Request for Quotation (RFQ) The provision of services to develop a compressed air system scoping tool to analyse, assess and evaluate opportunities for energy savings through control optimization

RFQ No. 5876/02/08/2022

Date of issue	Tuesday, July 19, 2022
Closing Date and Time	Tuesday, August 02, 2022
RFQ Number	**5876/02/08/2022**
Contact details	For submission of quotations or any other enquiries: tender@csir.co.za *(please always quote the RFQ number with your submissions and inquiries)*
CSIR Business Hours	08h00 to 16h30, Monday to Friday

1 INVITATION FOR QUOTATION

Quotations are hereby invited for the provision of services to develop a compressed air system scoping tool to analyse, assess and evaluate opportunities for energy savings through control optimization,on behalf of the National Cleaner Production Centre of South Africa (NCPC-SA).

2 BACKGROUND

The National Cleaner Production Centre-South Africa is the country's' leading resource efficiency program funded by the South African Government through the Department of Trade and Industry. In 2016 the NCPC-SA embarked on Phase II of its flagship Industrial Energy Efficiency Project (IEE Project), with international stakeholders like The Global Environment Facility (GEF) UNIDO and the Govt. of Italy. A key focus of the Phase II Project is to accelerate and expand the introduction of Energy Management Systems (EnMS), Industrial Energy Systems Optimization (ESO), and the Energy Management Standard (ISO 50001)

within the South African industrial (and selected commercial) sectors. As a result, the NCPC-SA has engaged various South African industry sectors and secured selected sites to participate in assessments targeted at identifying opportunities to reduce energy consumption.

The objective of the energy assessment is to assist the company to quantify the consumptionof all energy sources on site, as well as the significant energy users of each source of energy;to identify and quantify energy performance improvement opportunities through detailed assessment and measurement activities and to provide detailed recommendations for energyoptimization and reduction thereof.

2.1 Scope of work

Development of a compressed air scoping tool to analyse, assess and evaluate whether an opportunity for energy savings exists in sites which have multiple compressors, through control optimization:

- The tool needs to allow for data input, analysis of the data, assess and evaluate the potential for compressed air system control optimization. The tool should also advise/suggest the optimal/efficient control to use, quantify in terms of kw power, Rands, air flow etc.
- The tool should assess what the compressed air system state is and what possible gaps are there to attain an optimized compressed air system.
- The tool needs to be able to analyse a minimum of 2 multicompressors to a maximum number of 20 compressors of different types i.e., load/unload and VSD (variable speed drive), trim and baseload.
- The tool needs to analyse whether there is a need for a sequencer in the compressor control philosophy or not and quantify or demonstrate the potential benefit thereof.
- The tool should allow for scoping/probing of a compressed air system regarding high level potential savings opportunities and to access and quantify the opportunity that is available.
- The tool should assist the facility to highlight the immediate compressed air system energy savings opportunities which could subsequently lead to reduced

maintenance, decreased downtime, increase production throughput, and improvement in product quality.

2.2 PROGRAMME OUTPUTS/DELIVERABLES:

Deliverable/Task List	Expected Results	Duration(days)
Phase 1: Project briefing -Meeting between NCPC-SA project manager and contractor to finalize schedule and scope.	Briefing notes	**0.4**
Phase 2: Development of the tool to analyse, assess and evaluate compressed air system savings potential for sites with multiple compressors.	Excel based tool/(this may be in MS Excel or any other user friendly format	**20**
1.The tool needs to be able to control a minimum of 2 multicompressors to a maximum number of 20 compressors of different types i.e., load/unload and VSD (variable speed drive), trim and baseload.		
2. The tool needs to analyse, assess the as is condition of the compressed air system and advice/suggest the optimal/efficient control to use, quantify in terms of kwh power, Rands, air flow etc..		
4.The tool needs to analyse whether there is a need for a sequencer in the compressor control philosophy or not and quantify or demonstrate the potential benefit thereof		
5.The tool should assess what the compressed air system state is and what possible gaps are there to attain an optimized compressed air system, with quantification of potential benefits and savings		
6.Testing of the tool by service provider to the NCPC-SA Project Manager	Acceptance report	**0.4**
7.Final handover of the developed tool	Excel based tool/(this may be in MS Excel or any other user-friendly format	**0.2**
8. Awareness and information transfer session to NCPC staff and other interested stakeholders		
Expected Working Days		**21**

3 EVALUATION CRITERIA

3.1 Quotations received after the closing date will not be considered.

3.2 Submissions received by tenderers who do not submit a signed Declaration byTenderer form, will not be considered.

3.3 Selection of suppliers will be based on the **80/20** preference point system.

3.4 Indicate CSD number (National Treasury Central Supplier Database) on quotation. If not registered yet on CSD, use www.csd.gov.za to register. Neither a purchase order will be issued, nor will a contract be signed without a valid CSD number.

3.5 Provide valid original or certified copy of the B-BBEE Certificate issued by an accreditedverification agency and bearing a SANAS logo; or

- A valid sworn affidavit made on a DTI designed template; or
- A DTI issued sworn affidavit; or
- CIPC issued B-BBEE certificate.

No B-BBEE status will equal zero points during the evaluation. Neither a purchaseorder will be issued, nor will a contract be signed without a valid B-BBEE Certificate.

4 PRICING QUOTATION

4.1 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.

4.2 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, etc.

4.3 Payment will be according to the CSIR Payment Terms and Conditions.

4.4 Clearly indicate VAT charged where applicable (if not VAT registered, please state soclearly).

5 OTHER TERMS AND CONDITIONS

5.1 The tenderer shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any CSIR employee or its representatives. Such anact shall constitute a material breach of the Agreement

and the CSIR shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights.

5.2 A validity period of 90 days will apply to all quotations except where indicated differently onthe quote.

6 No goods and/or services should be delivered to the CSIR without an official CSIRPurchase order. CSIR purchase order number must be quoted on the invoice. Invoices without CSIR purchase order numbers will be returned to supplier.

7 DECLARATION BY TENDERER

Only tenderers who completed the declaration below will be considered for evaluation.

RFQ No: 5876/02/08/2022

I hereby undertake to render goods/services described in the attached tendering documents to CSIR in accordance with the requirements and task directives/quotation specifications stipulated in RFQ No. at the price/s quoted. My offer/s remains binding uponme and open for acceptance by the CSIR during the validity period indicated and calculatedfrom the closing date of the quotation.

I confirm that I am satisfied with regards to the correctness and validity of my quotation; that the price(s) and rate(s) quoted cover all the services specified in the quotation documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this RFQ as the principal liable for the due fulfilment of this RFQ process.

I declare that I have no participation in any collusive practices with any tenderer or any other person regarding this or any other RFQ proposal.

I accept that the CSIR may take appropriate actions, deemed necessary, should there be a conflict of interest or if this declaration proves to be false.

I confirm that I am duly authorised to sign this proposal.

NAME (PRINT) ……..

CAPACITY ……

SIGNATURE ……

NAME OF FIRM ……..……..

DATE ……

WITNESSES

1 ……

2 ……

DATE: ……..