	Request for Information (RFI) Template	Document Identifier	240-72663051	Rev	1
		Effective Date	October 2022		
		Review Date	October 2027		
		EOI/RFI Number	MWP2787CX		


PART A REQUEST FOR AN EXPRESSION OF INTEREST (EOI)/ REQUEST FOR INFORMATION (RFI)			
Description of the works/goods/services	MWP2787CX - Request to obtain information about the commercially available and/or demonstrated Non- Lithium-Ion long duration energy storage technologies.		
Deadline for submission	25 October 2024	At (South African Standard Time)	10h00
Tender Office address	Eskom Megawatt Park Tender Office Retail Centre 1 Maxwell Drive Sunninghill 2000		
Enquiries	Sello Ndlovu E-mail address: ndlovupe@eskom.co.za Tel: 011 800 6427		

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

- **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 long duration energy storage (LDES) technologies. Eskom may request indicative prices if so stated in this RFI.

We look forward to receipt of your response.

Yours faithfully




Procurement Manager

Shamani Padayachee

Date: 01 October 2024

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DEFINITIONS

In this Document, except as otherwise defined herein, the following terms shall have the following meanings:


B-BBEE	- means Broad-Based Black Economic Empowerment.
Document	- this document which outlines the requirements of the Request for information of solar photovoltaics (PV) technologies and associated components, services, and capabilities.
ERIC	- Eskom Research and Innovation Centre that is located at Lower Germiston Road, Rosherville, Gauteng.
Procurement Process	- Means the procurement process being conducted in terms of this RFI in respect of the Project or requested information.
RT&D	- Research, Testing and Development, a business unit in Eskom.
Respondent	- any entity or consortium that submits a Response to this Document.
State Owned Company or SOC	- a legal entity that is or has previously been created by the Government in order to partake in commercial activities on the Government's behalf, where in the context of the Project, such entity may include any entity with a mandate to engage in the energy or financing sector.
PV	- Photovoltaics.
RE	- Renewable.
LDES	- Long Duration Energy Storage
Gx, Dx and Tx	- Generation, Transmission and Distribution.

INTRODUCTION AND BACKGROUND

Electricity generation from renewable energy sources, such as solar PV and wind, are expected to increase their contribution to the future energy mix of South Africa. Due to the variable nature of these resources, energy storage technologies are an important complementary technology to provide flexibility and ancillary services.

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Eskom continuously updates its knowledge base on current and emerging power system technologies to stay abreast of the latest developments and opportunities available to it within the local and international market. Eskom is inviting suppliers to furnish relevant information on long duration energy storage technologies that can assist the power system with functions such as flexibility, grid stabilisation, demand management and energy shifting. The information provided by suppliers will be used by Eskom to inform strategic business decisions and evaluate potential long duration energy storage technologies that are suitable for possible implementation at pilot scale at an Eskom site(s).

PURPOSE AND STRUCTURE OF THE RFI

- 1) The objective of this RFI is to obtain market information from interested Suppliers/Service providers for the assessment of long duration energy storage (LDES) technologies and associated components, services, and capabilities to Eskom Research and Innovation Centre (ERIC).
- 2) The future LDES projects specifications will be developed based on the technologies that are available in the market.
- 3) Information from Suppliers/Service provider will be used by Eskom to verify known information on LDES technologies, update knowledgebase on current and emerging technologies and pilot projects,
- 4) Information from Suppliers/Service provider will also be used by Eskom to inform strategic business decisions and evaluate potential long duration energy storage (LDES) technologies that are suitable for possible implementation at Eskom sites.
- 5) Service providers/Suppliers are encouraged to provide complete information as much as possible.
- 6) Responses submitted should be as comprehensive as possible and include information requested and any supporting documentation in respect thereof. If proprietary information is included in the response, the clauses on the use of such information must be indicated.


PART B

RESPONSE SHEET IN TERMS OF A REQUEST FOR AN EXPRESSION OF INTEREST/ REQUEST FOR INFORMATION

To be completed by the supplier

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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	MWP2787CX - Request to obtain information about the commercially available and/or demonstrated Non- Lithium-Ion long duration energy storage technologies.		

Please find below our response to Eskom's questions:

1. RESPONDENT INFORMATION


No.	Question	Please indicate your response in this column
1.	Name of the Respondent	
2.	The name and contact details of the person appointed by the Respondent as its representative in the event that Eskom needs to contact the company for clarification or further details.	
3.	Company profile and description of key service offerings and capacities.	
4.	Is the respondent/company an existing registered Eskom vendor? (Please provide vendor registration details)	
5.	Provide details on respondent/Company empowerment, localisation credentials (Black Youth & Women Owned Enterprise, BBBEE Enterprise etc)	
6.	Is the company locally based or have a local office in South Africa? If no, indicate if the company is familiar with the requirements of South African State-Owned Companies tendering processes.	

2. SECTION A – PV MODULES:

No.	Question	Please indicate your response in this column
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A1.1	<p>The Respondent is required to provide Supplier name, product name and product description, including:</p> <ul style="list-style-type: none"> • Type of technology utilised and the scientific background. • Estimated technology readiness level. • Unique features in the technology. • Capacity. • Design life. • Implementation timeline of the technology. • Local South African agent or representative if available. • Estimated percentage of local content for associated technology. • Key technology risks • Storage requirements • Typical footprint range to deploy LDES system. • The possibility of scalability and flexibility of operation. 	
A1.2	<p>The Respondent to provide technology performance characteristics of the technology including:</p> <ul style="list-style-type: none"> • Round-trip efficiency. • Ramp rate (charge and discharge). • Response time. • Design depth of discharge. • Self-discharge rate (%/day). • Energy density. • Power density. • Capacity and performance degradation rate. 	
A1.3	Provide a process and flow diagram of a typical installation (including overall mass/material/heat balance, inputs, and outputs).	
A1.4	Provide functional descriptions and operating and performance parameters of all key components.	
A1.5	Describe the control philosophy and operating strategy of the technology.	
A1.6	<p>Maintenance philosophy of all key components:</p> <ul style="list-style-type: none"> • Availability of spares required for routine operations and maintenance. • Can equipment be repaired locally in South Africa? 	

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	<ul style="list-style-type: none"> • Typical wear parts and replacement timeframes. • Service intervals and duration. • Details of typical service and maintenance contracts available and recommended for the equipment supplied. • Typical service costs, including repairs, spares and labour for each type of service. • Reliability and availability statistics from previous installations. • Specialised engineering, operating and maintenance skills. 	
A1.7	<p>The Respondent to provide information on the budgetary cost estimated for the design, supply, and installation of long duration energy storage technology:</p> <ul style="list-style-type: none"> • Capital and operating expenditure in South African Rand (ZAR) per kilowatt hour (kWh)]. 	
A1.8	The Respondent to provide End-of-Life management plan for the technology.	
A1.9	<p>Provide information on after sales service capability:</p> <ul style="list-style-type: none"> • Training Requirements • Upskilling/retraining requirements. <p>Certification of operator requirements.</p>	
A1.10	<p>Supply of equipment for demonstration:</p> <ul style="list-style-type: none"> • Typical demonstration volume and scalability guarantee. • A letter of intent if willing to implement a pilot/demonstration plant in South Africa at an Eskom site. • Terms and conditions for the use of the equipment. • Typical guarantees and warranties that would be offered for the equipment and systems supplied. 	
A1.11	<p>Provide reference LDES installations:</p> <ul style="list-style-type: none"> • Name of facility. • Capacity. • Date of initial deployment. • Date of commercial operation • Years of operation after technology deployment, reason for removal if any. • Type of storage medium, Footprint, and specification. 	

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	<ul style="list-style-type: none"> Lessons learned from the deployment, demonstration, or operation of LDES systems. 	
	Possibility of visiting reference installation/s.	
A1.12	Intellectual property (license and ownership - if licensee, provide details including terms and conditions).	
A1.13	Provide information on the relevant standards, permitting and licensing authorisations (including environmental and other) that the technology should comply to. An estimate of the time required to obtain necessary authorisations to be provided.	
A1.14	The Respondent to provide Case studies / patents / reports / literature based on product experience / usage (provide report title, year published, author names, author's affiliation).	
A1.15	When do you anticipate that your LDES system would be able to compete with the conventional Li-ion Battery Energy Storage Systems (BESS) in terms of price and performance. Please state your technology's key benefits in comparison to Lithium-ion energy storage systems.	
A1.16	Provide any other additional information in respect of the technology which you may deem necessary to bring to the attention of Eskom.	

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