	Request for Information (RFI)	Document Identifier	240-72663051	Rev	1
		Effective Date	01 August 2016		
		Review Date	October 2027		
		RFI Number	MWP2876CX		

PART A REQUEST FOR INFORMATION (RFI)			
Description of the works/goods/services	Request for information on commercially available and/or demonstrated carbon capture utilization and/or storage technologies suitable for application at coal-fired power stations.		
Deadline for submission	16 January 2025	At (South African Standard Time)	10h00
Tender Office address	Tender Advice Centre Next to the Retail Centre Northside Megawatt Park 1 Maxwell Drive Sunninghill Sandton		
Enquiries:	Spha Madondo Madondst@eskom.co.za 011 516 7994		


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 request for information on commercially available and/or demonstrated carbon capture utilization and/or storage technologies suitable for application at coal-fired power stations. Eskom may request indicative prices if so, stated in this RFI.

Eskom has delegated the responsibility for this **RFI** to the signatory of this document, whose details can be found below.

We look forward to receipt of your response.


Yours faithfully


 Shamani Padayachee
 Corporation Tactical Procurement

Date: 14 November 2024

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PART B RESPONSE SHEET IN TERMS OF A REQUEST FOR AN 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.	Supplier name	
2.	Product name	
3.	Product/system description	
3.1	Technology utilised and the scientific background	
3.2	Unique features	
3.3	General arrangement drawings	
3.4	Is the technology suitable for use at hard coal-fired power stations firing sub-bituminous coal?	
3.5	Footprint requirement for technology	
3.6	Perspectives of coal fuel quality and characteristics relevant to CCS design	
4.	Provide a process and instrumentation diagram of a typical installation (including overall mass balance, input and output streams)	
5.	Provide functional descriptions and operating parameters of all key equipment	

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6.	Describe the control and protection philosophy of the boiler if this technology is utilised, and if any, what design codes are applicable in the design of the system	
7	Provide a list of interface/utility requirements and qualities	
7.1	Compressed air/process air	
7.2	Cooling water volume and quality	
7.3	Process water volume and quality	
7.4	Electrical supplies, auxiliary power consumption	
7.5	Control and instrumentation interface requirements and number of signals	
7.6	Overall system pressure drop	
7.7	Modifications/upgrade of existing equipment	
7.8	Information on auxiliary energy requirements and considerations for low pressure steam from the coal-fired unit vs. dedicated auxiliary unit, heat recovery opportunities, and other relevant factors	
7.9	Cooling considerations and perspectives on wet cooling vs. dry cooling and impacts on process design and operational efficiency	
8	Reagent requirements: quantities and qualities	
9	Waste stream treatment and disposal requirements	
10	Maintenance philosophy of all key equipment	
10.1	Service intervals and duration	
10.2	Wear parts and replacement timeframes	
10.3	Typical service costs, including repairs, spares and labour for each type of service	
10.4	Reliability and availability statistics from previous installations	
10.5	Spares availability and lead times.	
10.6	Specialised engineering, operating and/or maintenance skills	
10.7	Important Operations and Maintenance characteristics that should be noted before conducting a feasibility study	
11	Emissions reduction achieved for NO _x , SO _x , other HAPs pollutants (Hg)	
11.1	Concentration in treated flue gas in milligrams per normal metre cubed (mg/Nm ³) dry basis, normalised to 10 % oxygen (O ₂) on a dry basis	
11.2	Removal efficiency range in mass %.	
11.3	Inlet flue gas limits (Maximum acceptable input emissions concentration values (i.e. PM concentration))	
11.4	Potential capture rates, capture system efficiency, and conditions required to achieve optimal design	

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11.5	Requirements/criteria for environmental controls and flue gas management (SOX, NOX, particulate, and others) prior to the CO2 capture process to ensure reliability and optimal capture operation.	
12	Reference installations	
12.1	Name of power plant	
12.2	Units installed on	
12.3	Unit capacity	
12.4	Date of commercial operation of units	
12.5	Date of installation of the system.	
12.6	Years of operation of the system	
12.7	Reason for removal or decommissioning of the system	
12.8	Type of coal fired and specification	
12.9	Emissions reduction achieved (from - to) in mg/Nm3, dry 10 % O2	
12.1	Information on documented experience and level of success with integration of all aspects of CCS for coal-fired power plants. Eskom prefers that technologies have been demonstrated at least at large pilot scale (20+ MWe) and demonstrated as fully integrated capture process. Please also provide information on relevant engineering design activities.	
13	Budgetary cost estimated for the installation of technology on a typical unit complete with all required auxiliary and ancillary equipment required for the functioning of the system [capital and operating expenditure in ZAR/kW.	
14	Possible by-product revenue streams, estimated revenue potential in ZAR/kW	
15	Implementation timeline for greenfield and retrofit project	
16	Estimated percentage of local content for plant and materials	
17	Supply of equipment for demonstration	
17.1	Supplier to indicate if they are able to provide equipment for a demonstration installation	
17.2	Indicative capital and operating expenditure(ZAR/kW)	
18	CO2 Transport & Storage	
18.1	Supplier to indicate integration of a CO2 capture plant on a coal plant with pipeline transportation and injection for geologic storage.	
18.2	Supplier to indicate CO2 compression methods	
18.3	Supplier to indicate storage technology readiness	
18.4	Supplier to indicate sustainability, safety, and long-term monitoring of storage stability.	

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18.5	Requirements or preferences for leading a fully integrated deployment vs. individual component deployment. For example, inclusion or exclusion of CO2 capture balance of plant (compression, cooling, controls, etc.), CO2 transport equipment, and/or CO2 sequestration equipment.	
19	By-product utilisation options	
20	Implications on load following and low load operation	
21	Minimum turndown achievable	
22	Interface with FGD and Non-FGD	
23	Impact on availability & utilization factor of the plant ~ (EAF)	
24	Life cycle costs of the technology	
24.1	R/kw Capex	
24.2	R/Kw fixed O&M	
24.3	R/kWh variable O&M	
24.4	R/Kw ongoing capex (upgrades, major replacements etc)	

Yours faithfully

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

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