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Dear Vumile and Lydia

## **QUARTERLY UPDATE ON THE IMPLEMENTATION OF ESKOM'S MINIMUM EMISSION STANDARDS POSTPONEMENT COMMITMENT: END MARCH 2017**

An update is provided herewith on the progress made in implementing the commitments submitted in support of Eskom's Minimum Emission Standards Postponement applications in February 2014, and in implementing Eskom's air quality offsets programme. This update reflects the status as of end March 2017. This progress update should be read in conjunction with the previous feedback provided to Mr Vumile Senene, dated 06 January 2017.

### *Eskom's emission reduction upgrades/retrofits*

The spreadsheet attached shows the progress made to-date in implementing the emission abatement retrofits shown in **Figure 1** in the postponement applications. Routine maintenance, including fabric filter bag replacements and electrostatic precipitator repairs, was also conducted as required during the quarter.

Development of the planned retrofits and upgrades projects was continued well in the last quarter. Grootvlei Unit 2, the second unit to be retrofitted with a fabric filter plant (FFP), went on outage for the retrofit in November 2016 (and not in August 2016, as communicated in the previous quarterly update), and the retrofit is currently in progress. Following the Department of Public Enterprises' requirement for Eskom to resubmit the Public Finance Management Act (PFMA) application for the Tutuka FFP retrofit, Eskom submitted the said application, and the DPE's response was received in January 2017. The project start date is delayed (from 18/19 FY to 19/20 FY) due to delayed approval of the PPPFA Exemption application from National Treasury. A PFMA application was submitted to Kriel FFP retrofit project on 14 March 2017.

## QUARTERLY UPDATE ON THE IMPLEMENTATION OF ESKOM'S MINIMUM EMISSION STANDARDS POSTPONEMENT COMMITMENT: END MARCH 2017

### *Compliance with emission limits*

Power stations generally comply with the emission limits provided in the Minimum Emission Standards (MES) postponement decisions during normal operating conditions. In the rare case when the emission limits are exceeded, these incidents are reported to the authorities in terms of the National Environmental Management Act section 30, and/or otherwise as required by the Atmospheric Emission Licences (AELs).

Matimba Power Station was issued with a Notice of Intention to Issue a Compliance Notice in December 2016, regarding exceedances of the SO<sub>2</sub> emission limit. The high SO<sub>2</sub> emissions at Matimba are directly related to the Sulphur content of the coal. Options to prevent the high SO<sub>2</sub> emission incidents were investigated and more information was provided in the response to the Pre-Compliance Notice on 17 February 2017.

### *Air quality offsets programme*

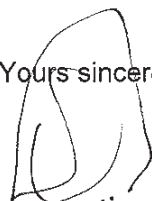
Air quality offset implementation plans were submitted to the Licencing Authorities and the Department of Environmental Affairs (DEA) in April 2016. A budget has been allocated internally for the implementation.

The following progress was made on implementing the air quality offsets programme in Quarter 4:

- investment approval for the lead implementations was received from EXCOPS, with some amendments. Eskom will be focusing on switching households from coal to electricity, and not from coal to LPG as was previously proposed.
- the tender issued to develop a business case for the provision of liquid petroleum gas (LPG) to KwaZamokuhle and Ezamokuhle was cancelled following EXCOPS amendments.
- A Local Stakeholder Reference Group (LSRG) meeting was held on 23 March 2017, at KwaZamokuhle.
- The updated implementation plans, annual report and Project Design Document will be submitted to the DEA this week.
- Eskom is currently placing contracts for KwaZamokuhle and Ezamokuhle for the project rollouts.
- The Bi-annual Eskom, DEA, Licensing Authorities, which was supposed to be held on 29 March 2017, has been postponed due to Parliamentary portfolio visit at Duvha Power Station.

Please let us know if you require any additional information.

Yours sincerely



Deidre Herbst

PR

**ESKOM ENVIRONMENTAL MANAGER**

Quarterly update on Minimum Emission Standards postponement commitments

Progress as of March 2017

Power Station	Retrofit	Commitment		Current status	Funding allocation	Risks
		Start date	End date			
Medupi	FGD	21/22	26/27	<p>Project development period is actively being managed with the increase in time to address various project and project management related matters closely monitored and controlled. Project investment approval expected [REDACTED].</p> <p>WFGD Process Plant basic design has been completed - work on the detail design to commence. Rail siding detail designs and works information have been completed.</p> <p>Environmental Impact Assessment is being conducted - specialist studies have been completed and draft reports are being drafted. Concept designs for EIA/WULA/WML are being conducted (additional scope); need to be finalised before EIA can be done. EIA strategy changed to pursue an interim waste disposal solution has been accepted and change communicated to DEA and I&amp;APs. DRA revision 2 was approved in [REDACTED].</p>	<p>Development funding secured; CAPEX funding to be requested in MYPD4 tariff application</p>	<p>Construction duration might take longer than initially anticipated - estimated at 5yrs per unit; this is however under investigation.</p> <p>EIA delays: EIA strategy changed to pursue an interim waste disposal solution to not delay the project; EIA schedule will be managed diligently. Scope amendments/discoveries during development and construction - may lead to additional engineering time and an increase in cost.</p> <p>Securing capital funding for the project - alternative being evaluated.</p>
	LNB	20/21	24/25	<p>Basic designs were completed on 19 September 2016. Detailed designs will be conducted internally by Eskom Engineers, prior to the project moving to execution stage.</p>	<p>CAPEX funding has been allocated internally. Funding to form part of MYPD4 tariff application.</p>	<p>Last unit is at a risk of not complying with the 1 April 2025 legislative requirement date.</p>
Tutuka	FFP	18/19	23/24	<p>Preferential Procurement Policy Framework Act (PPPFA) Exemption application submitted to Dept of Finance (DoF) in April 2016, with a copy to DPE. Additional information subsequently provided to DoF, on their request. DoF formal response was received early February 2017. PFMA information letter, advising DPE of increased costs, scope and time, beyond initial ERA, has been submitted to the DPE. DPE asked Eskom to resubmit PFMA application, which has been done. New PFMA approval was received in [REDACTED].</p>	<p>CAPEX funding has been allocated internally. Funding to form part of MYPD4 tariff application.</p>	<p>The PPPFA response still needs to be processed between Eskom and DPE</p>
	LNB	19/20	24/25	<p>Basic designs have been completed. Currently busy with detailed designs.</p>	<p>CAPEX funding has been allocated internally. Funding to form part of MYPD4 tariff application.</p>	<p>Last unit is at a risk of not complying with the 1 April 2025 legislative requirement date, but there is a concerted effort to accelerate the first unit to coincide with the FFP retrofit on the first unit.</p>

Power Station	Retrofit	Commitment		Current status	Funding allocation	Risks
		Start date	End date			
Duvha	HFT	21/22	23/24	<p>The plans to install a fabric filter plant (FFP) on Units 4-6 have been cancelled. Instead, Electrostatic Precipitator (ESP) high frequency transformers (HFT's) will be installed, and the ESPs, DHPs and SO<sub>2</sub> plants will be refurbished and ammonia injection may be introduced on the 3 units. Basic designs for a pilot HFT installation on Unit 5 have been completed, the associated ERA was approved, and the installation of the HFTs on Unit 5 is currently in progress. Engineering is currently busy with basic designs for the HFT installation on Units 4 and 6. Eskom aims to obtain ERA approval for these two units in [REDACTED] as the project experienced delays with the execution of the pilot installation on unit 5. The project strategy is to start the approval of the remaining two units for comparison of results after completion of unit 5, which is currently in execution. .</p>	<p>CAPEX funding for the HFT pilot, full HFT installations, ammonia injection and all the refurbishments has been allocated internally.</p>	<p>Risk that Units 4-6 will not be able to continually sustain 50 mg/Nm<sup>3</sup> on a daily basis. Will be requesting a monthly emission limit for these units.</p>
Matla	HFT	20/21	24/25	<p>The plans to install fabric filter plants on all units have been cancelled. Instead, the ESP upgrades will be completed on the remaining units, ESP high frequency transformers will be installed and ammonia injection may be introduced on all units. Basic designs for HFT pilot was completed. ERA for one pilot unit's HFTs was approved. ERA is not being revised due to apparent inadequate funding. HFT pilot installation was postponed again from [REDACTED] but this will not affect the project delivery dates.</p>	<p>CAPEX funding for the ESP upgrades, HFT pilot, full HFT installations and ammonia injection has been allocated internally.</p>	<p>Risk that units will not be able to continually sustain 50 mg/Nm<sup>3</sup> on a daily basis. Will be requesting a monthly emission limit for these units.</p>
	LNB	20/21	24/25	<p>Basic designs are currently underway and towards finalisation, pending designs challenges.</p>	<p>CAPEX funding has been allocated internally. Funding to be form part of MYPD4 tariff application.</p>	<p>Last unit is at a risk of not complying with the 1 April 2025 legislative requirement date.</p>
Kriel	FFP	19/20	24/25	<p>Basic designs completed. Extended basic/detailed designs started. Internal execution (ERA) approval obtained in Nov 2016. Overall contracting strategy [REDACTED] EIA approval received in October 2016. PFMA application was submitted to DPE on 14 March 2017.</p>	<p>CAPEX funding has been internally allocated. Funding to form part of MYPD4 tariff application.</p>	<p>New target date for first FFP installation start delayed by 2 months, to Feb 2020, largely due to previously reported engineering resource and design software problems. Additional technical design/draftsman resources are being brought on board, to facilitate process to limit project time overrun. 20 additional outage days, per single unit FFP retrofit, may be required, for additional foundation work, which had not been previously determined. New National Treasury procurement process requirements received recently pose additional delay risks.</p>

Power Station	Retrofit	Commitment		Current status	Funding allocation	Risks
		Start date	End date			
Grootvlei	FFP	15/16	17/18	The second unit (Unit 2) FFP retrofit was delayed from Aug 2016 to Nov 2016, but the retrofit is currently in progress. The last unit (Unit 4) FFP installation outage planned to start in April 2017.	CAPEX funding has been allocated internally.	

FGD = flue gas desulphurisation

LNB = low NOx burner

FFP = fabric-filter plant