

Mr Vumile Senene
Director, Air Quality Management Services
Department of Environmental Affairs
Private Bag X447
PRETORIA
0001
Email: vsenene@environment.gov.za

Date:
6 January 2017

Enquiries:
Tel +27 11 800 4682

Cc: Ms Lydia Alade
Email: LAlade@environment.gov.za

Ref: ENV17_L001

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 December 2016. This progress update should be read in conjunction with the feedback provided to Mr Vumile Senene on 21 December 2016.

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.

Project development of the planned retrofits and upgrades proceeded 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). The Department of Public Enterprises has stipulated that Eskom needs to resubmit the Public Finance Management Act (PFMA) application for the Tutuka FFP retrofit. Eskom is hopeful that this approval will be obtained before contracts need to be replaced, in order to avoid a delay on the project.

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

As you are no doubt aware, Kendal Power Station was issued with a Notice of Intention to Issue a Compliance Notice in October 2016 for alleged non-compliances to the Atmospheric Emission Licence, including exceedances of the particulate matter emission limit, and inadequate control efficiency of the abatement technology. Kendal submitted a response to this Notice on 15 December 2016. In this response, Kendal demonstrated that most of the alleged non-compliances were in fact based on incorrect information.

Matimba Power Station was also issued with a Notice of Intention to Issue a Compliance Notice in December 2016, regarding exceedances of the SO₂ emission limit. The high SO₂ emissions at Matimba are directly related to the Sulphur content of the coal. Options to prevent the high SO₂ emission incidents are being investigated and more information will be provided in the response to the Pre-Compliance Notice which is due 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.

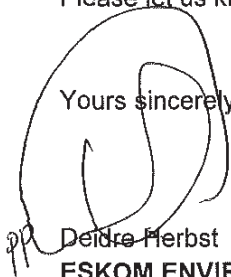
The following progress was made on implementing the air quality offsets programme in Quarter 4:

- investment approval for the lead implementations was received from Eskom's Board. The tenders for implementation can only be issued after procurement approval has been received.
- a tender was issued to develop a business case for the provision of liquid petroleum gas (LPG) to KwaZamokuhle and Ezamokuhle.
- more of the information collected during the KwaZamokuhle Pilot Project was analysed. The source apportionment shows that domestic coal burning accounts for more than 50% of the fine mode aerosol in winter.
- A Multi-Stakeholder Reference Group for Eskom's air quality offsets programme was held in Pretoria on 16 November 2016. Representatives from the DEA attended this meeting.

Within the next quarter, we anticipate submitting the Project Design Document for KwaZamokuhle's air quality offset project and the Annual Progress Report to the DEA.

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 December 2016

| 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.</p> <p>WFGD Process Plant basic design has been completed - work on the detail design to commence. Raising 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 Nov 21.06</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.</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. 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 (PPFFA) 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. 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.</p> | <p>CAPEX funding has been allocated internally. Funding to form part of MYPD4 tariff application.</p> | <p>Start date delayed to [REDACTED]. This date is at risk due to the requirement to get PFMA approval again, since contracts can only be placed after approval has been obtained. Revised contracting strategy now assumes that PPFFA exemption will be approved, which is also awaited, from National Treasury</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 | High frequency transformers will now be installed on Units 4-6, rather than the fabric filter plant originally planned. | 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. 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 2020 . | 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 |
| | 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. | 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 an HFT pilot on one unit have been completed and the ERA for the pilot approved. The contracting process is currently underway. | 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 2020 to 2025 | Basic designs are currently underway and towards finalisation, pending designs challenges | CAPEX funding has been allocated internally. Funding to be form part of MYPD4 tariff application | Last unit is at a risk of not complying with the 1 April 2025 legislative requirement date |
| Kriel | FFP | 19/20 | 24/25 | Basic designs completed. Extended basic/detailed designs started. Internal execution (ERA) approval obtained in Nov 2016. Overall contracting strategy submitted for approval. | Basic designs completed. Extended basic/detailed designs started. Internal execution (ERA) approval obtained in Nov 2016. Overall contracting strategy submitted for approval. | CAPEX funding has been internally allocated. Funding to form part of MYPD4 tariff application. | 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. |
| | FFP | 15/16 | 17/18 | First unit (Unit 3) retrofit has been completed and the unit commissioned in March 2016. Second unit (Unit 2) FFP retrofit delayed from Aug 2016 to Nov 2016. Retrofit is currently in progress. Last unit (Unit 4) FFP installation outage planned to start in April 2017. | First unit (Unit 3) retrofit has been completed and the unit commissioned in March 2016. Second unit (Unit 2) FFP retrofit delayed from Aug 2016 to Nov 2016. Retrofit is currently in progress. Last unit (Unit 4) FFP installation outage planned to start in April 2017. | CAPEX funding has been allocated internally. | |

| Power Station | Retrofit | Commitment | | Current status | Funding allocation | Risks |
|---------------|----------|------------|----------|----------------|--------------------|-------|
| | | Start date | End date | | | |

FGD = flue gas desulphurisation

LNB = low NOx burner

FFP = fabric filter plant