REQUEST FOR INFORMATION (RFI)

Interested parties are invited to participate in an RFI process for the purposes of providing information to Eskom
In Support of a
Generator Seal Oil System

RFI reference number: MPGXC004230

Deadline for submission: 2016-11-03 at 10:00 (South African Standard Time)

TENDERER'S NAME

Return this cover sheet with your response
REQUEST FOR INFORMATION

Eskom Holdings SOC Limited hereby invites you to submit information regarding your expertise in the field of Generator Seal Oil System in order to provide support in a Project to be carried out at Amot Power Station. Eskom Holdings SOC Limited would like to analyse the market's ability to supply the above required information.

Please note that this enquiry is not a request for quotation/Proposal but for information only and therefore non-committal and does not constitute a guarantee of business, nor an agreement to negotiate a binding agreement.

Eskom Holdings SOC Limited reserves the right not to proceed with any further engagements with prospective Supplier that cannot provide the necessary information.

Eskom Holdings SOC Limited is also committed to Supplier Development and Localisation, as a poverty alleviation and job creation initiative which identifies Government spending on infrastructure—such as Power Station construction as a key area of intervention, and Eskom, as a State Owned Enterprise, is required to set Local Content, black economic Empowerment (LBS, BWO and SBE) and Skills Development targets.

Eskom has delegated the responsibility for this Request for Information enquiry to TI Nkosi. All queries and official responses must be addressed to Ms TI Nkosi. Please email: Nkositl@eskom.co.za

Eskom is committed to stringent quality control standards and have formulated the following questionnaire to assist you in providing the information required.
Background
The current Arnott seal oil plant was commissioned by CEM in the 1970’s. The generators were changed during the Arnott capacity increase project which also affected the seal oil plant. Some of the components had to be upgraded or configured to accommodate the increase in pressure and flow rate. Most of the plant components have aged, leading to accelerated component failures and reduced plant reliability and availability. A number of plant load loss have been recorded in the past ten years due to seal oil plant component failures. The proposed scope of work on the generator seal oil plant must address the shortfalls currently experienced.

Some of the shortfalls include:

- Failures of the seal oil vacuum pumps due to loss of sealing water to maintain vacuum leading to oil ingress into the generator and also losing pump discharge pressure due to cavitation
- Failures of the tank level controlling instrumentation, leading to oil ingress into the generator, oil starvation and pump cavitation
- Failures of the seal oil/hydrogen differential pressure regulator, leading to high/low differential pressure and unit trip
- Failure of the seal oil coolers leading to oil in water contamination
- Failures of the seal oil heaters, leading to a cold unit light up and reduced oil flow on return lines
- Failures of diaphragm valves due to age
- Seal oil contamination by foreign material originating from the aged of the existing seal oil piping and tanks
- Flexibility to make required changes in operating philosophy due to type of technology and tools available

Criteria
The following criteria are applicable to the project:

- Civil/Structural and Architectural Design Criteria:
  This is a one on one replacement; therefore the static and dynamic loading must be the same as or less than the existing design.

- Control & Instrumentation Design Criteria:
  It's a one on one replacement in some instances; some instrumentation will remain the same. However, some other instrumentation will be replaced with better instruments that are more suited to the application.
  Some additional instruments will also be added as outlined in this document.
  The control philosophy will remain the same.

- Electrical Design Criteria: Electrical supply and motors
  NPS to be in accordance with IEC standards.
  Use existing generator capability chart.
  IEC and Eskom standards will be used to determine the design criteria for generator, switchgear, cabling and earthing.

- Layout Design Criteria
  This is a one on one replacement, therefore the layout should be kept the same, if for some reason changes need to be implemented, a study needs to be done to ensure that the interfaces are maintained.
- Maintenance Design Criteria;
  Maintenance criteria must try to match existing plant but may change due to state of the art technology.
- Mechanical Design Criteria;
  Mechanical will be designed in accordance with the applicable standards
  Auxiliary system design to be similar to existing design.
- Operating Design Criteria;
  Similar to existing design.
- Process Design Criteria;
  Similar to existing design.

The proposed scope of work to include but not limited to:

- H2/seal oil diff pressure control valve to control the delivery pressure to the seals. The new valve must have a damping mechanism to smoothen the control of the valve. The valve must be able to cope with a wide operating window and remain stable during transient conditions. The configuration of the seal oil differential pressure controller is very important to the stability in pressure and should be considered in design of this layout.
- Seal oil pumps with capacity sufficient to supply enough oil to the H2 shaft seals to maintain a normal differential pressure. Pump discharge pressure should be around 750 kPa.
- Pressure relief valves installed for each individual pump suitable for hydraulic application and suited to the type of pump used.
- A seal oil tank topping up facility. The facility must have a mechanism to prevent overfilling the seal oil tank. The topping up facility must also be equipped with a strainer.
- A recirculation pump and pipework to recirculate the oil from the tank through the heater and back to the tank
- Seal oil heater will have to be installed
- A reliable vacuum pump system. The type of system is up to the designer, however proper motivation should be added as to why the selected system is the preferred option. Seal water is available should there be a need.
- Online flow measurements readings for the DE and NDE supply to the seal. The type of instruments should be specified for technical evaluation.
- Level transmitters of all tanks should be included. The instruments will be technically evaluated based on the suitability for the application
- Any additional instruments or indications (pressure, level, temperature, flow, sight glass, etc.) can be added by the designer, should there be a need
- Any control mechanism can be added by the designer, however proper motivation should be added as to why this is needed
- Any pipework modifications should be included
- Generator liquid detection pipework modification to ensure oil spillage into the generator doesn't contaminate the H2 plant and equipment
• Seal oil plant should have a filtration facility to ensure the oil remains within the ISO 4406 specification

The above mentioned scope of work is only the current and existing problematic areas and component. The scope can be expanded and are not limited to the above mentioned components. The scope submitted must include all modification needed to the plant to fit the replacements and operate correctly.

Questions

Two options are currently being investigated:

• Option A: Full replacement of the system with specified boundary conditions at Generator termination points taking into account the design criteria.
• Option B: Refurbishment of the current seal oil system with specified boundary conditions at the Generator termination points taking into account the design criteria.

We would like to establish the following:

1. Scope of work associated for both options;
2. Outage time requirements for both options;
3. Budget costs associated with both options;

Please note:

Site clarification meeting with representatives of the Employer will take place as follows:

Commence on 2016-06-31,
Time: 10H30 hours
The venue is: Arnot Power Station
Rietkull Club (Outside the station)

1. SUBMISSION OF INFORMATION

To ensure the receipt of communication with regard to this request for information process, kindly complete Appendix A - Acknowledgement form

Tender documentation can be obtained via the following: It may be downloaded from http://mp2mas17.eskom.co.za/tenderbulletin/search.asp

Tender documents may be downloaded as follows:

Click on Tenders
Click on What’s out to tender
Click Eskom’s Tender bulletin
Click on General Search
Click on Search
1.1. Method of delivery

RFI submissions should be addressed and delivered to the Employer as follows:

ESKOM HOLDINGS SOC LIMITED
Group Technology & Commercial
RFI For Generator Seal Oil System
Arnot Power Station
ATT: Ms Ti Nkosi
CONFIDENTIAL TENDER NO. MPXGC004230

The place for delivery of the RFI is the Eskom Tender Box located at:

Eskom Tender Box
Ground Floor
No.10 Smuts Avenue
Witbank / Emalahleni/Mpumalanga

Marked: Confidential Tender No.MPGXC003583Rx3

Map Link for Tender Box, 10 Smuts Avenue, Witbank


(NOTE: TELEGRAPHIC, TELEPHONIC, TELEX, FACSIMILE, E-MAIL AND LATE TENDERS WILL NOT BE ACCEPTED).

All hardcopy RFI responses must be clearly marked as follows:

- Ref number: MPGXC004230
- Closing date: 03 November 2015

Suppliers are also urged to submit a soft copy documents marked with Company's name on top of the disc.

1.1.1 Important Notes

1.

(i) Due to the specific need that this RFI process has to fulfill, Eskom wishes to clarify that this invitation is not intended to impede, amend or replace any current or future procurement process that Eskom has engaged in or will engage in.
(ii) Eskom reserves the right, in its absolute discretion, at any stage and without notice, to terminate further participation in the process by any Party, to select or disqualify any interested participant from further engagement, to amend and/or terminate this RFI process or any future process pursuant to this process.

(iii) This RFI is a stand-alone information-gathering and market-testing exercise, intended only to inform and assist Eskom in an investigation currently being carried out for an existing project. All respondents, participate herein on the basis that it is providing information voluntarily to strengthen a potentially beneficial process for all stakeholders.

(iv) Any and/or all information submitted by any and/or all respondents may be used in the development of this intended solution, without the necessity of acknowledging the source, and without such entity gaining any rights in respect of such a solution, including but not limited to any intellectual property rights.

(v) No portion of any of the information submitted will be treated as confidential and respondents should NOT submit sensitive or confidential, market or commercial information. The intention is to gather broad and general information to inform the way forward on more concrete processes.

(vi) Any information provided pursuant to this RFI process and any subsequent processes and/or engagement is not confidential but Eskom will use the information only in the course of its process of carrying out an investigation for an existing project. Through making a submission a respondent accept the terms and conditions which governs this process.

(vii) If any clarification is required on the information submitted by the respondent, all clarification answers and comments will be published on the Eskom web-site.

(viii) All participants responding to this RFI process need to ensure that they have received all information and remain solely responsible for satisfying themselves as to the information required in responding hereto and are fully responsible for all costs incurred in relation hereto and under no circumstances will any resultant cost be borne by Eskom.
Eskom reserves the right not to award this tender to the highest ranked or highest scoring tenderer, as we need to leverage and align procurement practices to drive socio-economic development objectives that are enshrined in various Government’s policies such as B-BBEE, Industrial Policy Action Plan and the New Growth Path. Preference will be given to respondents who score high in these areas. For further details on Eskom’s transformation objectives, please refer to the Eskom Supply Chain Policy 32-1034 on the following link: http://www.eskom.co.za/c/61/eskom-purchasing-policies/*

We look forward to receipt of your response.

Yours faithfully

Mashudu Mathantshani
Arnot P/S Procurement Manager, Tactical Sourcing
Group Technology and Commercial
RESPONSE TO REQUEST FOR INFORMATION

TO: ESKOM HOLDINGS SOC LIMITED (Representative)  
FROM: ____________________________________________

Attention: TI Nkosi  
Fax No.: __________________________________________

Ref: MPGXC004230

REQUEST FOR INFORMATION FOR THE PURPOSE OF RFI PROCESS FOR THE PURPOSES OF PROVIDING INFORMATION TO ESKOM IN SUPPORT OF A GENERATOR SEAL OIL SYSTEM

We are in receipt of a Request for Information from Eskom Holdings Limited dated ________________

Please find below our response to your questions:

Confirmation of respondents to participate in a Request for Information in Support RFI For Generator Seal Oil System

We confirm the following (please mark the appropriate response):

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We are interested in submitting a response in terms of Eskom’s RFI process requirements</td>
<td></td>
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<tr>
<td>2</td>
<td>We have noted the deadline for the RFI submission</td>
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<tr>
<td>3</td>
<td>We intend to submit the information in the name of the organisation stated above</td>
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<tr>
<td>4</td>
<td>We would like to receive all further information and correspondence at our e-mail address as above</td>
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<tr>
<td>5</td>
<td>We have read and understood all the &quot;important notes&quot; under paragraph 1.1.1 above, particularly with regard to non-confidentiality of information submitted as part of a response to this RFI.</td>
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<td></td>
<td></td>
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</tbody>
</table>

Yours faithfully

For the Respondent