PART A E3876CXMWP - REQUEST FOR INFORMATION (RFI)			
Description of the works/goods/services	Request for Information (RFI) to assess the market availability, technical capabilities, and deployment experience of novel CSP receiver design and heat transfer fluids (TRL-Technology Readiness Level equivalent to pilots and demonstration project)		
Deadline for submission	***15 December 2026***	**At (South African Standard Time)**	**10h00**
Tender Office address	Tenders are uploaded via Eskom Tender bulletin site on the Eskom E- tendering page.		
Enquiries – Representative	Letsibogo Mahlatji MahlatLN@eskom.co.za		
RFI are to be submitted electronically via Eskom E- tendering site by the stipulated closing date and time. ***Please note it is the responsibility of the supplier to ensure that RFI submission is submitted before the closing date and time***	Tenders are uploaded via Eskom Tender bulletin site on the Eskom E- tendering page.		
Electronic Submission of RFI	The tenderer must upload the tender via Eskom Tender bulletin site on the Eskom E- tendering page. All documents need to be submitted in a PDF and Excel format (The upload size per document is 500 megabytes and total submission is restricted to 4 gigabytes). No Zip/condense files can be uploaded No hard copy will be accepted Please ensure that the submission status is indicated as complete. Supplier Help Manual guide and video can be found on Eskom E-Tendering page		
E-tendering Help Manual for supplier	Documents available at https://etendering.eskom.co.za		

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

- **Request for information (RFI)** to submit information to assess the market availability, technical capabilities, and deployment experience of novel CSP receiver design and heat transfer fluids (TRL-Technology Readiness Level equivalent to pilots and demonstration project).

  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 Request for Information (RFI) to assess the market availability, technical capabilities, and deployment experience of novel CSP receiver design and heat transfer fluids (TRL-Technology Readiness Level equivalent to pilots and demonstration project). Eskom may request indicative prices if so, stated in this RFI.

Eskom has delegated the responsibility for this **RFI** to the Representative of this document.

We look forward to receipt of your response.

Yours faithfully



Corporate Procurement Manager

Shamani Padayachee

Date: 20 November 2026

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DEFINITIONS

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

B-BBEE Document	_	• means Broad-Based Black Economic Empowerment. • this document which outlines the requirements of Eskom's further deliberation and development of Oil in water removal by a suitable technology
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 inspect of the Project or requested information.
RT&D Respondent	_	• Research, Testing and Development, a business unit in Eskom. 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

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BACKGROUND INFORMATION

Concentrated Solar Power (CSP) integrated with Thermal Energy Storage (TES) provides a potential pathway for dispatchable renewable electricity generation through the storage and later use of solar thermal energy. The technology could support Eskom's objectives relating to energy security, decarbonisation and the integration of renewable energy.

Eskom is therefore undertaking an RFI to assess the market, benchmark available novel CSP receiver designs and heat transfer fluids solutions and identify technologies with potential for further evaluation through pilot or demonstration projects.

DESCRIPTION OF SERVICE/ PRODUCT THAT NEEDS TO BE PROVIDED (USE HIGH LEVEL AND SHORT TEXT FORMAT), AND IF NECESSARY. ADD A SPREADSHEET.

Provide the information based on the "scope of work - Section 5 below". The information gathered will be used by Eskom to assess the market, benchmark available novel CSP receiver design and heat transfer fluids solutions and identify technologies with potential for further evaluation through pilot or demonstration projects.

MOTIVATION FOR THE REQUEST

Eskom is seeking to increase renewable energy generation while supporting energy security, grid flexibility and decarbonisation. As the contribution of variable renewable energy increases, there is a growing need for renewable generation technologies that can provide electricity when required (dispatchable) rather than only when the renewable resource is available (non-dispatchable).

CSP integrated with TES has the potential to provide dispatchable renewable electricity by storing solar thermal energy for later electricity generation. The purpose of this RFI is therefore to test the market and gather up-to-date information on available novel CSP receiver design and heat transfer fluid solutions that are either at testing and development stage or will be commercially ready in the next few years. The information obtained will support Eskom's strategic decision-making and identify technologies that may warrant further assessment, pilot testing or demonstration.

BENEFITS TO ESKOM

The RFI will enable Eskom to identify and benchmark novel CSP receiver design and heat transfer fluids solutions that could provide reliable and dispatchable renewable electricity. It will support the assessment of technology maturity, performance, scalability, cost competitiveness and suitability for South African conditions, while informing strategic decisions on technologies that could contribute to energy security, renewable energy integration and decarbonisation.

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PART B RESPONSE SHEET IN TERMS OF A REQUEST FOR INFORMATION To be completed by the supplier			
To	Eskom Holdings SOC Ltd	**Date**	17 November 2026
Attention			
Tel no		**Fax no and /or e-mail address**	
From		**Address**	
Address			
Sender			
Description of the works/goods/services	Request for Information (RFI) to assess the market availability, technical capabilities, and deployment experience of novel CSP receiver design and heat transfer fluids (TRL-Technology Readiness Level equivalent to pilots and demonstration project)		

Please find below our response to Eskom's questions:

No.	Questions	Response
1	**Technology Description** Provide Respondent name, product name and product description, including: • Type of technology utilised (Including CSP configuration, receiver technology, heat transfer medium, thermal storage technology) • Estimated technology readiness level and business 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 the system.	

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	• The possibility of scalability and flexibility of operation.	
2	**Technical Performance** The Respondent to provide technology performance characteristics of the technology including: **Solar Field** • Configuration and layout • Solar field efficiency at design point • Minimum and recommended Direct Normal Irradiance (DNI) ranges. **Receiver** • Receiver operating temperatures. • Receiver efficiency at design point • Receiver warm-up sequence • Receiver mode of operations and configuration **Receiver Heat Transfer Medium/Fluid** • Heat-transfer medium/fluid (HTF) • HTF operating temperature range • HTF properties and composition **Thermal Energy Storage System** • Usable storage capacity and duration. • Design Configuration (Integrated or decoupled via heat exchanger) • Thermal Storage medium and storage configuration. • TES HTF if heat exchanger is used (i.e., if different from receiver HTF) **Power Generation System (high-level)** • Power block efficiency at design point • Thermodynamic cycle (i.e., Rankine) • Steam generator system configuration (if applicable) • Heat and Mass balance diagram (i.e,, from TES, SGS, Power Block)	

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Plant Performance (high-level)

- Plant rated electrical and thermal capacity
- Thermal efficiencies at design point
- Electrical auxiliary use at design point
- Expected annual generation (MWh_e)
- Expected Capacity factor (%)
- Plant efficiency (%) at design point, indicate high-level sub-system efficiency, i.e. solar collection system (solar field, receiver), TES, SGS, power block
- Expected technical/plant availability (%).
- Thermal energy loss diagram at design point

Plant Operating Strategy & Operating Modes

- Cold, warm and hot start-up times
- Operating Modes (time, sequencing and energy required, electrical or thermal) for Solar Collecting System (solar field and receiver) and high-level for power block.
- Ramp rates
- Part-load operation limits

Plant Designs

- Scalability limited to receiver design
- Approximate land requirement
- Ability to operate under variable solar conditions and different charging/discharging modes.

Maintenance

- Receiver maintenance requirements
- Expected annual performance degradation (%) for the receiver and HTF
- Design life including mid-life refurbishment if applicable.

Environmental Considerations

- Environmental impact/safety of thermal storage medium and/or HTF

All performance claims shall clearly state the operating conditions and assumptions under which the values are achieved.

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3	Provide a process and flow diagram of a typical installation (including overall mass/material/heat balance, inputs, and outputs).	
4	Provide functional descriptions and operating and performance parameters of all key components. (details on the receiver, high-level on the solar field and power block)	
5	Describe the control philosophy and operating strategy of the technology (details on the receiver, high-level on the solar field and power block)	
6	Maintenance philosophy of all key components: (details on the receiver, high-level on the solar field and power block) • Availability of spares required for routine operations and maintenance. • Can equipment be repaired locally in South Africa? • 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.	
7	The Respondent to provide information on the budgetary cost estimated for the design, supply, and installation of the technology: • Capital and Operating expenditure in South African Rand (ZAR) • Plant operating design life (years) • LCOE (R/kWh) Also provide the underlying assumptions, plant capacity and storage duration used in determining these values. Operating strategy to consider for the LCOE calculation is maximise energy collected (MW_{th}) and maximise power generated (MW_e)	
8	The Respondent to provide End-of-Life management plan for the technology.	
9	Provide information on after sales service capability: • Training Requirements • Upskilling/retraining requirements. • Certification of operator requirements.	
10	Supply of equipment for demonstration: • Typical demonstration volume and scalability guarantee. • A letter of intent if willing to implement a pilot/demonstration plant in South Africa. • Terms and conditions for the use of the equipment. • Typical guarantees and warrantees that would be offered for the equipment and systems supplied.	
12	**Reference Installations**	

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	Provide details of existing pilot, demonstration and/or commercial installations: • Name of facility. • Capacity (MW_e) • Storage (MW_{th}) • Receiver size (MW_{th}) • Receiver Heat Thermal Medium • Storage Heat Thermal Medium (if different) • Location • Date of initial deployment. • commissioning status • Date of commercial operation • Years of operation after technology deployment, reason for removal if any. • Type of technology and storage medium, Footprint, and specification. • Lessons learned from the deployment, demonstration, or operation of the systems. • Possibility of visiting reference installation/s.	
13	Intellectual property (license and ownership - if licensee, provide details including terms and conditions).	
14	Provide information on the relevant standards, permitting and licensing authorisations (including SHERQ) that the technology should comply to. An estimate of the time required to obtain necessary authorisations to be provided.	
15	The Respondent to provide Case studies / patents / reports / literature based on product experience / usage (provide report title, year published, author names, author's affiliation).	
16	When do you anticipate that your proposed CSP-TES receiver technology will be commercially competitive with established Concentrated Solar Power (CSP) technologies in terms of cost and technical performance? Please describe the key technical, operational and economic benefits of your technology compared with conventional CSP systems	
17	**Localisation and technology transfer** • What are the estimated potential job opportunities (%) during construction and operation. • Describe the training and skills-development opportunities that could be provided to Eskom personnel and local industry in areas such as design, engineering, installation, commissioning, operation, and maintenance. • Provide the estimated local content percentage (%) achievable for a pilot/demonstration project and for future commercial-scale deployment, where possible.	

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	• Identify the major components and systems of the proposed CSP-TES technology that could be manufactured, fabricated, assembled or sourced in South Africa, and identify those that would need to be imported.	
18	Provide any other additional information in respect of the technology which you may deem necessary to bring to the attention of Eskom.	

Yours faithfully

Name	Designation	Signature	Date
Telephone number		**Fax and/or e-mail address**	

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