
TERMS OF REFERENCE FOR THE APPOINTMENT OF A SERVICE PROVIDER TO REVIEW AND DEVELOP ENERGY DATA COLLECTION TOOLS AND SYSTEMS FOR THE DEPARTMENT OF ENERGY

1 BACKGROUND

- 1.1 One of the key objectives of the Department of Energy is to provide credible energy statistics and information to promote evidence-based energy policy-making, planning and a well-informed energy sector. For this to be effective, data on the entire energy value-chain needs to be collected.
- 1.2 Good practice dictates that reliable business methodologies and secure information technologies be used to manage national energy statistics and prepare meaningful decision support.
- 1.3 In terms of Section 8.2 of the White Paper on Energy Policy in South Africa (December 1998), an appropriate energy data and information system is required, amongst other things, to facilitate integrated energy planning: *“data should be collected, stored and reported in accordance with international specifications and standards to facilitate easy comparison, integration and exchange. Data should be collected regularly and the database kept up to date.”*
- 1.4 In order to effect this policy requirement, subsection 3(4) of the National Energy Act requires the Minister to establish mechanisms to *“collect, collate and analyse energy data and information; manage energy data and information; and avail, in a manner prescribed, energy statistics and energy information to the public.”* Furthermore, subsection 3(5) of the National Energy Act also requires the Minister to publish output from various analyses of national energy demand and supply.
- 1.5 In fulfillment of the requirements of the Energy Act, it is therefore essential that quality energy data be collected, collated, validated, stored and maintained to

enable analysis for various uses. A centralised energy database should assist in the achievement of the above-mentioned objectives by:

- 1) providing a single data storage mechanism making it possible to view what data are available and to share data across the department while enforcing data security;
 - 2) providing a framework to standardise data storage and to describe, share and index data consistently within the department;
 - 3) eliminating collection of the same data multiple times for different purposes;
 - 4) providing different views of data without duplicating it;
 - 5) enabling faster reporting within Government and to other stakeholders;
 - 6) enabling convenient comparison and analysis of historical data hence facilitating improved data quality;
 - 7) separating data management, data analysis and business reporting layers so that resources can focus on their key roles;
 - 8) enabling regular and convenient backups; and
 - 9) supporting knowledge management by ensuring that information is consistently stored using appropriate standards and ensuring it will be available.
- 1.6 The centralized energy database should be supported by a web-based portal which enables different users and stakeholders to access relevant data. Adequate security measures should be put in place to avoid unauthorized access to data.
- 1.7 The centralized energy database currently contains limited data sets and its developed was largely informed by legacy business processes wherein specific data sets were collected in order to produce specific reports. As a consequence although the data is maintained in a single repository, data sets are maintained in separate databases with minimal linkages and cross-referencing between related

data. This also results in minimum application of existing data sets for multiple purposes.

2 SCOPE OF WORK

2.1 Identification of data providers and where relevant develop a data collection approach and mechanisms for collecting data required by the Energy Data Management and Dissemination Directorate

2.1.1 Identify and document the full data requirements and key gaps in the data collected by the Energy Data Management and Dissemination Directorate.

2.1.2 Identify and document the full population of existing and potential providers of data required by the Energy Data Management and Dissemination Directorate.

2.1.3 Develop business processes for the collection, capturing and maintenance of all data required to compile the South African National Energy Balances. (The Energy Balances are compiled for energy commodities applicable to South Africa and includes data across the entire energy value-chain for each energy commodity. Data on energy and non-energy end-use and applications is also required). The five categories for energy carriers are as follows:

- a) Natural Gas (All forms of natural gas)
- b) Coal (All coal grades and qualities)
- c) Petroleum and Petroleum Products
- d) Renewables (including waster)
- e) Electricity (From all primary energy sources – i.e. coal, nuclear, gas, renewables, etc)

2.1.4 Streamline data management processes within the Energy Data Management and Dissemination Directorate

2.1.5 Review existing tools and mechanisms of collecting data from Data Providers and where relevant make recommendations

2.1.6 Develop a mechanism and tools for collecting new and/or additional data sets from identified Data Providers

2.1.7 Collect new and/or additional data sets from data providers

2.2 Review and enhance business processes and systems for data collection, management, storage, analysis and dissemination within the three Directorates within the Energy Planning Chief Directorate, namely:

- a) Energy Data Management and Dissemination
- b) Energy Modelling
- c) Energy Planning and Strategic Interventions

2.2.1 Review existing business processes and where relevant enhance and assist with re-design

2.2.2 Develop and implement an approach for the consolidation and sharing of data within the three Directorates within the Energy Planning Chief Directorate

2.3 Identification of data requirements and key gaps within the Hydrocarbons, Policy Research and Electricity Supply Chief Directorates

2.3.1 To identify and document data requirements for the following Chief Directorates (A high-level structure is attached as Annexure A):

- a) Clean Energy
- b) Electricity Supply Infrastructure
- c) Hydrocarbons Policy
- d) Nuclear Non-Proliferation & Radiation Security
- e) Nuclear Policy
- f) Nuclear Safety and Technology
- g) Policy Analysis & Research

2.3.2 To identify and document key gaps between data which is currently collected and maintained within the Departments' Centralised Energy Database (CED)

2.3.3 To develop an action plan of how the data for the above-mentioned Directorates can be collected

2.3.4 To make recommendations on the design to expand the Centralised Energy Database to accommodate the additional requirements

2.4 Design and development of a web-based portal which will enable authorized users to view and extract data and reports (aligned and compatible with the Department of Energy's Information Technology infrastructure environment)

2.4.1 Identify user requirements for reports and data

2.4.2 Develop web-based interface with various levels of access for extracting data, custom-designed reports and ad-hoc reports.

3 THE SERVICE PROVIDER WILL BE EXPECTED TO ADHERE TO THE FOLLOWING:

3.1 As some of the data collected or handled by the Service Provider may be commercially sensitive and/or confidential, the Service Provider will be required to sign a non-disclosure agreement with the Department of Energy. Where this is a requirement by the relevant Data Provider, the Service Provider may also be required to sign a non-disclosure agreement with the relevant Data Provider.

3.2 As far as possible, key members of service provider's project team must be stationed at the offices of the Department of Energy to facilitate skills and knowledge transfer to internal staff.

3.3 If subcontracting is envisaged, the service provider must clearly indicate which parts of the work will be subcontracted. The service provider must accept full responsibility for any work that is subcontracted.

3.4 Where no subcontractor is given, it shall be assumed that the work shall be carried out directly by the service provider.

3.5 Data created or collected from a third party on behalf of the Department by the service provider, as part of contract performance, shall become the property of the Department.

3.6 The copyright in every work or any part thereof, in which copyright may subsist, created by the Service Provider, or any person performing work on the Service Provider's behalf, in the execution of the project, including all versions in either source code or object code form, shall vest in the Department and such works or part thereof, may only be reproduced, or disclosed to another person, with the written consent of the Department.

4 PROJECT OUTPUT/KEY DELIVERABLES

4.1 Identification of data providers and where relevant develop a data collection approach and mechanisms for collecting data required by the Energy Data Management and Dissemination Directorate

4.1.1 Detailed report on existing and potential providers of data required by the following three (3) Directorates (Energy Data Management and Dissemination, Energy Modelling and Energy Planning and Strategic Interventions). The report must also describe the approach for the consolidation of data within the three Directorates and make recommendations on the mechanisms and tools for collecting new and/or additional data sets from identified Data Providers

4.1.2 Business process documents (per energy commodity) for the collection, capturing and maintenance of all data.

4.1.3 Database design documents.

4.1.4 Tools and templates for collecting data sets.

4.1.5 Collect new and/or additional data sets from data providers.

4.1.6 Data uploaded into database.

4.1.7 Web interface for accessing data.

4.2 Review and enhance business processes and systems for data collection, management, storage, analysis and dissemination within the three Directorates within the Energy Planning Chief Directorate

4.2.1 Document outlining an approach/framework for information sharing across business units

4.2.2 Well-integrated data-sharing interface between the three Energy Planning Directorates

4.3 Identification of data requirements and key gaps within the following Chief Directorates

4.3.1 Detailed report on data requirements for the Chief Directorates specified in paragraph 2.3.1.

4.3.2 Action plan on addressing key gaps and expanding the Centralised Energy Database (CED) to accommodate new data sets

- 4.3.3 Design document for expanding the Centralised Energy Database to accommodate the additional requirements
- 4.4 Design and development of a web-based portal which will enable authorized users to view and extract data and reports (aligned and compatible with the Department of Energy's Information Technology infrastructure environment)
 - 4.4.1 User requirements document for data extraction and custom-build reports
 - 4.4.2 Access-controlled web-based portal for extracting data, custom-designed reports and facilitate the development of ad-hoc reports

5 REPORTING REQUIREMENT

- 5.1 The service provider shall report to the Chief Director: Energy Planning on a monthly basis.

6 COMPLETION DATE

- 6.1 The project must be completed within twelve (12) months from the date of signing the contract with the successful service provider.

6.2 COMPULSORY INFORMATION SESSION

A Compulsory Briefing session will be held on the **1st November 2013 at 10h00**, at the Department of Energy, at 192 Corner Paul Kruger and Visagie Streets. Failure of at least one member of the bidder to attend (or at least one member of the bidder consortium if applicable) will lead to disqualification.

7 PAYMENTS

- 7.1 The Department will not make upfront payment to a successful service provider. Payment will only be made in accordance to the delivery of service as per the schedule of sub-deliverables that will be agreed upon by both parties and upon receipt of an original invoice.

8 TAX CLEARANCE CERTIFICATE

- 8.1 The bidder is required to submit an original and valid Tax Clearance Certificate issued by the South African Revenue Services together with the bid documents (detailed and itemized quotation) before the closing date and time of the bid. **Failure to comply with this condition will invalidate the bid.**

9 EVALUATION METHODOLOGY

9.1 Cost

- 9.1.1 The service provider will be requested to provide a quote regarding the work to be undertaken for this project per Report/deliverable. The costing for each deliverable should be aligned with the expected sub-deliverables required to accomplish the final deliverable.
- 9.1.2 The total cost must be VAT inclusive and should be quoted in South African currency (i.e.rands).

9.2 Broad-Based Black Economic Empowerment

- 9.2.1 Provisions of the Preferential Procurement Policy Framework Act (PPPFA) 2011 and its regulation will apply in terms of awarding points.
- 9.2.2 Bidders are required to submit original and valid B-BBEE Status Level Verification Certificates or certified copies thereof together with their bids, to substantiate their B-BBEE rating claims.
- 9.2.3 Bidders who do not submit their B-BBEE status level verification certificates or are non-compliant contributors to B-BBEE will not qualify for preference points for B-BBEE.
- 9.2.4 In a case of Exempted Micro Enterprise, the following documents MUST be: submitted
- 9.2.5 Verification agencies accredited by SANAS
- 9.2.6 Registered auditors approved by IRBA

9.3 Bidders who qualify as EMEs

- 9.3.1 Accounting officers as contemplated in the CCA; or
- 9.3.2 Verification agencies accredited by SANAS; or
- 9.3.3 Registered auditors (Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates).
- 9.3.4 The table below depicts the B-BBEE status level of contribution:

| B-BBEE Status Level of Contributor | Number of points (90/10 system) |
|---|--|
| 1 | 10 |
| 2 | 9 |
| 3 | 8 |
| 4 | 5 |
| 5 | 4 |
| 6 | 3 |
| 7 | 2 |
| 8 | 1 |
| Non-compliant contributor | 0 |

9.4 Company Experience

9.4.1 Service providers should have at least five (5) years' experience in each of the following: data collection and management; database design and business process design. This should be supported by proof from 3 contactable referees indicating that similar project/s or work was executed.

9.4.2 Credentials or track record of data collection and management in the energy sector and/or knowledge of energy flows will be an added advantage.

9.4.3 Failure to submit the above will result in bidders forfeiting points in this category.

9.5 Team leader and team members' experience

9.5.1 Team Leader must have at least five (5) years' experience and individual team members must have at least three (3) years' experience in data collection and management. CV's of the team leader and team members must be attached to the technical proposal as proof.

9.5.2 Credentials or track record of data collection and management in the energy sector and/or knowledge of energy flows will be an added advantage.

9.6 Qualifications

- 9.6.1 The team leader and team members must possess qualifications whose subjects includes database design, business process design and data management or energy statistics, for example Bachelor Degree, Diploma or Certificate in any of the following: Computer Science, Information Systems, Information Technology or Informatics.
- 9.6.2 Certified copies of certificates must be attached to the proposal; failure to submit correspondence bidders will forfeit points in this category.

9.7 Project Plan

- 10.1 A high-level project plan/work programme must be submitted with the proposal and should clearly indicate the key deliverables and milestones to complete the work.
- 10.2 Key project dependencies must also be clearly indicated

10 EVALUATION CRITERIA

- 10.1 Bids will be evaluated on 90/10 point system as outlined in the PPPFA of 2011.
- 10.2 The proposals will be evaluated in two phases:

Phase 1: Bidders will be evaluated based on functionality. The minimum threshold for functionality is **70 out of 100 points**. Bidders who fail to meet minimum threshold will be disqualified and will not be evaluated further for price and BBEE points.

| | Criteria | Weights |
|---|--|--|
| 1 | <p>Company Experience:</p> <ul style="list-style-type: none"> ○ Five (5) years' experience in data collection and management ○ Five (5) years experience in database design ○ Five (5) years experience in business process design ○ Data collection and management in the energy sector and/or knowledge of energy flows will be an added advantage <p><i>(3 contactable referees indicating that similar project/s or</i></p> | <p>30</p> <p>10</p> <p>10</p> <p>5</p> <p>5</p> |

| | | |
|---|--|--|
| | <i>work was executed must be submitted as proof)</i> | |
| | <p>Team leader and team member experience:</p> <ul style="list-style-type: none"> ○ Team Leader must have at least five (5) years' experience in data collection and management ○ Individual team members must have at least three (3) years' experience in data collection and management ○ Credentials or track record of data collection and management in the energy sector and/or knowledge of energy flows will be an added advantage. ○ <i>(CV's must be attached as proof)</i> | <p>20</p> <p>10</p> <p>5</p> <p>5</p> |
| 3 | <p>Qualifications</p> <ul style="list-style-type: none"> ○ The team leader must possess qualifications whose subjects includes database design, business process design and data management or energy statistics, for example Bachelor Degree, Diploma or Certificate in any of the following: Computer Science, Information Systems, Information Technology or Informatics. ○ Individual team members must possess qualifications whose content/curriculum includes database design, business process design and data management or energy statistics ○ <i>(Certified copies of certificates must be attached to the proposal; failure to submit correspondence bidders will forfeit points in this category)</i> | <p>10</p> <p>5</p> <p>3</p> <p>2</p> |
| 4 | <p>Project Plan/Approach:</p> <ul style="list-style-type: none"> ○ A detailed methodology and project approach ○ A high-level project plan/work programme must be submitted with the proposal and must at a minimum | <p>40</p> <p>20</p> <p>15</p> |

| | | |
|-----------|---|------------|
| | indicate the key deliverables and milestones to complete the work. ○ Key project dependencies must also be clearly indicated | 5 |
| 11 | Total | 100 |

For purpose of evaluating functionality, the following values will be applicable:

| | | |
|-----------|------------------|---|
| 0= | Very Poor | Do not meet the requirements |
| 1= | Poor | Will not be able to fulfil the requirements |
| 2= | Average | Will partially fulfil the requirements |
| 3= | Good | Will be able to fulfil the requirements |
| 4= | Very Good | Will be able to fulfil better in terms of the requirements adequately |
| 5= | Excellent | Will fulfil the requirements exceptionally |

Phase 2:

| | |
|--------------------------|-----------|
| Price | 90 |
| B-BBEE compliance | 10 |

12 FORMAT AND SUBMISSION OF THE PROPOSAL

12.1 All the official standard bidding documents (SBD) must be completed in all respects by bidders. **Failure to comply will invalidate a bid.**

13 CLOSING DATE

13.1 Proposals must be submitted on **08th November 2013 at 11H00** at the Department of Energy, 192 Corner Visagie and Paul Kruger Streets, Pretoria in the bid box marked Department of Energy. **No late bids will be accepted.**

14 **ENQUIRIES**

TECHNICAL ENQUIRIES:

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