through software development, manufacturing, or substantial and major assembly or integration of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

5.3 For purposes of this clause, the nationality of the Bidder is distinct from the country in which the Information System and its goods components are produced or from which the related services are supplied.

6. Qualifications of the Bidder

6.1 By submission of documentary evidence in its bid, the Bidder must establish to the Purchaser’s satisfaction:

- (a) that it has the financial, technical, and production capability necessary to perform the Contract, meets the qualification criteria **specified in the BDS**, and has a successful performance history. If a prequalification process has been undertaken for the Contract(s) for which these Bidding Documents have been issued, the Bidder shall, as part of its bid, update any information submitted with its application for prequalification;

(For the purposes of establishing a Bidder’s qualifications, and unless stated to the contrary in the BDS, the experience and / or resources of any Subcontractor will not contribute to the Bidder’s qualifications; only those of a Joint Venture partner will be considered.)

- (b) that, in the case of a Bidder offering to supply key goods components of the Information System, as **identified in**



the BDS, that the Bidder does not itself produce, the Bidder is duly authorized by the producer to supply those components in the Purchaser's country under the Contract(s) that may result from this bidding; (This will be accomplished by including Manufacturer's Authorizations in the bid, based on the sample found in Section VII.)

- (c) that, if a Bidder proposes Subcontractors for key services if and as **identified in the BDS**, these Subcontractors have agreed in writing to serve for the Bidder under the Contract(s) that may result from this bidding; and
- (d) that, in the case of a Bidder not doing business within the Purchaser's country, the Bidder is or will be (if awarded the Contract) represented by an Agent in that country who is equipped and able to carry out the Bidder's maintenance, technical support, training, and repair obligations prescribed in the General and Special Conditions of Contract, and/or Technical Requirements.

6.2 Bids submitted by a Joint Venture of two or more firms as partners shall also comply with the following requirements:

- (a) the bid shall be signed so as to be legally binding on all partners;
- (b) one of the partners shall be nominated as being in charge, and this nomination shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
- (c) the partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture, and the entire execution of the Contract, including payment, shall be done exclusively with the partner in charge;
- (d) the partner or combination of partners that is responsible for a specific component of the Information System must meet the relevant minimum qualification criteria for that component;
- (e) a firm may submit bids either as a single Bidder on its own, or as partner in one, and only one, Joint Venture. If, as a result of the bid opening pursuant to ITB Clause 24, this requirement is not met, all bids involving the firm as a



single Bidder or Joint Venture partner will be disqualified;

- (f) all partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a statement to this effect shall be included in the authorization mentioned under ITB Clause 6.2 (b) above, in the bid as well as in the Contract (in case of a successful bid).

6.3 If a Bidder intends to subcontract major items of supply or services, it shall include in the bid details of the name and nationality of the proposed Subcontractor for each of those items and shall be responsible for ensuring that any Subcontractor proposed complies with the requirements of ITB Clause 4, and that any Goods or Services components of the Information System to be provided by the Subcontractor comply with the requirements of ITB Clause 5 and the related evidence required by ITB Clause 13.1 (e) (iii) is submitted. Bidders are free to list more than one Subcontractor against each item. Quoted rates and prices will be deemed to apply, whichever Subcontractor is appointed, and no adjustment of the rates or prices will be permitted. The Purchaser reserves the right to delete any proposed Subcontractor from the list. This shall be done prior to Contract signature, by deleting such unacceptable Subcontractors from Appendix 3 to the Contract Agreement, which shall list the approved Subcontractors for each item prior to Contract signature. Subsequent additions and deletions from the list of approved Subcontractors shall be performed in accordance with GCC Clause 20 (as revised in the SCC, if applicable) and Appendix 3 to the Contract Agreement.

For the purposes of these Bidding Documents, a Subcontractor is any vendor or service provider with whom the Bidder contracts for the supply or execution of any part of the Information System to be provided by the Bidder under the Contract (such as the supply of major hardware, software, or other components of the required Information Technologies specified, or the performance of related Services, e.g., software development, transportation, installation, customization, integration, commissioning, training, technical support, maintenance, repair, etc.).

6.4 A firm which is a Bidder, whether as a single Bidder or as a partner in a Joint Venture, cannot be a Subcontractor in other bids, except for the supply of commercially available hardware



or software by the firm, as well as purely incidental services such as installation/configuration, routine training, and ongoing maintenance/support. If the BDS for ITB Clause 6.1 (a) allows the qualification of Subcontractors nominated for certain components to be taken into account in assessing the Bidder's overall qualifications, any Subcontractor so nominated by any Bidder is automatically disqualified from being a Bidder itself or a partner in a Joint Venture. The same will normally apply to firms that have provided Subcontractor agreements for certain services pursuant to ITB Clause 6.1 (c). Non-compliance may result in the rejection of all bids in which the affected firm participates as Bidder or as partner in a Joint Venture. As long as in compliance with these provisions, or as long as unaffected by them due to not participating as Bidder or as partner in a Joint Venture, a firm may be proposed as a Subcontractor in any number of bids. If the BDS for ITB 28.1 permits the submission of bids for Subsystems, lots, or slices, then the provisions of this Clause 6.4 apply only to bids for the same Subsystem(s), lot(s), or slice(s);

7. Cost of Bidding

7.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser will in no case be responsible or liable for those costs.

8. Site Visit

8.1 The Bidder may wish to visit and examine the site or sites of the Information System and obtain for itself, at its own responsibility and risk, all information that may be necessary for preparing the bid and entering into the Contract. The costs of visiting the site or sites shall be at the Bidder's own expense.

8.2 The Purchaser will arrange for the Bidder and any of its personnel or agents to gain access to the relevant site or sites, provided that the Bidder gives the Purchaser adequate notice of a proposed visit of at least fourteen (14) days. Alternatively, the Purchaser may organize a site visit or visits concurrently with the pre-bid meeting, as specified in the BDS for ITB Clause 10.2. Failure of a Bidder to make a site visit will not be a cause for its disqualification.

8.3 No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the award of Contract.



B. THE BIDDING DOCUMENTS

9. Content of Bidding Documents

9.1 The contents of the Bidding Documents are listed below and should be read in conjunction with any addenda issued in accordance with ITB Clause 11:

- Section I Instructions to Bidders (ITB)
- Section II Bid Data Sheet (BDS)
- Section III Eligible Countries for the Provision of Goods, Works, and Services in Bank-Financed Procurement
- Section IV General Conditions of Contract (GCC)
- Section V Special Conditions of Contract (SCC)
- Section VI Technical Requirements (including Implementation Schedule)
- Section VII Sample Forms

9.2 Bidders are expected to examine all instructions, forms, terms, specifications, and other information in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or to submit a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in the rejection of its bid.

9.3 The Invitation for Bids is not formally part of the Bidding Documents and is included for reference only. In case of inconsistencies, the actual Bidding Documents shall prevail.

10. Clarification of Bidding Documents and Pre-bid Meeting

10.1 A prospective Bidder requiring any clarification of the Bidding Documents may notify the Purchaser in writing at the Purchaser's address and by one of the means **indicated in the BDS**. Similarly, if a Bidder feels that any important provision in the documents will be unacceptable; such an issue should be raised as soon as possible. The Purchaser will respond in writing to any request for clarification or modification of the Bidding Documents that it receives no later than twenty-one (21) days prior to the deadline for submission of bids prescribed by the Purchaser. Copies of the Purchaser's response (including an explanation of the query but not identifying its source) will be sent to all prospective Bidders that received the Bidding Documents from the Purchaser.

10.2 When **specified in the BDS**, the Purchaser will organize and



Bidders are welcome to attend a pre-bid meeting at the time and place **indicated in the BDS**. The purpose of the meeting will be to clarify issues and answer questions on any matter that may be raised at this stage, with particular attention to issues related to the Technical Requirements. Bidders are requested to submit any questions in writing to reach the Purchaser not later than one week before the meeting. Questions and answers will be transmitted in accordance with ITB Clause 10.1. Minutes of the meeting, including the questions raised and responses given, together with any responses prepared after the meeting, will be transmitted without delay to all those that received the Bidding Documents from the Purchaser. Any modification to the Bidding Documents listed in ITB Clause 9.1, which may become necessary as a result of the pre-bid meeting, shall be made by the Purchaser exclusively by issuing an Addendum pursuant to ITB Clause 11 and not through the minutes of the pre-bid meeting.

**11. Amendment of
Bidding
Documents**

- 11.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, amend the Bidding Documents. Later amendments on the same subject modify or replace earlier ones.
- 11.2 Amendments will be provided in the form of Addenda to the Bidding Documents, which will be sent in writing to all prospective Bidders that received the Bidding Documents from the Purchaser. Addenda will be binding on Bidders. Bidders are required to immediately acknowledge receipt of any such Addenda. It will be assumed that the amendments contained in such Addenda will have been taken into account by the Bidder in its bid.
- 11.3 In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, in which case, the Purchaser will notify all Bidders in writing of the extended deadline.

C. PREPARATION OF BIDS

**12. Language of
Bid**

- 12.1 The bid prepared by the Bidder and all correspondence and documents related to the bid exchanged by the Bidder and the Purchaser shall be written in the **language specified in the BDS**,



or, if the BDS so provides, in either one of two languages specified there. Any printed literature furnished by the Bidder as part of its bid may be in a language not specified in the BDS, as long as such literature is accompanied by a translation of its pertinent passages into the language of the bid, in which case, for purposes of interpretation of the bid, the translation shall govern.

13. Documents Comprising the Bid

13.1 The bid submitted by the Bidder shall comprise:

- (a) Bid Submission Form completed and signed by a person or persons duly authorized to bind the Bidder to the Contract;
- (b) all Price Schedules duly completed in accordance with ITB Clauses 14, 15, and 18 and signed by a person or persons duly authorized to bind the Bidder to the Contract;
- (c) if required, Bid-securing Declaration or Bid Security furnished in accordance with ITB Clause 17;
- (d) written confirmation authorizing the signatory of the bid to commit the Bidder, in accordance with ITB Clause 19.2;
- (e) Attachments:

- (i) Attachment 1: Bidder's Eligibility

In the absence of prequalification, documents establishing to the Purchaser's satisfaction the Bidder's eligibility to bid, including but not limited to documentary evidence that the Bidder is legally incorporated in a territory of an eligible source country as defined under ITB Clause 4;

- (ii) Attachment 2: Bidder's Qualifications

Documentary evidence establishing to the Purchaser's satisfaction, and in accordance with ITB Clause 6, that the Bidder is qualified to perform the Contract if its bid is accepted. In the case where prequalification of Bidders has been undertaken, and pursuant to ITB Clause 6.1 (a), the Bidder must provide evidence on any changes in the information submitted as the basis for prequalification or, if there has been no change at all in said information, a statement to this effect;

Any Manufacturer's Authorizations and Subcontractor



agreements specified as required in the BDS for ITB Clauses 6.1 (b) and 6.1 (c);

(iii) Attachment 3: Eligibility of Goods and Services

Documents establishing, to the Purchaser's satisfaction, that the Goods and Services components of the Information System to be supplied, installed, and/or performed by the Bidder are eligible Goods and Services as defined under ITB Clause 5. If awarded the Contract, the Bidder shall submit for such components of the Information System evidence of eligibility, which shall be confirmed by a certificate of origin issued at the time of shipment;

(iv) Attachment 4: Conformity of the Information System to the Bidding Documents

Documentary evidence establishing to the Purchaser's satisfaction, and in accordance with ITB Clause 16, that the Goods and Services components of the Information System to be supplied, installed, and/or performed by the Bidder conform to the Bidding Documents;

(v) Attachment 5: Proposed Subcontractors

A list of all major items of Goods or Services that the Bidder proposes to purchase or subcontract from others, and the name and nationality of the proposed Subcontractor, including vendors, for each of those items;

(vi) Attachment 6: Intellectual Property

A list of:

- (1) all Software included in the Bidder's bid, assigning each item to one of the software categories defined in GCC Clause 1.1 (c):
 - (A) System, General Purpose, and Application Software; and
 - (B) Standard and Custom Software.
- (2) all Custom Materials, as defined in GCC Clause 1.1 (c), included in the Bidder's bid.



All Materials not identified as Custom Materials shall be deemed Standard Materials, as defined in GCC Clause 1.1 (c).

Re-assignments among the Software and Materials categories, if necessary, will be made during the implementation of the Contract according to GCC Clause 39 (Changes to the System).

14. Bid Prices

- 14.1 All Goods and Services identified in the Supply and Installation Cost Sub-Table and the Recurrent Cost Sub-Table in Section VII (Forms 2.5 and 2.6), and all other Goods and Services proposed by the Bidder to fulfill the requirements of the Information System, must be priced separately in the format of the same tables and summarized in the corresponding Cost Summary Tables in the same Section. Prices must be quoted in accordance with the instructions provided in Section VII for the various cost tables, in the manner specified below.
- 14.2 The price of items that the Bidder has left blank in the cost tables provided in Section VII shall be assumed to be included in the price of other items. Items omitted altogether from the cost tables shall be assumed to be omitted from the bid and, provided that the bid is substantially responsive, an adjustment to the bid price will be made during evaluation in accordance with ITB Clause 28.6 (c) (iii).
- 14.3 Unit prices must be quoted at a level of detail appropriate for calculation of any partial deliveries or partial payments under the contract, in accordance with the Implementation Schedule in Section VI, and with GCC and SCC Clause 12 – Terms of Payment. Bidders may be required to provide a breakdown of any composite or lump-sum items included in the Cost Tables.
- 14.4 The prices for Goods components of the System are to be expressed and shall be defined and governed in accordance with the rules prescribed in the edition of Incoterms **specified in the BDS**, and quoted in the appropriate columns of the cost tables of Section VII as follows:
- (a) Goods supplied from outside the Purchaser's country:
- Unless otherwise **specified in the BDS**, the prices shall be quoted on a CIP (named place of destination) basis, exclusive of all taxes, stamps, duties, levies, and fees imposed in the Purchaser's country. The named place of



destination and special instructions for the contract of carriage are as **specified in the BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible countries. Similarly, the Bidder may obtain insurance services from any eligible source country.

(b) Locally supplied Goods:

Unit prices of Goods offered from within the Purchaser's Country, shall be quoted on an EXW (ex factory, ex works, ex warehouse or off-the-shelf, as applicable) basis, including all customs duties, levies, fees, sales and other taxes incurred until delivery of the Goods, but excluding all VAT or sales and other taxes and duties/fees incurred for the Goods at the time of invoicing or sales transaction, if the Contract is awarded.

(c) Inland transportation:

Unless otherwise **stated in the BDS**, inland transportation, insurance and related local costs incidental to the delivery of the Goods to the designated Project Sites must be quoted separately as a Service item in accordance with ITB Clause 14.5, whether the Goods are to be supplied locally or from outside the Purchaser's country, except when these costs are already included in the price of the Goods, as is, e.g., the case, when ITB Clause 14.4 (a) specifies CIP, and the named places of destination are the Project Sites.

- 14.5 The price of Services shall be quoted in total for each service (where appropriate, broken down into unit prices), separated into their local and foreign currency components. Prices must include all taxes, duties, levies and fees whatsoever, except only VAT or other indirect taxes, or stamp duties, that may be assessed and/or apply in the Purchaser's country on/to the price of the Services invoiced to the Purchaser, if the Contract is awarded. Unless otherwise **specified in the BDS**, the prices must include all costs incidental to the performance of the Services, as incurred by the Supplier, such as travel, subsistence, office support, communications, translation, printing of materials, etc. Costs incidental to the delivery of the Services but incurred by the Purchaser or its staff, or by third parties, must be included in the price only to the extent such obligations are made explicit in these Bidding Documents (as, e.g., a requirement for the Bidder to include the travel and subsistence



costs of trainees).

- 14.6 Prices for Recurrent Costs beyond the scope of warranty services to be incurred during the Warranty Period, defined in SCC Clause 29.4 and prices for Recurrent Costs to be incurred during the Post-Warranty Period, defined in SCC Clause 1.1. (e) (xii), shall be quoted as Service prices in accordance with ITB Clause 14.5 on the Recurrent Cost Sub-Table in detail, and on the Recurrent Cost Summary Table in currency totals. Recurrent costs are all-inclusive of the costs of necessary Goods such as spare parts, software license renewals, labor, etc., needed for the continued and proper operation of the System and, if appropriate, of the Bidder's own allowance for price increases.
- 14.7 Unless otherwise **specified in the BDS**, prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to increases on any account. Bids submitted that are subject to price adjustment will be rejected.



15. Bid Currencies 15.1 Prices shall be quoted in the following currencies:

- (a) The Bidder may quote its prices for all Information Technologies, associated Goods, and Services to be supplied from outside the Purchaser's Country in the currencies of countries eligible according to Section III. If the Bidder wishes to be paid in a combination of different currencies, it must quote unit prices accordingly, but no more than three foreign currencies may be used.
- (b) Unless otherwise **specified in the BDS**, the Bidder shall express its prices for such Information Technologies, associated Goods, and Services to be supplied locally (i.e., from within the Purchaser's Country) in the currency of the Purchaser's Country.

**16. Documents
Establishing
the Conformity
of the
Information
System to the
Bidding
Documents**

16.1 Pursuant to ITB Clause 13.1 (e) (iv), the Bidder shall furnish, as part of its bid, documents establishing the conformity to the Bidding Documents of the Information System that the Bidder proposes to supply and install under the Contract.

16.2 The documentary evidence of conformity of the Information System to the Bidding Documents shall be in the form of written descriptions, literature, diagrams, certifications, and client references, including:

- (a) the Bidder's technical bid, i.e., a detailed description of the Bidder's proposed technical solution conforming in all material aspects with the Technical Requirements (Section VI) and other parts of these Bidding Documents, overall as well as in regard to the essential technical and performance characteristics of each component making up the proposed Information System;
- (b) an item-by-item commentary on the Purchaser's Technical Requirements, demonstrating the substantial responsiveness of the Information System offered to those requirements. In demonstrating responsiveness, the commentary shall include explicit cross references to the relevant pages in the supporting materials included in the bid. Whenever a discrepancy arises between the item-by-item commentary and any catalogs, technical specifications, or other preprinted materials submitted with the bid, the item-by-item commentary shall prevail;
- (c) a Preliminary Project Plan describing, among other things,



the methods by which the Bidder will carry out its overall management and coordination responsibilities if awarded the Contract, and the human and other resources the Bidder proposes to use. The Plan should include a detailed Contract Implementation Schedule in bar chart form, showing the estimated duration, sequence, and interrelationship of all key activities needed to complete the Contract. The Preliminary Project Plan must also address any other topics **specified in the BDS**. In addition, the Preliminary Project Plan should state the Bidder's assessment of what it expects the Purchaser and any other party involved in the implementation of the Information System to provide during implementation and how the Bidder proposes to coordinate the activities of all involved parties;

- (d) a written confirmation that the Bidder accepts responsibility for the successful integration and interoperability of all components of the Information System as required by the Bidding Documents.

16.3 For purposes of the commentary to be furnished pursuant to ITB Clause 16.2 (b), the Bidder shall note that references to brand names or model numbers or national or proprietary standards designated by the Purchaser in its Technical Requirements are intended to be descriptive and not restrictive. Except where explicitly **prohibited in the BDS** for specific items or standards, the Bidder may substitute alternative brand/model names or standards in its bid, provided that it demonstrates to the Purchaser's satisfaction that the use of the substitute(s) will result in the Information System being able to perform substantially equivalent to or better than that specified in the Technical Requirements.

17. Securing the Bid

- 17.1 The BDS for this Clause specifies whether bids must be secured, and if so, whether by a Bid-Securing Declaration or by a Bid Security. If a Bid Security is required or optional, the **BDS also specifies the amount**.
- 17.2 Securing the bids shall be substantially in accordance with the related sample forms included in Section VII or other forms approved by the Purchaser prior to bid submission. Bids must remain secured for a period of 28 days beyond the validity period of the bids, as extended, if applicable, in accordance with ITB Clause 18.2. In case of a Bid Security, it shall also:



- (a) at the Bidder's option, be in the form of either a certified check, letter of credit, or a bank guarantee from a banking institution, or a bond issued by a surety;
- (b) be issued by a reputable institution selected by the Bidder and located in any eligible country; if the institution issuing the security is located outside the Purchaser's Country, it shall have a correspondent financial institution located in the Purchaser's Country to make the security enforceable;
- (c) be payable promptly upon written demand by the Purchaser in case any of the conditions listed in ITB Clause 17.6 is/are invoked;
- (d) be submitted in its original form; copies will not be accepted.

17.3 The Bid-Securing Declaration or the Bid Security of a Joint Venture shall be issued in the name of the Joint Venture submitting the bid provided the Joint Venture has legally been constituted, or else it shall be issued in the name of all partners proposed for the Joint Venture in the bid. Sanctions due to a breach of the terms of a Bid-Securing Declaration pursuant to ITB Clause 17.6 will apply to all partners to the Joint Venture.

17.4 If a Bid-Securing Declaration or Bid Security is required in accordance with ITB Clause 17.1, any bid not accompanied by a substantially acceptable Bid-Securing Declaration or Bid Security in accordance with ITB Clauses 17.2 and 17.3, shall be rejected by the Purchaser as non-responsive.

17.5 Unless executed or forfeited pursuant to ITB Clause 17.6, Bid-Securing Declarations, if any, will expire for, or Bid Securities, if any, will be returned as promptly as possible to,

- (a) all Bidders upon annulment of the bidding pursuant to ITB Clause 34;
- (b) Bidders refusing a request to extend the period of validity of their bids pursuant to ITB Clause 18.2;
- (c) the successful Bidder once it has signed the Contract Agreement and furnished a valid Performance Security as required;
- (d) the unsuccessful Bidders at the same time as in (c), that is,



when they are informed about the successful establishment of the contract with the successful Bidder.



17.6 The Bid-Securing Declaration, if any, may be executed, or the Bid Security, if any, may be forfeited:

- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form or any extension of validity the Bidder has agreed to pursuant to ITB Clause 18.2; or
- (b) in the case of the successful Bidder, if the Bidder fails to:
 - (i) sign the Contract Agreement in accordance with ITB Clause 36; or
 - (ii) furnish the Performance Security in accordance with ITB Clause 37.

17.7 If a bid security is **not required in the BDS**, and

- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 18.2, or
- (b) if the successful Bidder fails to: sign the Contract in accordance with ITB 36; or furnish a performance security in accordance with ITB 37;

the Borrower may, **if provided for in the BDS**, declare the Bidder disqualified to be awarded a contract by the Employer for a period of time **as stated in the BDS**.

18. Period of Validity of Bids

18.1 Bids shall remain valid, at a minimum, for the period **specified in the BDS** after the deadline date for bid submission prescribed by the Purchaser, pursuant to ITB Clause 21. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive. For the convenience of Bidders, the BDS spells out the minimal original expiration dates for the validity of the bid and, if applicable pursuant to ITB Clause 17.1, for securing the bid. However, Bidders are responsible for adjusting the dates in the BDS in accordance with any extensions to the deadline date of bid submission pursuant to ITB Clause 21.2.

18.2 In exceptional circumstances, prior to expiry of the bid validity period, the Purchaser may request that the Bidders extend the period of validity for a specified additional period. The request and the responses to the request shall be made in writing. A Bidder may refuse the request without risking execution of the Bid-Securing Declaration or forfeiting the Bid Security, but in



this case the bid will be out of the competition for the award. Except as provided in ITB Clause 18.3, a Bidder agreeing to the request will not be required or permitted to modify its bid, but will be required to ensure that the bid remains secured for a correspondingly longer period, pursuant to ITB Clause 17.2.

18.3 In the case of fixed price contracts, if the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the contract price will be adjusted as specified in the request for extension. Bid evaluation will be based on the bid prices without taking into consideration the above correction.

19. Format and Signing of Bid

19.1 The Bidder shall prepare an original and the number of copies/sets of the bid **specified in the BDS**, clearly marking each one as “ORIGINAL BID,” “COPY NO. 1,” “COPY NO. 2,” etc., as appropriate. In the event of any discrepancy between them, the original shall govern.

19.2 The original and all copies of the bid, each consisting of the documents listed in ITB Clause 13.1, shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder. The authorization must be in writing and included in the bid pursuant to ITB Clause 13.1 (d). The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.

19.3 The bid shall contain no interlineations, erasures, or overwriting, except to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

19.4 The Bidder shall furnish in the Bid Submission Form (a sample of which is provided in the Sample Forms Section of the Bidding Documents) information regarding commissions or gratuities, if any, paid or to be paid to agents relating to this procurement and to the execution of the Contract should the Bidder be successful.



D. SUBMISSION OF BIDS

20. Sealing and Marking of Bids

20.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as “ORIGINAL BID” and “COPY NO. [number].” The envelopes shall then be sealed in an outer envelope.

20.2 The inner and outer envelopes shall

- (a) be addressed to the Purchaser at the address **given in the BDS**, and
- (b) bear the loan/Project name indicated in the BDS for ITB Clause 2.1, the Invitation for Bids title and number, and the Contract name(s), as indicated in the BDS for ITB Clause 1.2, and the statement “DO NOT OPEN BEFORE [time and date],” to be completed with the time and date specified in the BDS for ITB Clause 24.1.

20.3 The inner envelopes shall also indicate the name and address of the Bidder so that the bid can be returned unopened in case it is declared “late.”

20.4 If the outer envelope is not sealed and marked as required by ITB Clause 20.2 above, the Purchaser will assume no responsibility for the bid’s misplacement or premature opening. If the outer envelope discloses the Bidder’s identity, the Purchaser will not guarantee the anonymity of the bid submission, but this disclosure will not constitute grounds for bid rejection.

21. Deadline for Submission of Bids

21.1 Bids must be received by the Purchaser at the address specified in the BDS for ITB Clause 20.2 no later than the time and date **stated in the BDS**.

21.2 The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the Bidding Documents in accordance with ITB Clause 11.3, in which case all rights and obligations of the Purchaser and Bidders will thereafter be subject to the deadline as extended.

22. Late Bids

22.1 Any bid received by the Purchaser after the bid submission deadline prescribed by the Purchaser in the BDS for ITB Clause 21, will be rejected and returned unopened to the Bidder.

23. Withdrawal, Substitution,

23.1 The Bidder may withdraw, substitute, or modify its bid after submission, provided that written notice of the withdrawal,



**and
Modification of
Bids**

substitution, or modification is received by the Purchaser prior to the deadline prescribed for bid submission. All notices must be duly signed by an authorized representative and shall include a copy of the authorization (the power of attorney) in accordance with ITB Sub-Clause 19.2.

23.2 All notices of withdrawal, substitution, or modification shall

- (a) be addressed to the Purchaser at the address named in the BDS for ITB Clause 20.2 (a), and
- (b) bear the Contract name, the IFB Title and IFB Number, and the words “BID WITHDRAWAL NOTICE”, BID SUBSTITUTION NOTICE”, or “BID MODIFICATION NOTICE”.

23.3 A notice may also be sent by electronic means such as fax or e-mail, but in this case must include a scan of the mailing receipt showing both the sender's and receiver's addresses for the signed hardcopy of the notice, and a scan of the power of attorney.

23.4 Bids requested to be withdrawn in accordance with ITB 23.1 shall be returned unopened to the Bidders. Bid withdrawal notices received after the bid submission deadline will be ignored, and the submitted bid will be deemed to be a validly submitted bid.

23.5 The substitution or modification of the bid shall be prepared, sealed, marked, and dispatched as follows:

- (a) The Bidders shall provide an original and the number of copies specified in the BDS for ITB Clause 19.1 of any substitution or modification to its bid, clearly identified as such, in two inner envelopes duly marked “BID SUBSTITUTION -- ORIGINAL” or “BID MODIFICATION -- ORIGINAL” and “BID SUBSTITUTION -- COPIES” or “BID MODIFICATION -- COPIES.” The inner envelopes shall be sealed in an outer envelope, which shall be duly marked “BID SUBSTITUTION” or “BID MODIFICATION”.
- (b) Other provisions concerning the marking and dispatch of a bid substitution or modification shall be in accordance with ITB Clauses 20.2, 20.3, and 20.4.

23.6 No bid may be withdrawn, substituted, or modified in the interval between the bid submission deadline and the expiration of the bid validity period specified by the Bidder in the Bid Submission Form, or any extension thereof agreed to by the



Bidder. Withdrawal of a bid during this interval may result in the execution of the Bid-Securing Declaration, if any, or forfeiture of the Bid Security, if any, pursuant to ITB Clause 17.6.

E. BID OPENING AND EVALUATION

24. Opening of Bids by Purchaser

24.1 The Purchaser will open all bids, including withdrawals, substitutions, and modifications, in public, in the presence of Bidders' representatives who choose to attend, at the time, on the date and at the place **specified in the BDS**. Bidders' representatives shall sign a register as proof of their attendance.

24.2 First, envelopes marked "BID WITHDRAWAL NOTICE" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "BID SUBSTITUTION NOTICE" shall be opened and read out and exchanged with the corresponding bid being substituted, and the substituted bid shall not be opened, but returned to the Bidder. No bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "BID MODIFICATION NOTICE" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only bids that are opened and read out at bid opening shall be considered further.

24.3 Bids shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total bid price including any unconditional discounts, and, if applicable, the prices and unconditional discounts for Subsystems, lots, or slices; the presence or absence of a Bid-Securing Declaration or a Bid Security if one was required; any conditional discounts offered for the award of more than one Subsystem, lot, or slice, if the BDS for ITB Clause 28.1 permits such discounts to be considered in the bid evaluation; and any other such details as the Purchaser may consider appropriate.

24.4 Bids and modifications that are not opened and read out at bid



opening shall not be considered for further evaluation, irrespective of the circumstances. These bids, including any bids validly withdrawn in accordance with ITB Clause 24.2, will promptly be returned, unopened, to their Bidders.

24.5 The Purchaser will prepare minutes of the bid opening, including the information disclosed to those present in accordance with ITB Clause 24.3. The minutes will promptly be distributed to all Bidders that met the deadline for submitting bids.

25. Clarification of Bids

25.1 During the bid evaluation, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered, or permitted.

26. Preliminary Examination of Bids

26.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. In the case where a prequalification process has been undertaken for the Contract(s) for which these Bidding Documents have been issued, the Purchaser will ensure that each bid is from a prequalified Bidder and in the case of a Joint Venture, that partners and structure of the Joint Venture are unchanged from those in the prequalification.

26.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between added or subtracted subtotals and totals, the unit or subtotal price shall prevail and the total price shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit or subtotal prices, in which case the line item total as quoted shall govern and the unit price or sub-total shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail, unless the discrepancy is the result of a typo/error for which the correction is self-evident to the Purchaser. If the Bidder with the Lowest Evaluated Bid does not accept the correction of errors, the bid shall be rejected.

26.3 The Purchaser may waive any minor informality, nonconformity, or irregularity in a bid that does not constitute a material deviation, provided such waiver does not prejudice or



affect the relative ranking of any Bidder.

26.4 Prior to the detailed evaluation, the Purchaser will determine whether each bid is of acceptable quality, is complete, and is substantially responsive to the Bidding Documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviations, exceptions, objections, conditionalities, or reservations. A material deviation, exception, objection, conditionality, or reservation is one: (i) that limits in any substantial way the scope, quality, or performance of the Information System; or (ii) that limits, in any substantial way that is inconsistent with the Bidding Documents, the Purchaser's rights or the successful Bidder's obligations under the Contract; or (iii) the acceptance of which would unfairly affect the competitive position of other Bidders who have submitted substantially responsive bids.

26.5 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the nonconformity. The Purchaser's determination of bid responsiveness will be based on the contents of the bid itself.

**27. Conversion to
Single
Currency**

27.1 For evaluation and comparison purposes, the Purchaser shall convert all bid prices expressed in various currencies and amounts into a single currency **specified in the BDS**, using the selling exchange rate established by the source and on the date also **specified in the BDS**.

**28. Evaluation and
Comparison of
Bids**

28.1 The Purchaser will evaluate and compare the bids that have been determined to be substantially responsive, pursuant to ITB Clause 26. The evaluation will be performed assuming either that:

- (a) the Contract will be awarded to the lowest evaluated Bidder for the entire Information System; or
- (b) if **specified in the BDS**, Contracts will be awarded to the Bidders for each individual Subsystem, lot, or slice defined in the Technical Requirements whose bids result in the lowest combined evaluated price for the entire System.

In the latter case, discounts that are conditional on the award of more than one Subsystem, lot, or slice may be offered in bids. However, such discounts will only be considered in the price



evaluation if so **confirmed in the BDS**.

28.2 To be considered for Contract award, Bidders must have submitted bids

- (a) for which detailed bid evaluation using the same standards for compliance determination as listed in ITB Clauses 26.3 and 26.4 confirms that the bids are commercially and technically responsive, and include the hardware, Software, related equipment, products, Materials, and other Goods and Services components of the Information System in, substantially, the full required quantities for the entire Information System or, if allowed in the BDS for ITB Clause 28.1, the individual Subsystem, lot or slice bid on; and
- (b) that offer Information Technologies that are proven to perform up to the standards promised in the bid by having successfully passed the performance, benchmark, and/or functionality tests the Purchaser may require, pursuant to ITB Clause 31.2.

28.3 The Purchaser's evaluation of a bid will be made on the basis of prices quoted in accordance with ITB Clause 14 (Bid Prices).

28.4 If **indicated by the BDS**, the Purchaser's evaluation of responsive bids will take into account technical factors, in addition to cost factors. An Evaluated Bid Score (B) will be calculated for each responsive bid using the following formula, which permits a comprehensive assessment of the bid price and the technical merits of each bid:

$$\text{EMBED Unknown } B \equiv \frac{C_{low}}{C} X + \frac{T}{T_{high}} (1 - X)$$

where

C = Evaluated Bid Price

C_{low} = the lowest of all Evaluated Bid Prices among responsive bids

T = the total Technical Score awarded to the bid

T_{high} = the Technical Score achieved by the bid that was scored highest among all responsive bids



X = weight for the Price as **specified in the BDS**

The bid with the highest Evaluated Bid Score (B) among responsive bids shall be termed the Lowest Evaluated Bid and is eligible for Contract award, provided the Bidder was prequalified and/or it was found to be qualified to perform the Contract in accordance with ITB Clause 31 (Postqualification).

28.5 If, in addition to the cost factors, the Purchaser has chosen to give weight to important technical factors (i.e., the price weight, X , is less than 1 in the evaluation), that cannot be reduced to life-cycle costs or pass/fail criteria, the Total Technical Points assigned to each bid in the Evaluated Bid Formula will be determined by adding and weighting the scores assigned by an evaluation committee to technical features of the bid in accordance with the criteria set forth below.

(a) The technical features to be evaluated are generally defined below and specifically **identified in the BDS:**

- (i) Performance, capacity, or functionality features that either exceed levels specified as mandatory in the Technical Requirements; and/or influence the life-cycle cost and effectiveness of the Information System.
- (ii) Usability features, such as ease of use, ease of administration, or ease of expansion, which influence the life-cycle cost and effectiveness of the Information System.
- (iii) The quality of the Bidder's Preliminary Project Plan as evidenced by the thoroughness, reasonableness, and responsiveness of: (a) the task and resource schedules, both general and specific, and (b) the proposed arrangements for management and coordination, training, quality assurance, technical support, logistics, problem resolution, and transfer of knowledge, and other such activities as specified by the Purchaser in Section VI (Technical Requirements) or proposed by the Bidder based on the Bidder's experience.

(b) Feature scores will be grouped into a small number of evaluation categories, generally defined below and



specifically **identified in the BDS**, namely:

- (i) The technical features that reflect how well the Information System meets the Purchaser's Business Requirements (including quality assurance and risk-containment measures associated with the implementation of the Information System).
 - (ii) The technical features that reflect how well the Information System meets the System's Functional Performance Standards.
 - (iii) The technical features that reflect how well the Information System meets the General Technical Requirements for hardware, network and communications, Software, and Services.
- (c) As **specified in the BDS**, each category will be given a weight and within each category each feature may also be given a weight.
- (d) During the evaluation process, the evaluation committee will assign each desirable/preferred feature a whole number score from 0 to 4, where 0 means that the feature is absent, and 1 to 4 either represent predefined values for desirable features amenable to an objective way of rating (as is the case for, e.g., extra memory, or extra mass storage capacity, etc., if these extras would be conducive for the utility of the system), or if the feature represents a desirable functionality (e.g., of a software package) or a quality improving the prospects for a successful implementation (such as the strengths of the proposed project staff, the methodology, the elaboration of the project plan, etc., in the bid), the scoring will be 1 for the feature being present but showing deficiencies; 2 for meeting the requirements; 3 for marginally exceeding the requirements; and 4 for significantly exceeding the requirements.
- (e) The score for each feature (i) within a category (j) will be combined with the scores of features in the same category as a weighted sum to form the Category Technical Score using the following formula:



$$S_j \equiv \sum_{i=1}^k t_{ji} * w_{ji}$$

where:

t_{ji} = the technical score for feature “i” in category “j”

w_{ji} = the weight of feature “i” in category “j”

k = the number of scored features in category “j”

and $\sum_{i=1}^k w_{ji} = 1$

- (f) The Category Technical Scores will be combined in a weighted sum to form the total Technical Bid Score using the following formula:

$$T \equiv \sum_{j=1}^n S_j * W_j$$

where:

S_j = the Category Technical Score of category “j”

W_j = the weight of category “j” as **specified in the BDS**

n = the number of categories

and $\sum_{j=1}^n W_j = 1$

28.6 The Evaluated Bid Price (C) for each responsive bid will be determined as the sum of the Adjusted Supply and Installation Costs (P) plus the Recurrent Costs (R);

where the Adjusted Supply and Installation Costs (P) are determined as:

- (a) The price of the hardware, Software, related equipment, products, Materials and other Goods offered from within or from outside the Purchaser’s Country, in accordance with ITB 14.4; plus
- (b) The total price for all software development, transportation, insurance, installation, customization, integration, Commissioning, testing, training, technical support, repair, and other Services, in accordance with ITB 14.5;



- (c) with adjustments for:
- (i) Deviations proposed to the Implementation Schedule in the Technical Requirements resulting in delayed completion of the entire Information System, if **permitted in the BDS** and provided they do not exceed the maximum permissible delay period **specified in the BDS**. For evaluation purposes, a pro rata increase of the total Supply and Installation Costs will be added using the percentage(s) **specified in the BDS** for each week of delay. Bids offering deliveries beyond the maximum permissible delay specified may be rejected.
 - (ii) Deviations taken to the Contract payment schedule specified in the SCC. If deviations are **permitted in the BDS**, for evaluation purposes the total Supply and Installation Costs will be increased pro rata by the amount of interest that could otherwise be earned on the amount of any payments that would fall due under the proposed schedule earlier than the schedule stipulated in the SCC, at the interest rate **specified in the BDS**.
 - (iii) Goods and Services that are required for the Information System but have been left out or are necessary to correct minor deviations of the bid will be added to the total Supply and Installation Costs using costs taken from the highest prices from other responsive bids for the same Goods and Services, or in the absence of such information, the cost will be estimated at prevailing list prices. If the missing Goods and Services are a scored technical feature, the relevant score will be set at zero.
 - (iv) Corrections to errors in arithmetic, in accordance with ITB Clause 26.2.
 - (v) Any discounts offered for the award of more than one Subsystem, lot, or slice, if the BDS for ITB Clause 28.1 permits the consideration of discounts in the price evaluation.
- (d) The Recurrent Costs (R) are reduced to net present value and determined using the following formula:



$$R \equiv \sum_{x=1}^{N+M} \frac{R_x}{(1+I)^x}$$

where

N = number of years of the Warranty Period, defined in SCC Clause 29.4

M = number of years of the Post-Warranty Services Period, as defined in SCC Clause 1.1.(e) (xii)

x = an index number 1, 2, 3, ... $N + M$ representing each year of the combined Warranty Service and Post-Warranty Service Periods.

R_x = total Recurrent Costs for year “ x ,” as recorded in the Recurrent Cost Sub-Table.

I = discount rate to be used for the Net Present Value calculation, as **specified in the BDS**.

29. Domestic Preference

29.1 No margin of domestic preference will apply.

30. Contacting the Purchaser

30.1 From the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bid, it should do so in writing.

30.2 If a Bidder tries to directly influence the Purchaser or otherwise interfere in the bid evaluation process and the Contract award decision, its bid may be rejected.

F. POSTQUALIFICATION AND AWARD OF CONTRACT

31. Post-qualification

31.1 The Purchaser will determine at its own cost and to its satisfaction whether the Bidder (including Joint Venture Partners, and any Subcontractors for which the BDS for ITB Clause 6.1 (a) permits that their qualifications count towards the required Bidder qualifications) that is selected as having submitted the Lowest Evaluated Bid is qualified to perform the Contract satisfactorily, in accordance with ITB Clause 6. If a prequalification process was undertaken for the Contract(s) for which these Bidding Documents were issued, the Purchaser will determine in the manner described above that no material changes have occurred after the prequalification that negatively affect the ability of the Bidder that has submitted the Lowest



Evaluated Bid to perform the Contract.

31.2 Pursuant to ITB Clauses 6 and 16, and as additionally may be **specified in the BDS**, the determination will evaluate the Bidder's financial, technical, design, integration, customization, production, management, and support capabilities and will be based on an examination of the documentary evidence of the Bidder's qualifications, as well as other information the Purchaser deems necessary and appropriate. This determination may include visits or interviews with the Bidder's clients referenced in its bid, site inspections, and any other measures. If so **specified in the BDS**, at the time of postqualification the Purchaser may also carry out tests to determine that the performance or functionality of the Information System offered meets those stated in the Technical Requirements.

31.3 An affirmative postqualification determination will be a prerequisite for award of the Contract to the Lowest Evaluated Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Purchaser will proceed to the next lowest evaluated Bidder to make a similar determination of that Bidder's capabilities to perform satisfactorily.

**32. Award
Criteria**

32.1 Subject to ITB Clause 34, the Purchaser will award the Contract to the Bidder whose bid has been determined to be substantially responsive and the Lowest Evaluated Bid, provided further that the Bidder has been determined to be qualified to perform the Contract satisfactorily, pursuant to ITB Clause 31.

**33. Purchaser's
Right to Vary
Quantities at
Time of Award**

33.1 The Purchaser reserves the right at the time of Contract award to increase or decrease, by the percentage(s) **indicated in the BDS**, any of the following:

- (a) the quantity of substantially identical Subsystems; or
- (b) the quantity of individual hardware, Software, related equipment, Materials, products, and other Goods components of the Information System; or
- (c) the quantity of Installation or other Services to be performed,

from that originally specified in the Technical Requirements (as amended by any Addenda issued pursuant to ITB Clause 11), without any change in unit prices or other terms and conditions.



- 34. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids**
- 34.1 The Purchaser reserves the right to accept or reject any bid or to annul the bidding process and reject all bids at any time prior to Contract award, without thereby incurring any liability to the Bidders.
- 35. Notification of Award**
- 35.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its bid has been accepted.
- 35.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 35.3 The Purchaser shall promptly publish in UNDB online and in dgMarket the results, identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a bid; (ii) bid prices as read out at bid opening; (iii) name, evaluated price and, if the bidding conditions included scoring for technical quality, the technical score of each bid that was evaluated; (iv) name of Bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, the price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful Bidders may make a request in writing to the Purchaser for a debriefing seeking explanations on the grounds on which their bids were not selected. The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.
- 35.4 Upon the successful Bidder furnishing the signed Contract Agreement and the Performance Security pursuant to ITB Clause 37, the Purchaser will promptly notify each unsuccessful Bidder, and will discharge all remaining Bid Securities, if any, as provided in ITB Clause 17.5 (c) and (d).
- 36. Signing of Contract**
- 36.1 At the same time as the Purchaser notifies the successful Bidder that its bid has been accepted, the Purchaser will send the Bidder the Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.
- 36.2 As soon as practically possible, but no more than twenty-eight (28) days following receipt of the Contract Agreement, the successful Bidder shall sign and date it, and return it to the Purchaser.



**37. Performance
Security**

37.1 As soon as practically possible, but no more than twenty-eight (28) days following receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, using the Performance Security form provided in the Bidding Documents or another form acceptable to the Purchaser.

37.2 Failure of the successful Bidder to comply with the requirements of ITB Clause 36 or ITB Clause 37.1 shall constitute sufficient grounds for the annulment of the award and, if and as applicable, execution of the Bid-Securing Declaration or forfeiture of the Bid Security, in which event the Purchaser may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.

38. Adjudicator

38.1 Unless otherwise **stated in the BDS**, the Purchaser proposes that the person named in the BDS be appointed as Adjudicator under the Contract to assume the role of informal Contract dispute mediator, as described in GCC Clause 6. In this case, a résumé of the named person is **attached to the BDS**. The proposed hourly fee for the Adjudicator is **specified in the BDS**. The expenses that would be considered reimbursable to the Adjudicator are also **specified in the BDS**. If a Bidder does not accept the Adjudicator proposed by the Purchaser, it should state its non-acceptance in its Bid Submission Form and make a counterproposal of an Adjudicator and an hourly fee, attaching a résumé of the alternative. If the successful Bidder and the Adjudicator nominated in the BDS happen to be from the same country, and this is not the country of the Purchaser too, the Purchaser reserves the right to cancel the Adjudicator nominated in the BDS and propose a new one. If by the day the Contract is signed, the Purchaser and the successful Bidder have not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed, at the request of either party, by the Appointing Authority specified in the SCC clause relating to GCC Clause 6.1.4, or if no Appointing Authority is specified there, the Contract will be implemented without an Adjudicator.



SECTION II. BID DATA SHEET (BDS)



Bid Data Sheet

The following specific information relating to the System to be procured and the procurement procedures that will be used shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions in the Bid Data Sheet (BDS) shall prevail over those in the ITB.

A. GENERAL

ITB 1.1	<p>Name of Purchaser: Electricidade de Moçambique, E.P. (EDM)</p> <p>Name of authorized Purchasing Agent: None</p> <p>Description of the System for which bids are invited:</p> <p>Supply of an Integrated Business Management System (SIGEM) for Electricidade de Moçambique, E.P. (EDM) including supply, installation, training, customization and integration with legacy systems, of the following Management Information Systems:</p> <ul style="list-style-type: none">(i) a commercial management system (CMS), to support customer service and all commercial functions within the company;(ii) an incident recording and management system (IRMS), to enable EDM to better respond to client contingencies by automating the detection of distribution faults and ensuring the quality of power supply;(iii) a corporate resources management information system (also identified as “enterprise resource planning (ERP)” for the entire EDM, to integrate the management of all the corporate processes and resources of the company under a single technological platform.
ITB 1.2	<p>Title of IFB: “Supply, Installation & Training of an Integrated Business Management System (SIGEM) for Electricidade de Moçambique, E.P. (EDM)”</p> <p>Number of IFB: ENC. 181/SIGEM-ERP&CMS&IRMS/2011</p> <p>Name of resulting Contract(s): “Supply, Installation & Training of an Integrated Business Management System (SIGEM) for</p>

	Electricidade de Moçambique, E.P. (EDM)”				
ITB 1.4	Alternative e-Tendering procedures are not available in this procurement.				
ITB 2.1	<p>Name of the Borrower: Government of the Republic of Mozambique</p> <p>Credit Number: IDA 4681-0 MZ</p> <p>Credit Amount: SDR 49.7 MILLION (US\$80 MILLION EQUIVALENT) – Overall Loan value for the whole EDAP Project (SIGEM Project is one of its components)</p> <p>Name of Project: EDAP IDA-Integrated Business Management System (SIGEM ERP-IRMS-CMS)</p>				
ITB 6.1 (a)	<p>The bidder must possess the requisite experience, strength and capabilities in providing the services necessary to meet the requirements, as described in the bidding documents. The bidder must also possess the technical know-how and the financial wherewithal that would be required to successfully provide the Information Technologies to the PURCHASER. The bids must be complete in all respect and should cover the entire scope of work as stipulated in the bidding document.</p> <p>From the time the Proposals are opened to the time the Contract is awarded, the Bidders should not contact the Client on any matter related to its Technical and/or Financial Proposal. Any effort by bidders to influence the Client in the examination, evaluation, ranking of Proposals, and recommendation for award of Contract may result in the rejection of the bidder’s Proposal.</p> <p>The Purchaser will evaluate and compare the bids that have been determined to be substantially responsive, pursuant to ITB Clause 26.</p> <p>After defining the lowest evaluated Bidder for the entire Information System based on Chapter E of the ITB the bidder should meet the eligibility criteria as given below:</p> <p><u>Legal Capability for the Bidder</u></p> <table border="1"> <thead> <tr> <th>Clause</th> <th>Minimum documents to be submitted as proof</th> </tr> </thead> <tbody> <tr> <td>Companies with registration for</td> <td>• Valid Business License</td> </tr> </tbody> </table>	Clause	Minimum documents to be submitted as proof	Companies with registration for	• Valid Business License
Clause	Minimum documents to be submitted as proof				
Companies with registration for	• Valid Business License				



	<table border="1"> <tr> <td> <p>providing software development and consultancy are eligible for bidding. The domestic and foreign Bidders should be registered under the relevant Act prevailing in their country since five years.</p> </td> <td> <p>issued from the authorized agency.</p> </td> </tr> <tr> <td> <p>Submit written power-of-attorney accompanying the bid for the person or persons signing the bidding documents (all pages of the original bid and it copies, except for un-amended printed literatures, shall be signed by the person or the persons signing the bid)</p> </td> <td> <ul style="list-style-type: none"> • The Power of Attorney (POA) should be submitted and executed on the non-judicial stamp paper of appropriate value as prevailing in the respective countries and the same be attested by a notary public. If the bidder is a foreign firm the POA should be </td> </tr> <tr> <td> <p>For supply of any applications software the bidder should have a certificate of Authenticity (COA), signed by Authorized Signatory stating that all software supplied are authentic and legal copy is/are being supplied.</p> </td> <td> <ul style="list-style-type: none"> • Certificate of Authenticity • In the case of a Bidder offering goods that the Bidder does not itself produce, should include Manufacturer's Authorizations in the bid, based on the sample found in Section VII </td> </tr> <tr> <td> <p>Bidding Document purchase</p> </td> <td> <ul style="list-style-type: none"> • Bidder should have purchased the bidding documents before the bid opening and therefore should present the corresponding receipt. </td> </tr> </table>	<p>providing software development and consultancy are eligible for bidding. The domestic and foreign Bidders should be registered under the relevant Act prevailing in their country since five years.</p>	<p>issued from the authorized agency.</p>	<p>Submit written power-of-attorney accompanying the bid for the person or persons signing the bidding documents (all pages of the original bid and it copies, except for un-amended printed literatures, shall be signed by the person or the persons signing the bid)</p>	<ul style="list-style-type: none"> • The Power of Attorney (POA) should be submitted and executed on the non-judicial stamp paper of appropriate value as prevailing in the respective countries and the same be attested by a notary public. If the bidder is a foreign firm the POA should be 	<p>For supply of any applications software the bidder should have a certificate of Authenticity (COA), signed by Authorized Signatory stating that all software supplied are authentic and legal copy is/are being supplied.</p>	<ul style="list-style-type: none"> • Certificate of Authenticity • In the case of a Bidder offering goods that the Bidder does not itself produce, should include Manufacturer's Authorizations in the bid, based on the sample found in Section VII 	<p>Bidding Document purchase</p>	<ul style="list-style-type: none"> • Bidder should have purchased the bidding documents before the bid opening and therefore should present the corresponding receipt.
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<p>Bidding Document purchase</p>	<ul style="list-style-type: none"> • Bidder should have purchased the bidding documents before the bid opening and therefore should present the corresponding receipt. 								

<i><u>Financial Capability for the Bidder</u></i>	
Clause	Minimum documents to be submitted as proof
<p><u>Average Annual Turnover:</u></p> <p>The Bidder should demonstrate a minimum average annual turnover of US\$9,000,000.00 (nine million American dollars) equivalent, calculated as total certified payments received for contracts in progress or completed, within the last five (5) years.</p>	<ul style="list-style-type: none"> Chartered Accountant certificate on Annual Financial statements for net worth turnover, etc copy of the audited profit and loss showing turnover of the company for last two years.
<p><u>Financial Performance:</u></p> <p>Submission of audited balance sheets, or if not required by the law of the applicant's country, other financial statements acceptable to the Bidder, for the last five (5) years to demonstrate the current soundness of the applicants financial position and its prospective long term profitability, and capacity to have a cash flow amount of US\$500.000 (five hundred thousand American dollars) equivalent.</p> <p>The following financial ratios should be accomplished:</p> <ul style="list-style-type: none"> Current ratio (current assets / current liabilities) ≥ 1.0 Debt Ratio (Total Debt / Total Assets) ≤ 0.90 	<ul style="list-style-type: none"> Audited financial statements or attested certificate from auditor (if not required by the law of the bidder's country, other financial statements acceptable to the Purchaser), for the past two years, including balance sheets, profit and loss accounts, and cash flow statement. The results should be annualized and accounting practices should follow Mozambique guidelines in force. Explanation for changes in accounting practices should be enclosed.
<i><u>Experience and Technical Capacity for the Bidder</u></i>	
Clause	Minimum documents to be submitted as proof



	<p>The Bidder/Supplier should be an established Information Technology company/ IT System Integrator and should have been in the business for a period exceeding ten (10) years as on the date of opening of bids. During the past ten (10) years, the Bidder should have completed four (4) successful contracts involving the development, installation, and provision of technical support for Information Systems of similar functional/technical characteristics in electric utilities, wherein two of the utilities had more than 1 million customers at the time of the implementation.</p> <p>Comments:</p> <ul style="list-style-type: none"> • Successful shall mean that relevant contract terms have been met to the satisfaction of the Client. • The past ten (10) years shall be determined to have begun ten (10) years prior to the publication date of the Invitation for Bids and will not be altered in the case of a postponement of the deadline for bid submission. • Work-in-Progress projects will not be considered for evaluation. 	<ul style="list-style-type: none"> • Work order confirming area of activity (scope) • Completion certificate / Go-Live Certificate • References/Client certificates
	<p>The Project Manager shall be a registered professional IT engineer with not less than 10 years experience in the design and supervision of IT Integrated Solution Projects. In</p>	<ul style="list-style-type: none"> • For the purpose of evaluation of the quality of the proposed staff, the Bidder shall submit CV's for its staff. In special, and,

	<p>demonstrating the professional experience, the Project Manager is expected to prove to have been involved in at least 3 (three) projects of similar nature (involving the information system solution being offered and with the responsibility of Project Manager in at least one of them) based in national and international turnkey contracts.</p> <p>In demonstrating the work experience, the Project Manager is expected to prove to have been part of the Bidder's Payroll for at least one (1) year.</p>	<p>apart from other important details, the CVs shall clearly indicate the experiences of the staff in the last five years, shall give types of activities performed and shall give the Client References.</p> <ul style="list-style-type: none"> • Documentary proof of confirming year and area of activity. Memorandum and Articles of Associations • Certificate from HR department is to be submitted
	<p>Each System Implementation Leader should be a registered professional engineer with not less than 4 years experience in the design and supervision of the implementation of the specific system assigned (ERP, CMS, IRMS).</p> <p>In demonstrating the professional experience, this staff member is expected to prove that have been involved in at least 3 (three) projects of similar nature (involving the information system solution being offered) based in national and international turnkey contracts.</p> <p>In demonstrating the work experience, the System Implementation Leader is expected to prove to have been part of the Bidder's Payroll for at least one (1) year.</p>	<ul style="list-style-type: none"> • For the purpose of evaluation of the quality of the proposed staff, the Bidder shall submit CV's for its staff. In special, and, apart from other important details, the CVs shall clearly indicate the experiences of the staff in the last five years, shall give types of activities performed and shall give the Client References. • Documentary proof of confirming year and area of activity. Memorandum and Articles of Associations



	<table border="1"><tr><td></td><td><ul style="list-style-type: none">• Certificate from HR department is to be submitted.</td></tr></table> <p>Purchaser requires that all legal documents are submitted legalized.</p>		<ul style="list-style-type: none">• Certificate from HR department is to be submitted.
	<ul style="list-style-type: none">• Certificate from HR department is to be submitted.		
ITB 6.1 (b)	Manufacturer's Authorizations for Information Technologies - except for those technologies which the Bidder itself manufactures - are required for the following types/categories: <i>all active (i.e. powered) equipment and all software.</i>		
ITB 6.1 (c)	If the Bidder proposes to use Subcontractors for the provision of certain key services, written agreements by the proposed firms to provide these services in case of contract(s) resulting from this bidding are required for the following types/categories of services: <i>All services</i>		

B. THE BIDDING DOCUMENTS

ITB 10.1	<p>Purchaser's / duly authorized Purchasing Agent's address:</p> <p><i>Electricidade de Moçambique, EP Direcção de Electrificação e Projectos Av. Filipe Magaia nr. 368, CP 2532 Maputo, Moçambique Facsimile number: +258 21322074 Att. Mr. Marcelino Alberto, Executive Board Member E-mail address: mgildo@edm.co.mz</i></p>
ITB 10.2	Dates, times, and places for the pre-bid meeting:

	<p>Date: March 14, 2012</p> <p>Time: 10:00am local time</p> <p>Place: Electricidade de Moçambique (EDM), Av. Filipe Samuel Magaia nr. 368, Maputo, Moçambique</p>
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C. PREPARATION OF BIDS

ITB 12.1	<p>The language of the bid and of all correspondence and documents related to it is: English</p> <p>Unless otherwise specified in the Technical Requirements (Section VI) all documentation attached to the bidding documents, including brochures, letters, etc., should translated to the language of the bid.</p> <p>This will be the only Contract version which the winning Bidder shall sign and the Contract shall be interpreted in accordance with the laws of Mozambique.</p>
ITB 14.1	<p>Recurrent cost items are: One year Maintenance after the warranty period. This maintenance will comprise of the following:</p> <ul style="list-style-type: none"> • Adaptive – dealing with changes and adapting in the software environment • Perfective – accommodating with new or changed user requirements which concern functional enhancements to the software • Corrective – dealing with errors found and fixing it • Preventive – concerns activities aiming on increasing software maintainability and prevent problems in the future
ITB 14.4	The Incoterms edition is: Incoterms 2010
ITB 14.4 (a)	<p>Bidders shall give the required details and a breakdown of their prices as follows in the price schedules:</p> <p>(a) For foreign goods priced on a CIP (named place of</p>



	<p>destination) basis:</p> <p>(i) The contract of carriage shall include the cost of unloading the goods at destination, as well as payment by the Bidder of the cost of custom formalities, duties, taxes or other charges payable on the foreign Goods for their transit through any country other than the Purchaser's country.</p> <p>(ii) The named place of destination shall be the Project Site (Direção do Sistema Integrado de Gestão da EDM (SIGEM), Av. Namaacha KM 1.5, P.O Box 381, Maputo, Mozambique)</p> <p>(b) Installation, customization, integration, commissioning, testing, training, technical support, maintenance, repair and other services for proper installation and operation of the Information System shall be quoted separately and shall include rates of prices for all labor, supplier's equipment, materials, consumables and all matters and things of whatsoever nature, provision of operations and maintenance manuals, training, etc., as necessary for the proper execution of the Installation Services, including all taxes, duties, levies and charges payable in Mozambique.</p> <p>(c) Sales tax, local taxes and other levies applied</p>
ITB 14.4 (c)	The Purchaser will assume the responsibility, including for the transport risks, for arranging, at its cost, the inland transport of the Goods to other place different from the Project Site stated in ITB 14.4 (a).
ITB 14.5	As stated before, there will not be any reimbursement of costs to the Bidder.
ITB 14.7	Prices quoted by the Bidder shall be <i>fixed prices</i> .
ITB 15.1 (b)	The currency to be used for quoting prices of the Goods and Services components of the System offered within the Purchaser's Country, as well as local currency expenditures for local technical support, training, maintenance, transportation, insurance, and other

	local services incidental to delivery, installation and operation of the System, is: <i>US American Dollars</i>
ITB 16.2 (c)	<p>In addition to the topics described in ITB Clause 16.2 (c), the Preliminary Project Plan must address the following topics:</p> <ul style="list-style-type: none"> a) Project Organization and Management Plan; b) Delivery and Installation Plan (work schedule) c) Data Requirement gathering Plan d) Information System Quality Plan e) Measurement Tools & Processes proposed for monitoring: f) Risk Management Plan g) Training Plan h) Change Management Plan i) Pre-commissioning and Operational Acceptance Testing Plan j) Warranty Service Plan k) Technical Support Plan l) Post-Warranty Service Plan (optional) m) Hardware Requirements for System Installation and Use (ONLY Description of proposed solution needs)
ITB 16.3	In the interest of effective integration, cost-effective technical support, and reduced re-training and staffing costs, Bidders are required to offer specific brand names and models for the following limited number of specific items: None
ITB 17.1	<p>Bids <i>need</i> to be secured by a Bid Security. The amount of Bid Security required shall be USD \$150,000.00 (One hundred and fifty thousand American dollars) or its equivalent in a convertible currency).</p> <p>Bidders are allowed to submit bank guarantees directly issued by the bank of their choice located in any eligible country. If the Bid security is issued by a financial institution that is located outside</p>



	Mozambique, such financial institution shall have a corresponding financial institution located in Mozambique to make it enforceable.
ITB 17.7	If the Bidder incurs any of the actions prescribed in ITB Clause 17.7 (a) or (b), the Borrower will declare the Bidder ineligible to be awarded contracts by the Employer for a period of 3 years.
ITB 18.1	The bid validity period shall be 120 days after the deadline for bid submission, as specified below in reference to ITB Clause 21. Accordingly, each bid shall be valid through August 23, 2012 . Accordingly, a bid with a Bid Security that expires before September 24, 2012 shall be rejected as non-responsive.
ITB 19.1	Required number of bid copies, besides the original: two (2) copies

D. SUBMISSION OF BIDS

ITB 20.2 (a)	<p>The address for bid submission is:</p> <p style="text-align: center;">Electricidade de Moçambique, EP Direcção de Electrificação e Projectos Av. Filipe Magaia nr. 368, CP 2532 Facsimile number: +258 21322074 Maputo, Moçambique</p> <p>Bidders should submit their proposals in sealed envelopes as per format below:</p> <p><u>EXTERNAL ENVELOPE</u></p> <p>The external envelope is unique envelope that should not indicate bidder name or any other information related to the bidder.</p>
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ENVELOPE (Front)

Republic of Mozambique
Electricidade de Moçambique, E.P. (EDM),
EDAP IDA - Integrated Business Management System (SIGEM
ERP-IRMS-CMS)

Credit Number: IDA 4681-0 MZ

Direcção de Electrificação e Projectos
 Av. Filipe Magaia nr. 368, CP 2532
 Maputo, Moçambique

IFB ENC. 181/SIGEM-ERP&CMS&IRMS/2011

**Supply, Installation & Training of an Integrated Business
 Management System (SIGEM) for Electricidade de
 Moçambique, E.P (EDM)**

DOT NOT OPEN BEFORE: 2:00pm local time of 04/23/2012

INTERNAL ENVELOPES

The internal envelopes refers to three (3) envelopes (1 Original and 2 copies) that should be properly identified with the format below:

For original

ENVELOPE (Front)

Republic of Mozambique
Electricidade de Moçambique, E.P. (EDM),
EDAP IDA - Integrated Business Management System (SIGEM



ERP-IRMS-CMS)

Credit Number: IDA 4681-0 MZ

Direcção de Electrificação e Projectos

Av. Filipe Magaia nr. 368, CP 2532

Maputo, Moçambique

IFB ENC. 181/SIGEM-ERP&CMS&IRMS/2011

**Supply, Installation & Training of an Integrated Business
Management System (SIGEM) for Electricidade de
Moçambique, E.P (EDM)**

ORIGINAL

“BIDDER IDENTIFICATION”

For copies #1 and #2

ENVELOPE (Front)

Republic of Mozambique

Electricidade de Moçambique, E.P. (EDM),

***EDAP IDA - Integrated Business Management System (SIGEM
ERP-IRMS-CMS)***

Credit Number: IDA 4681-0 MZ

Direcção de Electrificação e Projectos

Av. Filipe Magaia nr. 368, CP 2532

Maputo, Moçambique

IFB ENC. 181/SIGEM-ERP&CMS&IRMS/2011

**Supply, Installation & Training of an Integrated Business
Management System (SIGEM) for Electricidade de
Moçambique, E.P (EDM)**

	<div style="border: 1px solid black; padding: 20px; text-align: center;"> <p>COPY # “X”</p> <p>“BIDDER IDENTIFICATION”</p> </div> <p>The three envelopes/covers should be sealed separately by personal seal of the bidder and should be put in one large envelope/cover as described as EXTERNAL Envelope.</p> <p>Is suggested that the documents establishing bidders eligibility as per clauses included in the IFB should placed at the front of the bidding documents.</p>
ITB 21.1	Deadline for bid submission is: <i>April 23, 2012 2:00pm local time</i>

E. BID OPENING AND EVALUATION

ITB 24.1	<p>Time, date, and place for bid opening are:</p> <p style="text-align: center;"><i>April 23, 2012 2:00pm local time</i> at Electricidade de Moçambique, EP Direcção de Electrificação e Projectos Av. Filipe Magaia nr. 368, CP 2532, 1st Floor Maputo, Moçambique</p>
ITB 27.1	<p>The currency chosen for the purpose of converting to a common currency is: <i>U.S. American Dollars</i></p> <p>The source of exchange rate shall be: The Central Bank of Mozambique.</p> <p>The date of exchange rate determination is the same date for the bid submission deadline.</p>



ITB 28.1	Bids for Subsystems, lots, or slices of the overall Information System will not be accepted. Discounts for the award of multiple Subsystems, lots, or slices will not be considered in bid evaluation.
ITB 28.4	The bid evaluation will not take into account technical factors in addition to cost factors.
ITB 28.5	Not applicable
ITB 28.6 (c) (i)	The Purchaser will not accept deviations in the schedule of installation and commissioning specified in the Implementation Schedule.
ITB 28.6 (c) (ii)	The Purchaser will not accept deviations in the payment schedule in the SCC.
IAL 28.6 d)	The applicable Interest Rate for computation of the Net Present Value of Recurrent Costs is 10% annual.

F. POSTQUALIFICATION AND AWARD OF CONTRACT

ITB 31.2	As additional postqualification measures, the Lowest Evaluated Bidder shall give comprehensive presentation to the Purchaser's working committee members regarding and not limited to the project work plan, their experience in the domain knowledge, software customization needed, implementation methodology, project risk and risk mitigation plan, related to the Information System offered. The internal committee of the Purchasing will score the presentation and will decide on the contract award.
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ITB 33.1	Percentage for quantity increase or decrease: 25%
ITB 38.1	<p>The proposed Adjudicator is:</p> <p><i>Mr. Loland Oystein</i></p> <p><i>Avenida Armando Tivane 1853</i></p> <p><i>Phone: +258 21 48 50 58</i></p> <p><i>Fax: +258 21 48 50 57</i></p> <p><i>E-mail: loland.norconsult@tvcabo.co.mz</i></p> <p><u>Contracts with foreign Suppliers:</u></p> <p>All disputes arising in connection with the present Contract shall be finally settled under the Rules of Conciliation and Arbitration of the International Chamber of Commerce (ICC) by one or more arbitrators appointed in accordance with said Rules. The place of arbitration shall be South Africa.</p> <p><u>Contracts with local Suppliers:</u></p> <p>Any dispute between the Purchaser and a Contractor who is a national of the Purchaser's country arising in connection with the present Contract shall be settled under the rules of Centro de Arbitragem, Conciliação e Mediação de Moçambique (local arbitral institution)</p>



**SECTION III. ELIGIBLE COUNTRIES FOR THE PROVISION OF
GOODS, WORKS, AND SERVICES IN BANK-FINANCED
PROCUREMENT**



Eligible Countries for the Provision of Goods, Works, and Services in Bank-Financed Procurement

As of September 2007

1. Eligible for this procurement are firms of, and goods manufactured in, all countries except countries, if any, listed in the following restrictions.
2. In accordance with Para 1.8 (a) of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:
 - (i) as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the goods or works required, or
 - (ii) by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.
3. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:

With reference to paragraph (i) above: *none*

With reference to paragraph (ii) above: **Reference is made to the UN website:
<http://www.un.org/Docs/sc/committees/INTRO.htm>**



*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P.*

Section IV. General Conditions
of Contract

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SECTION IV. GENERAL CONDITIONS OF CONTRACT



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General Conditions of Contract

A. CONTRACT AND INTERPRETATION

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated below.

(a) contract elements

(i) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein. The Contract Agreement and the Contract Documents shall constitute the Contract, and the term “the Contract” shall in all such documents be construed accordingly.

(ii) “Contract Documents” means the documents specified in Article 1.1 (Contract Documents) of the Contract Agreement (including any amendments to these Documents).

(iii) “Contract Agreement” means the agreement entered into between the Purchaser and the Supplier using the form of Contract Agreement contained in the Sample Forms Section of the Bidding Documents and any modifications to this form agreed to by the Purchaser and the Supplier. The date of the Contract Agreement shall be recorded in the signed form.

(iv) “GCC” means the General Conditions of Contract.

(v) “SCC” means the Special Conditions of Contract.

(vi) “Technical Requirements” means the Technical Requirements Section of the Bidding Documents.

(vii) “Implementation Schedule” means the Implementation Schedule Sub-section of the Technical Requirements.

viii) “Contract Price” means the price or prices



defined in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement.

(ix) “Procurement Guidelines” refers to the edition **specified in the SCC** of the World Bank Guidelines: Procurement under IBRD Loans and IDA Credits.

(x) “Bidding Documents” refers to the collection of documents issued by the Purchaser to instruct and inform potential suppliers of the processes for bidding, selection of the winning bid, and Contract formation, as well as the contractual conditions governing the relationship between the Purchaser and the Supplier. The General and Special Conditions of Contract, the Technical Requirements, and all other documents included in the Bidding Documents reflect the Procurement Guidelines that the Purchaser is obligated to follow during procurement and administration of this Contract.

(b) entities

(i) “Purchaser” means the entity purchasing the Information System, as **specified in the SCC**.

(ii) “Project Manager” means the person **named as such in the SCC** or otherwise appointed by the Purchaser in the manner provided in GCC Clause 18.1 (Project Manager) to perform the duties delegated by the Purchaser.

(iii) “Supplier” means the firm or Joint Venture whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

(iv) “Supplier’s Representative” means any person nominated by the Supplier and named as such in the Contract Agreement or otherwise approved by the Purchaser in the manner provided in GCC Clause 18.2 (Supplier’s Representative) to perform the duties delegated by the Supplier.

(v) “Subcontractor” means any firm to whom any of



the obligations of the Supplier, including preparation of any design or supply of any Information Technologies or other Goods or Services, is subcontracted directly or indirectly by the Supplier.

(vi) “Adjudicator” means the person named in Appendix 2 of the Contract Agreement, appointed by agreement between the Purchaser and the Supplier to make a decision on or to settle any dispute between the Purchaser and the Supplier referred to him or her by the parties, pursuant to GCC Clause 6.1 (Adjudication).

(vii) “The World Bank” (also called “The Bank”) means the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).

(c) scope

(i) “Information System,” also called “the System,” means all the Information Technologies, Materials, and other Goods to be supplied, installed, integrated, and made operational (exclusive of the Supplier’s Equipment), together with the Services to be carried out by the Supplier under the Contract.

(ii) “Subsystem” means any subset of the System identified as such in the Contract that may be supplied, installed, tested, and commissioned individually before Commissioning of the entire System.

(iii) “Information Technologies” means all information processing and communications-related hardware, Software, supplies, and consumable items that the Supplier is required to supply and install under the Contract.

(iv) “Goods” means all equipment, machinery, furnishings, Materials, and other tangible items that the Supplier is required to supply or supply and install under the Contract, including, without limitation, the Information



Technologies and Materials, but excluding the Supplier's Equipment.

- (v) "Services" means all technical, logistical, management, and any other Services to be provided by the Supplier under the Contract to supply, install, customize, integrate, and make operational the System. Such Services may include, but are not restricted to, activity management and quality assurance, design, development, customization, documentation, transportation, insurance, inspection, expediting, site preparation, installation, integration, training, data migration, Pre-commissioning, Commissioning, maintenance, and technical support.
- (vi) "The Project Plan" means the document to be developed by the Supplier and approved by the Purchaser, pursuant to GCC Clause 19, based on the requirements of the Contract and the Preliminary Project Plan included in the Supplier's bid. The "Agreed and Finalized Project Plan" is the version of the Project Plan approved by the Purchaser, in accordance with GCC Clause 19.2. Should the Project Plan conflict with the Contract in any way, the relevant provisions of the Contract, including any amendments, shall prevail.
- (vii) "Software" means that part of the System which are instructions that cause information processing Subsystems to perform in a specific manner or execute specific operations.
- (viii) "System Software" means Software that provides the operating and management instructions for the underlying hardware and other components, and is identified as such in Appendix 4 of the Contract Agreement and such other Software as the parties may agree in writing to be Systems Software. Such System Software includes, but is not restricted to, micro-code embedded in hardware (i.e., "firmware"), operating systems, communications, system and network



management, and utility software.

- (ix) “General-Purpose Software” means Software that supports general-purpose office and software development activities and is identified as such in Appendix 4 of the Contract Agreement and such other Software as the parties may agree in writing to be General-Purpose Software. Such General-Purpose Software may include, but is not restricted to, word processing, spreadsheet, generic database management, and application development software.
- (x) “Application Software” means Software formulated to perform specific business or technical functions and interface with the business or technical users of the System and is identified as such in Appendix 4 of the Contract Agreement and such other Software as the parties may agree in writing to be Application Software.
- (xi) “Standard Software” means Software identified as such in Appendix 4 of the Contract Agreement and such other Software as the parties may agree in writing to be Standard Software.
- (xii) “Custom Software” means Software identified as such in Appendix 4 of the Contract Agreement and such other Software as the parties may agree in writing to be Custom Software.
- (xiii) “Source Code” means the database structures, dictionaries, definitions, program source files, and any other symbolic representations necessary for the compilation, execution, and subsequent maintenance of the Software (typically, but not exclusively, required for Custom Software).
- (xiv) “Materials” means all documentation in printed or printable form and all instructional and informational aides in any form (including audio, video, and text) and on any medium,



provided to the Purchaser under the Contract.

- (xv) “Standard Materials” means all Materials not specified as Custom Materials.
 - (xvi) “Custom Materials” means Materials developed by the Supplier at the Purchaser’s expense under the Contract and identified as such in Appendix 5 of the Contract Agreement and such other Materials as the parties may agree in writing to be Custom Materials. Custom Materials includes Materials created from Standard Materials.
 - (xvii) “Intellectual Property Rights” means any and all copyright, moral rights, trademark, patent, and other intellectual and proprietary rights, title and interests worldwide, whether vested, contingent, or future, including without limitation all economic rights and all exclusive rights to reproduce, fix, adapt, modify, translate, create derivative works from, extract or re-utilize data from, manufacture, introduce into circulation, publish, distribute, sell, license, sublicense, transfer, rent, lease, transmit or provide access electronically, broadcast, display, enter into computer memory, or otherwise use any portion or copy, in whole or in part, in any form, directly or indirectly, or to authorize or assign others to do so.
 - (xviii) “Supplier’s Equipment” means all equipment, tools, apparatus, or things of every kind required in or for installation, completion and maintenance of the System that are to be provided by the Supplier, but excluding the Information Technologies, or other items forming part of the System.
- (d) activities
- (i) “Delivery” means the transfer of the Goods from the Supplier to the Purchaser in accordance with the current edition Incoterms specified in the Contract.
 - (ii) “Installation” means that the System or a



Subsystem as specified in the Contract is ready for Commissioning as provided in GCC Clause 26 (Installation).

- (iii) “Pre-commissioning” means the testing, checking, and any other required activity that may be specified in the Technical Requirements that are to be carried out by the Supplier in preparation for Commissioning of the System as provided in GCC Clause 26 (Installation).
 - (iv) “Commissioning” means operation of the System or any Subsystem by the Supplier following Installation, which operation is to be carried out by the Supplier as provided in GCC Clause 27.1 (Commissioning), for the purpose of carrying out Operational Acceptance Test(s).
 - (v) “Operational Acceptance Tests” means the tests specified in the Technical Requirements and Agreed and Finalized Project Plan to be carried out to ascertain whether the System, or a specified Subsystem, is able to attain the functional and performance requirements specified in the Technical Requirements and Agreed and Finalized Project Plan, in accordance with the provisions of GCC Clause 27.2 (Operational Acceptance Test).
 - (vi) “Operational Acceptance” means the acceptance by the Purchaser of the System (or any Subsystem(s) where the Contract provides for acceptance of the System in parts), in accordance with GCC Clause 27.3 (Operational Acceptance).
- (e) place and time
- (i) “Purchaser’s Country” is the **country named in the SCC**.
 - (ii) “Supplier’s Country” is the country in which the Supplier is legally organized, as named in the Contract Agreement.
 - (iii) “Project Site(s)” means the place(s) **specified in**



the SCC for the supply and installation of the System.

- (iv) “Eligible Country” means the countries and territories eligible for participation in procurements financed by the World Bank as defined in the Procurement Guidelines. (**Note:** The World Bank maintains a list of countries from which Bidders, Goods, and Services are not eligible to participate in procurement financed by the Bank. The list is regularly updated and can be obtained from the Public Information Center of the Bank or its web site on procurement. A copy of the list is contained in the Section of the Bidding Documents entitled “Eligible Countries for the Provision of Goods, Works, and Services in Bank-Financed Procurement”).
- (v) “Day” means calendar day of the Gregorian Calendar.
- (vi) “Week” means seven (7) consecutive Days, beginning the day of the week as is customary in the Purchaser’s Country.
- (vii) “Month” means calendar month of the Gregorian Calendar.
- (viii) “Year” means twelve (12) consecutive Months.
- (ix) “Effective Date” means the date of fulfillment of all conditions specified in Article 3 (Effective Date for Determining Time for Achieving Operational Acceptance) of the Contract Agreement, for the purpose of determining the Delivery, Installation, and Operational Acceptance dates for the System or Subsystem(s).
- (x) “Contract Period” is the time period during which this Contract governs the relations and obligations of the Purchaser and Supplier in relation to the System, as **specified in the SCC**.
- (xi) “Defect Liability Period” (also referred to as the



“Warranty Period”) means the period of validity of the warranties given by the Supplier commencing at date of the Operational Acceptance Certificate of the System or Subsystem(s), during which the Supplier is responsible for defects with respect to the System (or the relevant Subsystem[s]) as provided in GCC Clause 29 (Defect Liability).

(xii) “The Post-Warranty Services Period” means the number of years **defined in the SCC** (if any), following the expiration of the Warranty Period during which the Supplier may be obligated to provide Software licenses, maintenance, and/or technical support services for the System, either under this Contract or under separate contract(s).

(xiii) “The Coverage Period” means the Days of the Week and the hours of those Days during which maintenance, operational, and/or technical support services (if any) must be available.

2. Contract Documents

2.1 Subject to Article 1.2 (Order of Precedence) of the Contract Agreement, all documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary, and mutually explanatory. The Contract shall be read as a whole.

3. Interpretation

3.1 Governing Language

3.1.1 All Contract Documents and related correspondence exchanged between Purchaser and Supplier shall be written in the language **specified in the SCC**, and the Contract shall be construed and interpreted in accordance with that language.

3.1.2 If any of the Contract Documents or related correspondence are prepared in a language other than the governing language under GCC Clause 3.1.1 above, the translation of such documents into the governing language shall prevail in matters of interpretation. The originating party, with respect to such documents shall bear the costs and risks of such translation.



3.2 Singular and Plural

The singular shall include the plural and the plural the singular, except where the context otherwise requires.

3.3 Headings

The headings and marginal notes in the GCC are included for ease of reference and shall neither constitute a part of the Contract nor affect its interpretation.

3.4 Persons

Words importing persons or parties shall include firms, corporations, and government entities.

3.5 Incoterms

Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by the current Incoterms (“Incoterms 2000” or a more recent version if and as published). Incoterms are the international rules for interpreting trade terms published by the International Chamber of Commerce, 38 Cours Albert 1er, 75008 Paris, France.

3.6 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and Supplier with respect to the subject matter of Contract and supersedes all communications, negotiations, and agreements (whether written or oral) of parties with respect to the subject matter of the Contract made prior to the date of Contract.

3.7 Amendment

No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party to the Contract.

3.8 Independent Supplier

The Supplier shall be an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint venture, or other joint relationship



between the parties to the Contract.

Subject to the provisions of the Contract, the Supplier shall be solely responsible for the manner in which the Contract is performed. All employees, representatives, or Subcontractors engaged by the Supplier in connection with the performance of the Contract shall be under the complete control of the Supplier and shall not be deemed to be employees of the Purchaser, and nothing contained in the Contract or in any subcontract awarded by the Supplier shall be construed to create any contractual relationship between any such employees, representatives, or Subcontractors and the Purchaser.

3.9 Joint Venture

If the Supplier is a Joint Venture of two or more firms, all such firms shall be jointly and severally bound to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one of such firms to act as a leader with authority to bind the Joint Venture. The composition or constitution of the Joint Venture shall not be altered without the prior consent of the Purchaser.

3.10 Nonwaiver

3.10.1 Subject to GCC Clause 3.10.2 below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, nor shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

3.10.2 Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, must be dated and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

3.11 Severability

If any provision or condition of the Contract is prohibited or



rendered invalid or unenforceable, such prohibition, invalidity, or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

3.12 Country of Origin

“Origin” means the place where the Information Technologies, Materials, and other Goods for the System were produced or from which the Services are supplied. Goods are produced when, through manufacturing, processing, Software development, or substantial and major assembly or integration of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components. The Origin of Goods and Services is distinct from the nationality of the Supplier and may be different.

4. Notices

4.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing and shall be sent, pursuant to GCC Clause 4.3 below, by personal delivery, airmail post, special courier, cable, telegraph, telex, facsimile, electronic mail, or Electronic Data Interchange (EDI), with the following provisions.

4.1.1 Any notice sent by cable, telegraph, telex, facsimile, electronic mail, or EDI shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.

4.1.2 Any notice sent by airmail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped, and conveyed to the postal authorities or courier service for transmission by airmail or special courier.

4.1.3 Any notice delivered personally or sent by cable, telegraph, telex, facsimile, electronic mail, or EDI shall be deemed to have been delivered on the date of its dispatch.

4.1.4 Either party may change its postal, cable, telex,



facsimile, electronic mail, or EDI addresses for receipt of such notices by ten (10) days' notice to the other party in writing.

4.2 Notices shall be deemed to include any approvals, consents, instructions, orders, certificates, information and other communication to be given under the Contract.

4.3 Pursuant to GCC Clause 18, notices from/to the Purchaser are normally given by, or addressed to, the Project Manager, while notices from/to the Supplier are normally given by, or addressed to, the Supplier's Representative, or in its absence its deputy if any. If there is no appointed Project Manager or Supplier's Representative (or deputy), or if their related authority is limited by the SCC for GCC Clauses 18.1 or 18.2.2, or for any other reason, the Purchaser or Supplier may give and receive notices at their fallback addresses. The address of the Project Manager and the fallback address of the Purchaser are as **specified in the SCC** or as subsequently established/amended. The address of the Supplier's Representative and the fallback address of the Supplier are as specified in Appendix 1 of the Contract Agreement or as subsequently established/amended.

5. Governing Law

5.1 The Contract shall be governed by and interpreted in accordance with the laws of the country specified in the SCC.

6. Settlement of Disputes

6.1 Adjudication

6.1.1 If any dispute of any kind whatsoever shall arise between the Purchaser and the Supplier in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity, or termination, or the operation of the System (whether during the progress of implementation or after its achieving Operational Acceptance and whether before or after the termination, abandonment, or breach of the Contract), the parties shall seek to resolve any such dispute by mutual consultation. If the parties fail to resolve such a dispute by mutual consultation within fourteen (14) days after one party has notified the other in writing of the dispute, then, if the Contract Agreement in Appendix 2 includes and



names an Adjudicator, the dispute shall, within another fourteen (14) days, be referred in writing by either party to the Adjudicator, with a copy to the other party. If there is no Adjudicator specified in the Contract Agreement, the mutual consultation period stated above shall last twenty-eight (28) days (instead of fourteen), upon expiry of which either party may move to the notification of arbitration pursuant to GCC Clause 6.2.1.

6.1.2 The Adjudicator shall give his or her decision in writing to both parties within twenty-eight (28) days of the dispute being referred to the Adjudicator. If the Adjudicator has done so, and no notice of intention to commence arbitration has been given by either the Purchaser or the Supplier within fifty-six (56) days of such reference, the decision shall become final and binding upon the Purchaser and the Supplier. Any decision that has become final and binding shall be implemented by the parties forthwith.

6.1.3 The Adjudicator shall be paid an hourly fee at the rate specified in the Contract Agreement plus reasonable expenditures incurred in the execution of duties as Adjudicator, and these costs shall be divided equally between the Purchaser and the Supplier.

6.1.4 Should the Adjudicator resign or die, or should the Purchaser and the Supplier agree that the Adjudicator is not fulfilling his or her functions in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Purchaser and the Supplier. Failing agreement between the two within twenty-eight (28) days, the new Adjudicator shall be appointed at the request of either party by the Appointing Authority **specified in the SCC**, or, if no Appointing Authority is **specified in SCC**, the Contract shall, from this point onward and until the parties may otherwise agree on an Adjudicator or an Appointing Authority, be implemented as if there is no Adjudicator.

6.2 Arbitration

6.2.1 If



- (a) the Purchaser or the Supplier is dissatisfied with the Adjudicator's decision and acts before this decision has become final and binding pursuant to GCC Clause 6.1.2, or
- (b) the Adjudicator fails to give a decision within the allotted time from referral of the dispute pursuant to GCC Clause 6.1.2, and the Purchaser or the Supplier acts within the following fourteen (14) days, or
- (c) in the absence of an Adjudicator from the Contract Agreement, the mutual consultation pursuant to GCC Clause 6.1.1 expires without resolution of the dispute and the Purchaser or the Supplier acts within the following fourteen (14) days,

then either the Purchaser or the Supplier may act to give notice to the other party, with a copy for information to the Adjudicator in case an Adjudicator had been involved, of its intention to commence arbitration, as provided below, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

6.2.2 Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with GCC Clause 6.2.1, shall be finally settled by arbitration. Arbitration may be commenced prior to or after Installation of the Information System.

6.2.3 Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

6.3 Notwithstanding any reference to the Adjudicator or arbitration in this clause,

- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree;
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.



B. SUBJECT MATTER OF CONTRACT

7. Scope of the System

7.1 Unless otherwise expressly **limited in the SCC** or Technical Requirements, the Supplier's obligations cover the provision of all Information Technologies, Materials and other Goods as well as the performance of all Services required for the design, development, and implementation (including procurement, quality assurance, assembly, associated site preparation, Delivery, Pre-commissioning, Installation, Testing, and Commissioning) of the System, in accordance with the plans, procedures, specifications, drawings, codes, and any other documents specified in the Contract and the Agreed and Finalized Project Plan.

7.2 The Supplier shall, unless specifically excluded in the Contract, perform all such work and / or supply all such items and Materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Operational Acceptance of the System as if such work and / or items and Materials were expressly mentioned in the Contract.

7.3 The Supplier's obligations (if any) to provide Goods and Services as implied by the Recurrent Cost tables of the Supplier's bid, such as consumables, spare parts, and technical services (e.g., maintenance, technical assistance, and operational support), are as **specified in the SCC**, including the relevant terms, characteristics, and timings.

8. Time for Commencement and Operational Acceptance

8.1 The Supplier shall commence work on the System within the period **specified in the SCC**, and without prejudice to GCC Clause 28.2, the Supplier shall thereafter proceed with the System in accordance with the time schedule specified in the Implementation Schedule in the Technical Requirements Section and any refinements made in the Agreed and Finalized Project Plan.

8.2 The Supplier shall achieve Operational Acceptance of the System (or Subsystem(s) where a separate time for Operational Acceptance of such Subsystem(s) is specified in the Contract) within the time **specified in the SCC** and in accordance with the time schedule specified in the Implementation Schedule in the Technical Requirements Section and any refinements made in the Agreed and Finalized Project Plan, or within such extended time to



which the Supplier shall be entitled under GCC Clause 40 (Extension of Time for Achieving Operational Acceptance).

9. Supplier's Responsibilities

- 9.1 The Supplier shall conduct all activities with due care and diligence, in accordance with the Contract and with the skill and care expected of a competent provider of information technologies, information systems, support, maintenance, training, and other related services, or in accordance with best industry practices. In particular, the Supplier shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.
- 9.2 The Supplier confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the System provided by the Purchaser and on the basis of information that the Supplier could have obtained from a visual inspection of the site (if access to the site was available) and of other data readily available to the Supplier relating to the System as at the date twenty-eight (28) days prior to bid submission. The Supplier acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Contract.
- 9.3 The Supplier shall be responsible for timely provision of all resources, information, and decision making under its control that are necessary to reach a mutually Agreed and Finalized Project Plan (pursuant to GCC Clause 19.2) within the time schedule specified in the Implementation Schedule in the Technical Requirements Section. Failure to provide such resources, information, and decision making may constitute grounds for termination pursuant to GCC Clause 41.2.
- 9.4 The Supplier shall acquire in its name all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the Purchaser's Country that are necessary for the performance of the Contract, including, without limitation, visas for the Supplier's and Subcontractor's personnel and entry permits for all imported Supplier's Equipment. The Supplier shall acquire all other permits, approvals, and/or licenses that are



not the responsibility of the Purchaser under GCC Clause 10.4 and that are necessary for the performance of the Contract.

- 9.5 The Supplier shall comply with all laws in force in the Purchaser's Country. The laws will include all national, provincial, municipal, or other laws that affect the performance of the Contract and are binding upon the Supplier. The Supplier shall indemnify and hold harmless the Purchaser from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the Supplier or its personnel, including the Subcontractors and their personnel, but without prejudice to GCC Clause 10.1. The Supplier shall not indemnify the Purchaser to the extent that such liability, damage, claims, fines, penalties, and expenses were caused or contributed to by a fault of the Purchaser.
- 9.6 The Supplier shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs, and all local laws and regulations pertaining to the employment of labor.
- 9.7 Any Information Technologies or other Goods and Services that will be incorporated in or be required for the System and other supplies shall have their Origin, as defined in GCC Clause 3.12, in a country that shall be an Eligible Country, as defined in GCC Clause 1.1 (e) (iv).
- 9.8 The Supplier shall permit the Bank and/or persons appointed by the Bank to inspect the Supplier's offices and/or the accounts and records of the Supplier and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Bank if required by the Bank. The Supplier's attention is drawn to Sub-Clause 41.2.1(c), which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 9.8 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under the Procurement Guidelines)
- 9.9 Other Supplier responsibilities, if any, are as **stated in the**



SCC.

10. Purchaser's Responsibilities

- 10.1 The Purchaser shall ensure the accuracy of all information and/or data to be supplied by the Purchaser to the Supplier, except when otherwise expressly stated in the Contract.
- 10.2 The Purchaser shall be responsible for timely provision of all resources, information, and decision making under its control that are necessary to reach an Agreed and Finalized Project Plan (pursuant to GCC Clause 19.2) within the time schedule specified in the Implementation Schedule in the Technical Requirements Section. Failure to provide such resources, information, and decision making may constitute grounds for Termination pursuant to GCC Clause 41.3.1 (b).
- 10.3 The Purchaser shall be responsible for acquiring and providing legal and physical possession of the site and access to it, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract.
- 10.4 If requested by the Supplier, the Purchaser shall use its best endeavors to assist the Supplier in obtaining in a timely and expeditious manner all permits, approvals, and/or licenses necessary for the execution of the Contract from all local, state, or national government authorities or public service undertakings that such authorities or undertakings require the Supplier or Subcontractors or the personnel of the Supplier or Subcontractors, as the case may be, to obtain.
- 10.5 In such cases where the responsibilities of specifying and acquiring or upgrading telecommunications and/or electric power services falls to the Supplier, as specified in the Technical Requirements, SCC, Agreed and Finalized Project Plan, or other parts of the Contract, the Purchaser shall use its best endeavors to assist the Supplier in obtaining such services in a timely and expeditious manner.
- 10.6 The Purchaser shall be responsible for timely provision of all resources, access, and information necessary for the Installation and Operational Acceptance of the System (including, but not limited to, any required telecommunications or electric power services), as identified in the Agreed and Finalized Project Plan, except where provision of such items is explicitly identified in the Contract as being the responsibility of the Supplier. Delay by the Purchaser may result in an appropriate extension of



the Time for Operational Acceptance, at the Supplier's discretion.

- 10.7 Unless otherwise specified in the Contract or agreed upon by the Purchaser and the Supplier, the Purchaser shall provide sufficient, properly qualified operating and technical personnel, as required by the Supplier to properly carry out Delivery, Pre-commissioning, Installation, Commissioning, and Operational Acceptance, at or before the time specified in the Technical Requirements Section's Implementation Schedule and the Agreed and Finalized Project Plan.
- 10.8 The Purchaser will designate appropriate staff for the training courses to be given by the Supplier and shall make all appropriate logistical arrangements for such training as specified in the Technical Requirements, SCC, the Agreed and Finalized Project Plan, or other parts of the Contract.
- 10.9 The Purchaser assumes primary responsibility for the Operational Acceptance Test(s) for the System, in accordance with GCC Clause 27.2, and shall be responsible for the continued operation of the System after Operational Acceptance. However, this shall not limit in any way the Supplier's responsibilities after the date of Operational Acceptance otherwise specified in the Contract.
- 10.10 The Purchaser is responsible for performing and safely storing timely and regular backups of its data and Software in accordance with accepted data management principles, except where such responsibility is clearly assigned to the Supplier elsewhere in the Contract.
- 10.11 All costs and expenses involved in the performance of the obligations under this GCC Clause 10 shall be the responsibility of the Purchaser, save those to be incurred by the Supplier with respect to the performance of the Operational Acceptance Test(s), in accordance with GCC Clause 27.2.
- 10.12 Other Purchaser responsibilities, if any, are **as stated in the SCC.**

C. PAYMENT

11. Contract Price

11.1 The Contract Price shall be as specified in Article 2



(Contract Price and Terms of Payment) of the Contract Agreement.

- 11.2 The Contract Price shall be a firm lump sum not subject to any alteration, except:
- (a) in the event of a Change in the System pursuant to GCC Clause 39 or to other clauses in the Contract;
 - (b) in accordance with the price adjustment formula (if any) **specified in the SCC.**
- 11.3 The Supplier shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.

12. Terms of Payment

- 12.1 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the System or Subsystem(s), Delivered, Pre-commissioned, Installed, and Operationally Accepted, and by documents submitted pursuant to GCC Clause 22.5 and upon fulfillment of other obligations stipulated in the Contract.

The Contract Price shall be paid as **specified in the SCC.**

- 12.2 No payment made by the Purchaser herein shall be deemed to constitute acceptance by the Purchaser of the System or any Subsystem(s).
- 12.3 Payments shall be made promptly by the Purchaser, but in no case later than forty five (45) days after submission of a valid invoice by the Supplier. In the event that the Purchaser fails to make any payment by its respective due date or within the period set forth in the Contract, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate(s) **specified in the SCC** for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.
- 12.4 All payments shall be made in the currency(ies) specified in the Contract Agreement, pursuant to GCC Clause 11. For Goods and Services supplied locally, payments shall be made in the currency of the Purchaser's Country, unless otherwise **specified in the SCC.**



12.5 Unless otherwise **specified in the SCC**, payment of the foreign currency portion of the Contract Price for Goods supplied from outside the Purchaser's Country shall be made to the Supplier through an irrevocable letter of credit opened by an authorized bank in the Supplier's Country and will be payable on presentation of the appropriate documents. It is agreed that the letter of credit will be subject to Article 10 of the latest revision of Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce, Paris.

13. Securities

13.1 Issuance of Securities

The Supplier shall provide the securities specified below in favor of the Purchaser at the times and in the amount, manner, and form specified below.

13.2 Advance Payment Security

13.2.1 As **specified in the SCC**, the Supplier shall provide a security equal in amount and currency to the advance payment, and valid until the System is Operationally Accepted.

13.2.2 The security shall be in the form provided in the Bidding Documents or in another form acceptable to the Purchaser. The amount of the security shall be reduced in proportion to the value of the System executed by and paid to the Supplier from time to time and shall automatically become null and void when the full amount of the advance payment has been recovered by the Purchaser. The way the value of the security is deemed to become reduced and, eventually, voided is as **specified in the SCC**. The security shall be returned to the Supplier immediately after its expiration.

13.3 Performance Security

13.3.1 The Supplier shall, within twenty-eight (28) days of the notification of Contract award, provide a security for the due performance of the Contract in the amount and currency **specified in the SCC**.

13.3.2 The security shall be a bank guarantee in the form provided in the Sample Forms Section of the Bidding



Documents, or it shall be in another form acceptable to the Purchaser.

13.3.3 The security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The security shall be returned to the Supplier no later than twenty-eight (28) days after its expiration.

13.3.4 Upon Operational Acceptance of the entire System, the security shall be reduced to the amount **specified in the SCC**, on the date of such Operational Acceptance, so that the reduced security would only cover the remaining warranty obligations of the Supplier.

14. Taxes and Duties

14.1 For Goods or Services supplied from outside the Purchaser's country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country. Any duties, such as importation or customs duties, and taxes and other levies, payable in the Purchaser's country for the supply of Goods and Services from outside the Purchaser's country are the responsibility of the Purchaser unless these duties or taxes have been made part of the Contract Price in Article 2 of the Contract Agreement and the Price Schedule it refers to, in which case the duties and taxes will be the Supplier's responsibility.

14.2 For Goods or Services supplied locally, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods or Services to the Purchaser. The only exception are taxes or duties, such as value-added or sales tax or stamp duty as apply to, or are clearly identifiable, on the invoices and provided they apply in the Purchaser's country, and only if these taxes, levies and/or duties are also excluded from the Contract Price in Article 2 of the Contract Agreement and the Price Schedule it refers to.

14.3 If any tax exemptions, reductions, allowances, or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier



to benefit from any such tax savings to the maximum allowable extent.

- 14.4 For the purpose of the Contract, it is agreed that the Contract Price specified in Article 2 (Contract Price and Terms of Payment) of the Contract Agreement is based on the taxes, duties, levies, and charges prevailing at the date twenty-eight (28) days prior to the date of bid submission in the Purchaser's Country (also called "Tax" in this GCC Clause 14.4). If any Tax rates are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of the Contract, which was or will be assessed on the Supplier, its Subcontractors, or their employees in connection with performance of the Contract, an equitable adjustment to the Contract Price shall be made to fully take into account any such change by addition to or reduction from the Contract Price, as the case may be.

D. INTELLECTUAL PROPERTY

15. Copyright

- 15.1 The Intellectual Property Rights in all Standard Software and Standard Materials shall remain vested in the owner of such rights.
- 15.2 The Purchaser agrees to restrict use, copying, or duplication of the Standard Software and Standard Materials in accordance with GCC Clause 16, except that additional copies of Standard Materials may be made by the Purchaser for use within the scope of the project of which the System is a part, in the event that the Supplier does not deliver copies within thirty (30) days from receipt of a request for such Standard Materials.
- 15.3 The Purchaser's contractual rights to use the Standard Software or elements of the Standard Software may not be assigned, licensed, or otherwise transferred voluntarily except in accordance with the relevant license agreement or as may be otherwise **specified in the SCC**.
- 15.4 As applicable, the Purchaser's and Supplier's rights and obligations with respect to Custom Software or elements of the Custom Software, including any license agreements, and with respect to Custom Materials or elements of the Custom



Materials, are specified in the SCC. **Subject to the SCC**, the Intellectual Property Rights in all Custom Software and Custom Materials specified in Appendices 4 and 5 of the Contract Agreement (if any) shall, at the date of this Contract or on creation of the rights (if later than the date of this Contract), vest in the Purchaser. The Supplier shall do and execute or arrange for the doing and executing of each necessary act, document, and thing that the Purchaser may consider necessary or desirable to perfect the right, title, and interest of the Purchaser in and to those rights. In respect of such Custom Software and Custom Materials, the Supplier shall ensure that the holder of a moral right in such an item does not assert it, and the Supplier shall, if requested to do so by the Purchaser and where permitted by applicable law, ensure that the holder of such a moral right waives it.

15.5 The parties shall enter into such (if any) escrow arrangements in relation to the Source Code to some or all of the Software as are **specified in the SCC** and in **accordance with the SCC**.

16. Software License Agreements

16.1 Except to the extent that the Intellectual Property Rights in the Software vest in the Purchaser, the Supplier hereby grants to the Purchaser license to access and use the Software, including all inventions, designs, and marks embodied in the Software.

Such license to access and use the Software shall:

- (a) be:
 - (i) nonexclusive;
 - (ii) fully paid up and irrevocable (except that it shall terminate if the Contract terminates under GCC Clauses 41.1 or 41.3);
 - (iii) valid throughout the territory of the Purchaser's Country (or such other territory as **specified in the SCC**); and
 - (iv) subject to additional restrictions (if any) as **specified in the SCC**.
- (b) permit the Software to be:
 - (i) used or copied for use on or with the computer(s)



for which it was acquired (if specified in the Technical Requirements and/or the Supplier's bid), plus a backup computer(s) of the same or similar capacity, if the primary is(are) inoperative, and during a reasonable transitional period when use is being transferred between primary and backup;

- (ii) as **specified in the SCC**, used or copied for use on or transferred to a replacement computer(s), (and use on the original and replacement computer(s) may be simultaneous during a reasonable transitional period) provided that, if the Technical Requirements and/or the Supplier's bid specifies a class of computer to which the license is restricted and unless the Supplier agrees otherwise in writing, the replacement computer(s) is(are) within that class;
- (iii) if the nature of the System is such as to permit such access, accessed from other computers connected to the primary and/or backup computer(s) by means of a local or wide-area network or similar arrangement, and used on or copied for use on those other computers to the extent necessary to that access;
- (iv) reproduced for safekeeping or backup purposes;
- (v) customized, adapted, or combined with other computer software for use by the Purchaser, provided that derivative software incorporating any substantial part of the delivered, restricted Software shall be subject to same restrictions as are set forth in this Contract;
- (vi) as **specified in the SCC**, disclosed to, and reproduced for use by, support service suppliers and their subcontractors, (and the Purchaser may sublicense such persons to use and copy for use the Software) to the extent reasonably necessary to the performance of their support service contracts, subject to the same restrictions as are set forth in this Contract; and
- (vii) disclosed to, and reproduced for use by, the



Purchaser and by such other persons as are **specified in the SCC** (and the Purchaser may sublicense such persons to use and copy for use the Software), subject to the same restrictions as are set forth in this Contract.

16.2 The Standard Software may be subject to audit by the Supplier, in accordance with the terms **specified in the SCC**, to verify compliance with the above license agreements.

17. Confidential Information

17.1 Except if otherwise **specified in the SCC**, the "Receiving Party" (either the Purchaser or the Supplier) shall keep confidential and shall not, without the written consent of the other party to this Contract ("the Disclosing Party"), divulge to any third party any documents, data, or other information of a confidential nature ("Confidential Information") connected with this Contract, and furnished directly or indirectly by the Disclosing Party prior to or during performance, or following termination, of this Contract.

17.2 For the purposes of GCC Clause 17.1, the Supplier is also deemed to be the Receiving Party of Confidential Information generated by the Supplier itself in the course of the performance of its obligations under the Contract and relating to the businesses, finances, suppliers, employees, or other contacts of the Purchaser or the Purchaser's use of the System.

17.3 Notwithstanding GCC Clauses 17.1 and 17.2:

- (a) the Supplier may furnish to its Subcontractor Confidential Information of the Purchaser to the extent reasonably required for the Subcontractor to perform its work under the Contract; and
- (b) the Purchaser may furnish Confidential Information of the Supplier: (i) to its support service suppliers and their subcontractors to the extent reasonably required for them to perform their work under their support service contracts; and (ii) to its affiliates and subsidiaries,

in which event the Receiving Party shall ensure that the person to whom it furnishes Confidential Information of the Disclosing Party is aware of and abides by the Receiving Party's obligations under this GCC Clause 17 as if that



person were party to the Contract in place of the Receiving Party.

17.4 The Purchaser shall not, without the Supplier's prior written consent, use any Confidential Information received from the Supplier for any purpose other than the operation, maintenance and further development of the System. Similarly, the Supplier shall not, without the Purchaser's prior written consent, use any Confidential Information received from the Purchaser for any purpose other than those that are required for the performance of the Contract.

17.5 The obligation of a party under GCC Clauses 17.1 through 17.4 above, however, shall not apply to that information which:

- (a) now or hereafter enters the public domain through no fault of the Receiving Party;
- (b) can be proven to have been possessed by the Receiving Party at the time of disclosure and that was not previously obtained, directly or indirectly, from the Disclosing Party;
- (c) otherwise lawfully becomes available to the Receiving Party from a third party that has no obligation of confidentiality.

17.6 The above provisions of this GCC Clause 17 shall not in any way modify any undertaking of confidentiality given by either of the parties to this Contract prior to the date of the Contract in respect of the System or any part thereof.

17.7 The provisions of this GCC Clause 17 shall survive the termination, for whatever reason, of the Contract for three (3) years or such longer period as may be **specified in the SCC**.

E. SUPPLY, INSTALLATION, TESTING, COMMISSIONING, AND ACCEPTANCE OF THE SYSTEM

18. Representatives 18.1 Project Manager

If the Project Manager is not named in the Contract, then within fourteen (14) days of the Effective Date, the



Purchaser shall appoint and notify the Supplier in writing of the name of the Project Manager. The Purchaser may from time to time appoint some other person as the Project Manager in place of the person previously so appointed and shall give a notice of the name of such other person to the Supplier without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of work on the System. Such appointment shall take effect only upon receipt of such notice by the Supplier. Subject to the extensions and/or limitations **specified in the SCC** (if any), the Project Manager shall have the authority to represent the Purchaser on all day-to-day matters relating to the System or arising from the Contract, and shall normally be the person giving or receiving notices on behalf of the Purchaser pursuant to GCC Clause 4.

18.2 Supplier's Representative

18.2.1 If the Supplier's Representative is not named in the Contract, then within fourteen (14) days of the Effective Date, the Supplier shall appoint the Supplier's Representative and shall request the Purchaser in writing to approve the person so appointed. The request must be accompanied by a detailed curriculum vitae for the nominee, as well as a description of any other System or non-System responsibilities the nominee would retain while performing the duties of the Supplier's Representative. If the Purchaser does not object to the appointment within fourteen (14) days, the Supplier's Representative shall be deemed to have been approved. If the Purchaser objects to the appointment within fourteen (14) days giving the reason therefor, then the Supplier shall appoint a replacement within fourteen (14) days of such objection in accordance with this GCC Clause 18.2.1.

18.2.2 Subject to the extensions and/or limitations **specified in the SCC** (if any), the Supplier's Representative shall have the authority to represent the Supplier on all day-to-day matters relating to the System or arising from the Contract, and shall normally be the person giving or receiving notices on behalf of the Supplier pursuant to GCC Clause 4.



18.2.3 The Supplier shall not revoke the appointment of the Supplier's Representative without the Purchaser's prior written consent, which shall not be unreasonably withheld. If the Purchaser consents to such an action, the Supplier shall appoint another person of equal or superior qualifications as the Supplier's Representative, pursuant to the procedure set out in GCC Clause 18.2.1.

18.2.4 The Supplier's Representative and staff are obliged to work closely with the Purchaser's Project Manager and staff, act within their own authority, and abide by directives issued by the Purchaser that are consistent with the terms of the Contract. The Supplier's Representative is responsible for managing the activities of its personnel and any subcontracted personnel.

18.2.5 The Supplier's Representative may, subject to the approval of the Purchaser (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions, and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice signed by the Supplier's Representative and shall specify the powers, functions, and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until the notice of it has been delivered.

18.2.6 Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with GCC Clause 18.2.5 shall be deemed to be an act or exercise by the Supplier's Representative.

18.3 Objections and Removals

18.3.1 The Purchaser may by notice to the Supplier object to any representative or person employed by the Supplier in the execution of the Contract who, in the reasonable opinion of the Purchaser, may have behaved inappropriately, be incompetent, or be negligent. The Purchaser shall provide evidence of the same, whereupon the Supplier shall remove such person



from work on the System.

18.3.2 If any representative or person employed by the Supplier is removed in accordance with GCC Clause 18.3.1, the Supplier shall, where required, promptly appoint a replacement.

19. Project Plan

19.1 In close cooperation with the Purchaser and based on the Preliminary Project Plan included in the Supplier's bid, the Supplier shall develop a Project Plan encompassing the activities specified in the Contract. The contents of the Project Plan shall be as **specified in the SCC** and/or Technical Requirements.

19.2 The Supplier shall formally present to the Purchaser the Project Plan in accordance with the procedure specified in the SCC.

19.3 If required, the impact on the Implementation Schedule of modifications agreed during finalization of the Agreed and Finalized Project Plan shall be incorporated in the Contract by amendment, in accordance with GCC Clauses 39 and 40.

19.4 The Supplier shall undertake to supply, install, test, and commission the System in accordance with the Agreed and Finalized Project Plan and the Contract.

19.5 The Progress and other reports **specified in the SCC** shall be prepared by the Supplier and submitted to the Purchaser in the format and frequency specified in the Technical Requirements.

20. Subcontracting

20.1 Appendix 3 (List of Approved Subcontractors) to the Contract Agreement specifies critical items of supply or services and a list of Subcontractors for each item that are considered acceptable by the Purchaser. If no Subcontractors are listed for an item, the Supplier shall prepare a list of Subcontractors it considers qualified and wishes to be added to the list for such items. The Supplier may from time to time propose additions to or deletions from any such list. The Supplier shall submit any such list or any modification to the list to the Purchaser for its approval in sufficient time so as not to impede the progress of work on the System. The Purchaser shall not withhold such approval unreasonably. Such approval by the Purchaser of a Subcontractor(s) shall not relieve the Supplier from any of



its obligations, duties, or responsibilities under the Contract.

20.2 The Supplier may, at its discretion, select and employ Subcontractors for such critical items from those Subcontractors listed pursuant to GCC Clause 20.1. If the Supplier wishes to employ a Subcontractor not so listed, or subcontract an item not so listed, it must seek the Purchaser's prior approval under GCC Clause 20.3.

20.3 For items for which pre-approved Subcontractor lists have not been specified in Appendix 3 to the Contract Agreement, the Supplier may employ such Subcontractors as it may select, provided: (i) the Supplier notifies the Purchaser in writing at least twenty-eight (28) days prior to the proposed mobilization date for such Subcontractor; and (ii) by the end of this period either the Purchaser has granted its approval in writing or fails to respond. The Supplier shall not engage any Subcontractor to which the Purchaser has objected in writing prior to the end of the notice period. The absence of a written objection by the Purchaser during the above specified period shall constitute formal acceptance of the proposed Subcontractor. Except to the extent that it permits the deemed approval of the Purchaser of Subcontractors not listed in the Contract Agreement, nothing in this Clause, however, shall limit the rights and obligations of either the Purchaser or Supplier as they are specified in GCC Clauses 20.1 and 20.2, in the SCC, or in Appendix 3 of the Contract Agreement.

21. Design and Engineering

21.1 Technical Specifications and Drawings

21.1.1 The Supplier shall execute the basic and detailed design and the implementation activities necessary for successful installation of the System in compliance with the provisions of the Contract or, where not so specified, in accordance with good industry practice.

The Supplier shall be responsible for any discrepancies, errors or omissions in the specifications, drawings, and other technical documents that it has prepared, whether such specifications, drawings, and other documents have been approved by the Project Manager or not, provided that such discrepancies, errors, or omissions are not because of inaccurate information furnished in writing to the Supplier by or on behalf of the



Purchaser.

21.1.2 The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification, or other document, or any modification of such design, drawings, specification, or other documents provided or designated by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Project Manager.

21.2 Codes and Standards

Wherever references are made in the Contract to codes and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date twenty-eight (28) days prior to date of bid submission shall apply unless otherwise **specified in the SCC**. During Contract execution, any changes in such codes and standards shall be applied after approval by the Purchaser and shall be treated in accordance with GCC Clause 39.3.

21.3 Approval/Review of Technical Documents by the Project Manager

21.3.1 The Supplier shall prepare and furnish to the Project Manager the documents as **specified in the SCC** for the Project Manager's approval or review.

Any part of the System covered by or related to the documents to be approved by the Project Manager shall be executed only after the Project Manager's approval of these documents.

GCC Clauses 21.3.2 through 21.3.7 shall apply to those documents requiring the Project Manager's approval, but not to those furnished to the Project Manager for its review only.

21.3.2 Within fourteen (14) days after receipt by the Project Manager of any document requiring the Project Manager's approval in accordance with GCC Clause 21.3.1, the Project Manager shall either return one copy of the document to the Supplier with its approval endorsed on the document or shall notify the Supplier in writing of its disapproval of the document and the



reasons for disapproval and the modifications that the Project Manager proposes. If the Project Manager fails to take such action within the fourteen (14) days, then the document shall be deemed to have been approved by the Project Manager.

21.3.3 The Project Manager shall not disapprove any document except on the grounds that the document does not comply with some specified provision of the Contract or that it is contrary to good industry practice.

21.3.4 If the Project Manager disapproves the document, the Supplier shall modify the document and resubmit it for the Project Manager's approval in accordance with GCC Clause 21.3.2. If the Project Manager approves the document subject to modification(s), the Supplier shall make the required modification(s), and the document shall then be deemed to have been approved, subject to GCC Clause 21.3.5. The procedure set out in GCC Clauses 21.3.2 through 21.3.4 shall be repeated, as appropriate, until the Project Manager approves such documents.

21.3.5 If any dispute occurs between the Purchaser and the Supplier in connection with or arising out of the disapproval by the Project Manager of any document and/or any modification(s) to a document that cannot be settled between the parties within a reasonable period, then, in case the Contract Agreement includes and names an Adjudicator, such dispute may be referred to the Adjudicator for determination in accordance with GCC Clause 6.1 (Adjudicator). If such dispute is referred to an Adjudicator, the Project Manager shall give instructions as to whether and if so, how, performance of the Contract is to proceed. The Supplier shall proceed with the Contract in accordance with the Project Manager's instructions, provided that if the Adjudicator upholds the Supplier's view on the dispute and if the Purchaser has not given notice under GCC Clause 6.1.2, then the Supplier shall be reimbursed by the Purchaser for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the



dispute and the execution of the instructions as the Adjudicator shall decide, and the Time for Achieving Operational Acceptance shall be extended accordingly.

21.3.6 The Project Manager's approval, with or without modification of the document furnished by the Supplier, shall not relieve the Supplier of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager or inaccurate information furnished in writing to the Supplier by or on behalf of the Purchaser.

21.3.7 The Supplier shall not depart from any approved document unless the Supplier has first submitted to the Project Manager an amended document and obtained the Project Manager's approval of the document, pursuant to the provisions of this GCC Clause 21.3. If the Project Manager requests any change in any already approved document and/or in any document based on such an approved document, the provisions of GCC Clause 39 (Changes to the System) shall apply to such request.

22. Procurement, Delivery, and Transport

22.1 Subject to related Purchaser's responsibilities pursuant to GCC Clauses 10 and 14, the Supplier shall manufacture or procure and transport all the Information Technologies, Materials, and other Goods in an expeditious and orderly manner to the Project Site.

22.2 Delivery of the Information Technologies, Materials, and other Goods shall be made by the Supplier in accordance with the Technical Requirements.

22.3 Early or partial deliveries require the explicit written consent of the Purchaser, which consent shall not be unreasonably withheld.

22.4 Transportation

22.4.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during shipment. The packing, marking, and documentation within and outside the packages shall



comply strictly with the Purchaser's instructions to the Supplier.

22.4.2 The Supplier will bear responsibility for and cost of transport to the Project Sites in accordance with the terms and conditions used in the specification of prices in the Price Schedules, including the terms and conditions of the associated Incoterms.

22.4.3 Unless otherwise **specified in the SCC**, the Supplier shall be free to use transportation through carriers registered in any eligible country and to obtain insurance from any eligible source country.

22.5 Unless otherwise **specified in the SCC**, the Supplier will provide the Purchaser with shipping and other documents, as specified below:

22.5.1 For Goods supplied from outside the Purchaser's Country:

Upon shipment, the Supplier shall notify the Purchaser and the insurance company contracted by the Supplier to provide cargo insurance by telex, cable, facsimile, electronic mail, or EDI with the full details of the shipment. The Supplier shall promptly send the following documents to the Purchaser by mail or courier, as appropriate, with a copy to the cargo insurance company:

- (a) two copies of the Supplier's invoice showing the description of the Goods, quantity, unit price, and total amount;
- (b) usual transportation documents;
- (c) insurance certificate;
- (d) certificate(s) of origin; and
- (e) estimated time and point of arrival in the Purchaser's Country and at the site.

22.5.2 For Goods supplied locally (i.e., from within the Purchaser's country):

Upon shipment, the Supplier shall notify the Purchaser



by telex, cable, facsimile, electronic mail, or EDI with the full details of the shipment. The Supplier shall promptly send the following documents to the Purchaser by mail or courier, as appropriate:

- (a) two copies of the Supplier's invoice showing the Goods' description, quantity, unit price, and total amount;
- (b) delivery note, railway receipt, or truck receipt;
- (c) certificate of insurance;
- (d) certificate(s) of origin; and
- (e) estimated time of arrival at the site.

22.6 Customs Clearance

- (a) The Purchaser will bear responsibility for, and cost of, customs clearance into the Purchaser's country in accordance the particular Incoterm(s) used for Goods supplied from outside the Purchaser's country in the Price Schedules referred to by Article 2 of the Contract Agreement.
- (b) At the request of the Purchaser, the Supplier will make available a representative or agent during the process of customs clearance in the Purchaser's country for goods supplied from outside the Purchaser's country. In the event of delays in customs clearance that are not the fault of the Supplier:
 - (i) the Supplier shall be entitled to an extension in the Time for Achieving Operational Acceptance, pursuant to GCC Clause 40;
 - (ii) the Contract Price shall be adjusted to compensate the Supplier for any additional storage charges that the Supplier may incur as a result of the delay.

23. Product Upgrades

- 23.1 At any point during performance of the Contract, should technological advances be introduced by the Supplier for Information Technologies originally offered by the Supplier in its bid and still to be delivered, the Supplier shall be obligated to offer to the Purchaser the latest versions of the



available Information Technologies having equal or better performance or functionality at the same or lesser unit prices, pursuant to GCC Clause 39 (Changes to the System).

- 23.2 At any point during performance of the Contract, for Information Technologies still to be delivered, the Supplier will also pass on to the Purchaser any cost reductions and additional and/or improved support and facilities that it offers to other clients of the Supplier in the Purchaser's Country, pursuant to GCC Clause 39 (Changes to the System).
- 23.3 During performance of the Contract, the Supplier shall offer to the Purchaser all new versions, releases, and updates of Standard Software, as well as related documentation and technical support services, within thirty (30) days of their availability from the Supplier to other clients of the Supplier in the Purchaser's Country, and no later than twelve (12) months after they are released in the country of origin. In no case will the prices for these Software exceed those quoted by the Supplier in the Recurrent Costs tables in its bid.
- 23.4 During the Warranty Period, unless otherwise **specified in the SCC**, the Supplier will provide at no additional cost to the Purchaser all new versions, releases, and updates for all Standard Software that are used in the System, within thirty (30) days of their availability from the Supplier to other clients of the Supplier in the Purchaser's country, and no later than twelve (12) months after they are released in the country of origin of the Software.
- 23.5 The Purchaser shall introduce all new versions, releases or updates of the Software within eighteen (18) months of receipt of a production-ready copy of the new version, release, or update, provided that the new version, release, or update does not adversely affect System operation or performance or require extensive reworking of the System. In cases where the new version, release, or update adversely affects System operation or performance, or requires extensive reworking of the System, the Supplier shall continue to support and maintain the version or release previously in operation for as long as necessary to allow introduction of the new version, release, or update. In no case shall the Supplier stop supporting or maintaining a version or release of the Software less than twenty four (24)



months after the Purchaser receives a production-ready copy of a subsequent version, release, or update. The Purchaser shall use all reasonable endeavors to implement any new version, release, or update as soon as practicable, subject to the twenty-four-month-long stop date.

**24. Implementation,
Installation, and
Other Services**

24.1 The Supplier shall provide all Services specified in the Contract and Agreed and Finalized Project Plan in accordance with the highest standards of professional competence and integrity.

24.2 Prices charged by the Supplier for Services, if not included in the Contract, shall be agreed upon in advance by the parties (including, but not restricted to, any prices submitted by the Supplier in the Recurrent Cost Schedules of its Bid) and shall not exceed the prevailing rates charged by the Supplier to other purchasers in the Purchaser's Country for similar services.

**25. Inspections and
Tests**

25.1 The Purchaser or its representative shall have the right to inspect and/or test any components of the System, as specified in the Technical Requirements, to confirm their good working order and/or conformity to the Contract at the point of delivery and/or at the Project Site.

25.2 The Purchaser or its representative shall be entitled to attend any such inspections and/or tests of the components, provided that the Purchaser shall bear all costs and expenses incurred in connection with such attendance, including but not limited to all inspection agent fees, travel, and related expenses.

25.3 Should the inspected or tested components fail to conform to the Contract, the Purchaser may reject the component(s), and the Supplier shall either replace the rejected component(s), or make alterations as necessary so that it meets the Contract requirements free of cost to the Purchaser.

25.4 The Project Manager may require the Supplier to carry out any inspection and/or test not specified in the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such inspection and/or test shall be added to the Contract Price. Further, if such inspection and/or test impedes the progress of work on the System and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made



in respect of the Time for Achieving Operational Acceptance and the other obligations so affected.

25.5 If any dispute shall arise between the parties in connection with or caused by an inspection and/or with regard to any component to be incorporated in the System that cannot be settled amicably between the parties within a reasonable period of time, either party may invoke the process pursuant to GCC Clause 6 (Settlement of Disputes), starting with referral of the matter to the Adjudicator in case an Adjudicator is included and named in the Contract Agreement.

26. Installation of the System

26.1 As soon as the System, or any Subsystem, has, in the opinion of the Supplier, been delivered, Pre-commissioned, and made ready for Commissioning and Operational Acceptance Testing in accordance with the Technical Requirements, the SCC and the Agreed and Finalized Project Plan, the Supplier shall so notify the Purchaser in writing.

26.2 The Project Manager shall, within fourteen (14) days after receipt of the Supplier's notice under GCC Clause 26.1, either issue an Installation Certificate in the form specified in the Sample Forms Section in the Bidding Documents, stating that the System, or major component or Subsystem (if Acceptance by major component or Subsystem is specified pursuant to the SCC for GCC Clause 27.2.1), has achieved Installation by the date of the Supplier's notice under GCC Clause 26.1, or notify the Supplier in writing of any defects and/or deficiencies, including, but not limited to, defects or deficiencies in the interoperability or integration of the various components and/or Subsystems making up the System. The Supplier shall use all reasonable endeavors to promptly remedy any defect and/or deficiencies that the Project Manager has notified the Supplier of. The Supplier shall then promptly carry out retesting of the System or Subsystem and, when in the Supplier's opinion the System or Subsystem is ready for Commissioning and Operational Acceptance Testing, notify the Purchaser in writing, in accordance with GCC Clause 26.1. The procedure set out in this GCC Clause 26.2 shall be repeated, as necessary, until an Installation Certificate is issued.

26.3 If the Project Manager fails to issue the Installation Certificate and fails to inform the Supplier of any defects



and/or deficiencies within fourteen (14) days after receipt of the Supplier's notice under GCC Clause 26.1, or if the Purchaser puts the System or a Subsystem into production operation, then the System (or Subsystem) shall be deemed to have achieved successful Installation as of the date of the Supplier's notice or repeated notice, or when the Purchaser put the System into production operation, as the case may be.

27. Commissioning and Operational Acceptance

27.1 Commissioning

27.1.1 Commissioning of the System (or Subsystem if specified pursuant to the SCC for GCC Clause 27.2.1) shall be commenced by the Supplier:

- (a) immediately after the Installation Certificate is issued by the Project Manager, pursuant to GCC Clause 26.2; or
- (b) as otherwise specified in the Technical Requirement or the Agreed and Finalized Project Plan; or
- (c) immediately after Installation is deemed to have occurred, under GCC Clause 26.3.

27.1.2 The Purchaser shall supply the operating and technical personnel and all materials and information reasonably required to enable the Supplier to carry out its obligations with respect to Commissioning.

Production use of the System or Subsystem(s) shall not commence prior to the start of formal Operational Acceptance Testing.

27.2 Operational Acceptance Tests

27.2.1 The Operational Acceptance Tests (and repeats of such tests) shall be the primary responsibility of the Purchaser (in accordance with GCC Clause 10.9), but shall be conducted with the full cooperation of the Supplier during Commissioning of the System (or major components or Subsystem[s] if **specified in the SCC** and supported by the Technical Requirements), to ascertain whether the System (or major component or Subsystem[s]) conforms to the Technical Requirements and meets the standard of performance



quoted in the Supplier's bid, including, but not restricted to, the functional and technical performance requirements. The Operational Acceptance Tests during Commissioning will be conducted as **specified in the SCC**, the Technical Requirements and/or the Agreed and Finalized Project Plan.

At the Purchaser's discretion, Operational Acceptance Tests may also be performed on replacement Goods, upgrades and new version releases, and Goods that are added or field-modified after Operational Acceptance of the System.

27.2.2 If for reasons attributable to the Purchaser, the Operational Acceptance Test of the System (or Subsystem[s] or major components, pursuant to the SCC for GCC Clause 27.2.1) cannot be successfully completed within the period **specified in the SCC**, from the date of Installation or any other period agreed upon in writing by the Purchaser and the Supplier, the Supplier shall be deemed to have fulfilled its obligations with respect to the technical and functional aspects of the Technical Specifications, SCC and/or the Agreed and Finalized Project Plan, and GCC Clause 28.2 and 28.3 shall not apply.

27.3 Operational Acceptance

27.3.1 Subject to GCC Clause 27.4 (Partial Acceptance) below, Operational Acceptance shall occur in respect of the System, when

- (a) the Operational Acceptance Tests, as specified in the Technical Requirements, and/or SCC and/or the Agreed and Finalized Project Plan have been successfully completed; or
- (b) the Operational Acceptance Tests have not been successfully completed or have not been carried out for reasons that are attributable to the Purchaser within the period from the date of Installation or any other agreed-upon period as specified in GCC Clause 27.2.2 above; or
- (c) the Purchaser has put the System into production or use for sixty (60) consecutive days. If the



System is put into production or use in this manner, the Supplier shall notify the Purchaser and document such use.

27.3.2 At any time after any of the events set out in GCC Clause 27.3.1 have occurred, the Supplier may give a notice to the Project Manager requesting the issue of an Operational Acceptance Certificate.

27.3.3 After consultation with the Purchaser, and within fourteen (14) days after receipt of the Supplier's notice, the Project Manager shall:

- (a) issue an Operational Acceptance Certificate; or
- (b) notify the Supplier in writing of any defect or deficiencies or other reason for the failure of the Operational Acceptance Tests; or
- (c) issue the Operational Acceptance Certificate, if the situation covered by GCC Clause 27.3.1 (b) arises.

27.3.4 The Supplier shall use all reasonable endeavors to promptly remedy any defect and/or deficiencies and/or other reasons for the failure of the Operational Acceptance Test that the Project Manager has notified the Supplier of. Once such remedies have been made by the Supplier, the Supplier shall notify the Purchaser, and the Purchaser, with the full cooperation of the Supplier, shall use all reasonable endeavors to promptly carry out retesting of the System or Subsystem. Upon the successful conclusion of the Operational Acceptance Tests, the Supplier shall notify the Purchaser of its request for Operational Acceptance Certification, in accordance with GCC Clause 27.3.3. The Purchaser shall then issue to the Supplier the Operational Acceptance Certification in accordance with GCC Clause 27.3.3 (a), or shall notify the Supplier of further defects, deficiencies, or other reasons for the failure of the Operational Acceptance Test. The procedure set out in this GCC Clause 27.3.4 shall be repeated, as necessary, until an Operational Acceptance Certificate is issued.

27.3.5 If the System or Subsystem fails to pass the



Operational Acceptance Test(s) in accordance with GCC Clause 27.2, then either:

(a) the Purchaser may consider terminating the Contract, pursuant to GCC Clause 41.2.2;

or

(b) if the failure to achieve Operational Acceptance within the specified time period is a result of the failure of the Purchaser to fulfill its obligations under the Contract, then the Supplier shall be deemed to have fulfilled its obligations with respect to the relevant technical and functional aspects of the Contract, and GCC Clauses 30.3 and 30.4 shall not apply.

27.3.6 If within fourteen (14) days after receipt of the Supplier's notice the Project Manager fails to issue the Operational Acceptance Certificate or fails to inform the Supplier in writing of the justifiable reasons why the Project Manager has not issued the Operational Acceptance Certificate, the System or Subsystem shall be deemed to have been accepted as of the date of the Supplier's said notice.

27.4 Partial Acceptance

27.4.1 If so specified in the SCC for GCC Clause 27.2.1, Installation and Commissioning shall be carried out individually for each identified major component or Subsystem(s) of the System. In this event, the provisions in the Contract relating to Installation and Commissioning, including the Operational Acceptance Test, shall apply to each such major component or Subsystem individually, and Operational Acceptance Certificate(s) shall be issued accordingly for each such major component or Subsystem of the System, subject to the limitations contained in GCC Clause 27.4.2.

27.4.2 The issuance of Operational Acceptance Certificates for individual major components or Subsystems pursuant to GCC Clause 27.4.1 shall not relieve the Supplier of its obligation to obtain an Operational Acceptance Certificate for the System as an integrated whole (if so specified in the SCC for GCC Clauses 12.1 and 27.2.1) once all major components and Subsystems have been



supplied, installed, tested, and commissioned.

27.4.3 In the case of minor components for the System that by their nature do not require Commissioning or an Operational Acceptance Test (e.g., minor fittings, furnishings or site works, etc.), the Project Manager shall issue an Operational Acceptance Certificate within fourteen (14) days after the fittings and/or furnishings have been delivered and/or installed or the site works have been completed. The Supplier shall, however, use all reasonable endeavors to promptly remedy any defects or deficiencies in such minor components detected by the Purchaser or Supplier.

F. GUARANTEES AND LIABILITIES

28. Operational Acceptance Time Guarantee

28.1 The Supplier guarantees that it shall complete the supply, Installation, Commissioning, and achieve Operational Acceptance of the System (or Subsystems, pursuant to the SCC for GCC Clause 27.2.1) within the time periods specified in the Implementation Schedule in the Technical Requirements Section and/or the Agreed and Finalized Project Plan pursuant to GCC Clause 8.2, or within such extended time to which the Supplier shall be entitled under GCC Clause 40 (Extension of Time for Achieving Operational Acceptance).

28.2 If the Supplier fails to supply, install, commission, and achieve Operational Acceptance of the System (or Subsystems pursuant to the SCC for GCC Clause 27.2.1) within the time for achieving Operational Acceptance specified in the Implementation Schedule in the Technical Requirement or the Agreed and Finalized Project Plan, or any extension of the time for achieving Operational Acceptance previously granted under GCC Clause 40 (Extension of Time for Achieving Operational Acceptance), the Supplier shall pay to the Purchaser liquidated damages at the rate **specified in the SCC** as a percentage of the Contract Price, or the relevant part of the Contract Price if a Subsystem has not achieved Operational Acceptance. The aggregate amount of such liquidated damages shall in no event exceed the amount specified in the SCC (“the Maximum”). Once the Maximum is reached, the Purchaser may consider termination of the Contract, pursuant to GCC Clause 41.2.2.



28.3 Unless otherwise **specified in the SCC**, liquidated damages payable under GCC Clause 28.2 shall apply only to the failure to achieve Operational Acceptance of the System (and Subsystems) as specified in the Implementation Schedule in the Technical Requirements and/or Agreed and Finalized Project Plan. This Clause 28.3 shall not limit, however, any other rights or remedies the Purchaser may have under the Contract for other delays.

28.4 If liquidated damages are claimed by the Purchaser for the System (or Subsystem), the Supplier shall have no further liability whatsoever to the Purchaser in respect to the Operational Acceptance time guarantee for the System (or Subsystem). However, the payment of liquidated damages shall not in any way relieve the Supplier from any of its obligations to complete the System or from any other of its obligations and liabilities under the Contract.

29. Defect Liability

29.1 The Supplier warrants that the System, including all Information Technologies, Materials, and other Goods supplied and Services provided, shall be free from defects in the design, engineering, Materials, and workmanship that prevent the System and/or any of its components from fulfilling the Technical Requirements or that limit in a material fashion the performance, reliability, or extensibility of the System and/or Subsystems. Exceptions and/or limitations, if any, to this warranty with respect to Software (or categories of Software), shall be as **specified in the SCC**. Commercial warranty provisions of products supplied under the Contract shall apply to the extent that they do not conflict with the provisions of this Contract.

29.2 The Supplier also warrants that the Information Technologies, Materials, and other Goods supplied under the Contract are new, unused, and incorporate all recent improvements in design that materially affect the System's or Subsystem's ability to fulfill the Technical Requirements.

29.3 In addition, the Supplier warrants that: (i) all Goods components to be incorporated into the System form part of the Supplier's and/or Subcontractor's current product lines, (ii) they have been previously released to the market, and (iii) those specific items **identified in the SCC** (if any) have been in the market for at least the minimum periods



specified in the SCC.

29.4 The Warranty Period shall commence from the date of Operational Acceptance of the System (or of any major component or Subsystem for which separate Operational Acceptance is provided for in the Contract) and shall extend for the length of time **specified in the SCC.**

29.5 If during the Warranty Period any defect as described in GCC Clause 29.1 should be found in the design, engineering, Materials, and workmanship of the Information Technologies and other Goods supplied or of the Services provided by the Supplier, the Supplier shall promptly, in consultation and agreement with the Purchaser regarding appropriate remedying of the defects, and at its sole cost, repair, replace, or otherwise make good (as the Supplier shall, at its discretion, determine) such defect as well as any damage to the System caused by such defect. Any defective Information Technologies or other Goods that have been replaced by the Supplier shall remain the property of the Supplier.

29.6 The Supplier shall not be responsible for the repair, replacement, or making good of any defect or of any damage to the System arising out of or resulting from any of the following causes:

- (a) improper operation or maintenance of the System by the Purchaser;
- (b) normal wear and tear;
- (c) use of the System with items not supplied by the Supplier, unless otherwise identified in the Technical Requirements, or approved by the Supplier; or
- (d) modifications made to the System by the Purchaser, or a third party, not approved by the Supplier.

29.7 The Supplier's obligations under this GCC Clause 29 shall not apply to:

- (a) any materials that are normally consumed in operation or have a normal life shorter than the Warranty Period; or
- (b) any designs, specifications, or other data designed, supplied, or specified by or on behalf of the Purchaser or



any matters for which the Supplier has disclaimed responsibility, in accordance with GCC Clause 21.1.2.

29.8 The Purchaser shall give the Supplier a notice promptly following the discovery of such defect, stating the nature of any such defect together with all available evidence. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect any such defect. The Purchaser shall afford the Supplier all necessary access to the System and the site to enable the Supplier to perform its obligations under this GCC Clause 29.

29.9 The Supplier may, with the consent of the Purchaser, remove from the site any Information Technologies and other Goods that are defective, if the nature of the defect, and/or any damage to the System caused by the defect, is such that repairs cannot be expeditiously carried out at the site. If the repair, replacement, or making good is of such a character that it may affect the efficiency of the System, the Purchaser may give the Supplier notice requiring that tests of the defective part be made by the Supplier immediately upon completion of such remedial work, whereupon the Supplier shall carry out such tests.

If such part fails the tests, the Supplier shall carry out further repair, replacement, or making good (as the case may be) until that part of the System passes such tests. The tests shall be agreed upon by the Purchaser and the Supplier.

29.10 If the Supplier fails to commence the work necessary to remedy such defect or any damage to the System caused by such defect within the time period **specified in the SCC**, the Purchaser may, following notice to the Supplier, proceed to do such work or contract a third party (or parties) to do such work, and the reasonable costs incurred by the Purchaser in connection with such work shall be paid to the Purchaser by the Supplier or may be deducted by the Purchaser from any monies due the Supplier or claimed under the Performance Security.

29.11 If the System or Subsystem cannot be used by reason of such defect and/or making good of such defect, the Warranty Period for the System shall be extended by a period equal to the period during which the System or Subsystem could not be used by the Purchaser because of such defect and/or



making good of such defect.

29.12 Items substituted for defective parts of the System during the Warranty Period shall be covered by the Defect Liability Warranty for the remainder of the Warranty Period applicable for the part replaced or three (3) months, whichever is greater.

29.13 At the request of the Purchaser and without prejudice to any other rights and remedies that the Purchaser may have against the Supplier under the Contract, the Supplier will offer all possible assistance to the Purchaser to seek warranty services or remedial action from any subcontracted third-party producers or licensor of Goods included in the System, including without limitation assignment or transfer in favor of the Purchaser of the benefit of any warranties given by such producers or licensors to the Supplier.

30. Functional Guarantees

30.1 The Supplier guarantees that, once the Operational Acceptance Certificate(s) has been issued, the System represents a complete, integrated solution to the Purchaser's requirements set forth in the Technical Requirements and it conforms to all other aspects of the Contract. The Supplier acknowledges that GCC Clause 27 regarding Commissioning and Operational Acceptance governs how technical conformance of the System to the Contract requirements will be determined.

30.2 If, for reasons attributable to the Supplier, the System does not conform to the Technical Requirements or does not conform to all other aspects of the Contract, the Supplier shall at its cost and expense make such changes, modifications, and/or additions to the System as may be necessary to conform to the Technical Requirements and meet all functional and performance standards. The Supplier shall notify the Purchaser upon completion of the necessary changes, modifications, and/or additions and shall request the Purchaser to repeat the Operational Acceptance Tests until the System achieves Operational Acceptance.

30.3 If the System (or Subsystem[s]) fails to achieve Operational Acceptance, the Purchaser may consider termination of the Contract, pursuant to GCC Clause 41.2.2, and forfeiture of the Supplier's Performance Security in accordance with GCC Clause 13.3 in compensation for the extra costs and



delays likely to result from this failure.

**31. Intellectual
Property Rights
Warranty**

31.1 The Supplier hereby represents and warrants that:

- (a) the System as supplied, installed, tested, and accepted;
- (b) use of the System in accordance with the Contract; and
- (c) copying of the Software and Materials provided to the Purchaser in accordance with the Contract

do not and will not infringe any Intellectual Property Rights held by any third party and that it has all necessary rights or at its sole expense shall have secured in writing all transfers of rights and other consents necessary to make the assignments, licenses, and other transfers of Intellectual Property Rights and the warranties set forth in the Contract, and for the Purchaser to own or exercise all Intellectual Property Rights as provided in the Contract. Without limitation, the Supplier shall secure all necessary written agreements, consents, and transfers of rights from its employees and other persons or entities whose services are used for development of the System.

**32. Intellectual
Property Rights
Indemnity**

32.1 The Supplier shall indemnify and hold harmless the Purchaser and its employees and officers from and against any and all losses, liabilities, and costs (including losses, liabilities, and costs incurred in defending a claim alleging such a liability), that the Purchaser or its employees or officers may suffer as a result of any infringement or alleged infringement of any Intellectual Property Rights by reason of:

- (a) installation of the System by the Supplier or the use of the System, including the Materials, in the country where the site is located;
- (b) copying of the Software and Materials provided the Supplier in accordance with the Agreement; and
- (c) sale of the products produced by the System in any country, except to the extent that such losses, liabilities, and costs arise as a result of the Purchaser's breach of GCC Clause 32.2.



- 32.2 Such indemnity shall not cover any use of the System, including the Materials, other than for the purpose indicated by or to be reasonably inferred from the Contract, any infringement resulting from the use of the System, or any products of the System produced thereby in association or combination with any other goods or services not supplied by the Supplier, where the infringement arises because of such association or combination and not because of use of the System in its own right.
- 32.3 Such indemnities shall also not apply if any claim of infringement:
- (a) is asserted by a parent, subsidiary, or affiliate of the Purchaser's organization;
 - (b) is a direct result of a design mandated by the Purchaser's Technical Requirements and the possibility of such infringement was duly noted in the Supplier's Bid; or
 - (c) results from the alteration of the System, including the Materials, by the Purchaser or any persons other than the Supplier or a person authorized by the Supplier.
- 32.4 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Clause 32.1, the Purchaser shall promptly give the Supplier notice of such proceedings or claims, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf. Unless the Supplier has so failed to notify the Purchaser within the twenty-eight (28) days, the Purchaser shall make no admission that may be prejudicial to the defense of any such proceedings or claim. The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.



32.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all losses, liabilities, and costs (including losses, liabilities, and costs incurred in defending a claim alleging such a liability) that the Supplier or its employees, officers, or Subcontractors may suffer as a result of any infringement or alleged infringement of any Intellectual Property Rights arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided to the Supplier in connection with this Contract by the Purchaser or any persons (other than the Supplier) contracted by the Purchaser, except to the extent that such losses, liabilities, and costs arise as a result of the Supplier's breach of GCC Clause 32.8.

32.6 Such indemnity shall not cover

- (a) any use of the design, data, drawing, specification, or other documents or materials, other than for the purpose indicated by or to be reasonably inferred from the Contract;
- (b) any infringement resulting from the use of the design, data, drawing, specification, or other documents or materials, or any products produced thereby, in association or combination with any other Goods or Services not provided by the Purchaser or any other person contracted by the Purchaser, where the infringement arises because of such association or combination and not because of the use of the design, data, drawing, specification, or other documents or materials in its own right.

32.7 Such indemnities shall also not apply:

- (a) if any claim of infringement is asserted by a parent, subsidiary, or affiliate of the Supplier's organization;
- (b) to the extent that any claim of infringement is caused by the alteration, by the Supplier, or any persons contracted by the Supplier, of the design, data, drawing, specification, or other documents or materials provided to the Supplier by the Purchaser or any persons contracted by the Purchaser.



32.8 If any proceedings are brought or any claim is made against the Supplier arising out of the matters referred to in GCC Clause 32.5, the Supplier shall promptly give the Purchaser notice of such proceedings or claims, and the Purchaser may at its own expense and in the Supplier's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. If the Purchaser fails to notify the Supplier within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Supplier shall be free to conduct the same on its own behalf. Unless the Purchaser has so failed to notify the Supplier within the twenty-eight (28) days, the Supplier shall make no admission that may be prejudicial to the defense of any such proceedings or claim. The Supplier shall, at the Purchaser's request, afford all available assistance to the Purchaser in conducting such proceedings or claim and shall be reimbursed by the Purchaser for all reasonable expenses incurred in so doing.

33. Limitation of Liability

33.1 Provided the following does not exclude or limit any liabilities of either party in ways not permitted by applicable law:

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to any obligation of the Supplier to indemnify the Purchaser with respect to intellectual property rights infringement.

G. RISK DISTRIBUTION

34. Transfer of Ownership

34.1 With the exception of Software and Materials, the ownership of the Information Technologies and other Goods shall be transferred to the Purchaser at the time of Delivery or otherwise under terms that may be agreed upon and specified



in the Contract Agreement.

34.2 Ownership and the terms of usage of the Software and Materials supplied under the Contract shall be governed by GCC Clause 15 (Copyright) and any elaboration in the Technical Requirements.

34.3 Ownership of the Supplier's Equipment used by the Supplier and its Subcontractors in connection with the Contract shall remain with the Supplier or its Subcontractors.

35. Care of the System

35.1 The Purchaser shall become responsible for the care and custody of the System or Subsystems upon their Delivery. The Purchaser shall make good at its own cost any loss or damage that may occur to the System or Subsystems from any cause from the date of Delivery until the date of Operational Acceptance of the System or Subsystems, pursuant to GCC Clause 27 (Commissioning and Operational Acceptance), excepting such loss or damage arising from acts or omissions of the Supplier, its employees, or subcontractors.

35.2 If any loss or damage occurs to the System or any part of the System by reason of:

- (a) (insofar as they relate to the country where the Project Site is located) nuclear reaction, nuclear radiation, radioactive contamination, a pressure wave caused by aircraft or other aerial objects, or any other occurrences that an experienced contractor could not reasonably foresee, or if reasonably foreseeable could not reasonably make provision for or insure against, insofar as such risks are not normally insurable on the insurance market and are mentioned in the general exclusions of the policy of insurance taken out under GCC Clause 37;
- (b) any use not in accordance with the Contract, by the Purchaser or any third party;
- (c) any use of or reliance upon any design, data, or specification provided or designated by or on behalf of the Purchaser, or any such matter for which the Supplier has disclaimed responsibility in accordance with GCC Clause 21.1.2,



the Purchaser shall pay to the Supplier all sums payable in respect of the System or Subsystems that have achieved Operational Acceptance, notwithstanding that the same be lost, destroyed, or damaged. If the Purchaser requests the Supplier in writing to make good any loss or damage to the System thereby occasioned, the Supplier shall make good the same at the cost of the Purchaser in accordance with GCC Clause 39. If the Purchaser does not request the Supplier in writing to make good any loss or damage to the System thereby occasioned, the Purchaser shall either request a change in accordance with GCC Clause 39, excluding the performance of that part of the System thereby lost, destroyed, or damaged, or, where the loss or damage affects a substantial part of the System, the Purchaser shall terminate the Contract pursuant to GCC Clause 41.1.

35.3 The Purchaser shall be liable for any loss of or damage to any Supplier's Equipment which the Purchaser has authorized to locate within the Purchaser's premises for use in fulfillment of Supplier's obligations under the Contract, except where such loss or damage arises from acts or omissions of the Supplier, its employees, or subcontractors.

**36. Loss of or
Damage to
Property;
Accident or
Injury to
Workers;
Indemnification**

36.1 The Supplier and each and every Subcontractor shall abide by the job safety, insurance, customs, and immigration measures prevalent and laws in force in the Purchaser's Country.

36.2 Subject to GCC Clause 36.3, the Supplier shall indemnify and hold harmless the Purchaser and its employees and officers from and against any and all losses, liabilities and costs (including losses, liabilities, and costs incurred in defending a claim alleging such a liability) that the Purchaser or its employees or officers may suffer as a result of the death or injury of any person or loss of or damage to any property (other than the System, whether accepted or not) arising in connection with the supply, installation, testing, and Commissioning of the System and by reason of the negligence of the Supplier or its Subcontractors, or their employees, officers or agents, except any injury, death, or property damage caused by the negligence of the Purchaser, its contractors, employees, officers, or agents.

36.3 If any proceedings are brought or any claim is made against the Purchaser that might subject the Supplier to liability



under GCC Clause 36.2, the Purchaser shall promptly give the Supplier notice of such proceedings or claims, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf. Unless the Supplier has so failed to notify the Purchaser within the twenty-eight (28) day period, the Purchaser shall make no admission that may be prejudicial to the defense of any such proceedings or claim. The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

36.4 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from any and all losses, liabilities, and costs (including losses, liabilities, and costs incurred in defending a claim alleging such a liability) that the Supplier or its employees, officers, or Subcontractors may suffer as a result of the death or personal injury of any person or loss of or damage to property of the Purchaser, other than the System not yet achieving Operational Acceptance, that is caused by fire, explosion, or any other perils, in excess of the amount recoverable from insurances procured under GCC Clause 37 (Insurances), provided that such fire, explosion, or other perils were not caused by any act or failure of the Supplier.

36.5 If any proceedings are brought or any claim is made against the Supplier that might subject the Purchaser to liability under GCC Clause 36.4, the Supplier shall promptly give the Purchaser notice of such proceedings or claims, and the Purchaser may at its own expense and in the Supplier's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. If the Purchaser fails to notify the Supplier within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Supplier shall be free to conduct the same on its own behalf. Unless the Purchaser has so failed to notify the Supplier within the twenty-eight (28) days, the Supplier shall make no admission



that may be prejudicial to the defense of any such proceedings or claim. The Supplier shall, at the Purchaser's request, afford all available assistance to the Purchaser in conducting such proceedings or claim and shall be reimbursed by the Purchaser for all reasonable expenses incurred in so doing.

36.6 The party entitled to the benefit of an indemnity under this GCC Clause 36 shall take all reasonable measures to mitigate any loss or damage that has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.

37. Insurances

37.1 The Supplier shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurance set forth below. The identity of the insurers and the form of the policies shall be subject to the approval of the Purchaser, who should not unreasonably withhold such approval.

(a) Cargo Insurance During Transport

as applicable, 110 percent of the price of the Information Technologies and other Goods in a freely convertible currency, covering the Goods from physical loss or damage during shipment through receipt at the Project Site.

(b) Installation "All Risks" Insurance

as applicable, 110 percent of the price of the Information Technologies and other Goods covering the Goods at the site from all risks of physical loss or damage (excluding only perils commonly excluded under "all risks" insurance policies of this type by reputable insurers) occurring prior to Operational Acceptance of the System.

(c) Third-Party Liability Insurance

On terms as **specified in the SCC**, covering bodily injury or death suffered by third parties (including the Purchaser's personnel) and loss of or damage to property (including the Purchaser's property and any Subsystems that have been accepted by the Purchaser) occurring in connection with the supply and installation



of the Information System.

(d) Automobile Liability Insurance

In accordance with the statutory requirements prevailing in the Purchaser's Country, covering use of all vehicles used by the Supplier or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.

(e) Other Insurance (if any), as **specified in the SCC**.

37.2 The Purchaser shall be named as co-insured under all insurance policies taken out by the Supplier pursuant to GCC Clause 37.1, except for the Third-Party Liability, and the Supplier's Subcontractors shall be named as co-insured under all insurance policies taken out by the Supplier pursuant to GCC Clause 37.1 except for Cargo Insurance During Transport. All insurer's rights of subrogation against such co-insured for losses or claims arising out of the performance of the Contract shall be waived under such policies.

37.3 The Supplier shall deliver to the Purchaser certificates of insurance (or copies of the insurance policies) as evidence that the required policies are in full force and effect.

37.4 The Supplier shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Supplier.

37.5 If the Supplier fails to take out and/or maintain in effect the insurance referred to in GCC Clause 37.1, the Purchaser may take out and maintain in effect any such insurance and may from time to time deduct from any amount due the Supplier under the Contract any premium that the Purchaser shall have paid to the insurer or may otherwise recover such amount as a debt due from the Supplier.

37.6 Unless otherwise provided in the Contract, the Supplier shall prepare and conduct all and any claims made under the policies effected by it pursuant to this GCC Clause 37, and all monies payable by any insurers shall be paid to the



Supplier. The Purchaser shall give to the Supplier all such reasonable assistance as may be required by the Supplier in connection with any claim under the relevant insurance policies. With respect to insurance claims in which the Purchaser's interest is involved, the Supplier shall not give any release or make any compromise with the insurer without the prior written consent of the Purchaser. With respect to insurance claims in which the Supplier's interest is involved, the Purchaser shall not give any release or make any compromise with the insurer without the prior written consent of the Supplier.

38. Force Majeure

38.1 "Force Majeure" shall mean any event beyond the reasonable control of the Purchaser or of the Supplier, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected and shall include, without limitation, the following:

- (a) war, hostilities, or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy, and civil war;
- (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion, and terrorist acts;
- (c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler, or any other act or failure to act of any local state or national government authority;
- (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine, and plague;
- (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves, or other natural or physical disaster;
- (f) failure, by the Supplier, to obtain the necessary export permit(s) from the governments of the Country(s) of



Origin of the Information Technologies or other Goods, or Supplier's Equipment provided that the Supplier has made all reasonable efforts to obtain the required export permit(s), including the exercise of due diligence in determining the eligibility of the System and all of its components for receipt of the necessary export permits.

- 38.2 If either party is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances of the event of Force Majeure within fourteen (14) days after the occurrence of such event.
- 38.3 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered, or delayed. The Time for Achieving Operational Acceptance shall be extended in accordance with GCC Clause 40 (Extension of Time for Achieving Operational Acceptance).
- 38.4 The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GCC Clause 38.6.
- 38.5 No delay or nonperformance by either party to this Contract caused by the occurrence of any event of Force Majeure shall:
- (a) constitute a default or breach of the Contract;
 - (b) (subject to GCC Clauses 35.2, 38.3, and 38.4) give rise to any claim for damages or additional cost or expense occasioned by the delay or nonperformance,
- if, and to the extent that, such delay or nonperformance is caused by the occurrence of an event of Force Majeure.
- 38.6 If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than sixty



(60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the time period covered by the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which, either party may terminate the Contract by giving a notice to the other.

38.7 In the event of termination pursuant to GCC Clause 38.6, the rights and obligations of the Purchaser and the Supplier shall be as specified in GCC Clauses 41.1.2 and 41.1.3.

38.8 Notwithstanding GCC Clause 38.5, Force Majeure shall not apply to any obligation of the Purchaser to make payments to the Supplier under this Contract.

H. CHANGE IN CONTRACT ELEMENTS

39. Changes to the System

39.1 Introducing a Change

39.1.1 Subject to GCC Clauses 39.2.5 and 39.2.7, the Purchaser shall have the right to propose, and subsequently require, the Project Manager to order the Supplier from time to time during the performance of the Contract to make any change, modification, addition, or deletion to, in, or from the System (interchangeably called “Change”), provided that such Change falls within the general scope of the System, does not constitute unrelated work, and is technically practicable, taking into account both the state of advancement of the System and the technical compatibility of the Change envisaged with the nature of the System as originally specified in the Contract.

A Change may involve, but is not restricted to, the substitution of updated Information Technologies and related Services in accordance with GCC Clause 23 (Product Upgrades).

39.1.2 The Supplier may from time to time during its performance of the Contract propose to the Purchaser (with a copy to the Project Manager) any Change that the Supplier considers necessary or desirable to improve the quality or efficiency of the System. The Purchaser may at its discretion



approve or reject any Change proposed by the Supplier.

39.1.3 Notwithstanding GCC Clauses 39.1.1 and 39.1.2, no change made necessary because of any default of the Supplier in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Achieving Operational Acceptance.

39.1.4 The procedure on how to proceed with and execute Changes is specified in GCC Clauses 39.2 and 39.3, and further details and sample forms are provided in the Sample Forms Section in the Bidding Documents.

39.1.5 Moreover, the Purchaser and Supplier will agree, during development of the Project Plan, to a date prior to the scheduled date for Operational Acceptance, after which the Technical Requirements for the System shall be “frozen.” Any Change initiated after this time will be dealt with after Operational Acceptance.

39.2 Changes Originating from Purchaser

39.2.1 If the Purchaser proposes a Change pursuant to GCC Clauses 39.1.1, it shall send to the Supplier a “Request for Change Proposal,” requiring the Supplier to prepare and furnish to the Project Manager as soon as reasonably practicable a “Change Proposal,” which shall include the following:

- (a) brief description of the Change;
- (b) impact on the Time for Achieving Operational Acceptance;
- (c) detailed estimated cost of the Change;
- (d) effect on Functional Guarantees (if any);
- (e) effect on any other provisions of the Contract.

39.2.2 Prior to preparing and submitting the “Change



Proposal,” the Supplier shall submit to the Project Manager an “Change Estimate Proposal,” which shall be an estimate of the cost of preparing the Change Proposal, plus a first approximation of the suggested approach and cost for implementing the changes. Upon receipt of the Supplier’s Change Estimate Proposal, the Purchaser shall do one of the following:

- (a) accept the Supplier’s estimate with instructions to the Supplier to proceed with the preparation of the Change Proposal;
- (b) advise the Supplier of any part of its Change Estimate Proposal that is unacceptable and request the Supplier to review its estimate;
- (c) advise the Supplier that the Purchaser does not intend to proceed with the Change.

39.2.3 Upon receipt of the Purchaser’s instruction to proceed under GCC Clause 39.2.2 (a), the Supplier shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with GCC Clause 39.2.1. The Supplier, at its discretion, may specify a validity period for the Change Proposal, after which if the Purchaser and Supplier has not reached agreement in accordance with GCC Clause 39.2.6, then GCC Clause 39.2.7 shall apply.

39.2.4 The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If the nature of the Change is such that the Contract rates and prices are inequitable, the parties to the Contract shall agree on other specific rates to be used for valuing the Change.

39.2.5 If before or during the preparation of the Change Proposal it becomes apparent that the aggregate impact of compliance with the Request for Change Proposal and with all other Change Orders that have already become binding upon the Supplier under this GCC Clause 39 would be to increase or decrease the Contract Price as originally set forth in



Article 2 (Contract Price) of the Contract Agreement by more than fifteen (15) percent, the Supplier may give a written notice of objection to this Request for Change Proposal prior to furnishing the Change Proposal. If the Purchaser accepts the Supplier's objection, the Purchaser shall withdraw the proposed Change and shall notify the Supplier in writing of its acceptance.

The Supplier's failure to so object to a Request for Change Proposal shall neither affect its right to object to any subsequent requested Changes or Change Orders, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Supplier represents.

39.2.6 Upon receipt of the Change Proposal, the Purchaser and the Supplier shall mutually agree upon all matters contained in the Change Proposal. Within fourteen (14) days after such agreement, the Purchaser shall, if it intends to proceed with the Change, issue the Supplier a Change Order. If the Purchaser is unable to reach a decision within fourteen (14) days, it shall notify the Supplier with details of when the Supplier can expect a decision. If the Purchaser decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Supplier accordingly. Under such circumstances, the Supplier shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Supplier in its Change Estimate Proposal submitted in accordance with GCC Clause 39.2.2.

39.2.7 If the Purchaser and the Supplier cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Achieving Operational Acceptance, or any other matters identified in the Change Proposal, the Change will not be implemented. However, this provision does not limit the rights of either party under GCC Clause 6



(Settlement of Disputes).

39.3 Changes Originating from Supplier

If the Supplier proposes a Change pursuant to GCC Clause 39.1.2, the Supplier shall submit to the Project Manager a written “Application for Change Proposal,” giving reasons for the proposed Change and including the information specified in GCC Clause 39.2.1. Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GCC Clauses 39.2.6 and 39.2.7. However, should the Purchaser choose not to proceed or the Purchaser and the Supplier cannot come to agreement on the change during any validity period that the Supplier may specify in its Application for Change Proposal, the Supplier shall not be entitled to recover the costs of preparing the Application for Change Proposal, unless subject to an agreement between the Purchaser and the Supplier to the contrary.

40. Extension of Time for Achieving Operational Acceptance

40.1 The time(s) for achieving Operational Acceptance specified in the Schedule of Implementation shall be extended if the Supplier is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:

- (a) any Change in the System as provided in GCC Clause 39 (Change in the Information System);
- (b) any occurrence of Force Majeure as provided in GCC Clause 38 (Force Majeure);
- (c) default of the Purchaser; or
- (d) any other matter specifically mentioned in the Contract;

by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.

40.2 Except where otherwise specifically provided in the Contract, the Supplier shall submit to the Project Manager a notice of a claim for an extension of the time for achieving Operational Acceptance, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such



event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Purchaser and the Supplier shall agree upon the period of such extension. In the event that the Supplier does not accept the Purchaser's estimate of a fair and reasonable time extension, the Supplier shall be entitled to refer the matter to the provisions for the Settlement of Disputes pursuant to GCC Clause 6.

40.3 The Supplier shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

41. Termination

41.1 Termination for Purchaser's Convenience

41.1.1 The Purchaser may at any time terminate the Contract for any reason by giving the Supplier a notice of termination that refers to this GCC Clause 41.1.

41.1.2 Upon receipt of the notice of termination under GCC Clause 41.1.1, the Supplier shall either as soon as reasonably practical or upon the date specified in the notice of termination

- (a) cease all further work, except for such work as the Purchaser may specify in the notice of termination for the sole purpose of protecting that part of the System already executed, or any work required to leave the site in a clean and safe condition;
- (b) terminate all subcontracts, except those to be assigned to the Purchaser pursuant to GCC Clause 41.1.2 (d) (ii) below;
- (c) remove all Supplier's Equipment from the site, repatriate the Supplier's and its Subcontractors' personnel from the site, remove from the site any wreckage, rubbish, and debris of any kind;
- (d) in addition, the Supplier, subject to the payment specified in GCC Clause 41.1.3, shall
 - (i) deliver to the Purchaser the parts of the System executed by the Supplier up to the



date of termination;

- (ii) to the extent legally possible, assign to the Purchaser all right, title, and benefit of the Supplier to the System, or Subsystem, as at the date of termination, and, as may be required by the Purchaser, in any subcontracts concluded between the Supplier and its Subcontractors;
- (iii) deliver to the Purchaser all nonproprietary drawings, specifications, and other documents prepared by the Supplier or its Subcontractors as of the date of termination in connection with the System.

41.1.3 In the event of termination of the Contract under GCC Clause 41.1.1, the Purchaser shall pay to the Supplier the following amounts:

- (a) the Contract Price, properly attributable to the parts of the System executed by the Supplier as of the date of termination;
- (b) the costs reasonably incurred by the Supplier in the removal of the Supplier's Equipment from the site and in the repatriation of the Supplier's and its Subcontractors' personnel;
- (c) any amount to be paid by the Supplier to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges;
- (d) costs incurred by the Supplier in protecting the System and leaving the site in a clean and safe condition pursuant to GCC Clause 41.1.2 (a); and
- (e) the cost of satisfying all other obligations, commitments, and claims that the Supplier may in good faith have undertaken with third parties in connection with the Contract and that are not covered by GCC Clauses 41.1.3 (a) through (d) above.

41.2 Termination for Supplier's Default



41.2.1 The Purchaser, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of termination and its reasons therefore to the Supplier, referring to this GCC Clause 41.2:

- (a) if the Supplier becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, if the Supplier is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Supplier takes or suffers any other analogous action in consequence of debt;
- (b) if the Supplier assigns or transfers the Contract or any right or interest therein in violation of the provision of GCC Clause 42 (Assignment); or
- (c) if the Supplier, in the judgment of the Purchaser, has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, including but not limited to willful misrepresentation of facts concerning ownership of Intellectual Property Rights in, or proper authorization and/or licenses from the owner to offer, the hardware, software, or materials provided under this Contract.

For the purposes of this Clause:

- (i) “corrupt practice”¹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

¹ “Another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.



- (ii) “fraudulent practice”¹ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) “collusive practice”² is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice”³ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under Sub-Clause 9.8.

¹ A “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

² “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

³ A “party” refers to a participant in the procurement process or contract execution.



41.2.2 If the Supplier:

- (a) has abandoned or repudiated the Contract;
- (b) has without valid reason failed to commence work on the System promptly;
- (c) persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just cause;
- (d) refuses or is unable to provide sufficient Materials, Services, or labor to execute and complete the System in the manner specified in the Agreed and Finalized Project Plan furnished under GCC Clause 19 at rates of progress that give reasonable assurance to the Purchaser that the Supplier can attain Operational Acceptance of the System by the Time for Achieving Operational Acceptance as extended;

then the Purchaser may, without prejudice to any other rights it may possess under the Contract, give a notice to the Supplier stating the nature of the default and requiring the Supplier to remedy the same. If the Supplier fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Purchaser may terminate the Contract forthwith by giving a notice of termination to the Supplier that refers to this GCC Clause 41.2.

41.2.3 Upon receipt of the notice of termination under GCC Clauses 41.2.1 or 41.2.2, the Supplier shall, either immediately or upon such date as is specified in the notice of termination:

- (a) cease all further work, except for such work as the Purchaser may specify in the notice of termination for the sole purpose of protecting that part of the System already executed or any work required to leave the site in a clean and safe condition;
- (b) terminate all subcontracts, except those to be



assigned to the Purchaser pursuant to GCC Clause 41.2.3 (d) below;

- (c) deliver to the Purchaser the parts of the System executed by the Supplier up to the date of termination;
- (d) to the extent legally possible, assign to the Purchaser all right, title and benefit of the Supplier to the System or Subsystems as at the date of termination, and, as may be required by the Purchaser, in any subcontracts concluded between the Supplier and its Subcontractors;
- (e) deliver to the Purchaser all drawings, specifications, and other documents prepared by the Supplier or its Subcontractors as at the date of termination in connection with the System.

41.2.4 The Purchaser may enter upon the site, expel the Supplier, and complete the System itself or by employing any third party. Upon completion of the System or at such earlier date as the Purchaser thinks appropriate, the Purchaser shall give notice to the Supplier that such Supplier's Equipment will be returned to the Supplier at or near the site and shall return such Supplier's Equipment to the Supplier in accordance with such notice. The Supplier shall thereafter without delay and at its cost remove or arrange removal of the same from the site.

41.2.5 Subject to GCC Clause 41.2.6, the Supplier shall be entitled to be paid the Contract Price attributable to the portion of the System executed as at the date of termination and the costs, if any, incurred in protecting the System and in leaving the site in a clean and safe condition pursuant to GCC Clause 41.2.3 (a). Any sums due the Purchaser from the Supplier accruing prior to the date of termination shall be deducted from the amount to be paid to the Supplier under this Contract.

41.2.6 If the Purchaser completes the System, the cost of completing the System by the Purchaser shall be determined. If the sum that the Supplier is entitled to be paid, pursuant to GCC Clause 41.2.5, plus the



reasonable costs incurred by the Purchaser in completing the System, exceeds the Contract Price, the Supplier shall be liable for such excess. If such excess is greater than the sums due the Supplier under GCC Clause 41.2.5, the Supplier shall pay the balance to the Purchaser, and if such excess is less than the sums due the Supplier under GCC Clause 41.2.5, the Purchaser shall pay the balance to the Supplier. The Purchaser and the Supplier shall agree, in writing, on the computation described above and the manner in which any sums shall be paid.

41.3 Termination by Supplier

41.3.1 If:

- (a) the Purchaser has failed to pay the Supplier any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause **pursuant to the SCC**, or commits a substantial breach of the Contract, the Supplier may give a notice to the Purchaser that requires payment of such sum, with interest on this sum as stipulated in GCC Clause 12.3, requires approval of such invoice or supporting documents, or specifies the breach and requires the Purchaser to remedy the same, as the case may be. If the Purchaser fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Supplier's notice; or
- (b) the Supplier is unable to carry out any of its obligations under the Contract for any reason attributable to the Purchaser, including but not limited to the Purchaser's failure to provide possession of or access to the site or other areas or failure to obtain any governmental permit necessary for the execution and/or completion of the System;

then the Supplier may give a notice to the Purchaser



of such events, and if the Purchaser has failed to pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within twenty-eight (28) days of such notice, or if the Supplier is still unable to carry out any of its obligations under the Contract for any reason attributable to the Purchaser within twenty-eight (28) days of the said notice, the Supplier may by a further notice to the Purchaser referring to this GCC Clause 41.3.1, forthwith terminate the Contract.

41.3.2 The Supplier may terminate the Contract immediately by giving a notice to the Purchaser to that effect, referring to this GCC Clause 41.3.2, if the Purchaser becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Purchaser takes or suffers any other analogous action in consequence of debt.

41.3.3 If the Contract is terminated under GCC Clauses 41.3.1 or 41.3.2, then the Supplier shall immediately:

- (a) cease all further work, except for such work as may be necessary for the purpose of protecting that part of the System already executed, or any work required to leave the site in a clean and safe condition;
- (b) terminate all subcontracts, except those to be assigned to the Purchaser pursuant to Clause 41.3.3 (d) (ii);
- (c) remove all Supplier's Equipment from the site and repatriate the Supplier's and its Subcontractor's personnel from the site.
- (d) In addition, the Supplier, subject to the payment specified in GCC Clause 41.3.4, shall:



- (i) deliver to the Purchaser the parts of the System executed by the Supplier up to the date of termination;
- (ii) to the extent legally possible, assign to the Purchaser all right, title, and benefit of the Supplier to the System, or Subsystems, as of the date of termination, and, as may be required by the Purchaser, in any subcontracts concluded between the Supplier and its Subcontractors;
- (iii) to the extent legally possible, deliver to the Purchaser all drawings, specifications, and other documents prepared by the Supplier or its Subcontractors as of the date of termination in connection with the System.

41.3.4 If the Contract is terminated under GCC Clauses 41.3.1 or 41.3.2, the Purchaser shall pay to the Supplier all payments specified in GCC Clause 41.1.3, and reasonable compensation for all loss, except for loss of profit, or damage sustained by the Supplier arising out of, in connection with, or in consequence of such termination.

41.3.5 Termination by the Supplier pursuant to this GCC Clause 41.3 is without prejudice to any other rights or remedies of the Supplier that may be exercised in lieu of or in addition to rights conferred by GCC Clause 41.3.

41.4 In this GCC Clause 41, the expression “portion of the System executed” shall include all work executed, Services provided, and all Information Technologies, or other Goods acquired (or subject to a legally binding obligation to purchase) by the Supplier and used or intended to be used for the purpose of the System, up to and including the date of termination.

41.5 In this GCC Clause 41, in calculating any monies due from the Purchaser to the Supplier, account shall be taken of any sum previously paid by the Purchaser to the Supplier under the Contract, including any advance payment paid **pursuant to the SCC.**



42. Assignment

42.1 Neither the Purchaser nor the Supplier shall, without the express prior written consent of the other, assign to any third party the Contract or any part thereof, or any right, benefit, obligation, or interest therein or thereunder, except that the Supplier shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.



SECTION V. SPECIAL CONDITIONS OF CONTRACT (SCC)


	<p style="text-align: center;"><i>Supply, Installation & Training of an Integrated Business Management System (SIGEM) for Electricidade de Moçambique, E.P.</i></p>	<p style="text-align: right;">Section V. Special Conditions of Contract (SCC) Page 144</p>
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Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions of the SCC shall prevail over those in the General Conditions of Contract. For the purposes of clarity, any referenced GCC clause numbers are indicated in the left column of the SCC.

A. CONTRACT AND INTERPRETATION

1. Definitions (GCC Clause 1)

GCC 1.1 (a) (ix)	The applicable edition of the Procurement Guidelines is dated: edition of May 2004 revised during October 2006 and May 2010.
GCC 1.1 (b) (i)	The Purchaser is: <i>Electricidade de Moçambique, E.P. (EDM)</i>
GCC 1.1 (b) (ii)	The Project Manager is: <i>Mr. Jose Neves</i> CMS Consultant: <i>Ms. Luis Pilar Rodriguez</i> ERP Consultant: <i>Ms. Alejandra Garcia</i> IRMS Consultant: <i>Mr. Eduardo Bergerie</i> Project Manager Consultant: <i>Mr. Carlos Garcia</i>
GCC 1.1 (e) (i)	The Purchaser's Country is: <i>Republic of Mozambique</i>
GCC 1.1 (e) (iii)	The Project Site(s) is: <i>Direção do Sistema Integrado de Gestão da EDM (SIGEM), Av. Namaacha KM 1.5, P.O Box 381, Maputo, Mozambique</i>
GCC 1.1 (e) (x)	The Contract shall continue in force until the Information System and all the Services have been provided unless the Contract is terminated earlier in accordance with the terms set out in the Contract.



GCC 1.1. (e) (xii)	The Post-Warranty Services Period is <i>twelve (12) months</i> , starting with the completion of the Warranty Period.
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2. Contract Documents (GCC Clause 2)

GCC 2	There are no Special Conditions of Contract applicable to GCC Clause 2.
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3. Interpretation (GCC Clause 3)

GCC 3.1.1	<p>The Contract's governing language is <i>English</i>.</p> <p>Unless otherwise specified in the Technical Requirements (Section VI) all documentation attached to the bidding documents, including brochures, letters, etc., should translated to the language of the bid.</p>
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4. Notices (GCC Clause 4)

GCC 4.3	<p>Address of the Project Manager:</p> <p><i>Electricidade de Moçambique, EP Direcção de Electrificação e Projectos Sistema Integrado de gestão da EDM (SIGEM) Av. Da Namaacha (EN4) km 1,5, P.O. Box 381 Maputo, Moçambique Facsimile number: +258 21400798 E-mail address: jneves@edm.co.mz</i></p> <p>Fallback address of the Purchaser:</p> <p><i>Electricidade de Moçambique, EP Direcção de Electrificação e Projectos Av. Filipe Magaia nr. 368, CP 2532</i></p>
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Maputo, Moçambique

Facsimile number: +258 21322074

5. Governing Law (GCC Clause 5)

GCC 5.1	The Contract shall be interpreted in accordance with the laws of: <i>Republic of Mozambique</i>
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6. Settlement of Disputes (GCC Clause 6)

GCC 6.1.4	The Appointing Authority for the Adjudicator is: <i>Mr. Loland Oystein</i> <i>Avenida Armando Tivane 1853</i> <i>Phone: +258 21 48 50 58</i> <i>Fax: +258 21 48 50 57</i> <i>E-mail: loland.norconsult@tvcabo.co.mz</i>
GCC 6.2.3	If the Supplier is foreign (including a Joint Venture when at least one partner is foreign), arbitration proceedings shall be conducted in accordance with the rules of arbitration of UNCITRAL (United Nations Commission on International Trade Law). These rules, in the version in force at the time of the request for arbitration, will be deemed to form part of this Contract. If the Supplier is a national of the Purchaser's country , any dispute between the Purchaser and a Supplier arising in connection with the present Contract shall be referred to arbitration in accordance with the laws of the Purchaser's country. <i>A supplier would be considered foreign, if the nationality, in the case of Joint Venture of the Partner-in-charge, and in case of a single entity/firm, is foreign to the Purchaser's country. All other Suppliers would be considered local.</i>



B. SUBJECT MATTER OF CONTRACT

7. Scope of the System (GCC Clause 7)

GCC 7.3	<p>The Supplier's obligations under the Contract will include the guarantee for the following recurrent cost items, as identified in the Recurrent Cost tables in the Supplier's Bid (and as stated in 2.5.3.4 of Section VI Technical Requirements):</p> <p><u>Software Maintenance</u></p> <p>As part of the maintenance activities of the solution, the Supplier MUST assured that the following maintenance activities will be performed:</p> <ul style="list-style-type: none">• Adaptive – dealing with changes and adapting in the software environment• Perfective – accommodating with new or changed user requirements which concern functional enhancements to the software• Corrective – dealing with errors found and fixing it• Preventive – concerns activities aiming on increasing software maintainability and prevent problems in the future <p>The Supplier agrees to guarantee the supply of spare parts required for the operation and maintenance of the System, as stated above, for a period of 12 months beginning with the end of the warranty period. The Supplier MUST provide, at its own cost, the necessary spares for the support. Purchaser won't bear the cost of any spare parts for maintenance during the Warranty Period.</p> <p>Purchaser might negotiate with the Supplier (after bid award) possible changes in scope in relation to integration with existing systems (legacy systems) as the need arise due to implementation requirements.</p>
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8. Time for Commencement and Operational Acceptance (GCC Clause 8)

GCC 8.1	<p>The Supplier shall commence work on the System within fourteen (14) days from the Effective Date of the Contract.</p>
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GCC 8.2

Operational Acceptance will occur on or before the date ***consistent with the Implementation Schedule in the Technical Requirements Section (VI)***.

9. Supplier's Responsibilities (GCC Clause 9)

GCC 9.9

The Supplier shall have the following additional responsibilities: **None**

10. Purchaser's Responsibilities (GCC Clause 10)

GCC 10.12

The Purchaser shall have the following additional responsibilities: **None**

C. PAYMENT

11. Contract Price (GCC Clause 11)

GCC 11.2 (b)

Adjustments to the Contract Price shall be as follows: **None**

12. Terms of Payment (GCC Clause 12)

GCC 12.1

Subject to the provisions of GCC Clause 12 (Terms of Payment), the Purchaser shall pay the Contract Price to the Supplier according to the categories and in the manner specified below. Only the categories Advance Payment and Complete System Integration relate to the entire Contract Price. In other payment categories, the term "total Contract Price" means the total cost of goods or services under the specific payment category. Within each such category, the Contract Implementation Schedule may trigger pro-rata payments for the portion of the total Contract Price for the category corresponding to the goods or services actually Delivered, Installed, or Operationally Accepted, at unit prices and in the currencies specified in the Price Schedules of the Contract Agreement.

(a) Advance Payment: Ten percent (10%) of the entire Contract



	<p>Price, exclusive of all Recurrent Costs, shall be paid against receipt of a claim accompanied by the Advance Payment Security specified in GCC Clause 13.2.</p> <p>(b) Custom Software and Custom Materials:</p> <p>Sixty percent (60%) of the total or pro-rata Contract Price will be paid in increments against Purchaser's acceptance of major intermediate deliverables defined in the Implementation Schedule as key milestones.</p> <p>(c) Complete System Integration</p> <p>Thirty percent (30%) of the entire Contract Price, exclusive of all Recurrent Costs, as final payment against Operational Acceptance of the System as an integrated whole.</p> <p>(d) Recurrent Costs</p> <p>one hundred percent (100%) of the price of the services actually delivered will be paid annually in arrears, on submission and Purchaser's approval of invoices. Please refer Section VI: Technical Requirements: Consumables and Other Recurrent Costs</p>
GCC 12.3	The Purchaser shall pay to the Supplier interest on the delayed payments at a rate of: one percent (1%) per annum.
GCC 12.4	For Goods and Services supplied locally, the Purchaser will pay the Supplier in the currency stated in the Contract Agreement and the Price Schedules it refers to.
GCC 12.5	No alternative method of Payment for Goods supplied from outside the Purchaser's Country is available

13. Securities (GCC Clause 13)

GCC 13.2.1	The Supplier shall provide within twenty-eight (28) days of the notification of Contract award an Advance Payment Security in the
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	amount and currency of the Advance Payment specified in SCC for GCC Clause 12.1 above.
GCC 13.2.2	The reduction in value and expiration of the Advance Payment Security are calculated as follows: $P*a/(100-a)$, where “P” is the sum of all payments effected so far to the Supplier (excluding the Advance Payment), and “a” is the Advance Payment expressed as a percentage of the Contract Price pursuant to the SCC for GCC 12.1.
GCC 13.3.1	The Performance Security shall be denominated in US American Dollars for an amount equal to ten percent (10%) of the Contract Price, excluding any Recurrent Costs.
GCC 13.3.4	During the Warranty Period (after Operational Acceptance of the System), the Performance Security shall be reduced to two and a half percent (2.5%) of the Contract Price, excluding any Recurrent Costs.

14. Taxes and Duties (GCC Clause 14)

GCC 14	Supplier shall bear all the taxes & duties. Only Service Tax shall be paid by the Purchaser as per applicable law of the Purchaser’s country.
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D. INTELLECTUAL PROPERTY

15. Copyright (GCC Clause 15)

GCC 15.3	<p>The Purchaser may assign, license, or otherwise voluntarily transfer its contractual rights to use the Standard Software or elements of the Standard Software, without the Supplier’s prior written consent, under the following circumstances:</p> <p>(a) To a third party to assist the Purchaser in making a transition from its existing system (s) to the new system (s)</p>
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	<p>(b) To any purchaser of the concern, or any successor entities following a group reorganization or bankruptcy or other insolvency procedures</p> <p>(c) If directed, in writing, by the Government of Mozambique or any statutory agency to comply with any audit, legal or special investigative proceedings that may arise</p>
GCC 15.4	<p>The Purchaser's and Supplier's rights and obligations with respect to Custom Software or elements of the Custom Software are as follows:</p> <p>Supplier acknowledges that all right, title and interest in all Modifications (Custom Source Code Software related to modifications made by Supplier for this project), and Materials (Customized for this project) are and will remain the exclusive property of the Purchaser and that supplier does not and shall not acquire any ownership, right, title, interest, copyright, trade secret, patent or other proprietary rights in the Modifications or the Materials through this Agreement. Supplier will not claim any title to or take any action that jeopardizes purchaser's rights in the Modifications or the Materials. To the extent that supplier may nevertheless acquire any right, title or interest in any Modifications or Materials, supplier agrees to assign and, upon its creation, hereby automatically assigns to purchaser all rights, title and interest in such Modifications and Materials, without the necessity of any further consideration.</p> <p>The Purchaser's and Supplier's rights and obligations with respect to Custom Materials or elements of the Custom Materials are as follows:</p> <p>All documents associated with the Software, manuals, works, reports, forms, data, designs, drawings, tables, materials, publications, records, business models, inventions and other work product created in the course of performing its obligations under this Agreement will remain the exclusive property of Purchaser.</p>
GCC 15.5	<p>No software escrow contract is required for the execution of the Contract</p>



16. Software License Agreements (GCC Clause 16)

GCC 16.1 (a) (iii)	The Standard Software license shall be valid <i>throughout the territory of the Purchaser's Country</i>
GCC 16.1 (a) (iv)	Use of the software shall be subject to the following additional restrictions: <i>none</i>
GCC 16.1 (b) (ii)	The Software license shall permit the Software to be used or copied for use or transferred to a replacement computer <i>provided the replacement computer falls within approximately the same class of machine and maintains approximately the same number of users, if a multi-user machine</i>
GCC 16.1 (b) (vi)	The Software license shall permit the Software to be disclosed to and reproduced for use (including a valid sublicense) by <i>support service suppliers or their subcontractors, exclusively for such suppliers or subcontractors in the performance of their support service contracts</i>
GCC 16.1 (b) (vii)	In addition to the persons specified in GCC Clause 16.1 (b) (vi), the Software may be disclosed to, and reproduced for use by the members of the Purchaser's business group that are not direct competitors of the Supplier. The Purchaser must obtain and provide the Supplier written evidence from such parties that such parties will abide by the terms of the Contract as if they were party to the Contract.
GCC 16.2	The Supplier's right to audit the Standard Software will be subject to the following terms: The Purchaser will make available to the Supplier within seven (7) days of a written request accurate and up-to-date records of the number and location of copies, the number of authorized users, or any other relevant data required to demonstrate use of the Standard Software as per the license agreement



17. Confidential Information (GCC Clause 17)

GCC 17.1	There are no modifications to the confidentiality terms expressed in GCC Clause 17.1
GCC 17.7	The provisions of this GCC Clause 17 shall survive the termination, for whatever reason, of the Contract for three (3) years

E. SUPPLY, INSTALLATION, TESTING, COMMISSIONING, AND ACCEPTANCE OF THE SYSTEM

18. Representatives (GCC Clause 18)

GCC 18.1	The Purchaser's Project Manager shall have the following additional powers and / or limitations to his or her authority to represent the Purchaser in matters relating to the Contract: <i>no additional powers or limitations.</i>
GCC 18.2.2	The Supplier's Representative shall have the following additional powers and / or limitations to his or her authority to represent the Supplier in matters relating to the Contract: <i>no additional powers or limitations.</i>

19. Project Plan (GCC Clause 19)

GCC 19.1	Chapters in the Project Plan shall address the following subject: a) Project Organization and Management Plan; b) Delivery and Installation Plan (work schedule) c) Data Requirement gathering Plan d) Information System Quality Plan e) Measurement Tools & Processes proposed for monitoring; f) Risk Management Plan g) Training Plan h) Change Management Plan i) Pre-commissioning and Operational Acceptance Testing Plan j) Warranty Service Plan k) Technical Support Plan
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	<p>l) Post-Warranty Service Plan (optional)</p> <p>m) Hardware Requirements for System Installation and Use (ONLY Description and capacity planning of proposed solution needs)</p> <p>Further details regarding the required contents of each of the above chapters are contained in the Technical Requirements, Section VI.</p>
GCC 19.2	<p>Within thirty (30) days from the Effective Date of the Contract, the Supplier shall present a Project Plan to the Purchaser. The Purchaser shall, within fourteen (14) days of receipt of the Project Plan, notify the Supplier of any respects in which it considers that the Project Plan does not adequately ensure that the proposed program of work, proposed methods, and/or proposed Information Technologies will satisfy the Technical Requirements and/or the SCC (in this Clause 19.2 called “non-conformities” below). The Supplier shall, within five (3) days of receipt of such notification, correct the Project Plan and resubmit to the Purchaser. The Purchaser shall, within seven (7) days of resubmission of the Project Plan, notify the Supplier of any remaining non-conformities. This procedure shall be repeated as necessary until the Project Plan is free from non-conformities. When the Project Plan is free from non-conformities, the Purchaser shall provide confirmation in writing to the Supplier. This approved Project Plan (“the Agreed and Finalized Project Plan”) shall be contractually binding on the Purchaser and the Supplier.</p>
GCC 19.5	<p>The Supplier shall submit to the Purchaser the following reports:</p> <p>(a) Monthly progress reports, summarizing:</p> <ul style="list-style-type: none">(i) results accomplished during the prior period;(ii) cumulative deviations to date from schedule of progress milestones as specified in the Agreed and Finalized Project Plan;(iii) corrective actions to be taken to return to planned schedule of progress; proposed revisions to planned schedule;(iv) other issues and outstanding problems; proposed actions to be taken;



	<p>(v) resources that the Supplier expects to be provided by the Purchaser and/or actions to be taken by the Purchaser in the next reporting period;</p> <p>(vi) other issues or potential problems the Supplier foresees that could impact on project progress and/or effectiveness.</p>
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20. Subcontracting (GCC Clause 20)

GCC 20	There are no Special Conditions of Contract applicable to GCC Clause 20.
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21. Design and Engineering (GCC Clause 21)

GCC 21.2	The Contract shall be executed in accordance with the edition or the revised version of all referenced codes and standards current at the date <i>of thirty (30) days before bid submission.</i>
GCC 21.3.1	<p>The Supplier shall prepare and furnish to the Project Manager the following documents for which the Supplier must obtain the Project Manager's approval before proceeding with work on the System or any Subsystem covered by the documents:</p> <p>Project Planning</p> <ul style="list-style-type: none">• Risk Management Plan• Change Management Plan• Data Gathering Requirement <p>Solution Design</p> <ul style="list-style-type: none">• Software Requirement Specification.• Application Architecture• Security Architecture• Data Design & Data Modeling• Interface Design <p>Operational Acceptance</p> <ul style="list-style-type: none">• Installation Roll-out Plan• Data Migration Strategy



	<ul style="list-style-type: none">• Data Migration Sign-off• Operational Acceptance Plan• Test cases to be used in any kind of testing required as per this contract. <p>User Training</p> <ul style="list-style-type: none">• Training plan• User Manual• Administration/ technical Manual <p>Any other documents not mentioned here but necessary for concluding the documentation requirement of scope definition of the Bid Document in Section VI.</p>
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22. Procurement, Delivery, and Transport (GCC Clause 22)

GCC 22.4.3	The Supplier shall be free to use transportation through carriers registered in any eligible country and shall obtain insurance from any eligible source country.
GCC 22.5	The Supplier shall provide the Purchaser with shipping and other documents as specified in the GCC

23. Product Upgrades (GCC Clause 23)

GCC 23.4	The Supplier shall provide the Purchaser <i>with all new versions, releases, and updates to all Standard Software during the Warranty Period, for free, as specified in the GCC</i>
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24. Implementation, Installation, and Other Services (GCC Clause 24)

GCC 24	There are no Special Conditions of Contract applicable to GCC Clause 24
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25. Inspections and Tests (GCC Clause 25)

GCC 25	There are no Special Conditions of Contract applicable to GCC Clause 25.
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26. Installation of the System (GCC Clause 26)

GCC 26	There are no Special Conditions of Contract applicable to GCC Clause 26.
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27. Commissioning and Operational Acceptance (GCC Clause 27)

GCC 27.2.1	<p>Operational Acceptance Testing shall be conducted in accordance with the <i>Pre-commissioning and Operational Acceptance Testing Plan</i>.</p> <p>This plan should be sufficiently comprehensive, unambiguous, and verifiable to result in proper operation of the System with minimal confusion or controversy.</p> <p>As this Contract covers the Installation and Acceptance testing of a number of Subsystems (Integrated Information System), the nature of the acceptance tests required for each Subsystem, and for the final tests to be carried out on the entire System once all Subsystems have been completed, needs to be clearly specified by the Supplier in the Plan and the Supplier bears sole responsibility for correcting any defects discovered during the tests.</p>
GCC 27.2.2	<p>If the Operational Acceptance Test of the System, or Subsystem(s), cannot be successfully completed within <i>no more than ninety (90)</i> days from the date of Installation or any other period agreed upon by the Purchaser and the Supplier, then GCC Clause 27.3.5 (a) or (b) shall apply, as the circumstances may dictate.</p>



F. GUARANTEES AND LIABILITIES

28. Operational Acceptance Time Guarantee (GCC Clause 28)

GCC 28.2	Liquidated damages shall be assessed at one half of one percent (0.5%) per week. The maximum liquidated damages are ten percent (10%) of the Contract Price, or relevant part of the Contract Price if the liquidated damages apply to a Subsystem.
GCC 28.3	Liquidated damages shall be assessed <i>only with respect to achieving Operational Acceptance</i>

29. Defect Liability (GCC Clause 29)

GCC 29.1	For Software, exceptions or limitations to the Supplier's warranty obligations shall be as follows: <i>None</i>
GCC 29.3 (iii)	The Supplier warrants that the following items have been released to the market for the following specific minimum time periods: Commercial management system (CMS), Incident recording and management system (IRMS) and Corporate resources management information system (ERP), offered by the Supplier for this bid <i>must have been commercially available in the market for at least three years (any version of the information system) and must have been commercially available in the market for at least eight (8) months for the actual version being offered in this bid.</i>
GCC 29.4	The Warranty Period shall begin from the date of Operational Acceptance of the System or Subsystem and extend for <i>twelve (12) months</i>
GCC 29.10	During the Warranty Period, the Supplier must commence the work necessary to remedy defects or damage within eight (8) hours of notification or less time so as to ensure that there is no degradation in



Service Performance Requirement as defined in the Section VI:
Technical Requirements (Service Performance Requirements).

30. Functional Guarantees (GCC Clause 30)

GCC 30

There are no Special Conditions of Contract applicable to GCC Clause 30.

31. Intellectual Property Rights Warranty (GCC Clause 31)

GCC 31

There are no Special Conditions of Contract applicable to GCC Clause 31.

32. Intellectual Property Rights Indemnity (GCC Clause 32)

GCC 32

There are no Special Conditions of Contract applicable to GCC Clause 32.

33. Limitation of Liability (GCC Clause 33)

GCC 33

There are no Special Conditions of Contract applicable to GCC Clause 33.

G. RISK DISTRIBUTION

34. Transfer of Ownership (GCC Clause 34)

GCC 34

There are no Special Conditions of Contract applicable to GCC Clause 34.



35. Care of the System (GCC Clause 35)

GCC 35	There are no Special Conditions of Contract applicable to GCC Clause 35.
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36. Loss of or Damage to Property; Accident or Injury to Workers; Indemnification (GCC Clause 36)

GCC 36	There are no Special Conditions of Contract applicable to GCC Clause 36.
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37. Insurances (GCC Clause 37)

GCC 37.1 (c)	<p>The Supplier shall obtain Third-Party Liability Insurance in the amount of 400.000 US American Dollars, with deductible limits of no more than twenty percent (20%). The Insurance shall cover bodily injury or death suffered by third parties (including the Purchaser's personnel, Consultants and Contractual Staff) and loss of or damage to property (including the Purchaser's property and any Subsystems that have been accepted by the Purchaser) occurring in connection with the supply and installation of the Information System. The Insurance shall cover the period from effective date of Contract until Date of Completion of Contract.</p>
GCC 37.1 (e)	<p>The Supplier shall obtain Worker's Compensation Insurance in accordance with the statutory requirements of the Republic of Mozambique. The Insurance shall cover the period from the beginning date, relative to the Effective Date of the Contract until expiration date, relative to the Effective Date of the Contract's completion.</p> <p>The Supplier shall obtain Employer's Liability Insurance in accordance with the statutory requirements of <i>Republic of Mozambique</i>. The Insurance shall cover the period of six (6) months from the beginning date, relative to the Effective Date of Contract completion.</p>

38. Force Majeure (GCC Clause 38)

GCC 38	There are no Special Conditions of Contract applicable to GCC Clause 38
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38.

H. CHANGE IN CONTRACT ELEMENTS

39. Changes to the System (GCC Clause 39)

GCC 39	There are no Special Conditions of Contract applicable to GCC Clause 39.
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40. Extension of Time for Achieving Operational Acceptance (GCC Clause 40)

GCC 40	There are no Special Conditions of Contract applicable to GCC Clause 40.
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41. Termination (GCC Clause 41)

GCC 41	There are no Special Conditions of Contract applicable to GCC Clause 41.
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42. Assignment (GCC Clause 42)

GCC 42	There are no Special Conditions of Contract applicable to GCC Clause 42.
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SECTION VI. TECHNICAL REQUIREMENTS (INCLUDING IMPLEMENTATION SCHEDULE)



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Technical Requirements

A. BACKGROUND

0.1 The Purchaser

0.1.1 The Government of Mozambique (GOM) has applied a credit from the IDA (International Development Association) for the implementation of an Integrated Management System for the Electricity Utility of Mozambique (SIGEM - Sistema Integrado de Gestão da Electricidade de Moçambique) and intends to apply part of the funds to make payment under the agreement(s) resulting from this IFB: “Supply & Installation of Integrated IT System”.

0.1.2 The SIGEM is an Integrated Solution that groups and encompasses all activities to be carried out within EDM. It comprises, amongst other, the optimization of processes, training of staff, aligning the organization to best industry practices as well as the installation of new technologies.

0.1.3 Some important facts are described as follows:

The Country

Mozambique is a Southern African Country sharing borders with Swaziland, Republic of South Africa (RSA), Malawi, Zimbabwe, Zambia and Tanzania. On the east, it has a long Indian Ocean coastline. It is one of the largest countries in Africa, covering an area of about 800,000 Km², and one of the most sparsely populated countries in Africa.

Mozambique has staged a remarkable recovery from a devastating civil war that ended in the early 1990s and has successfully completed an ambitious program of “first generation” reforms. Since 1992, infrastructure has been improved and is now approaching its pre-war levels, and incomes have risen considerably. The poverty headcount fell from 69 percent in 1997 to 54 percent in 2003. On average the economy grew by 8 percent annually between 1996 and 2006. This accomplishment can be attributed to the Government of Mozambique’s (GoM) phased but determined approach to stabilization and reforms, as well as to concessional assistance (half of Government expenditures), healthy agricultural catch-up growth, and fast expansion in tourism, construction, and certain manufacturing sub-sectors. Another



significant factor was the GoM's success in attracting "mega-projects" in aluminum smelting, natural gas, and titanium mining.

Nevertheless, with a population of 21 million inhabitants, an annual per capita income of US \$330 in 2007 and 54 percent of the population still below the poverty line, Mozambique faces considerable social and economic challenges. The urban and peri-urban economically active population is expected to grow at 4 percent annually until 2010, underscoring the need for the continuous expansion of urban and peri-urban infrastructure services. Only around 17% of households have access to electricity with over half of them living in Maputo and its surrounding areas. All the provincial capitals and most of the municipal areas are also supplied with electricity. Most of these urban centers are connected to the main national electrical grid which is owned and operated by the Mozambican power utility, Electricidade de Moçambique (EdM).

Access to grid-based electrification in the rural areas is extremely low (2%) and due to low demographic densities and geographically dispersed loads, will remain very low for the foreseeable future. Off-grid electrification schemes have and can continue to increase access to modern energy services but much investments are required in this area and a comprehensive long-term national rural electrification strategy and investment program is still needed.

Mozambique's vast energy resources have the capacity to satisfy most of its domestic energy needs. They include hydropower, natural gas, coal, biomass, solar and wind. The country is endowed with a considerable hydropower potential which has been broadly estimated at 12,500 MW with a corresponding annual energy generation potential of 60,000 GWh. It is estimated that around one third of this potential can be developed at a relatively low cost. The largest potential is in the Zambezi River basin at sites such as Cahora Bassa north and Mphanda Nkuwa. So far only about 2,200 MW has been developed. In addition, the potential for small hydro is 190 MW, which includes 6 MW micro hydro ($1 < MW \leq 2$), 18 MW mini hydro ($2 < MW \leq 8$) and 166 MW small hydro ($8 < MW < 15$). Potential sites for these micro hydropower schemes are located within the mountainous terrain with perennial streams and rivers of the Manica, Tete and Niassa provinces.

At the household level, the main requirement for energy is for cooking and lighting. The principal energy source for the majority of Mozambicans is biomass, particularly wood fuel. Within rural communities, this accounts for nearly all the total energy consumed. Charcoal production and use is widespread in small urban settlements, district capitals and around larger towns and cities. The commercial production of charcoal for the growing urban and peri-urban markets is beginning to pose serious tangible negative environmental impacts. While market demand for charcoal cannot be easily reverse until viable alternative household and SME fuels are available in the marketplace at affordable prices, there is an urgent need to promote improved



charcoal production methods and practices, and to sustainably manage forest exploitation for charcoal making.

EDM - General Aspects

In 1977 Decree-Law 38/77 of 27 August created Electricidade de Moçambique E.E. (Mozambique Electricity Company), the result of merging several municipal water and electricity services supplying. In 1995 Decree 28/95 transformed the company into a public corporation named EDM - Electricidade de Moçambique, E. P.

Since then EDM has been vertically integrated, covering the generation, transmission, distribution and sale of electricity.

Electricidade de Moçambique (EdM), is a vertically-integrated, government-owned electric utility with an installed capacity of 140MW hydropower (86MW operational) and installed 109MW (82MW operational) in thermal power stations. EdM buys most of its power supply (400MW) from Hidroelectrica de Cahora Bassa (HCB), owner and operator of the Cahora Bassa plant on the Zambezi (2,075 MW). The GoM owns 82 percent of HCB which operates as an Independent Power Producer (IPP). The bulk of the electricity generated at HCB is exported to South Africa, with a small amount to Zimbabwe. EdM sells any excess electricity on the Southern Africa Short Term Energy Market. The Mozambique transmission grid is currently interconnected with South Africa, Zimbabwe and Swaziland.

The Conselho Nacional de Electricidade (CNELEC) was established as an independent advisory regulatory body for the electricity sector in early 2008.

The government considers the energy sector to be a priority, and it is committed to measures that will attract private investment to this area and promote the development of the national electricity grid.

In October 1997, in line with international trends towards greater market liberalization, the Electricity Law (Law 21/97 of 1 October) was promulgated. This changed some of the principles underlying the national framework, namely:

- It ended the state monopoly on the generation, transmission, distribution and sale of electricity, and stressed private sector participation in the development of the national grid;
- The state retained its role of regulating/promoting the development of the sector;
- It established the general legal framework for activities in the sector, to be undertaken through concessions;



- It established the National Electricity Council (CNELEC), a consultative body on matters of national electricity policy, and on the application of the law and its regulations.

Under Article 42 of the above-mentioned Electricity Law, specific regulations were approved establishing the Energy Policy (Resolution 05/98 of 3 March) and giving EDM the role of manager of the National Electricity Transmission Grid and the Regulations for the Electricity Law that defined the powers and procedures for granting concessions for the generation, transmission, distribution and sale of electricity.

Through Resolution 24/2000 of 3 October the Electricity Law established a number of specific requirements for EDM to ensure more concise and reliable data about the various stakeholders in the energy sector. These include, in particular:

- Separation of the accounts for the generation, transmission and distribution of electricity;
- Restructuring the cost and accounting system, establishing separate accounts for each business unit;
- Ensuring that management information is available to support government decisions at national and regional level on tariffs, electricity supply, competition, concession holders, etc. It should be noted that tariff policy is approved by the Council of Ministers and is updated regularly.

EDM Customers and Activity Indicators

EDM currently supplies electricity to 614,731 customers, distributed as follows:

TYPE	SOUTH	CENTRE	NORTH	TOTAL
Prepaid	432,252	182,237	149,947	764,436
Domestic Tariff	410,848	170,006	139,946	720,800
General Tariff	20,963	11,766	9,342	42,071
Social Tariff				



	395	457	658	1,510
Agricultural Tariff	46	8	1	55
Post-paid	82,680	61,211	43,896	187,787
Low Voltage (LV)	81,272	60,525	43,637	185,434
Domestic Tariff	68,328	50,825	38,663	157,816
General Tariff	11,662	7,478	4,285	23,425
Social Tariff	93	1,397	394	1,884
Agricultural Tariff	5	5	-	10
Low Voltage Large Client Tariff	1,184	820	295	2,299
Medium Voltage (MV)	1,406	686	259	2,351
High Voltage (HV)	2	-	-	2
TOTAL	514,932	243,448	193,843	952,223

The following table contains some indicators (with approximate values) on EDM's activities.

SYSTEM	INDICATOR	VALUE
Prepaid System	Number of prepaid contracts	89.604
	Average number of new contracts (per month)	9.956
Post-paid System	Number of post-paid contracts	21.018
	Average number of new contracts (per month)	2.335
	Number of invoices processed (per month)	393.732



SYSTEM	INDICATOR	VALUE
	Average number of real readings (per month)	385.857
	Average number of estimated readings (per month)	7.875

EdM's existing installed capacity is approximately 240MW (109MW hydro and 130MW diesel and gas). Nevertheless, most of EdM's available supply capacity - about 136MW (61MW Hydro and 75MW thermal) - is generated by ageing plants which would require refurbishment.

In 2010 the total energy consumption was 2197 GWh and peak demand was 534 MW. The total power generating capacity including the share from Cahora Bassa is in excess of what is needed in the country. However, due to lack of power transmission lines and distribution networks, the availability of hydroelectricity for the time being is largely restricted to urban and peri-urban areas. In the rural areas, the electricity simply is not available and where it is available, is supplied from diesel generators. According to the Ministry of Energy's Management Strategy for the Energy Sector (2008-2012), Mozambique is recording a yearly growth in the electricity demand of 7%. GoM's objective is to reach an electrification rate of 15% by 2019 (and 20% by 2020). By 2020, Mozambique should have a total energy need of 5.40 GWh and an electricity demand close to 900 MW based on an estimated annual demand growth of 7 - 8%.

The main source of electricity to the national grid comes from hydropower plants. The remaining centers have diesel or gas generators that supply electricity which is distributed through mini-grids that are independent of the main national grid system. All except a few of these independent systems are owned by the State and operated by district administrations, municipalities or other government institutions.

There are still many district capital and other rural localities with relatively high population concentration that are either not currently supplied with electricity or have old generation and distribution systems which are no longer functioning. In low-demand rural centers, electricity development, connection and operation costs per customer are higher than those in larger towns and cities. Revenues from consumers rarely cover costs. Most consumers fall within the domestic consumer category and very little electricity is used for economic purposes. There are very few large consumers. Under the current regime of uniform tariffs throughout the country, there is an implicit cross-



subsidy of consumers in these low-demand centers by consumers in the larger cities and towns.

EDM Processes

There are 4 macro processes at EDM:

MACR	PROCESSES				
STRATEGIC	Asses Environment	Define and Control Business Plans	Develop Partnerships		
OPERATIONAL	Energy Generation	Transport Energy	Distribute Energy		
COMERCIA	Bu and Sell Energy	Manage Sale	Bill / Manage Clients		
SUPPORT	Manage Budgets	Manage Finances and General Ledger	Manage Human Resource	Manage Logistic	Manage IS/IT
	Audit Execution	Othe Support Prozesse Management			

- Strategic Processes comprise the EDM activities aimed at the long-term management and development of the institution and involve an analysis of the environment, the development of partnerships, definition of policies and strategies and the respective monitoring.
- Operational and Commercial Processes include activities that represent its core business and that justify the company's existence, namely: the acquisition/generation, transmission and distribution of energy, the sale of energy and managing and billing customers.
- Support Processes include activities that support EDM's work in the management of human, material and financial resources.



The Integrated Solution that EDM aims at must cover the Operational, Commercial and Support processes.

EDM Organization and Structure

EDM's current structure consists of two types of Units/Centers:

- Business Centres that are fundamental for EDM's core business i.e. that are directly linked to the Generation, transmission and distribution of electricity;
- Support Centres that provide fundamental support services for the work of the Business Centres (e.g. human resources, IS/IT, finance).

The activities of the support centers and business centers, the market operator and the Commercial Directorate are all concentrated in the South – in Maputo city. The head offices of the Transmission and Generation Directorates are in Maputo city with units distributed throughout the country - power stations and substations respectively.

The following table shows the distribution areas of each Distribution Centre/Directorate.

SOUTH					
Distribution Areas	Maputo (provincial capital)	Matola (provincial capital)	Chokwe	Xai-Xai (provincial capital)	Inhambane (provincial capital)
CENTRE					
Distribution Areas	Beira (provincial capital)	Chimoio (provincial capital)	Tete (provincial capital)	Quelimane (provincial capital)	Mocuba
NORTH					
Distribution Areas	Nampula (provincial capital)	Nacala	Angoche	Lichinga (provincial capital)	Pemba (provincial capital)

Each Distribution Centre carries out Commercial, Support and Operational (transmission) activities.

Under EDM's current organizational structure the geographical area coordinated by each distribution centre/directorate is divided into smaller areas called Distribution Areas (DA).



The DAs provide public service of production (backup) and supplying of electricity to consumers linked to the grid covering the geographical area under its responsibility. They also carry out all operational, commercial and support activities. In addition they project and build or inspect the construction, expansion or optimization of buildings according to plans prepared by the senior management.

Distribution zones (DZs) are departments of the DAs with smaller operational capacity. The DZs usually work with low voltage grids and consumers. In some cases, however, depending on the grid's characteristics the DZs could be made responsible for operating medium voltage grids and small power stations within their geographical area. Each DZ usually has the following activities:

- Commercial Services
- Technical Services; and
- Administrative Services

Depending on their specific characteristics, DZs can be organized in different ways although their activities are essentially the same as those of the DAs.

To carry out its strategic, operational, commercial and support activities EDM has approximately 3,200 employees.

Organization structure is depicted in Attachment 6 of Section H.

EDM Application Support

EDM conducts its business processes - strategic, operational and support - through diverse applications and technological infrastructures. See annex I for a detailed list of the existing systems

The wide variety of applications, together with the low level of integration results in a series of constraints:

- Inconsistent data;
- Lack of, or difficulty in, internal control;
- High support costs; and
- Lack of timely information.



EDM has identified the need to mitigate these constraints in a way that is coordinated with the ongoing re-organization. It has chosen to develop an IS/IT Master Plan with structured renovation of the application solutions and the technological infrastructure that supports their operations.

The IS/TI Master Plan is taking shape through various initiatives by EDM to integrate computer solutions that involve not only the implementation of a robust communications structure, but also the installation and use of computer applications to support most of the company's operations.

In order to establish clear guideline for the technological renovation, an application and technological vision has been defined that should be achieved in the medium term, as well as a program of projects/initiatives to achieve the vision.

An analysis of EDM's strategic objectives and of the company's processes, identifying the main constraints and priorities, has made it possible to prioritize the various areas of intervention. Each is associated with stages in the evolution of the application panorama aligned with its business priorities.

EDM has identified the need to mitigate these constraints, and for that has chosen to implement the Integrated Solution, SIGEM.

Existing systems are depicted in Attachment 1 of Section H.

0.2 Business Objectives of the Purchaser

0.2.1 Given the rapid growth in its assets, customer base and level of operations EdM urgently need to upgrade and modernize its management systems. That will be accomplished through the deployment of an Integrated Business Management System (IBMS), the so called SIGEM, under the EDAP (APL-2). The SIGEM will enable EdM to improve all the main areas of corporate management, particularly the management of its customer base and assets and its financial management. The design of the SIGEM incorporates World Bank "Best Practice", and will be designed taking into consideration the local context. This aspect of institutional strengthening and capacity building is complimentary to the efforts of other development partners in the area, but was chosen as it can be implemented as a stand-alone activity. The deployment of the new integrated management system will include comprehensive, intensive and advanced training of staff to ensure that the relevant personnel are able to run the system efficiently after its full deployment (in addition to training in the new SIGEM).

The SIGEM is a management-oriented initiative within the EDAP project, which seeks to improve the operational performance and enhance corporate governance of Electricidade de Moçambique (EDM) in a sustainable manner,



by providing the company with the best tools for a modern and efficient management of its customers and corporate resources. For that purpose, SIGEM focuses on reengineering of commercial and distribution operations and corporate resources management, based on best management practices, supported by state-of-art management information systems (MIS). New operational procedures for a more customer oriented approach in the execution of activities using these new tools will also be developed, and EDM's employees will be periodically trained in the use of the MIS and in the utilization of the new procedures. Technical assistance to guide EDM in how to build the corresponding reliable databases will be provided.

The deployment of a powerful and modern integrated management system – including training of personnel in commercial and financial areas -- will improve EdM's business management and will enable it to face the ongoing and future challenges related its expansion. Training of staff on large project management will enable EdM to face the challenges imposed by the expected forthcoming “mega” power generation and transmission projects.

SIGEM Project

In order to align all continuous efforts towards EDM's growth and to avoid all possible constraints as a result of such growth, there is a need to improve the operational performance and enhance corporate governance of EDM in a sustainable manner and with focus on customer, profitability and social service. Thus, EDM has developed a plan with 4 major vectors that will govern all activities within the company





0.2.2 The main reasons for the implementation of the Integrated Solution at EdM stems from the fact that EdM suffers from the following problem:

Ineffective Operations

- Generally low performance in company vital business operations:
- Significant number of manual processes and paper circulation between offices;
- Duplicity of effort.
- Data inaccuracies.
- Manual and repetitive activities that increase the risk of human error.
- Lack of standardized procedures.
- Business carried out differently depending on the region/division.

Inadequate Information Systems

- Lack of validations and controls, hence, very open to fraud.
- Important business processes are not covered or partially covered (a significant number of manual activities are required).
- Lack of interfaces and integration between applications (islands of information).



- Delayed and inaccurate operational and managerial information, mostly manually produced.
- Generally Low performance.
- Insufficient Communication Infrastructure to meet business requirements.

Inappropriate Organization

- Inappropriate organizational structures for the business.
- Generally based on system/resource constraints instead of being business oriented;
- Unclear distribution of responsibilities and accountabilities;
- Duplication of functions and responsibilities.
- Processes mostly oriented to execute repetitive operations, instead of managing and improving them.

External factors

- Regulatory issues in force in the country, such as new reporting requirements;
- Commercialization/market requirements;
- International reporting standard to which EDM and the Country must adhere to.

0.2.3 The SIGEM will include the installation in the whole EDM of the following Management Information Systems to improve the company's operations and management and enhance corporate governance:

- (i) a commercial management system (CMS), to support customer service and all commercial operations within the company (consumption metering, reading, billing, collection, attention of customers in agencies or through call centers, disconnection and reconnection related to commercial debts, new contracts, etc.);
- (ii) an incident recording and management system (IRMS), to enable EDM to better respond to client contingencies by automating the detection of distribution faults and ensuring the quality of power supply;
- (iii) a corporate resources management information system (also identified as “enterprise resource planning (ERP)” for the entire EDM, to integrate



the management of all the corporate processes and resources of the company under a single technological platform, such as accounting and finances, human resources, procurement and logistics (stocks, fleet, etc), plant and equipment maintenance, etc.

0.3 Acronyms Used in These Technical Requirements

0.3.1

	Term	Explanation
	BDS	Bid Data Sheets
	bps	bits per second
	CA	Competent Authority
	CBT	Computer Based Training
	CD	Compact Disk
	CMS	Customer Management System
	cps	characters per second
	CPU	Central Processing Unit
	CRP	Class Room Pilot
	DBMS	Database Management System
	DC	Data Center
	DCC	Distribution Control Centre
	DR	Data Recovery



	Term	Explanation
	DOS	Disk Operating System
	dpi	dots per inch
	EDAP	Energy Development and Access Project
	EDM	Electricidade de Mocambique
	ERP	Enterprise Resource Planning System
	Ethernet	IEEE 802.3 Standard LAN protocol
	FP	Forms and Procedures
	GoM	Government of Mozambique
	GB	gigabyte
	Gbps	Gigabit per second
	GCC	General Conditions of Contract
	GUI	Graphical User Interface
	HA	High Availability
	HDD	Hard Disk Drive
	HQ	Head Quarter
	HR	Human Resources
	Hz	Hertz (cycles per second)
	IBMS	Integrated Business Management System



	Term	Explanation
	ICS	Integrated Communication System
	IDA	International Development Association
	IEEE	Institute of Electrical and Electronics Engineers
	IFB	Invitation for Bids
	IP	Internet Protocol
	IPV4 or 6	Internet Protocol version 4 or 6
	IRMS	Incident Recording and Management System
	ISO	International Standards Organization
	IT	Information Technology
	ITB	Instructions to Bidders
	KB	kilobyte
	kVA	Kilovolt ampere
	LAN	Local Area Network
	lpi	lines per inch
	lpm	lines per minute
	LV	Low Voltage
	MB	megabyte
	Mbps	Megabits per second



	Term	Explanation
	MPLS	Multi Protocol Label Switching
	MTBF	Mean time between failures
	MV	Medium Voltage
	NAS	Network Attached Storage
	NIC	Network interface card
	NIS	Network Information System
	NMS	Network Management System
	NOS	Network operating system
	ODBC	Open Database Connectivity
	OEM	Original Equipment Manufacturer
	OLE	Object Linking and Embedding
	OS	Operating system
	PAP	Project Affected Person
	PCL	Printer Command Language
	PDF	Portable Document Format
	PM	Project Manager
	ppm	pages per minute
	PPP	Public Private Partnership



	Term	Explanation
	PS	PostScript -- Adobe page description language
	RAID	Redundant array of inexpensive disks
	RAM	Random access memory
	RISC	Reduced instruction-set computer
	SAN	Storage Area Network
	SCADA	Supervisory Control And Data Acquisition
	SCSI	Small Computer System Interface
	SMTP	Simple Mail Transfer Protocol
	SNMP	Simple Network Management Protocol
	SOA	Service Oriented Architecture
	SQL	Structured Query Language
	SSL	Secure Socket Layer
	SRS	Software Requirement Specification
	TB	Tera Byte
	TCP/IP	Transmission Control Protocol / Internet Protocol
	TS	Technical Specifications
	USB	Universal Serial Bus
	UPS	Uninterrupted Power Supply



	Term	Explanation
	V	Volt
	VPN	Virtual Private Network
	WLAN	Wireless LAN
	WAN	Wide Area Network
	WWW	World Wide Web



B. BUSINESS FUNCTION AND PERFORMANCE REQUIREMENTS

1.1 Business Requirements to Be Met by the System

As mentioned earlier in this document, Integrated System Project (SIGEM) that is the basis of this bid is a management-oriented initiative within the EDAP project, which seeks to improve the operational performance and enhance corporate governance of Electricidade de Moçambique (EDM) in a sustainable manner, by providing the company with the best tools for a modern and efficient management of its customers and corporate resources. For that purpose, SIGEM focuses on reengineering of commercial and distribution operations and corporate resources management, based on best management practices, supported by state-of-art management information systems (MIS). New operational procedures for a more customer oriented approach in the execution of activities using these new tools will also be developed, and EDM's employees will be periodically trained in the use of the MIS and in the utilization of the new procedures. Technical assistance to guide EDM in how to build the corresponding reliable databases will be provided.

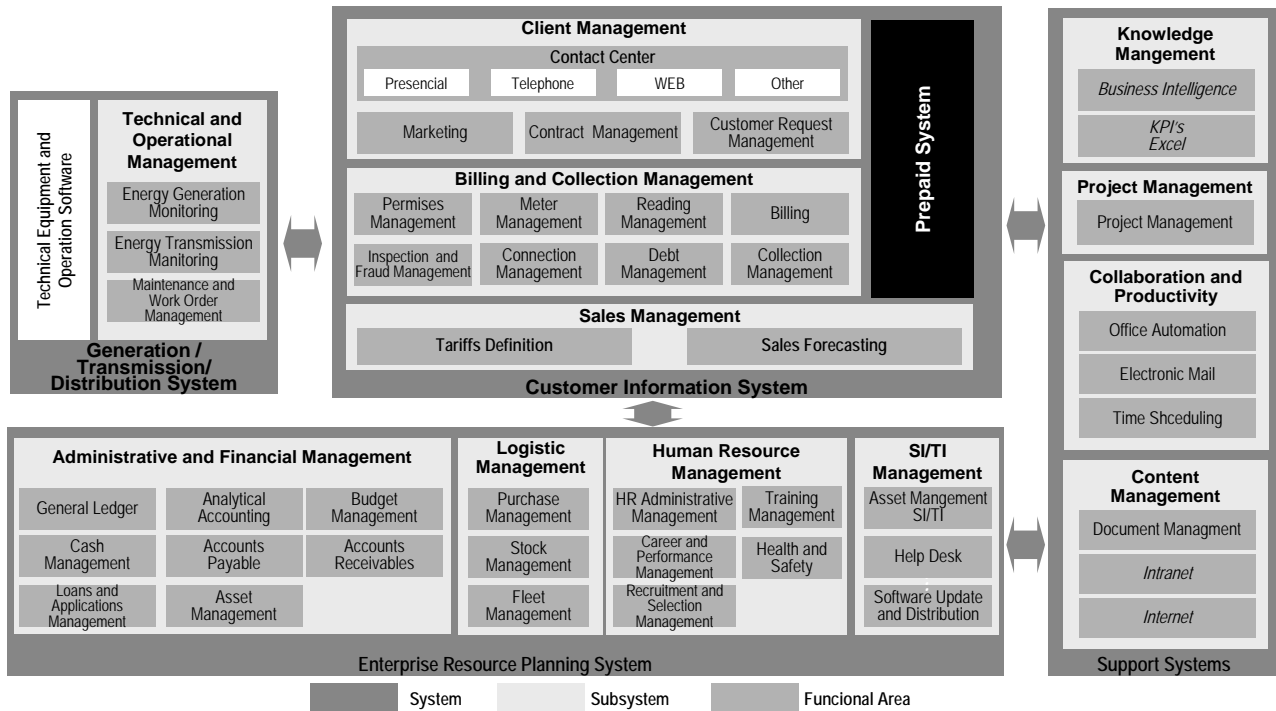
Application Vision

Based on an analysis of Purchaser's business processes, the IS/IT Master Plan defines a structured application architecture that is appropriate to the current context of the company. The application architecture systematizes the various application components through the following hierarchy:

- System;
- Subsystem; and
- Functional Area.



General Purchaser Application Architecture



This architecture is considered an application vision to be achieved by Purchaser during the current restructuring of the IS/IT.

SIGEM Application Components

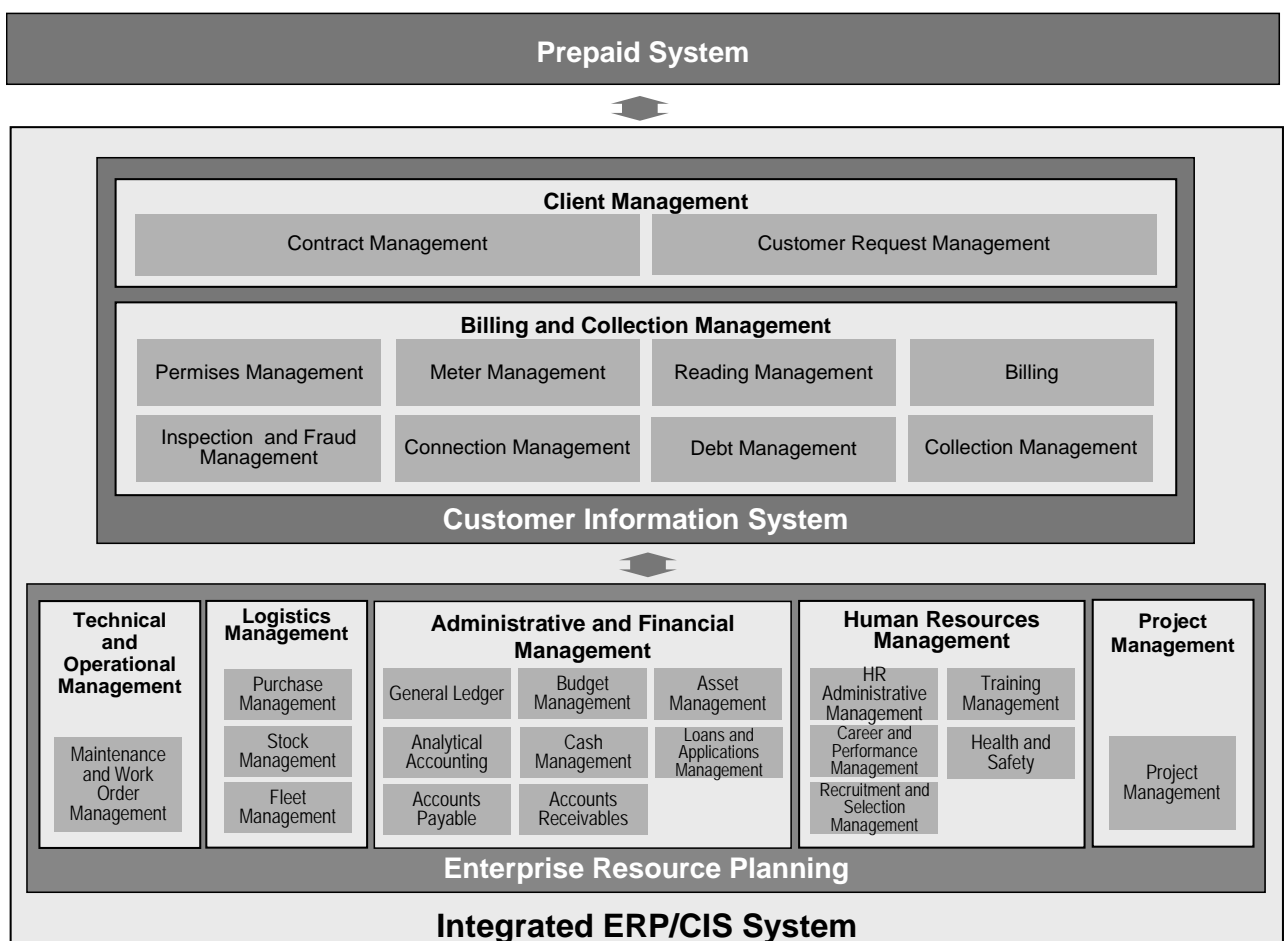
The IS/IT Master Plan gives priority to the selection of an integrated technological solution that guarantees:

- A structuring platform on which the company's main business processes should rest;
- Standardization of solutions in functional and operational terms – ease of use and need for less varied technical skills;
- Capitalizing on experience and best practices in implementing IS's in the electricity sector;
- Uniform technological platforms;
- Minimizing investment costs;



- Quality of information generated, and greater facility in the overall and aggregate vision;
- Fluid implementation and the facility to evolve to the 3rd and 4th stages in an integrated manner.

Consequently, the technical specifications described here provide the basis for selecting an Integrated ERP/CIS Solution that addresses the following systems:



It should be noted that the expression “Integrated Solution” should be considered in its broad sense, covering the various aspects of integrating information systems: organization, processes, applications and technology.



The SIGEM includes the installation in the whole EDM of an integrated Information System comprise of the following Subsystems: (i) a commercial management system (CMS), to support customer service and all commercial functions within the company; (ii) an incident recording and management system (IRMS), to enable EDM to better respond to client contingencies by automating the detection of distribution faults and ensuring the quality of power supply; (iii) a corporate resources management information system (also identified as “enterprise resource planning (ERP)” for the entire EDM, to integrate the management of all the corporate processes and resources of the company under a single technological platform.

Bidder's proposal must comply with the complete list of business requirements for each system (the solution must implement correspondence business processes and functions):

COMMERCIAL MANAGEMENT SYSTEM (CMS)

The commercial management system must be available at all EDM's facilities. Moreover, its design should enable fast and efficient answers to the client's needs (for example, the general account and the requests of information, hiring, service requests, complaints, etc).

A detailed description of hardware and communication equipments must be carried out as mandatory for the proper operation of the commercial management system.

Generalities

The new commercial management system of EDM should basically comply with the requirements of integrally administrating all the processes of the company's commercial activity.

The proposed commercial system for implementation must have already been successfully implemented in at least four enterprises of electricity distribution and more than 1.000.000 of the customers must have been managed by the system.

It should also be a tool that enables each member of the organization involved in the commercial processes, such as directors, managers, chiefs, and other employees, to make all the necessary adjustments in order to be able to daily monitor the commercial processes operations. If this is done, the action plans that are necessary in order to improve the customer service activities as well as the ones of invoicing, collection and non-technical losses will be carried out effectively.

It should be a friendly tool that can be easily consulted at any time with regard to any aspect of the company's clients. Furthermore, there should be a provision to enable information access on a daily or monthly basis, as business needs may require.



Below a brief description of every commercial process that the tool must entail is shown.

Commercial Processes

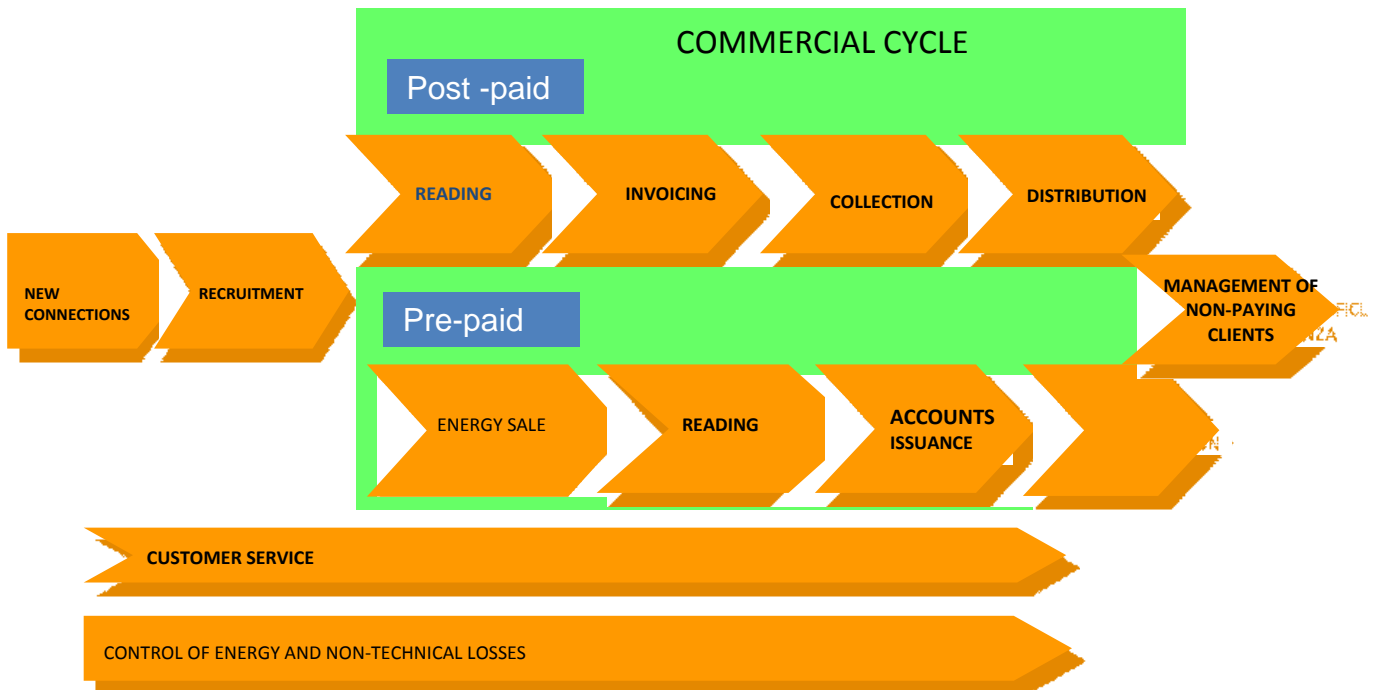
There are five macro commercial processes in EDM:

1. The request of new connections
2. Commercial cycle. it includes different stages depending on whether the clients have post-paid meters (reading, invoicing, distribution and bill's collection) or pre-paid meters (the energy sales, reading, the issuance and distribution of the statement of accounts).
3. Client's debt management.
4. Customer Service (individualized, by telephone, through the internet, etc).
5. Energy flow and non-technical losses management

These five commercial macro processes are depicted in the following chart:



COMMERCIAL



1. Process of request of new supplies and hiring

This process is concerned with the management of the new connections, contract formalities with clients and changes in the client's party that might arise during the contract enforcement (such as change in client's name). ..

The new connection process comprises different stages depending on the type of request at stake (ones that require distribution team intervention or not). The commercial system should measure the compliance of connection execution deadline as well as the total amount of time spent in carrying out the new connection.

The main stages for a request of a new connection are as follow:

- Registration and inspection: it is the beginning of the request, it entails geographic location and inspection and approval of client's premises.
- Preparation and notification of the budget if site works are needed. It involves the estimation of the price that the client will have to pay.



- The budget collection: which can be done personally (Commercial Units) or External Points (Cash dispensers), through different forms of payment (cash, financed, etc). The respective legal documents must be issued in each case.
- Activity completion and request closure.

In order to keep the interrelation between the commercial activities and the Distribution Center updated, the new commercial system must be able to maintain the information regarding each step of the new connection updated. Additionally, it is mandatory to have a complete record of the customer's requests, to perform a follow-up of the completion period and to inform about the development of each petition.

Once the process of the extension of the energy network is completed (if it is necessary to be done), and the connection has been completed, the new connection must be registered (identifying the geographic location), and the contract enters into full force.

The main stages that must be taken into consideration in the contracting period are:

- The registration of the contract: this is the beginning of the business relationship between the client and the company. All information must be verified including the possibility of the customer having debts with other services. The service will be automatically included in the process of reading, invoicing and collection.
- The updating of the contract: any alterations in the entities that are part of it must be available so that they can be checked and updated.
- The cancellation of a contract: it involves the termination of the business relationship and the issuance of the last bill and also the possibility of using the last reading provided by the client to make an estimation taking into account the previous consumptions or generating an order of reading.

Each business deal must be kept in the accounting records.

2. The business cycle process

80% of EDM's residential customers have pre-paid meters. The company's business cycle varies depending on whether the clients own pre-paid or post-paid meters. Although the process is the same, as the only difference is in the ways of payment, the business cycle's stages differ. With post-paid clients, the stages are: reading,



invoicing, together with the distribution and collection of invoices. However, with pre-paid clients, the stages are: the energy sale, reading, the issuing and distribution of the statement of accounts.

a. Post paid clients

i. Reading

The reading activity is concerned with the operations related to the programming of the reading sections, the reading of the meters on different means, and their processing, for the subsequent invoicing of the consumption and the management of commercial losses. This activity includes the validation of the readings obtained.

The management of the reading processes must be developed in a decentralized manner through the reading centers, which depend on the Commercial Agencies. With the new system, the following tasks will be carried out:

- The route's optimization for the reading activity
- Recording and deletion of clients in reading routes.
- The scheduling of the daily work.
- The assignment of tasks to the employees in the reading section.
- Validation and correction of the readings performed.
- Internal administrative management of irregularities reported by the Readers..

The daily scheduling of reading activities must be done in accordance with boundaries established in the operations and assigned to each reading center to perform during the whole month or year.

In order to organize a reading route the new system must take into consideration certain facts, such as: amount of readings, the time it takes to read each meter and to distribute them.

The new system will also need to be able to process the information of the readings that comes from various means: portable data terminal, the listing of the everyday routes, the measuring that is done by long



distance and the reading provided by the customer (telephone or Internet).

The reading control process should enable:

- the issuing of complaints from the reader about anomalous situations.
- the processing and correction of these anomalous situations.
- the automatic issuing of operations that arise from the complaints: the emission of working orders, of tasks that have not yet been completed and of the invoicing.
- the registration of the deviation from what was planned and what was carried out, so as to administrate the activity.
- the control of the quality of the reader's work.

It is the company's responsibility to identify when a client is dealing with an anomalous situation, which should be parametrizable, and the indication of the area it occurs.

EDM has customers whose meters can be read by long distance (AMR). The new commercial system should enable to performance of the necessary interfaces in order to obtain information from these meters for the invoicing task.

ii. Invoicing

This process consists in the calculation of the cost that must be included in the invoice, of the fines, the extra charges, and the taxes which will depend on the supplies characteristics, the information obtained from the meters, as well as other concepts and rates associated, together with the detection and resolution of the foreseen validations of the data included in the invoicing.

According to the parameters that the clients consider to be convenient to avoid mistakes in the invoicing and to enable the detection of possible frauds, an invoicing validation system should be available in the new commercial system.

It should also be possible for the resolution of these anomalies to be done in a centralized way at the Business Address of the Commercial Cycle's Management or in a decentralized way at the respective Commercial Agency.



The system should allow the inclusion in the client's invoice, of the data that the company considers relevant such as the detail of what is charged, the amount, the billed KWh and what the laws of the country require. Notifications should also be present, such as debt notifications. Furthermore, the invoicing process must take into account the adjustments that need to be done due to the client's complaints in the invoices that were issued.

The new commercial system must enable to perform the invoicing of services that function with remote meters. The latter usually has software that makes it possible to carry out the reading task remotely. The system should be able to connect with the software so as to do the invoicing of such remote meters with the same easiness of those invoicing with classic meters.

The invoicing accounting records must show all the invoices that form each account.

iii. Collection

The collection process takes place once the invoice is issued and delivered to the customer. It includes all the activities that arise from the cash collection which can be performed either at the company's own Commercial Agencies or at any collection network where the clients can have access.

The new commercial system must be prepared to carry out the collections in all the existing forms: through automatic debit, over-the-counter payments of external agents (banks, supermarkets, drugstores, cash dispensers).

The collection task performed at the company's own Commercial Agencies must count with cashiers and cash desks. Moreover, there must be a record of all the operations carried out which will be controlled at the end of the day.

The collections carried out by external agents and the respective deposit accounts carried out at EDM must be updated and controlled. Likewise, the transactions that are part of a certain account must be distinguished.

b. Pre paid clients (CREDELEC)

i. The energy sale



Currently, EDM has a pre-paid energy sale system Eclipse through which clients can obtain electricity, paying before its consumption. This system, with the data provided by the client, number of the meter and client's name, issues a code that the client will enter in the meter, allowing him to consume the energy; the consumption enabled will depend on the amount of money that was paid. Once this energy has been consumed, the client will no longer count with electricity.

In order for the Commercial system to be daily updated with the client's data (such as the energy that was bought by the user) the Commercial Management System must have an interface with this system. Furthermore, the Commercial Management System must provide the Eclipse System with the necessary information so that the system can carry out the sale of energy, that is, the information regarding the client's data and the meter (registrations, cancellations, changes of meter, and changes in rates) should be updated.

Moreover, the Commercial System should be constantly connected to the accounting system in order to have correct and updated information about the energy that was sold in this manner.

ii. The reading of the pre-paid meter

In this activity, all the operations described must be followed. Pre-paid meters will be in the reading routes together with post-paid meters. The Portable Reader Systems will have uploaded the pre-paid meters so that the reader can perform its activity as it does so with post paid meters. It should also be able to perform the required complaints concerning the measuring point's situation.

iii. The issue of the statement of account

As when selling energy in a pre-paid manner, invoices are paid in cash and in advance. A statement of account must be sent to the client containing the information that arises from the energy sale, which includes the amount of energy that was bought by the customer and the dates of the transaction. As the system has the reading of the meter, by taking into account the energy bought by the client, it will be able to provide information about the client's debt. With this data about the energy sale and the reading performed, the system will issue statements of account that will be sent to the customers.

3. Client's debt management



When the client does not pay the invoice during the established period, the process of the management of non-paying clients starts operating. The system must be programmed to carry out several operations that are related to the collection of invoiced amounts, such as: notification of debt, cancelling the service, reconnection if the payment is performed, the follow up of the cancelling of the service if the payment is not effective. These processes will function according to the company's commercial policies concerning the management of non-paying clients. These policies determine: how long since the invoice's expiration the cut notification is issued, and how many days must pass since the notification to cancel the service for the order of follow up of the cancellation to be issued.

The management of the debt must include the calculation of the fines and extra financial charges that arise due to the lack of payment during the established periods.

The company should have specialized sectors in the management of the debt, so that they can fulfill the process once the automatic activities have been completed. These sectors should be able of perform the correspondent operations in each case, such as sending letters to the clients or requesting legal assistance if needed.

The new commercial system should allow to finance and refinance debts in shares with financial interest. EDM's commercial policies will establish certain parameters to determine the quantity of shares, their value and the interest's percentage.

It should also enable to perform a follow up unpaid debt. This will be shown at the system's screens together with the respective area, the type of client, its record and the debt that corresponds to the Commercial Agency. According to the company's policies, every commercial operation that involves the collection of the debt of a non paying client, interests or fines, and extra charges on non paying clients, must be registered at the company's accounting system through interfaces that the commercial system must daily carry out with the mentioned system.

4. Customer service

This process involves all the activities that have to do with the relationship between the customer and the company, such as the handling of complaints and consequently, the notifications that need to be done.

The new commercial system should make it possible to attend the customers through all the means available: Commercial Agencies, Call Centres and the Internet.

The system should always have access to general information concerning the clients, supplies, technical data, as well as information about the meters and readings, the invoicing and collections, the electric equipment, detailed description of the client's previous contact with the company or vice versa, and irregularities. If this can be performed, the customer service's timing will improve.

The personalized service through the commercial agencies will enable each and every client of EDM to perform the commercial procedures at any agency available.



Moreover, the commercial agents will complete the procedures requested by the clients in the system.

The customer service performed by telephone will consist on serving clients from all over the country. Received calls due to commercial issues must be differentiated from the ones related with service's quality issues as well as from the ones concerned with service quality.

The customer service carried out through the internet should enable to solve enquiries concerning invoices and consumptions, as well as requests of copies of the invoices, and modifications of the contract's data such as the change of name or of rate, of pretence of invoicing and the contribution from the client about readings.

Furthermore, a recording of all the possible types of complaints must be done. The system should perform a follow up of the complaints that have already been solved by the different commercial agents, at the Commercial Agencies, by telephone or through the Internet.

5. Energy flow and non-technical losses management

EDM's new commercial management system should have an area in charge of carrying out an efficient control over the company's energy losses. When the company requires it, it should provide information about the energy balance, which must be done taking into account the meters placed in the delivered point of each stage of the business (Generation, transmission and distribution). In order to control the energy losses, the company must implement strong action plans that require thousands of activities in this field to be carried out by the company's employees or staff hired for this purpose. The energy control unit should perform a thorough follow up of the strategic plans implemented with the aim of reducing losses and the actions carried out to comply with this objective.

The energy control unit should be a tool that enables to register the different ways of action of the company's strategic planning and to perform a monthly follow up of the advance levels, deviations and correction tasks, which have been carried out.

With the information taken from the company's various management systems, the measure of the actions performed can be done automatically. It must be a tool designed to be used by the directorship, the business management as well as by the employees in charge of operations implemented for the reduction of non-technical losses.

The management of service orders

As a consequence of the development of the different processes that are part of the commercial activity, such as, customer service, connection of new supplies, commercial cycle, management of non paying clients and energy control, it will be



necessary to issue the working orders automatically, which will be carried out in the respective geographic location of the energy supply.

The issuance of service orders is present in all commercial processes. It is of utter importance to perform the follow up and control of each of them as well as to upload into the system the data that arises from every service order. Therefore, the requirements for this operation will be thoroughly described,

The service orders involve the completion of the following tasks: the programming operations, the distribution of tasks between the employees, who can be members of the company or especially hired for this job, the delivery of the materials required, the fieldwork, the registration of the activities done, and finally, the validation and subsequent updating of the service orders issued in all the processes.

Depending on the task that must be performed, there will be different types of service orders: connection, power cut, reconnection, inspection, change of equipment, etc. The service order goes through different stages: issued, cancelled, and solved. In each of them, the next procedures must be fulfilled:

- the registration of the service order's record: dates, hours, users, identification of the staff that carried out the activity, the operations that took place and the ones that weren't complied, the materials used, the timing and costs, etc.
- the recording of the time it took for the working order to be fulfilled, which can be measured since its issuance until its subsequent updating, and its breakdown depending on the user responsible for each area.

The system must automatically issue each service order to the respective commercial agency. For doing so, the system must find the geographic location of the supply when it is issued.

If the company requires it, the service orders can be printed as a document to be handed in to the enterprise's staff that will carry out the activity. The documents printed that are related to service orders should have certain characteristics in common with all the service orders and certain features that depend on the type of working order.

Management control

The new commercial system should have a management control unit to facilitate the control and follow up of the different activities that make up the commercial processes.

It is necessary to take into account the information and the management indicators, their evolution, their accumulation (daily, monthly or annually) which can be seen in



physic or monetary units, their grouping according to different variables such as geographic location, type of client, date and rate, which should be detailed in a graphic or chart.

The data offered should be useful for the revision, analysis and control of the commercial periods. For example, it can be of great use for checking how much time it took to contact a client, to connect them, to solve the client's complaints, to fulfill the service orders, as well as for calculating the amount of services that were cancelled due to non-paying clients and the amount of reconnections performed. Moreover, the information will also be beneficial as the company will be able to easily identify the debts, the type of clients, and their location, to reduce the non-technical losses. If this is taken into account, the company will be prepared to make proper decisions regarding the commercial processes and therefore the customer service will improve.

The consulted data can refer to the current month, updated until the last working day. It should be possible to select the period of a group of months, which include the last 24 months with the option of accumulating values.

In each case, it is mandatory to link the information through the different geographic entries and commercial agencies that the company has available. The fact that the system enables to make enquiries, implies that the data available should include details concerning operations that haven't yet been fulfilled, and aspects about each process, commercial unit, its historical record and deviation of the respective parameter's control.



INCIDENT RECORDING MANAGEMENT SYSTEM (IRMS)

Electricidade de Moçambique (EDM) is interested in acquiring an Incident Recording and Management System (IRMS) that will support the management processes of customers' calls and the on-the field activities monitoring of incidents resolutions.

The system will allow EDM to keep track of all customer calls and to know at any moment, the progress of the customer complaint and the actions taken by the Distribution Control Centre (DCC) during the monitoring of emergency crews in the field. Continuous monitoring of Quality of Service, expressed by appropriate indicators will also be ensured by the system.

The IRMS will therefore be mainly composed of three modules (Figure 1):

- Reception and automatic classification of customer calls.
- Follow-up of calls and actions on the distribution network.
- Information to assist decision making for management.

The system relies on a fully functional database that contains:

- The Customer data which comes from the Customer Management System (CMS).
- The association for each client to MV/LV transformer in question.
- The "upstream" path of power from each MV/LV transformer to the transmission substation.

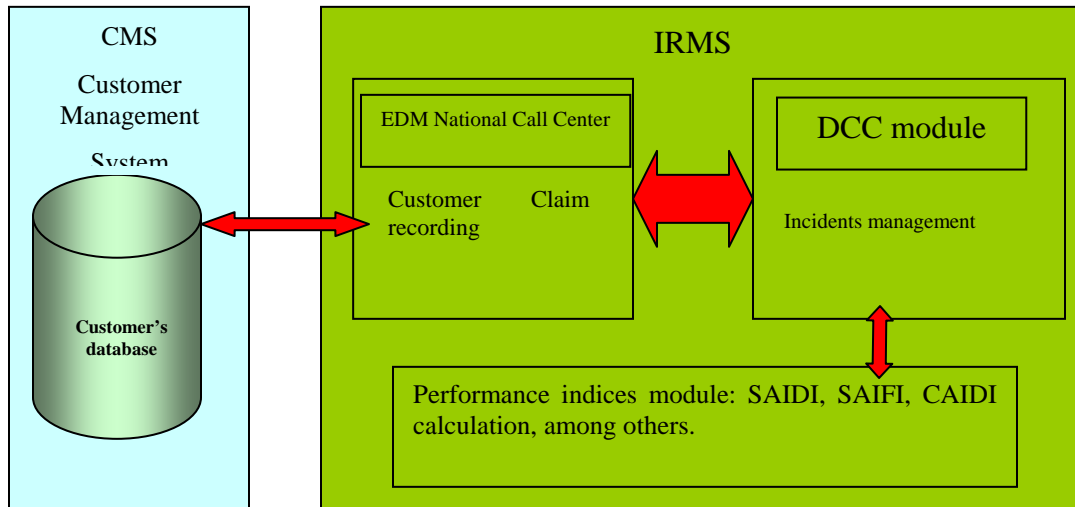


Figure 1 – IRMS concept

1. Organizational structure and process in which the IRMS will be implemented
 - a. Organizational structure associated with the process of monitoring calls

The structure of the organization where the IRMS will be implemented is as following:

A Call Centre

It ensures customer contact, 24 hours every day of the year, registering in the IRMS, its claims for failure in the power supply. Each telephone operator station is equipped with a screen access to that system.

A Distribution Control Centre (DCC)

Check the status of the Distribution Network and ensure its maximum availability. Directs, by radio or other kind of communications, the activity of emergency crews sent to the scene of any abnormality in the power supply

Operators have on-line access to the IRMS and also have an updated representation of the network controlled, under the form of a single



diagram, placed on the walls of the centre, plotted directly from the Network Information System¹ (NIS).

Field crews

Sent in the field by the DCC operator, perform switching and repairs indicated by the DCC.

Network Maintenance Units

These units located in major towns in the country ensure maintenance of the facilities of the network. When a repair cannot be performed by an emergency crew, these units ensure the monitoring of maintenance crews to repair the defect.

Data maintenance units

In each region, along with the DCC, it will run a unit to ensure the maintenance of the NIS database from where the IRMS database should be updated.

Other units

Management information generated by the system will be used by Managers and units reporting, in charge of Planning, Development, Operation and Network Management

b. The process of resolving a customer call

The customer calls the call-centre. The attending operator identifies the subscriber in the IRMS database and records its complaint (outage, low voltage, absence of a phase, etc).

The IRMS orders automatically logged calls, grouped by MV/LV transformers.

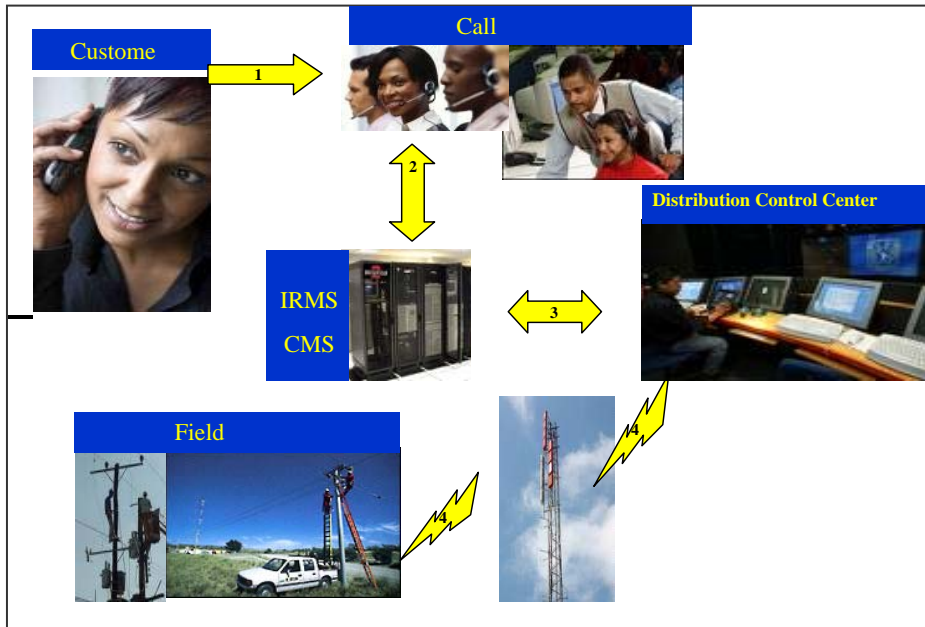
The operator, of the Distribution Control Centre, monitors on screen the list of facilities (transformers, feeders, branches) resulting from the classification made by the IRMS, according to customer calls.

According to the structure of that classification, the operator determines a priori, the extent of the interruption of electricity supply. He directs by

¹ ABB Network Information System (NIS) is based on a Facilplus Spatial/E Geographical Information System from Digpro.



radio, or other kind of communications, the emergency crew nearest available of the point of failure estimated and records in the system, the allocation of that team.



During the repairing action, the DCC Operator can follow, through contacts with the crews, the different steps of the task assigned. He should be able to record in the IRMS:

- The allocation of a crew to an Incident Record
- The fault location
- A partial restoration of the supply within an Incident Record
- The full reestablishment of the supply within an Incident Record
- The redirection, if necessary, of the Incident Record to the Maintenance Department (in case the Emergency Crews are not able to solve definitively the Incident Record)
- The reception from the Maintenance Department, of the end of work related to an Incident Record
- The end of the repair.



For each Incident Record, the Operator will perform the monitoring of its evolution. The IRMS will allow him to record the cause of the incident, the equipment and the voltage level involved, the crews assigned and the description of the tasks performed.

The IRMS will record automatically the time elapsed step by step for each incident and will give the total installed power of MV/LV transformers curtailed, and the customers' number affected by each incident

On the basis of this information, the DCC Operator will organize the actions to be done by the teams, on the field, and will decide, if necessary and possible, the load transfer switching between circuits, in order to minimize the duration of the supply interruption to the Customers.

c. Location and size of organization

EDM has at the present around 952,223 customers. This figure will likely rise quickly in the near future because the current and planned electrification policy to be developed in the next years.

The present regional distribution of Customers is as follows:

REGION	SOUTH	CENTRE	NORTH	TOTAL
<i>Customers</i>	<i>514,932</i>	<i>243,448</i>	<i>193,843</i>	<i>952,223</i>

THE IRMS to be supplied must be compatible with the organization structure described.

As an indication, the different units participating in the Operation Process will have the following size and location:

- A Call-centre located in Maputo with 50 Agent working places
- A Distribution Control Centre in Maputo with at least eight Operator working places (four in charge of Maputo Capital and four managing Southern Region).



- A Distribution Control Centre for each capital of province, namely: Xai-Xai, Inhambane, Beira, Chimoio, Tete, Quelimane, Nampula, Pemba and Lichinga with at least four operator working places each one controlling the respective province.
- Fifteen Network Maintenance Units located in each corresponding Distribution Area with, at least, one working place each for a Maintenance crew dispatcher.
- Eleven NIS and IRMS Data maintenance units located in each province capital with three working places for Data Maintenance Operators each one
- Two National Data Centres, where the IRMS servers will be installed, Located at Maputo.

The IRMS should be accessible through the Intranet of EDM by users as function of their authorization level.

The following **Figure 2** illustrates the location of DCC, Call-Centre and Data Centres where the IRMS servers will be installed.

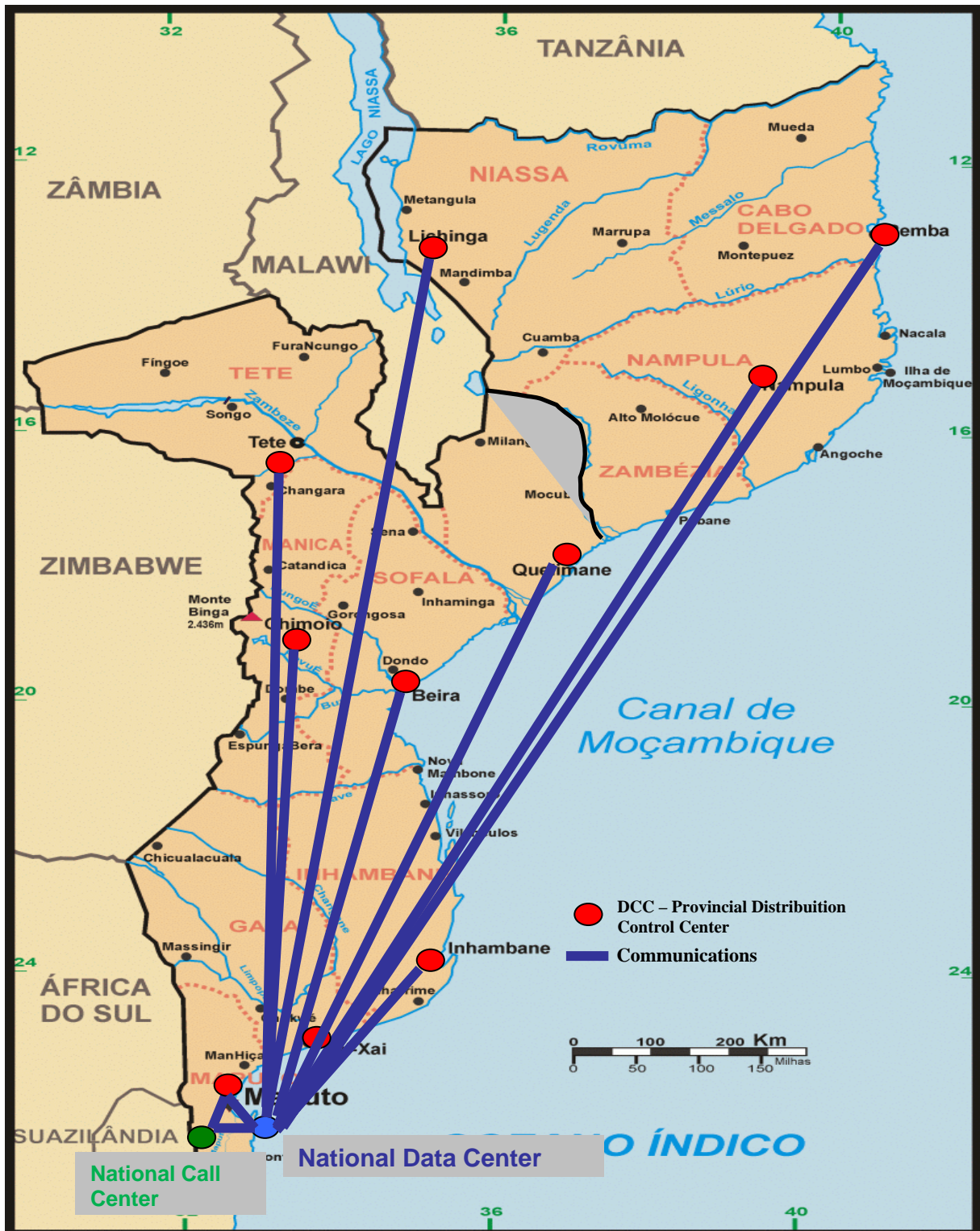


Figure 2 – Location and respective areas of service of DCC



2. Functionality of the Incident Recording Management System (IRMS)

The functional characteristics can be grouped, as it was already said, in three modules.

a. Customer's calls reception module

Customer's claims input screen: This screen is used by the Call Centre agent to record the customer's claims or abnormalities seen and notified by a passer-by. The possible possibilities are then:

EDM Customer's

The Call Centre agent must find Customer's Data, in the Data Base, using some of the information given by the caller, like:

- The name of the subscriber
- The personal ID Number of the subscriber or the registration number of the company
- The address of the supply point
- The identification number of the EDM subscriber
- The pole number feeding his electric supply
- The number of the power meter of the supply

Once the Customer is identified, the system must give at least, the following information online:

Duplicate incoming call control.

A call is duplicated while the previous one, coming from the same customer, is on a status indicating that the outage still active.

Debt control or customer preventively disconnected by the utility.

The related data should be extracted online from the Commercial Management System Data Base.



Customers' information feedback on incidents affecting their electric point of service.

In this case, the Call Centre agent should inform the customer which upstream facility is out of service and its estimated repairing time.

In case the customer is not in the preceding situations described, the Call Centre agent should input the customer claim following a list of EDM predetermined options (settled during the parameterization phase). The list must include at least the following descriptions:

- Electric supply interruption
- One phase missing
- Low voltage
- Extent of the shortage as perceived by the customer:
 - His home
 - The neighbor
 - Dangerous situation for human beings or material resources
 - A free text field for additional information

Passer-by's calls

The system must allow the input of phone calls from individuals who are not registered as EDM customers. This feature will allow receiving notifications from anyone who noticed an abnormality related to the Distribution Network (fallen line, electric equipment on fire, or whatever situation potentially dangerous and visible). The system will let register the witness's observations and the address where a crew has to be dispatched.

Phone calls statistics

The IRMS should provide on-line information on:

- The total number of hourly phone calls, keeping the daily historian.
- The total number of phone calls which still pending to be assigned to an incident record.



- The total number of customer's calls which still without energy supply. This information will be given as function of the waiting time.
- b. Following of the repairing actions on the Electric Network
- The following functions should be retrieved and displayed on the operator's screens of the Distribution Control Centres (DCC).

Customer's claims waiting list

Display of waiting calls is done following a branching representation of the network.

Since the system will group calls by power pole or MV/LV transformer, as appropriate, the operator can see on the screen the list of poles and transformers associated with customer's claims so as to be an aid in determining the probable location of the outage. The operator should see the upstream branches of each group (LV/MV Transformer, branch line, circuit, substation feeder, etc.). See example in Figure 3.

WAITING CALLS				Waiting time (mn)
Substation 275/66 kV nr.1				
○	Circuit 2			
	▪	Sb 66/11 kV nr. 5		
		○	Circuit 8	
			•	TC 345 3 customers 40
			•	TC 487 1 customers 45
			•	TC 298 6 customers 38
○	Circuit 6			
	▪	Sb 66/11 kV nr.7		
		○	Circuit 4	
			•	TC 114 1 customers 68
			•	Branch 4
			○	CT 342 4 customers 15
			○	CT 987 8 customers 20
Substation 110/11 kV nr. 2				
○	Circuit 1			
	▪	TC 999	10 customers	5
	▪	TC 006	1 customers	3
	▪	TC 219	4 customers	8
	▪	Branch 2		
		○	TC 997	5 customers 1
		○	TC 856	12 customers 1
		○	TC 431	8 customers 4
		○	TC 381	2 customers 3



	○ TC 121	1 customer		2
	○ TC 109	3 customers	5	
	○ TC 142	2 customers		4
	○ Branch 3			
		• TC 582	2 customers	3
		• TC 522	15 customers	2
		• TC 526	9 customers	2
▪ Circuit 4				
	○ TC 064	1 customer		18
TC: Transformer Centre 11 / 0.4 kV				

Figure 3.- Waiting list example

Once the operator has chosen on the screen the likely point of cut-off, he should create an Incident Record interactively, in order to follow the repairing steps. The facility chosen as probably faulty, all the equipment grouped downstream and customer's waiting list as well, will be related to this incident.

The supplier should additionally and optionally present graphic screens showing the information on a spatial based representation in order to help the operator to determine the faulty equipment. Figure 4 shows a sample of the spatial representation used in EDM within their Geographic Information System called NIS (Network Information System).



Figure 4 – Sample of Customers and Distribution Network representation by EDM GIS

Incident management

The functionality, of the Incidents Records following, will allow assigning for each:

- The cause of the fault.
- The type of fault.
- One or more crews.
- The status of the Incident.
- The voltage level of the fault (or the switching in case of programmed tripping).
- The different restoration times for each facility involved in the same Incident.
- The transfer of an individual Incident, if necessary, to the Maintenance Department.



- The time of the complete restoration time of the supply.
- The ending time of definite repair.
- The list of transformers without supply.

The system should record automatically the time of each status change.

The Operator will update in real time the list of restored facilities. He will update the incidents status according to a predefined list (i.e. “Waiting”, “Crew assigned”, “Cause located”, “Partial restoration”, “Supply restored”) and should write, if necessary, additional comments on a free text field.

The system will be capable to calculate and display on screen, the non delivered energy and the equivalent interruption time index (SAIDI), in terms of the installed power in transformers and also in terms of the customers’ number without supply, using the interruption time registered, related to each facility and each customer.

Crew’s management

The system will manage the lists with the teams on duty.

For each crew, the data will contain the name of the Team Leader, vehicle number and indication of the assigned shift and, optionally, the names of other members of the team.

c. Information Management Module

This module will give management information from the operation of the Network. It will allow the creation of queries defined by the user on demand. IT will manage also standard queries like:

- Incidents list sorted by electric facility within a period of time.
- Incidents list sorted by Customer within a selected time interval.
- Claims history sorted by Customer within a selected time interval.
- Incidents list sorted by crew within a selected time interval.
- Upstream feeding and downstream supply information of each facility.
- Complete list of upstream facilities feeding a subscriber for a selected date.



- Quality of Service Performance Indices (SAIDI, SAIFI, CAIDI). The calculation formula as defined by EDM will be used.
- Other standard indices to be defined by EDM during the parameterisation phase of the implementation project.

d. Data Base Editor

The IRMS Data Base maintenance must be done on-line. The following activities should be done with the system on production:

- Record the linking of a new subscriber to its feeding transformer (or whatever element defined in the Data Model like a MV or LV feeder).
- Feeding change of a subscriber.
- Introduction of a new transformer or whichever new element previously defined in the Data Model of the Data Base.
- The Tables (Incident type, voltage level, fault origin, assigned crew, etc.) should be modifiable.
- Feeder change of an existing circuit or branch line, for real configuration following purpose, or whatever situation requiring to associate a group of branch lines or Transformers or other elements to a different entity than present.

e. Historian

The system must preserve the history of all changes over time, of the feeding scheme of each subscriber from the meter (on the power pole) to the substation highest voltage that feeds it.

This feature will allow maintaining the overall consistency of the information generated by the system (correct calculation of the indicators of quality of service, energy balance, verification of a claim from a customer or an internal problem for the organization, etc.)

f. Application

Supplier must submit the detailed data model of the IRMS, including formats and relationships between all objects and tables. The data model of the system will be fully accessible to other applications, acquired or developed by EDM as needed, without requiring the intervention of the provider of IRMS.



Access to the system must be made according to different user profiles, protected by personal passwords. The privileges of the different profiles are related to the functions authorized for each user (Call-centre operator, Distribution Control Centre operator, Database maintenance operator, Distribution Network Maintenance Operator, Engineering studies user, Network operation supervisor user, Management user, etc.).



ENTERPRISE RESOURCE PLANNING (ERP)

A management system of corporate resources should facilitate the dissemination, implementation, evolution and control of processes in the human resources, material, financial and technology areas, thus achieving the highest optimization, in a context of efficiency and business efficiency in general.

The above requires the use of tools that will enable the execution of such macro processes, without duplication of a single data entry for multiple uses, or similar operations or procedures, or the repeat of excessive controls that ultimately lead to a lack of control or inflexibility when operating, with the consequent associated direct and indirect costs.

The basic principle for centralized resource units to function optimally for the company is that these units manage to centralize activities, requiring a definition of policies at a company level, resource management whose unification favors, scale economy, improved cost and corporate profits, while still allowing adequate decentralized operational management with reliable answers in a timely manner.

The required comprehensive solution on the basis of a strong and open technological and communications scheme must enable: 1) to optimize the operation of the organization, 2) to transfer routine and manual tasks of the processes to the system, reducing the workload of the EDM areas, allowing them to focus on strategic and management tasks, such as negotiations (purchasing, projects and collection):

Comprehensive Management of all the company's processes and resources (financial, material, logistical and human) under a single technology platform that eliminates rework, erratic procedures, minimizes paper usage, and will not generate unnecessary efforts:

- Management of analytical and financial accounting
- Management of fixed assets (corporate assets)
- Management costs by sector and (or) business units.
- Management of purchases and inventory.
- Budgetary management: by projects, areas, purchases, funding sources, etc.
- Full management of human resources (training and development, career plans, skills and abilities, payroll, etc.).



Based on the referred premises we will detail the basic modules and functions needed for an electricity power company in accordance with leading practices observed in the sector:

1. GENERAL AND ANALYTICAL ACCOUNTING

Overall functioning is important to assist major stages:

- a. an accounts plan, with a flexible structure and a table of parameterized master fields, defined under EDM's specific requirements as an electricity power distribution company, respecting the demands required by the control body.
- b. A control level that will enable the collection of historical accounting records, as well as online and automatic records produced by a possible interface with other systems.
- c. The system must provide the accounting of the various derivative transactions, for instance, of purchase orders, service orders, and reimbursable cost orders, among others.
- d. At a an evidence level, it should allow the release of the books required by corporate regulations, balance sheets, monthly balances, charts of assets, liabilities, outcome accounts and local corporate tax requirements.

2. COST MANAGEMENT

At a cost accounting level it is essential to allow a pro rata calculation and allocation of costs, through parameterized prorated rules.

The system must also provide cost information about cost centers, departments, regional centers, projects and general areas according to the structure and definition of the company.

This module should allow the production of management reports on costs or management analysis, which do not necessarily coincide with the reports from accounting, without a need to duplicate data entry.

Also cost accounting by business unit is required when assessing the weight of each part of the electricity supply process, also taking into account the total view and, in turn, lowering the costs of cross-section sub-processes to different sectors or within the sector.

3. FIXED ASSETS



Taking into account the importance of fixed assets in the numbers of power companies, it is essential to maintain an updated inventory with details of economic growth, economic decline, alterations, allowing for real control of investments.

Modules for Fixed Assets should allow an online and real time process of asset turnover, conduct a physical inspection of corporate assets, rated by business unit, department, division, accounts, cost center and even employees

It must allow for the control of assets through bar code systems, through interfaces with software and a bar code reader.

Transfers of assets between accounts and cost centers should be allowed to provide accurate online information, as well as deletions, changes in data and asset values when carrying out inventories.

At a reporting level it should be able to generate reports of changes in assets, accounts and cost centers, showing the turnover occurred in the period, growth, decline, adjustments, depreciation, transfers, and physical location.

4. FINANCIAL MANAGEMENT

a. BUDGET

At a budgetary level it is essential to enable the development and generation of the budget at a decentralized level of service units, allowing a clear definition and assignment of responsibilities in its development and implementation.

On the other hand the tool must enable the preparation, monitoring and control of financial planning, with projected revenues and expenditures. It should generate a daily, monthly and pluriannual cash flow if required.

The functions must also include the stages of reservation, commitments, execution, and the implementation of entries through the issuance of purchase orders, issuing contracts, and service orders associated with the contract.

And to make reports the following are required:

- Reports showing budgetary items, responsibility area and cost center.
- Performance reports by area and budgetary items at any point in the process.
- Budgetary comparative reports versus executed ones, diversion calculation, by area and budgetary item.

b. PAYABLE ACCOUNTS – TREASURY



For these functions the management tool should allow an automatic accounting of payments, both in terms of asset, liability and cost accounts. It is also required that from disbursements a cash flow generation may be obtained to allow for the planning of a daily, weekly and monthly cash book.

The system must allow integration with all processes originating commitments to pay, regardless of the originating application which may be covered or not within the referred ERP system.

In general, the solution should allow the automatic issuance of payment processes generating the required approvals, making sure that legal requirements are met in terms of taxes, among others.

Regarding processes, the system should allow for decentralized registration by area of responsibility of notes payable, controlling the process flow and processing of same, taking into account specific contractual terms and probable areas for improvement.

c. ACCOUNTS RECEIVABLE

Under the assumption that the billing and collection from EDM customers are processed in a commercial system to be implemented, we detail among the functional requirements, some requirements related to accounts receivable that may not be included in the referred system, considering them as various bills, for instance, but not limited to: debit notes, credit notes, real property rental, rental of posts, testing materials, probable collection agreements with third parties in electricity bills, etc.

The system must enable the generation of reports or reports on the position of portfolio collections, detailed by client, deadlines, and delays, among others.

d. HUMAN RESOURCES

The Human Resources management of a company such as EDM requires several features in constant evolution: selection, entry and registration of staff; disengagement, various leaves, liquidation of assets, development of skills and competencies, training, career planning, work safety, occupational medicine. Below, we will specify the significant modules and functions for the sector:

i. ENTRY AND REGISTRATION OF STAFF

Any system should allow the registration of the employment relationship identifying the method of contracting and (or) type of contract. This register must contain the personal data, functional status, work area, educational background, among others, to ensure proper treatment of the resource within the Organization at all levels.



The update of all online data is essential.

Regarding the employment relationship, the system should allow all forms of employment permitted by the company, categorizing them, even special entries such as students or interns, among others.

It is necessary to keep the functional background records for each employee during a limited or unlimited period according to the requirements of the company, as well as viewing the record of all information changes in the register identifying the date of the change and the official in charge.

For each entry the system should automatically generate a sole employee number through which he may be identified in all activities and processes associated with said employee, in the company.

ii. TERMINATION AND DISENGAGEMENT

In the case of disengagement the record must be updated to keep the various conditions of same as well as the formulas associated to such terminations: just cause, death, temporary contract term, resignation, retirement, discharge for permanent illness, etc.

iii. MISCELLANEOUS LEAVES OR REMOVALS FROM POSITIONS

The system should allow for the recording and updating of data from the period and the reasons for leaves and possible removals from positions, for various reasons.

iv. POSITIONS, SALARIES AND FINAL SETTLEMENTS

The tool should allow automatic settlements of fixed, variable, vacation salaries (even collectively), overtime, etc., as well as the corresponding discounts.

It should also help to keep a record of all types of deductions, issuing evidence of payment with the details of the settlement: salaries, extras, deductions, reimbursements, etc. It is essential to allow the establishment of a hierarchy of deductions in the event that the company is unable to pay the salary for all employees, based on the current legislation

The generation of payroll must allow the view per employee, identifying cost-center area, and deductions and income to be processed by the accounting module. As for the reports, it is minimally required to have a detail of employees with a historic record, by cost



center or areas, by category, by type or value of wages, amount of overtime as well as the legal or banking information required, etc.

In the case of any travel expenses, the tool should be able to make the request for expenses, and accountability throughout the system, with the corresponding controls and authorizations

At this stage the tool should allow registration of career structure, defined salary ranges, as well as the schedule of costs and salaries of the company. Also a customization should be allowed in order to apply and simulate salary adjustments per position, type of contract, employee, territorial basis if necessary, with the possibility of differentiated indexes, in the case of legal or internal requirements of the company.

v. DEVELOPMENT OF SKILLS AND COMPETENCIES

At this level it is required to identify and record the training needs of employees, also allowing for the registration and inventory of knowledge, skills, abilities and experiences of employees.

To facilitate a comparison of the profile for each employee with the requirements of positions and functions, allowing identifying compliance and non-compliance of such employees regarding the requirements. This facilitates the manufacturing of a training plan, whereby it should help to monitor, control and keep a historic record of the training carried out and received per employee, sector as well as the budget incurred in.

vi. WORK SAFETY

For the management of human resources, work operation safety should be taken into account. This fact also ensures compliance with current regulations, the worker's health and safety, purchases in a timely manner of the corresponding work materials and appropriate training, among others.

These features include being able to control a hazard prevention program custom-designed by the company, allowing to track the foreseeable risks, keeping the historic record thereof per official, position, in order to automatically feed and improve the corresponding prevention program.

As aforementioned, this module should allow controlling personal protective equipment at the hands of officials and its maturity, according to the job profile, allowing the issuance of receipts to be signed by the beneficiary. Possibility of carrying out accident statistics through the system.



vii. WORK MEDICINE

The functions required should enable to develop, control and issue a program of medical surveillance and occupational health as defined by the company, including a schedule of activities. The above should also facilitate the control of occupational tests and their results, as well as especially required exams.

A parameterized medical record is required.

At a statistics level it should allow to produce diversity in occupational management, control of absenteeism and causes, among others.

e. LOGISTICS AND CONTRACT MANAGEMENT

Basic management and control functions require the accessibility of users in the generation, alteration, exclusion, and approval of applications for quote, request, order, contract, among other stages.

At a monitoring level it is necessary to control the physical execution of contracts differentiated by supplier.

To view and verify the historic records of the documents subsequent to the purchase order, such as: receiving the merchandise, returning merchandise, entry of the invoice, credit notes or any document relating to the order in question. At a balance level, enabling an automatic update upon receipt of materials or transfer between warehouses.

Allow the blocking of purchase orders, order, when there is no budget. Furthermore, the generation of rules to evaluate suppliers should be allowed: on-time delivery, variability in prices, etc. The service registry must include general information, tax data, types of purchases, types of services, specific legal requirements of each service, if any, being able to receive this information at a company level, buying unit, etc.

The system must allow an automatic coding of materials and manual allocation, adapted to the company.

For quality processes, the functions should allow an automatic blocking of the batch without interfering with the remaining processes. In terms of orders, it should be able to automatically create purchase orders based on the planned data, and to define a strategy for the release and approval of orders.

In the case of stocks, it should be able to have statistics and historic records of turnovers, valuation according to selected criteria, ensuring automatic integration with accounting for updating, adjustments of differences, among others.

Furthermore, to carry out a rotatory, individual inventory, per warehouse.



At a stock consult level, these should be performed at a level of warehouses, company, third parties' storage, etc.

The follow up of the buying process and different status is extremely important so that it can be accomplished in real time and in accordance with authorization strategies.

Taking into account the agreed purchases, where the system should be able to issue automatic purchase requests for existing contracts, if there is a material and budgetary availability.

Another function required is the integration in a single application of various purchase orders for identical items that generate the preparation of a unified and centralized purchase order, as well as an interaction of such orders with the budget and cash flow of the company. In terms of stock, the system should allow to control minimum stock, reorder point (fixed and dynamic), and a full and safety control.

At a materials' control level, it should allow for an online verification of information on stocks, availability, location, etc., as well as the management of batch status, batch description, strategies for specifying the batch, information on batch usage (traceability), view the status of the batches (reservation, blocking, inspection, consigned, etc.), control of materials per batch, taking into account the control of the necessary characteristics for such batch (i.e. maturity), achieving an automatic blocking of materials after due date, and generate alerts if the desired conditions in the planning stage cannot be met. Integration with the active module is important so that the preparation of purchase orders for fixed assets through Logistics will allow such processes to be tracked by the active module.

f. INFORMATION MANAGEMENT

In the event of information management, it should be able to access such information from any defined modules, enabling the preparation of reports by different fields, with formulas, filters and conditions of easy and quick reference.

1.2 Functional Performance Requirements of the System

1.2.1 See attachments 8, 9, etc.

1.3 Related Information Technology Issues and Initiatives



- 1.3.1 The current state of IT readiness (software, hardware and telecommunications) and usage is described in the attachments.

C. TECHNICAL SPECIFICATIONS

2.0 General Technical Requirements

- 2.0.1 Language Support: All information technologies must provide support for the Portuguese Language (all screen, menus, etc should use the correct Technical Terms in Portugues). Specifically, all display technologies and software must support the ISO/IEC 10646 character set.
- 2.0.2 DATES: All information technologies MUST properly display, calculate, and transmit date data, including, but not restricted to 21st-Century date data. The Format to be used should be dd/mm/yyyy.
- 2.0.3 Electrical Power: All active (powered) equipment must operate on voltage range and frequency range of 220v +/- 20v, 50Hz +/- 2Hz. All active equipment must include power plugs standard in Mozambique.
- 2.0.4 Environmental: Unless otherwise specified, all equipment must operate in environments of 10-40 degrees centigrade, 20-80 percent relative humidity, and 0-40 grams per cubic meter of dust.
- 2.0.5 Safety:
- 2.0.5.1 Unless otherwise specified, all equipment must operate at noise levels no greater than 55 decibels.
- 2.0.5.2 All electronic equipment that emits electromagnetic energy must be certified as meeting US FCC class B or EN 55022 and EN 50082-1, or equivalent, emission standards.



2.0.6 Server Operating System

- All Server application will be installed over Windows 2008 Server Enterprise Edition, Windows Data Center Edition or Unix
- Different releases may be need, but specials version and particularity must be avoided in the design.
- All specific requirements must be clarify in the offer.

2.0.7 Applications' Data Base

- Corporative Data Base adopted by EDM is Oracle
- License of Enterprise Edition is provisioned by EDM
- No special requirements, like redundancy issues are desired
- Specific Versions and possible additional plug-ins must be clarify for EDM installing
- Corporative installation will be EDM responsibility
- Supplier should define the proper system procedure to facitlitate archiving activities in order to maximize DB performance.

2.0.8 Redundancy

- Redundancy server or Data Base will not be present
- Only Disk and storage redundancy will be available in the EDM's Data Center

2.0.9 Contingency

- Contingency Data Center (DC) is preview in Purchaser's strategy
- Daily, weekly and monthly backups and additional preservative actions must be established for this purpose.
- Less than one day of loss must be considered



- Procedures and related activities must be clarified for each SIGEM's Application
- Manual instruments and procedures must be described
- The contingency scheme is not part of this bid and DC contingency will be maintained in perfect conditions to enter into service by the appropriate procedures. A set of communication links is disposed between contingency DC and main DC and it will ensure the continuous operation of the SIGEM' systems against possible disasters.
- The contingency scheme was describe in the ICS Specification and is included like commons specification for the SIGEM's applications design

2.0.10 User Interface for SIGEM's Applications

- Web client must be always possible like client interface
- Default GUI WEB environment via Internet/Intranet, using browser (compatible with Internet Explorer 7.0 or higher and FireFox 2.0 or higher)
- The adequate SIGEM's applications portal and the required customization must be installed
- If Purchaser needs the internal intranet merge, then will be facilitated this facility
- The Internal Corporative ingress and the Contingency (Internet) ingress must be provided
- Plane text and encryption option must be provided by user selection (Http and Https)
- Communication links with already encryption will be possible to avoid encryption
- Different Screen resolutions must be resolved for different kinds of links

2.0.11 Printing

- At the remote office side printer jobs must depends only on the Windows Printer Driver Availability inside this client PC



- No special reservation, allocation and central installation must be need

2.0.12 Software Interfaces & Common Specifications

- Web services must be provided like standard interface
- Special API requirements must be clarify and quoted in the offer
- Special hardware and software must be clarify
- All the messages, including error messages, and screens of the solution should be displayed in Portuguese (all screen, menus, etc should use the correct Technical Terms in Portuguese, not simple literal translation)
- Versions upgrade - Allow total reusing of parameterizations made during deployment of new versions of the modules of the solution.
- Version upgrade- in case of version change or discontinuity of software provided in the integrated solution, involving the need for adaptation of the solution, the supplier shall, during the term of the contract, run the necessary changes for adaptation
- Support processing in three or more layers of application (presentation, application, data and Web services layer).
- Make Available tools that make possible the customization of presentation interface in the Web/desktop environment.
- Allow for parameterization, i.e. support the adaptation of various business processes, without necessarily bring in new developments or changing existing programs. This parameterization can be on screens, tables, headings, captions, menu, consistency/validations, and calculations, among others.

2.0.13 User Security

- User authentication by Active Directory (AD) must be possible
- EDM will decide the use of AD implementation
- User groups for applications and different level users will be defined
- Different profiles for different users groups
- Users' credentials should never be transmitted as "plain text"



- User Activity reports must be available
- Central Console for user logs must be provided
- Logs time stamp must be present for traceability
- One set of index for measures related with availability and reliability for each System
- SLA criteria for each System
- Historian data for web server publishing and further analysis

2.1 Computing Hardware Specifications

2.1.1 System Architecture

The Bidder shall submit, as part of its offer, the minimum specifications for all equipment necessary for the operation of the integrated System based on the business and technical requirements stated in this bid. That information will be used by the Purchaser to proceed to upgrade its hardware facilities (Data Center). As a reference the bidder might consider all information provided in the attachments

- Optimum Configuration must be described in the offer (Layer design, server, storage and main issues and components, interconnection, etc)
- Purchaser will provide all standard Hardware required in accordance of the proposed dimensions
- Additional requirements must be clearly stated.

2.1.1 Capacity Planning

The technical specifications of equipment should ensure the proper operation of the Integrated Solution and should also consider access and equipment needs of the sites stated in Attachment 2.

Sizing of servers and disk storage must ensure the operation at 100% of dimensioning requested.

The solution's architecture must ensure corporate access to the application and its data and ensure an availability of 99.9%.



Specifically for IRMS the Bidder should take into account that the minimum amounts to be taken into account for IRMS parameterization and for equipment dimensioning are the following:

<i>System Dimensioning</i>	
Voltage levels	10
Item classes	25
Subclasses	25
Minimum number of elements by class and subclass:	
Transformers	100,000
Branches	20,000
Interruption devices	20,000
MV circuits	2,000
Substations HV/MV or MV/MV	1,000
Transformer Centres MV/LV	100,000
Customers	7,000,000
Maximum number of calls per day	20,000
Maximum number of calls per hour	2,000
Call History	4,000,000 per year
	Thirty million in ten year
Incidents history	2,000,000 per year
	Ten million in ten year



The minimum sizing, showed in the table above, should be used for the IRMS quotation and for the hardware technical specifications to be delivered jointly with the offer.

2.2 Network and Communications Specifications

2.2.1 Network

The Bidder shall submit, as part of its offer, the minimum specifications for all Telecommunications requirements for the operation of the integrated System based on the business and technical requirements stated in this bid. That information will be used by the Purchaser to proceed to upgrade its Telecommunications facilities. As a reference the bidder might consider all information provided in the attachments.

Basically it is expected the Bidder include in its bid:

- Optimum Configuration must be described in the offer wherein Telecommunications final requirements are part of Purchaser's Internal Communication Project.
- Purchaser will provide all standard Telecommunications required in accordance of the proposed dimensions
- Additional requirements must be clearly stated.

As an example, for the IRMS, Call Centre, Distribution Control Centres, Data Maintenance Units, and other authorized users of Purchaser, will be connected to the servers rooms, where reside both database and application system, through an IP network. The supplier will clearly state the minimum bandwidth to ensure the operation of the application with an adequate response time

2.3 Software Specifications

2.3.1 General Specifications

Usually, the integrated system should have the following features:



- To be able to surf through the different functionalities in a fast way.
- Through the visibly permanently option menu, the staff will have access to the operations that must be carried out daily by the Business Agents in charge of the telephonic or personalized service, in order to speed up the procedures requested.
- To keep the location and operation criterions throughout the entire implementation.
- Homogeneity of information in the different screens.
- The use of several variables for the location of the different entities, such as the name of the clients and of the streets, telephone numbers, and identity documents, which will be obtained through the clients number that has been determined by the company.
- Finding the clients or supplies through the combination of fields. For example, being able to locate a supply with the name of the customer and the name of the street.
- The customization of the operation menu according to the user and profile.
- The possibility of having access to all the screens associated to the processes.
- The possibility of having facilities in the screens for the identification of tasks that haven't yet been complied by the user.
- Being able to monitor the main commercial indicators by just surfing through a screen.
- It should be possible to make interfaces with other systems that are currently being used in the enterprise as well as with other systems that will later be implemented. In particular, it should automatically issue the bookkeeping entry that shows the economic facts and facilitate its financial audit. The interface should also be done with the system that the company has for the energy sales to clients that own pre-paid meters.
- The tool must be developed in Portuguese (screens, assistances, menus, etc), and should use the correct Technical Terms in Portuguese.
- Processing and automatic monitoring of procedures through the various areas of the company.



- Receiving the basic and advanced reporting that the company requires, which must be available and usable by end users at any level.
- Current and future ability for the independence of the technological platform to be used.
- High scalability of the platform: it should be successfully tested in at least two similar companies of the same size or of a greater size.
- Current and future ability to update the platform with new features according to the best practices of corporate services.

The System will be, essentially characterized by the following features:

- **Modularity:** The system will initially be required to cover a range of business process modules, but it should allow addition of more modules or more users in any module as and when required, which should seamlessly integrate into the core system.
- **Flexibility:** The system should support customization to Purchaser's business requirements and should be adaptable to changing Purchaser's practices. In case there arises need to customize to specific needs of Purchaser, the same should be done in the form of add-ons and routines that can be plugged/unplugged from the base product as the situation arises.
- **Open Architecture:** The system should be open to allow interoperability with general-purpose software and have the facility to export/ import data files from other applications.
- **Integration:** The system should be fully integrated across departments and functional areas and also across geographical location of sites. It should have the ability to assign validation on specific fields based on entries in the data validation reference file. It should be fully compatible for data exchange with legacy systems & other systems.
- **Workflow integration approach:** The system should support workflow to automatically raise alerts, messaging etc. across functional areas/modules.
- **Internet and Intranet enabled:** The system should be able to demonstrate its ability to enable internet, intranet and web connectivity. It might also show E-commerce capability so that it can be linked if needed in the future with the system of customers and suppliers.



- **Single Point data entry:** The system should be able to have data entered into the computer system once to ensure integrity of data and that there are no redundancies in the data.
- **Scalability:** The system should be scalable to handle any number of users and volume of data load without compromising response time or efficiency of operations.

2.3.2 Business Application Software

The following is a list of the key Functional Requirements Specifications for envisaged IT solution. To be valid the offer must comply with all requirements stated the technical specifications matrix. The matrix table summarizes the functions required of each component of the Integrated Information System. Compliance with all the items in the matrix does not exempt the Bidder for the need to comply with the rest of requirements in this bid.

The Bidder should complete each matrix in which the functional requirements are described clearly stating if the requirement is fulfilled by the solution. Each matrix states the minimum requirements that the solution must fulfill and three columns have been added to indicate “Yes” or “No”, and a description on how the requirement is fulfilled.

If a requirement is indicated as not to available, the respective offer will be automatically disqualified, as Purchaser requires the minimum requirements for the informatics tool to be acceptable.



COMMERCIAL MANAGEMENT SYSTEM (CMS)

General requirements

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
1	The commercial system must be transactional, and the data must be captured online where it is originated and can be consulted by users. It may also use batch processing when dealing with massive information.			
2	It must be parameterizable, both at general level and modular or functional level, where users can control specific functions. Functions that belong to the system's manager can also be parameterized.			
3	It allows to issue and present reports, tables, indicators and statistics in general in screen, in paper or exported to magnetic media or through office tools.			
4	The system implementation should include a business procedure and rule's model that allows to maintain the system. It will also have one or more help online levels for the user, in Portuguese (the correct Technical Terms in Portuguese).			
5	The display should be in Portuguese (all screen, menus, etc should use the correct Technical Terms in Portuguese)			
6	It should be able to endure updated versions, without a new implementation system project. It must have an evolutionary and corrective maintenance. The change of version should not affect the regular functioning of the company.			



7	The minimum technical documentation that is required to hand in when the implementation is completed, consists on: a) Updated User's Manual b) Updated Data Model c) Updated Data Dictionary d) Updated Functional Range e) System's Operation Guide f) Manuals for support and maintenance of the system (configuration, error analysis, etc.);g) documents of analysis and process redesign; h) Manual of analysis and conceptual design of the system; i) User's system administrator; j) Documents data migration methodology k) Plan test system implementation and acceptance.			
8	It must allow the integration with other applications, internal and external, through Service's Oriented Architecture (SOA), thus allowing the exposure of its functionality through services or accessing other applications through the use of its services.			
9	The supplier will have to make sure that when changing the version the regular functioning of the company is not affected.			
10	It must allow the definition of security profiles in a simple and agile way that allows the permission assignment for group of users or individual users.			
11	It must allow the control of the user's status (i.e.: active, blocked, expired, etc).			
12	It must allow the restriction of the application access, through the combination of the following authorization levels: - On a Module level (e.g.: Invoicing) - On an Application level (e.g.: Invoicing/Reading's correction).			
13	The systems must safely update and access the database.			
14	It must allow the programming of the users' and passwords validity. Passwords must be encrypted.			



15	The users' interface must have access buttons to the most used functions (toolbar).			
16	It must allow the programming of closing user's sessions due to inactivity.			
17	The system must register the user, date and time of the last update of each register in the data base.			
18	It must allow the report exportation towards other applications (Word, Excel, flat files, pdf, etc).			
19	It must have monitoring tools for the commercial calendar and the impacts that occur during commercial processes (reading errors, invoicing, collection).			
20	If there are any kinds of delay in the commercial cycle, the system will have to notify accordingly to the person in charge of the activity, through a text message (SMS).			

Functionalities of New Clients Contracting Process

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
21	Ability to allow the costumers' data entry as well as the related information, distinguishing people from companies. The system should be able to differentiated, depending on the rate category and the activity's nature (health, education, defence ministry, etc).			



22	Ability to allow the required documentation entry for a request and the identification of the pending documents. The system should ensure that the signing of the contract is digital and that the foregoing can be electronically filed.			
23	Ability to allow the entry of important notes of the new Connections request and new Supply Terms.			
24	It must be customized in order to allow the printing of the service request stipulated by law, and for its sending by Electronic means.			
25	It must allow the collection of the carried out actions in order to close the request without having hired the service. It is also possible that such charges are paid together with the issued service's invoice (can be paid in instalments).			
26	It must allow the printing of the supporting document stipulated by law.			
27	The consecutive number of the service solicitude request must be automatically generated as well as the new customer's connection request.			
28	The consecutive number of the service request must be unique in order to identify it with other system's options.			
29	It must allow the realization of an enquiry by status request, modification date and type of request.			
30	A Record of status' modifications must be kept with their corresponding dates of service request.			



31	The service request can be cancelled at any desired time.			
32	Ability to allow that a user posses several contracts in the same domicile or in different ones, or that they belong to diverse rate scales.			
33	It 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.			
34	It must allow the generation of working orders for the realization of tasks that are required by the service's request. Such tasks can be carried out directly by the costumer's service staff, based on the current availability of the field's team.			
35	It must allow the selection of the types of work orders for the service's request exclusively.			
36	The New Contracting Process Module must interface with the Eclipse system (existing prepaid energy sales system at EDM), in a way that such system is updated, in relation to costumer's information, subscriptions, cancellation, meter change, change of address, etc.			



Functionalities of the commercial cycle - Reading

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
37	It must allow the entry of the meter reading(s) in order to obtain the user's consumption.			
38	It must allow the realization of the consultation of the meter's status (post-paid, pre-paid or AMI) or update it (active, disconnected, retired) related to the involved business process (payment process and reconnection, for instant).			
39	It must allow the modification or manual entry of the meter's readings, before the invoicing, in order to correct or regularize any reading inconsistency.			
40	It must allow the processing of the meter's readings provided by the user.			
41	It must allow the monitoring, through consultations, of the reading programs, with detailed performed , not performed, inconsistent and absent readings,			
42	The system must keep record of the way in which the Reading was carried out: manually, with a portable terminals, AMI or telemetry, etc. Also, the system must trace its source (clients' reading or company's).			
43	Any irregularity related with the readings, must be automatically reported, validating the readings when processing them for invoicing.			



44	There must be an interface with the portable terminals of the meter's reading routes, in order to upload and download the reading's information.			
45	The validation of the introduced readings in the portable terminals must be checked.			
46	The follow up the carried out readings must be visualized.			
47	The necessary data for the installation of a meter must be stored.			
48	It must allow the reinstallation of a disconnected meter in other service.			
49	The installation, connection and disconnection of the meters must be registered, as well as the required maintenance tasks, such as calibration.			
50	Reports on the reading entry and consumption calculation should be done.			
51	The chosen system must be able to receive information from Automatic Meter Reading (AMR) and/or Advanced Metering Infrastructure (AMI) through an interface that allows the reception of the obtained meter readings for the relevant processes of the business management. Regarding AMI, it refers to processes such as power increase or decrease, disconnection and reconnections, etc (apart from the remote reading processes).			
52	It allows the realization of reading routes according to the programmed dates and route types.			

Functionalities of the Commercial Cycle - Billing



	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
53	The calculation process must have a minimum parameterizing level that allows the users to change their behavior without changing the software.			
54	The system must have information in its database on each and every invoicing (simulated, real and cancelled) in such a way that they can be visualized and printed at any time.			
55	<p>The billing calculation must be carried out through the definition of amount parameters, according to the existing tariff system.</p> <p>For example, if a given client exceeds the threshold allowed for social tariff in energy consumption the system should place him/ her in the next tariff level, the domestic tariff. The system should be parameterized to cater for this procedure.</p>			
56	It must allow the follow up of invoicing status from its origin to its current stage.			
57	The system must allow the processing of invoicing in pre-printed form, through emitted forms, or by one or more software packages specialized in printing.			
58	The chosen system must keep a record of each rate's price, in order to be able to calculate or recalculate an invoicing at any time.			



59	It must allow to record the average consumption according to rates, for its further use in invoicing when there is no record at all.			
60	It must enable to accept the payment that was done in advance in order to include it in the invoicing or in the invoicing that was previously agreed on 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 invoicing must be performed.			
61	It must allow the calculation of invoices in line with the reading programs.			
62	The system must have a highly configurable invoicing engine, that allows it adapt itself in any different tariff – in such a way that any change is recorded – and it performs correct invoicing and retroactive adjustments when needed, including the correct accounting entries.			
63	Centralized invoicing must be carried out within the normal meter reading program or for fixed consumption.			
64	The system must allow the conciliation of different kinds of billings of a specific supply.			
65	Billings must be issued in hard copy, magnetic support or any other adequate format for transfer by electronic data exchange (banks, for instance).			
66	The system must be able to manage client's current account in a way that allows for the grouping of a random number of invoices that belong to the same a costumer so that they expire on the same date or have a same shipping address.			



67	It must allow the calculation of invoice charges at the end of the contract.			
68	It must allow the cancellation of an invoice from which a claim has been received.			
69	It must allow re-invoicing (to invoice again) based on estimated data or fixed consumptions, real data that comes from a work order and data provided by the user.			
70	It must allow the invoicing through fraud and penalties related to irregular services.			
71	It must allow for the tax calculation according to the national regulations.			
72	The system must allow the issuance of account summary or statement, of every customer's account.			
73	It must allow the invoicing of period consumption, regarding it as an outstanding debt adding it to other possible pending debts.			
74	The system must be able to display customer's records.			
75	The system must be able to produce reports, statistics and indicators of reading and billing processes based on: time, errors, anomalies, etc. Such reports can be exported, published or sent by different means.			
76	It must control and manage the invoice adjustments.			



77	The system must update online and on real time, the current account of each customer, according to the billing processes.			
78	It must allow massive cancellation of invoices should any errors or inconsistencies occur.			
79	INVOICING OF STREET LIGHTING It allows the invoicing of every consumption of public lighting and its related demand.			
80	It must allow for the issuance of public lighting Invoices and their payment It should also be able to issue EDM's internal consumptions invoices and its payment (offices and other company's premises).			
81	The system must generate massive processes for invoicing: hundreds or thousands invoices in an only process that updates online and on real time the customer's data base and their current account.			
82	The system must ensure that the financial information (accounting, budget and costs) is permanently updated in an automatic and natural way, or through interfaces, with the incoming data from the Business System.			
83	The prepaid power sales system, ECLIPSE, will invoice online the energy sold in the following way: the business system must interface with such system so as to update the energy sold by this payment form.			
84	The prepaid invoiced energy must be entered to the customer's account.			
85	The system must issue account's statement of customers with prepaid meter, keeping in mind the energy sold and the reading done in the customer's meter.			



Functionalities of the Commercial Cycle - Collection

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
86	All system users that are cashiers or external agents must be registered and identified.			
87	Different formats for the charge's shipment must be allowed.			
88	Online payment must be allowed in the offices and in external collection centers.			
89	Different forms of payment must be accepted: cash, checks, credit cards and debit cards. The system should enable payments through electronic transfer of funds (SISTAFE- State Financial Management System, Cash machine, and internet).			
90	Payment can be combined in different forms (cash and check, cash and credit card, etc) with an only receipt or different receipts. The system should also carry out payments for financial compensation			
91	Payments that are done in the same day can be cancelled.			
92	The cashiers must automatically shut down when the payment office is closed. For security reasons, the system should be able to limit the amount collected by the cashier and carry out a			



	temporary closure so as to allow the deposit of the amount that has been collected up to that moment.			
93	Cash balances can be controlled through agencies and payment terminals.			
94	It must be able to record complete historical information about collection for users and agents.			
95	Cash balances must be controlled by the end of the day or in shift changes.			
96	The external agents must trace returned checks and unreported payments.			
97	It must 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.			
98	It must allow the interface with credit systems in order to transmit and receive records related to payments through credit/debit cards.			
99	Invoices from users that have chosen automatic debit in their bank accounts, must be sent to them.			
100	The system must allow the connection with external payment agents both online and offline (from its own systems through the enabling enterprise services –SOA).			
101	It must allow the correction and control of the wrong payments online.			



102	<p>The system has specific operations for the management of returned checks:</p> <ul style="list-style-type: none"> - Charge generation (from the bank) - Status resulting from the paid invoices by the check or generation of a new charge of the corresponding amount (decision level configuration) - Costumer follow up (letters, messages, etc) 			
103	<p>It must allow the maintenance of charts and general parameters.</p>			
104	<p>It must manage different types of agreements.</p> <p>The system should be able to register or send back the amount that has been paid by the client`s joint participation in electricity grid construction activities</p>			
105	<p>It can handle attributes and official authorization levels</p>			
106	<p>It handles and integrates AMI meters in the following collection processes:</p> <ul style="list-style-type: none"> - reactivation of disconnected costumers - update of balance meter (for prepaid meters) - Tariff update (for prepaid meters), etc. 			
107	<p>The system must allow partial and complete payments. It must have a management module that allows a correct management of collections, with precise follow up reports, issued timely.</p> <p>The system should also be able to affect the payments of certain loans in the respective invoices.</p>			



Functionalities of Debtor Client's Process

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
108	The information regarding the payments carried out by the users will have to be available for reference.			
109	Partial or total payments on account should be possible.			
110	Once overdue invoices have been paid invoices, a reconnection order must be automatically issued.			
111	According to EDM's policies, partial payments and payment agreements will have to be accepted.			
112	If the bank account's balance or the credit card isn't enough to cover the amount that must be paid, a payment notification must be automatically issued.			
113	The operations that must be fulfilled regarding the users who have not paid all their debts must be automatically issued (orders for service cancellation, visits, calls, and letters).			
114	In order to issue notifications concerning the guarantee expiry, as established by the company, it must be parameterized.			
115	Following certain criterion established by the Organization, it must allow to cancel power cut orders and to			



	reinstall a service without the payment being fulfilled.			
116	It must be able to control the number of activities that must be carried out, considering the operational capacity (for example: it must restrict the number of cancellation orders issued depending on the Technical Center's capacity, as well as parameterizing substitute activities such as the programming of phone calls, the issuance of letters, etc.)			
117	It must be able to obtain debt information about different levels, types of users, areas. In the management of debts, the system should be able to identify debts corresponding to certain clients (the Government, hospitals, defense ministry, waters companies, etc).			
118	It must enable to select all the users whose debt and number of invoices to be paid exceeds certain amount (parameter).			
119	It must enable configuration and flexible definition of the rules that must be set, to determine the operations that must be carried out (for example, considering the debt's and rate's record, type of client, the debt's amount, etc.) The system should produce debit balance reports, taking into consideration the date, category, the nature of the activity (health, education, etc), the type of customer (private or public), and the debt's status.			
120	In case of the payment being effected or the existence of a payment agreement, it must enable an automatic issuance of reconnection and working orders.			
121	It must allow the issuance and download the orders for the posterior verification of the cancellations.			



122	It must prepare statistics regarding the cancelled services and reconnections, which must be recorded in the system's data.			
123	It must be able to issue individual disconnection request.			
124	It must be able to issue several reports such as: summaries of reconnections, summaries of special disconnections, temporary disconnections, clients who have not been disconnected, clients who have been disconnected, and clients who do not have meter, clients with no electricity, and extra charges resulting from disconnections and reconnections.			
125	It must be able to issue operational reports concerning: disconnection timing and reconnection processes, notified mistakes, statistics regarding the employee's performances, etc.			
126	<p>The system must be able to produce consolidated current accounts that allow management of big customers (such as the Government) through accounts that comprise certain services.</p> <p>These will allow the system to obtain overall statement of accounts. Furthermore, they will enable the possibility of paying individually or at a consolidated level to make this management task easier.</p> <p>The system should issue client's statement of accounts with reference to the requested period.</p>			
127	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).			

Functionality of customer service process



	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
128	If the user has many services, it must allow different ways of payment or various bank accounts.			
129	An exclusive number of user's identification and contract must be assigned, enabling easy detection of possible debts.			
130	It must be able to manage different kinds of client's identification that are part of the contract: contract holder, the beneficiary of the service, the one responsible of payment, etc.			
131	It must be able to display information about: working orders that have not yet been carried out, complaints, irregularities, and various issues that have not been solved, as well as observations, readings done by telephone and the client's record.			
132	It should allow the recording of user's complaints, enabling to have the type of complaints stipulated by law and according to the company's current needs. These should be classified based on the company's criteria.			
133	The system should be able to carry out a precise and accurate follow up of the different stages that a complaint must go through. In addition, all these activities should be duly recorded.			
134	Should there be a need, the operations that must be carried out when a complaint is presented; it should automatically issue working orders.			



135	It should be able to update complaints depending on the activities that were carried out.			
136	When there is a complaint regarding the invoices, this can be modified by canceling it and creating a new one with the adequate modifications.			
137	It must be able to cancel complaints when there is no justifiable ground, for example, when the complaint is purposeless.			
138	It must be able to consult the different complaints per Branch so as to provide solutions to each Branch			
139	It must be able to invoice, issue, modify, consult and bill and budget costs that are not provided for in the invoice.			
140	The user can be the holder of various services under his/her name and may have the same account for all of them or one for each.			
141	It must allow to make modifications when it is necessary. For example when it is required to: change the tariff, modify the address where the invoice is to be sent or change the name of the contract's holder.			
142	The system must be able to send information in a normal way or through interfaces to systems such as IVR.			
143	Regarding the Internet's functioning, the Client's Portal should be connected online and in real time to the system's central database. If the system does not operate in this manner, for example, with a replica of a database, it won't be accepted.			



144	The system should be able to display information through the Internet: invoices, previous consumptions, changes in the client's data, the registration of a new contract or its canceling, etc.			
145	An interface should be available with the Eclipse System (the selling system of pre-paid energy) to record changes that have been effected in the client's contract in order to keep the system updated for efficiently carrying out the operation of the selling of pre-paid energy.			

Operations for the energy control and the management of non technical losses processes

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
146	All the energy measures taken from delivering points (generation, transmission and distribution) should be recorded in an integrated manner, respecting their periodicity in order to have accurate energy balance.			
147	It should be able to display data and compare the different measures taken at the delivering points. Moreover, through these displays, it must be possible to understand the variations that take place at the daily load diagram.			
148	It must be able to correct erroneous values of measures displayed in the carried out analysis.			
149	It should allow the uploading of the measures that correspond to each delivery point and customer's reading through interfaces or files.			



150	In this uploading, the ratification of consistency and data format required should be fulfilled as well as issuing a log of errors.			
151	The system must process all the measures uploaded in order to provide daily reports regarding measures and to further issue energy balances.			
152	The system must be able to upload the forecast regarding the daily buying of energy in the delivery points in order to keep a daily control over the measure's reports.			
153	It must be able to daily monitor the energy flow into the system in the different delivery points, differentiating the voltage level and comparing it with the forecast regarding the buying of energy.			
154	The development of the company's total losses according to each geographic area can be checked. It should also be possible to perform an energy loss control depending on the branch, the geographic location, and MV/LV substations.)			
155	It must be able to see detailed information concerning the different type of clients, poor and subsidized areas, which require a special follow up.			
156	It should be able to produce charts about the invoiced energy <i>versus</i> the energy collected as well as charts depicting the energy flow through the different levels of the company.			
157	It should be able to record all defined plans as well as its subject, actions to be done, duration estimate.			



158	For each operation defined in the plan of the recovery of non-technical losses, it should be possible to identify people in charge, how it is measured and the planned data.			
159	Every month, the system should automatically issue the operations that must be carried out by the Commercial Technical Service or by the hired company, according to the established action plan.			

Functionalities of for the management of service orders process

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
160	It should provide an option for automatic issuance of working orders derived from any transaction of the system's operations (customer service, readings, invoices, collection, hiring, and complaints).			
161	It should be possible to define the geographic areas that belong to Technical Centers for the automatic assignment of jobs according to the service's location, allowing integration with Geographic Information Systems (GIS) for the optimization of the resource's allocation.			
162	The system should be able to transfer information regarding the service orders for the calculation of costs, into the ERP System by ordinary means or through interfaces.			
163	All the activities fulfilled for the completion of the order as well as the duration and the details of the operations should be recorded.			



164	It should record the technician who has been assigned to service's installation.			
165	The system must perform automatic checking's of consistency before issuing working orders.			
166	The order that must be carried out in an installation should be printed and the system record that the printing was done.			
167	It must be able to solve in large scale the working orders concerning: disconnections, reconnections, notification of disconnections and everything related to the management of non-paying clients.			
168	It must be able to enable to program the operations to be carried out in the installation with certain characteristics (geographic area, substations the user's tariff, the average consumption, pending debts,).			

Functionalities for Management Process



	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
169	It must be able to issue different collection records, for example, for groups of tariffs and users and Commercial Branches.			
170	It must allow the issuance of daily reports concerning the whole commercial cycle (reading, invoicing, and collection).			
171	It should display all the indicators established to carry out a daily, weekly, monthly or annual follow up.			
172	The system should have a tool for the management control that interacts with the database model, allowing to obtain relevant management information.			
173	Apart from the reports that the system has already incorporated, there should be the possibility of adding new reports that the company might consider convenient for future use without altering the system.			
174	The system should provide reports via web to the company`s management.			
175	The system should be able to provide mechanisms for reporting: a) triggered automatically defined periodicity; b) triggered automatically by events; c) triggered manually.			



INCIDENT RECORDING MANAGEMENT SYSTEM (IRMS)

Customer's calls reception

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
1	The screen, where are recorded the phone calls, should allow the call centre agent to record, according to the situation, customer's claims or abnormalities seen and notified by a passer-by.			
2	The daily phone calls history will be saved.			
3	All the information recorded, for each phone call, should be retrieved on-line.			
4	The total number of customer calls who still without electricity should be available on-line. This information should be seen by waiting time and by the step of evolvement of the situation.			
5	Should control the duplicated recording of customer's calls, insuring their unicity and the date and time registration of each call.			
6	Should automatically monitor that customer is not current on payment of invoice or other reason which should justify his administrative disconnection by the utility.			



7	Allow on-line feed-back to Customer, on ongoing actions for energy restoration.			
8	It is possible to parameterize the information given by the Customer which describes the situation (i.e. blackout, low voltage, phase missing, outage extent, free text for additional observations).			
9	The identification of the call centre agent is recorded for each phone call record.			

Identification of incidents location and their following by DCC operators

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
10	The system displays the Customer's claims, graphically or alphanumerically, following an arbores cent (or geo-referenced) representation of the Network, in order to facilitate the identification of the faulty point on it.			
11	The incidents monitoring functionality allows the user to assign to each of them from parameterized lists: the repair status; the voltage level of the unpredicted o programmed switch opening; the transfer of the work order, if necessary, to the Maintenance Department.			
12	The incidents following functionality, allows to assign for each incident, within suitable lists: the cause and type of the faulty situation.			



13	The incidents following functionality, allows to assign for each Incident Record, within suitable lists: one or more crews.			
14	The incidents following functionality, allows to assign for each incident, within suitable lists: the individual interruption time of each equipment involved in the incident, the time of definitive restoration works ending and the list of non energized transformers at any moment.			
15	The system will automatically record the time of each state change			
16	The system allows the real time update of equipment reenergized and other changes on the incident status (i.e. Pending, Crew assigned, Default located, Partial recovery, Service recovered).			
17	Comments can additionally be written in free text format for each incident.			

Management Information

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
18	The system allows retrieving and calculating the customer's daily average consumption, from the Commercial Database, to estimate the non delivered energy during an incident.			



19	Crew's composition and vehicle assigned should be seen with appropriate queries.			
20	The crew's list should be modified as needed for each shift.			
21	Incidents list can be sorted by assigned crew within a selected time interval.			
22	The performance indices defined by EDM are calculated daily. Other indices defined by EDM should be programmed and calculated by the system.			
23	It is possible to define the performance indices established in the present Technical Specifications (SAIDI, SAIFI, and CAIDI formula weighted per customer and per MV/LV transformer installed power).			
24	The performance indices should be seen for any day of the year and summarized per month or for any date of the year (starting from the 1st January).			
25	The Performance Indices should be seen discriminated by voltage, equipment (substation, circuit, branch line, MV/LV transformer, LV feeder), customer's type, time period, type of fault, type of faulty equipment, crew's ID, geographic or administrative area or other criteria defined during the parameterization of the system.			
26	The equipment should be listed by the quality of service delivered (SAIFI or SAIDI).			



27	The interruptions history should be listed for each Customer.			
28	The claims history should be listed for each Customer			
29	The interruptions history should be listed for each network facility defined within the Data Model.			
30	Upstream feeding and downstream supply information of each facility should be displayed on-line.			
31	Complete list of upstream facilities feeding a subscriber for a selected date should be displayed on demand.			

Edition capabilities of the database, tables and historian

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
32	The update or new recording of any element, defined in the Data Model (like transformers, feeders, branch lines, etc.), is allowed on-line.			



33	The different tables listing the types of incidents, voltages, origins of the faults, equipments affected and crews can be modified on-line.			
34	The system preserves the historical data, of all customers' electrical feeding changes, from their power meter to the higher level of voltage defined in the Data Model.			
35	The system allows to record, on-line, the linking of a new subscriber to its feeding transformer (or whatever element defined in the Data Model like a MV or LV feeder).			
36	The system allows the feeding change of an existing Customer.			
37	A feeding change of an existing MV circuit, branch line, transformer or LV line can be done without rerecording all the data of these elements.			

Technical Information

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
38	The Data Model can be parameterized as required in "Database model" paragraph			



39	Detailed description of the functional and technical characteristics of the system presented, including the optimal technical requirements of the Hardware needed to operate the system offered. The list of the hardware equipment needed for the implementation of the system is presented in the offer.			
40	The User's manuals (Parameterization, System Maintenance, Data Base edition, Call Centre agent, DCC Operator and Data queries for analysis) will be adapted to the EDM glossary and procedures and written in Portuguese language (the correct Technical Terms in Portuguese)			
41	All the texts displayed, by the IRMS, on its screens or on printed reports must be in Portuguese (the correct Technical Terms in Portuguese)			
42	The interface with SCADA allows the automatic creation of the related incident in the IRMS when SCADA controlled switches change their state.			
43	The interface with the CMS (Commercial Management System) allows on-line access to the relevant customer's data used for claim register and electrical association			
44	The interface with NIS (Network Information System) allows on-line update of the IRMS Database			
45	The system has an open format access in order to develop an interface to an AMI for "last gasp" reception			



ENTERPRISE RESOURCE PLANNING (ERP)

Fixed assets/ equity

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
01	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
02	Allows entry of information relating to the supplier, manufacturer, model, serial number, origin and other technical data required such as physical location and assigned official in charge, and the ability to handle images and / or photographs of assets.			
03	Allows monitoring and control of the assets' life, as well as projections of asset value based on its rate of depreciation			
04	Provides reports and allows queries at the level required by the user: project, organization, levels of fixed asset accounting structure, physical location and official in charge.			
05	Allows to generate reports on fixed assets turnover classified by type of transaction (i.e. additions, transfers, withdrawals, charges to assets, low sales). It is required to report the date of the turnover, cause and who was responsible for its safekeeping			



06	Enables to prepare a catalog of fixed assets that can standardize descriptions and expedite entries (assets entry ;).			
07	Asset management should be integrated in real time with the financial and management accounting, accounts payable, purchasing, warehouses, budgets and investments.			
08	Allow recording specific characteristics of each fixed asset			
09	Process of depreciation by cost center.			
10	Calculation of current value in records of each asset.			
11	Management of different methods and depreciation rates per asset			
12	Ability to integrate valuation outcomes and make ledger entries in the corresponding accounting in an automatic and identified manner			
13	Asset management must have a real-time integration with the industrial maintenance system, so that there is not one catalog in maintenance and another in fixed assets.			



14	Must allow the good control through the bar code system, through interface software and the bar code reader.			
15	Allow to incorporate the additional expenditure that increase the value in the Fixed Assets calculation			
16	Allow to group fixed assets by location			
17	Allow to transfer an asset for use by various employees, and administrate the responsible control of transfers.			
18	Enable to refer a fixed asset from an identification code, its users and up to 3 previous users.			
19	System capacity to calculate the value of each asset with its historic.			
20	Ability to query a fixed asset on the screen individually: by brand, model, location and owner.			
21	Ability to reconcile the assets physical inventory and records. Reports showing the surplus or missing assets.			



Projects

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
22	Accounting of remaining material from Capital Projects to be entered into the warehouse (After Project Completion)			
23	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
24	Allow the natural integration of projects with the functions of purchasing, inventories, accounting, costs and budgets modules.			
25	Allow evaluation of project performance through ERP, partial reports, project completion and closing process of same.			
26	Allow to keep a detailed control of project management			
27	Allow simplified or detailed planning of the project costs as a control and a basis for budgeting.			



28	Allow for planning of project costs.			
29	It must have a program of activities and resources that constitute the project.			
30	The ERP system will enable online validation for each of the authorized items in the project that have a budget support and availability.			
31	Allow to define various status on the projects.			
32	Allow to analyze the project progress that may determine at any time the degree of real progress comparing it with the planned progress			
33	Allow to make settlements of the partial or total project to different types of receptors such as cost centers, fixed assets, etc.			
34	Allow to keep a control of the expenses in projects and determine if there is a surplus in same			
35	Allow to preparing the budget for projects.			
36	Assign unique reference number per project			



Warehouse and Inventories

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
37	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
38	Management of parameterized ratio codes for all transactions, on inputs and outputs there is a code per adjustment, purchase, transfer and consumption			
39	System's ability to manage cyclical inventories with suggested items to review, stock list and documentation for uploading. An internal audit will also have access to the inventory system to certify each count.			
40	Management of batch control and tracking ability.			
41	Monitoring inventory transactions with an ability to follow up turnover and audits. It contains reports or queries that provide transaction data at a specified date and facilitate any search for information required to verify turnovers or the practice of Auditing.			
42	Handling locations, shelves and racks integrated with inventory management.			



43	Ability to receive goods choosing per purchase order, item code, or sequentially, respecting the sequence of the purchase order.			
44	Ability to reprint purchase orders organized at least with the following criteria: product code, purchase order line and / or description.			
45	Handling of optional modules for transportation planning, where it handles distribution lists, delivery route and volume of items.			
46	Ability to make internal guides called Ratio of Goods in Transit RGT, in which parts, boxes and bundles are detailed. These items are transported to warehouses or destination areas. And the document issued for such transfer must be fully financed.			
47	Management of inventory costing systems at least PEPS, UEPS, average and standard			
48	Cancellation of devaluation turnover (mono and scraps) and its impact on accounting and auditing.			
49	Access to inquiries and inventory reports with at least the following: Stock, pending orders, stock availability, etc. All this may be grouped by: warehouses, management, family, etc.			
50	Handling returns using barcodes			



51	Handling returns from local projects (material previously requested from the warehouse)			
52	Inventory Management : replacement models based on historical consumption, expected demand, stock and other parameters of predefined planning horizon(12 months, 6 months) in order to stock replenishment planning based on forecast or historical consumption (stock maximum/minimum for storage and ongoing services/economat).			
53	Follow up of merchandise from its order to its delivery at destination			
54	Allow productivity analysis on inventories to the code level (rotations, profit margins)			
55	Managing cyclic inventory counting with ABC classification and allowing the system to assign these classifications based on the existing turnovers.			
56	Handling of returns from Capital Projects			
57	Handling of Material from various donations			
58	Handling of Material returned to suppliers due to defective manufacturing			



Human Resources

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
59	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
60	Management of the process for control and management of selection and hiring at an internal and external level.			
61	Record of internal and external selection process			
62	The system shall allow for the budgeting and reserve of resources for each of the authorized positions, both filled-in and vacant			
63	Allow management and control of traveling expenses and travel requests.			
64	Ability to manage the complete process of local payroll (payments, discounts, deductions, etc.).			
65	Management of different types of payroll and its exceptions			



66	Ability to handle special payrolls (bonus, extra month's salary, etc.).			
67	Allows to allocate and reserve resources for different kinds of expenditures that make up the payroll at a market and employee level. Furthermore, after issuing the payroll, the budget will be charged, and the commitments that have been previously created in the original budget will be cut down			
68	Management of knowledge, skills and competencies.			
69	Control and record of the awarded training.			
70	Management of training plans and virtual training			
71	Control of training resources (classrooms, instructors, suppliers, etc.).			
72	Management of Work Medicine that allows the work accidents control, contracts with institutions of health statistics.			
73	Management of Work Safety, material control and demands.			



74	Automatic generation of employee´s number that identifies him in all processes associated with it.			
75	Management of Career Plans			
76	Management of an electronic record per employee, by providing standardized historical information			
77	Management of different types of performance evaluations (almost 180 degree method). Management of performance evaluations where goals of the position vs. the awarded grades are set, including the date, who conducted the assessment and evaluation results			
78	Allow to define the organizational enterprise structure.			
79	Records the jobs and functions description with indication of profiles and competencies.			
80	Alerts´s generation for specific expiration: dates/deadlines and renewal of the contracts.			



Purchases and Acquisitions

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
81	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
82	Automatically generating requisitions based on inventory levels and material planning models			
83	Control of statistics charts for requisitions to know the areas, items, amounts, costs, suppliers, timings, that are required, etc.			
84	Handling of prices and rebates including price adjustments as per contractual requirements.			
85	Management of tenders for the integration of scanned documents on biddings received.			
86	Ability to convert tenders into purchase orders or contracts to be monitored at an electronic level with safety levels			
87	Management of additional costs at a price, such as shipping, freight, handling, delivery, custom duties, storage costs at the custom authorities, financial costs, etc.			



88	Allow launching of procurement procedures according to the authorization profiles defined by EDM, and once authorized by the head set on the system, it allows the sequence of the acquisition/contracting.			
89	Allow online registration based in : contracts; delivery orders, service orders ,etc.			
90	Allow development of the draft tender with pre-established models from the data system and the corresponding updates.			
91	Allow validation of drafts of bids and contracts through the system.			
92	Allow to register all the steps and authorization processes with traceability of authorizations, offers and selection from the requester to the hiring.			
93	Allow the validation and registration stages budgetary reserve, hiring, commitment and execution during the term of the contract, releasing no executed budget.			
94	Allow the acquisition of all or part of services and goods.			
95	Allow the generation of the final version of the contracts through profiles defined for the performers, as well as for printing.			



96	Allow the comprehensive management of the process stages, traceability and automatic deadlines alerts			
97	Allow the progress visualization of purchase and performance of the contract through previous defined profiles, from the requesting area to the execution.			
98	Allow proposal comparison and with historical data.			
99	Allow the contract generation with its own sequence number associated to the original purchase process.			
100	Allow monitoring and traceability of all contract changes related a each contract purchase.			
101	Provide the information related to the contract signing to the different areas involved.			
102	Monitoring the contracts execution informing the technical, financial, budgetary areas about and executions stages.			
103	Monitoring the contract duration and extensions alerting automatically the contracts owners.			
104	Allow monitoring all the material and services purchased: pending canceled or still in process.			



105	Materials and services receptions based on contracts or purchase orders, registered automatically in analytical and budget accounting.			
106	Allow the material and services rejection during the purchase process			
107	Allow the online update of the services and materials receptions.			
108	Allow the automatically generation payment process with the correct reception of material and services.			
109	Management and control of recurrent purchase orders.			
110	Management of purchase order status			
111	Statistics on purchase orders and their status, volume of products, purchases vs. Budget, etc.			
112	Management of purchase budget and such budget must be integrated with the accounting budget.			



113	Management and classification of suppliers, as a minimum, by type, family, level, location, type of material, etc.			
114	Integrated management of tenders to enable control from the process bases, confirming that the bases were published, the delivery of bases to suppliers, base analysis, allocation and monitoring of contracts.			
115	Tenders should be automatically integrated with the planning and purchase area			
116	Tenders awarded may be automatically converted into purchase orders or contracts with safety levels.			
117	Handling of import purchase orders with tariffs management.			

General accounting, analytical and budgeting

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
118	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			



119	Definition of accounting structures plan and on line update.			
120	Enables to keep accounting in different currencies in a parallel manner in real time.			
121	Ability to handle alphanumeric systems to represent levels of account in the accounting catalog			
122	It allows the design and implementation of interfaces with other existing sub-systems.			
123	It allows independent accounting for each area. (Business Management Units)			
124	Using short names or aliases for the accounts.			
125	Management of multiple organizations and legal entities			
126	Managing multiple accounting calendars with periods defined by the user.			
127	Definition of additional information fields defined by the user without programming.			



128	Security of access to books of accounts and accounting accounts per user.			
129	Accounting and calculation of transactions and account balances online.			
130	Automatic reversal of transactions and provisions.			
131	Enables to audit the transactions.			
132	Online validation of all transaction information, without any need to execute processes per batch, separated from the accounting records.			
133	Automatic distribution of account balances. Ability to create prorated policies for expenses that allow to distribute the balance of an account into several accounts using percentages and / or amounts			
134	Ability to handle accounting per project, with sublevels of accounts providing the user with a detailed classification of same.			
135	Defines basis for the calculation and allocation of expenses or indirect costs among various cost centers or entity.			



136	Enables to consult data for different items: period, cost centers, type of costs, number of activities, etc.			
137	Enables the accounting record for online operations and their automatic numbering.			
138	Allows to define automatic accounting records for transactions that are run periodically in a standard manner (depreciation, adjustments for inflation, exchange differences, amortization of deferred payments, closing adjustments, etc.)			
139	Enables the use of accounting records based on predefined calculations, which may be automatically reversed in the following period.			
140	Ability to handle ABC costing in an integrated manner with the rest of the modules.			
141	Issuing flexible and parameterized reporting to comply with generally accepted accounting standards and demands.			
142	In the accounting documents, you may parameterize concepts such as: document type, class, date, document number and commercial name, source cost center identification, days of maturity of the documents or invoices to be cancelled, concept of each document, etc.			
143	Precludes the use of number and date of the accounting record for a previously closed month.			



144	Allows to revert accounting records in accordance with authorization levels previously defined in the system, as well as managing audit to the system in order to know who made ledger entries and cancellations			
145	Calculates taxes automatically during registration of the accounting transaction			
146	Accumulates taxes from various periods during a fiscal period. (Two months, years)			
147	Enables to consolidate financial statements of several entities.			
148	Allows to inactivate or close accounts and prevents the record on these accounts			
149	Enables to carry out independent closings per entity			
150	Prevents (not allowed) recording during the process of closing and on closed periods.			
151	Ability to open multiple windows within the accounting system in order to consult several subjects at once, without generating the use of a new license.			



152	Automatic reports of analytical forms for expenses, income, comparative financial statements, etc., with an automatic drill down functions.			
153	Ability to introduce transactions of other modules into accounting, in various ways, per total amounts, itemization, monthly totals, daily totals, some itemized transactions, others as a group, etc.			
154	Ability to make massive changes to accounting accounts from the catalog through a standard tool.			

Treasury and bank reconciliation

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
155	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
156	Monitoring treasury records differentiating between payments, deposits, withdrawals. etc.			
157	Record cash transactions, including the processing and settlement of petty cash replenishment.			



158	Manual and automatic bank reconciliation.			
159	Obtaining and consulting forecasts of cash			
160	Issuance of bank transfers			
161	Managing expenditure payments of employees.			
162	Managing expenses reports.			
163	Automatic registration of exchange rate changes.			
164	Upon receiving / generating payment, it automatically accounts the deposit / withdrawal on the respective account receivable / payable including bank charges.			
165	Turnovers of transfers between financial institutions, by entity, account, business and date are identified.			
166	Allows cash flow projections in different currencies, based on historical data and trends.			



167	Provides cash flow control per entity and at a consolidated level			
168	Managing payments with different forms of payment, such as checks, electronic fund transfer or electronic payment orders to banks.			
169	Handles limits on the amounts to make payments taking into account the way of payments.			
170	Processes payments manually and automatically.			
171	Bank check account balances before and after the generation of payments			
172	Allows to identify referenced clients' deposits			
173	Allows to group several invoices from the same supplier in one payment, controlling payment for each invoice			
174	Allow to monitoring investment information related to investment type, duration, taxes.etc			
175	Enables operation of historic information on securities and other investments from its acquisition, redemption and final sale.			



176	The treasury is fully integrated with all operating procedures of the entity having to do with financial resources.			
177	Ability to identify the source of funds according to a predefined catalog (state funds, own resources, etc.).			
178	System's ability to generate reports and consults of bank transactions at an earlier date where starting from the balance in the banks at the beginning of the month it may group items on different concepts and achieve the bank balance by the end of the month.			
179	Possibilities of reports on financial investments: <ul style="list-style-type: none">• Global investment position.• Position by assets or group of assets(bank accounts, etc)• Transaction History by asset or group of assets.			

Loans

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
180	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			



181	Allow the financial management of loans, calculating interest debt, repayment, adjustments, additions, decreases.			
182	The system should offer the possibility to Access to the management's reports and queries from projects and services financed by international loans.			
183	The system should allow planning, control and show the debt state and the online interrelation with the budgetary, payable accounts.			
184	The system should allow consult the enforceability degree: oblige, short, medium and long term.			
185	The system should allow the management, control and payment of the cost and develop the relevant management reports.			
186	The system should allow recording, management and control loans with international traceability of authorizations for different processes.			
187	The system should provide management reports for monitoring and control of loans, and projects financial and budget execution.			
188	The system should allow viewing loans with all the possible details : accrued interest, to pay, etc.			
189	The system should simulate the loan evolution in order to plan the corresponding resources.			



190	The system should allow to introduce different models of uses and amortizations. Also established managers traceability and EDM customized reports.			
191	The system should allow the calculation of the main indicators of debt, management liquidity ratios, debt coverage, financial autonomy.			
192	The system shall permit the registration and update of the Exchange rate fixed or variable.			
193	The system should provide a map of the Exchange difference which displays and records the changes monthly, quarterly, semiannual and annual account-level.			
194	The system should allow view the Exchange differences to capitalize or differ.			
195	The system should allow introduce additions and make adjustments, recording the responsible in case of manual adjustments.			
196	The system must facilitate the projection of future debt for each financial and established customized reports.			
197	Ability to identify the source of funds according to a predefined index by EDM.			



198	Control of loan portfolio by fund, program, project, class or type.			
199	Control of renewal credits or increases in funding.			
200	Possibility to perform simulations of loans and repayments, and its impact on financial costs.			
201	Possibility to assigning invoices to particular loan or activity/Project/ contract in order to control the contract performance.			
202	Ability to generate detailed reports for loan; repayment to be made, debt by degree of liability, map of control debt.			

Budget

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
203	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			



204	The system must register online entries from other modules that will have a relevant budget such as the acquisition of goods and services, revenue (income), accounts payable, accounts receivable, acquisition and asset accounting, payroll, travel expenses and allowances, advances, payments, additional accounting records, internal cost distributions, etc.			
205	The solution should have several record books: a financial accounting system, a system of cost accounting and a budgetary control system. Depending on each transaction, appropriate entries in each of the books will be recorded. This will allow each area to access the appropriate view to get the required information.			
206	The solution allows an online control of the assigned budget and also the budget of available cash flow to exercise control in a separate manner, by responsible unit, budget item, funding source and program. It must also include the release control of the authorizations, versions and expenditure budget in both budgetary lines.			
207	Allows to define a catalog of budget items for income and expenses easy to maintain independently from the accounting accounts catalog which may relate to the latter.			
208	It enables to set hierarchical structures in the organizational units and in the catalog of budgetary items so that it can add or consolidate budget information at various levels.			
209	The system should not allow the change in the definition of a budgetary item that changes the accounting meaning of same.			
210	The system should only allow the elimination of budgetary data that do not contain financial turnovers or operations and if this is necessary for organizational changes or regulations, the system must allow the filing of information, which can be consulted when required			



211	It allows to compare management progress at budgetary different times (comparing budget performance with executed performance): pre-committed or requested, committed, accrued, paid, advance payments and recovery in cash flow, and obtain balances and reports by period, by date or grouped by the concepts established by the user.			
212	It enables all budgetary data to be subject to individual authorization for use, thus maintaining adequate levels of security in them.			
213	It allows the assignment of the Approved Budget of Expenditure and Revenue per Exercise, per Head Unit, Budget Item, Funding Source and Program.			
214	It enables the identification of valid budgetary items for each Head Unit in order to allow only the budgeting of those valid items for each Head Unit according to EDM's operation.			
215	It allows the automatic process of budgeting from top to bottom (Higher Units to Subordinate Units) or from bottom to top, to calculate budgetary values of general items from budget items in detail, with various levels of addition and non-addition			
216	It enables to manage multiple budgetary versions.			
217	Allow a budget projection, specifying parameters for the calculation of the projection from historic budget records that have been executed, with various validity terms, the application of an increased percentage, taking into account macroeconomic variables, with a final modification by user per item of projected budget before the projection closing process. It should allow the application of parameters and an independent calculation of methods for each item of Income and Expenses or for groups of items			



218	Allows to control the use of resources according to budget allocations for each budget line-item per Head Unit- Budgetary Item-Funding Source-Program			
219	Once the Expenditure Budget is in motion, the System must allow to Freeze this authorized budgetary version and keep the values initially set			
220	Management of preliminary entries, initial budget documents, transfers, cancellations, supplements and releases to the budget, through various levels of authorization, with an automatic generation of electronic trades, allowing routing and assigning tasks to divisions and areas for positions and / or individuals according to EDM's needs. It allows to inform originators about the outcome of their application by the same means.			
221	It allows an automatic application and classification of expenses validating the available budget authorized to be exercised by Head Unit- Budgetary Item, Program and Source of Funding to prevent budgetary overdrafts in the commitment or in the exercise.			
222	The system must monitor online different budget times (pre-committed or requested, committed, accrued, paid or exercised and remaining balance) depending on the status of the process of expenditures or income.			
223	Ability to perform budget reserves, control budgetary non-availability, with effective date of the reserve			
224	Ability to generate budget information on a consolidated basis or by element according to the defined hierarchies of budgetary items			
225	Allow the management of extensions, budget transfers between items in real time			



226	Allows to control the availability of funds before approving the documents, without the need to run any additional batch process			
227	Allows online entry of budget turnovers in financial accounting			
228	Allows entry of budget turnovers such as: extensions, cancellations or changes to the commitment and exercise, updating and verifying budget availability online.			
229	It enables online reconciliation of budgetary information with the accounting and treasury information.			
230	It allows execution and closing of budget periods independently from the closing of accounts in order to know the budget status before the closing of accounts, keeping integration without allowing for records in accounting that will affect the budget if the latter is closed. The system must allow for the monthly closing by type of document or budgetary time or for head units.			
231	The system allows to implement budget reserves for budgetary executive areas whereby one or more areas or budgetary items, programs and projects can be specified. The system should verify online the budget adequacy in the budgetary items-programs-funding sources-specified project, rejecting the entry of such reserve in case of non-budget availability and once the document has been entered, the system must reduce the corresponding budgetary availability. The system must be able to specify the effective date of such reserve.			
232	The system should have an electronic function to approve or reject the request for budgetary reserves, through multiple levels of authorization depending on the amounts and items to be entered, and electronically submitting the document to the official(s) in charge of its approval.			



233	The budget reserve should register online a commitment in the budget of the specified item.			
234	Allows to implement in the budgetary closing the carrying over of budgetary balances and commitments and accrued not completed in the fiscal year, into the new fiscal year, clearly identifying the records from previous fiscal years			
235	Allows to carry over the pending documents so that they are entered into the new fiscal year budget, or to carry over the documents with their respective budget for the financial year to be ended, in which case such budget must be differentiated from the new fiscal year budget.			
236	It enables to keep historic records of previous years' budgets and the current budget.			

Management of accounts payable

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
237	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			



238	Compliance with tax and legal requirements in Mozambique.			
239	Control of duplicated invoices to avoid a double entry or payment			
240	Validation of online invoice data			
241	Credit control by invoice and supplier.			
242	Generation of manual payment and through an automatic program for payments.			
243	Automatic recalculation of payment programs.			
244	Deduction of withholding taxes at the time of payment.			
245	Automatic calculation and management of taxes when invoices are entered.			
246	Capable of handling foreign currency in invoices, documents and payments			



247	This module must reconcile the bills entered in it, checking invoices against purchase orders issued by purchases and warehouse entries.			
248	When a payment document is reversed, it automatically reverses (with the historic currency) the records generated in the accounting.			
249	Allows to generate reports on debts, by classification and consolidation of invoices (old invoices and concepts).			
250	The function of accounts payable must be integrated with the suppliers' catalog.			
251	It supports the following types of documents: invoices, debit notes, credit notes, expense accounts, corrections and cancellations.			
252	It numbers the documents automatically and on line.			
253	It validates the accounting charges of the invoice against the budget record, within the budget accrual.			
254	It may copy information from other receipts / documents in order to generate new ones.			



255	It enables the entry of the same accounting account for multiple items. (purchase orders, invoices)			
256	It restricts access to users who are unauthorized to carry out records for an entity or cost center in another area			
257	It automatically updates the liabilities recorded once payment has been made through the account payable module.			
258	The function of payments allows to select payments, based on different criteria such as: by creditor, way of payment, accounting document, financial entity and account., etc.			
259	Ability to enter documents that have not been entered by contracts and purchasing modules			
260	Controlling and monitoring status of pending invoices.			
261	Issuance of reporting on status of accounts by supplier, active and inactive accounts.			
262	Management of payments' authorization electronically and with different levels of authorization.			



Management of accounts receivable

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
263	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
264	It enables to generate reports of old balances automatically.			
265	Upon receipt of payment, it automatically posts the entry against the corresponding account receivable.			
266	Accounting subsidiary book for accounts receivable integrated with the ledger.			
267	It should be able to obtain a Statement of Account by Customer, i.e. details of all commercial transactions such as: Invoices, Credit Notes, Debit Notes, Returns, Claims Settlement, Payment Agreements, Status of External Agencies, Open Items, Balanced Items, Delinquency, Calculation of Interests, Uncollectible Items.			
268	To enable massive registration of revenues, automatically generating the document number and system date (allowing manual entry of the date), accounting, budget and Cash Flow entry, according to the accounts related by concept. This should be automatically performed			
269	Enabling automatic online updates of cash and bank balances, according to data recorded in the income register.			



Cost management

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
270	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
271	Management of standard costing			
272	Management of average costing, UEPS, PEPS.			
273	Management of ABC costing for all processes and integrated in the whole system.			
274	Parameterization of costing method by type of goods. This method should be edited by the end user.			
275	Ability to handle automatic prorating of costs based on% or calculations that take into account balances from other accounts.			
276	Ability to identify costs by cost center, department, section			



277	Cost analysis by process			
278	Integration of graphics, consult and cost analysis by category, management, section, etc., with drill down options.			
279	Analysis and comparative chart of real costs vs. budgeted costs, vs. standard costs.			
280	It must have a flexible structure of cost centers grouping, where several levels may be defined according to EDM needs.			
281	It must have a flexible grouping of general ledger accounts for costs and expenses, which can define several levels according to the needs of the company.			
282	It must have automatic records for accounting of costs and expenses arising from the modules originating the operation. (Purchasing, inventories, general accounting, etc.).			
283	Allows to control Cost Centers, verifying budget availability.			
284	Enabling prorating or allocations of costs between cost centers and managements, taking into account criteria such as percentages, fixed amounts and profitability of each.			



285	Enable to define and update the bases for the calculation and allocation of expenses or indirect costs between several cost centers.			
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Planning

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
286	Easiness to handle requisitions automatically and with at least 3 levels of electronic authorization.			
287	Ability to define KPI (key performance indicators) in the organization, with an automatic updating and monitoring from the system. The system must also include pre-defined indicators that enable the process of defining them.			
288	Ability to integrate information from outside the system automatically or via automatic email.			
289	Ability to integrate policies and procedures in the system that must be available online at all times.			
290	Ability to perform queries and analysis of quantitative and qualitative information of all transactions by taking information from the system or other sources			



291	Integration of financial information and KPI of all the organization areas in order to develop the EDM plans.			
292	Activities control by the established KPI reports from the management modules.			

Information Management

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
293	Each ERP system module should generate reports that serve to provide management information by a automatically or manual defined frequency.			
294	Ability to generate standard reports and ad-doc with access levels properly controlled.			
295	Ability to support the management performance through indicators control			
296	Enable to send automatically the predefine reports to the Board.			



General requirement of ERP modules

	REQUIREMENT	Complies	Does not Comply	Remarks on compliance
297	Should enable the use of multiple currencies.			
298	A unique maintenance Exchange table(with various foreign currencies, various periods and various currency types)			
299	The ability to maintain balances in the various functional currency and the transactional currency.			
300	Possibility to do the invoices with a currency different from the functional currency and from the currency that the invoice will be paid (i.e. functional currency MZM, currency invoice USD, charging currency MZM)			
301	Possibility of charge in any currency.			
302	Possibility to elaborate any reports in any currency.			
303	Ensure the recovery of historical data			



304	Ensure the information integrity (undo incomplete transactions)			
305	Should enable the use of multi-company structure			
306	Ensure the natural integration of ERP modules.			



2.3.3 Database

Specifically for IRMS the Bidder should take into account that the data model should describe the Distribution Network and its associated Clients as function of Purchaser needs. The structure of the Purchaser's Distribution Network will be modeled with all its voltage levels. This modeling should include also the first Transmission level at least. For each of them, various kinds of facilities should be defined. The IRMS and its database can be sized according to some parameters, which allow the representation of N voltage levels and M classes and subclasses of elements for each voltage. N and M should not have, in principle, an upper limit of sizing.

As an example, voltage levels currently used in EDM are:

<i>Voltage (kV)</i>
400
275
132
110
66
33
19.1 (SWER ¹)
11
0.400
0.230

Modeling elements, as an indication and not limitation, are:

¹ SWER: Single Wire Earth Return



<i>Class and subclass elements</i>	
Customer	
Facilities	Busbars
	Capacitors
	Switches
	Breakers
	Cut-outs
	HV/MV Substations
	MV Feeders
	MV/MV Substations
	MV Circuits
	MV Branches
	MV/LV Transformers
	LV Feeder
	Customer Pole

Examples of hierarchical relationships of the different elements and facilities that feed customers:



Example of a customer supply - Case 1

Substation HV/MV1

Circuit MV1

Branch MV1

Transformer MV1/MV2

Circuit MV2

Branch MV2

Transformer MV2/LV

LV Customer Pole

Customer

Example of a Customer supply - Case 2

Transformer MV1/MV2

Circuit MV2

Branch MV2 (level 1)

Branch MV2 (level 2)

.....

Branch MV2 (level n)

Transformer Centre MV2/LV

Customer's Pole

Customer

The search keys of Customers data within the Commercial Management System or the Incident Recording Management System, according to the configuration adopted, will be at least the following:



<i>Customers Data</i>
Name
Surname
Personal ID Number
Address
EDM Customer ID number
Customer's Pole ID
Power Meter ID

2.4 System Management, Administration, and Security Specifications

2.4.0 General Requirements:

In addition to the management, administration, and security requirements specified in each sections covering the various hardware and software components of the System, the System must also provide for the following management, administration, and security features at the overall system level.

2.4.1 Technical management and troubleshooting:

The solution proposed by the Bidder must manage the solution and troubleshoot any problem in the intended operation of the solution and arising because of defect or shortcoming.

2.4.2 User and usage administration:



Bidder's solution must allow a complete management of the User and Usage rights and privileges of the Users that access the Solution.

Access to the solution should be authorized by the individual and unique password with traceability and error control and intrusion attempts at solution.

The solution must have audit trail capabilities, allowing the tracing of transactions: who made when logged, where conducted, what have done and the type of change made (inclusion, amendment, deletion). These features should be enabled only in the functions that will be determined by the Purchaser.

2.4.3 Security:

Bidder's solution must allow developing, document and implementing security policies and procedures which will ensure at all times the security of the IT system deployed by the Bidder. Bidder must design and implement the Solution in compliance to the defined Information Security (as a reference Bidder might use ISO 27001)

Bidder's solution should be aligned with an Information Security Policy that should necessarily include but not limited to the following policies to ensure IT security in the Purchaser:

- IT Risk Management Policy
- Access Control Policy
- User ID and Password Management Policy

Among others the solution being offered should consider the following User Security Requirements

- User authentication by Active Directory (AD) must be possible
- Purchaser will decide the use of AD implementation
- User Activity reports must be possible
- Central Console for user logs must be provided
- Traceability and time stamp must be present
- Set of Index for availability and reliability of each system
- SLA criteria for each System



- Historian data for web server publishing and analysis
- Solution Security routines should allow users access only to the set of objects in the solution (screens, transactions, business areas, etc.) authorized individually to each user or group of users.
- Implement time out at the level of application module.
- Ensure information integrity (undo incomplete transactions).
- Access from a single menu structure.
- Should allow different levels of operations approvals for individual users and groups (Workflow approvals)
- Enable the registration and blocking access in the case of undue access attempts, being this function fully parameterizable.

2.5 Service Specifications

The Bidder shall Design, Develop, Customize, Deliver, Install, Configure and provide necessary support for integrated solution software, that will cater to the requirements of integrated application system as intended by Purchaser. Supplier shall train and equip all intended end users and beneficiaries of the system with all necessary skills required to operate in the new work environment due to the system implemented. Bidder shall provide the support for continuing operations and maintenance of the system during the Managed Services phase. Bidder is expected to perform and deliver the following services during the system implementation phase. Please note that the services mentioned below are the minimum services that the Supplier needs to provide. Bidder however is not expected to limit its services to the below mentioned scope only and may require to perform activities which are deemed appropriate by Purchaser in order to meet the expectations & goals of the Project.

2.5.1 System Integration:

As an integrated information system, the solution should support seamless integration with other systems to lessen the possibility of erroneous computations and mishandling of information, keeping data integrity and updated information intact. Also, the system will be designed to accommodate future interfaces and future enhancements. Initially the Bidder shall Design, Develop, Customize, Deliver, Install, Configure and provide necessary support for the following interfaces:



Interfaces per System

Commercial Management System (CMS)

The application should enable the development of interfaces with EDM's management systems and with other applications. Particularly, the Commercial Management System will be provided with the interfaces for the following sub-systems:

Internal to Bidder

- Financial and accounting system (Internal to Bidder): In order for the development of the interface's access to the Financial and Accounting System's database that EDM establishes, the Commercial Management System's provider should present all the necessary information. In order to keep the accounting data and the information regarding the enterprise's management updated, the Commercial System must be daily connected to the company's economic operations (invoicing, payment), which are carried out on a daily basis at the commercial agencies. The development of this interface will be realized by the offer's prices of the supplier.
- Incident management system: The Commercial Management System's supplier should present all the information required for the development of the interface's entry to EDM's Incident Management System's database. The development of this interface will be realized by the offer's prices of the supplier.

External to Bidder

- ECLIPSE Pre paid energy sale system: The Commercial Management System must connect to this system in order to receive data concerning the sale of energy and to send information into the system so that the latter can be updated and will therefore have the necessary information to carry out the operations successfully.
- Remote measurement system or AMR: In order to be able to receive data needed for the invoices of clients who are connected to the Telemetry System or that own AMR meters, the Commercial Management System's supplier, should present all the information required for the development of the interface that enables the access of



the Telemetry System into the Commercial Management System's database.

- **SCADA:** In order to receive information about the meters placed in the frontier points, which can facilitate the elaboration of the energy balance, the Commercial Management System's supplier should present all the data required for the development of the interface that enables the access of the SCADA System (that EDM has already developed or will do so in the future), into the Commercial Management System's database.
- **MS Excel:** The management information will be easily sent to Excel with the format defined by the user.
- **MS Word:** Reports previously defined in Word format can be issued.
- **MS Access:** Information obtained from the Commercial Management System's database can be put into the Access database's format.

Incident Recording Management System (IRMS)

The application should allow the development of interfaces with other EDM systems and with office applications. In particular, the IRMS will be supplied with interfaces for the following systems.

Internal to Bidder

- **Customer Management System:** The supplier of the IRMS must submit all information necessary for the development of the interface to access the Database of the Commercial Management System EDM, which ensures the proper functioning of the functionality described in the Technical Requirements.

External to Bidder

- **Remote Metering System:** IRMS provider must submit all information necessary for developing an AMI - IRMS interface, to receive alarms coming from the telemetry system indicating absence of voltage at the meter point (i.e. "last gasp"). These alarms can be processed by the IRMS as automated calls from customers. Development in the IRMS, in the case that this will be necessary, shall be borne by the supplier of IRMS. This activity should be quoted apart.



- SCADA: IRMS provider must submit all information necessary to access the IRMS database from the SCADA, installed at the National Dispatch in Maputo. The aim of this connection is to process alerts of feeder switching, creating automatically the related Incident Record within the IRMS. Additional software developments, if they were necessary on the IRMS, should be borne by the supplier of IRMS.
- NIS: EDM is using, since 2008, an ABB Network Information System (NIS) which is based on a Facilplus Spatial/E Geographical Information System from Digpro. This system is presently installed in Maputo and Matola offices. The NIS database contains the Distribution Network description and the connection of each customer to it. The supplier shall propose an IRMS database updating process using the NIS database as the source of all changes on the distribution Network.
- MS Excel: The management information will be easily exported to Excel with the format defined by the user.
- MS Word: Reports previously defined in Word format can be issued.
- MS Access: Data extractions should be possible from the database of the IRMS, in order to convert them to Access Database format.

2.5.2 Training and Training Materials:

This consists of the identification of the necessary resources, activities and methodology by which the knowledge for the operation of the systems to be installed will be transferred from the Bidder to the different users of the Purchaser. The Bidder shall act as the lead on the development of the Detailed Training Plan that will be completed after Contract award.

All training courses conducted by a trainer will be performed on site in the Purchaser training facility. Training classes must be available for up to twenty (20) students for all functional and operational courses, and must include training materials for all users. In the case of highly specialized technical training where the Vendor recommends four (4) or less personnel be trained, Purchaser will consider an off-site solution.

Training Plan

Bidder must provide:

- Definition of the objectives and scope of training
- Determination of training materials



- Identification of logistics for training,
- Design of training activities for instructors and trainees
- Design of training curriculum
 - a) The names of the courses that will be provided;
 - b) Course Pre-requisites
 - c) The duration of the course;
 - d) Who should attend each course (role/responsibility);
 - e) The orientation of the course (functional or technical);
 - f) The skill sets required
- Development of training schedule and design of training evaluation.

Bidders must make clear what post-training support will be provided for each course and for what duration. The cost (if any) should be fully identified and included in solution pricing.

Bidder will have final responsibility for preparing ALL training material documents and must clearly identify the portions of the training materials that Purchaser is expected to provide in completion of the documents.

Strategy and Methodology

Bidder must identify their training methodology and strategy for:

- The IT staff that support the SIGEM
- Functional users that will heavily use the System
- All other training that will require general user training.

Specify a strategy for training the following types of end users:

- Category 1 - Power Users (Employees that frequently use the system to process transactions);
- Category 2 - Casual Users (Users that access the system to view reports, or do queries on a casual basis); and
- Category 3 - Specialty users of the system (functional and technical analysts).



The Training methodology must outline both Bidder and Purchaser resource roles (with skills required) by function and by Deployment. Resource roles must be set at each stage of training, from gathering training requirements, identifying users to be trained, developing the detailed Training Plan and associated course curriculum, to producing training materials and end-user documentation, conducting training, and performing post training evaluations. Bidder should outline all steps within its approach.

Bidder must consider the following training:

- User Training

Bidder will provide training to users, as nominated by the departments of the Purchaser, for operation of various services and software applications incorporated in the system. It may be brought to the attention of the supplier that the serving manpower at the Purchaser is poorly IT literate with poor knowledge of common office software (like MS office, etc.) and common Internet services like emails etc. Hence the Bidder may plan for some basic level of training for the users. The Bidder must conduct training for the end users which would comprise of the following:

- ✓ Process Training: The process training should detail out the steps of the process along with the roles and responsibilities to the concerned end users and acquaint them with the revised processes.
- ✓ Application Training: The application training should be proposed to acquaint and train the work force with specific modules of the software applications thus giving the end users the skill to conduct their work through the new applications.

The program is expected to impart the required skill set and capacity for performance of defined roles and responsibilities in the new work environment.

All training should be done in Portuguese with a Portuguese native-speaker trainer. No translators would be allowed.

- Technical:

The Bidder must conduct separate technical training program to train the core technical staff of the Purchaser's IT department. The Bidder shall provide training in Portuguese about technical operations and



configurations of various equipments incorporated in the integrated IT Solution.

- Management:

The Bidder must provide training to managers and senior administrative personnel, as nominated by departments, specifically on monitoring and reporting features provided by the System. The training should cover features such as various dashboards and reports related to usage, capacity planning and decision support systems.

- OEM Training Program:

Bidder must arrange for OEM training in line with official OEM course curriculum mapped with the product to be implemented in the organization. This training will be conducted in Portuguese for a small group of users (not more than 20).

- Computer Based Training (CBT):

The Bidder might develop and deploy a computer based training (in Portuguese) which should be available online to all Purchaser's employees at all times. It is left to the Bidder to propose the design and functionality of the Computer Based Training (CBT) module. However, the CBT is expected to be rich in content, interactive and a user driven training utility.

2.5.3 Technical Support:

2.5.3.1 Warranty Service:

The Bidder Vendor shall warrant that the System, and any portion thereof, including but not limited to the individual Functions, Modules and Deployments, shall operate in accordance with, and be maintained, to meet the Specifications, terms, and requirements of the tender/Contract. This System Warranty shall be in addition to the Deployment Warranties for the individual Deployments and shall commence upon the Effective Date of the Contract and remain in effect throughout the System Warranty Period.

The Bidder shall warrant that the Software is properly functioning, compliant with the requirements of the tender, and shall operate in accordance with, and



be maintained throughout the System Warranty Period to meet the Specifications, terms and requirements of the tender/Contract.

The Bidder shall warrant that the Software do not violate or infringe any patent, trademark, copyright, trade name or other intellectual property rights or misappropriate any trade secret of any third party. This warranty of non-infringement shall be an on-going and perpetual obligation, which shall survive termination of the Contract. In the event the Software provided under this agreement is replaced or modified, the warranty period shall begin a new limited to only those elements of the Software, which have been replaced or modified. Any breach of this warranty may be subject to default.

The Bidder shall warrant that the Software does not contain any time bombs, destructive programming, or mechanisms designed to disrupt the performance of the System, malicious data, or other undocumented programs.

The Bidder shall warrant that all System components, in whole and in part, including but not limited to the individual Modules, Functions, Deployments, replacement or upgraded System Software components to correct Deficiencies, and/or Enhancements, shall operate compatibly with the rest of the System Software without loss of any functionality and in accordance with the Specifications.

Warranty Services

Bidder shall agree to maintain, repair, and correct Deficiencies in the System, Non-software Deliverables, and Written Deliverables, including but not limited to the individual Modules, Functions, Elements and the System, during all Warranty Periods, at no additional cost to the Purchaser, to meet the terms and requirements of this Bid.

Warranty Services shall include, without limitation, the following:

- ✓ System Maintenance: Bidder shall maintain the System so that it functions in accordance with and meets the Specifications, terms, and requirements of this Bid
- ✓ System Repair or Replacement: Bidder shall repair or replace the System, or any portion thereof, so that the System functions in accordance with the Specifications and requirements of this Bid.

Warranty Period

Warranty period will commence upon Purchaser issuance of a Letter of User Acceptance Test for the software and will continue for requested period. Upon



completion of Warranty Period, the Bidder will receive a Letter of Final Acceptance from Purchaser if no Class A or Class B Deficiencies exist.

If within the last thirty (30) calendar days of a Warranty Period, the System or any portion thereof, fails to operate in accordance with the Specifications, in whole or in part, the Bidder will correct the Deficiency, and a new thirty (30) calendar day warranty period will commence. Any Class A or B Deficiencies must be corrected and the Deployment and/or System must run for thirty (30) consecutive calendar days without Class A or B deficiencies for the Warranty Period to end.

2.5.3.2 User support / hot line:

Bidder should be able to provide the following assistance based on different categories:

- Class A Deficiencies (On-call Assistance) - for all Class A Deficiencies, the Vendor shall have available to NFC on-call telephone assistance, with issue tracking available to NFC, twenty four (24) hours per day and seven (7) days a week with an e-mail / telephone response within two (2) hours of request
- Class A Deficiencies (Diagnostic Response) – for all Class A Deficiencies, Bidder shall provide on-site support, within sixteen (16) business hours of a request
- Class B Deficiencies (Corrective Action) – for all Class B Deficiencies Purchaser will notify the Bidder of such Deficiencies during regular business hours and the Bidder shall respond back within forty eight (48) hours of notification of planned corrective action
- For all Class A and B Deficiencies found during the warranty period and all Class A and B Deficiencies found in the warranty releases shall be corrected by the Bidder no later than fifteen (15) business days, unless specifically extended by the Purchaser.
- In the event that the Bidder fails to correct a Deficiency or fails to do so within the allotted period of time, the Bidder may exercise its rights to extend the warranty period without cost (see above 2.3.5.1 as “Warranty Period Extensions”)

Bidder shall maintain a record of the activities related to warranty repair or maintenance activities performed for the Purchaser. For all warranty services



calls, the Vendor shall ensure the following information is collected and maintained: 1) Nature of the Deficiency; 2) Current status of the Deficiency; 3) Action plans, dates, and times; and 4) Deficiency resolution information. Bidder must work with Purchaser to perform System monitoring and identify and troubleshoot potentially large-scale System failures or Deficiencies by collecting the following information:

- Mean time between reported Deficiencies with the Software;
- Diagnosis of the root cause of the problem; and
- Identification of repeat calls or repeat Software problems.

2.5.3.3 Technical Assistance:

Bidder must provide Technical Assistance till the end of Warranty Service.

- Bidder must provide Technical Assistance in terms of application performance, client configuration, and database management
- Bidder shall provide Technical Assistance for the licensed software for the entire duration of engagement

Please refer Attachment 9: Service Performance Levels

2.5.3.4 Post-warranty maintenance services:

Bidder should quote for these extended services but considering that it is not part of this bid.

2.5.4 Data Conversion and Migration:

Bidder is responsible for the following activities in total coordination with the Purchaser:

- Data gathering and clean-up: This activity involves the specification of all data requirements of the new system. This will allow the Purchaser



to identified together with the Bidder necessary information data sources (including the collection of the information required for the operation of the systems to be installed when the necessary data is not available in the database of the existing systems or from any document files as well as the validation of the integrity and the currency of the existing information). Security and control measures to ensure the integrity of that information to be collected which are defined in the data gathering plan will be followed strictly.

- Preparation of conversion: This phase involves the preparation for conversion and the data to guarantee the success of the installation of the system. The process of conversion involves the transformation of the structure of the necessary data for the operation of the information systems to be installed.
- Conversion processes: Involves the identification and development procedures for the gathering and conversion of information. The bulk of conversion includes the creation and maintenance of conversion files as well as the control and contingency actions for the conversion processes.
- Technical design of automated conversion: Involves the designing of the files and modules that will be used for the conversion of information for the use of the systems in production. The specifications will be documented for the use of the analysts/programmers. The objective of this task is to ensure that the programs that will run will verify and validate the accuracy of the data obtained and will generated periodic reports on the validation process containing relevant statistics.

2.6 Documentation Requirements

2.6.1 END-User documents:

- Supplier must provide the complete set of user guides for operation of software solution products in Portuguese. The content for these guides must be generated depending on the application roles. This documentation must cover business processes and instruction on how to work with the GUI.
- Bidder must provide user manuals in Portuguese which should be in the form of step by step guide along with the various screen shots.



- Bidder must also provide manual covering DOs and DON'Ts, known issues and workarounds as required for operating and maintaining the end-user systems.
- Bidder must establish, as part of Help Desk, a set of FAQs and help assistant that is available online for Purchaser's employees as well as external stakeholders.
- All manuals must be available in Portuguese to end-users as PDF files as well in the form of online help as web pages. The help should be in the form of screenshots.
- Bidder should provide the corresponding Procedure Manuals (relating the activities with the corresponding system functions) in Portuguese.

2.6.2 Technical Documents:

Bidder must submit (using corresponding form in Section VII) together with the rest of bid documents a complete Hardware Requirements for System Installation and Use (ONLY Description of proposed solution needs). This inventory of Hardware needs will be used by the Purchaser to upgrade its existing Data Center Capabilities and workstations (as stated in Attachment 7 – Clause H).

Bidder must consider some basic premises:

- Optimum Configuration must be described in the offer (Layer design, server, storage and main issues and components, interconnection, etc)
- EDM will provide all standard Hardware required in accordance of the proposed dimensions
- Special requirements must be clarified for its consideration and must be quoted inside each offer
- Telecommunications links are proposed inside the ICS description
- Additional requirements must be clarified
- Special requirements for SIGEM' Systems management must be clarified and quoted in each offer

Additional to what is stated in Attachment 7, some of the general characteristics of the current Hardware are:



- The server family belongs to HP and this brand must be preserved along the project grown.
- Specifics server requirements must be list:
 - ✓ Processors
 - ✓ Family
 - ✓ -Quantity
 - ✓ -Speed
 - ✓ -Number of Cores
 - ✓ -RAM Memory extension and speed
- The Main Storage is an array of FiberChannel disks.
- Specials configurations of this array must be clarified for EDM preparing
- The storage system is:
 - ✓ Model: EVA 8000
 - ✓ Controller: Dual FC RAID
 - ✓ Cache: 4GB
 - ✓ Capacity: 10TB RAW
- Storage communications: HP StorageWorks SAN Switch 4/32
- The specials redundancy and RAID configurations will be agree
- The backup system:
 - ✓ Model: HP StorageWorks MSL 6000 series Library
 - ✓ Drivers: 2 x LTO2 400GB/1.6T
 - ✓ Slots: 32

Bidder must provide the specifications, installation, configuration and troubleshooting guides for items installed in Portuguese.

- Supplier shall provide maintenance manuals related to software
- Supplier must prepare all implementation documents such the requirements document, functional design/setup document, technical design document for customizations, technical documentation for programs, screens, interfaces, files formats used and reports generated, data migration strategy document, user acceptance testing documents



System level documentation

- a) The system level documentation shall include at least a two-level system description and a glossary.
- b) The first level of the system documentation shall be introductory. The system shall be described in a manner sufficient for operator and system manager understanding.
- c) On the second level, the Supplier shall furnish a manual that shall describe the system configuration and all system functions in detail. There shall be explained all the parameters and their effects on each function. The usage and purpose of all the devices and modules of the system shall be included in the document. The manual shall be organized for quick access to each detailed description of the system operation procedures.
- d) A glossary shall be delivered. There shall be indexes to the documents where the items are explained. Three handbooks are required: A Vending Server handbook, a Vending Client Operators handbook and a Management Client Operators handbook.

Maintenance manuals

For all the software maintenance functions there shall be a manual. Maintenance Manuals shall include the following subjects:

- Description of different kinds of data.
- Attributes of each data type.
- Various maintenance procedures
- Time periods between maintenance activities
- Details of how to obtain further assistance in the case of errors and maintenance problems

2.7 Consumables and Other Recurrent Cost Items

Bidder must provision the following Recurrent Cost Items from the day of achieving Operational Acceptance of the Entire System till the end of Warranty Period:

- Software Maintenance:



- ✓ System and General-Purpose Software
- ✓ Application, Standard, and Custom Software
- Managed Services

2.8 Other Non-IT Goods

Not Applicable



D. TESTING AND QUALITY ASSURANCE REQUIREMENTS

3.1 Inspections

3.1.1 Pre-delivery Inspections:

The Purchaser or its representative shall have the right to conduct pre-dispatch inspection of the Information Technologies for their conformity to the specifications (so called Factory Acceptance Test - FAT). The purpose of the FAT is to verify that the system meets all the demands specified in this document, as far as possible, when installed in a test environment. The system can be installed in the production environment after an approved FAT. The FAT of the installation shall be conducted in a laboratory environment before delivery to the Purchaser. The FAT shall be performed according to a FAT protocol. This test protocol is a part of the contract and shall be delivered to the Purchaser for review well before the actual FAT is planned to take place. These tests shall be coordinated with the Purchaser. All functions and functional correlations shall be tested in such a manner that all the equipment in the functional chain is tested as whole. The tests shall include both operational and maintenance related functions. All objects shall be tested for status, operational status, and exchange of messages, alarms and logging. Stability and durability performance shall be verified. The tests shall include normal as well as abnormal operational conditions.

Where the Purchaser decides to conduct such tests on the premises of the Supplier, Purchaser or a Third Party will depend on the following options to be chosen by the Purchaser:

- Visit to one of the client references listed by the Bidder as requested
- Prototype demo at Purchaser premises based on software specifications
- Prototype demo at Bidder's premises based on software specifications

In any case, all reasonable facilities and assistance like Testing Instruments and other test gadgets including access to drawings and production data shall be furnished to the inspectors at no charge to the Purchaser. The schedule & procedure of testing shall be coordinated among parties in accordance with



the Project plan. Should any inspected or tested Items fail to conform to the Specifications the Purchaser may reject them and the Bidder shall either replace the rejected Items or make all alterations necessary to meet Specification requirements free of cost to the Purchaser.

3.1.2 Inspections following delivery:

Bidder shall deliver all items requested on the time schedule negotiated. It also needs to submit all final versions of the documents stated in ITB16.2 (c). As this it is mandatory to submit the Hardware Requirements for System Installation and Use.

3.2 Pre-commissioning Tests

3.2.0 In addition to the Supplier's standard check-out and set-up tests, the Supplier (with the assistance of the Purchaser) must perform the following tests on the System and its Subsystems before Installation will be deemed to have occurred and the Purchaser will issue the Installation Certificate(s) (pursuant to GCC Clause 26 and related SCC clauses).

3.2.1 The Entire System: Pre-commissioning Tests for the entire System are:

Pre-commissioning testing or also called Site Acceptance Test (SAT) is done simulating the production load. Test data is either prepared or generated from the tools. This testing is used to evaluate performance, load capacity and concurrency, and also to verify that the system meets all the demands specified in this document, as far as possible, when installed in the production environment (onsite).

The system shall be tested after it is installed in its design environment (onsite). The SAT shall be performed according to a SAT protocol. This test protocol is a part of the contract and shall be delivered to the purchaser for review well before the actual SAT is planned to take place. All specified functions between the headquarter installation and a remote site shall be tested.

The test shall at least include the following parts:

Inspection of:

- System description



- Technical documentation
- Operator manuals

Functional tests:

- System functionality tested against specifications
- Integration in the Purchaser IT environment is tested

Performance tests:

- The system is tested against specified performance requirements

The SAT can be divided into multiple stages allowing for new installations to be connected to the system when they are ready to be tested. All parts of the system shall be complete at the time of roll-out. If the Bidder is unable to carry out certain test steps and procedures in the order proposed by the purchaser, the Bidder shall notify the Purchaser of this condition. The tests shall include normal as well as abnormal operational conditions.

Following special type of testing might be done during SAT Phase

- Regression Testing - The objective of regression testing is to ensure software remains intact (in case there was a recoding after some component was rejected). A baseline set of data and scripts will be maintained and executed to verify changes introduced during the release have not “undone” any previous code. Expected results from the baseline are compared to results of the software being regression tested. All discrepancies will be highlighted and accounted for, before testing proceeds to the next level.
- Performance Testing - Although performance testing is described as a part of system testing, it can be regarded as a distinct level of testing. Performance testing will verify the load, volume, and response times as defined by requirements. The Bidder has to test and demonstrate the operational performance requirement as defined in the Testing Plan after completion of entire scope.
- Load Testing - Testing an application under heavy loads to determine at what point the systems response time degrades or fails.
- Installation Testing - Testing full, partial, or upgrade install/uninstall processes. The installation test for a release



will be conducted with the objective of demonstrating production readiness. This test is conducted after the application has been migrated to the client's site. It will encompass the inventory of configuration items (performed by the application's System Administration) and evaluation of data readiness, as well as dynamic tests focused on basic system functionality. When necessary, a sanity test will be performed following the installation testing.

- Security/Penetration Testing - Testing how well the system protects against unauthorized internal or external access, willful damage, etc. This type of testing may require sophisticated testing techniques.
- Recovery/Error Testing - Testing how well a system recovers from crashes, hardware failures, or other catastrophic problems.

3.3 Operational Acceptance Tests

3.3.0 Pursuant to GCC Clause 27 and related SCC clauses, the Purchaser (with the assistance of the Supplier) will perform the following tests on the System and its Subsystems following Installation to determine whether the System and the Subsystems meet all the requirements mandated for Operational Acceptance.

3.3.1 Conversion Testing

As an important component of the system implementation all activities related to data gathering and conversion should be tested to have a smooth implementation.

3.3.2 The Entire System: Pre-commissioning Tests for the entire System are:

The system will be taken over by owner only after successful operational acceptance testing. As this, Purchaser might submit to Bidder an Implementation certification. These tests will involve the evaluation of the value of the parameters established for the certification of implementation of the systems. The primary objective of this activity will be to validate again the compliance of the system with the established criteria (test scenarios) to obtain a written implementation certification from the EDM top management. The composition of the team being involved in this task must be external to



the Bidder's Development Team and will involve Purchaser's End Users (to be determined by the Steering Committee in the course of the project). This segment will also cover the preparation of the executive summary and final report on the implementation of the new systems.

As a major component of these tests, Bidder in consultation with Purchaser (and end users) should prepare test scenario for each business scenario. A test scenario when executed should fulfill a business requirement as per the scope of business functionality. Test scenarios include following:

- Test Specification - During the test specification phase, the test cases are specified. It consists of description of the input, process to be executed and a prediction of output results.
- Test Environment - Component developer does unit testing and integration testing. Integration testing can be delegated to a specialized testing group. Each of the members in the testing group is provided with testing environment according to his/her role and responsibilities.

During the test scenarios definition, for each of the business scenario, an acceptance criterion is defined. Acceptance criteria include expected behavior of the software component and the expected results (data). Expected results form a part of the Exit Criteria. In addition to expected result and behaviors, some conditions are also specified in the exit criteria. They can be:

- Number of bugs to be discovered for a functional module. This depends on size of the functionality and is an indicator of amount of testing done.
- If any medium or low-priority errors are outstanding - the implementation risk must be signed off as acceptable by Purchaser.
- All High Priority errors from System Test must be fixed and tested

Bidder needs to get the acceptance criteria approved from Purchaser for all the functional components of the system. The Acceptance Criteria for each release into production environment will be agreed upon by Bidder in consultation with Purchaser prior to release from Testing to production environment. After installation, if any bug is reported or there is non-compliance to requirements then a proper procedure should be followed. End-user should report ("Change Request") to his/her supervisor about the bug that will in turn get forwarded to Project Manager (PM). PM will forward the List



of change request to Bidder along with consortium partners. After the bug is fixed, it should be reflected in the production copy after testing it.

Bidder should note that Purchaser can appoint a third party agency for conducting any part of above testing procedures (in addition to the testing carried out by the bidder).

3.3.3. Stability test (OAT)

The behavior and stability of the system shall be monitored during a 12 month period. The monitoring starts when all the installations in the system are connected and operational. This is done to ensure that no long-term errors arise. Suggestions on appropriate test periods and conditions shall be provided by the Bidder in cooperation with the Purchaser.



E. IMPLEMENTATION SCHEDULE

4. Implementation Schedule (*Entire System procurement*)

4.1 Time Schedule

The following schedule it is just a reference that aims to align Bidder's Implementation Strategy with Purchaser's expectations. Some tasks might be disregarded or additional tasks might be added by the Bidder to the Implementation Schedule based on previous approval by the Purchaser.

A more detailed project schedule can be given to the Bidder upon request.

4.2 Preferred Approach for Engagement

- a) **Purchaser prefers to implement a package based solution.**
- b) **The solution is expected to be implemented within 15 months from the effective date of signing the contract.**
- c) **The Bidder should provide Warranty support for 1 year post operational acceptance of the solution.**
- d) **Additional requirement gathering (including conversion, etc) and Pre-commissioning Testing would happen in a staggered manner; however, the Operational Acceptance would happen at a single go for the complete system.**
- e) **Software and Licenses would be procured in a manner to maximize the usable life of the Asset and Warranty Support.**
- f) **Licenses would be procured in accordance with the actual need of the organization. Supplier would agree to supply the licenses at the quoted Unit Rates at a Future Date to Purchaser during the performance of the Contract.**



ID	Task Name	Start	Finish	2012		Qtr 2, 2012			Qtr 3, 2012			Qtr 4, 2012			Qtr 1, 2013			Qtr 2, 2013				
				Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
1	Phase 3	Mon 3/26/12	Sat 6/8/13																			
2	Phase Organization	Mon 3/26/12	Fri 3/30/12																			
3	Submission of report of detailed implementation plan	Fri 3/30/12	Fri 3/30/12																			
4	Development	Sat 3/31/12	Wed 12/5/12																			
5	Organization	Sat 3/31/12	Wed 4/4/12																			
6	Programming and testing	Thu 4/5/12	Wed 10/31/12																			
7	Encoding of work units	Thu 4/5/12	Thu 8/2/12																			
8	Parametization	Thu 4/5/12	Thu 8/2/12																			
9	Unit testing	Fri 8/3/12	Fri 9/21/12																			
10	System testing	Sat 9/22/12	Wed 10/31/12																			
11	Technical support to development	Thu 4/5/12	Wed 12/5/12																			
12	Installation	Fri 6/29/12	Sat 6/8/13																			
13	Organization	Fri 6/29/12	Tue 7/3/12																			
14	Development of conversion procedures	Wed 7/4/12	Thu 8/2/12																			
15	Preparation for conversion	Fri 8/3/12	Fri 2/8/13																			
20	GO LIVE	Fri 2/8/13	Fri 2/8/13																			
21	Post-conversion follow-up	Sat 2/9/13	Sat 6/8/13																			
22	Initial support for the system	Sat 2/9/13	Wed 4/24/13																			
23	Analysis and evaluation	Sun 3/31/13	Wed 5/29/13																			
24	System delivery	Sat 5/25/13	Sat 6/8/13																			
25	Delivery of fully functional systems	Sat 6/8/13	Sat 6/8/13																			
26	Technology Assimilation	Sat 3/31/12	Fri 5/24/13																			
27	Organization	Sat 3/31/12	Mon 4/9/12																			
28	Diagnosis of inclination to change	Tue 4/10/12	Fri 6/8/12																			
32	Planning for technology assimilation	Tue 4/10/12	Sun 8/12/12																			
41	Rollout of technology assimilation	Mon 6/4/12	Fri 5/24/13																			



System Inventory Table (Supply and Installation Cost Items)
Entire System procurement

Component No.	Component	Relevant Technical Specifications No.	Additional Site Information	Quantity
1	Project Plan	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
2	System Software License		SIGEM	1
2.1	CMS	Clause B - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
2.2	IRMS	Clause B - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
2.3	ERP	Clause B - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	
3	Training	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS	Training facilities (Attachment 5 – H)	XX
4	Software Customization	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
4.1	Software Customization CMS	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
4.2	Software Customization IRMS			
4.3	Software Customization ERP			



Component No.	Component	Relevant Technical Specifications No.	Additional Site Information	Quantity
4.4	Customization CMS-IRMS interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
4.5	Customization CMS-ERP interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
4.6	Customization ERP-IRMS interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5	Installation	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
5.1	Installation of CMS	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5.2	Installation of IRMS	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5.3	Installation of ERP	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5.4	Installation of CMS-IRMS interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5.5	Installation of CMS-ERP interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
5.6	Installation of ERP-IRMS interface	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS		
6	Data Conversion	Clause 2.5 - SECTION VI. TECHNICAL REQUIREMENTS	SIGEM	1
7	System Administration	--	SIGEM	1



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Note: - - indicates not applicable. “ indicates repetition of table entry above.



System Inventory Table (Recurrent Cost Items)

Entire System procurement

Comp.No.	Component	Y1	Y2	Y3	Y4	...	Yn
1	Software Licenses & Updates	Incl. in Warranty					
1.1	System and General-Purpose Software	Incl. in Warranty	all items, all sites	all items, all sites	all items, all sites	none	none
1.2	Application, Standard and Custom Software	Incl. in Warranty	HQ	HQ	HQ	HQ	HQ
2	Technical Services						
2.1	Sr. Systems Analyst	80 days	40 days	20 days	10 days	0	0
2.2	Sr. Programmer	20 days	40 days	60 days	40 days	0	0
2.3	Sr. Network Specialist	--	20 days	20 days	0	0	0
2.4	Sr. Database Specialist	20 days	40 days	20 days	10 days	0	0
3	Extended Warranty Services (as described in BDS ITB 12.1)	--	HQ	HQ	HQ	HQ	HQ
4	Post warranty services (do not summarized as this is optional)	--	HQ	HQ	HQ	HQ	HQ

Note: -- indicates not applicable. “ indicates repetition of table entry above.



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Site Table(s)

Entire System procurement

See below Attachment 2 (Site Drawings and Site Survey Information)



Table of Holidays and Other Non-Working Days

Month	2011	2012	2013
January	1 st	1 st	1 st
February	3 rd	3 rd	3 rd
March			
April	7 th	7 th	7 th
May	1 st	1 st	1 st
June	25 th	25 th	25 th
July			
August			
September	7 th and 25 th	7 th and 25 th	7 th and 25 th
October	4 th	4 th	4 th
November	10 th	10 th	10 th
December	25 th	25 th	25 th



F. REQUIRED FORMAT OF TECHNICAL BIDS

5.1 Description of Information Technologies, Materials, Other Goods, and Services

5.1.0 The Bidder must provide detailed descriptions of the essential technical, performance, or other relevant characteristics of all key Information Technologies, Materials, other Goods, and Services offered in the bid (e.g., version, release, and model numbers). Without providing sufficient clear detail, Bidders run the risk of their bids being declared non-responsive.

5.1.1 To assist in the bid evaluation, the detailed descriptions should be organized and cross referenced in the same manner as the Bidder's item-by-item commentary on the Technical Requirements described in Section 5.2 below. All information provided by cross reference must, at a minimum, include clear titles and page numbers.

5.2 Item-by-Item Commentary on the Technical Requirements

5.2.0 The Bidder must provide an item-by-item commentary on the Purchaser's Technical Requirements, demonstrating the substantial responsiveness of the overall design of the System and the individual Information Technologies, Goods, and Services offered to those Requirements, see ITB Clause 16.2 (b).

5.2.1 In demonstrating the responsiveness of its bid, the Bidder is strongly urged to use the Technical Responsiveness Checklist provided in Section G of the Technical Requirements. Failure to do so increases significantly the risk that the Bidder's Technical Bid will be declared technically non-responsive. Among other things, the checklist should contain explicit cross references to the relevant pages in the Bidder's Technical Bid.

5.3 Preliminary Project Plan

5.3.0 The Bidder must prepare a Preliminary Project Plan describing, among other things, the methods and human and material resources that the Bidder proposes to employ in the design, management, coordination, and execution



of all its responsibilities, if awarded the Contract, as well as the estimated duration and completion date for each major activity. The Preliminary Project Plan must also address the topics and points of emphasis specified in “SCC Clause 19” including any additional items stated in the Bid Data Sheet for ITB Clause 16.2 (c). The Preliminary Project Plan should also state the Bidder’s assessment of the major responsibilities of the Purchaser and any other involved third parties in System supply and installation, as well as the Bidder’s proposed means for coordinating activities by each of the involved parties to avoid delays or interference.

5.3.1 In addition to the topics and points of emphasis, the Preliminary Project Plan MUST address:

5.3.2

a) Project Organization and Management Plan

i) Description of methodology & work plan for performing the assignment.

ii) Task, Time, and Resource Schedules

iii) List of persons going to be deputed as Project Manager, Business Process Re-Engineering Consultant, Quality Assurance Expert, Business Analysis, Project Leader, Training Expert, etc., giving their name, the minimum professional experience and the details of the project handled by each.

iv) Curriculum Vitae (CV) of proposed professional staff (CV should be signed by the concerned employee and the authorized representative of the Bidder), specifying the following:

1) Key qualifications – Description of staff member’s in depth and successful experience in maximum five assignments most pertinent to tasks on this assignment.

2) Education – Summarize college/university and other specified / management / professional education, giving names of the school, dates attended and degree obtained.



3) Employment record – Starting with present position, list in reverse order, every major employment hold.

b) Delivery and Installation Plan (work schedule)

Bidder should validate or suggest modifications to the implementation schedule, adding all necessary details based on their experience.

c) Data Requirement gathering Plan

A comprehensive plan should be submitted by the Bidder comprising the following phases:

- Data gathering and clean-up: This activity involves the specification of all data requirements of the new system. This will allow the Purchaser to identify together with the Bidder necessary information data sources (including the collection of the information required for the operation of the systems to be installed when the necessary data is not available in the database of the existing systems or from any document files as well as the validation of the integrity and the currency of the existing information). Security and control measures to ensure the integrity of that information to be collected which are defined in the data gathering plan will be followed strictly.
- Preparation of conversion: This phase involves the preparation for conversion and the data to guarantee the success of the installation of the system. The process of conversion involves the transformation of the structure of the necessary data for the operation of the information systems to be installed.
- Conversion processes: This segment will involve the identification and development procedures for the gathering and conversion of information. The bulk of conversion includes the creation and maintenance of conversion files as well as the control and contingency actions for the conversion processes.
- Technical design of automated conversion: This segment will involve the designing of the files and modules that will be used for the conversion of information for the use of the systems in production. The specifications will be documented for the use of the



analysts/programmers. The objective of this task is to ensure that the programs that will run will verify and validate the accuracy of the data obtained and will generate periodic reports on the validation process containing relevant statistics.

d) Information System Quality Plan

Bidder needs to describe how will apply proper project management practices to cost, time, resources, communication, etc., to assure proper quality of its deliverables. It also covers managing changes within the project.

e) Measurement Tools & Processes proposed for monitoring:

- Performance of the System
- Service Performance Level

f) Risk Management Plan

The strategies produced from the iterative process of review in the previous phases will be analyzed in order to designate different activities to meet the objectives of the Risk Management Plan. Certain identified risk factors may be minimized or eliminated by properly addressing them in training, communication and implementation support.

g) Training Plan

This consists of the identification of the necessary resources, activities and methodology by which the knowledge for the operation of the systems to be installed will be transferred from the Bidder to the different users of the Purchaser. The main objective is to describe methodology on:

- Definition of the objectives and scope of training
- Determination of training materials
- Identification of logistics for training,
- Design of training activities for instructors and trainees
- Design of training curriculum
- Development of training schedule and design of training evaluation.



To elaborate this plan, Bidder must consider the following training topics:

- User Training

Bidder will provide training to users, as nominated by the departments of the Purchaser, for operation of various services and software applications incorporated in the system. It may be brought to the attention of the supplier that the serving manpower at the Purchaser is poorly IT literate with poor knowledge of common office software (like MS office, etc.) and common Internet services like emails etc. Hence the Bidder may plan for some basic level of training for the users. The Bidder must conduct training for the end users which would comprise of the following:

- ✓ Process Training: The process training should detail out the steps of the process along with the roles and responsibilities to the concerned end users and acquaint them with the revised processes.
- ✓ Application Training: The application training should be proposed to acquaint and train the work force with specific modules of the software applications thus giving the end users the skill to conduct their work through the new applications.

The program is expected to impart the required skill set and capacity for performance of defined roles and responsibilities in the new work environment.

- Technical:

The Bidder must conduct separate technical training program to train the core technical staff of the Purchaser's IT department. The Bidder shall provide training about technical operations and configurations of various equipments incorporated in the integrated IT Solution.

- Management:

The Bidder must provide training to managers and senior administrative personnel, as nominated by departments, specifically on monitoring and reporting features provided by the System. The training should cover features such as various dashboards and reports related to usage, capacity planning and decision support systems.



- OEM Training Program:

Bidder must arrange for OEM training in line with official OEM course curriculum mapped with the product to be implemented in the organization. This training will be conducted for a small group of users (not more than 20).

- Computer Based Training (CBT):

The Bidder might develop and deploy a computer based training which should be available online to all Purchaser's employees at all times. It is left to the Bidder to propose the design and functionality of the Computer Based Training (CBT) module. However, the CBT is expected to be rich in content, interactive and a user driven training utility.

h) Change Management Plan

As part of the implementation and project roll-out, the Bidder is required to develop an awareness plan as part of the communication and change management process. The Bidder must develop a change management strategy while keeping in mind the implications of the revised systems on working within Purchaser after the implementation of the new IT system. Purchaser will take all necessary steps to facilitate the organization wide role out of the strategy once approved. It is expected that the Change Management Plan proposed by the Bidder clearly defines the following:

- Communication plan that will help in managing perceptions of all the stakeholders and creating awareness about the dimensions of change
- Operational plan that will help in developing change management team and implementing the overall change management strategy in a phased approach

Bidder would be required to detail a Change Management Workshop at the beginning of the project. The objective of the Change Management Workshop would be to generate awareness about the project and acquaint the staff at Purchaser with the new changes that would take place as a part of IT implementation strategy. Its aim would be to address the attendees with a formal introduction to the new system. The emphasis of the Orientation-cum-Workshop would lie on getting the user acceptance for the project from the



end users of the system and making them comfortable with the change with the implementation of IT project. All the users irrespective of the levels and the departments will have to be provided orientation training to apprise them of the changed environment and the usage of IT based functioning.

i) Pre-commissioning and Operational Acceptance Testing Plan

Test plans are prepared for each phase of testing. The initial test plan is created during the Project Planning phase. The initial test plan describes who performs which type of testing and when. Ideally master test plan covers all types of test i.e. from unit testing to production testing. The Bidder must build an overall plan for testing and acceptance of system. The Bidder will be responsible for the delivery of the functionality and associated testing. Purchaser will further help to identify the gaps in a proactive manner. The Acceptance Test Plan will include all the necessary steps to ensure complete FUNCTIONALITY, INTEGRATION, OPERATION, SECURITY AND PERFORMANCE of the system, either individually (i.e. specific module-wise/component-wise) or collectively as a whole, whichever would be appropriate to such an exercise. The Acceptance Test plan must describe the following:

- Testing methodology for each component of the solution
- Indicate how the Bidder would demonstrate to Purchaser that all the components of the new system have been tested
- Define the various levels or types of testing that will be performed
- Provide necessary checklist/documentation that will be required for testing.

Test plans contains following items:

- Roles and responsibilities of test team
- Approach to testing
- Function testing
- Security testing
- User Interface and reports testing
- Concurrency testing
- Performance and Load testing



- Test Scenarios along with entry and exit criteria
- Test specifications

It is Bidder's responsibility during the tests to evaluate and recommend any further changes to the infrastructure & application, at no extra cost to Purchaser. Any recommendations for change will be discussed with Purchaser.

Bidder should also provision for repeatable sets of test cases to cover implementation of patches or minor enhancements to reduce effort.

j) Warranty Service Plan

It will be expected that, initially, incidences will occur until the systems will perfectly comply with the functional design and technical environment while in operation and until the users are perfectly comfortable with the use of the system. Therefore, the Supplier shall warrant that the Systems and overall Solution shall have no defect arising from the design or workmanship, or through any act of omission or commission. This Warranty shall inter alia cover fine tuning, optimizing or changing the Application to serve its intent during the actual use of the Application. This plan needs to address how the Bidder plans to:

- Provide Managed Services till the end of Warranty Service.
- Setup Help Desk to cater to end-user complaints of all employees of Purchaser
- Put in place a complaint logging system for the help desk. Reports from the complaint logging system will be used for monitoring SLAs related to Help Desk.
- Generate required reporting for SLA computation.

k) Technical Support Plan

This involves the establishment of an action plan for providing user support during the period when the system is transferred to production to resolve problems that may arise in the initial use of the system. The objective of this task is to elaborate an implementation support plan. The activities that will be carried out to achieve this objective will include the definition and scope of implementation support, definition of logistics, design of activities and elaboration of calendar. The parameters for implementation certification will



also be defined during this segment. The implementation support plans and the defined parameters for certification will be presented to PURCHASER top management for review, revision and approval.

j) Post-Warranty Service Plan (optional)

Bidder can offer a post-warranty service plan. However this is not part of the requirements of this bid.

5.4 Confirmation of Responsibility for Integration and Interoperability of Information Technologies

5.4.0 The Bidder must submit a written confirmation that, if awarded the Contract, it shall accept responsibility for successful integration and interoperability of all the proposed Information Technologies included in the System, as further specified in the Bidding Document.



G. TECHNICAL RESPONSIVENESS CHECKLIST

Technical Responsiveness Checklist

Note to Bidders: The following Checklist is provided to help the Bidder organize and consistently present its Technical Bid. For each of the following Technical Requirements, the Bidder must describe how its Technical Bid responds to each Requirement. In addition, the Bidder must provide cross references to the relevant supporting information, if any, included in the bid. The cross reference should identify the relevant document(s), page number(s), and paragraph(s). The Technical Responsiveness Checklist does not supersede the rest of the Technical Requirements (or any other part of the Bidding Documents). If a requirement is not mentioned in the Checklist that does not relieve the Bidder from the responsibility of including supporting evidence of compliance with that other requirement in its Technical Bid. The single word response (e.g. “Yes,” “No,”) will not be sufficient to confirm technical responsiveness with Technical Requirements.

Requirement No. 1	Technical Requirement: As in point B. Business Function and Performance Requirements of Section VI. Technical Requirements	<i>Mandatory</i>
Bidder should provide detailed information on how it fulfills the requirements. The more complete this information is described the better the understanding of the Purchaser of the Bidder’s capacity in fulfilling all requirements.		

Requirement No. 2	Technical Requirement: As in point C. Technical Specifications Requirements of Section VI. Technical Requirements. As in point D. Testing and Quality	<i>Mandatory</i>
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	<p>Assurance Requirements of Section VI. Technical Requirements</p> <p>As in point E. Implementation Schedule including all inventory and other tables Requirements of Section VI. Technical Requirements</p>	
<p>Bidder should complete the corresponding technical requirements data sheet, and use the last column to describe:</p> <ul style="list-style-type: none"> ✓ Bidder's technical reasons supporting compliance ✓ Bidder's cross references to supporting information in Technical Bid <p>The more complete this information is described the better the understanding of the Purchaser of the Bidder's capacity in fulfilling all requirements.</p>		

Requirement No. 3	<p>Qualifying Requirements:</p> <p>As at ITB 6.1 (a) of BDS and other parts of the document specified</p>	<i>Mandatory</i>
<p>All documentation supporting Bidder's fulfillment of the requirements must be submitted</p>		

Requirement No. 4	<p>Bid Format Requirements:</p> <p>As in point F. Required format of Technical Bids (Clause 5.3) - of Section VI. Technical Requirements.</p>	<i>Mandatory</i>
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Bidder should cross references to supporting information in Technical Bid related to the Preliminary Project Plan. This plan will show Bidder's approach for the project and is a very important component of the bid.



H. ATTACHMENTS

Attachment 1. Existing Information Systems / Information Technologies

Attachment 2. Site Drawings and Site Survey Information

Attachment 3. Sample Reports, Data Entry Forms, Data, Coding Schemes, Etc.

Attachment 4. Relevant Legal Codes, Regulations, Etc.

Attachment 5. Available Training Facilities

Attachment 6. The Purchaser's Project and Corporate Management Structure

Attachment 7. The Purchaser's Data Center Capabilities and Hardware Inventory

Attachment 8. User Inventory

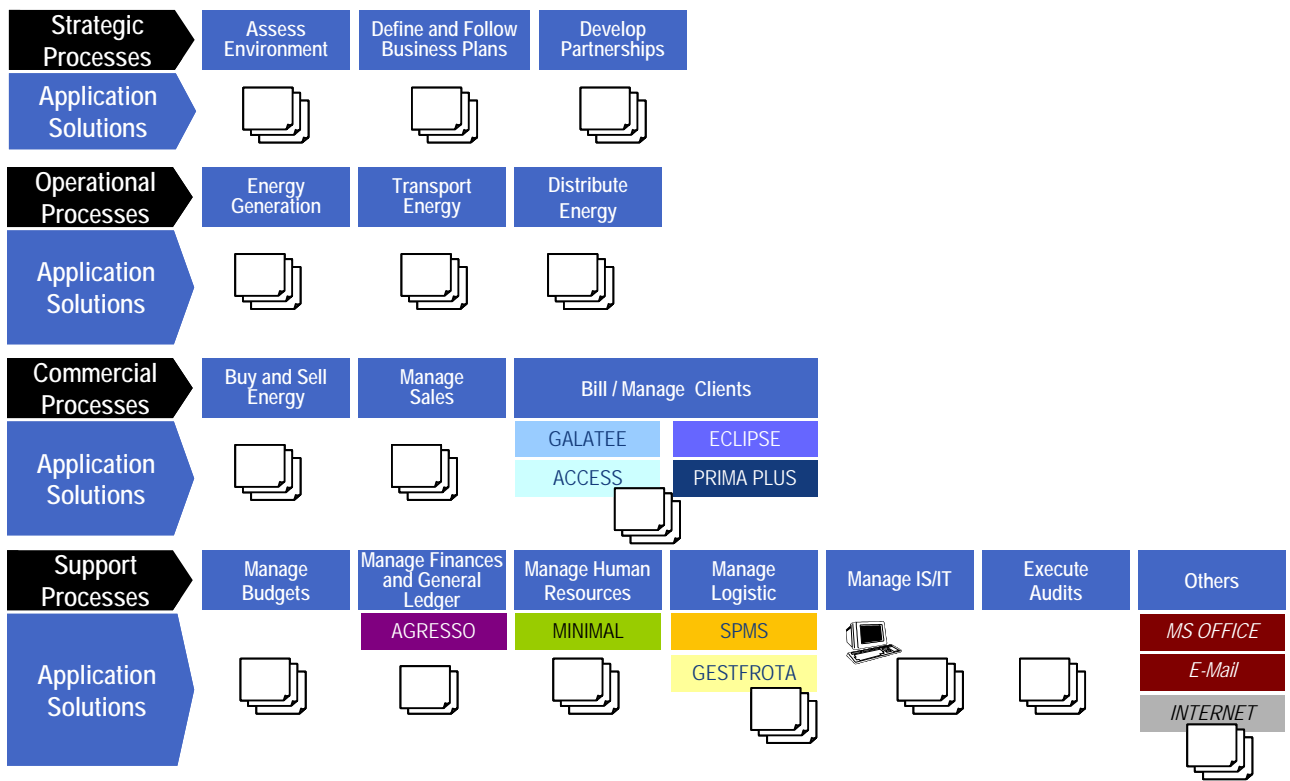
Attachment 9. Service Performance Levels

Attachment 10. Network



Attachment 1. Existing Information Systems / Information Technologies

EDM conducts its business processes - strategic, operational and support - through diverse applications and technological infrastructures.



The following tables present and summarize the main existing applications, grouped into two types: i) Management and Support Application and ii) Commercial Applications.



Management and Support Applications

This comprises the applications that support EDM's business management activities.

System	Description
AGRESSO	<ul style="list-style-type: none">▪ Financial application for processing the general ledger, analytical accounts, accounts receivable, accounts payable and fixed assets (minimal functions of the fixed assets module are used);▪ It was acquired from Agresso – ASA Group, manufacturer of the solution, and started being used by in EDM in 1996;▪ Presently is being configured to include stocks and purchases.▪ Version ABW 5.6
MINIMAL	<ul style="list-style-type: none">▪ The solution for human resource procedures (processing wages, performance assessment, workplace health, among others);▪ Acquired from the Portuguese company MINIMAL; EDM started using it in 1995 for processing wages;▪ Actually is running the version 1.6.0-29
KPI's	<ul style="list-style-type: none">▪ Application developed internally by EDM that addresses the KPI's (Key Performance Indicators) defined under the project "Separation of Accounts and Reorganization of EDM". This application will handle the data treated by all the company's systems;▪ Application built in MSFT Visual Basic on an MSFT Access database.
NIS	<ul style="list-style-type: none">▪ NIS (Network information system) – System used to management, maintenance and networking engineering as well as data gathering from distribution network;▪ Developed by Swedish company Digpro and supplied by ABB in 2007;▪ Actually the system is running in 5 distribution areas (Maputo, Matola, Beira, Nacala and Nampula);



System	Description
PSS/E	<ul style="list-style-type: none">▪ Application for calculus and high voltage network planning;▪ It was purchased from PTI (Show Power Technology, Inc . www.pti-us.com), an American corporation, supplier of various energy solutions,▪ It was commissioned in EDM in 1993,▪ It is a moonset up application that uses a system owner of files running on a MS-Windows
AppliDoc	<ul style="list-style-type: none">▪ Document Management System.▪ Sourced by PatnerSolutions, Portugal, in 2010▪ The system running under Windows 2000 Server;▪ The database is MS SQL Server 2000/2003/2005 Express
SCATEX	<ul style="list-style-type: none">▪ Application in use at transmission national dispatch centre;▪ Sourced in 2008 by Sweeden Company;▪ The system running under Windows XP on workstation and Linux at the servers;▪ The database is Oracle.
FleetCo	<ul style="list-style-type: none">▪ Fleet Management▪ Sourced by EngCo, Mozambique, in 2010
INTERNET & INTRANET	<ul style="list-style-type: none">▪ The site Internet (www.edm.co.mz) is the email server for EDM and it is hosted in the same infra-structure;▪ EDM's email runs under the domain edm.co.mz.▪ Sourced by DotCom, Mozambique, in 2010
CALL CENTRE (Piquete)	<ul style="list-style-type: none">▪ Fault Management, material consumption.



Commercial Applications

This comprises the applications that support customer relations activities.

System	Description
GALATÉE	<ul style="list-style-type: none">▪ Application for processing requests for contracts, recording readings, billing and collecting from EDM's "post-paid" clients;▪ Acquired from the French company SAUR and started to be used by EDM in 2000;▪ Customer/server solution that uses the Gupta (www.guptaworldwide.com) SQLBase 7.5.1 as its data base management system, Gupta with development in Team Developer 3.1 by the same manufacturer. Uses Microsoft Windows operating system.
ACCESS	<ul style="list-style-type: none">▪ Solution developed internally by EDM to automate the Operational Areas without access to Galatée;▪ The solution essentially seeks to control meter reading, billing and collecting for the "post-paid" services of each operational area;▪ It was developed internally by EDM and started to be used in 1995;▪ It operates in a Windows environment and was developed in MS Access Database.
ECLIPSE	<ul style="list-style-type: none">▪ Application for processing "pre-paid" management and sales;▪ Acquired from the South African company ACTARIS;▪ Started to be used by EDM in August 2002;▪ Uses Microsoft Windows operating system and Oracle database management system;▪ Standard Transfer Specification (STS) compliant.
AMR	<ul style="list-style-type: none">▪ Application used to bill High and Medium Voltage Customers▪ Supplied by Itron, South Africa, in 2010



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Attachment 2. Site Drawings and Site Survey Information

DIREÇÃO DA DISTRIBUIÇÃO DE MAPUTO							
Name	Type	Address	Reference Point (SE)		ER P	CMS	IRMS
Sede da Empresa	Escritorios	Av.Agostinho Neto nº70	25°58.09 2	32°35.54 9	X	X	X
Direcção de Distribuição	Escritorios	Predio JAT	25°58.63 1	32°34.86 2	X	X	X
Direcção Comercial	Escritorios	Av.Eduardo Mondlane nº1398	25°58.04 4	32°34.94 5	X	X	X
SIGEM	Escritorios	Av da Namaacha (EN4), km 1,5	25°56.47 4	32°31.91 2	X	X	X
Direção de Eletrificação e Projetos	Escritorios	Av.Filipe S.Magaia-nº368	456934	7127784	X		
Gabinete de Imagem e Comunicacao	Escritorios	Av.Alberth Luthuri nº970	456959	7128508	X		
Departamento de Saude e Assist.Social	Centro de Saude	Av.Patrice Lumumba nº177	458454	7126962	X		
Residencia Protocolar	Residencia	Av.Keneth Kaunda nº 406	459853	7128888			
OGE	Oficinas	Av.24 de Julho	457370	7127930	X		
Oficinas Gerais	Escritorios		25°55'57"	32°35'68"	X	X	X
Armazem Central			25°55'57"	32°35'96"	X		
Agencia das FPLM	Sede do CD		25°55'55"	32°35'96"		X	



SE4	Subestação		25°47'27"	32°34'29"			X
Distribuição (Av. Eduardo Mondlane)	Escritorios		25°58'39"	32°34'57"		X	
SE5	Subestação		25°57'86"	32°36'18"			X
SE1	Subestação		25°58'04"	32°35'96"			X
Distribuição	Sede do CD		25°58'39"	32°34'57"	X	X	
DEP.KARL Max	Loja Comercial		25°58'61"	32°34'18"		X	
SE3	Subestação		25°88'78"	32°34'13"			X
DEP.MALHANGALENE	Loja Comercial		25°57'38"	32°34'52"		X	
DEP.M.NGOUABY	Loja Comercial		25°57'24"	32°34'27"		X	
SE7	Subestação		25°57'13"	32°34'37"			X
FASE 1	Escritorios tecnico-comerciais		25°58'03"	32°34'25"		X	
SE2	Subestação		25°57'13"	32°33'13"			X
DEP.Alto Mae	Loja Comercial		25°57'29"	32°33'53"		X	
ZD Catembe	Sede da ZD		25°0'34"	32°33'48"	X	X	X
DEP.Jardim	Loja Comercial		25°55'49"	32°33'14"		X	
SE6	Subestação		25°55'39"	32°33'23"			X
Posto de venda do Bagamoio	Posto de Venda		25°53'51"	32°34'15"		X	
Piquete Benfica	Piquete		25°53'16"	32°33'54"		X	



FASE 4 - Sector tecnico	Sede do CD		25°52'56"	32°34'02"		X	
Posto de venda Minguene	Posto de Venda		25°55'20"	32°37'20"		X	
SE9	Subestação		25°53'82"	32°36'16"			X
SE8	Subestação		25°54'51"	32°36'49"			X
Fase 5	Sede do CD		25°52'48"	32°37'19"		X	X
Posto de Venda de Guava	Posto de Venda		25°49'25"	32°38'33"		X	
Posto de Venda de Matendene	Posto de Venda		25°51'03"	32°35'45"		X	
Posto de Venda CMC	Posto de Venda		25°50'38"	32°37'21"		X	
Agencia Marracuene	Sede do CD		25°44'21"	32°40'34"		X	X
Armazem Marracuene	Armazém		25°44'15"	32°40'30"	X		
SE da Riopele	Subestação		25°45'04"	32°39'34"			X

ÁREA DE DISTRIBUIÇÃO DA PROVINCIA DE MAPUTO

Name	Type	Address	Reference Point (E)		ERP	CMS	IRMS
SEDE DA ADPM	Escritórios		25 96.521	32 45.675	X	X	X
AGENCIA DE INFULENE	AGENCIA		25 54.030	32 32.086		X	
BOANE	ZD		26 02.533	32 19.578		X	X
NAMAACHA	ZD		25 59.157	32 01.177		X	X
BELA VISTA	ZD		26 20.937	32 40.116		X	X



PONTA DO OURO	ZD		26 50.364	32 52.946		X	X
INHACA	ZD		26 00.350	32 54.922		X	X
MANHIÇA	ZD		25 24.243	32 48.477		X	X
MOAMBA	ZD		25 36.046	32 14.554		X	X
SABIE	ZD		25 19.357	32 15.109		X	X
RESSANO GARCIA	ZD		25 26.513	31 59.424		X	X
BOANE	Subestação		26 02.214	32 19.720			X
MATOLA RIO	Subestação		25 59.328	32 25.638			X
MATOLA GARE	Subestação		25 49.259	32 26.484			X
MOAMBA	Subestação		25 34.565	32 15.178			X
SALAMANGA	Subestação		26 26.739	32 38.334			X
MACHAVA	Subestação		25 55.259	32 29.404			X
INFULENE	Subestação MOVEL		25 88.327	32 54.604			X
KONGOLOTE	Subestação MOVEL		25 85.498	32 55.164			X
TSALALA	Posto de Venda		25 52.670	32 26.634		X	
LIBERDADE	Posto de Venda		25 54.697	32 27.745		X	
MACHAVA	Loja Comercial		25 54.520	32 29.434		X	
NKOBE	Posto de Venda		25 50.374	32 29.230		X	
KONGOLOTE	Posto de Venda		25 50.155	32 32.064		X	



SAO DAMASO	Posto de Venda		25 52.875	32 31.115		X	
T3	Posto De Venda		25 54.155	32 32.512		X	

ÁREA DE DISTRIBUIÇÃO DO CHOKWÉ							
Name	Type	Address	Reference Point (E)		ERP	CMS	IRMS
Xinavane	ZD	Ed.Mondlane	25° 02' 47,1''	32° 47' 22,1''		X	
Magude	ZD		25° 01' 33,5''	32° 39' 03,4''		X	
Macia	Agencia	5° Bairro	25° 01' 41,8''	33° 06' 16,2''		X	X
P. Bilene	ZD	B.Cimento	25° 17' 15,7''	33° 14' 47,2''		X	
Xilembene	ZD		24° 40' 21,4''	33° 15' 29,3''		X	
Xilembene	Posto de venda (Contentor)	Chiguidela	24° 40' 38,4''	33° 19' 15,2''		X	
3 de Fevereiro	Posto de venda (Contentor)	1° Bairro	25° 09' 39,2''	32° 48' 18,0''		X	
Chiaquelane	Posto de venda (Contentor)	1° Bairro	24° 48' 36,2''	33° 07' 56,0''		X	
Chokwe - Piquete	Piquete	2° Bairro	24° 31' 33,4''	33° 00' 06,6''		X	X
Chokwe, Escritorio-Sede	Escritório	2° Bairro	24° 31' 40,0''	33° 00' 00,0''	X	X	
Chokwe, Escritorio-Sede	Armazém	2° Bairro	24° 31' 42,7''	33° 00' 00,2''	X		
Mabalane	Posto de venda (Contentor)		23° 51' 13,6''	32° 37' 29,4''		X	
Massingir	ZD	5° Bairro	23° 55' 12,7''	32° 09' 40,5''		X	



Massingir	Central Electrica	5º Bairro	23° 54' 56,8''	32° 09' 40,8''			X
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ÁREA DE DISTRIBUIÇÃO DE XAI-XAI							
Name	Type	Address	Reference Point (SE)		ER P	CMS	IRM S
Escritorio Sede	Escritório	B.1 cidade	25 02.658	33 38.822	X	X	X
Loja	Posto de Cobrança	B.1 cidade	25 02.654	33 38.574		X	
Loja	Posto de Venda	Tavene	25 03.340	33 39.424		X	
Loja	Posto de Venda	Chongoene	25 00.464	33 47.308		X	X
Escritorio Chibuto	ZD	Chibuto	24 41.498	33 31.874	X	X	X
Escritorio Manjacaze	ZD	Manjacaze	24 43.060	33 52.484	X	X	X
Loja	Posto de venda	Chicumbane	24 58.913	33 33.033		X	
Loja	Posto de venda	Zongoene	548526	7218993		X	X
Loja	Posto de cobranca	Chidenguele	24 55.225	34 11.382		X	X
Subestacao Chicumbane	Subestação	Chicumbane	24 58.913	33 33.033			X
Subestacao Tavene	Subestação	B.10 cidade	25 03.737	33 39.479			X

ÁREA DE DISTRIBUIÇÃO DE INHAMBANE							
Name	Type	Address	Reference Point (SE)		ER P	CMS	IRM S



Escritorio-Sede	Escritório	Balane-3	23°52'14.46"	35°23'9.66"	X	X	X
Agencia-Inhambane	Agencia	Balane-2	23°52'14.08"	35°23'0.23"		X	
Agencia-Maxixe	Agencia	Chambone-5	23°51'25.86"	35°20'46.97"	X		X
Loja	Posto de venda	Lindela	24° 5'39.50"	35°16'23.49"		X	
Subestação-Lindela	Subestação	Lindela	24° 6'20.69"	35°15'49.18"			X
ZD-Massinga	ZD	Cimento	23°19'49.56"	35°22'53.55"	X	X	X
ZD-Morrumbene	ZD	Cimento	23°39'29.00"	35°20'38.93"	X	X	X
ZD-Homoine	ZD	Nzucwane	23°53'2.93"	35° 8'59.70"	X	X	X
ZD-Inharrime	ZD	Chelenge	24°28'34.67"	35° 1'26.96"	X	X	X
UD-Quissico	UD	Nzile	24°43'8.55"	34°44'26.79"	X	X	X
Central de Mocumbine	Central Electrica	Mocumbine	24°32'1.72"	34°47'26.65"			X
Agencia de Vilankulo	Agencia	Central	21°59'9.02"	35°19'6.73"	X	X	
Piquete-Vilankulo	Piquete	Central	21°59'58.41"	35°19'4.64"			X
UD-Inhassoro	UD	Sede	21°32'15.39"	35°12'9.15"		X	X
UD-Nova Manbone	UD	Josina Machel	20°59'14.70"	35° 1'16.46"		X	X
UD-Machanga	UD	Gojone	20°58'31.65"	35° 0'4.63"		X	X
Subestação de Vilankulo	Subestação	19 de Outubro	21°57'37.69"	35°18'25.01"			X
Mini-Subestação de Inhassoro	Subestação	Fequete	21°32'22.44"	35°11'14.48"			X
Central de Temane	Central Electrica	Magungumete	21°44'30.38"	35°4'6.60"	X		



ÁREA DE DISTRIBUIÇÃO DE NAMPULA							
Name	Type	Address	Reference Point (SE)		ER P	CMS	IRMS
Escritorios/Agencia Norte	Agencia		15°06'806"	039°15'562"	X	X	X
Esc. Murrupula (actual)	Escritório		15°27'573"	038°40'557"	X	X	
Esc. Murrupula (futuro)			15°27'575"	038°40'621"			X
Subestacao 220kV	Subestação		15°07'475"	039°13'107"	X		
PV Muaca Nuavela	Posto de Venda		15°06'868"	039°13'314"		X	
Armazem	Armazém		15°06'595"	039°14'949"	X		
Central de Nampula/ATNO	Escritorio		15°06'849"	039°15'195"	X		
PV Paulo S. Khankomba	Posto de Venda		15°07'095"	039°15'812"		X	
Piquete de Nampula	Piquete		15°07'042"	039°15'910"			X
Agencia Sul	Agencia		15°15'008"	039°15'993"	X	X	X
PV Muahivire	Posto de venda		15°07'791"	039°15'952"		X	
PV Anchilo	Posto de venda		15°05'997"	039°25'443"		X	
PV de Marratane	Posto de venda		15°15'308"	039°14'828"		X	
PV Sipal	Posto de venda		15°06'789"	039°15'435"		X	



PV HSF (1° de Maio)	Posto de venda		15°07'011"	039°15'589"		X	
PV Poetas	Posto de venda		15°07'342"	039°15'868"		X	
PV Muahivire-Expansão	Posto de venda		15°08'703"	039°16'590"		X	
PV Aeroportos	Posto de venda		15°06'727"	039°17'012"		X	
PV Rapale (actual)	Posto de venda		15°01'976"	039°07'416"		X	
PV Rapale (futuro)	Posto de venda		15°01'983"	039°07'421"		X	
PV Namina	Posto de venda		14°56'393"	038°41'543"		X	
PV Namigonha	Posto de venda		15°02'672"	038°20'035"		X	X
Ribaue	Escritorio		14°56'509"	038°19'383"	X	X	X
PV Iapala	Posto de venda		15°01'650"	038°02'917"		X	X
Nametil	Escritorio		15°42'879"	039°20'421"	X	X	X
Moma	Escritorio		16°45'758"	039°13'260"	X	X	
PV Topuito	Posto de venda		16°33'170"	039°37'064"		X	X
PS Topuito	Posto de venda		16°33'338"	039°38'076"			
PV Larde	Posto de venda		16°28'936"	039°42'960"		X	X
Central de Angoche			16°12'703"	039°55'050"	X		X
Angoche	Escritorio		16°13'776"	039°54'148"	X	X	X
PV/Piquete de Angoche	Posto de venda		16°13'922"	039°54'377"		X	X
PV Inguri (Angoche)	Posto de venda		16°13'483"	039°54'203"		X	X



Namitoria	Posto de venda		16°03'160"	039°44'028"		X	
PV Nanhupo Rio (actual)	Posto de venda		15°57'923"	039°30'831"		X	
PV Nanhupo Rio (futuro)	Posto de venda		15°57'890"	039°30'835"		X	
PV km 20	Posto de venda		15°50'513"	039°25'522"		X	

ÁREA DE DISTRIBUIÇÃO LICHINGA

Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
AD Escritorios Lichinga	Escritorio	AV.FPLM	S13°17.875'	E035°14.625'	X	X	X
ZD - Marrupa	Escritorio	Marrupa sede	S13°11.672'	E037°29.870'		X	
UD Maua	Escritorio	Maua Sede	S13°52.220'	E037°09.652'		X	X
UD Metarica	Escritorio	Metarica Sede	S14°19.841'	E036°47.766'		X	
UD Mecanhelas	Escritorio	Mecanhelas Sede	S15°11.626'	E035°52.174'		x	X
UD Mecanhelas	Posto de Cobrança	Entre-Lagos	S14°59.276'	E035°53.439'		X	
Agencia de Cuamba	Central Electrica	Cimento	S14°48.030'	E036°32.094'			x
Agencia de Cuamba	Escritorio	AV 25 de Setembro	S14°47.885'	E036°32.423'	X	X	
Agencia de Cuamba	Posto de Cobrança	Lurio	S14°47.506'	E036°50.904'		X	
UD Malema	Posto de cobrança	Mutuale	S14°50.265'	E037°00.134'		X	



UD Malema	Escritorio	Malema Sede	S14°57.245'	E037°24.674'		X	X
ZD Mandimba	Escritorio	Mandimba Sede	S14°21.140'	E035°39.108'		X	X
UD Sanga	Escritorio	Malulu Sede	S12°56.638'	E035°25.512'		X	X
UD Sanga	Posto de cobrança	Nsauca	S13°05.143'	E035°11.829'		X	
UD Metangula	Posto de cobrança	Maniamba	S12°45.513'	E034°58.932'		X	
UD Metangula	Escritorio	Metangula sede	S12°41.891'	E034°48.433'		X	X

ÁREA DE DISTRIBUIÇÃO DE PEMBA							
Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Escritorio-sede	Escritorio	Natite	0663144 30 m	8566255 292°	X	X	X
Subestação Muchara	Subestacao	Muchara	0665547 113m	8556886 296°			
UD Mecufi	Escritorio		0668628 3 m	8530270 6°		X	X
ZD Chiure	Escritorio		0584690 345 m	8520168 238°		X	X
UD Namapa	Escritorio		0589317 227 m	8483600 163°		X	X
Subestação Metoro	Subestacao		0594903 360m	8548607 221°			X
Caixa Metoro	Posto de Venda		0594621 412 m	855110 341°		X	
ZD Montepuez	Escritorio		0500517 526 m	8549040 128°		X	



ZD Montepuez	Escritorio		0500197 521 m	8549191 266°			X
UD Ancuabe	Escritorio		0592702 351 m	8565514 322°		X	
ZD Macomia	Escritorio		12° 14' 56.04895"	40° 07' 28.28200"		X	X
ZD Mocimboa da Praia	Escritorio		647903	8745517		X	x

AREA DE DISTRIBUIÇÃO DE NACALA

Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Escritorio-sede	Escritorio		14°32.350 '	040°7'00	X		X
Posto de Vendas de Chocas Mar	Agencia		14°56.555 '	040°44.278'		X	
Posto de Vendas de Mossuril	Posto de venda		14°57.781 '	040°39.517'		X	
Ilha de Moçambique Escritorio	Escritorio		15°02.175 '	040°44.209'		X	
Agencia Alta	Agencia		14°33.327 '	040°41.209'		X	
parque de automoveis			14°33.479 '	040°41.205'			

ÁREA DE DISTRIBUIÇÃO DA BEIRA

Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
DDC-Escritório		Chaimite	19° 50.114	34° 50.254	X	X	X
Agência da Beira/P. de	Agência	Chaimite	19° 50.097	34° 50.243	X	X	X



Cobrança/Piquete							
Distribuição/Armazéns/futuro DDC/ADB	Escritorio	Maquinino	19° 50.075	34° 50.529	X		X
N.Ligações/Frota Automóvel/Parque	Escritorio	Maquinino	19° 50.059	34° 50.605	X	X	
Armazéns da Munhava	Armazem	Munhava	19° 48.388	34° 51.128	X		
Subestação da Munhava	Subestacao	Munhava	19° 48.433	34° 51.150			X
PS 50 futura Agência da Manga	Agencia	Manga	19° 46.914	34° 52.220	X	X	X
Subestação nº1	Subestação	Chainite	19° 50.158	34° 50.442			X
Subestação nº2	Subestação	Estoril	19° 50.401	34° 53.916			X
Subestação nº3	Subestação	Chipangara	19° 50.611	34° 51.307			X
Subestação nº4	Subestação	Macúti	19° 50.859	34° 52.618			X
Subestação nº5	Subestação	Maquinino	19° 49.850	34° 50.412			X
Agência do Dondo/P.Cobrança/Piquete	Agência	Central	19° 36.941	34° 44.635	X	X	X
Subestação do Dondo	Subestação	Nhamaiabue	19° 36.924	34° 43.485			X
UDBúzi	P. Cobran.	Nassane	19° 52.961	34° 35.822		X	
Armazéns do Búzi	Armazem	Nassane	19° 53.085	34° 35.784	X		X
Subestação de Guaraguara	Subestacao	Guaraguara	19° 52.017	34° 29.230			X
UDCaia	Posto de venda	Bairro da Vila	17° 49.697	35° 20.228		X	X



UDSena	Posto de venda	Bairro da Vila	17° 26.793	35° 1.746		X	X
UDChemba	Posto de venda	2° Bairro	17° 9.784	34° 53.477		X	X
UDChibabava	Posto de venda	1° Bairro	20° 17.536	33° 39.142		X	X
UDChibabava	Posto de venda	1° Bairro	20° 17.538	33° 39.127		X	X
Muxungue (Instalações alugadas)	Posto de venda	2° Bairro	20° 22.989	33° 56.161		X	X
UDInhaminga	Posto de venda	25 de Junho	18° 24.875	35° 1.421		X	X
ZDMarromeu	Posto de venda	S. Mutemba	18° 17.463	35° 56.263		X	X
UDMutarara	Posto de venda	25 Dezembro	17° 27.255	35° 4.806		X	X
ZDNhamatanda	Posto de venda	1° Bairro	19° 16.353	34° 12.372		X	X

ÁREA DE DISTRIBUIÇÃO DE CHIMOIO							
Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
ESCRITORIOS DA SEDE	Agencia	EDUARDO MONDLANE	36 K 0550306	UTM 7886875	X	X	X
Distribuição, Posto de Venda da Soalpo e Aprovisionamento	Escritorio	7 DE ABRIL	36 K 0551215	UTM 7884822	X	X	X
Posto de Venda de Nhamadjessa	Agencia	NHAMADJESSA	36K 0547582	UTM7886364			
Operação	Piquete	EDUARDO MONDLANE	36 K 0550300	UTM 7886920			X
SUBST. DE CHIMOIO - 01	Subestacao	BAIRRO 7 DE ABRIL	36 K 0551277	UTM 7884775			X
SUBST. DE CHIMOIO - 02	Subestacao	BAIRRO 7 DE ABRIL	36 K 0551439	UTM 7883706			X
UD MESSICA	Subestacao	MESSICA SEDE	36 K 0508487	UTM 7900563	X	X	



SUBST. DE MESSICA	Subestacao	MESSICA	36 K 0503587	UTM 7899480			X
ZD MANICA	Sede da ZD	JOSINA MACHEL	36K 0486500	UTM 7906138	X	X	x
SUBST. MANICA	Subestacao	BAIRRO JOSINA MACHEL	36 K 0486176	UTM 7905173			X
UD PENHALONGA	Escritorio	PENHALONGA SEDE	36 K 0474561	UTM 7914550	X	X	x
UD MACHIPANDA		CHITIO	36 K 0471331	UTM 7899873	X	X	x
UD VANDUZI		SEDE	36 K 0527785	UTM 7904258	X	X	
ZD GONDOLA SEDE		BAIRRO ED. MONDLANE	36 K 0567121	UTM 7890539	X	X	X
UD INCHOPE		3 DE FEVEREIRO	36K 0596203	UTM 7875961		X	X
Subst. Inchope		3 DE FEVEREIRO	36k 0598601	UTM 7876126			X
SUBST. DE GONDOLA - 1		BAIRRO ED. MONDLANE	36 K 0567693	UTM 7889440			X
SUBST. DE GONDOLA - 2		BAIRRO MUCÉSSUA	36 K 0569414	UTM 7887526			X
UD CATANDICA SEDE		CIMENTO	36 K 0518302	UTM 8003550	X	X	X
SUBST. DE CATANDICA	Subestacao	CATANDICA	36 K 0522736	UTM 8008676			X
UD - MUSSORIZE	Escritorio	BAIRRO CIMENTO	36 K 0476277	UTM 7738318	X	X	X
UD - GURO	Escritorio	SEDE	36K 0537151	UTM 8073574	X	X	X
UD - SUSSUNDENGA	Escritorio	SEDE	36 K 0530874	UTM 7853650	X	X	X

ÁREA DE DISTRIBUIÇÃO DE TETE

Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Escritorio-Sede	Escritorio	Francisco Manyanga	16°09,554'	033°35, 260'	X	X	
Aprovisionamento	Agencia-Sede	Filipe Samuel Magaia	16°08,378'	033° 34,285'	X		
Posto de Cobrança Matema	Posto de venda	Matema	16°08,708'	033° 37,584'		X	
Subestação	subestação	Filipe Samuel Magaia	16°09,315'	033° 35,023'			X



Escritorio-Manje	UD	Bairro nº 2	15°22,993'	033°12,320'		X	X
Subestação-Manje	UD	Bairro nº 2	15°22,329'	033°12,202'		X	X
Escritorio-Chifunde	UD	Bairro nº 1	14°52,876'	032°50,351'		X	X
Escritorio-Macanga	UD	Tchanjele	14°54,089'	033°36,545'		X	X
Escritorio-Ulongue	ZD	Francisco Manyanga	14°43,404'	034°21,628'		X	X
Escritorio-Tsangano	UD	Bairro nº 7	15°09,821'	034°33,619'		X	X
Escritorio-Zobue	UD	Bairro nº 2	15°35,632'	034°26,282'		X	X
Escritorio-Moatize	ZD	25 de Setembro	16°07,052'	033°43,633'		X	X
Escritorio-Changara	UD	Josina Machel	16°49,976'	033°16,605'		X	X
Escritorio-Cuchamano	UD	Bairro nº 2	16°57,856'	032°52,121'		X	X
Escritorio-Chitima	UD	1° de Maio	15°44,513'	032°46,075'		X	X
Escritorio-Magoé	UD	Bairro nº 1	15°48,552'	031°45,230'		X	X
Escritorio-Mucumbura	UD	Bairro nº1	15°46,532'	031°45,220'		X	X

ÁREA DE DISTRIBUIÇÃO DE QUELIMANE

Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Escritorio-sede	Agencia	Bairro Central	17° 52.663'	036° 52.975'	X	X	
Armazens	Armazem	Bairro Central	17° 52.575'	036° 52.943'	x		
Distribuição	Piquete	Bairro Central	17° 52.546'	036° 52.937'			X



UD Macuse	Escritório	Macuse	17° 42.016'	037° 10.787'	x	x	X
UD Namacurra	Escritório	Namacurra Sede	17° 29.666'	037° 01.633'	x	x	X
ZD Nicoadala	Escritório	Nicoadala Sede	17° 36.093'	036° 48.805'	x	x	X
Central Termica	Central	Bairro do Aeroporto	17° 52.058'	036° 52.601'			X
UD Zalala	Escritório	Praia de Zalala	17° 50.169'	037° 07.205'	x		
UD Zalala	Escritório	Praia de Zalala	17° 49.743'	037° 07.296'		x	X
UD Mopeia	Escritório	Mopeia Sede	17° 58.829'	035° 42.719'	x	x	X
ZD Morrumbala	Escritório	Bairro Central Morrumbala	17° 19.677'	035° 35.018'	x	x	X
UD Chimuara	Escritório	Chimuara	17° 46.828'	035° 24.426'	x	x	X
UD Inhassuge	Escritório	Gonhane	18° 01.783'	036° 49.177'	x	x	X

ÁREA DE DISTRIBUIÇÃO DE MOCUBA							
Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Escritório Sede - Direcção	Escritório	3 DE FEVEREIRO	28 53 42	8137252	X		
Distribuição	Piquete	Central	285270	8137242			X
Aprovisionamento	Armazem	Central	285244	8137231	X		
Agencia Sede	Agencia	Central	285270	8137220		X	



Posto de venda de Muroga	Posto de venda	CFM	285989	8137630		X	
Posto de venda do Aeroporto	Posto de venda	Aeroporto 1	283893	8136019		X	

DIRECÇÃO DA REDE DE TRANSPORTE							
Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Area Transporte Sul (ATS)	Escritorio		S 25° 52'58,83'	E 32°32'43,51"	X		X
Área Transporte Centro Norte (ATCN)	Escritorio	Rua da Resistencia	S 17° 52.551'	E 036° 52.941'	X		
ATCN - Estaleiro SAE	Armazem	Av. Julius Nyerere	S 17° 52.444'	E 036° 53.843'	X		
ATCN - SE Ceramica	Subestacao	Ceramica	S 17° 43.196'	E 036° 53.403'			X
ATCN - PS Nicoadala	Posto de Sec.	Nicoadala	S 17° 34.676'	E 036° 46.462'			X
ATCN - SE Chimuara	Subestacao	Chimuara	S 17° 46.856'	E 035° 24.352'			X
ATCN - SE Mocuba	Subestacao	Bive	S 16° 07.929'	E 038° 05.881'			X
ATCN - SE Mocuba	Armazem	Bive	S 16° 07.929'	E 038° 05.881'	X		
ATCN - SE Gurue	Subestacao	Gurue Sede	S 15° 29.483'	E 036° 59.661'			X
ATCN - SE Alto-Molocue	Subestacao	Uape	S 15° 39.168'	E 037° 40.243'			X
ATCN - SE Uape	Subestacao	Maua Sede	S 16° 07.849'	E 038° 05.896'			X

ÁREA DE PRODUÇÃO DE CHIMOIO



Name	Type	Address	Reference Point (SE)		ERP	CMS	IRMS
Central do Mavuzi	Central Hidroeléctrica	Bive	19° 32' 51,02" S	E 036° 52.941'			X
Central da Chicamba	Central Hidroeléctrica	Bive	19° 09' 20,9" S	33° 08'42,7" E			X
Armazéns Mavuzi		Gurue Sede	19° 32' 43,1" S	33° 30'32,2" E	X		
Armazéns Chicamba		Uape	19° 09' 20,9" S	33° 08'42,7" E	X		
Escritórios Chimoio	Escritório/Piquete	Maua Sede	19° 06' 36,5" S	33° 28'42,5" E	X	X	X



Attachment 3. Sample Reports, Data Entry Forms, Data, Coding Schemes, Etc.

As an example of actual documentation being used at the Purchaser offices, we listed below some reference documents:



DEMONSTRAÇÃO DE RESULTADOS POR NATUREZA

CÓDIGO DE CONTAS		EXERCÍCIO ECONÓMICO	
		2010	2009
6	CUSTOS E PERDAS		
6.2	Custos com o Pessoal	0,00	0,00
	6.2.2 - Remunerações dos Trabalhadores		
	6.2.5 - Ajudas de custo		
	6.2.6 - Indemizações		
6.3	Fornecimentos e Serviços de Terceiros	0,00	0,00
	6.3.1 - Subcontractos		
	6.3.2 - Fornecimentos e Serviços		
6.4	Impostos e Taxas	0,00	0,00
	6.4.3 - Imposto de selo		
	Total dos Custos Operacionais	0,00	0,00
6.8	Custos e Perdas Financeiros		
6.9	Custos e Perdas Extraordinários		
	Total dos Custos	0,00	0,00
8.8	Resultado Líquido do Exercício		
7	PROVEITOS E GANHOS		
7.2	Vendas de Serviços	0,00	0,00
	7.2.1 Serviços		
	Total dos Proveitos Operacionais	0,00	0,00
7.9	Proveitos ou ganhos extraordinários	0,00	0,00
	7.9.9 Outros proveitos e ganhos extraordinários		
	Total dos Proveitos	0,00	0,00
	Síntese		
	Resultados Operacionais	0,00	0,00
	Resultados Financeiros	0,00	0,00
	Resultados Extraordinários	0,00	0,00
	Resultados Líquido do Exercício	0,00	0,00

O Presidente do Conselho de Administração

O Técnico de Contas



FLUXO DE TESOURARIA

(Valores em
MTs)

DESCRIÇÃO	ACUMULADO ANUAL				MENSAL		DESVIO	
	ORÇAMENTO	REALIZADO	SALDO		ORÇAMENTO	REALIZADO	DESVIO	
			ABSOLUTO	%			ABSOLUTO	%
Saldo Final	0	0	0	0		0		
Saldo Inicial	0	0	0	0		0		
Cash-flow	0	0	0	0%		0		
Cobranças de energia e taxas		0	0	0%		0		
Outras receitas		0	0	0%		0		
Créditos Bancários recebidos		0	0	0%		0		
Cash-inflow	0	0	0	0%		0		
Custos de funcionamento		0	0	0%		0		
Remuneração a trabalhadores		0	0	0%		0		
Aquisição e importação de energia eléctrica		0	0	0%		0		
Aquisição de materiais eléctricos / DIA		0	0	0%		0		
Combustíveis p/ produção		0	0	0%		0		
Amortização de créditos		0	0	0%		0		
Despesas de investimento		0	0	0%		0		
Impostos e Taxas		0	0	0%		0		
Cash-outflow	0	0	0	0%		0		



EDM
Electricidade de Moçambique

FOLHA DE CAIXA

MOEDA NACIONAL

Data

RECEBIMENTOS

PAGAMENTOS

Entrada de caixa número	Descrição	Valor	Saida de caixa número
<input type="text"/>	1) De Bancos	<input type="text"/>	<input type="text"/>
<input type="text"/>	Cheques emitidos	<input type="text"/>	<input type="text"/>
<input type="text"/>	Cheques devolvidos	<input type="text"/>	<input type="text"/>
<input type="text"/>	Bordereauxs de despesas	<input type="text"/>	<input type="text"/>
<input type="text"/>	2) De Cobranças do dia	<input type="text"/>	<input type="text"/>
<input type="text"/>	Em cheques e numerario	<input type="text"/>	<input type="text"/>
<input type="text"/>	Por transferencia bancaria	<input type="text"/>	<input type="text"/>
<input type="text"/>	3) Remanescente de cheques	<input type="text"/>	<input type="text"/>
<input type="text"/>	Bordereuax de transferencia	<input type="text"/>	<input type="text"/>
<input type="text"/>	Juros credores	<input type="text"/>	<input type="text"/>
<input type="text"/>	Imposto sobre juros	<input type="text"/>	<input type="text"/>
	TOTAL DE RECEBIMENTOS	0,00	



RESUMO DO MOVIMENTO DO DIA

1.Saldo anterior	0,00
2.Total de Recebimentos	0,00
3. (1) + (2)	0,00
4.Total de Pgamentos	0,00
5.Saldo para o dia seguinte	0,00

DECOMPOSIÇÃO DE SALDO EM

--	--	--	--	--	--

FUNDO DE MANEIO

Numerário	0,00	
Vales	0,00	
Documentos	0,00	0,00

COBRANÇAS

Numerário	0,00	
Cheques	0,00	
Transferencias bancárias	0,00	0,00

OUTROS VALORES POR DEPOSITAR

Numerário	0,00	
Cheques		0,00

CHEQUES POR REGULARIZAR

244.238.944,00

TOTAL

244.238.944,00



Electricidade de Moçambique, 2012

CENTRO DE NEGOCIO E DE SUPORTE		Head Office & Support	Backup	Distribuição	Comercial	TOTAL
Número de consumidores						
Tarifa domestica social	0 - 100 kWh				0	0
Domestica	0 - 300 kWh				0	0
Domestica	301 - 500 kWh				0	0
Domestica	> 500 kWh				0	0
Pré-pagamento					0	0
Doméstica total					0	0
Geral	0 -300 kWh				0	0
Geral	301 - 500 kWh				0	0
Geral	> 500 kWh				0	0
Pré-pagamento					0	0
Geral total					0	0
Agrícola	0 - 300 kWh				0	0
Agrícola	301 - 500 kWh				0	0
Agrícola	> 500 kWh				0	0
Pré-pagamento					0	0
Agrícola total					0	0
GC - Baixa tensão					0	0
Baixa tensão total					0	0
Media tensão					0	0
Média Tensão Agricola					0	0



Media tensão total					0	0
Alta tensão					0	0
Alta tensão total					0	0
Número Total de Consumidores					0	0
Media mensal kW/categoria de consumidores						
GC - Baixa tensão					0	0
Media tensão					0	0
Média Tensão Agrícola					0	
Alta tensão					0	0
Vendas por categorias de consumidores (MWh)						
Tarifa domestica social	0 - 100 kWh				0	0
Domestica	0 - 300 kWh				0	0
Domestica	301 - 500 kWh				0	0
Domestica	> 500 kWh				0	0
Pré-pagamento					0	0



E D M

A. O. _____

ELECTRICIDADE DE MOCAMBIQUE, E.P.

Codigo _____

MAPA DE CONCILIAÇÕES BANCARIAS

BANCO	CONTA Nº	PERIOD O
Saldo cf. Extracto bancario	<input type="text"/>	Saldo cf. Conta-corrente <input type="text"/>
- Total cheques registados conta-corrente e por debitar no extrato. (discriminacao em anexo A)	<input type="text"/>	- Total debitos efectuados pelo banco ainda nao registados em conta-corrente (discriminar em anexo F) <input type="text"/>
+ Total depositos registados em conta-corrente e por creditar no extrato (discriminar em anexo B)	<input type="text"/>	+ Total creditos efectuados pelo banco ainda nao registados em conta-corrente (discriminar em anexo G) <input type="text"/>
- Total de valores erradamente creditados pelo banco (discriminar em anexo C)	<input type="text" value="0.00"/>	- Total valores erradamente registados a debito em conta-corrente (discriminar em anexo H) <input type="text"/>
+ Total de valores erradamente debitados pelo banco		+ Total valores erradamente



(discriminar em anexo D)

0.00

registados a credito em
conta-corrente
(discriminar em anexo I)

Outros

(discriminar em anexo E)

0.00

Outros
(discriminar em anexo J)

SALDO FINAL FIXO

0.00

0.00

NOME

CARGO

DEPARTAMENTO

ASSINATURA

Preparado em/...../..... por

Revisto em/...../..... por

Aprovado em/...../..... por



Electricidade de Mocambique

Codigo:

CONTAGEM DE TESOURARIA

Contagem realizada no dia com referencia a

Referência

FUNDO DE MANEIO

	Meticais	Número	Valor	
Notas	100.00	x 0	=	0.00
	50.00	x 0	=	0.00
	20.00	x 0	=	0.00
	10.00	x 0	=	0.00
	5.00	x 0	=	0.00
	1.00	x 0	=	0.00
		x	=	0.00
		x	=	0.00
			Sub total	<input type="text" value="0"/>
Moedas	5,000.00	x	=	0.00
	1,000.00	x	=	0.00
	500.00	x	=	0.00
	100.00	x	=	0.00
	50.00	x	=	0.00
	20.00	x	=	0.00
	10.00	x	=	0.00
	5.00	x	=	0.00
	1.00	x	=	0.00
	0.50	x	=	0.00
				Sub total



DESPESAS PAGAS A PARTIR DO FUNDO DE MANEIO
(ainda nao regularizadas)

A1.1

0.00

A1.2

0.00

A1.3

0.00

OUTRO
S

0.00

TOTAL

A

	NOME	CARGO	ASSINATURA
CONFERENTE	<input type="text"/>	<input type="text"/>	<input type="text"/>
TESOUREIRO	<input type="text"/>	<input type="text"/>	<input type="text"/>
SUPERVISOR	<input type="text"/>	<input type="text"/>	<input type="text"/>



Electricidade de Mocambique

Codigo:

CONTAGEM DE TESOURARIA

Contagem realizada no dia _____ com referencia a

Referencia:

FOLHA RESUMO DA CONTAGEM

	Referencia	
FUNDO DE MANEIO	<input type="text"/> A 1	<input type="text"/> -
COBRANÇAS POR DEPOSITAR	<input type="text"/> A 2	<input type="text"/> -
OUTROS VALORES POR DEPOSITAR	<input type="text"/> A 3	<input type="text"/> -
CHEQUES POR REGULARIZAR	<input type="text"/> A 4	<input type="text"/> -
OUTROS	<input type="text"/> A 5	<input type="text"/> -
TOTAL		<input type="text"/> -

	NOME	CARGO	ASSINATURA
CONFERENTE	<input type="text"/>	<input type="text"/>	<input type="text"/>
TESOUREIRO	<input type="text"/>	<input type="text"/>	<input type="text"/>
SUPERVISOR	<input type="text"/>	<input type="text"/>	<input type="text"/>




Electricidade de Mocambique

Codigo:

CONTAGEM DE TESOURARIA

Contagem realizada no dia _____ com referencia a _____

Referencia  A1:1

DESPESAS PAGAS A PARTIR DO FUNDO DE MANEIO

Folha 1 de 5

DOCUMENTO			DESCRIÇÃO	VALOR
TIPO	Nº	DATA		
1				0.00
2				0.00
3				0.00
4				0.00
5				0.00
6				0.00
7				0.00
8				0.00
9				0.00
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				



22				
23				
24				
25				

A Transportar

0.00

	Nome	Cargo	Assinatura
Conferente		0	
Tesoureiro		0	
Supervisor		0	

Folha 2 de 5

DOCUMENTO			DESCRICAO	VALOR
TIPO	Nº	DATA		
Transporte				0.00
26	2			
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				



43
44
45
46
47
48
49
50

A Transportar

0.00

	Nome	Cargo	Assinatura
Conferente	0	0	
Tesoureiro	0	0	
Supervisor	0	0	

Folha 3 de 5

	DOCUMENTO			DESCRICAO	VALOR
	TIPO	Nº	DATA		
	Transporte				0.00
51	3				
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					



64
65
66
67
68
69
70
71
72
73
74
75

A Transportar

0.00



	Nome	Cargo	Assinatura
Conferente	0	0	
Tesoureiro	0	0	
Supervisor	0	0	

Folha 4 de 5

DOCUMENTO			DESCRICAO	VALOR
TIPO	Nº	DATA		
Transporte				0.00
76	3			
77				
78				
79				
80				
81				
82				
83				
84				



85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
10				
0				

A Transportar

0.00

	Nome	Cargo	Assinatura
Conferente			
Tesoureiro			
Supervisor			

Folha 5 de 5

	DOCUMENTO			DESCRICA0	VALOR
	TIPO	Nº	DATA		
					0.00
10					
1	5				
10					
2					
10					
3					
10					
4					



10				
5				
10				
6				
10				
7				
10				
8				
10				
9				
11				
0				
11				
1				
11				
2				
11				
3				
11				
4				
11				
5				
11				
6				
11				
7				
11				
8				
11				
9				
12				
0				
12				
1				
12				
2				
12				
3				
12				
4				
12				
5				

TOTAL

0.00



	Nome	Cargo	Assinatura
Conferente			
Tesoureiro			



Supervisor

0

0



Electricidade de Mocambique

Codigo: 0

CONTAGEM DE TESOURARIA

Contagem realizada no dia com referencia a

Referencia A1.2

VALES Folha 1 de 2

DATA	BENEFICIARIO	FINS A QUE SE DESTINA	VALOR
1			0.00
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			



18			
19			
20			
21			
22			
23			
24			
25			

A Transportar

0.00

	Nome	Cargo	Assinatura
Conferente	0	0	
Tesoureiro	0	0	
Supervisor	0	0	

Folha 2 de 2

DATA	BENEFICIARIO	FINS A QUE SE DESTINA	VALOR
			0.00
26	1		
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			



39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

TOTAL

0.00

A1

	Nome	Cargo	Assinatura
Conferente	0	0	
Tesoureiro	0	0	
Supervisor	0	0	



EDM, E. P.

D.D./A.D./Z.D.

Código: _____

REQUISIÇÃO DE FUNDOS À TESOURARIA

Nº ____/____/____ Sector requisitante _____

Data: / / _ _ _

Valor

--	--	--	--	--

1. Extenso: _____

2. Fins a que se destina: _____

Documento



Tipo **n°** **Beneficiário** **Valor**

_____	_____	_____	_____	_____
-------	-------	-------	-------	-------

Encargo a ser suportado pela verba do Código n° _____ cuja situação é a seguinte:

Disponibilidade inicial.....

--	--	--	--	--

Saldo existente.....

--	--	--	--	--

Valor da presente RFT.....

--	--	--	--	--

Saldo final.....

--	--	--	--	--

3. Transferência Bancária n° _____ s/ a conta n° _____ sobre o _____

Cheque n° _____ s/ a conta n° _____ sobre o _____

Débito Directo n° _____ s/ a conta n° _____ sobre o _____



Outra Forma de Pagamento: _____

4. Responsável pela elaboração da RFT: Nome: _____ Cargo: _____ Assinatura: _____

5. Assinatura do Chefe do DALO: Nome: _____ Cargo: _____ Assinatura: _____

6. Responsável pela Autorização da RFT: Nome: _____ Cargo: _____ Assinatura: _____

7. Assinatura do Tesoureiro após Pagamento: Nome: _____ Cargo: _____ Assinatura: _____

.....
A destacar e destruir após a regularização desta RFT

Recebi em __ / __ / ____ o cheque acima identificado em 3. Emitido pelo valor desta RFT

assinatura do responsável pela regularização desta RFT



*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P.*

Section VI. Technical Requirements

Page 404

mod.: EDM / OM - TRFT - 2005



Attachment 4. Relevant Legal Codes, Regulations, Etc.

ENERGY LEGAL FRAMEWORK

ENERGY SECTOR / POWER GENERATION AND SUPPLY

- Law No. 21/97, of 1 October 1997 - Electricity Law
- Decree No. 8/2000, of 20 April 2000 - Regulations on the Powers and Procedures for the Award of Concessions, and the Import and Export of Energy
- Decree No. 42/2005, of 29 November 2005 - Regulations on the National Power Transmission Network Regulations (“NPTN”)
- Decree No. 43/2005, of 29 November 2005 - which entrusts the role of NPTN Operator to Electricidade de Moçambique, EP (“EDM”)
- Decree No. 45/98, of 25 September 1998 – Regulations on management of power facilities built or renovated with own funds in the Districts which has not been assigned to a public company
- Ministerial Diploma No. 31/85, of 31 July 1985 - Regulations on Technical Skills for preparing, implementing and operating power facilities of particular service
- Decree No. 48/2007, of 22 October 2007 - Licensing Regulations for Electric Facilities
- Decree No. 43/2005, of 29 November 2005 - entrusts the role of NPTN Operator to Electricidade de Moçambique, EP (“EDM”)
- Decree No. 25/2000, of 3 October 2000 – Electricity National Council (CNELEC) Statutes
- Decree n° 46847 - Regulation of safety of high voltage power lines and distribution networks of low voltage power
- Decree n° 46847 - Regulation of safety of substations and stations of transforming and sectioning
- Decrees 29782, 30308 and 37823 - Regulation of safety of low voltage power facilities
- Decree 28/95 July 17th - Transforms Empresa Nacional de Electricidade de Mocambique,E.E in a Public Utility



ENERGY POLICIES AND STRATEGIES

- Resolution No. 10/2009, of 4 June 2009 - Energy Policy and Strategy
- Resolution No. 22/2009, of 21 May 2009 - Biofuels Policy and Strategy
- Resolution No. 62/2009, of 14 October 2009 – Renewable Energy Policy
- Resolution No. 64/2009, of 2 November 2009 – Natural Gas Market Development Strategy
- Decree No. 67/2009, of 11 December 2009 – National Atomic Energy Agency

OTHER LEGAL FRAMEWORK APPLICABLE

CORPORATE

- Decree-Law No. 2/2005, of 27 December 2005 as amended by Decree-Law No. 2/2009, of 24 April 2009 – Mozambican Commercial Code
- Decree 49/2004, of 17 November 2004 - Commercial Activities' Licensing Regulations

INVESTMENT

- Law No. 3/93, of 24 June 1993 - Investment Law (“IL”)
- Decree No. 14/93, of 21 July 1993, as amended by Decree No. 43/2009, of 21 August 2009 - Investment Law Regulations (“ILR”)

TAX & CUSTOMS

- Law No. 34/2007, of 31 December 2007, as amended by Law No. 20/2009, of 10 September 2009 - Corporate Income Tax Code (“CIRPC”)
- Decree No. 9/2008, of 16 April 2008, as amended by Decree No. 68/2009, of 11 December 2009 - Corporate Income Tax Regulations
- Law No. 32/2007, of 31 December 2007 - VAT Code
- Decree No. 8/2008, of 16 April 2008 - VAT Code Regulations



- Law No. 4/2009, of 12 January 2009 – Tax Benefits Code
- Decree No. 34/2009, of 6 July 2009 - Customs Clearance of Goods
- Law 15/2002 June 26th – Tax General Law
- Decree 56/2009 October 7 – Fiscal Benefits

LABOUR

- Law No. 23/2007, of 1 August 2007 - Labour Law
- Decree No. 55/2008, of 30 December 2008 - Expatriate Regulations
- Decree No. 38/2006, of 27 September 2006 – Visa Regulations

ENVIRONMENT

- Resolution No. 5/95, of 3 August 1995 – National Environment Policy
- Law No. 20/97, of 1 October 1997 - Environment Law
- Decree No. 45/2004, of 29 September 2004, as amended by Decree No. 42/2008, of 4 November 2008 – Environmental Impact Assessment Regulations
- Decree No. 13/2006, of 15 June 2006 – Waste Management Regulations

FOREIGN EXCHANGE

- Law 11/2009, of 11 March 2009 - Foreign Exchange Law
- Bank of Mozambique's Order No. 5/GGBM/96, of 19 July 1996 – Foreign Exchange Regulations

LAND

- Law 19/97, of 1 October 1997 - Land Law
- Decree 66/98, of 8 December 1998, as amended by Decree No. 1/2003, of 18 February 2003 and Decree No. 79/2009, of 29 December 2009 - Land Law Regulations



GENERAL

- Mozambican Constitutional Law – approved on 16 November 2004
- Mozambican Civil Code
- Civil Procedure Code
- Law No. 11/99, of 8 July 1999 - Arbitration, Conciliation and Mediation Law (“ACML”)
- Decree No. 15/2010, of 24 May 2010 - Regulations on Procurement for Public Works, Supply of Goods and Provisions of Services to the State



Attachment 5. Available Training Facilities

TRAINING FACILITIES		
Item	Maputo Training Center	Chimoio Training Center
Classrooms	4	2
Computer Classroom	1	1
PC per Classroom	12	10
Trainees per Classroom	16	16
Laboratory	1	1
Electric Training Classroom	1	1
Mechanical Training Classroom	1	1
Datashow	2	1
Training Camp	1	1

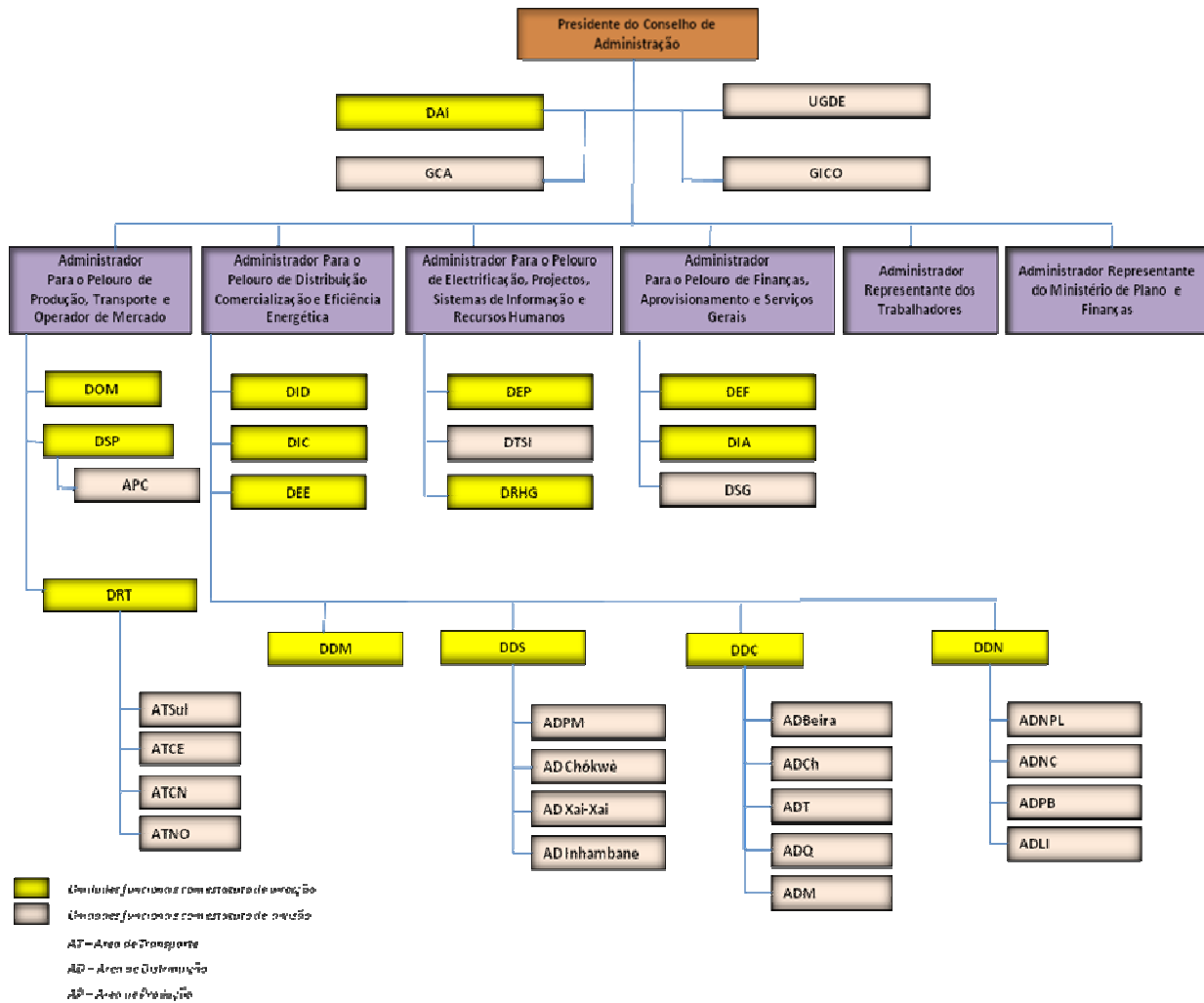
Maputo Training Center is divided into two buildings:

- One located at Av. Eduardo Mondlane N° 1352 Second Floor - C.P.1712-Maputo
Phone: 21326020 / Fax: 21323249
- Another one located at the old Maputo Power plant.



Attachment 6. The Purchaser's Project and Corporate Management Structure

First level of EDM's Organizational Structure





Attachment 7. The Purchaser's Data Center Capabilities and Hardware Inventory

DATA CENTER

DESCRIPTION	QTY	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION
Database Servers	4	4 CPU Quad-Core latest generation, 16GB to 64GB RAM, FC redundant connection, redundant energy.	2 Quad-Core Intel Xeon MP, 1600 MHz, 24GB, FC redundant connection, redundant energy. <i>(Expandable to up to 4 CPU and 128 GB RAM)</i>
Applications, Mail and Testing Servers	10	4 CPU Quad-Core latest generation, 16GB to 64GB RAM, FC redundant connection, redundant energy.	2 Quad-Core Intel Xeon MP, 1600 MHz, 24GB, FC redundant connection, redundant energy. <i>(Expandable to up to 4 CPU and 128 GB RAM)</i>
Web Servers, DNS and DHCP	7	2 CPU Quad-Core latest generation, 4GB to 16GB RAM, redundant energy.	1 Quad-Core Intel Xeon, 2666 MHz, 4GB, FC redundant connection, redundant energy.



Monitoring and Management Servers	4	2 CPU Quad-Core latest generation, 4GB to 16GB RAM, redundant energy.	<i>(Expandable to up to 2 CPU and 64 GB RAM)</i>
Virtualization		Virtualization platform for x86 servers (Hypervisor) with corresponding monitoring and management applications.	Hyper-v (to be defined)
Storage	2	Dual FC RAID Controller, 4GB cache, 10TB RAW, redundant energy.	EVA 8000, Dual FC RAID Controller, 4GB cache, 10TB RAW, redundant energy
SAN Switch	2	Switch FC of 16 ports 4Gbps or more	HP StorageWorks SAN Switch 4/32
Tape Library	1	Tape Library with 32 slots and 2 drives of latest generation.	HP StorageWorks MSL 6000 series Library com 2 drives LTO2 400GB/1.6T
Core Switch Ethernet	3	Modular Switch with capacity for Gigabit and 10 Gigabit Ethernet modules, and with energy redundancy.	Cisco 4506 - DRC Cisco 3560G – DRC Cisco 4006 – DC
Traffic Compression Accelerators	2	Traffic compressors and accelerators, capable of load balancing among multiple links and compression of http and https packages in order to speed-up Web applications.	



Firewall	2	Security system with intruder's detection and prevention functionalities.	Fortinet – VPN Concentrator, Anti- Spam, Anti-Virus, Firewall
Router WAN	4	To connect to remote sites	
Router Internet	3	For Internet Connection	



GENERAL EQUIPMENT

COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
1.	Hardware (Headquarters)			
1.2	Servers	HP Proliant ML 350 G3, G4	Used for AD, DNS, DHCP, Antivirus and Network Information System	10
		HP Proliant DL 380 G3, G4, G5	Main & Secondary for Commercial postpaid system (GALATEE)	8
		HP Proliant ML 370 G5	Company e-mail and Web page, Antivirus BCK	4
		HP Proliant DL 385 G5	Used for AD, Fin & Acc system	3
		HP Proliant DL 320	Backup Commercial postpaid system (GALATEE)	1
		DELL Optiplex 330	Form Commercial Prepaid System (Eclipse)	2



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
1.1.1	Advanced workstations			
1.1.2	Standard workstations	HP 6200 PRO MT IC I3-2120 3.1GHZ/500GB/4GB/W7PRO NIC - 10/100/1000; Acer Power, core 2 Duo, 6400, 2.13GHZ/320GB/4GB/W vistaPRO NIC - 10/100/1000; Dell, core 2 Duo 1.5GHZ/160GB/2GB/W vista, NIC - 10/100/1000;	For Office, Fin & Acc, HR, Commercial, ...	214
1.1.3	High-speed laser printer	HP LASER JET 9050DN		2
1.1.4	Standard-speed laser printer	HP LASER JET 2055		22
		HP LASER JET 4525		10



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
		HP DESK JET xx		
		HP OFFICE JET xx		14
1.1.4	Continuous-feed printer	EPSON FX 300+		5
		EPSON LQ 1050, EPSON 570		3
		EPSON TM – U210D		2
1.1.5	etc.			
2	Hardware (Sites)			
2.1	Servers	DELL Optiplex 330		24
		HP Proliant ML 350 G3, G4	Used for AD, Antivirus and Network Information System	6



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
2.2	Advanced workstations			
2.3	Standard workstations	HP 6200 PRO MT IC I3-2120 3.1GHZ/500GB/4GB/W7PRO NIC - 10/100/1000; Acer Power, core 2 Duo, 6400, 2.13GHZ/320GB/4GB/W vistaPRO NIC - 10/100/1000; Dell, core 2 Duo 1.5GHZ/160GB/2GB/W vista, NIC - 10/100/1000;	For Office, Fin & Acc, HR, Commercial, ...	935 +- 1012
2.4	High-speed laser printer	HP LASER JET 9050DN		6



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
2.5	Standard-speed laser printer	HP LASER JET 2055		20
		HP LASER JET 4525		8
		HP OFFICE JET XX		10
2.6	Continuous-feed printer	EPSON FX 300+		54
		EPSON LQ 1050, EPSON 570		30
		EPSON TM – U210D		32
2.7	etc.			
3.	LAN (Headquarters)			
3.1	Hubs	Cisco Catalyst 2950	12, 24, 48 PORTS	70



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
		TP LINK	24 PORTS	12
3.2	Punch-down panel			
3.3	Uninterruptible power supply	GE LP Series 33	30kva	2
		GE LP Series 33	20kva	2
		APC Smart 31	3kva, 5kva, 10kva	22
3.4	etc.			
4	Database	Oracle, SQL, Informix		
5	Backup			
6	External Storage	HP Storage Works, Modular SMART ARRY 500	10 drives x 72.8GB	1



COMPONENT No.	COMPONENT	RELEVANT TECHNICAL SPECIFICATIONS	ADDITIONAL INFORMATION	QTY
		HP Storage Works, Modular SMART ARRAY 1000	0.5TB - for Microsoft, Linux, NetWare and (limited) HP-UX and SCO environments	1
7	General-Purpose Software	MS OFFICE MS WINDOWS 7	2003, 2007, 2010	545



Attachment 8. User Inventory

USERS

The following table shows a TENTATIVE number of users of the Integrated System divided into the various application systems. As much as possible the licensing should be based on user ranges

ERP

APPLICATION SYSTEM		GEOGRAPHICAL DISTRIBUTION					ESTIMATED USERS
		Maputo	South	Centre	North	Total	
ERP	Stocks e Purchases	23	24	16	19	82	95
	Maintenance and Work Orders	4	26	20	14	64	85
	Projects	17	26	20	14	77	90
	Human Resources	47	16	12	12	87	100
	Fleet	7	4	6	4	21	30
	Administrative Financial	57	41	32	31	161	180

CMS



APPLICATION SYSTEM	GEOGRAPHICAL DISTRIBUTION					ESTIMATED USERS
	Maputo	South	Centre	North	Total	
CMS	24	350	150	125	649	700

IRMS

APPLICATION SYSTEM		GEOGRAPHICAL DISTRIBUTION					ESTIMATED USERS
			South	Centre	North	Total	
IRMS	COD Users (*)		34	31	24	89	100
	Call Center Users		N/A	N/A	N/A	100	100

Table 1 - Detailed information as per (*)

REGION	PROVINCE	DISTRIBUTION AREA	SHIFT 1	SHIFT 2	SHIFT 3	BACKUP (STAND BY)	TOTAL
SOUTH	Maputo Cidade	DDM - Maputo	3	3	3	1	10
	Maputo Provincia	ADPM	3	3	3	1	10
	Gaza	AD Xai-Xai	2	2	2	1	7
	Inhambane	AD Inhambane	2	2	2	1	7



CENTR E	Sofala	AD Beira	3	3	3	1	10
	Manica	AD Chimoio	2	2	2	1	7
	Tete	AD Tete	2	2	2	1	7
	Zambézia	AD Quelimane	2	2	2	1	7
NORTH	Nampula	AD Nampula	3	3	3	1	10
	Cabo Delgado	AD Pemba	2	2	2	1	7
	Niassa	AD Lichinga	2	2	2	1	7
TOTAL			26	26	26	11	89



EMPLOYEES

To carry out its strategic, operational, commercial and support activities EDM has approximately 3,230 employees, distributed as follows:

UNITS	NUMBER OF EMPLOYEES
Business Centres	2,873
Generation	118
Transmission	362
Distribution Maputo City	465
Distribution South	774
Distribution Centre	637
Distribution North	517
Support Centres	357
TOTAL	3,230

These figures (users, employees, etc) should be used for software licensing purposes, description of HW requirements and training strategies. HOWEVER, FINAL NUMBERS IN RELATION TO LICENCES NEEDS, THE FINAL INVENTORY WILL BE ADJUSTED LATER.



Attachment 9. Service Performance Levels

Service Level Agreement (SLA)

This section is to be agreed by Purchaser and Bidder as a possible key performance indicator for this engagement. The following information reflects the measurements to be used to tracking, monitoring and reporting of systems and project performance on a regular basis. The targets shown in the following tables are for the period of contract and its extension. The SLA will be applicable during implementation and warranty periods.

General principles of Service Level Agreements

The Service Level agreements have been logically segregated in the following categories:

- Project Management
- Availability Management
- Performance Management
- Service Management

1. Project Management

SLA No.	Parameter	Description	Target	Penalty	Validation Tools / Method
1.1	Project setup time	Bidder is expected to mobilize the team for commencement of work	Within the 15 days from date of award of contract Project kick off meeting with in 1 week from date of	Purchaser reserves the right to terminate the contract	Project team to available as indicated in the proposal, Project kick off meeting , Project management office setup



			award of contract		
1.2	Installation , Delivery and Training	Delivery, Installation, Training, integration & testing of all components /equipments required for the System implementation at all Purchaser's locations	Location wise Go Live plan for all locations	Extension of warranty services accordingly. If delay goes beyond 1 month Purchaser reserves the right to terminate the contract	1.Post delivery inspection reports (signed by Purchaser) 2. Training completion certificate along with attendance sheets
1.3	Project implementation timeline for System implementation	Bidder is expected to complete the entire implementation within the time frame as mentioned in the Bid Documents.	100 % adherence to the timelines.	Extension of warranty services accordingly. If delay goes beyond 1 month Purchaser reserves the right to terminate the contract	1. Project Plan & schedule 2. Actual Deliverables 3. User Acceptance completion 4. Implementation completion support duly signed by authorized Purchaser's PM

2. Supplier's Response Management (error handling/user support)

SLA No.	Parameter	Description	Target	Penalty	Validation Tools / Method
2.1	Supplier response to Purchaser error message/user support	If the System or any portion thereof, fails to operate in accordance with the Specifications, in whole or in part, the Bidder will correct the Deficiency, and a new thirty (30) calendar day	See "2.5.3.2 User support / hotline" of Section VI Technical Requirements	In the event that the Supplier fails to correct a Deficiency or fails to do so within the allotted period of time, the Bidder may exercise its rights to extend the warranty period without cost (see 2.3.5.1 as "Warranty Period Extensions" of Section VI	Measured based on error handling monitoring tool



		warranty period will commence. Any Class A or B Deficiencies must be corrected and the Deployment and/or System must run for thirty (30) consecutive calendar days without Class A or B deficiencies for the Warranty Period to end.		Technical Requirements)	
--	--	--	--	-------------------------	--

3. Solution availability

SLA No.	Parameter	Description	Target	Penalty	Validation Tools / Method
3.1	Solution (software and services) availability at all Purchasers' Locations. Uptime will be calculated for all days on a basis of 24 / 7 (365/366 days availability as applicable)	Solution Availability = $98.5\% \left(1 - \frac{\text{Downtime}}{\text{Total time}} \right) * 100$ Downtime excludes any problems attributed from Purchaser	Minimum of 98.5% uptime measured on a monthly basis	Extension of warranty services accordingly. If solution fails to perform for 4 months on a row Purchaser reserves the right to terminate the contract. See 2.5.3 of Section VI Technical Requirements	Measured on weekly basis as per Monitoring & reporting tool reports



4. Performance Management

SLA No.	Parameter	Description	Target	Penalty	Validation Tools / Method
4.1	Application response time	Acceptable transaction response time	90% of the response time to the end users for any transaction across all Purchaser locations should be less than 15 seconds for transactions executed over the network for the proposed software when 3 years data available in system and with maximum specified concurrent user users are connected to system. Vendor shall be able to simulate this condition and demonstrate result.	Extension of warranty services accordingly. If solution fails to perform for 4 months on a row Purchaser reserves the right to terminate the contract. See 2.5.3 of Section VI Technical Requirements	Measured daily, penalties applicable on monthly basis. Automated tool might be agreed upon between Supplier and Purchaser for pre defined transaction response time testing

Problem Notification & Resolution Time matrix

Maximum time to restore is defined as the time taken to resolve the problem, starting from the time of logging the complaint and within the time specified in table below. Supplier should notify the Purchaser within 2 hours after resolution of problem.

Maintenance activities



Software upgrades, updates, Patches installation, Training, Documentation, Customization, Development, 8hr/day onsite Manpower Availability etc. and any other Activities as defined by Purchaser at the time of signing of agreement. These activities are stated on ITB 14.1

Breach of SLA

In case, the system integrator does not meet the above service level agreement for 4 continuous months, Purchaser will treat it as a breach of Service Level Agreement. The following actions will be taken:

- a. Issue a letter seeking reasons for not complying the SLA.
- b. The Supplier should reply the notice with 7 working days as per calendar.
- c. If Purchaser is not satisfied with the reply Purchaser will initiate the termination process.

Exclusions to breach of SLA

The reason attributed to Delay in execution / approval from Purchaser's side. Any such delays will be notified in writing to Purchaser, will not be treated as breach of SLA.

SLA supervision

Purchaser will review the performance of the solution against the SLA defined at any given duration. The supervision report will form the basis for imposing penalty or breach of contract. The results will be shared with the Supplier as soon as possible. Purchaser reserves the right to appoint a third-party auditor to validate the SLA.



Reporting Procedures

Purchaser together with Supplier will prepare and distribute SLA performance reports in an agreed upon format by the first of every month for the entire Project duration. The reports might include “actual versus target” SLA performance, a variance analysis and discussion of appropriate issues or significant events.

Issue Management Procedures

Below is described issue management process for resolution of any issue arising during the duration of the contract of Project. It is expected that this predefined process will only be used on an exception basis if issues are not resolved at lower management levels.

Issue Management Process:

- a. Either Supplier or Purchaser may document an issue along with objective summary of both view points and possible solutions
- b. Both parties will decide the appropriate issue resolution authority
- c. A meeting or conference call will be conducted to resolve the issue in a timely manner. The documented issues will be distributed to the participants at least 24 hours prior to the discussion if the issue is not an emergency requiring immediate attention.
- d. The selected issue resolution authority will resolve the issue and communicate to concerned stakeholders.
- e. In the event a significant business issue is still unresolved, the arbitration procedures described in the Contract will be used.

SLA change control

The SLA has to keep changing as per Purchaser’s Implementation Requirements during the course of Project. This document also defines the following management procedures.



1. A process for negotiating changes to the SLA.
2. An issue management process for documenting and resolving particularly difficult issues.
3. Management escalation process to be used if issue is not resolved in a timely manner.

Any changes to the levels of service provided during the term of this agreement will be requested, documented and negotiated in good faith by both parties. Either party can request a change. Changes will be documented as an addendum to this document and consequently to the contract.

SLA Change Process

Both the parties may amend this SLA by mutual agreement in accordance. Changes can be proposed by either party. Normally the forum for negotiating SLA changes will be Purchaser's monthly review meetings.

Version Control

Any amendments to the SLA will be identified through a version control number. In case there are minor changes to the SLA, these can be cumulated and released as a combined SLA.

Management Escalation Procedures

The purpose of this escalation process is to provide a quick and orderly method of notifying both parties that an issue is not being successfully resolved at the lowest possible management level. Implementing this procedure ensures that Purchaser and Supplier are communicating at the appropriate levels. Escalation should take place on an exception basis and only if successful issue resolution cannot be achieved in a reasonable time frame.



1. All issues would be raised to the Project Management team, which is completely responsible for the day to day aspects of the implementation. The Project management team shall classify the issues based on their severity level and resolve them within appropriate timelines.
2. If project management team is unable to resolve an issue, the issue would be escalated to the project steering committee with options/ risks detailed for decision. Purchaser will make decisions based on the options/ risks presented by the team.

Signing of SLA (Sample)

IN WITNESS WHEREOF, the parties hereto have caused this Service Level Agreement to be executed by their respective authorized representatives as of the <date>.

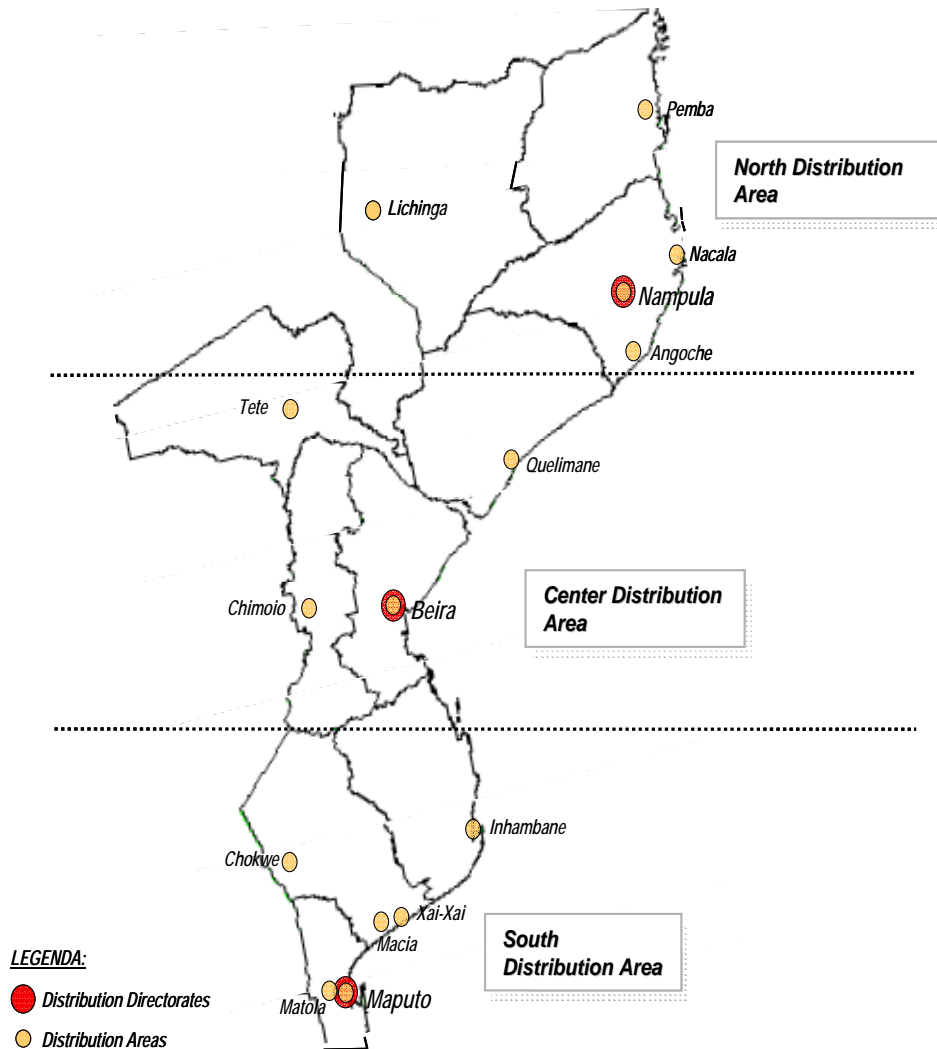
Purchaser	Supplier
Name:	Name:
Address:	Address:
Date:	Date:
Signature	Signature



Attachment 10. Purchaser's Network

Currently the Purchaser is pursuing an Internal Communications Project aims to provide Telecommunications Platform to attend current and future business requirements necessary for its Commercial, Resources and Distribution Areas. The platform will be designed and configured to support the future growth and expansion requirements of the organization in terms of both size and functional parameters, and also to be able to accommodate future technology enhancements that have the potential to increase operational effectiveness and ease implementation of new features, functions, and applications.

Purchaser is distributed throughout the country, divided into three large regions: North, Centre and South.



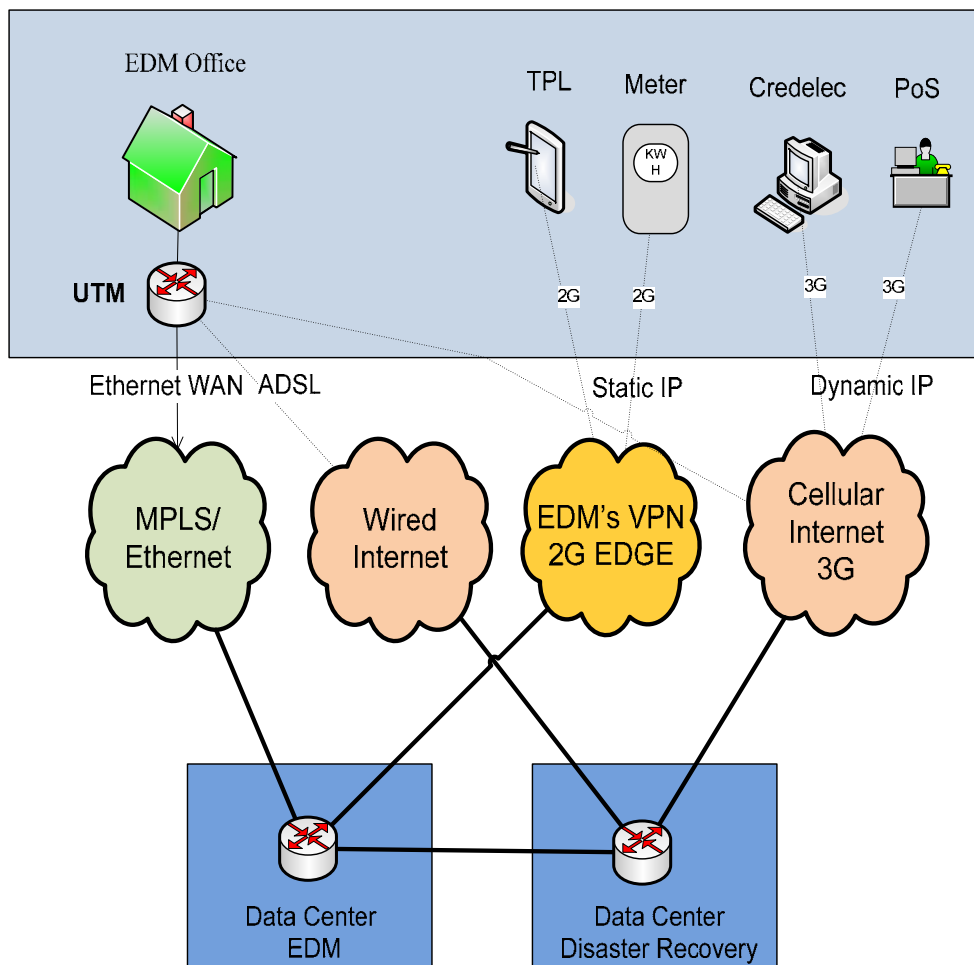


Region	Province
South	Maputo / Gaza / Inhambane
Centre	Sofala / Manica / Zambézia / Tete
North	Nampula / Niassa / Cabo Delgado

EDM's technological infrastructure and communications are concentrated in the South, more precisely in Maputo city.

IP Network Configuration

EDM' Services





The IP Network is supported by 4 transport networks:

1) MPLS Ethernet network

It is the land and wired, network with fiber and copper deployment

Two infrastructures are possible:

- a. Own EDM' support
- b. Rented support

2) Wired Internet network

They are the ADSL lines rented for backup and internet access.

3) 3G Internet network

Mobile Internet (3G modem) services rented for backup and internet access for smaller offices. The service has dynamic IP with VPN configuration.

4) 2G EDGE network

It's a Network leased by EDM for telemetry and mobile low bandwidth services. It has a private static IP addressing.

Encryption is not required because it is a isolated network separated of internet and other private users.

Each of the networks has one link (at least) for access Data Centers, allowing remote services connects the central systems.

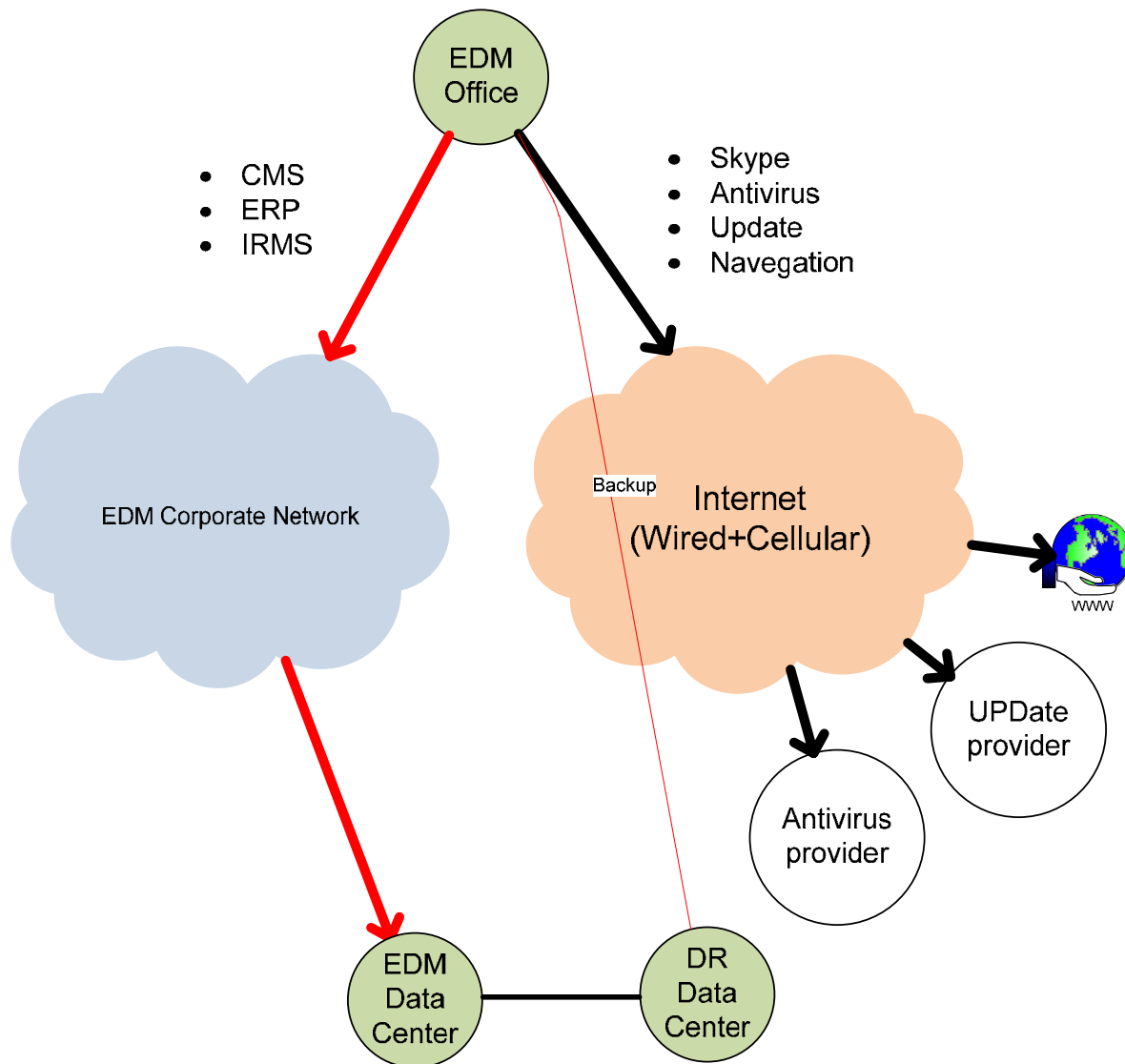
The choice of the topology responds to the following operation:

- a. EDM's Data Center (DC1) is the NOC built into EDM's Head quarter building and is the active DC in normal operation.
- b. Disaster Recovery Data Center (DC2) it's a rented NOC for housing the required equipment in case of abnormal operation of DC1
- c. The SIGEM applications are normally working over dedicated lines and the DC1' servers are bringing the applications hosting and services.
- d. EDM' offices access Internet Network by the internet line contract and can be cable or phone connecting through the same UTM equipment that connects the main line.



- e. If the main line falls, the connection to DC1 is established through an Internet VPN to the DC2 and from there to the DC1 using DC1-DC2. This passage should be automatic and it will be implemented over available routing protocols. The high priorities of SIGEM applications will block internet applications.
- f. Once restored the main line then restores the shortcut Office to DC1 taking SIGEM applications this way.

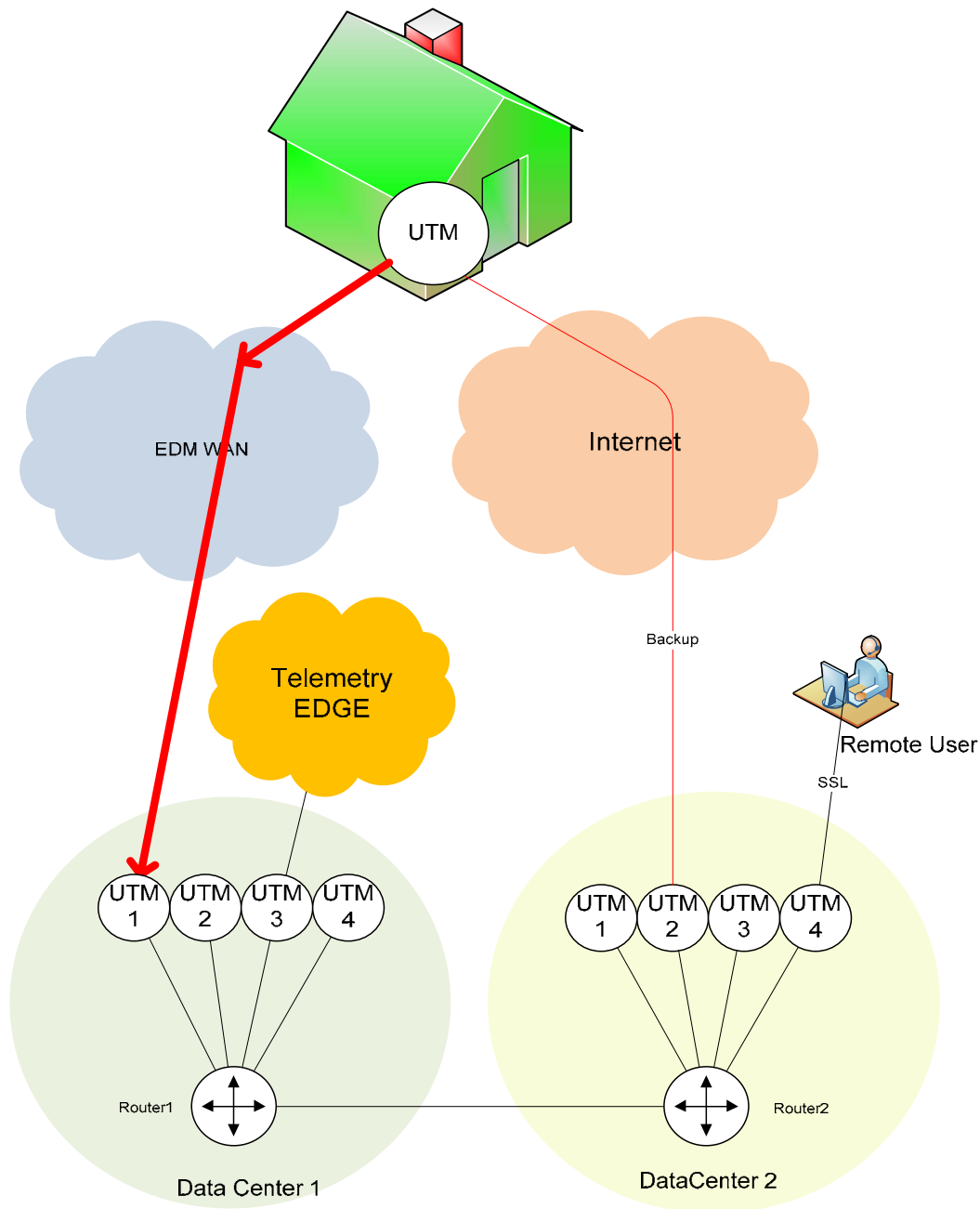
The following diagram shows the operation of an Office and DCs.





Internet applications like navigation, skype, email, update of antivirus and downloads of the operating system is made through the proxy and firewall of the UTM box without interfering the SIGEM's traffic.

Data Center Communication Equipment





Each of both Data Centers has installed 4 UTM boxes with the same configuration and hardware and following next functions:

- UTM1 - Main network connection
- UTM2 - Internet connection
- UTM3 - Telemetry network connection
- UTM4 - SSL connection for the applications' remote users

The final system configuration must permit the DC change (in contingency) without remote site changes.

Configuration's Synchronization should be guaranteed after each variation in any of the DCs.

The internal communications represented like Router 1 and 2 are performed by two Cisco 4006 devices with Giga Bits interfaces.



SECTION VII. SAMPLE FORMS



Notes to Bidders on working with the Sample Forms

The Purchaser has prepared the forms in this section of the Bidding Documents to suit the specific requirements of the System being procured. They are derived from the forms contained in the World Bank's Standard Bidding Documents for the Supply and Installation of Information Systems. In its bid, the Bidder must use these forms (or forms that present in the same sequence substantially the same information). Bidders should not introduce changes without the Purchaser's prior written consent (which may also require the clearance of the World Bank). If the Bidder has a question regarding the meaning or appropriateness of the contents or format of the forms and/or the instructions contained in them, these questions should be brought to the Purchaser's attention as soon as possible during the bid clarification process, either at the pre-bid meeting or by addressing them to the Purchaser in writing pursuant to ITB Clause 10.

The Purchaser has tried to provide explanatory text and instructions to help the Bidder prepare the forms accurately and completely. The instructions that appear directly on the forms themselves are indicated by use of typographical aides such as italicized text within square brackets as is shown in the following example taken from the Bid Submission Form:

Duly authorized to sign this bid for and on behalf of [*insert: name of Bidder*]

In preparing its bid, the Bidder must ensure all such information is provided and that the typographical aides are removed.

The sample forms provide a standard set of documents that support the procurement process as it moves forward from the stage of bidding, through Contract formation and onto Contract performance. The first set of forms must be completed and submitted as part of the bid prior to the deadline for bid submission. These include: (i) the Bid Submission Form; (ii) the Price Schedules; (iii) the Manufacturer's Authorizations and key Subcontractor agreements; (iv) the List of Proposed Subcontractors; (v) the form(s) for securing the bid (if and as required); and other forms as found in sub-sections 1 through 4 of this Section VII of the Bidding Documents.

- **Bid Submission Form:** In addition to being the place where official confirmation of the bid price, the currency breakdown, the completion date(s), and other important Contract details are expressed, the Bid Submission Form is also used by the Bidder to confirm - in case adjudication applies in this Contract - its acceptance of the Purchaser's proposed Adjudicator, or to propose an alternative. If the bid is being



submitted on behalf of a Joint Venture, it is essential that the Bid Submission Form be signed by the partner in charge and that it be supported by the authorizations and power of attorney required pursuant to ITB Clause 6.2. Given widespread concern about illegal use of licensed software, Bidders will be asked to certify in the Bid Submission Form that either the Software included in the bid was developed and is owned by the Bidder, or, if not, the Software is covered by valid licenses with the proprietor of the Software.

- **Price Schedules:** The prices quoted in the Price Schedules should constitute full and fair compensation for supply, installation, and achieving Operational Acceptance of the System as described in the Technical Requirements based on the Implementation Schedule, and the terms and conditions of the proposed Contract as set forth in the Bidding Documents. Prices should be given for each line item provided in the Schedules, with costs carefully aggregated first at the Subsystem level and then for the entire System. If the Price Schedules provide only a summary breakdown of items and components, or do not cover some items unique to the Bidder's specific technical solution, the Bidder may extend the Schedules to capture those items or components. If supporting price and cost tables are needed for a full understanding of the bid, they should be included.

Arithmetical errors should be avoided. If they occur, the Purchaser will correct them according to ITB Clause 26.2 (ITB Clause 38.2 in the two-stage SBD) without consulting the Bidder. Major omissions, inconsistencies, or lack of substantiating detail can lead to rejection of a bid for commercial non-responsiveness. Presenting prices according to the breakdown prescribed in the Price Schedules is also essential for another reason. If a bid does not separate prices in the prescribed way, and, as a result, the Purchaser cannot apply the domestic preference provision described in ITB Clause 29 (ITB Clause 41 in the two-stage SBD), if they are applicable in this bidding, the Bidder will lose the benefit of the preference. Once bids are opened, none of these problems can be rectified. At that stage, Bidders are not permitted to change their bid prices to overcome errors or omissions

- **Manufacturer's Authorizations and written agreements by key Subcontractors:** In accordance with ITB Clauses 6.1 (b) and (c), a Bidder may be required to submit, as part of its bid, Manufacturer's Authorizations in the format provided in the Bidding Documents, and agreements by Subcontractors proposed for key services, for all items specified in the Bid Data Sheet. There is no particular format (or sample form) for Subcontractor agreements
- **List of Proposed Subcontractors:** In accordance with ITB Clause 6.3, a Bidder must submit, as part of its bid, a list of proposed subcontracts for major items of Technologies, Goods, and/or Services. The list should also include the names and



places of registration of the Subcontractors proposed for each item and a summary of their qualifications.

- **List of Software and Materials:** In accordance with ITB Clause 13.1 (e) (vi) (ITB Clauses 13.1 (c) (vi) and 25.1 (e) (vi) in the two-stage SBD), Bidders must submit, as part of their bids, lists of all the Software included in the bid assigned to one of the following categories: (A) System, General-Purpose, or Application Software; or (B) Standard or Custom Software. Bidders must also submit a list of all Custom Materials. If provided for in the Bid Data Sheet, the Purchaser may reserve the right to reassign certain key Software to a different category.
- **Qualification information forms:** In accordance with ITB Clause 6, the Purchaser will determine whether the Bidder is qualified to undertake the Contract. This entails financial, technical as well as performance history criteria which are specified in the BDS for ITB Clause 6. The Bidder must provide the necessary information for the Purchaser to make this assessment through the forms in this sub-section. The forms contain additional detailed instructions which the Bidder must follow.
- **Securing the bid:** If the BDS for ITB Clause 17 (ITB Clause 29 in the two-stage SBD) requires that bids be secured, the Bidder shall do so in accordance with the type and details specified in the same ITB/BDS Clause, either using the form(s) included in these Sample Forms or using another form acceptable to the Purchaser. If a Bidder wishes to use an alternative form, it should ensure that the revised format provides substantially the same protection as the standard format; failing that, the Bidder runs the risk of rejection for commercial non-responsiveness.

Bidders need not provide the Performance Security and Advance Payment Security with their bids. Only the Bidder selected for award by the Purchaser will be required to provide these securities.

The following forms are to be completed and submitted by the successful Bidder following notification of award: (i) Contract Agreement, with all Appendices; (ii) Performance Security; and (iii) Advance Payment Security.

- **Contract Agreement:** In addition to specifying the parties and the Contract Price, the Contract Agreement is where the: (i) Supplier Representative; (ii) if applicable, agreed Adjudicator and his/her compensation; and (iii) the List of Approved Subcontractors are specified. In addition, modifications to the successful Bidder's Bid Price Schedules are attached to the Agreement. These contain corrections and



adjustments to the Supplier's bid prices to correct errors, adjust the Contract Price to reflect – if applicable - any extensions to bid validity beyond the last day of original bid validity plus 56 days, etc.

- **Performance Security:** Pursuant to GCC Clause 13.3, the successful Bidder is required to provide the Performance Security in the form contained in this section of these Bidding Documents and in the amount specified in accordance with the SCC.
- **Advance Payment Security:** Pursuant to GCC Clause 13.2, the successful Bidder is required to provide a bank guarantee for the full amount of the Advance Payment - if an Advance Payment is specified in the SCC for GCC 12.1 - in the form contained in this section of these Bidding Documents or another form acceptable to the Purchaser. If a Bidder wishes to propose a different Advance Payment Security form, it should submit a copy to the Purchaser promptly for review and confirmation of acceptability before the bid submission deadline.

The Purchaser and Supplier will use the following additional forms during Contract implementation to formalize or certify important Contract events: (i) the Installation and Operational Acceptance Certificates; and (ii) the various Change Order forms. These and the procedures for their use during performance of the Contract are included in the Bidding Documents for the information of Bidders.



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1. BID SUBMISSION FORM (SINGLE-STAGE BIDDING)

Date: *[Bidder insert: date of bid]*
Loan/Credit No.: **IDA 4681-0 MZ**
IFB: **ENC. 181/SIGEM-ERP&CMS&IRMS/2011**
Contract: **Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)**

To:

Mr. Jose Neves

Electricidade de Moçambique, EP

Direcção de Electrificação e Projectos

Sistema Integrado de gestão da EDM (SIGEM)

Av. Da Namaacha (EN4) km 1,5, P.O. Box 381

Maputo, Mozambique

Dear Sir or Madam:

Having examined the Bidding Documents, including Addenda Nos. *[insert numbers]*, the receipt of which is hereby acknowledged, we, the undersigned, offer to supply, install, achieve Operational Acceptance of, and support the Information System under the above-named Contract in full conformity with the said Bidding Documents for the sum of:

*[insert: amount of local
currency in words]*

*([insert: amount of local currency
in figures from corresponding Grand
Total entry of the Grand Summary
Cost Table])*

plus *[insert: amount of foreign
currency A in words]*

*([insert: amount of foreign
currency A in figures from
corresponding Grand Total entry of
the Grand Summary Cost Table])*

[as appropriate, add the following]

plus *[insert: amount of foreign*

*amount of foreign
currency B in figures from*



	<i>currency B in words]</i>	<i>corresponding Grand Total entry of the Grand Summary Cost Table])</i>
plus	<i>[insert: amount of foreign currency C in words]</i>	<i>([insert: amount of foreign currency C in figures from corresponding Grand Total entry of the Grand Summary Cost Table])</i>

or such other sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules attached herewith and made part of this bid.

We undertake, if our bid is accepted, to commence work on the Information System and to achieve Installation and Operational Acceptance within the respective times stated in the Bidding Documents.

If our bid is accepted, and if these Bidding Documents so require, we undertake to provide an advance payment security and a performance security in the form, in the amounts, and within the times specified in the Bidding Documents.

We hereby certify that the Software offered in this bid and to be supplied under the Contract (i) either is owned by us, or (ii) if not owned by us, is covered by a valid license from the proprietor of the Software.

We agree to abide by this bid, which, in accordance with ITB Clauses 13 and 16, consists of this letter (Bid Submission Form) and the enclosures listed below, for a period of 120 days from the date fixed for submission of bids as stipulated in the Bidding Documents, and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to Contract execution if we are awarded the Contract, are listed below:

Name and Address of Agent	Amount and Currency	Purpose of Commission or Gratuity
---------------------------	---------------------	-----------------------------------

Etc. *[if none, state: "none"]*

Until the formal final Contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any bid you may receive.



Dated this [*insert: ordinal*] day of [*insert: month*], [*insert: year*].

Signed:

Date:

In the capacity of [*insert: title or position*]

Duly authorized to sign this bid for and on behalf of [*insert: name of Bidder*]

ENCLOSURES:

Price Schedules

Bid-Securing Declaration or Bid-Security (if and as required)

Signature Authorization [*plus, in the case of a Joint Venture Bidder, list all other authorizations pursuant to ITB Clause 6.2*]

Attachment 1. Bidder's Eligibility

Attachment 2. Bidder's Qualifications (including Manufacturer's Authorizations and Subcontractor agreements if and as required)

Attachment 3. Eligibility of Goods and Services

Attachment 4. Conformity of the Information System to the Bidding Documents

Attachment 5. Proposed Subcontractors

Attachment 6. Intellectual Property (Software and Materials Lists)

[*if appropriate, specify further attachments or other enclosures*]



Bid Table of Contents and Checklist

Note: Bidders should expand and (if appropriate) modify and complete the following table. The purpose of the table is to provide the Bidder with a summary checklist of items that must be included in the bid as described in ITB Clauses 13.1 and 16, in order for the bid to be considered for Contract award. The table also provides a summary page reference scheme to ease and speed the Purchaser’s bid evaluation process.

Item	present: y/n	page no.
Bid Submission Form.....		
Price Schedules		
Bid-Securing Declaration / Bid-Security (if and as required).....		
Signature Authorization (for Joint Ventures additionally including the authorizations listed in ITB Clause 6.2) ...		
Attachment 1		
Attachment 2		
Manufacturer’s Authorizations		
Subcontractor agreements		
Attachment 3		
Attachment 4		
Attachment 5		
Attachment 6		
.....		



2. PRICE SCHEDULE FORMS

Note: in information systems procurement, the Contract Price (and payment schedule) should be linked as much as possible to achievement of operational capabilities, not just to the physical delivery of technology.



2.1 Preamble

General

1. The Price Schedules are divided into separate Schedules as follows:
 - 2.2 Grand Summary Cost Table
 - 2.3 Supply and Installation Cost Summary Table
 - 2.4 Recurrent Cost Summary Table
 - 2.5 Country of Origin Code Table

*[insert: **any other Schedules as appropriate**]*
2. The Schedules do not generally give a full description of the information technologies to be supplied, installed, and operationally accepted, or the Services to be performed under each item. However, it is assumed that Bidders shall have read the Technical Requirements and other sections of these Bidding Documents to ascertain the full scope of the requirements associated with each item prior to filling in the rates and prices. The quoted rates and prices shall be deemed to cover the full scope of these Technical Requirements, as well as overhead and profit.
3. If Bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with the Instructions to Bidders in the Bidding Documents prior to submitting their bid.

Pricing

4. Prices shall be filled in indelible ink, and any alterations necessary due to errors, etc., shall be initialed by the Bidder. As specified in the Bid Data Sheet, prices shall be fixed and firm for the duration of the Contract.
5. Bid prices shall be quoted in the manner indicated and in the currencies specified in ITB Clauses 14 and 15 (ITB Clauses 27 and 28 in the two-stage SBD). Prices must correspond to items of the scope and quality defined in the Technical Requirements or elsewhere in these Bidding Documents.



6. The Bidder must exercise great care in preparing its calculations, since there is no opportunity to correct errors once the deadline for submission of bids has passed. A single error in specifying a unit price can therefore change a Bidder's overall total bid price substantially, make the bid noncompetitive, or subject the Bidder to possible loss. The Purchaser will correct any arithmetic error in accordance with the provisions of ITB Clause 26.2 (ITB Clause 38.2 in the two-stage SBD).

7. Payments will be made to the Supplier in the currency or currencies indicated under each respective item. As specified in ITB Clause 15.1 (ITB Clause 28.1 in the two-stage SBD), no more than three foreign currencies may be used. The price of an item should be unique regardless of installation site.



2.2 Grand Summary Cost Table

		[insert: Local Currency] Price	[insert: Foreign Currency A] Price	[insert: Foreign Currency B] Price	[insert: Foreign Currency C] Price
1.	Supply and Installation Costs (from Supply and Installation Cost Summary Table)				
2.	Recurrent Costs (from Recurrent Cost Summary Table)				
3.	Grand Totals (to Bid Submission Form)				

Name of Bidder:		
Authorized Signature of Bidder:		



2.3 Supply and Installation Cost Summary Table

Entire System Procurement as necessary for supply, installation, and achieving Operational Acceptance of the System, specify items in the Table below, modifying, deleting, or expanding the sample line items and sample table entries as needed.]

Costs MUST reflect prices and rates quoted in accordance with ITB Clauses 14 and 15 (ITB Clauses 27 and 28 in the two-stage SBD).

Bidders must mention the specific names of the component in the following table. Additional Rows may be added to accommodate more cost components.

Unit prices for the same item appearing several times in the table must be identical in amount and currency.

Component No.	Component Description	Country of Origin Code	Quantity	Unit Prices / Rates					Total Prices				
				Supplied Locally	Supplied from outside the Purchaser's Country				Supplied Locally	Supplied from outside the Purchaser's Country			
				[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]	[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]
0	Project Plan	--	--	--	--	--	--	--					
1	System Software License		1										
1.2	CMS		1										
1.3	IRMS		1										



Component No.	Component Description	Country of Origin Code	Quantity	Unit Prices / Rates					Total Prices				
				Supplied Locally	Supplied from outside the Purchaser's Country				Supplied Locally	Supplied from outside the Purchaser's Country			
				[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]	[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]
2.3	Management Training		1										
2.3.1	Training		1										
2.3.2	Logistics Cost		1										
2.4	OEM Training		1										
2.4.1	Training		1										
2.4.2	Logistics Cost		1										
2.5	CBT Training		1										
2.6	Change Management Workshop		1										
3	Software Customization		1										
3.1	Software Customization CMS												



Component No.	Component Description	Country of Origin Code	Quantity	Unit Prices / Rates					Total Prices				
				Supplied Locally	Supplied from outside the Purchaser's Country				Supplied Locally	Supplied from outside the Purchaser's Country			
				[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]	[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]
4.2	Installation of IRMS												
4.3	Installation of ERP												
4.4	Installation of CMS-IRMS interface												
4.5	Installation of CMS-ERP interface												
4.6	Installation of ERP-IRMS interface												
5	Data Conversion		1										
5.1	Conversion Customization		1										
5.2	Database Tuning		1										



				Unit Prices / Rates					Total Prices				
				Supplied Locally	Supplied from outside the Purchaser's Country				Supplied Locally	Supplied from outside the Purchaser's Country			
Component No.	Component Description	Country of Origin Code	Quantity	[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]	[insert: local currency]	[insert: local currency]	[insert: foreign currency A]	[insert: foreign currency B]	[insert: foreign currency C]
6	System Administration		1										
7.	Supply of General-Purpose Software (if needed)												
Subtotals (to [insert: <i>line item</i>] of Supply and Installation Cost Summary Table)													

Note: -- indicates not applicable.

Name of Bidder:	
Authorized Signature of Bidder:	



2.4 Recurrent Cost Summary Table

Entire System procurement as necessary for the operation of the System, specify items in the Table below, modifying the sample line items and sample table entries as needed.]

Costs MUST reflect prices and rates quoted in accordance with ITB Clauses 14 and 15 (ITB Clauses 27 and 28 in the two-stage SBD).

Component No.	Component	Maximum all-inclusive costs (for costs in <i>US American Dollars</i>)						Sub-total for <i>US American Dollars</i>
		Y1	Y2	Y3	Y4	...	Yn	
2.	Software Licenses & Updates	Incl. in Warranty						
2.1	System and General-Purpose Software	Incl. in Warranty						
2.2	Application, Standard and Custom Software	Incl. in Warranty						
3.	Technical Services							
3.1	Sr. Systems Analyst	--						
3.2	Sr. Programmer	--						
3.3	Sr. Network Specialist	--						
3.4	Sr. Database Specialist	--						
4	Extended Warranty Services (as described in BDS ITB 12.1)	--		--	--		--	



		Maximum all-inclusive costs (for costs in <i>US American Dollars</i>)						
Component No.	Component	Y1	Y2	Y3	Y4	...	Yn	Sub-total for <i>US American Dollars</i>
5	Post warranty services (do not summarized as this is optional)	--	--	(*)	(*)		(*)	
6	[Identify other recurrent costs as may be offered by the Bidder]	(*)	(*)	(*)	(*)		(*)	
	Annual Subtotals:							--
Cumulative Subtotal (to [<i>insert: currency</i>] entry for [<i>insert: line item</i>] in the Recurrent Cost Summary Table)								

(*) Should not be summarized as it is an optional item.

Name of Bidder:	
Authorized Signature of Bidder:	



3. OTHER BID FORMS AND LISTS

3.1 Manufacturer's Authorization

Invitation for Bids Title and No.: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*
*Supply, Installation & Training of an Integrated Business
Management System (SIGEM) for Electricidade de
Moçambique, E.P.*

To: _____

WHEREAS _____ who are official producers of
_____ and having production facilities at
_____ do hereby authorize
_____ located at
_____ (hereinafter, the "Bidder")
to submit a bid and subsequently negotiate and sign a Contract with you for resale of the
following Products produced by us:

We hereby confirm that, in case the bidding results in a Contract between you and the
Bidder, the above-listed products will come with our full standard warranty.

Name _____ In the capacity of _____

Signed _____

Duly authorized to sign the authorization for and on behalf of : _____

Dated on _____ day of _____,
_____.



Note: This authorization should be written on the letterhead of the Manufacturer and be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.



3.5.1 General Information Form

All individual firms and each partner of a Joint Venture that are bidding must complete the information in this form. Nationality information should be provided for all owners or Bidders that are partnerships or individually owned firms.

Where the Bidder proposes to use named Subcontractors for highly specialized components of the Information System, the following information should also be supplied for the Subcontractor(s), together with the information in Forms 3.5.2, 3.5.3, 3.5.3a, 3.5.4, and 3.5.5. Joint Ventures must also fill out Form 3.5.2a.

1.	Name of firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	Telex
5.	Place of incorporation / registration	Year of incorporation / registration

Nationality of owners ¹		
Name		Nationality
1.		
2.		
3.		
4.		
5.		

^{1/} To be completed by all owners of partnerships or individually owned firms.



3.5.2 General Information Systems Experience Record

Name of Bidder or partner of a Joint Venture

All individual firms and all partners of a Joint Venture must complete the information in this form with regard to the management of Information Systems contracts generally. The information supplied should be the annual turnover of the Bidder (or each member of a Joint Venture), in terms of the amounts billed to clients for each year for work in progress or completed, converted to U.S. dollars at the rate of exchange at the end of the period reported. The annual periods should be calendar years, with partial accounting for the year up to the date of submission of applications. This form may be included for Subcontractors only if the Bid Data Sheet for ITB Clause 6.1 (a) explicitly permits experience and resources of (certain) Subcontractors to contribute to the Bidder's qualifications.

A brief note on each contract should be appended, describing the nature of the Information System, duration and amount of contract, managerial arrangements, purchaser, and other relevant details.

Use a separate page for each partner of a Joint Venture, and number these pages.

Bidders should not enclose testimonials, certificates, and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.

Annual turnover data (applicable activities only)		
Year ¹	Turnover	US\$ equivalent
1.		
2.		
3.		
4.		
5.		
¹ / Commencing with the partial year up to the date of submission of bids		



3.5.2a Joint Venture Summary

Names of all partners of a Joint Venture
1. Partner in charge
2. Partner
3. Partner
4. Partner
5. Partner
6. etc.

Total value of annual turnover, in terms of Information System billed to clients, in US\$ equivalent, converted at the rate of exchange at the end of the period reported:

Annual turnover data (applicable activities only; US\$ equivalent)						
Partner	Form 3.5.2 page no.	Year 1	Year 2	Year 3	Year 4	Year 5
1. Partner in charge						
2. Partner						
3. Partner						
4. Partner						
5. Partner						
6. Etc.						
Totals						



3.5.3 Particular Information Systems Experience Record

Name of Bidder or partner of a Joint Venture

On separate pages, using the format of Form 3.5.3a, the Bidder is requested to list contracts of a similar nature, complexity, and requiring similar information technology and methodologies to the contract or contracts for which these Bidding Documents are issued, and which the Bidder has undertaken during the period, and of the number, specified in the BDS for ITB Clause 6.1 (a). Each partner of a Joint Venture should separately provide details of its own relevant contracts. The contract value should be based on the payment currencies of the contracts converted into U.S. dollars, at the date of substantial completion, or for ongoing contracts at the time of award.



3.5.3a Details of Contracts of Similar Nature and Complexity

Name of Bidder or partner of a Joint Venture

Use a separate sheet for each contract.

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of Purchaser	
3.	Purchaser address	
4.	Nature of Information Systems and special features relevant to the contract for which the Bidding Documents are issued	
5.	Contract role (check one) <input type="checkbox"/> Prime Supplier <input type="checkbox"/> Management Contractor <input type="checkbox"/> Subcontractor <input type="checkbox"/> Partner in a Joint Venture	
6.	Amount of the total contract/subcontract/partner share (in specified currencies at completion, or at date of award for current contracts) Currency Currency Currency	
7.	Equivalent amount US\$ Total contract: \$_____; Subcontract: \$_____; Partner share: \$_____;	
8.	Date of award/completion	
9.	Contract was completed ____ months ahead/behind original schedule (if behind, provide explanation).	
10.	Contract was completed US\$ _____ equivalent under/over original contract amount (if over, provide explanation).	
11.	Special contractual/technical requirements.	
12.	Indicate the approximate percent of total contract value (and US\$ amount) of Information System undertaken by subcontract, if any, and the nature of such Information System.	



3.5.4 Summary Sheet: Current Contract Commitments / Work in Progress

Name of Bidder or partner of a Joint Venture

Bidders and each partner to an Joint Venture bid should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Name of contract	Purchaser, contact address/tel./fax	Value of outstanding Information System (current US\$ equivalent)	Estimated completion date	Average monthly invoicing over last six months (US\$/month)
1.				
2.				
3.				
4.				
5.				
etc.				



3.5.5 Financial Capabilities

Name of Bidder or partner of a Joint Venture

Bidders, including each partner of a Joint Venture, shall provide financial information to demonstrate that they meet the requirements stated in the BDS for ITB Clause 6.1 (a). Each Bidder or partner of a Joint Venture shall complete this form. If necessary, separate sheets shall be used to provide complete banker information. A copy of the audited balance sheets shall be attached.

Autonomous subdivisions of parent conglomerate businesses shall submit financial information related only to the particular activities of the subdivision.

Banker	Name of banker	
	Address of banker	
	Telephone	Contact name and title
	Fax	Telex

Summarize actual assets and liabilities in U.S. dollar equivalent (at the rates of exchange current at the end of each year) for the previous five calendar years. Based upon known commitments, summarize projected assets and liabilities in U.S. dollar equivalent for the next two calendar years, unless the withholding of such information by stock market listed public companies can be substantiated by the Bidder.

Financial information in US\$ equivalent	Actual: Previous five years					Projected: Next two years	
	5	4	3	2	1	1	2
1. Total assets							
2. Current assets							
3. Total liabilities							



Financial information in US\$ equivalent	Actual: Previous five years					Projected: Next two years	
	5	4	3	2	1	1	2
4. Current liabilities							
5. Profits before taxes							
6. Profits after taxes							

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in the BDS for ITB Clause 6.1 (a).

Source of financing	Amount (US\$ equivalent)
1.	
2.	
3.	
4.	

Attach audited financial statements—including, as a minimum, profit and loss account, balance sheet, and explanatory notes—for the period stated in the BDS for ITB Clause 6.1 (a) (for the individual Bidder or each partner of a Joint Venture).

If audits are not required by the laws of Bidders' countries of origin, partnerships and firms owned by individuals may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns,



3.5.6 Personnel Capabilities

Name of Bidder

For specific positions essential to contract management and implementation (and/or those specified in the Bidding Documents, if any), Bidders should provide the names of at least two candidates qualified to meet the specified requirements stated for each position. The data on their experience should be supplied on separate sheets using one Form 3.5.6a for each candidate.

Bidders may propose alternative management and implementation arrangements requiring different key personnel, whose experience records should be provided.

1.	Title of position
	Name of prime candidate
	Name of alternate candidate
2.	Title of position
	Name of prime candidate
	Name of alternate candidate
3.	Title of position
	Name of prime candidate
	Name of alternate candidate
4.	Title of position
	Name of prime candidate
	Name of alternate candidate



3.5.6a Candidate Summary

Name of Bidder

Position	Candidate	
	<input type="checkbox"/> Prime <input type="checkbox"/> Alternate	
Candidate information	Name of candidate	Date of birth
	Professional qualifications	
Present employment	Name of Employer	
	Address of Employer	
	Telephone	Contact (manager / personnel officer)
	Fax	Telex
	Job title of candidate	Years with present Employer

Summarize professional experience over the last twenty years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company/Project/ Position/Relevant technical and management experience



3.5.7 Technical Capabilities

Name of Bidder

The Bidder shall provide adequate information to demonstrate clearly that it has the technical capability to meet the requirements for the Information System. With this form, the Bidder should summarize important certifications, proprietary methodologies, and/or specialized technologies which the Bidder proposes to utilize in the execution of the Contract or Contracts.



4. BID-SECURING

4A. BID SECURITY (BANK GUARANTEE)

[insert: Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: *[insert: Name and Address of Purchaser]*

Date: *[insert: date]*

BID GUARANTEE No.: *[insert: Bid Guarantee Number]*

We have been informed that *[insert: name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated *[insert: bid date]* (hereinafter called "the Bid") for the execution of *[insert: name of contract]* under Invitation for Bids No. *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*.

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee, and that the bid guarantee automatically covers any alternative bids included in the Bid, if the Bidder is permitted to offer alternatives and does so.

At the request of the Bidder, we *[insert: name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert: amount in figures]* (*[insert: amount in words]*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn the Bid (or any parts of it) during the period of bid validity specified by the Bidder in the Bid Submission Form or any extension of the period of bid validity which the Bidder subsequently agreed to; or
- (b) having been notified of the acceptance of the Bid by you during the period of bid validity, (i) failed or refused to execute the Contract Agreement, or (ii) failed or refused to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier



of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bid's validity.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[Signature(s)]

[Note to Bidders: Instructions on amount and currency can be found in the ITB Clause and BDS for "Securing the Bid." Joint Ventures need to also ensure that their Bank Guarantee meets the requirements for Joint Ventures as provided in the same Clause.]



4B. BID SECURITY (BID BOND)

BOND NO.: _____

BY THIS BOND, [*insert: name of Bidder*] as Principal (hereinafter called “the Principal”), and [*insert: name, legal title, and address of surety*], authorized to transact business in Mozambique, as Surety (hereinafter called “the Surety”), are held and firmly bound unto *Electricidade de Moçambique, E.P. (EDM)* as Obligee (hereinafter called “the Purchaser”) in the sum of [*insert amount of Bond in currency, figures and words*], for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written bid to the Purchaser dated the ___ day of _____, 20__, for the execution of *Supply, Installation & Training of an Integrated Business Management System (SIGEM) for Electricidade de Moçambique, E.P. (EDM)* (hereinafter called “the Bid”). If the Principal was permitted by the bidding conditions to submit alternative bid(s) and did so, then these are deemed part of the Bid and thus covered by this Bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) withdraws the Bid (or any parts of it) during the period of the Bid's validity specified in the Bid Submission Form, or any extension of the period of the Bid's validity the Principal subsequently agreed to, notice of which to the Surety is hereby waived; or
- (b) having been notified of the acceptance of the Bid by the Purchaser during the period of the Bid's validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders;

then the Surety undertakes to immediately pay to the Purchaser up to the above amount upon receipt of the Purchaser's first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has/have occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid's validity.



IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

Principal: _____ Surety: _____

[add Corporate Seal(s) (where appropriate)]

[Signature]

[Signature]

[state: printed name and title]

[state: printed name and title]

[Note to Bidders: Instructions on amount and currency can be found in the ITB Clause and BDS for "Securing the Bid." Joint Ventures need to also ensure that their Bid Bond meets the requirements for Joint Ventures as provided in the same Clause.]



5. CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT is made

the [*insert: ordinal*] day of [*insert: month*], [*insert: year*].

BETWEEN

- (1) [*insert: Name of Purchaser*], a [*insert: description of type of legal entity, for example, an agency of the Ministry of . . .*] of the Government of [*insert: country of Purchaser*], or corporation incorporated under the laws of [*insert: country of Purchaser*] and having its principal place of business at [*insert: address of Purchaser*] (hereinafter called “the Purchaser”), and
- (2) [*insert: name of Supplier*], a corporation incorporated under the laws of [*insert: country of Supplier*] and having its principal place of business at [*insert: address of Supplier*] (hereinafter called “the Supplier”).

WHEREAS the Purchaser desires to engage the Supplier to supply, install, achieve Operational Acceptance of, and support the following Information System [*insert: brief description of the Information System*] (“the System”), and the Supplier has agreed to such engagement upon and subject to the terms and conditions appearing below in this Contract Agreement.

NOW IT IS HEREBY AGREED as follows:

Article 1. 1.1 Contract Documents (Reference GCC Clause 1.1 (a) (ii))

Contract Documents

The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

- (a) This Contract Agreement and the Appendices attached to the Contract Agreement
- (b) Special Conditions of Contract
- (c) General Conditions of Contract
- (d) Technical Requirements (including Implementation Schedule)
- (e) The Supplier’s bid and original Price Schedules



(f) [Add here: **any other documents**]

1.2 Order of Precedence (Reference GCC Clause 2)

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above, provided that Appendix 7 shall prevail over all provisions of the Contract Agreement and the other Appendices attached to the Contract Agreement and all the other Contract Documents listed in Article 1.1 above.

1.3 Definitions (Reference GCC Clause 1)

Capitalized words and phrases used in this Contract Agreement shall have the same meanings as are ascribed to them in the General Conditions of Contract.

Article 2.

**Contract Price
and Terms of
Payment**

2.1 Contract Price (Reference GCC Clause 1.1(a)(viii) and GCC Clause 11)

The Purchaser hereby agrees to pay to the Supplier the Contract Price in consideration of the performance by the Supplier of its obligations under the Contract. The Contract Price shall be the aggregate of: [insert: **amount of foreign currency A in words**], [insert: **amount in figures**], plus [insert: **amount of foreign currency B in words**], [insert: **amount in figures**], plus [insert: **amount of foreign currency C in words**], [insert: **amount in figures**], [insert: **amount of local currency in words**], [insert: **amount in figures**], as specified in the Grand Summary Price Schedule.

The Contract Price shall be understood to reflect the terms and conditions used in the specification of prices in the detailed price schedules, including the terms and conditions of the associated Incoterms, and the taxes, duties and related levies if and as identified.

Article 3.

**Effective Date
for
Determining
Time for
Operational
Acceptance**

3.1 Effective Date (Reference GCC Clause 1.1 (e) (ix))

The time allowed for supply, installation, and achieving Operational Acceptance of the System shall be determined from the date when all of the following conditions have been fulfilled:

- (a) This Contract Agreement has been duly executed for and on behalf of the Purchaser and the Supplier;
- (b) The Supplier has submitted to the Purchaser the performance security and the advance payment security, in



accordance with GCC Clause 13.2 and GCC Clause 13.3;

- (c) The Purchaser has paid the Supplier the advance payment, in accordance with GCC Clause 12;
- (d) *[specify here: any other conditions, for example, opening/confirmation of letter of credit]*.

Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.

3.2 If the conditions listed under 3.1 are not fulfilled within two (2) months from the date of this Contract Agreement because of reasons not attributable to the Supplier, the parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Achieving Operational Acceptance and/or other relevant conditions of the Contract.

Article 4.

Appendixes

- 4.1 The Appendixes listed below shall be deemed to form an integral part of this Contract Agreement.
- 4.2 Reference in the Contract to any Appendix shall mean the Appendixes listed below and attached to this Contract Agreement, and the Contract shall be read and construed accordingly.

APPENDIXES

- Appendix 1. Supplier's Representative
- Appendix 2. Adjudicator
- Appendix 3. List of Approved Subcontractors
- Appendix 4. Categories of Software
- Appendix 5. Custom Materials
- Appendix 6. Revised Price Schedules (if any)
- Appendix 7. Minutes of Contract Finalization Discussions and Agreed-to Contract Amendments



IN WITNESS WHEREOF the Purchaser and the Supplier have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

For and on behalf of the Purchaser

Signed:

in the capacity of [*insert: title or other appropriate designation*]

in the presence of

For and on behalf of the Supplier

Signed:

in the capacity of [*insert: title or other appropriate designation*]

in the presence of

CONTRACT AGREEMENT

dated the [*insert: number*] day of [*insert: month*], [*insert: year*]

BETWEEN

[*insert: name of Purchaser*], “the Purchaser”

and

[*insert: name of Supplier*], “the Supplier”



Appendix 1. Supplier's Representative

In accordance with GCC Clause 1.1 (b) (iv), the Supplier's Representative is:

Name: *[insert: **name** and provide title and address further below, or state “to be nominated within fourteen (14) days of the Effective Date”]*

Title: *[if appropriate, insert: **title**]*

In accordance with GCC Clause 4.3, the Supplier's addresses for notices under the Contract are:

Address of the Supplier's Representative: *[as appropriate, insert: **personal delivery, postal, cable, telegraph, telex, facsimile, electronic mail, and/or EDI addresses.**]*

Fallback address of the Supplier: *[as appropriate, insert: **personal delivery, postal, cable, telegraph, telex, facsimile, electronic mail, and/or EDI addresses.**]*



Appendix 2. Adjudicator

In accordance with GCC Clause 1.1 (b) (vi), the agreed-upon Adjudicator is:

Mr. Loland Oystein
Avenida Armando Tivane 1853
Phone: +258 21 48 50 58
Fax: +258 21 48 50 57
E-mail: loland.norconsult@tvcabo.co.mz

In accordance with GCC Clause 6.1.3, the agreed-upon fees and reimbursable expenses are:

Hourly Fee: USD 100

Pursuant to GCC Clause 6.1.4, if at the time of Contract signing, agreement has not been reached between the Purchaser and the Supplier, an Adjudicator will be appointed by the Appointing Authority named in the SCC.



Appendix 3. List of Approved Subcontractors

The Purchaser has approved use of the following Subcontractors nominated by the Supplier for carrying out the item or component of the System indicated. Where more than one Subcontractor is listed, the Supplier is free to choose between them, but it must notify the Purchaser of its choice sufficiently in advance of the time when the subcontracted work needs to commence to give the Purchaser reasonable time for review. In accordance with GCC Clause 20.1, the Supplier is free to submit proposals for Subcontractors for additional items from time to time. No subcontracts shall be placed with any such Subcontractors for additional items until the Subcontractors have been approved in writing by the Purchaser and their names have been added to this list of Approved Subcontractors, subject to GCC Clause 20.3.

[specify: item, approved Subcontractors, and their place of registration that the Supplier proposed in the corresponding attachment to its bid and that the Purchaser approves that the Supplier engage during the performance of the Contract. Add additional pages as necessary.]

Item	Approved Subcontractors	Place of Registration



Appendix 6. Revised Price Schedules

The attached Revised Price Schedules (if any) shall form part of this Contract Agreement and, where differences exist, shall supersede the Price Schedules contained in the Supplier's Bid. These Revised Price Schedules reflect any corrections or adjustments to the Supplier's bid price, pursuant to the ITB Clauses 18.3, 26.2, and 33.1 (ITB Clauses 30.3, 38.2, and 45.1 in the two-stage SBD).



Appendix 7. Minutes of Contract Finalization Discussions and Agreed-to Contract Amendments

The attached Contract amendments (if any) shall form part of this Contract Agreement and, where differences exist, shall supersede the relevant clauses in the GCC, SCC, Technical Requirements, or other parts of this Contract as defined in GCC Clause 1.1 (a) (ii).



6. PERFORMANCE AND ADVANCE PAYMENT SECURITY FORMS

6.1 Performance Security Form (Bank Guarantee)

[insert: Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: *[insert: Name and Address of Purchaser]*

Date: *[insert: date]*

PERFORMANCE GUARANTEE No.: *[insert: Performance Guarantee Number]*

We have been informed that on *[insert: date of award]* you awarded Contract No. *[insert: Contract number]* for *[insert: title and/or brief description of the Contract]* (hereinafter called "the Contract") to *[insert: complete name of Supplier]* (hereinafter called "the Supplier"). Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert: amount(s)' in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

On the date of your issuing, to the Supplier, the Operational Acceptance Certificate for the System, the value of this guarantee will be reduced to any sum(s) not exceeding *[insert: amount(s)] in figures and words].* This remaining guarantee shall expire no later than *[insert: number and select: of months/of years (of the Warranty Period that needs to be covered by the remaining guarantee)]* from the date of the Operational Acceptance Certificate for the System, and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20 (a) is hereby excluded.

[Signature(s)]

¹ The bank shall insert the amount(s) specified and denominated in the SCC for GCC Clauses 13.3.1 and 13.3.4 respectively, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Purchaser.



6.2 Advance Payment Security Form (Bank Guarantee)

[insert: Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: *[insert: Name and Address of Purchaser]*

Date: *[insert: date]*

ADVANCE PAYMENT GUARANTEE No.: *[insert: Advance Payment Guarantee Number]*

We have been informed that on *[insert: date of award]* you awarded Contract No. *[insert: Contract number]* for *[insert: title and/or brief description of the Contract]* (hereinafter called "the Contract") to *[insert: complete name of Supplier]* (hereinafter called "the Supplier"). Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of *[insert: amount in numbers and words, for each currency of the advance payment]* is to be made to the Supplier against an advance payment guarantee.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total the amount of the advance payment referred to above, upon receipt by us of your first demand in writing declaring that the Supplier is in breach of its obligations under the Contract because the Supplier used the advance payment for purposes other than toward the proper execution of the Contract.

It is a condition for any claim and payment to be made under this guarantee that the advance payment referred to above must have been received by the Supplier on its account *[insert: number and domicile of the account]*.

For each payment after the advance payment, which you will make to the Supplier under this Contract, the maximum amount of this guarantee shall be reduced by the ninth part of such payment. At the time at which the amount guaranteed becomes nil, this guarantee shall become null and void, whether the original is returned to us or not.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[Signature(s)]



7. INSTALLATION AND ACCEPTANCE CERTIFICATES

7.1 Installation Certificate

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name and number of Contract**]

To: [insert: **name and address of Supplier**]

Dear Sir or Madam:

Pursuant to GCC Clause 26 (Installation of the System) of the Contract entered into between yourselves and the *Electricidade de Moçambique, E.P. (EDM)* (hereinafter the “Purchaser”) dated [insert: **date of Contract**], relating to the [insert: **brief description of the Information System**], we hereby notify you that the System (or a Subsystem or major component thereof) was deemed to have been correctly installed on the date specified below.

1. Description of the System (or relevant Subsystem or major component: [insert: **description**]
2. Date of Installation: [insert: **date**]

Notwithstanding the above, you are required to complete the outstanding items listed in the attachment to this certificate as soon as practicable. This letter shall not relieve you of your obligation to achieve Operational Acceptance of the System in accordance with the Contract nor of your obligations during the Warranty Period.

For and on behalf of the Purchaser

Signed:

Date:

in the capacity of: [state: **“Project Manager”** or state **the title of a higher level authority in the Purchaser’s organization**]



7.2 Operational Acceptance Certificate

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To: [insert: **name and address of Supplier**]

Dear Sir or Madam:

Pursuant to GCC Clause 27 (Commissioning and Operational Acceptance) of the Contract entered into between yourselves and the *Electricidade de Moçambique, E.P. (EDM)* [hereinafter the “Purchaser”] dated [insert: **date of Contract**], relating to the [insert: **brief description of the Information System**], we hereby notify you the System (or the Subsystem or major component identified below) successfully completed the Operational Acceptance Tests specified in the Contract. In accordance with the terms of the Contract, the Purchaser hereby takes over the System (or the Subsystem or major component identified below), together with the responsibility for care and custody and the risk of loss thereof on the date mentioned below.

1. Description of the System (or Subsystem or major component): [insert: **description**]
2. Date of Operational Acceptance: [insert: **date**]

This letter shall not relieve you of your remaining performance obligations under the Contract nor of your obligations during the Warranty Period.

For and on behalf of the Purchaser

Signed:

Date:



in the capacity of: [state: ***“Project Manager” or higher level authority in the Purchaser’s organization***]



8. CHANGE ORDER PROCEDURES AND FORMS

Date: [insert: *date*]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: *name or System or Subsystem and
number of Contract*]

General

This section provides samples of procedures and forms for carrying out changes to the System during the performance of the Contract in accordance with GCC Clause 39 (Changes to the System) of the Contract.

Change Order Log

The Supplier shall keep an up-to-date Change Order Log to show the current status of Requests for Change and Change Orders authorized or pending. Changes shall be entered regularly in the Change Order Log to ensure that the log is kept up-to-date. The Supplier shall attach a copy of the current Change Order Log in the monthly progress report to be submitted to the Purchaser.

References to Changes

- (1) Request for Change Proposals (including Application for Change Proposals) shall be serially numbered CR-nnn.
- (2) Change Estimate Proposals shall be numbered CN-nnn.
- (3) Estimate Acceptances shall be numbered CA-nnn.
- (4) Change Proposals shall be numbered CP-nnn.
- (5) Change Orders shall be numbered CO-nnn.

On all forms, the numbering shall be determined by the original CR-nnn.

Annexes

- 8.1 Request for Change Proposal Form
- 8.2 Change Estimate Proposal Form



- 8.3 Estimate Acceptance Form
- 8.4 Change Proposal Form
- 8.5 Change Order Form
- 8.6 Application for Change Proposal Form



8.1 Request for Change Proposal Form

(Purchaser's Letterhead)

Date: [*insert: date*]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [*insert: name of System or Subsystem or number
of Contract*]

To: [*insert: name of Supplier and address*]

Attention: [*insert: name and title*]

Dear Sir or Madam:

With reference to the above-referenced Contract, you are requested to prepare and submit a Change Proposal for the Change noted below in accordance with the following instructions within [*insert: number*] days of the date of this letter.

1. Title of Change: [*insert: title*]
2. Request for Change No./Rev.: [*insert: number*]
3. Originator of Change: [*select Purchaser / Supplier (by Application for Change Proposal), and add: name of originator*]
4. Brief Description of Change: [*insert: description*]
5. System (or Subsystem or major component affected by requested Change): [*insert: description*]
6. Technical documents and/or drawings for the request of Change:
Document or Drawing No. Description
7. Detailed conditions or special requirements of the requested Change: [*insert: description*]
8. Procedures to be followed:



- (a) Your Change Proposal will have to show what effect the requested Change will have on the Contract Price.
 - (b) Your Change Proposal shall explain the time it will take to complete the requested Change and the impact, if any, it will have on the date when Operational Acceptance of the entire System agreed in the Contract.
 - (c) If you believe implementation of the requested Change will have a negative impact on the quality, operability, or integrity of the System, please provide a detailed explanation, including other approaches that might achieve the same impact as the requested Change.
 - (d) You should also indicate what impact the Change will have on the number and mix of staff needed by the Supplier to perform the Contract.
 - (e) You shall not proceed with the execution of work related to the requested Change until we have accepted and confirmed the impact it will have on the Contract Price and the Implementation Schedule in writing.
9. As next step, please respond using the Change Estimate Proposal form, indicating how much it will cost you to prepare a concrete Change Proposal that will describe the proposed approach for implementing the Change, all its elements, and will also address the points in paragraph 8 above pursuant to GCC Clause 39.2.1. Your Change Estimate Proposal should contain a first approximation of the proposed approach, and implications for schedule and cost, of the Change.

For and on behalf of the Purchaser

Signed:

Date:

in the capacity of: [state: **“Project Manager” or higher level authority in the Purchaser’s organization**]



8.2 Change Estimate Proposal Form

(Supplier's Letterhead)

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To:

*Electricidade de Moçambique, EP
Direcção de Electrificação e Projectos
Sistema Integrado de gestão da EDM (SIGEM)
Av. Da Namaacha (EN4) km 1,5, P.O. Box 381
Maputo, Mozambique*

Attention:

Mr. Jose Neves

Dear Sir or Madam:

With reference to your Request for Change Proposal, we are pleased to notify you of the approximate cost of preparing the below-referenced Change in accordance with GCC Clause 39.2.1 of the Contract. We acknowledge that your agreement to the cost of preparing the Change Proposal, in accordance with GCC Clause 39.2.2, is required before we proceed to prepare the actual Change Proposal including a detailed estimate of the cost of implementing the Change itself.

1. Title of Change: [insert: **title**]
2. Request for Change No./Rev.: [insert: **number**]



3. Brief Description of Change (including proposed implementation approach): *[insert: **description**]*
4. Schedule Impact of Change (initial estimate): *[insert: **description**]*
5. Initial Cost Estimate for Implementing the Change: *[insert: **initial cost estimate**]*
6. Cost for Preparation of Change Proposal: *[insert: **cost in the currencies of the Contract**]*, as detailed below in the breakdown of prices, rates, and quantities.

For and on behalf of the Supplier

Signed:

Date:

in the capacity of: *[state: “**Supplier’s Representative**” or other higher level authority in the Supplier’s organization]*



8.3 Estimate Acceptance Form

(Purchaser's Letterhead)

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To:

*Electricidade de Moçambique, EP
Direcção de Electrificação e Projectos
Sistema Integrado de gestão da EDM (SIGEM)
Av. Da Namaacha (EN4) km 1,5, P.O. Box 381
Maputo, Mozambique*

Attention:

Mr. Jose Neves

Dear Sir or Madam:

We hereby accept your Change Estimate and agree that you should proceed with the preparation of a formal Change Proposal.

1. Title of Change: [insert: **title**]
2. Request for Change No./Rev.: [insert: **request number / revision**]
3. Change Estimate Proposal No./Rev.: [insert: **proposal number / revision**]
4. Estimate Acceptance No./Rev.: [insert: **estimate number / revision**]



5. Brief Description of Change: [insert: ***description***]
6. Other Terms and Conditions:

In the event that we decide not to order the Change referenced above, you shall be entitled to compensation for the cost of preparing the Change Proposal up to the amount estimated for this purpose in the Change Estimate Proposal, in accordance with GCC Clause 39 of the General Conditions of Contract.

For and on behalf of the Purchaser

Signed:

Date:

in the capacity of: [state: ***“Project Manager” or higher level authority in the Purchaser’s organization***]



8.4 Change Proposal Form

(Supplier's Letterhead)

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To:

*Electricidade de Moçambique, EP
Direcção de Electrificação e Projectos
Sistema Integrado de gestão da EDM (SIGEM)
Av. Da Namaacha (EN4) km 1,5, P.O. Box 381
Maputo, Mozambique*

Attention:

Mr. Jose Neves

Dear Sir or Madam:

In response to your Request for Change Proposal No. [insert: **number**], we hereby submit our proposal as follows:

1. Title of Change: [insert: **name**]
2. Change Proposal No./Rev.: [insert: **proposal number/revision**]
3. Originator of Change: [select: **Purchaser / Supplier**; and add: **name**]
4. Brief Description of Change: [insert: **description**]



5. Reasons for Change: [insert: **reason**]
6. The System Subsystem, major component, or equipment that will be affected by the requested Change: [insert: **description**]
7. Technical documents and/or drawings for the requested Change:
Document or Drawing No. Description
8. Estimate of the increase/decrease to the Contract Price resulting from the proposed Change: [insert: **amount in currencies of Contract**], as detailed below in the breakdown of prices, rates, and quantities.
Total lump sum cost of the Change:

Cost to prepare this Change Proposal (i.e., the amount payable if the Change is not accepted, limited as provided by GCC Clause 39.2.6):
9. Additional Time for Achieving Operational Acceptance required due to the Change: [insert: **amount in days / weeks**]
10. Effect on the Functional Guarantees: [insert: **description**]
11. Effect on the other terms and conditions of the Contract: [insert: **description**]
12. Validity of this Proposal: for a period of [insert: **number**] days after receipt of this Proposal by the Purchaser
13. Procedures to be followed:
 - (a) You are requested to notify us of your acceptance, comments, or rejection of this detailed Change Proposal within [insert: **number**] days from your receipt of this Proposal.
 - (b) The amount of any increase and/or decrease shall be taken into account in the adjustment of the Contract Price.

For and on behalf of the Supplier

Signed:

Date:

in the capacity of: [state: **“Supplier’s Representative” or other higher level authority in the Supplier’s organization**]



8.5 Change Order Form

(Purchaser's Letterhead)

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To:

*Electricidade de Moçambique, EP
Direcção de Electrificação e Projectos
Sistema Integrado de gestão da EDM (SIGEM)
Av. Da Namaacha (EN4) km 1,5, P.O. Box 381
Maputo, Mozambique*

Attention:

Mr. Jose Neves

Dear Sir or Madam:

We hereby approve the Change Order for the work specified in Change Proposal No. [insert: **number**], and agree to adjust the Contract Price, Time for Completion, and/or other conditions of the Contract in accordance with GCC Clause 39 of the Contract.

1. Title of Change: [insert: **name**]
2. Request for Change No./Rev.: [insert: **request number / revision**]
3. Change Order No./Rev.: [insert: **order number / revision**]
4. Originator of Change: [select: **Purchaser / Supplier**; and add: **name**]



5. Authorized Price for the Change:

Ref. No.: [insert: **number**]

Date: [insert: **date**]

[insert: **amount in foreign currency A**] plus [insert: **amount in foreign currency B**] plus [insert: **amount in foreign currency C**] plus [insert: **amount in local currency**]

6. Adjustment of Time for Achieving Operational Acceptance: [insert: **amount and description of adjustment**]

7. Other effects, if any: [state: **“none”** or insert **description**]

For and on behalf of the Purchaser

Signed:

Date:

in the capacity of: [state: **“Project Manager”** or **higher level authority in the Purchaser’s organization**]

For and on behalf of the Supplier

Signed:

Date:

in the capacity of: [state **“Supplier’s Representative”** or **higher level authority in the Supplier’s organization**]



8.6 Application for Change Proposal Form

(Supplier's Letterhead)

Date: [insert: **date**]

Loan/Credit Number: *IDA 4681-0 MZ*

IFB: *ENC. 181/SIGEM-ERP&CMS&IRMS/2011*

*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P. (EDM)*

Contract: [insert: **name of System or Subsystem and
number of Contract**]

To:

*Electricidade de Moçambique, EP
Direcção de Electrificação e Projectos
Sistema Integrado de gestão da EDM (SIGEM)
Av. Da Namaacha (EN4) km 1,5, P.O. Box 381
Maputo, Mozambique*

Attention:

Mr. Jose Neves

Dear Sir or Madam:

We hereby propose that the below-mentioned work be treated as a Change to the System.

1. Title of Change: [insert: **name**]
2. Application for Change Proposal No./Rev.: [insert: **number / revision**] dated: [insert: **date**]
3. Brief Description of Change: [insert: **description**]
4. Reasons for Change: [insert: **description**]
5. Order of Magnitude Estimation: [insert: **amount in currencies of the Contract**]



6. Schedule Impact of Change: [insert: ***description***]
7. Effect on Functional Guarantees, if any: [insert: ***description***]
8. Appendix: [insert: ***titles*** (if any); otherwise state ***“none”***]

For and on behalf of the Supplier

Signed:

Date:

in the capacity of: [state: ***“Supplier’s Representative”*** or ***higher level authority in the Supplier’s organization***]



9 BIDDER SOLUTION HARDWARE REQUIREMENTS TABLE

Entire System procurement

Bidder must submit together with the rest of bid documents a complete Hardware Requirements for System Installation and Use (ONLY Description of proposed solution needs). This inventory of Hardware needs will be used by the Purchaser to upgrade its existing Data Center Capabilities and workstations (as stated in Attachment 7 – Clause H). Bidder might consider information on the attachments as a possible baseline.

Component No.	Component	Relevant Technical Specifications	Additional Information	Quantity
1.	Hardware (Headquarters)			
1.2	Servers			
1.1.1	Advanced workstations			
1.1.2	Standard workstations			
1.1.3	High-speed laser printer			
1.1.4	Standard-speed laser printer			
1.1.4	Continuous-feed printer			
1.1.5	etc.			



Component No.	Component	Relevant Technical Specifications	Additional Information	Quantity
2	Hardware (Sites)			
2.1	Servers			
2.2	Advanced workstations			
2.3	Standard workstations			
2.4	High-speed laser printer			
2.5	Standard-speed laser printer			
2.6	Continuous-feed printer			
2.7	etc.			
3.	LAN (Headquarters)			
3.1	Hubs			
3.2	Punch-down panel			
3.3	Uninterruptible power supply			
3.4	etc.			
4	Database			
5	Backup			



*Supply, Installation & Training of an Integrated
Business Management System (SIGEM) for
Electricidade de Moçambique, E.P.*

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Component No.	Component	Relevant Technical Specifications	Additional Information	Quantity
6	External Storage			
7	General-Purpose Software			
8	OTHERS			