Request For Proposals

Energy Management System

November 2018
1 Introduction

1.1 Purpose

Tata Chemicals Magadi Ltd is soliciting proposals from qualified companies to provide an Energy Management System, necessary metering and communications hardware, system training, and ongoing maintenance and support. You are invited to submit a proposal in accordance with this Request for Proposals (RFP).

1.2 Background

Tata Chemicals Magadi is Africa’s largest soda ash manufacturer and one of Kenya’s leading exporters. Established in 1911 as Magadi Soda Company, the company has been producing natural soda ash at Lake Magadi, Kenya, for over a hundred years. TCM is situated 120km south west of Nairobi at Lake Magadi. The company recovers trona (a naturally occurring mineral) from surface deposits at Lake Magadi. Soda ash is obtained by washing and calcining trona.

2 Schedule of Events

This RFP will be governed by the following schedule:

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<thead>
<tr>
<th>Event</th>
<th>By Who</th>
<th>Date</th>
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<tbody>
<tr>
<td>RFP Release Date</td>
<td>TCML</td>
<td>6th Nov 2018</td>
</tr>
<tr>
<td>Site Visits and Presentations</td>
<td>Vendor</td>
<td>9th Nov 2018 at 1000Hrs</td>
</tr>
<tr>
<td>Questions to TCML</td>
<td>Vendor</td>
<td>Before submission deadline</td>
</tr>
<tr>
<td>Answers to Questions</td>
<td>TCML</td>
<td>Before submission deadline</td>
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<tr>
<td>Proposal Submission Deadline</td>
<td>Vendor</td>
<td>31st Dec 2018</td>
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<tr>
<td>Evaluation of Proposals</td>
<td>TCML</td>
<td>1st Jan – 15 Feb 2019</td>
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<td>Due Diligence</td>
<td>TCML</td>
<td>15th Feb – 20th Feb 2019</td>
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<td>Proposer Selection</td>
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<td>21st Feb – 26th Feb 2019</td>
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<tr>
<td>Award Contract</td>
<td>TCML</td>
<td>26th Feb – 28th Feb 2019</td>
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</table>
3 Proposal Format

Each Proposal will adhere to the order and content of sections defined below, and each section must be completed in full. Incomplete proposals will not be considered.

3.1 Cover Letter
Include a cover letter signed by a principal in the company, indicating full contact information (mailing address, telephone number, and e-mail address). The cover letter may also summarize key elements of the proposal, and uniqueness of the proposed technology or response.

3.2 Summary of Qualifications
Describe the qualifications of the proposing company and project leads, to demonstrate the capability to provide the technology and services required in this RFP. Information shall include:

i. Company information, including name (main point of contact), address, business type, and website

ii. Description of the company, including:
   - Certificate of incorporation
   - Tax Registration details
   - The total number of employees.
   - An overview of all the products and services that the company provides.
   - The number of years that the company has provided the services requested in the RFP.
   - The number of current customers.
   - Any other relevant information about the company

iii. Provide at least ten references for customers that have received similar services as those detailed in the RFP. TCML reserves the right to contact any of the organizations or individuals listed. Information provided shall include:
   - Customer name.
   - Brief description of the scope of products and services delivered, current status, project start and end dates, total project square footage, number of facilities served, facility types, and product and services provided.
   - Primary point of contact for the customer, including name, telephone number, and e-mail address.
3.3 Technology Features and Implementation Plan
Provide a description of the proposed approach and methodology to satisfy the Scope of Work defined in this RFP. This section shall include:

i. A network diagram of the basic system architecture of the proposed technology.

ii. A detailed description of how the proposed technology provides the "required" capabilities in the Scope of Work.

iii. A description of any additional capabilities that may be of interest to TCML but are not specified as either "required" or "preferred" in the Scope of Work.

iv. Where applicable, screenshots to clearly illustrate key reporting, visualization, or analysis capabilities.

v. A description of how the proposed technology satisfies the IT requirements listed in the Scope of Work.

vi. A description of the training and ongoing technical support and maintenance services that will be provided.

vii. A detailed project implementation plan, including all tasks and subtasks, durations, milestones, and deliverables. Include project management methods that will be used to ensure that the time schedule will be met.

viii. A thorough description of specific responsibilities required of TCML (e.g., site access, provision of electrical and network diagrams, network access, etc.) in conducting the project.

3.4 Cost Proposal
The cost proposal shall explain the pricing structure for all software, hardware, integration, data commissioning, and other services required for the project. Include an itemized list of all direct and indirect costs (e.g., personnel, travel and supplies) associated with the implementation of proposed EMS. The proposal shall include the following:

i. Sensing and metering hardware purchase, installation, integration, and commissioning fees

ii. Communication hardware purchase and installation fees

iii. Software set-up fees (e.g., software configuration, programming, license, training, etc.).

iv. Ongoing software fees (e.g., data storage and hosting, maintenance, access, technical support and maintenance, etc.).

v. Any specified technology features or capabilities that add significantly to project costs.

vi. Any additional optional or bundled services or fees.
3.5 **Staffing**
Describe the team that will be assigned to the project, with each member’s areas of responsibility.

3.6 **Protections and Assurances**
Describe the specific measures and protections that the responding company can provide to TCML to ensure continuity of services in the event of bankruptcy, transfers of ownership, or other disruptions to business-as-usual operations.

4 **Scope of Work**

4.1 **Energy consumption tracking**
The technology will track and provide views of the following meter points on a sub-hourly (e.g., 15-minute) basis.

i. Whole-plant level: Electricity, gas, water etc.

ii. Equipment sub-metered level: fans, boiler, pumps, motors etc.

iii. Functional area/zones of plant: dredges, washery, grinding and screening, power station, township etc.

4.2 **Energy data inputs**

i. The technology will collect interval data directly from remotely readable meters (Electricity, gas, water etc.) using industry standard communication protocols.

ii. The technology will have the capability to consolidate meter readings, to create virtual meter points. In other words, it can add and subtract the readings from multiple meters at the same interval, to produce a calculated time series of energy use.

iii. The technology will be able to upload and store a minimum history of five years of energy use or other data from standard spreadsheet or text file formats for analysis, reporting, and visualization.

4.3 **Data quality checking**

i. The technology will provide data validation to detect quality issues such as gaps, spikes, and flat-lines, and will provide an option or service to automatically fill and/or correct data.

ii. The technology will provide customizable notification schemes [e.g., work order generation, e-mail, phone, text message, etc., to individual and/or group recipients] for data quality alerting.

4.4 **Reporting and data export**

i. The technology will provide year-over-year, month-over-month, week-over-week or day-by-day energy, cost, or equipment health and performance reports.
ii. The technology will provide users the ability to create and save custom reports.

iii. The technology will allow users to export data (all, or selected points or totalizations) to the following file formats for use in external tools such as MS Excel and MS Office.
   - .xlsx/.xls
   - .pdf
   - .doc

4.5 IT Requirements

4.6 Data storage, backup, and hosting

i. Data archival will use a database and provide a periodic data backup option (e.g., monthly, quarterly, yearly).

ii. The technology will offer sufficient capacity to store all required data

iii. The technology will use industry standard security protocols that comply with the TCML’s requirements for privacy and network and system protection.

iv. The technology provider will indicate specific security frameworks and certifications that are utilized.

v. The technology must include hardware firewalls, vulnerability scans, and automated patch updates.

4.7 Permissions and access control

i. The technology provider will indicate any limits on the number of users and/or accounts that can be accessed via web browser or mobile web applications.

ii. Login to the system will require a username and password.

iii. The technology provider will indicate how users are authenticated.

4.8 Usability

i. The technology will condense large amounts of real-time and historical energy usage data into a graphical format that is rich, intuitive, and user friendly.

ii. The technology will be accessible through multiple hardware platforms (i.e., smart phone, tablet or PCs).

iii. The technology will support common browsers, including Internet Explorer, Firefox, Chrome, and Safari.

4.9 Networking

The technology provider will indicate which protocols their technology is compatible with, including all relevant elements of the system, such as building metering and control communications, databases, web services, and Internet communications.
4.10 Warranty
The technology provider will include a warranty that will begin after implementation, testing, and commissioning. The duration of the warranty will be at least two months. During the warranty period, all software and services listed will be provided to TCML on a no-charge basis.

4.11 Technical support
The technology will provide the following help system for end users:

i. An online help system that includes comprehensive system documentation
ii. Printed documentation
iii. A service help desk with a guaranteed response time
iv. The technology provider will provide a detailed list of technical support and maintenance options.
v. The technology provider will provide estimates of the frequency of software updates during a year and any associated system downtime.

4.12 Training
The technology provider will offer user training in the following form. Training may include the following options:

i. Tools and instructional materials in video, electronic format or hard copy
ii. Initial onsite training programs at each site
iii. Ongoing group training sessions to update personnel and instruct new staff

4.13 Testing and commissioning
Prior to hand-off, the technology provider will fully commission all meters, sensors, data acquisition and communications systems, and analytical functions supported by the technology. The provider will document the test and assurances that were conducted, and will make this documentation available to TCML.