

Ms Nompumelelo Simelane  
 Air Quality Officer  
 Nkangala District Municipality  
 PO Box 437  
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Date:  
 11 July 2024

Enquiries:  
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Ref: NDM/AEL/MP312/11/07

Dear Ms. Simelane

**DUVHA POWER STATION’S BI-ANNUAL EMISSIONS REPORT FOR FY 2023/24**

This serves as the bi-annual report required in terms of Section 7.2.1. in Duvha Power Station’s Atmospheric Emission Licence as well as in terms of the reporting requirements listed in the Minimum Emission Standards. The emissions are from 01 October 2023 to 31 March 2024. Verified emissions of particulates as measured by installed CEMS and SO<sub>2</sub> and NO<sub>x</sub> (as NO<sub>2</sub>) as calculated, are also included.

**Name, description and reference number of plant as specified in the AEL:**

<b>Name of facility</b>	Eskom Holdings SOC Limited
<b>Description of facility</b>	Duvha Power Station
<b>Reference number of plant</b>	NDM/AEL/MP312/11/07

**Emission Trends:**

The emissions in the table below are that of October 2023 to March 2024 bi-annual period.

Table 1. General oversight of emissions at Duvha Power Station 2023/24

Power Station	Coal-fired emissions (tons/annum)	Fuel-oil emissions (tons/annum)		Total (tons/annum)
		FO 150	Catlight	
Duvha Power Station	PM: 1752.21	PM: 0	PM: 0	PM: 1752.21
	SO <sub>2</sub> : 36 214	SO <sub>2</sub> : 1112.87	SO <sub>2</sub> : 62.04	SO <sub>2</sub> : 37 388.91
	NO <sub>x</sub> : 23 748	NO <sub>x</sub> : 0	NO <sub>x</sub> : 0	NO <sub>x</sub> : 23 748

**Generation Division**

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Eskom Holdings SOC Limited Reg No 2002/015527/30

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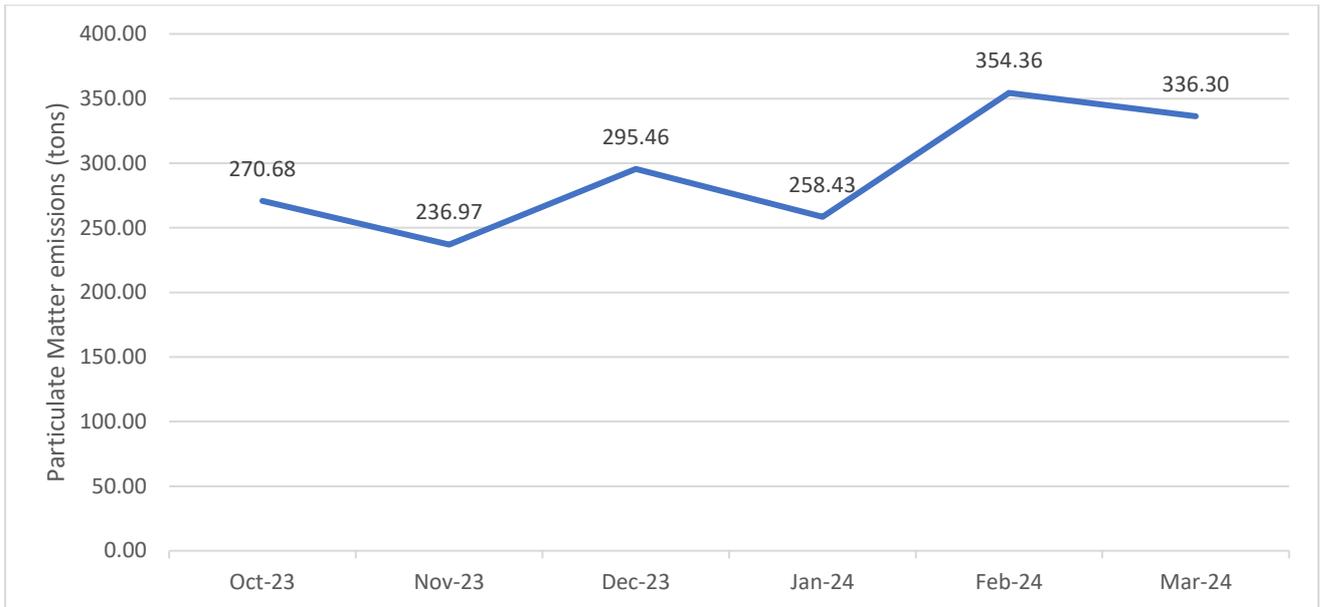


Figure 1. Monthly Particulate Emission in tons from Duvha Power Station October 2023 to March 2024.

Please note: Gaseous emissions, in particular, are largely dependent on the power generated by the power station, and thus the amount of coal burnt.

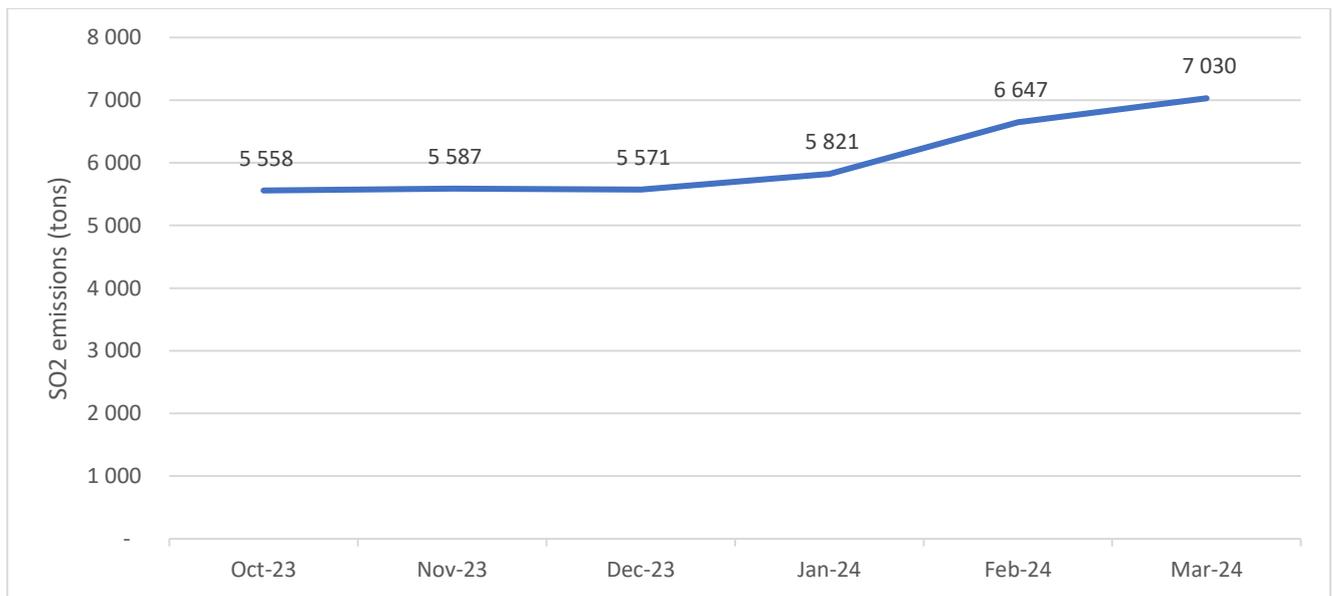


Figure 2. Monthly SO<sub>2</sub> Emissions in tons from Duvha Power Station October 2023 to March 2024.

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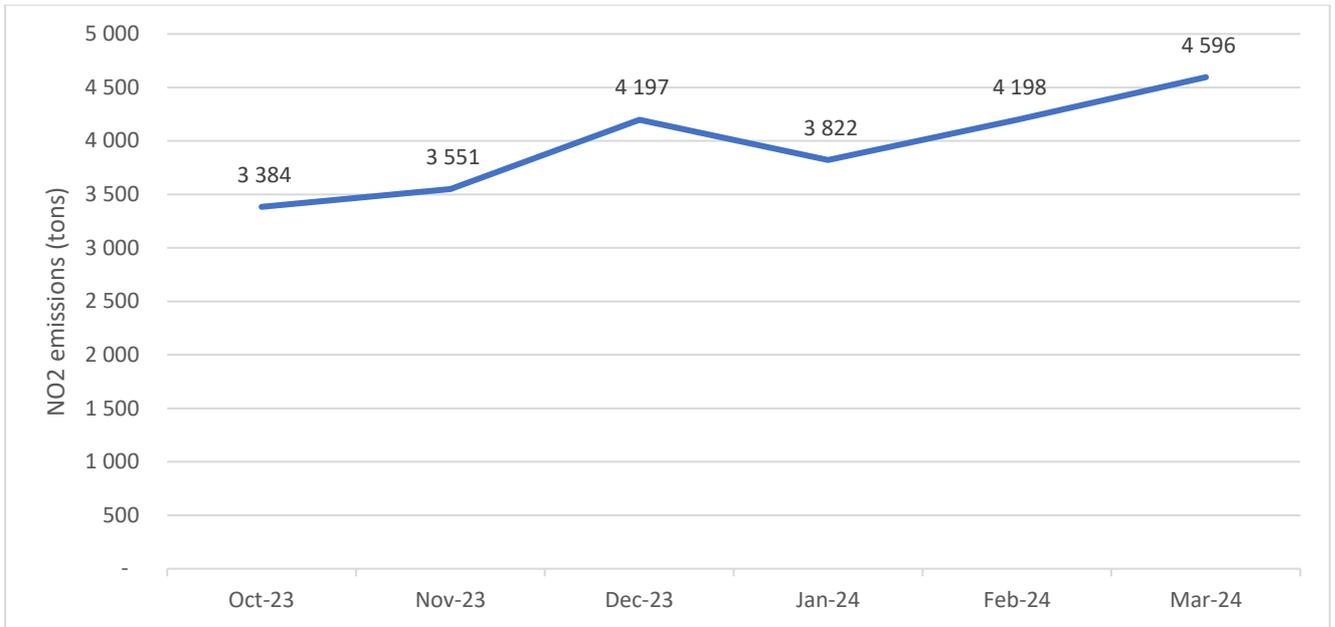


Figure 3. Monthly NO<sub>2</sub> Emissions in tons for Duvha Power Station October 2023 to March 2024.

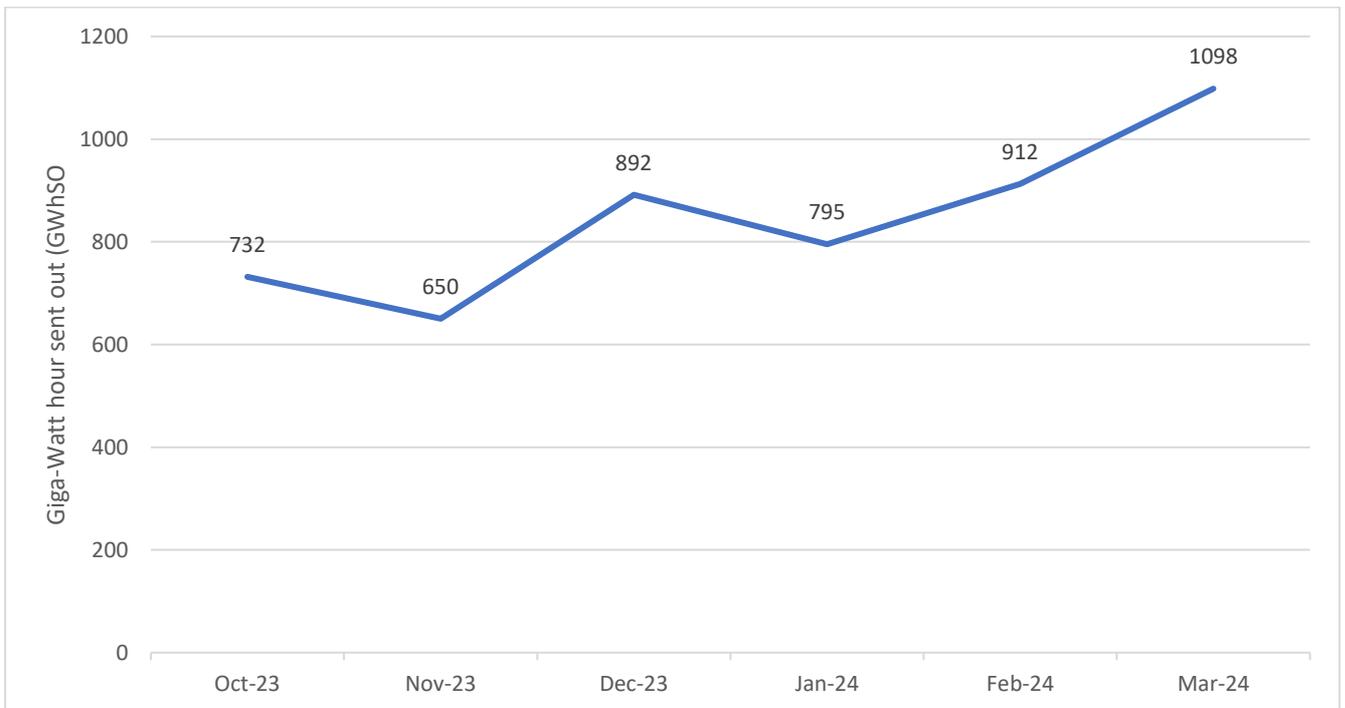


Figure 4. Monthly Energy sent out in GWh at Duvha Power Station October 2023 to March 2024.

Figures showing compliance with the daily average emission limits of the respective pollutants have been presented to you in the monthly emission reports sent to your offices.

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## Monitoring data availability

Table 2. General oversight of monitoring data availability for Duvha Power Station October 2023 to March 2024 in terms of the number of full hours per annum that valid results were obtained for the CEMS in question.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
PM	99.75%	98.63%	Unit Offload	97.90%	99.47%	95.28%
SO <sub>2</sub>	47.15%	82.95%	Unit Offload	96.53%	94.72%	98.88%
NO <sub>x</sub>	47.15%	82.97%	Unit Offload	96.62%	93.63%	98.95%

## Compliance Audit Report(s):

An internal carbon dioxide (CO<sub>2</sub>) emissions review audit was conducted on 17-18 October 2023 (please refer to Appendix B). The purpose of the review was to verify the processes used by the station for producing the final fossil fuel burnt figures in the calculation of Eskom's CO<sub>2</sub> emissions.

## Major upgrades projects:

A project to install High Frequency Transformers (HFT's) on unit 4 and 6 which are currently using Electrostatic Precipitator (ESP) abatement equipment is at the commercial phase whereby the Project Execution Release Approval document was revised, and the investment request was re-approved. The Squad Check will be conducted by 30 June 2024.

This is aimed at reducing PM emissions to ensure compliance to the minimum emissions limits of 2020 (50mg/Nm<sup>3</sup> for all units).

## Greenhouse gas emissions:

Greenhouse gas emissions are reported through the greenhouse gas reporting regulation process and as such are not included in this bi-annual emissions report.

## Results of spot measurements or correlation tests:

Table 3. Overview of dates of last conducted CEMS verification tests for PM, SO<sub>2</sub> and NO<sub>x</sub> (Please see annexure 2 for the verification test results)

Stack/ Unit	PM (Correlation tests)	SO <sub>2</sub> (Parallel tests)	NO <sub>x</sub> (Parallel tests)
Unit 2	10-14 October 2023	18-21 July 2023	18-21 July 2023
Unit 5	03-06 October 2022	04-07 July 2023	04-07 July 2023
Unit 6	31 October-06 November 2023	10-13 July-2023	10-13 July-2023

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## An explanation of all instances where the license requirements were exceeded:

Table 4. Overview of emission license limit exceedances for October 2023 to March 2024.

Stack/unit and pollutant	Exceedance date [from – to]	Reason for exceedance	Remediation measure and effectiveness
Unit 6 (PM)	14 November 2023	Negligence by OPS personnel	<p><b>Corrective action:</b></p> <p>Apply consequence management to the ops personnel for failing to adhere to the Emissions response procedure.</p> <p><b>Preventative action:</b></p> <ul style="list-style-type: none"><li>• Shift managers to share the report with all Ops personnel regarding the use of Emissions response procedure.</li><li>• Environmental manager to Conduct awareness on the response of High Stack emissions to all Ops personnel.</li></ul>

An explanation of all other daily instances of exceedances (including the grace periods) of the minimum emissions requirements are included on the monthly emissions reports submitted to your office.

### NAEIS reporting:

Duvha Power Station submitted its annual report on the NAEIS system on the 22<sup>nd</sup> of May 2024.

### General

The rest of the information demonstrating compliance with the emission licence conditions is supplied in the monthly emission reports sent to your office.

Hoping the above will meet your satisfaction.

Supported by



M Mamoleka  
**ENGINEERING MANAGER: DUVHA POWER STATION**

Yours sincerely



L Chauke  
**DUVHA POWER STATION: GENERAL MANAGER**