	Expression of Interest (EOI)/ Request for Information (RFI)	Template Identifier	240-72663051	Rev	1
		Document Identifier	N/A	Rev	N/A
		Effective Date	01 August 2016		
		Review Date	September 2022		
		EOI/RFI No.	MWP1213CX		

PART A REQUEST FOR AN EXPRESSION OF INTEREST (EOI) /REQUEST FOR INFORMATION(RFI)			
Description of the works/goods/services	The provision for the real time dynamic simulator		
Deadline for submission	01 April 2022	At (South African Standard Time)	10H00
Tender Office address	THE TENDER OFFICE Eskom Megwatt Park Tender office Northside (Retail Centre) Maxwell Drive Sunninghill		

Eskom Holdings SOC Ltd ("Eskom") invites you to submit an:

- **Request for information (RFI)** to submit information for the works/goods/services as stated in the table. This RFI is a stand-alone information-gathering and market-testing exercise, intended only to inform and assist Eskom's further deliberation and development of a strategy for the [Drafting note: insert name of project]. Eskom may request indicative prices if so stated in this RFI.


Eskom has delegated the responsibility for this **RFI NO – MWP1213CX** to the signatory of this document, whose details can be found below.

Name	Designation	Signature	Date
Sello Ndlovu	Senior Buyer		11 March 2022
Telephone number	011 800 6427	Fax and/or e-mail address	0866681103 ndlovupe@eskom.co.za

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PART B RESPONSE SHEET IN TERMS OF A REQUEST FOR AN EXPRESSION OF INTEREST /REQUEST FOR INFORMATION To be completed by the supplier			
To	Eskom Holdings SOC Ltd	Date	
Attention			
Tel no		Fax no and /or e-mail address	
From		Address	
Address			
Sender			
Description of the works/goods/services			


Please find below our response to Eskom's questions:

No.	Question	Please indicate your response in this column
1.	<i>[your contact name and contact details]</i>	
2.	<i>[Company registration number]</i>	
3.	<i>[brief description of previous experience and Description of the solution that you can offer]</i>	
4.	<i>Indicative prices (optional and only for use of RFI's)</i>	
5.	<i>[Add applicable questions]</i>	

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1. BACKGROUND

SECTION 1

1.1 Introduction

According to the approved IRP 2019, the renewable component of the energy mix will be approximately 27 GW by the year 2030 consisting of 8.9 GW both CSP and PV, 17.8 GW of Wind and 0.1 GW of small Hydro and Biomass. Renewables are intermittent, to achieve the renewable integration, the ingredients to be added includes control, automation and monitoring so that clean, safe, reliable, resilient, efficient and sustainable energy could be generated and consumed.

Renewables are interfaced by means of inverters on the grid. At a moment Eskom uses software tools like DigSilent Power factory and PSSE to evaluate the impact of these inverters by means of generic models which does not reflect true impact. RTDS has a potential of interfacing controllers of these inverters into the simulated network and evaluate their impact in real time. It is then easy to evaluate their impact even before these devices are commissioned into the network.

A literature scan was conducted to investigate who are the leaders of RTDS globally and which institutions in South Africa has these devices. The scan report recommended that indeed Eskom need to have RTDS to evaluate the impact of renewables on the grid. Modern power system is evolving and is growing to be large with complex systems. Given the uniqueness of the Eskom grid and the challenges associated with it, Eskom must produce project specifications that will address its challenges through the Real-time simulation to avoid system collapse due to large integration of renewable into the grid. Major studies will require the use of very fast, flexible, and scalable real-time simulators. It must be noted that electric power system equipment can be connected directly to the simulation platform to study their behaviour in real-time situation. This will be the most important over and above the traditional simulation methods that are currently employed by Eskom.

Eskom has more than 10 000 three phase buses that covers the entire Eskom network. To specify the device and indicative cost of the RTDS that will cover the entire network is required to initiate the next stage of this project.


The product that needs to be provided is as follows:

- To provide Information from suppliers and manufacturers on Real Time Dynamic Simulator (RTDS),
- To provide history of Installation done,
- To provide indicative cost of the device suitable to cover Eskom grid, and

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- To provide information on number of racks needed to accommodate entire Eskom grid.

2. BENEFITS TO ESKOM

Real-Time Dynamic Simulator (RTDS) offers the following benefits:

- Interface the controllers of inverters with the simulated network,
- Allow Eskom to evaluate the impact of renewables into the grid in real time,
- Test control system hardware even when a physical plant is unavailable,
- Avoid costly design flaws by detecting errors early when they are still cost effective to connect.
- RTDS has a potential to restart the power grid after total blackout using system Islanding.

3. OBJECTIVE OF THIS REQUEST

- To provide Information from suppliers and manufacturers on Real Time Dynamic Simulator (RTDS),
- To provide history of Installation done,
- To provide indicative cost of the device suitable to cover Eskom grid, and
- To provide information on number of racks needed to accommodate entire Eskom grid.

4. SPECIFICATION

The project specification for the device will be determined once this process of Request of Information has been completed

5. IN RESPONSE TO THE REQUEST THE FOLLOWING INFORMATION IS REQUESTED.

- To provide Information on Real Time Dynamic Simulator (RTDS),
- To provide history of Installation done,
- To provide indicative cost of the device suitable to cover Eskom grid, and
- To provide information on number of racks needed to accommodate entire Eskom grid.


Eskom has delegated the responsibility for this Request for Information enquiry to Sello Ndlovu

All queries and official responses must be addressed to sello.ndlovu@eskom.co.za The closing time for clarification of queries is 3 days before the deadline for tender submission.

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6. METHOD AND PLACE OF DELIVERY

6.1 All the responses must be sealed and be delivered at the tender box located at the following:

THE TENDER OFFICE
Eskom Megwatt Park Tender office
Northside (Retail Centre)
Maxwell Drive
Sunninghill

6.2 All RFI responses must be clearly marked:

MWP1213CX

Eskom Holdings SOC Limited ("Eskom") invites you to submit information regarding the real time dynamic simulator

6.3 FORMAT OF SUBMISSION

Each RFI response shall be submitted in **1 original printed, 1copy and 1 CD**


7. IMPORTANT NOTES

- I. Due to the specific need that this RFI process to fulfil, Eskom wishes to clarify that this RFI is to intended to impede, amend or replace any current or future procurement process that Eskom has engage in or will engage in.
- II. Eskom reserve 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 analysis exercise, intended only to inform and assist Eskom in an investigation currently being carried out for an existing project. All respondent, participate herein on the basis that is providing information voluntarily to strengthen a potentially beneficial process for all stakeholders.
- IV. Any and /or all information submitted by any and/or respondents may be used in the development of this intended solution, without the necessity of acknowledging the

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source, and without such entity gaining any rights in respect of such a solution, including but not limited any intellectual property rights.

- V. No portion of any information submitted will be treated as confidential and respondents should **NOT** submit sensitive or confidential market or commercial information. The intention is to gather 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 its processed 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 and 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.
- IX. Eskom reserves the right not to award this tender to the highest ranked or highest scoring tenderer, as it needs to leverage and align its procurement practices to driving 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 *tenderers* who score high in these areas. For further details on Eskom's transformation objectives, please refer to the Eskom Supply Chain Policy 32-1033 on the following link: <http://www.eskom.co.za/c/61/Eskom-purchasing-policies/>


Intellectual Property Requirements

NB: All proposals should state clearly who owns Intellectual Property if applicable

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We look forward to receipt of your response.

Yours faithfully,



Damela Mathetja

Procurement Manager – Tactical Procurement

Eskom Holdings SOC Limited

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