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Dear Vumile and Lydia

QUARTERLY UPDATE ON THE IMPLEMENTATION OF ESKOM'S MINIMUM EMISSION STANDARDS POSTPONEMENT COMMITMENT: END DECEMBER 2016

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 June 2017.

Eskom's emission reduction upgrades/retrofits

Highlights in implementing Eskom's emission reduction programme include the start of the third and final fabric filter plant retrofit at Grootvlei Power Station, and the installation of the high frequency transformer (HFT) pilot at Duvha Unit 5. The HFT pilot is currently being tested.

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

Compliance with emission limits

Power stations generally comply with the emission limits given in the Minimum Emission Standards 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

Eskom is planning to submit an application for postponement of the Minimum Emission Standard's 'existing plant' SO₂ Minimum Emission Standards for Matimba and Medupi Power Stations, since there are occasional exceedances of the SO₂ emission limits at these stations when batches of high Sulphur coal are received. The draft motivation and Atmospheric Impact Report have been published for public comment (the public comment period ended on 29 June 2017), and public engagements were held in Marapong and Lephalale on 13 and 14 July 2017, respectively.

Eskom's annual emissions were reported to the National Atmospheric Emission Inventory System by 31 March 2017, and the annual emission reports required by the Atmospheric Emission Licences have been submitted to the Licencing Authorities

We are pleased to report that the overall Eskom relative particulate emissions reduced from 0.36 kg of ash emitted per Megawatt-hour sent out (kg/MWhSO) in Eskom's Financial Year 2016, to 0.30 kg/MWhSO in Eskom's FY2017

Air quality offsets programme

Updated air quality offset implementation plans and an annual progress report were submitted to the Licencing Authorities and the Department of Environmental Affairs (DEA) on 31 March 2017. The implementation plans are similar to those submitted in April 2016, but detail how the programme will aim to switch households from coal to electricity, rather than to liquid petroleum gas as discussed in the 2016 plans. Electricity is a cleaner energy source than LPG, and promoting electricity is aligned with Eskom's mandate. A budget has been allocated internally for the implementation.

The following progress was made on implementing the air quality offsets programme between April and June 2017:

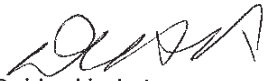
A 30-house electricity pilot has commenced in KwaZamokuhle to test the effectiveness of switching households to electricity. Only single, unextended, coal-using RDP houses were considered to be eligible for this pilot in order to facilitate the analysis of the data collected. Households which participated in the previous pilot were also not considered eligible for this pilot. Participating households were randomly selected from the eligible households. A local stakeholder reference group meeting was held in KwaZamokuhle on 14 June 2017, to communicate the 30-household plans and selection criteria with the community. Contracts have been signed with 30 households who have volunteered to participate in the pilot. 30 electric stoves and 30 electric heaters have been delivered to site, and installation in houses is currently in progress. The insulation material has also been delivered to site, and installation is underway. Energy efficient lamps (CFLs) have also been delivered. Data collection is scheduled to be completed by 30 September 2017, after which analysis will commence.

The placement of contract packages for the lead implementation phase of the air quality offsets programme has been somewhat delayed by the need for the 30-house pilot because some of the scopes of work are dependent on the results of the 30-house pilot. Nevertheless, Eskom is proceeding with getting approvals and developing procurement strategies, where possible. The finalization of the Project Design Document for KwaZamokuhle has also been delayed by the need for the results of the 30-house pilot.

An update on the implementation of the air quality offsets programme for Lethabo Power Station was presented at the Sedibeng and Sasolburg Implementation Task Teams in May 2017

Please let us know if you require any additional information

Yours sincerely



Deidre Herbst

ESKOM ENVIRONMENTAL MANAGER

Quarterly update on Minimum Emission Standards postponement commitments

Progress as of end June 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</p> <p>Project investment approval expected early 2018</p> <p>WFGD Process Plant basic design has been completed - work on the detail design to commence</p> <p>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</p> <p>Concept designs for EIA/WULA/WML are being conducted (additional scope), need to be finalised before EIA can be done</p> <p>EIA strategy changed to pursue an interim waste disposal solution has been accepted and change communicated to DEA and I&APs</p> <p>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</p> <p>EIA strategy changed to pursue an interim waste disposal solution to not delay the project, EIA schedule will be managed diligently</p> <p>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</p> <p>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</p> <p>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>National Treasury's response to Eskom's Preferential Procurement Policy Framework Act (PPPFA) Exemption application received in Feb 2017</p> <p>Eskom has formulated a stance on that response, which was subsequently shared with the DPE</p> <p>Eskom's reply to National Treasury is going through internal approval process</p>	<p>CAPEX funding has been allocated internally</p> <p>Funding to form part of MYPD4 tariff application</p>	<p>Installation start date delayed to July [REDACTED] subject to following emerging risks</p> <p>(i) Revised contracting strategy, taking into account Eskom's stance on National Treasury's response to Eskom's PPPFA exemption application, needs to be presented to Eskom's procurement committees for final approval</p> <p>(ii) Potential delays could arise if Eskom's capital projects review process, aimed at alleviating Eskom's cash constraints, takes longer than planned</p>
	LNB	19/20	24/25	<p>Detailed designs have been completed</p> <p>Currently busy with all work input into the ERA approval scheduled for [REDACTED]</p>	<p>CAPEX funding has been allocated internally</p> <p>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	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 SO3 plants will be refurbished and ammonia injection may be introduced on the 3 units. The installation of pilot HFTs on Duvha Unit 5 will be completed in July 2017. Test results from the installed transformers on the first field are looking good. Basic designs for units 4 & 6 are completed and Eskom aims to obtain ERA approval for these two units in [REDACTED]	CAPEX funding for the HFT pilot, full HFT installations, ammonia injection and all the refurbishments has been allocated internally	Risk that Units 4-6 will not be able to continually sustain 50 mg/Nm3 on a daily basis. Will be requesting a monthly emission limit for these units
Matla	HFT	20/21	24/25	High frequency transformers will now be installed and the electrostatic precipitator upgrade completed on all units, rather than the fabric filter plant originally planned	CAPEX funding for the ESP upgrades, HFT pilot, full HFT installations and ammonia injection has been allocated internally	Risk that units will not be able to continually sustain 50 mg/Nm3 on a daily basis. Will be requesting a monthly emission limit for these units
	LNB	20/21	24/25	Assume one unit is retrofitted every year from 2021 to 2026	CAPEX funding has been allocated internally. Funding to be form part of MYPD4 tariff application	Last two units are at a risk of not complying with the 1. April 2025 legislative requirement date. Installation will finish in 2026
Kriel	FFP	19/20	24/25	Basic designs completed. Extended basic/detailed designs started. Internal execution (ERA) approval obtained [REDACTED]. Overall contracting strategy has also been approved	CAPEX funding has been internally allocated. Funding to form part of MYPD4 tariff application	(i) 20 additional outage days, per single unit FFP retrofit, will be required, for additional foundation work, which had not been previously determined (ii) New National Treasury procurement process requirements received recently pose additional delay risks (iii) Potential delays could arise if Eskom's capital projects review process, aimed at alleviating Eskom's cash constraints, takes longer than planned
Grootvlei	FFP	15/16	17/18	FFP retrofits have been completed on Units 3 and 2. The retrofit of unit 4 is currently underway and is expected to be completed in September 2017	CAPEX funding has been allocated internally	

FGD = flue gas desulphurisation

LNB = low NOx burner

FFP = fabric filter plant