



**MINISTER**  
**FORESTRY, FISHERIES AND THE ENVIRONMENT**  
**REPUBLIC OF SOUTH AFRICA**

**LSA243175; LSA243178; LSA243179; LSA243183**  
**LSA243185; LSA243186; LSA243187; LSA243205**  
**LSA243208; LSA243210; LSA243214; LSA243221**  
**LSA243222; LSA243224; LSA243225; LSA243226**

**APPEAL DECISION**

**APPEALS INSTITUTED AGAINST DECISIONS OF THE NATIONAL AIR QUALITY OFFICER IN  
RESPECT OF THE SUSPENSION AND POSTPONEMENT OF COMPLIANCE WITH THE MINIMUM  
EMISSION STANDARDS**

ESKOM	First Appellant/ Applicant
Centre for Environmental Rights	Second Appellant / Respondent Interested and Affected Party
Michelle Rivarola	Third Appellant
Greenpeace Africa	Second Respondent
The National Air Quality Officer	Competent Authority

# APPEALS INSTITUTED AGAINST DECISIONS OF THE NATIONAL AIR QUALITY OFFICER IN RESPECT OF THE SUSPENSION AND POSTPONEMENT OF COMPLIANCE WITH THE MINIMUM EMISSION STANDARDS

**Appeal:** These appeals were lodged by Eskom (Pty) Ltd (Eskom/ the first appellant), the Centre for Environmental Rights on behalf of groundWorks and Earthlife Africa (CER/ the second appellant) and Ms Michele Rivarola (the third appellant) against the various decisions of the National Air Quality Officer (NAQO) of the Department of Forestry, Fisheries and the Environment (the Department/ DFFE), taken on 30 October 2021, in relation to the sixteen (16) applications brought by Eskom for the postponement /suspension of compliance timeframes relating to the National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA), Minimum Emission Standards (MES) for Eskom Holdings SOC Ltd (Eskom).

## 1. BACKGROUND AND APPEAL

1.1. Eskom Holdings SOC Ltd (Eskom) is South Africa's primary electricity supplier. All of Eskom's coal and liquid fuel-fired power stations are required to meet the Minimum Emission Standards (MES) as regulated in terms of section 21 of the National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEMAQA).

1.2. Section 21 of the National Environmental Management Act, 2004 (Act 39 of 2004) (NEMAQA) states as follows:

### **"21. Listing of activities.—**

(1) The Minister must, or the MEC may, by notice in the Gazette—

(a) publish a list of activities which result in atmospheric emissions and which the Minister or MEC reasonably believes have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage; and

(b) when necessary, amend the list by—

(i) adding to the list activities in addition to those contemplated in paragraph (a);



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(ii) removing activities from the list; or

(iii) making other changes to particulars on the list.

(2) A list published by the Minister applies nationally and a list published by the MEC applies to the relevant province only.

(3) A notice referred to in subsection (1)—

(a) must establish minimum emission standards in respect of a substance or mixture of substances resulting from a listed activity and identified in the notice, including—

(i) the permissible amount, volume, emission rate or concentration of that substance or mixture of substances that may be emitted; and

(ii) the manner in which measurements of such emissions must be carried out;

(b) may contain transitional and other special arrangements in respect of activities which are carried out at the time of their listing; and

(c) must determine the date on which the notice takes effect.

(4) (a) Before publishing a notice in terms of subsection (1) or any amendment to the notice, the Minister or MEC must follow a consultative process in accordance with sections 56 and 57.

(b) Paragraph (a) need not be complied with if the notice is amended in a nonsubstantive way.

- 1.3. On 22 November 2013, the then Minister of Environmental Affairs, Minister Bomo Edith Edna Molewa Molewa, published the "Regulations of the List of Activities Which Result in Atmospheric Emissions Which Have or May Have a Significant Detrimental Effect on the Environment, including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage, 2013" (GNR 893/ the Listed Activities/ the Section 21 Notice), in Government Notice No.893, Gazette No. 37054. These Listed Activities were published in terms of Section 21 of the NEMAQA/ AQA. On 31 October 2018,

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the then Minister, Minister Nomvulo Mokonyane published the amendments to GNR893 in GNR 1207.

- 1.4. The Section 21 Notice provides that new and existing facilities that could not meet the prescribed MES within the legislated timeframes could apply for the postponement of the compliance timeframes to the National Air Quality Officer (NAQO) within the Department of Forestry, Fisheries and the Environment (the Department). Moreover, any entity that undertakes a Listed Activity requires an atmospheric emission license (AEL) to conduct such Listed Activity. The Section 21 Notice also provides for arrangements in respect of, inter alia, postponement with the compliance of MES for new plant for five years from the date of issue; suspension of compliance of MES for plants being decommissioned by 31 March 2030; and alternate emission limit or emission load if certain conditions are met.
- 1.5. Considering that Eskom was required to comply with the MES contained in GNR 893 as amended by GNR 1207 (31 October 2018), it (Eskom) submitted various requests/applications to the NAQO.
- 1.6. In or during November 2018, Eskom submitted its first application for postponement, suspension and alternative limits by submitting the Tutuka power station application.
- 1.7. In March 2019, Eskom submitted a batch of ten (10) postponement, suspension and alternative limit applications that included (i) Duvha, (ii) Kendal, (iii) Majuba, (iv) Camden, (v) Kriel, (vi) Mala, (vii) Hendrina, (viii) Arnot, (ix) Komati and (x) Lethabo power stations. These applications were submitted to the NAQO in terms of paragraph 11a, 11B and 12A of the GNR 1207 of 31 October 2018. On 13 June 2019 the NAQO requested additional information for the batch of 10 applications.
- 1.8. Subsequent to the above submissions, Eskom submitted a request in terms of section 47C of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended (NEMA) for condonation to submit late applications for its Medupi, Matimba, Port Rex and Grootvlei power stations. On 15 October 2019, I granted Eskom condonation for late submission of the abovementioned applications. Eskom thereafter submitted its postponement applications for Medupi, Matimba, Port Rex and Grootvlei power stations in November 2019.

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- 1.9. The NAQO received the additional information requested from Eskom in relation to the 10 applications, in separate batches during the period between October 2019 to January 2021. Preliminary decisions were agreed upon between the NAQO and the licensing authority, and presented to Eskom for discussion and further consideration. This was followed by formal preliminary decision letters that were sent to Eskom on 19 March 2021.
- 1.10. On 30 March 2021, Eskom provided a preliminary assessment of the decision which was followed by a formal response to each decision in their letters dated 13, 26 and 29 April 2021, respectively.
- 1.11. Eskom also applied for suspension for compliance with MES for existing plants that are scheduled for decommissioning by 2030 and these plants are Acacia, Arnot, Camden, Grootvlei, Hendrina, Komati, Kriel and Port Rex power stations.
- 1.12. In addition, Eskom applied for postponement and alternative limits for Duvha, Kendal, Lethabo, Majuba, Matimba, Matla, Medupi and Tutuka power stations.
- 1.13. On 30 October 2021, the NAQO issued her decisions on the 16 applications received. In summary the NAQO refused the applications for Matla, Duvha, Matimba, Medupi and Lethabo power stations in their entirety ("Adverse Decisions"). The postponement applications for Majuba, Tutuka, Kendal and Kriel, were all partially granted ("Partial Refusals"). The NAQO's decisions in respect of the following power stations were in Eskom's favour: Grootvlei, Arnot, Komati, Camden, Hendrina, Acacia and Port Rex.
- 1.14. The Directorate: Appeals and Legal Review (Appeals Directorate) within the Department received various appeals against the decisions that were taken by the NAQO in relations to Eskom's suspension applications. These appeals were lodged in terms of section 43(1) of NEMA, read together with regulation 4(1) of the National Appeal Regulations, 2014 (2014 Appeal Regulations) as follows:
  - 1.14.1. On 30 October 2021, Eskom filed appeals against the NAQO's refusal decisions in respect of the Matla, Duvha, Matimba, Medupi, Lethabo, Majuba, Tutuka, Kendal and Kriel facilities.

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- 1.14.2. On 9 February 2022 the Centre for Environmental Rights (CER) on behalf of two appellants: groundWork Trust and Earthlife Africa filed appeals against the NAQO's decisions taken in respect of the Majuba, Kendal and Tutuka power stations as well as the NAQO's decisions for the Camden, Hendrina, Arnot, Komati, Grootvlei and Kriel power stations.
- 1.14.3. A further appeal was lodged by Michele Rivarola (third appellant) against the Port Rex decision.
- 1.14.4. On 17 August 2023 the Appeals Directorate received a response from Greenpeace Africa as part of the consultative process that was undertaken by the NECA Forum, wherein it (Greenpeace) comments on the decision of the NAQO and object is to the appeal from Eskom.
- 1.15. On 7 November 2023, the second appellant filed responding statements in relation to the appeals filed by the first appellant.
- 1.16. On 8 February 2024 the NAQO submitted her comments to the various appeals.
- 1.17. I am aware that Eskom plays a critical role in the social and economic lives of all South Africans. South Africa has been plagued by power cuts in the form load shedding which has had an adverse impact on the economic growth and social well-being of many people within the Republic. Being alive to the critical role that Eskom plays within the country, I understood the need to consider these appeals broadly, alongside the principles of sustainable development.
- 1.18. In or during 2022, I established a consultative forum in terms of section 3A of the NEMA as amended, namely the National Environmental Consultative and Advisory (NECA) Forum, to deal with the various issues arising from the appeals lodged against the decisions that were taken by the NAQO in relation to the Listed Activities/ Section 21 Notice. The purpose of the NECA forum, in addition to considering and making recommendations to me on the various issues arising from these appeals was to allow appellants, stakeholders and other I&APs an opportunity to make representations and

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comments on issues pertaining to compliance and/or non-compliance with MES and the decisions of the NAQO with regard thereto.

- 1.19. The role of the NECA Forum was to, inter alia, understand and consider the legal, environmental, societal and economic implications of granting or refusing the appeals, in the light of all the information before it. This implies that the Forum needed to give due consideration, not only to the submissions of the appellants which formed the basis of its appeal, but also conduct additional information sessions.
- 1.20. In May 2022, I referred these appeals to the NECA Forum. For the purposes of these appeals, the NECA Forum have acted in the capacity of the appeal panel in terms of Regulation 6 of the National Appeal Regulations, 2014, to provide me with their recommendations on the technical and legal aspects arising in relation thereto. Considering the extensive nature of the NECA Forums mandate, I informed appellants that I had decided to hold all the appeals in abeyance pending the recommendation and or report from the NECA Forum to me.
- 1.21. On 8 March 2024, the NECA Forum submitted their report in respect of this appeal, setting out the issues and concerns raised, the forum's findings in respect of the issues, and their recommendations. I have considered the findings of the NECA Forum in my deliberations on this appeal. I have consulted with the Legal Officials within the Department on the recommendations contained in the NECA forum and based on my consideration thereof, I concur with all the recommendations of the NECA Forum. I will therefore refer extensively to the recommendations of the NECA Forum in this appeal decision. Where I repeat the recommendations of the NECA Forum, this must not be construed to mean that I have not applied my own mind to the issues. I am merely re-iterating the recommendations that I rely upon to arrive at the decision I have made in relation to these appeals.
- 1.22. Before I address each ground of appeal, I deem it appropriate to first set out the background of each application submitted by Eskom in relation to its power stations listed above, followed by the decision of the NAQO.

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## BACKGROUND ON EACH APPLICATION AND MOTIVATIONS PROVIDED BY ESKOM ON EACH POWER STATION:

### Duvha Power Plant (Duvha)

1.23. Eskom's request for suspension and alternative limits and postponement for its Duvha facility is as follows:

- 1) Postponement of the new plant PM limit between 1 April 2020 and 31 March 2025 and an alternative daily limit of 80mg/Nm<sup>3</sup> for units 4, 5 & 6 until decommissioning (2030-2034).
- 2) An alternative daily limit for SO<sub>2</sub> of 2600 mg/Nm<sup>3</sup> from 1 April 2020 until decommissioning (2030-2034).
- 3) An alternative daily limit of 1100 mg/Nm<sup>3</sup> NO<sub>x</sub> between 1 April 2020 and decommissioning (2030-2034).

1.24. It is requested that the proposed limits only apply during normal working conditions, and not during start-up and shut-down, upset conditions and maintenance periods.

	Current Limit (from AEL)			Requested Emission Limits*			
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by	
Particulate Matter Unit 1-3	100	Daily	Immediately	50	Daily	1 April 2020	
	50		1 April 2020				
Particulate Matter Unit 4-6	100		Immediately	80			
	50		1 April 2020				
Sulphur dioxide Unit 1-3	3500	Daily	Immediately	2600	Daily	1 April 2020	
	2300		1 April 2020 – 31 March 2025				
	500		1 April 2025				
Sulphur dioxide Unit 4-6	3500		Immediately				1 April 2020 – 31 March 2025
	2300		1 April 2020 – 31 March 2025				
	500		1 April 2025				
Nitrogen oxides Unit 1-3	1100		Daily				Immediately
	1100	1 April 2020 – 31 March 2025					

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	Current Limit (from AEL)			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Nitrogen oxides Unit 4-6	750		1 April 2025			1 April 2020
	1100		Immediately			
	1100		1 April 2020 – 31 March 2025			
	750		1 April 2025			

\*The requested emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.

Table 1 on page 6 of Eskom's motivation for its application, sets out the applicable limits.

1.25. The motivation for Eskom's request is in summary as follows:

1.25.1. Based on the remaining life of the Duvha power station, the techno-economics and cost benefits assessment, any additional measures other than what was committed to above is not financially viable.

1.25.2. Emissions from Duvha will not result in non-compliance with National Ambient Air Quality Standards (NAAQS), together with a suite of undesired environmental consequences of compliance with the MES including associated water demands, transport impacts and increases in waste and carbon dioxide (CO<sub>2</sub>) production. These undesired consequences together with the financial costs of compliance (such as an increase in the electricity tariff) must be weighed up against the benefits that will accrue as a result of compliance with the MES. The benefit of compliance does not justify the non-financial and financial costs of compliance.

1.25.3. Eskom's reasons for the application are grouped together and set out as follows:

- Remaining life of the power station – Duvha is currently scheduled to be decommissioned between 2030 and 2034. It is Eskom's submission that it is not financially viable to retrofit Duvha with Flue Gas Desulpharisation (FGD) abatement technology given its current operating life.
- Water availability – It is Eskom's assertion that the water demands of FGD are significant and



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FGD is not a judicious use of water in an extremely water scarce country such as South Africa.

- Environmental implications of FGD – There are environmental consequences of FGD relating to the use of limestone and the requirement to transport it as well as relating to the production of gypsum as a by-product.
- Impact on Ambient Air Quality – in this regard, it is stated that *“Duvha Power Station is located in the Mpumalanga Province, 15 km southeast of eMalahleni. The surrounding land use includes coal mining, brick manufacturing, agriculture and residential areas, Duvha therefore operates in an area of elevated ambient SO<sub>2</sub> as a result of multiple other sources. This elevated loading is reflected in the ambient air quality measurements where non-compliance with the National Ambient Air Quality Standards (NAAQS) is evident in Witbank (2015 and 2016) and Komati (2016) for daily and annual average concentrations. For actual SO<sub>2</sub> emissions at Duvha Power Station the predicted annual average SO<sub>2</sub> concentration is significantly less than the national ambient SO<sub>2</sub> standard of 50 µg/m<sup>3</sup> [and] does not exceed the national ambient air quality standards of 125 µg/m<sup>3</sup>. The impact of Duvha’s emissions on ambient air quality has been comprehensively assessed in the accompanying independently compiled Atmospheric Impact Report.”*
- Cost implications of compliance with the MES – Eskom’s financial implications of compliance with the MES, most especially the financial implications of compelling existing plants to comply with ‘new plant’ standards, is presented in Eskom’s motivation in more detail. According to Eskom, there are direct financial costs and electricity tariff implications of compliance.

1.25.4. Below is a summary of what Eskom applied for in 2019 and the NAQO’s decision taken in respect thereof:

S21 Category	Appliance	Postponement Sought	Emission Standards			
			Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
			Pollutant	2015	2020	
<b>Subcategory 1.1: Solid Fuel Combustion Installations</b>	Units 4-6	80 mg/Nm <sup>3</sup> from 1 April 2020 until 2025	PM	100	50	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)

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		80 mg/Nm <sup>3</sup> until decommissioning (2030-2034)				Postponement until 31 March 2025 is declined because the facility did not demonstrate the intention to comply with the new plant standard of 50mg/Nm <sup>3</sup> .
	6 Units	2600 mg/Nm <sup>3</sup> from 1 April 2020 until decommissioning (2030-2034)	SO <sub>2</sub>	3500	1000	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2300mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
	6 Units	1100 mg/Nm <sup>3</sup> from 1 April 2020 till decommissioning (2030-2034)	NO <sub>x</sub>	1100	750	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>1100mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.

1.25.5. The NAQO, in her decision dated 30 October 2021, imposed the following conditions:

- *"This decision will have to be reflected in your Atmospheric Emission Licence (AEL) to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be affected.*
- *In addition, you are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Duvha Power Station.*
- *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year."*
- *Eskom Duvha Power Station's requirement to implement an offset programme to reduce PM pollution in the ambient/receiving environment as your facility is located in the Highveld Priority Area remains in place."*

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### Matla Power Plant (Matla)

1.26. Eskom's motivation in relation to Matla Power Plant is set out as follows:

- *Unit 1-4 Postponement of the new plant PM MES between 1 April 2020 to 31 March 2025 and an alternative daily limit of 200 mg/Nm<sup>3</sup> from 2020 until March 2021 (when ESP upgrades complete). An alternative limit of 100mg/Nm<sup>3</sup> from April 2021 to March 2025. An alternative limit of 80 mg/Nm<sup>3</sup> from April 2025 onwards.*
- *Unit 5 & 6 Postponement of PM new plant MES and an alternative limit of 100 mg/Nm<sup>3</sup> from 2020 to March 2025. An alternative limit of 80 mg/Nm<sup>3</sup> from 2025onwards.*
- *Postponement of the new plant SO<sub>2</sub> standard and an alternative daily limit for SO<sub>2</sub> of 2600 mg/Nm<sup>3</sup> from 1 April 2025 onwards.*
- *Postponement of NO<sub>x</sub> new plant MES and an alternative daily limit of 1200 mg/Nm<sup>3</sup> from 1 April 2025 until March 2027 (retrofit complete). Compliance of the standard at 750 mg/Nm<sup>3</sup> from 1 April 2027 onwards.*
- *Based on the remaining life of the Matla power station, the techno-economics and cost benefits assessment shows that any additional measures other than what wascommitted to above is not financially viable.*
- *It is requested that the proposed alternative limits only apply during normal working conditions, and not during start-up or shut-down, upset conditions and maintenance periods."*

1.27. This is also set out in table 2 on page 6 of Eskom's motivation which sets out the applicable limits contained in Matla's AEL as well as the requested emission limits:

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	Current Limit (from AEL)			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Particulate Matter	200 (Units 1-4)	Daily	1 April 2015 – 1 March 2020 1 April 2020	200** (Units 1-4)	Daily	1 April 2020
	100 (Units 1-4)	Daily		100 (Units 1-4)	Daily	1 April 2021
	50	Daily		80 (Units 1-4)	Daily	1 April 2025
	100 (Units 5 & 6)	Daily	1 April 2015 to 31 March 2020 1 April 2020	100 (Units 5 & 6)	Daily	1 April 2020
	50	Daily		80 (Units 5 & 6)	Daily	1 April 2025
	3500	Daily	1 April 2015			
Sulphur dioxide	2600	Daily	1 April 2020 – 31 March 2025	3500	Daily	1 April 2020
	500	Daily	1 April 2025	2600	Daily	1 April 2025
Nitrogen oxides	1200	Daily	1 April 2015 – 31 March 2020	1200	Daily	1 April 2020
	750	Daily	1 April 2020	750	Daily	1 April 2027

1.28. In paragraph 5 of Eskom's motivation, it adds that *“such reasons are set out below and include the fact that emissions from Matla will not result in non-compliance with National Ambient Air Quality Standards (NAAQS), together with a suite of undesired environmental consequences of compliance with the MES including associated water demands, transport impacts and increases in waste and carbon dioxide (CO<sub>2</sub>) production. These undesired consequences together with the financial costs of compliance (such as an increase in the electricity tariff) must be weighed up against the benefits that will accrue as a result of compliance with the MES, It is Eskom's view that the benefit of compliance does not justify the non-financial and financial costs of compliance.”*

1.29. Below is a summary of what Eskom applied for in 2019 and the NAQO's decision taken in respect thereof:

S21 Category	Appliance	Postponement Sought	Emission Standards			
			Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
			Pollutant	2015	2020	
Subcategory Solid Combustion Installations	1.1: Fuel	200mg/Nm <sup>3</sup> from 1 April 2020	PM	100	50	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)

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	Units 5-6	100mg/Nm <sup>3</sup> from 1 April 2021  80mg/Nm <sup>3</sup> from 1 April 2025 until decommissioning  100mg/Nm <sup>3</sup> from 1 April 2020  80mg/Nm <sup>3</sup> from 1 April 2025				Postponement from 1 April 2020 to 31 March 2025 is declined because the facility did not demonstrate the intention to comply with the new plant standard of 50mg/Nm <sup>3</sup> .
	6 Units	3500mg/Nm <sup>3</sup> from 1 April 2020  2600mg/Nm <sup>3</sup> from 1 April 2025 until decommissioning by 2034	SO <sub>2</sub>	3500	1000	Postponement /alternative limit request until decommissioning declined because the facility do not comply or meet the requirement of GNR 1207 of 2018 11A, 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2600mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
	6 Units	1200mg/Nm <sup>3</sup> from 1 April 2020  750mg/Nm <sup>3</sup> from 1 April 2027	NO <sub>x</sub>	1100	750	Alternative limit request declined because the facility do not comply or meet the requirement of GNR 1207 of 2018 12A (a) and 12A(b).  Postponement request until 31 March 2025 declined because the facility does not show the intention to comply with the new plant standard of 750mg/Nm <sup>3</sup> .

1.30. The NAQO's decision, dated 30 October 2021 was subject to the following conditions:

- *"The decision will have to be reflected in Eskom's AEL to be of force and effect. Therefore, Eskom must liaise with the relevant AELA as soon as possible so that the required amendments, variations and additions to its AEL can be effected.*
- *Eskom is required to submit a quarterly progress report on the implementation of its compliance road map and the commitments that it made in support of its postponement application for its Matla Power Station.*

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- *Eskom is also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the DFFE's financial year.*
- *Eskom's Matla Power Station's requirement to implement an offset programme to reduce PM pollution in the ambient/receiving environment, as the facility is located in the HPA, remains in place.*
- *The decision may be reviewed by the NAQO with the concurrence of the AELA should AAQ conditions in the affected area of the plant not conform to AAQS. "*

### **Medupi Power Plant (Medupi)**

1.31. In respect of the Medupi Power Plant, Eskom states the following:

- *"A MES postponement decision was issued to Medupi in 2015 and again in 2018 in respect of compliance to the MES SO<sub>2</sub> limit. With the amendments of the MES regulations in October 2018, it is necessary to submit this application for alternative limits and the postponement for SO<sub>2</sub>. Eskom has applied and received a condonation for the late submission of an application for Medupi until November 2019, and an initial application was made by that date. This document is an update of the November 2019 application with some revised information (in particular an updated Atmospheric Impact Report and motivation) as Eskom committed to in the November 2019 application and with edits after the Public Participation completed in August 2020."*
- *"Medupi already achieves the 50 mg/Nm<sup>3</sup> Particulate Matter (PM) daily for 'new' MES limits and meets the "new" plant standards for nitrogen oxide (NO<sub>x</sub> – 750 mg/Nm<sup>3</sup>), as such no changes in terms of either of these pollutants is requested.*
- *Eskom has an existing postponement decision granting a monthly limit of 3500 mg/Nm<sup>3</sup> for SO<sub>2</sub> until 31 May 2025. From 1 April 2025 Eskom is required to comply with a SO<sub>2</sub> limit of 1000 mg/Nm<sup>3</sup>. Previous planning indicated that FGD would be installed at Medupi 6 years after completion of each unit thus between 2021 and 2026. Unfortunately, there have been significant delays in the implementation of the project and in confirming funding. This in combination with the deterioration in Eskom's financial position, the negative environmental impacts and the limited health benefits associated with the FGD*



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*implementation has led to a re-evaluation and consideration of an alternative approach in respect of SO<sub>2</sub> reduction. The alternative approach considers the enablement of a Just Energy Transition Strategy for Eskom and further investigation into less costly SO<sub>2</sub> reduction technologies. Eskom is thus requesting a postponement from compliance to the new plant MES until 31 March 2025 with an alternate limit of 4000 mg/Nm<sup>3</sup> monthly from 2020 until 2030. Achieving the new plant limit of 1000 mg/Nm<sup>3</sup> post-2030 would be subject to a review of alternative less costly SO<sub>2</sub> reduction technology and the level of compliance with ambient air standards.*

- *A strict interpretation of the amendment of the MES regulations in 2018 has potentially restricted the legal mechanisms which would provide the authorities with the ability to grant the required time for the investigation of less costly SO<sub>2</sub> reduction technologies and Eskom's financial recovery. This application should thus also be considered as a request for exemption from compliance with the present MES timeframes to the Minister of DEFF, as allowed for in terms of section 59 of NEMAQA, if so required." (Sic)*

1.32. It should be noted that the indulgence sought by Eskom is found on page 9 of its motivation, which reads as follows:

*"In summary, the application submitted for Medupi is:*

- Alternative monthly SO<sub>2</sub> limit of 4000 mg/Nm<sup>3</sup> from 1 April 2020 until 31 March 2030.*
- Alternative monthly SO<sub>2</sub> limit from 1 April 2030 until decommissioning will be proposed based on the SO<sub>2</sub> emission reduction technology selected if a suitable technology is identified. Medupi will comply with the new plant standard for PM and NO<sub>x</sub> and no change in respect of these pollutants is requested. In terms of the existing license and postponement decisions, it is understood that the previously granted postponement of the SO<sub>2</sub> limit will remain in place until 2025 as a minimum (compliance to a monthly limit of 3 500 mg/Nm<sup>3</sup>). Based on the techno-economics and with due consideration of the issues described in this application, any additional measures other than what was committed to above, and the emission limits requested are not financially viable. The monthly averaging period has been requested due to the variability in coal quality which results in days where a daily limit is exceeded and others where the emissions are below the daily limit."*



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1.33. Table 1 on page 9 of Eskom's motivation, shows the applicable limits contained in Medupi's AEL as well as the emission limits requested:

Point source SV0002, 0011,0012, 0013,0014 and 0015	Current Limit (from AEL)			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
				To be proposed based on technologies		1 April 2030
Nitrogen Oxide (NO <sub>x</sub> )	750	Daily	1 April 2015	750	Daily	1 April 2020

\* The requested alternate emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.

\* Limit as per 2018 MES application grant (LP/ES-MT/WDM/20170825)

Point source SV0002, 0011,0012, 0013,0014 and 0015	Current Limit (from AEL)			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Particulate Matter (PM)	50	Daily	1 April 2015	50	Daily	1 April 2020
Sulphur Dioxide (SO <sub>2</sub> )	3500	Monthly*	1 April 2015	4000	Monthly	1 April 2020

1.34. In paragraph 6 of Eskom's motivation, it sets out the reasons for applying for the postponement as follows:

- (i) Coal quality and the high sulphur content of Waterberg coals;
- (ii) Delays in FGD project timeframes and further study time requirements;
- (iii) The cost of SO<sub>2</sub> reduction and Eskom's financial position;
- (iv) Water use associated with SO<sub>2</sub> reduction;
- (v) Waste, sorbent and energy impacts of SO<sub>2</sub> reduction technologies;
- (vi) The state of air in the Waterberg and the predicted impact of Eskom's application;
- (vii) The potential impact on national electricity supply; and
- (viii) Eskom's Just Energy Transition Strategy and climate change response.

1.35. Below is a summary of what Eskom applied for in 2020 and the NAQO's decision taken in respect thereof:

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S21 Category	Appliance	Postponement Sought	Emission Standards			
			Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
			Pollutant	2015	2020	
<b>Subcategory 1.1: Solid Fuel Combustion Installations</b>	6 Units	4000mg/Nm <sup>3</sup> (monthly) from 1 April 2020 till 31 March 2030  1000mg/Nm <sup>3</sup> (monthly) from 1 April 2030 till decommissioning	SO <sub>2</sub>	3500	1000	Alternative limit is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(b). Postponement of compliance timeframe with the minimum emission standards for new plant beyond 2025 is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 11A. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.

1.36. The NAQO's decision, dated 30 October 2021 was subject to the following conditions:

- *"The decision will have to be reflected in Eskom's AEL to be of force and effect. Therefore, Eskom must liaise with the relevant AELA as soon as possible so that the required amendments, variations and additions to its AEL can be effected.*
- *Eskom is required to submit a quarterly progress report on the implementation of its compliance road map and of its commitments made in support of its postponement application for its Medupi Power Station.*
- *Eskom is also required to provide a progress report on the implementation of offset projects where applicable, as well as of other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the DFFE's financial year.*
- *Eskom's Medupi Power Station is required to implement an offset programme to reduce SO<sub>2</sub> pollution in the ambient/receiving environment, as the facility is located in the WBPA. A definite off set implementation plan is expected from Eskom's Medupi Power Station within 90 days from the date of issue of the decision."*

**Tutuka Power Plant (Tutuka)**

1.37. Eskom summarises its application as follows:

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*“Eskom herewith formally makes an application to the National Air Quality Officer (NAQO) for postponement of the compliance timeframes associated with the Minimum Emission Standards (MES) and asks for alternative limits for particular matter (PM) and nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) for its Tutuka Power Station. This application also asks for reconsideration of the limits granted to Eskom in response to Tutuka Power Station’s previous postponement application that was made in 2014.*

*Tutuka is installing a Fabric Filter Plant (FFP) to reduce particulate emissions as per its previous postponement request but due to delays this will only be completed by 2027. An alternate daily PM emission limit of 300 mg/Nm<sup>3</sup> or a monthly limit of 200 mg/Nm<sup>3</sup> is thus requested until 2027, the station will comply with the MES limit once the FFP is installed. In order to reduce NO<sub>x</sub> emissions the station is planning to instal low NO<sub>x</sub> burners. This project will be completed by 2026 and an alternative limit of 1200 mg/Nm<sup>3</sup> is requested until then, the station will comply with the NO<sub>x</sub> MES once the project is complete. To reduce SO<sub>2</sub> to the new plant level of 1000 mg/Nm<sup>3</sup> would require installation of Flue Gas Desulphurisation (FGD) which is not considered appropriate for Tutuka and an alternate limit of 3000 mg/Nm<sup>3</sup> is requested for the station until decommissioning.”*

- 1.38. In table 3 on page 7 of Eskom’s motivation, it sets out the maximum emission rates as listed in Tutuka’s AEL, which are the emission rates that were granted to it pursuant to a postponement application it made in 2015 and which are currently in effect:

Pollutant Name	Maximum release rate		
	Limit value (mg/Nm <sup>3</sup> )	Date to be achieved by	Average period
PM	350	1 April 2015 – 31 December 2018	Daily
	200	1 January 2019 – 31 December 2019	Daily
	100	From 1 January 2020	Daily
SO <sub>2</sub>	3400	1 April 2020 – 31 December 2025	Daily
NO <sub>x</sub>	1200	1 April 2015-31 March 2020	Daily
	750	From 1 April 2020	Daily

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1.39. A summary of the requested emission limits for Tutuka Power Station are set out below:

Pollutant Name	Maximum release rate		
	Limit value (mg/Nm <sup>3</sup> )	Date to be achieved by	Average period
PM	300 (daily) OR 200 (monthly)	1 January 2019 – 31 March 2027	Daily OR Monthly
	50	From 1 April 2027 onwards	Daily
SO <sub>2</sub>	3000	1 April 2020 – 31 March 2025	Daily
	3000	From 1 April 2025 – onwards	Daily
NO <sub>x</sub>	1200	1 April 2020-31 March 2026	Daily
	750	From 1 April 2026 onwards	Daily

- 1.40. In relation to abating PM pollution, Eskom states that *“Tutuka is working towards completing a full FFP retrofit to ensure compliance with the “new plant” emission limit of 50 mg/Nm<sup>3</sup>. Eskom is further considering non-FFP solutions to bring the plant into compliance with the new plant standards.”*
- 1.41. In terms of NO<sub>x</sub> emission reduction, *“Tutuka Power Station currently emits unabated NO<sub>x</sub> emissions as the station’s original design did not include LNB [low NO<sub>x</sub> burner] technology. Tutuka is working towards completing a full LNB retrofit to ensure compliance with the ‘new plant’ emission limit of 750 mg/Nm<sup>3</sup>, with which the station is currently not complying with most of the time.”*
- 1.42. In relation to SO<sub>2</sub> emission abatement, Eskom states that *“SO<sub>2</sub> emissions are released as a result of the sulphur content in the coal. Flue gas desulphurization (FGD) technology is the only effective control measure to reduce SO<sub>2</sub> emissions. The FGD is a process which passes flue gas through alkaline solution/media. FGD technology is expensive, requires significant quantities of water, creates a new waste stream and increases greenhouse gases. Only the new power stations, namely Kusile and Medupi, are scheduled for being equipped with FGD Plants, while a pilot project is being executed to determine the correct technology to install at Matimba and Kendal*

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*power station. Tutuka Power Station currently emits unabated SO<sub>2</sub> emissions as the station's original design did not include FGD technology."*

1.43. Eskom intends to complete the retrofit of FFP at its Tutuka powerplant in 2027 and of LNBs by April 2026.

1.44. Below is a summary of what Eskom applied for in 2018, and the NAQO's decision in respect thereof:

S21 Category	Appliance	Postponement Sought	Emission Standards				
			Minimum Emission Standards (mg/Nm³)			Decision	
			Pollutant	2015	2020		
Subcategory 1.1: Solid Combustion Installations	1.1: Fuel	6 Units	300 mg/Nm³ (daily) or 200mg/Nm³ (monthly) from 1 January 2019 until 31 March 2027	PM	100	50	Alternative limit request beyond 2025 is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>100mg/Nm³</b> from 1 January 2020 to 31 March 2025 thus remains in place.
			3000mg/Nm³ from 1 April 2020  3000mg/Nm³ from 1 April 2025 until decommissioning	SO₂	3500	1000	Alternative limit until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3400mg/Nm³</b> from 1 April 2020 to 31 March 2025 thus remains in place.
			1200mg/Nm³ from 1 April 2020 until 31 March 2026	NO <sub>x</sub>	1100	750	Postponement/alternative limit beyond 2025 is declined as the facility do not comply or meet the requirement of GNR 1207 of 2018 11A, 12A(a) and 12A(b). Postponement of compliance with the minimum emission standards for new plant is granted with a limit of <b>1100mg/Nm³</b> from 1 April 2020 to 31 March 2025.

1.45. The NAQO's decision dated 30 October 2021, was subject to the following conditions:

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- (a) *"This decision will have to be reflected in your Atmospheric Emission License (AEL) to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be effected.*
- (b) *You are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Eskom Tutuka Power Station.*
- (c) *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year.*
- (d) *Eskom Tutuka Power Station's requirement to implement an offset programme to reduce Particulate Matter (PM) pollution in the ambient/receiving environment as your facility is located in the Highveld Priority Area remains in place.*
- (e) *A detailed compliance roadmap must be submitted to the Department a year from the date of issue of this decision.*
- (f) *The decision may be reviewed by the NAQO with the concurrence of AELA should ambient air quality conditions in the affected area of the plant not conform to ambient air quality standards.*

### **Lethabo Power Plant (Lethabo)**

1.46. Eskom states as follows:

*"Lethabo already achieves the 'existing plant' MES of 100 mg/Nm<sup>3</sup> Particulate Matter (PM), 1100 mg/Nm<sup>3</sup> for Nitrogen oxides (NO<sub>x</sub>) and 3500 mg/Nm<sup>3</sup> for Sulphur dioxide (SO<sub>x</sub>) emissions. However, the Power Station will not be able to comply with the "newplant" MES of 50 mg/Nm<sup>3</sup> until the planned SO<sub>3</sub> plant upgrade and High Frequency Power Supply (HFPS) installation is completed by 2025 and as such a postponement of the new plant standard until 2025 is requested. The technology choice for Lethabo does however not guarantee compliance to the new plant limit and as such an alternate limit of 80 mg/Nm<sup>3</sup> until station decommissioning is requested. The station cannot comply with the new plant limit of NO<sub>x</sub> limit of 750 mg/Nm<sup>3</sup> and an alternative limit*



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*of 1100 mg/Nm<sup>3</sup> is being requested. Similarly the station is unable to comply with the newplant limit of 1000 mg/Nm<sup>3</sup> for SO<sub>2</sub> and an alternate limit of 2600 mg/Nm<sup>3</sup> is being requested."*

- 1.47. The indulgence sought by Eskom is recorded on page 6 of its motivation as follows:

*"In summary the postponement requested for Lethabo is: A postponement of the PM new plant MES until 2025 (when the planned retrofits are complete) with an alternative daily limit of 100 mg/Nm<sup>3</sup> until then and thereafter an alternate daily limit of 80 mg/Nm<sup>3</sup>. For SO<sub>2</sub> a postponement of the new plant standard is requested until 2025 with an alternative limit of 3500 mg/Nm<sup>3</sup> and thereafter an alternate daily limit of 2600 mg/Nm<sup>3</sup> is requested until decommissioning in 2040. For NO<sub>x</sub> postponement of the new plant standard until 2025 is requested and thereafter an alternative daily limit of 1100 mg/Nm<sup>3</sup> is requested until station decommissioning.*

*Based on the remaining life of the Lethabo power station, the techno-economics and cost benefit assessment any additional measures other than what was committed to above, and the emission limits requested is not considered a socio-economic benefit and will not result in increased health impact.*

*It is requested that the proposed alternative emission limits only apply during normal working conditions, and not start-up or shut-down, upset conditions and maintenance periods."*

- 1.48. Eskom's request is set out in the table below, which shows the applicable limits contained in the Lethabo power plant's AEL as well as the requested emission limits:



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	Current Limit (from AEL)			Requested Emission Limits***		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Particulate Matter	100	Monthly	1 April 2015	100	Daily	1 April 2020
	100	Daily	1 January 2016	80	Daily	1 April 2025
	50	Daily	1 April 2020			
Sulphur dioxide	3500	Daily	1 April 2015	3500 2600	Daily Daily	1 April 2020 1 April 2025
	2500		1 April 2020			
Nitrogen oxides	1100	Daily	1 April 2015	1100	Daily	1 April 2020
	1100		1 April 2020	1100	Daily	1 April 2025

The requested interim emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.

1.49. In paragraph 5 of Eskom's motivation, it sets out its reasons for applying for a postponement. The following reasons are listed, and each is then elaborated on in its motivation:

- (i) Remaining Power Station Life
- (ii) Water Availability
- (iii) Environmental Implications of FGD
- (iv) Impact on Ambient Air Quality
- (v) Cost implications of compliance with MES
- (vi) Project Delays

1.50. Below is a summary of what Eskom applied for in 2020 and the NAQO's decision.

S21 Category		Appliance	Postponement Sought	Emission Standards			
				Minimum Emission Standards (mg/Nm³)			Decision
				Pollutant	2015	2020	
Subcategory	1.1:	6 Units	100mg/Nm³ from 1 April 2020	PM	100	50	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)
Solid Combustion Installations	Fuel		80mg/Nm³ from 1 April 2025				

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						Postponement from 1 April 2020 to 31 March 2025 declined because the facility did not demonstrate the intention to comply with the new plant standard of 50mg/Nm <sup>3</sup> .
		3500mg/Nm <sup>3</sup> from 1 April 2020 and  2600mg/Nm <sup>3</sup> from 1 April 2025 until decommissioning by 2040	SO <sub>2</sub>	3500	1000	Postponement /alternative limit request until decommissioning declined because the facility does not comply or meet the requirement of GNR 1207 of 2018 11A, 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		1100mg/Nm <sup>3</sup> (1300) from 1 April 2020  1100mg/Nm <sup>3</sup> from 1 April 2025 until decommissioning by 2040	NO <sub>x</sub>	1100	750	Postponement /alternative limit request until decommissioning declined because the facility does not comply or meet the requirement of GNR 1207 of 2018 11A, 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>1100mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.

1.51. The NAQO's decision, dated 30 October 2021 was subject to the following conditions:

- a) *"This decision will have to be reflected in your AEL to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be effected.*
- b) *You are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Eskom Lethabo Power Station.*
- c) *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year.*
- d) *Eskom Lethabo Power Station's requirement to implement an offset programme to reduce Particulate Matter (PM) pollution in the ambient/receiving environment as the facility is located in the VTAPA Priority Area remains in place.*

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- e) *The decision may be reviewed by the NAQO with the concurrence of AELA should ambient air quality conditions in the affected area of the plant not conform to ambient air quality standards."*

### Matimba Power Plant (Matimba)

- 1.52. Eskom's motivation, which accompanied its application states as follows:

*"A MES postponement decision was issued to Matimba in 2015 and again in 2018 in respect of compliance to the MES SO<sub>2</sub> limit. With the amendments of the MES regulations in October 2018, it is necessary to submit this application for alternative limits. Eskom has applied and received a condonation for the late submission of an application for Matimba until November 2019, and an initial application was made by that date. This document is an update of the November 2019 application with some revised information (in particular an updated Atmospheric Impact Report and motivation) as Eskom committed to in the November 2019 application and with edits after the Public Participation completed in August 2020."*

*"Matimba already achieves the 100 mg/Nm<sup>3</sup> Particulate Matter (PM) daily for 'existing' MES limits and the "existing" limit of nitrogen oxide (NO<sub>x</sub> – 1100 mg/Nm<sup>3</sup>). However, Eskom's Matimba Power Station will not be able to comply with the 750 mg/Nm<sup>3</sup> daily 'new plant' MES for NO<sub>x</sub>, the new plant and existing plant SO<sub>2</sub> limit of 1000 mg/Nm<sup>3</sup> and 3500 mg/Nm<sup>3</sup> respectively, and the 50 mg/Nm<sup>3</sup> daily PM limit, consistently. As such Matimba is requesting an alternative monthly PM limit of 50 mg/Nm<sup>3</sup>, a monthly NO<sub>x</sub> limit of 750 mg/Nm<sup>3</sup> as well as a monthly SO<sub>2</sub> limit of 4000 mg/Nm<sup>3</sup>, until decommissioning of the station.*

*Eskom has a present postponement decision granting a monthly limit of 3500 mg/Nm<sup>3</sup> monthly limit for SO<sub>2</sub> until 31 May 2025. Eskom will be unable to meet the SO<sub>2</sub> new plant daily limit of 1000 mg/Nm<sup>3</sup> from 2025 without the installation of Flue Gas Desulphurisation (FGD) technology – which Eskom argues in this application, is not warranted or appropriate." (Sic)*

- 1.53. A summary of the indulgence sought by Eskom is as follows:

- (i) Alternative **monthly** limit of 50 mg/Nm<sup>3</sup> for PM from 1 April 2020 until decommissioning.

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- (ii) Alternative **monthly** limit of 750 mg/Nm<sup>3</sup> for NO<sub>x</sub> from 1 April 2020 until decommissioning.
- (iii) Alternative **monthly** limit of 4000 mg/Nm<sup>3</sup> for SO<sub>x</sub> from 1 April 2020 until decommissioning.

The emission limits proposed in this application are informed by plant design, plant operations, coal quality and the existing regulatory requirements.

In terms of the existing license and postponement decisions, Matimba has until 1 April 2025 to comply with the SO<sub>2</sub> limit. It is understood that the previously granted postponements of limits (monthly limit of 3500 mg/Nm<sup>3</sup>) will remain in place until 2025 as a minimum.

Based on the techno-economics and with due consideration of the issues described in this application, any additional measures other than what was committed to above and the emission limits requested are not financially viable...."

- 1.54. Eskom's request is also set out in table 1 on page 9 of Eskom's motivation, which shows the applicable limits contained in the Matimba power plant's AEL and the requested emission limits:

	Current Limit (from AEL)			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Units 1, 2 and 3 (PM)	50	Daily	1 April 2020	50	Monthly	1 April 2020
Units 4, 5 and 6 (PM)						
Units 1, 2, and 3 (SO <sub>2</sub> )	3500	Monthly*	1 April 2020	4000	Monthly	1 April 2020
Units 4, 5 and 6 (SO <sub>2</sub> )						
Units 1, 2 and 3 (NO <sub>x</sub> )	750	Daily	1 April 2020	750	Monthly	1 April 2020
Units 4, 5 and 6 (NO <sub>x</sub> )						

\*The requested alternate emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.

\* Limit as per 2018 MES application grant (LP/ES-MT/WDM/20170825)

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1.55. In paragraph 6 of Eskom's motivation, it sets out the reasons for applying for a postponement. The following reasons are listed, and each is then elaborated on in its motivation:

- a) *Coal quality and the high Sulphur content of Waterberg coals;*
- b) *Plant performance and the need for operational flexibility;*
- c) *The remaining life of Matimba power station;*
- d) *The cost of SO<sub>2</sub> reduction and Eskom's financial position;*
- e) *Water availability and water use associated with SO<sub>2</sub> reduction;*
- f) *The environmental implication of SO<sub>2</sub> reduction (waste, sorbent and energy impacts);*
- g) *The state of air in the Waterberg and the predicted impact of Eskom's application;*
- h) *The potential impact on national electricity supply; and*
- i) *Eskom's Just Energy Transition Strategy and climate change response.*

1.56. With regard to the coal quality in the Waterberg area, Eskom indicates that:

*"The root cause of the high SO<sub>2</sub> emissions experienced is the high sulphur content in the coal supplied to the station by the Exxaro Grootegeluk Coal Mine...In the short to medium-term, there is no simple remedy to the situation, and all potential solutions bring along with them significant operational, environmental and financial implications. Load losses, coal beneficiation practices, alterations to existing coal contracts and options to source coal from other mines are all options that have been looked into to find potential solutions but have proven not to be feasible.*

*To better manage coal quality, Eskom is monitoring the sulphur content of the coal daily, and, where high levels are seen, the station engages with the mine to increase off-take from low sulphur mine sources. The mine and station are also engaging in coal quality forecasting and blending low and high sulphur areas in the mine to improve the average quality of the station feed."*

1.57. Below is a summary of what Eskom applied for in 2020 and the NAQO's decision in respect thereof:

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S21 Category		Appliance	Postponement Sought	Emission Standards			
				Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
				Pollutant	2015	2020	
Subcategory 1.1: Solid Fuel Combustion Installations		6 Units	50mg/Nm <sup>3</sup> (monthly) from 1 April 2020 until decommissioning	PM	100	50	Alternative limit is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)
			4000mg/Nm <sup>3</sup> (monthly) from 1 April 2020 until decommissioning	SO <sub>2</sub>	3500	1000	Alternative limit is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
			750mg/Nm <sup>3</sup> (monthly) from 1 April 2020 until decommissioning	NO <sub>x</sub>	1100	750	Alternative limit is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a)

1.58. The NAQO's decision, summarised above, was subject to the following further conditions, set out in its decision dated 30 October 2021:

- a) *"This decision will have to be reflected in your AEL to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be effected.*
- b) *You are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Eskom Matimba Power Station.*
- c) *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year.*
- d) *Eskom Matimba Power Station's requirement to implement an offset programme to reduce SO<sub>2</sub> pollution in the ambient/receiving environment as the facility is located in the Waterberg-Bojanala Priority Area. A definite offset implementation plan is expected from Eskom Holdings SOC Limited (Matimba Power Station) within 90 days from the date of issue*



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of this decision.

- e) *The decision may be reviewed by the NAQO with the concurrence of AELA should ambient air quality conditions in the affected area of the plant not conform to ambient air quality standards."*

### Kendal Power Plant (Kendal)

1.59. Eskom's application is summarised as follows:

- 1) *Postponement of the new plant standard for PM between 1 April 2020 to 31 March 2025 and an alternative daily limit of 100 mg/Nm<sup>3</sup> and an alternative daily limit of 85 mg/Nm<sup>3</sup> for PM from 1 April 2025 until decommissioning (2039 - 2044);*
- 2) *Postponement of the new plant standard for SO<sub>2</sub> and an alternative daily limit for SO<sub>2</sub> of 3000 mg/Nm<sup>3</sup> from 1 April 2025 until decommissioning (2039 - 2044);*
- 3) *A postponement of the NO<sub>x</sub> new plant limit and an alternate limit daily limit of 1100 mg/Nm<sup>3</sup>. From 1 April 2025 Eskom requests a monthly limit of 750mg/Nm<sup>3</sup> until decommissioning (2039-2044). No postponement for the PM standards is requested.*
- 4) *It is requested that the proposed limits only apply during normal working conditions, and not during start-up or shut-down, upset conditions and maintenance periods."*

	Current Limit (from AEL)			Requested Emission Limits***		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Particulate matter	100	24 hours	1 April 2015	100	Daily	1 April 2020
	50		1 April 2020	85	Daily	1 April 2025
Sulphur Dioxide	3500	24 hours	1 April 2015	3500	Daily	1 April 2020
	2600		1 April 2020 – 31 March 2025	3000	Monthly	1 April 2025
	500		1 April 2025			
Nitrogen Oxide	1100	24 hours	1 April 2015	1100	Daily	1 April 2020
	750		1 April 2020	750	Monthly	1 April 2025

\*\*\*The requested interim emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.



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1.60. Paragraph 5 of its motivation, Eskom sets out its reasons for applying for a postponement in respect of its Kendal Power Station. In this regard, it is stated that,

*“As mentioned above, the application for postponement and alternate limits must be accompanied by reasons. Such reasons are set out below and include the fact that emissions from Kendal will generally not result in non-compliance with National Ambient Air Quality Standards (NAAQS), the decommissioning of Kendal will occur between 2039 and 2044 (according to the 50-year life plan); together with a suite of undesired environmental consequences of compliance with the MES including associated water demands, transport impacts and increases in waste and carbon dioxide (CO<sub>2</sub>) production. These undesired consequences together with the financial costs of compliance (such as an increase in the electricity tariff) must be weighed up against the benefits that will accrue as a result of compliance with the MES. It is Eskom’s view that the benefit of compliance does not justify the non-financial and financial costs of compliance. None of these reasons should be seen as exclusive (i.e. it is not one reason alone that prevents compliance) but rather all in combination. Before presenting these various reasons, the reader is referred to Annexure A the AIR, Annexure B the Summary Atmospheric Impact Report and Annexure C the CBA.”*

1.61. Below is a summary of what Eskom applied for in 2019 and the NAQO’s decision in respect thereof:

1.1 Category		Appliance	Postponement Sought	Emission Standards			
				Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
				Pollutant	2015	2020	
Subcategory	1.1:	6 Units	100 mg/Nm <sup>3</sup> from 1 April 2020 to 31 March 2025	PM	100	50	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)
Solid Combustion Installations	Fuel		85 mg/Nm <sup>3</sup> from 1 April 2025 till decommissioning (2039-2044)				Postponement until 31 March 2025 is declined because the facility did not demonstrate the intention to comply with the new plant standard of 50mg/Nm <sup>3</sup> .

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		3000 mg/Nm <sup>3</sup> (monthly) from 1 April 2025 till decommissioning (2039-2044)	SO <sub>2</sub>	3500	1000	Alternative limit request until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(c)(i)  Postponement of compliance timeframe of 3000mg/Nm <sup>3</sup> (monthly) is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 11A and 12A(b). The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2600mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		1100 mg/Nm <sup>3</sup> alternative daily limit  750 mg/Nm <sup>3</sup> (monthly) from 1 April 2025 till decommissioning (2039-2044)	NO <sub>x</sub>	1100	750	Alternative limit until decommissioning is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A (a).  Postponement of compliance with the minimum emission standards for new plant is granted with a limit of <b>1100mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025.

1.62. The NAQO's decision, dated 30 October 2021 was subject to the following conditions:

- a) *"This decision will have to be reflected in your AEL to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be effected.*
- b) *You are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Eskom Kendal Power Station.*
- c) *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year.*
- d) *Eskom Kendal Power Station's requirement to implement an offset programme to reduce Particulate Matter (PM) pollution in the ambient/receiving environment as your facility is located in the Highveld Priority Area remains in place.*
- e) *The decision may be reviewed by the NAQO with the concurrence of AELA should ambient*

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*air quality conditions in the affected area of the plant not conform to ambient air quality standards."*

### Majuba Power Plant (Majuba)

1.63. Eskom's summarises its application as follows:

*"It is requested that the proposed alternative limits only apply during normal working conditions, and not during start-up or shut-down, upset conditions and maintenance periods.*

*In summary the postponement for Majuba requested is:*

1. *Postponement of the SO<sub>2</sub> new plant MES and an alternative limit of 3000mg/Nm<sup>3</sup> from 2025 onwards;*
2. *An alternative limit of 1400 mg/Nm<sup>3</sup> monthly for NO<sub>x</sub> until 2026 (completion of low NO<sub>x</sub> retrofit) and compliance to the new plant standard from there onwards.*

*No postponement for the PM standards is requested."*

	Current Limit (from AEL )			Requested Emission Limits*		
	Limit value	Averaging period	Date to be achieved by	Limit value	Averaging period	Date to be achieved by
Particulate Matter	100	Daily	1 April 2015	50	Daily	1 April 2020
Sulphur Dioxide	3500	Daily	1 April 2015	3500	Daily	1 April 2020
				3000	Daily	1 April 2025
Nitrogen Oxides	1500	Daily	1 April 2015-31 March 2020	1400	Monthly	1 April 2020
				750	Daily	1 April 2026 until decommissioning

\*The requested interim emission limits above are in mg/Nm<sup>3</sup> at 273 K, 101.3 kPa, dry and 10% O<sub>2</sub>.

1.64. In paragraph 5 of its motivation, Eskom sets out its reasons for applying for a postponement in respect of it Majuba Power Station. In this regard, it is stated that:

*"As mentioned above, the Application for postponement must be accompanied by reasons. Such reasons are set out below and include the fact that emissions from Majuba will not result in non-compliance with National Ambient Air Quality Standards (NAAQS), project delays and a suite of undesired environmental consequences of compliance with the MES including associated water*

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*demands, transport impacts and increases in waste and carbon dioxide (CO<sub>2</sub>) production. These undesired consequences together with the financial costs of compliance (such as an increase in the electricity tariff) must be weighed up against the benefits that will accrue as a result of compliance with the MES. It is Eskom's view that the benefit of compliance does not justify the non-financial and financial costs of compliance. ...None of these reasons should be seen as exclusive (i.e. it is not one reason alone that prevents compliance) but rather all in combination. Before presenting these various reasons, the reader is referred to Annexure A, in which various information is presented on the Majuba Power Station."*

- 1.65. Below is a summary of what Eskom applied for in 2018 and the NAQO's decision in respect thereof:

S21 Category	Appliance	Postponement Sought	Emission Standards			
			Minimum Emission Standards (mg/Nm <sup>3</sup> )			Decision
			Pollutant	2015	2020	
Subcategory 1.1: Solid Fuel Combustion Installations	6 Units	3500mg/Nm <sup>3</sup> from 1 April 2020 and	SO <sub>2</sub>	3500	1000	Postponement of compliance timeframe with the minimum emission standards beyond 2025 is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 11A.
		3000mg/Nm <sup>3</sup> from 1 April 2025 until decommissioning by 2051				Alternative limit request is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A(a) and 12A(b).
		1400mg/Nm <sup>3</sup> (monthly) from 1 April 2020	NO <sub>x</sub>	1100	750	The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3200mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		750mg/Nm <sup>3</sup> from 1 April 2026 until decommissioning by 2051				Alternative limit is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 12A (a) and 12A(b).
						Postponement application beyond 31 March 2025 is declined as the facility does not comply or meet the requirement of GNR 1207 of 2018 11A.

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						Postponement issued from 1 April 2020 to 31 March 2025 with the emission limit of <b>1300 mg/Nm<sup>3</sup></b> .
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1.66. The NAQO's decision, was subject to the following further conditions, set out in its decision dated 30 October 2021:

- a) *"This decision will have to be reflected in your Atmospheric Emission Licence (AEL) to be of force and effect. Therefore, you must liaise with the relevant AELA in this regard as soon as possible so that the required amendments, variations and additions to your AEL can be effected.*
- b) *You are required to submit a quarterly progress report on the implementation of your compliance road map and commitments that you made in support of the postponement application for Eskom Majuba Power Station.*
- c) *You are also required to provide a progress report on implementation of offset projects where applicable, as well as other reporting requirements included in the AEL. The reports must be submitted to the NAQO and the AELA following the Department of Forestry, Fisheries and the Environment's financial year.*
- d) *Eskom Majuba Power Station's requirement to implement an offset programme to reduce Particulate Matter (PM) pollution in the ambient/receiving environment as your facility is located in the Highveld Priority Area remains in place.*
- e) *The decision may be reviewed by the NAQO with the concurrence of AELA should ambient air quality conditions in the affected area of the plant not conform to ambient air quality standards."*

**Eskom's Hendrina, Kriel, Grootvlei, Camden and Arnot Power Plants ((Hendrina), (Kriel), (Grootvlei), (Camden) and (Arnot) respectively)**

1.67. The table below summarises Eskom's applications to the NAQO in respect of these five power stations and the NAQO's decision in respect of each:

**APPEALS INSTITUTED AGAINST DECISIONS OF THE NATIONAL AIR QUALITY OFFICER IN RESPECT OF THE SUSPENSION AND POSTPONEMENT OF COMPLIANCE WITH THE MINIMUM EMISSION STANDARDS**

PLANT	DECOMMISSIONING DATE	POLLUTANT/S FOR WHICH SUSPENSION IS SOUGHT	DECISION BY NAQO
Arnot	2026 – 2029	SO <sub>2</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>2500mg/Nm<sup>3</sup></b> during this period. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>1000mg/Nm<sup>3</sup></b> during this period.
Camden	2023 – 2025	SO <sub>2</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>1100mg/Nm<sup>3</sup></b> during this period.
Grootvlei	2026 – 2027	PM	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>100mg/Nm<sup>3</sup></b> for the North and South stack during this period.
		SO <sub>2</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>3500mg/Nm<sup>3</sup></b> during this period. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3500mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.

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PLANT	DECOMMISSIONING DATE	POLLUTANT/S FOR WHICH SUSPENSION IS SOUGHT	DECISION BY NAQO
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>1100mg/Nm<sup>3</sup></b> during this period.
Hendrina	2023 – 2025	SO <sub>2</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is
			granted from 1 April 2025 to 31 December 2026 with a limit of <b>3200mg/Nm<sup>3</sup></b> during this period. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>3200mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 December 2026 with a limit of <b>1100mg/Nm<sup>3</sup></b> during this period.
Kriel	2026 – 2030	SO <sub>2</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2025 to 31 March 2030 with a limit of <b>2800mg/Nm<sup>3</sup></b> during this period. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>2800mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place.
		PM	Suspension of compliance timeframe with the minimum emission standards for new plant standard is granted from 1 April 2020 to 31 March 2030 with a limit of <b>100 mg/Nm<sup>3</sup></b> for the North and South stack during this period.
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2025 to 31 March 2030 with a limit of <b>1100mg/Nm<sup>3</sup></b> during this period.



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1.68. For all five plants the applications were for all 6 units and the suspension sought is from 2020 to 2030.

1.69. The applicable MES to all five plants is for subcategory 1.1, Solid Fuel Combustion Installations:

<b>Pollutant</b>	<b>2015 (mg/Nm<sup>3</sup>)</b>	<b>2020 (mg/Nm<sup>3</sup>)</b>
<b>SO<sub>2</sub></b>	<b>3500</b>	<b>1000</b>
<b>PM</b>	<b>100</b>	<b>50</b>
<b>NO<sub>x</sub></b>	<b>1100</b>	<b>750</b>

1.70. What is common between all of the power stations that appear in the table above is that Eskom plans to decommission them by 2030. Due to the timing of decommissioning, Eskom explains in each of its applications that the timelines for developing FGD abatement technology at any of these plants is too lengthy to justify it in the circumstances, particularly when one considers factors, such as the cost of installation and the issues related to water scarcity. This forms part of Eskom's reasons for why it seeks the once-off suspensions.

1.71. It should also be noted that in terms of the suspensions sought by Eskom, with the exception of Kriel, it does not seek to emit in excess of the existing plant standards and the indulgence sought relates strictly to a suspension of compliance with new plant standards.

1.72. Eskom's applications for each power plant were accompanied by the following:

1.72.1. Atmospheric Impact Report;

1.72.2. Summary Atmospheric Impact Report;

1.72.3. Health Impact focused cost benefit analysis; and

1.72.4. Public participation report.

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- 1.73. Eskom's application in respect of its Grootvlei power plant also included a review of a 2018 Final Report in the context of updated ambient concentrations of PM dispersion modelling results (2020).
- 1.74. Eskom made several applications, related to 16 power plants which are the subject of this section of the report. With these applications, Eskom submitted a document titled: "Applications for suspension, alternative limits and/or postponement of the minimum emission standards (MES) compliance timeframes for Eskom's coal and liquid fuel fired power stations- Summary Document", dated March 2019. Figure 1 of the aforementioned document, on page 7, is titled, "Committed emission abatement retrofits and power station decommissioning dates to illustrate Eskom's overall atmospheric emissions reduction plan." The document further sets out the date by which Eskom intends to decommission the five power stations.

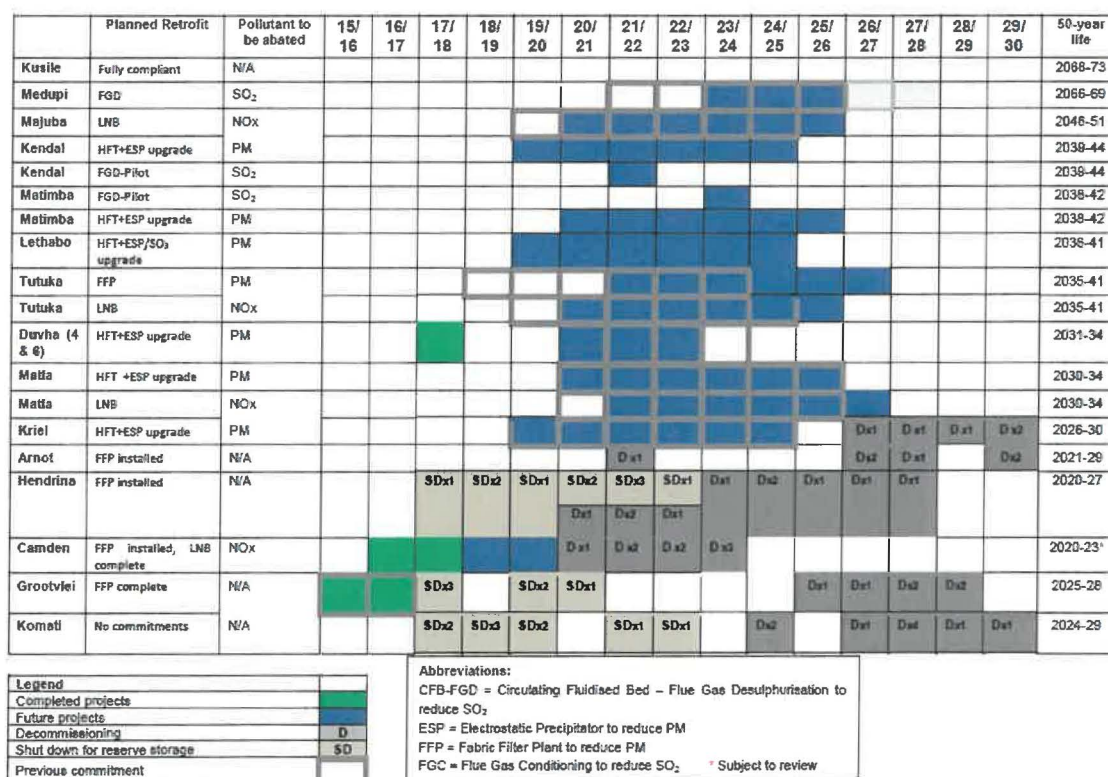


Figure 2: Committed emission abatement retrofits and power station decommissioning dates to illustrate Eskom's overall atmospheric emissions reduction plan

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- 1.75. The information contained in Figure 2 may have changed in view of the electricity crisis in South Africa, that has worsened from the time that Eskom submitted its applications to the NAQO.
- 1.76. The NAQO granted Eskom's application in full for Arnot, Camden, Hendrina and Grootvlei and in relation to Kriel. The NAQO granted Eskom an indulgence but with stricter limits than those applied for by Eskom. The NAQO's decision in respect of Kriel, dated 30 October 2021 does not clearly indicate that Eskom's applications for these more lenient limits were rejected.
- 1.77. The NAQO's decision in respect of each power station is subject to a number of conditions. The relevant conditions, applicable to all five power plants areas follows:
- *"This decision will have to be reflected in your Atmospheric Emission License to be of force and effect. Therefore, you must liaise with the relevant Atmospheric Emission Licensing Authority in this regard as soon as possible so that the required amendments, variations and additions to your Atmospheric Emission License can be effected...."*
  - *...the Atmospheric Emission License will not be renewed beyond the suspension dates as stipulated in the table above. Furthermore, the decommissioning plan for Eskom [insert station name] must be submitted to the Department a year from the date of issue of this decision."*
- 1.78. Despite 30 October 2022 being one year from the date of issue of the NAQO's decisions, the implementation of the decisions is stayed and the time periods are suspended in accordance with the provisions of section 43(7) of NEMA, which states as follows:
- "An appeal under this section suspends an environmental authorisation, exemption, directive, or any other decision made in terms of this Act or any other specific environmental management Act, or any provision or condition attached thereto."*

### Port Rex Power Plant (Port Rex)

- 1.79. The table below summarises Eskom's application to the NAQO and the NAQO's decision in respect thereof:

**APPEALS INSTITUTED AGAINST DECISIONS OF THE NATIONAL AIR QUALITY OFFICER IN RESPECT OF THE SUSPENSION AND POSTPONEMENT OF COMPLIANCE WITH THE MINIMUM EMISSION STANDARDS**

PLANT	DECOMMISSIONING DATE <sup>14</sup>	POLLUTANT/S FOR WHICH SUSPENSION IS SOUGHT	DECISION BY NAQO
Port Rex	No later than 2030	PM	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2020 to 31 March 2030 with a limit of <b>75 mg/Nm<sup>3</sup></b> during this period.
		NO <sub>x</sub>	Suspension of compliance timeframe with the minimum emission standards for new plant is granted from 1 April 2025 to 31 March 2030 with a limit of <b>600mg/Nm<sup>3</sup></b> during this period. The requirement to comply with the minimum emission standards for new plant as stated in the 2015 postponement decision with a limit of <b>600mg/Nm<sup>3</sup></b> from 1 April 2020 to 31 March 2025 thus remains in place

1.80. The applicable MES for this application is for subcategory 1.2, Liquid Fuel Combustion Installations:

Pollutant	2015 (mg/Nm <sup>3</sup> )	2020 (mg/Nm <sup>3</sup> )
PM	75	50
NO <sub>x</sub>	1100	250

1.81. It should be noted that, in terms of the suspensions sought by Eskom, it does not seek to emit in excess of the existing plant standards and the indulgence sought relates strictly to a suspension of compliance with new plant standards, until decommissioning.

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1.82. Eskom's application in respect of Port Rex was successful.

1.83. The NAQO's decision was, however, subject to a number of conditions. The relevant conditions, applicable to Port Rex, are as follows:

- *"This decision will have to be reflected in your Atmospheric Emission License to be of force and effect. Therefore, you must liaise with the relevant Atmospheric Emission Licensing Authority in this regard as soon as possible so that the required amendments, variations and additions to your Atmospheric Emission License can be effected...."*
- *...the Atmospheric Emission License will not be renewed beyond the suspension date as stipulated in the table above. Furthermore, the decommissioning plan for Eskom Port Rex Power Station must be submitted to the Department a year from the date of issue of this decision."*

1.84. Before I turn to deal with each ground of appeal, the NAQO's responses thereto and my evaluation thereof, I must emphasise that I was guided in this appeal by the principles set out in section 2 of the National Environmental Management Act No. 107 of 1998 (NEMA). Those principles apply alongside all of the other appropriate and relevant considerations, including the State's responsibility to respect, protect, promote and fulfil the social and economic rights in Chapter 2 of the Constitution and in particular the basic needs of persons disadvantaged by unfair discrimination. I have been guided by the principles set out in section 2 of NEMA, including section 2(2) which provides that "environmental management must place people and their needs at the forefront of its concern and serve their physical, psychological, developmental, cultural and social interests equitably"; also section 2(3) which provides that "development must be socially, environmentally and economically sustainable". Moreover, when I considered the issue of sustainable development, I did so with section 2(3) in mind and I considered the proper application of the factors articulated in section 2(4)(a) to (r).

1.85. I have also taken guidance from the judgement in *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* [2017] 2 All SA 519 (GP) at para 80, Murphy J explained that:

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*“NEMA, like all legislation, must be interpreted purposively and in a manner that is consistent with the Constitution, paying due regard to the text and context of the legislation. Section 2 of NEMA sets out binding directive principles that must inform all decisions taken under the Act, including decisions on environmental authorisations. The directive principles serve as guidelines (by reference) to which any organ of state must exercise any function when taking any decision in terms of NEMA or any statutory provision concerning the protection of the environment. They guide the interpretation, administration and implementation of NEMA and any other law concerned with the protection or management of the environment. Competent authorities must take into account the directive principles when considering applications for environmental authorisation. The directive principles promote sustainable development and the mitigating principle that environmental damage must be avoided, minimised and remedied. The environmental impact assessment process is a key means of promoting sustainable development, by ensuring that the need for development is sufficiently balanced with full consideration of the environmental impacts of a project with potential environmental impacts. The directive principles caution decision-makers to adopt a risk-averse and a careful approach, especially in the face of incomplete information.”*

1.86. I have also been mindful of the judgment of the Pretoria High Court in the matter of *Trustees for the Time Being of Groundwork Trust & Another vs Minister of Environmental Affairs & Others* Case No. 39724/19, while also bearing in mind that certain aspects of this judgement have been taken on appeal.

1.87. I now deal with the grounds of appeal submitted by each of the appellants and where I deem it appropriate, I address those grounds of appeal that are overlapping in nature under a single ground of appeal.

1.88. I have structured this appeal decision as follows:

1.88.1. **INTRODUCTION AND BACKGROUND:** Under this heading I have provided the background to Eskom's applications for postponement/ suspension of compliance timeframes or alternate limits; its motivations on each power station; and the decision



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taken in relation thereto.

- 1.88.2. **APPEALS:** I will set out a summary of the grounds of appeal submitted by the appellants, and the NAQO's response to each of these grounds of appeal.
- 1.88.3. **EVALUATION:** I will evaluate each ground of appeal based on the recommendations provided by the Forum, which I at the outset state that I concur with.
- 1.88.4. **DECISION:** I will set out the outcome of my consideration of this appeal under this heading.

## 2. APPEALS

2.1 Eskom (the first appellant) appeals against the decisions taken by the NAQO in relation to:

- 2.1.1 The Postponement Application decisions for the Matla, Duvha, Matimba, Medupi and Lethabo power stations, which were all refused by the NAQO in their entirety. These decisions are categorised by Eskom as "*Adverse Decisions*"; and
- 2.1.2 The Postponement Application decisions for Majuba, Tutuka, Kendal and Kriel, which were all partially granted. These decisions are categorised by Eskom as "*Partial Refusals*".

2.2 The NAQO's decisions in respect of the following power stations were in Eskom's favour: Grootvlei; Arnot; Komati; Camden; Hendrina; Acacia and Port Rex. These decisions are categorised by Eskom as "*Positive Decisions*".

2.3 Centre for Environmental Rights representing groundWorksTrust and Earthlife Africa (the second appellants) submitted their appeals against:

- 2.3.1 Portions of the NAQO's decisions for the Majuba, Kendal and Tutuka power stations; and
- 2.3.2 The NAQO's decisions for the Camden, Hendrina, Arnot, Komati, Grootvlei and Kriel power stations.

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2.4 The NAQO's Port Rex decision is the subject of an appeal by Michele Rivarola (third appellant).

### **Eskom's Point in limine**

2.5. Eskom, prior to setting out its grounds of appeal, raised two *points in limine*, set out as follows:

#### ***First Point in Limine:***

- 2.5.1. The NAQO has misconstrued the DFFE's mandate. The DFFE is required to take into account sustainable development in environmental management and when taking the Decisions. Furthermore, the NAQO failed to place people at the forefront of environmental management in reaching the Decisions.
- 2.5.2. There is, therefore, a disagreement concerning the exercise of the NAQO, DFFE and Minister's functions which may significantly affect the environment.
- 2.5.3. Alternatively, there is disagreement regarding the protection of the environment in an appeal before the Minister. The disagreement is worthy of the Minister appointing a facilitator to call and conduct meetings of interested and affected parties and hereby requests the minister to do so in accordance with section 17(2) of NEMA, should the Minister find section 17(1) of NEMA to be inapplicable.
- 2.5.4. The meanings of "*sustainable development*" and "*just energy transition*" are in dispute. According to the reasons given by the NAQO for her decisions she has adopted a strict interpretation of the MES considering only the protection of the environment, and financial costs of implementing the decisions, closure of seven (7) stations; and associated 19 000 MW of supply to the national grid were not considered as according to the NAQO these "*fall outside the DFFE's mandate.*"
- 2.5.5. The NAQO's assertion that the MES "*were first published in 2010 and Eskom has made minimal effort to fully comply with the standards,*" is factually incorrect.
- 2.5.6. The NAQO's decisions "*do not result in the coordination and harmonisation of policies, legislation and actions relating to the environment*", as is required by the guiding principles set out in section 2(4)(l) and (m) of NEMA. These provisions that there must be inter- governmental coordination and harmonisation of policies, legislation and actions relating to the environment and that actual

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or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.

- 2.5.7. Eskom quoted what it deems to be the relevant principles that apply to the actions of all organs of state, that may significantly affect the environment:

*"(2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*

*(3) Development must be socially, environmentally and economically sustainable....*

*(4)(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option...*

*(4)(d)(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment."*

- 2.5.8. The NAQO's decisions are at odds with the abovementioned environmental principles for a number of reasons, including the principles in section 2(2) and section 2(3) of NEMA, which contemplate that people and their needs must be at the forefront of environmental management and that development must be socially, environmentally and economically sustainable. The NAQO has failed to place people and their needs at the forefront of environmental management in that, on her own version, she neglected to consider the fact that her decisions would result in the closure of power stations and an associated 16000 to 30000 MW of supply to the national grid. This lack of capacity cannot practically be provided for and as a result Eskom would need to implement stage 8 load shedding immediately and stage 15 loadshedding by 2025. Although there is no express right to energy and/or electricity in the Constitution, such a right is implied. Without electricity, it is virtually impossible to realise many of the other rights contained in the Constitution; for example, without electricity it is impossible to store certain life-saving medication, including vaccinations, which ultimately infringes on the right to healthcare. The right to housing, water, property, life and dignity are some of the other rights that could be infringed by a lack of electricity.

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- 2.5.9. The NAQO's decisions favour the environment above social and economic considerations in the sustainable development enquiry instead of balancing the three pillars of the sustainability enquiry, which is what is required to inform environmental management.
- 2.5.10. The NAQO appears to have focused on Air Quality in making her decision, whereas the factors affecting air quality in the priority areas are complex. In the Highveld and Vaal Triangle priority areas, monitoring confirms that PM is in general non-compliance to the *National Ambient Air Quality Standards (NAAQS)*. There is, however, general compliance to the NO<sub>x</sub> standard and whilst SO<sub>2</sub> levels are high, much of the region is in compliance with the SO<sub>2</sub> standard. In respect of SO<sub>2</sub>, monitoring has not shown exceedance of any of the NAAQS standards for any averaging periods between 2016 and 2020. Dispersion modelling for baseline emissions, which should align with the monitoring data, does, however, predict exceedances of the NAAQS for hourly and daily results, illustrating the trend for modelling to over predict short-term concentrations. The over prediction of short-term simulations may extend to the other scenarios. It is, however, not appropriate to say that no exceedances of the standard can be anticipated at sensitive receptors based on the hourly and daily modelling. The simulated annual average emissions for SO<sub>2</sub>, a more reliable data set, does predict compliance to the NAAQS for all the scenarios at all sensitive receptors with the exception of Medupi AQMS (adjacent to the station). Given this, the significant impact of installing FGD (water, waste, and financial) at both Medupi and Matimba must also be critically considered in decision-making.

### ***Second Point in limine***

- 2.5.11. Section 17(1), alternatively section 17(2) of NEMA is applicable in the circumstances of this matter. As its primary relief, Eskom seeks to have a disagreement about the functions of the DFFE, the NAQO and the Minister referred to conciliation. It is clear from section 18 of NEMA that the outcome of a conciliation is not binding and where conciliation does not resolve the matter, the parties can decide whether they wish to refer it to arbitration. Furthermore, in the event of no agreement having been reached, the report of the conciliator may contain his or her recommendations in relation to how the matter may be resolved.

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### Eskom's appeal

- 2.6. Eskom submitted a consolidated appeal in response to the NAQO's decisions in respect of several of its coal-fired power stations. Eskom did not submit an appeal per power station, instead its appeals are formulated as responses to the decisions taken by the NAQO per its classification of these decisions as "*positive decisions*", "*adverse decisions*" and "*partial refusals*".
- 2.7. Eskom makes the following submissions in respect of its grounds of appeal:

#### **First Ground of Appeal: Decisions are unlawful, irrational and unreasonable – relevant considerations were not considered:**

- 2.1.1 *"In the Reasons for her Decisions, the NAQO stated that 'Eskom is advised to make a request to the Ministers of the Departments they listed in a letter to the NAQO dated 30 March 2021, for consideration of all the other factors that are outside the Departments mandate, such as insufficient water, gypsum and financial costs of implementing decisions; closure of seven (7) stations; and associated 19 000 MW of supply to the national grid.' This statement by the NAQO suggests that the NAQO did not take any of the abovementioned factors into consideration when making her decisions, and as a result are unlawful and fall to be set aside. In particular, the considerations ignored all go to the sustainable development enquiry, which is required when exercising any decision-making powers in terms of NEMA and/or NEMAQA."*
- 2.1.2 *"Multiple units at the coal-fired stations will not be able to operate in compliance with the limits imposed in the Decision. Based on performance trends, an initial assessment of the impact of the decision, in terms of generating capacity that will become unavailable, the impact is estimated to be 16 000 MW immediately as stations are unable to meet the immediate limits in respect of PM and NOx. By 2025 when the existing SO2 postponements lapse and multiple stations are expected to comply with the new plant SO2 limit, this increases to 30 000 MW (69% of Eskom's total installed coal station capacity)."*

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- 2.1.3 Eskom lists the costs of compliance with the MES and gives examples to illustrate their point that from a social, employment, economic, environmental and energy security perspective, compliance is simply untenable. Emphasis is placed on the fact that the installation of certain abatement technology has a negative impact on the environment due to South Africa being a water scarce country and the by-product of such processes potentially creating more waste, which must be carefully disposed of. According to Eskom, the NAQO's failure to consider the costs of compliance and, in particular, the cost of installing an FGD, is a further example of the irrationality of the NAQO's decision.
- 2.1.4 *"By neglecting to consider the consequences or implications of the Decisions, the Decisions are rendered irrational and/or unreasonable. Without having due regard to the consequences of the Decisions, which include environmental consequences, such as insufficient water and increased CO<sub>2</sub> emissions, as well as those to people and South Africa as a whole, the NAQO could not adequately explore and select the best practicable environmental option. In order for a decision to be rational, the means must be rationally connected to the ends. But if the ends were not considered by the NAQO, the decisions could never have been rational."*
- 2.1.5 *"The NAQO justifies her approach as being consistent with the MES. However, given the purpose of the MES and its recognition of transitional measures, it is imperative of the JET and sustainable development as mandated in NEMA, the NAQO's interpretation of the MES, which essentially elevates the environment as a sole criterion for decision making, gives rise to absurdities in both law and in fact."*

**Second Ground of Appeal: Decisions are unlawful, irrational and unreasonable – failure to give adequate consideration to the Atmospheric Impact Report, the fact that AAQ generally complies with the applicable NAAQS and an acceptable margin of safety:**

- 2.1.6 *"Eskom is but one of many air quality impacting sources. Compliance with the ambient air quality standards in the Highveld and Vaal Priority Areas with respect to NO<sub>2</sub> and SO<sub>2</sub> are variable and, in general, there is compliance with the NAAQS. In the WBPA, there is compliance to the NAAQS for PM, NO<sub>x</sub> and SO<sub>2</sub>."*



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- 2.1.7 *"Eskom's emission reduction plan and the JET programme will see the progressive reduction in PM, NO<sub>x</sub>, SO<sub>2</sub> and CO<sub>2</sub> over time. Implementing the emission reduction plan and installing more efficient emission control technology will reduce Eskom's emissions. The decommissioning of the older stations and increased use of the newer, less emitting Medupi and Kusile will also result in a substantial decrease in Eskom's emissions over time." Eskom further provides an example in which it is projected that "compared to a 2020 baseline that by 2035 Eskom's relative PM emissions will reduce by 58%, SO<sub>2</sub> by 66% and NO<sub>x</sub> by 46%."*

### **Third Ground of Appeal: Decisions are unlawful, irrational and unreasonable – conditions imposed are irrational.**

- 2.1.8 *"The Decisions, although partial or negative, nevertheless impose conditions requiring offset programmes to be implemented and reporting requirements. In circumstances where the Postponement Applications were refused, it is inappropriate and unlawful to attach binding conditions to adverse decisions. This is clear from regulation 13(b) of the MES, which provides that the NAQO may refuse the application with written reasons. The regulation does not empower the NAQO to impose conditions in a negative decision."*
- 2.1.9 *"Eskom respectfully requests that the Minister positively exercises the discretion granted to her in terms of section 17(1) of NEMA, to refer the matter for conciliation prior to making a decision on this appeal."*
- 2.1.10 *"In the alternative, Eskom submits that section 17(2) of NEMA is applicable and hereby requests that the Minister appoint a facilitator to call and conduct meetings of interested and affected parties with the purpose of reaching an agreement to refer a difference or disagreement to conciliation... Should the Minister reject Eskom's request for the matter to be referred to conciliation, [it] requests the Minister to set aside the negative and partial decisions and substitute them with positive decisions that grant the Postponement Applications for all of the reasons and on the grounds of appeal set out above."*

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### CER Appeal on behalf of groundWork and Earthlife Africa (Second Appellants)

- 2.2 The CER submitted an appeal against the decisions taken by the NAQO in relation to Eskom's Kendal, Tutuka, Majuba, Camden, Hendrina, Arnot, Komati, Grootvlei, and Kriel power stations. The CER submits that:
- 2.2.1 The 2017 Framework is the “*national framework for achieving the objectives of [the AQAJ]*” and it “*binds all organs of state in all spheres of government*”. Eskom may not lawfully apply for postponements, suspensions or alternative emission limits, **unless and until the ambient air quality within air-shed priority areas where a power station is located, is compliant with the NAAQS**. As explained below, this is not the case; and for this reason alone an application should be summarily rejected.
- 2.2.2 “As an organ of state, significant emitter and a major source of air pollution in South Africa, Eskom is legally required, at all times, to limit its emissions to ensure compliance with the NAAQS and to reduce its impacts on public health. In limited circumstances, including demonstration of compliance with existing plant standards and NAAQS, only one postponement per pollutant is permitted for the 2020 MES, and such postponement may not extend beyond 5 years (i.e. all plants must meet the 2020 MES by 31 March 2025.”
- 2.2.3 “Eskom may not lawfully apply to postpone its compliance with the MES, or apply to suspend MES compliance, unless and until the ambient air quality within the three priority air-shed areas where their power stations are located are in compliance with the NAAQS – this is not the case.”
- 2.2.4 “An Eskom power station that will be decommissioned by 31 March 2030, may apply for a once-off suspension of compliance with new plant MES, provided the application is accompanied by a detailed decommissioning schedule.”
- 2.2.5 “Alternative emission limits that are weaker than the existing plant MES, may not be considered, let alone granted; and an application for an alternative limit must demonstrate a previous reduction in emissions of the said pollutant or pollutants, measures and direct investments

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*implemented towards compliance with the relevant new plant standards, and there must be [material] compliance with the NAAQS in the area for pollutant or pollutants applied for."*

2.2.6 *"Based on the above legal framework, several aspects in a number of the NAQO decisions must be dismissed as unlawful and therefore set aside by the Minister as the appeal authority. Before turning to the grounds of appeal where it is demonstrated that the NAQO has, erred in a number of the decisions issued."*

2.3 The CER seeks to challenge the decisions that were taken by NAQO, on the grounds set out below:

**The decision taken by the NAQO to grant Majuba power station a postponement of compliance timeframes for the NOx new plant standard from 1 April 2020 to 31 March 2025 and directing the power station to comply with a limit of 1300 mg/Nm<sup>3</sup> is unlawful.**

2.3.1 The NAQO's decision *"denied Eskom's request for an alternative limit of 1400mg/Nm<sup>3</sup> from 1 April 2020 for the Majuba power station. It further denied Eskom's request for postponement beyond 31 March 2025."* These decisions are not disputed. *"However, the NAQO authorised Eskom's request to postpone compliance with new plants standards from 1 April 2020 to 31 March 2025 with a limit of 1300mg/Nm<sup>3</sup>. This is even weaker than the existing plants standard for NOx, which is 1100mg."*

2.3.2 *"Allowing Eskom to emit at levels that undermine the existing plant standards is a blatant violation of paragraph 11D of the amended List of Activities, which makes it clear that no postponement of compliance timeframes or a suspension of compliance timeframes shall be granted for compliance with MES for existing plant standards."* The NAQO's decision *"allows for an untenable position that would entitle any emitter to apply for and be granted an emission limit that is weaker than the already lenient standards for existing plants, notwithstanding the explicit intention in the Listed Activities and the MES that the existing plant standards must be the bare minimum limit. The NAQO's decision renders the already weak MES redundant. It is a deliberate weakening, and therefore a contravention of the applicable laws that were put in place to protect public health*

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*and wellbeing. The NAQO's legal position is unlawful as well as contrary to section 24 of the Constitution."*

- 2.3.3 It is also determinative that the Majuba power station is situated in the Highveld Priority Area (HPA), where, *"after more than 14 years since the declaration, air quality in the HPA has not improved, and remains non-compliant with the NAAQS. Air quality monitoring data publicly available on the South African Air Quality Information System (SAAQIS) website shows that air quality in the HPA continues to be extremely poor and unsafe for its residents. As contemplated in terms of paragraph 5.4.3.4 of the 2017 Framework, only in such cases where the areas in which the power stations are based are in compliance with NAAQS - which the HPA, is not - can postponement of compliance, suspension of compliance, or alternative limit applications even be considered. In terms of section 1(a)(ii) of PAJA, the powers to exercise administrative action are derived from the law and only extend insofar as the legislation allows. Therefore, we submit that granting any of these applications for coal-fired power stations in the HPA or any other priority area is ultra vires the Constitution, the AQA, the amended List of Activities, the 2017 Framework, and the provisions of NEMA. Moreover, with reference to the table provided in Annexure A1 [of the CER's appeal], Majuba power station is categorised as a 'mid-life' station with a scheduled end-of-life of 2046. Although the Appellants oppose the running of this station to its end-of-life toward compliance with South African's increasing Nationally Determined Contribution, and Constitutional obligations, to limiting global warming to 1.5 C, Majuba power station should be fully compliant with the new plant MES for all three pollutants, by this stage of the MES compliance timeframe."*

**The decision to grant Kendal power station a postponement of compliance timeframes for the NO<sub>x</sub> new plant standard from 1 April 2020 to 31 March 2025 and directing the station to comply with a limit of 1100mg/Nm<sup>3</sup> is unlawful.**

- 2.3.4 The NAQO authorised Eskom's request to postpone compliance with the NO<sub>x</sub> new plant standard at Kendal power station from 1 April 2020 to 31 March 2025 with a limit of 1100mg/Nm<sup>3</sup>, which will allow Eskom to only comply with the existing plant standard, rendering this decision unlawful.

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- 2.3.5 *"As is the case with Majuba power station, Kendal power station is also located in the HPA. This alone bars the NAQO from authorising postponement applications for Kendal power station, in accordance with 5.4.3.4 of the 2017 Framework. In addition, Eskom's reasons for its application, many of which... are specious and insincere, do not reasonably explain why, despite over 10 years of notice, it delayed in taking meaningful steps to comply with the MES, especially at a 'midlife' power station with a scheduled end-of-life date of 2039. This failure runs contrary to the 2017 Framework's requirement that Eskom provide "a detailed justification and reasons for the application."*
- 2.3.6 *"Save for the recent amendments in November 2018, and an increase of the SO<sub>2</sub> newplant limit in 2020, the MES in respect of solid fuel coal-fired power stations have not changed since 2010. The process of putting together the List of Activities commenced in about 2004, over an approximate 5-year period, and a multi-stakeholder process was convened to determine and set appropriate MES for the List of Activities. Eskom was integral to this process. Eskom knew of the impending emission limits and inevitable compliance action during the mid-2000's, giving it many years' advance warning that it would need to make the necessary plans and investments to come into compliance with MES. Aside from the impending obligations of the MES (at the time), Eskom had knowledge of the direct health impacts of its coal-fired power stations, based on the 2006 studies referred to in LAC's February 2019 submissions; these provided sufficient reason for Eskom to ensure that it was implementing the necessary abatement measures to effectively mitigate the impacts of its coal-fired power stations, in compliance with its section 28 NEMA duty of care. Indeed, as an organ of state, it had and continues to have, a duty to respect, protect, promote and fulfil the rights in the Constitution; in particular, but not limited to, section 24. In other words, Eskom was legally compelled to act well before the MES were even published in 2010."*
- 2.3.7 *"Eskom provides no reasonable explanation as to why it has waited more than 8 years since the List of Activities came into force, or more than 3 years from when the 2015 postponement application was granted, to begin – and/or adequately progress and plan for – the abatement equipment installations which would allow it to comply with the new plant MES at Kendal power station, as well as Majuba and Tutuka (addressed below) power stations."*

**The decision to grant Tutuka power station a postponement of compliance timeframes for the NO<sub>x</sub> new plant standard from 1 April 2020 to 31 March 2025, and directing the power**

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station to comply with a limit of 1100mg/Nm3 is unlawful.

The decision to grant a suspension of compliance timeframes for the Camden, Hendrina, Arnot, Komati, Grootvlei, and Kriel power stations without detailed and clear decommissioning schedules accompanying the applications is unlawful.

2.3.8 *“Paragraph 11B of the List of Activities provides that “an existing plant to be decommissioned by 31 March 2030 may apply to the National Air Quality Officer before 31 March 2019 for a once-off suspension of compliance timeframes with minimum emission standards for new plant. Such an application must be accompanied by a **detailed decommissioning schedule**. No such application shall be accepted the National Air Quality Officer after 31 March 2019.” This explicit requirement is not only re-enforced in the 2017 Framework, in relation to an application for a once-off suspension of compliance timeframes with new plant MES, but it goes further, requiring that an Eskom power station **must** provide a “**clear decommissioning schedule**”. If an existing facility is granted a suspension of the compliance timeframes — which we submit Eskom ought not to have been granted, it is required by the List of Activities and the 2017 Framework to comply with existing plant MES during the suspension period until decommissioning by 31 March 2030, latest.”*

2.3.9 The NAQO granted Eskom's application for the suspension of compliance until decommissioning by 2030 for six coal-fired power stations namely: Hendrina; Arnot; Camden; Komati; Grootvlei; and Kriel, the 'old' stations. The CER also makes reference to Eskom's Summary Motivation Report, which presents the “decommissioning dates” per Eskom power station, and submits that, *“as legally required by the List of Activities and the 2017 Framework, it is not a “detailed” or “clear” decommissioning schedule. It is not permissible for the [NAQO], with the licensing authorities, to consider the suspension applications in the absence of clear detailed decommissioning schedules stations, let alone grant the applications. This is unlawful and the suspension of compliance decisions must be set aside... Eskom's decommissioning dates do not constitute a “detailed” or a “clear” decommissioning schedule per station for the following reasons:*

- *The decommissioning information in Figure 1 and/or the explanatory text around it should specify the commencement dates/planned commencement dates, in addition to the key*



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*actions and timelines to enable the decommissioning of at least the 6 stations included in the suspension application.*

- *As a minimum, and/or the explanatory text around it ought to specify the commencement date/planned commencement date of the necessary regulatory requirements to authorise the decommissioning process, including, inter alia:*
  - *As a Listed Activity, the closure of an existing Eskom coal-fired power station must conduct a basic impact assessment in accordance with the amended EIA Regulations, 2014. This should include details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts, particularly the coal ash dumps; and*
  - *Considering the social impact of decommissioning an Eskom power station, and Eskom's duties as an organ of state, we submit that it is both necessary and appropriate that an inclusive and transparent social and labour closure plan is developed for the decommissioning process. This should account for, among other critical issues, the redeployment of staff employed at the station."*

2.3.10 *"The processes identified above require both lead-time and budget – Eskom's decommissioning table addresses neither. The Hendrina power station was supposed to commence with decommissioning from 2018 and Camden power station from the beginning of 2020, yet there appears to be no decommissioning schedule, plan, or financial resources allocated to these processes. In fact, they (the second appellants) note with extreme concern that the decommissioning dates for both Hendrina power station and Camden power station have reportedly been pushed out; Camden by as much as 5 years."*

2.3.11 *"Eskom ought to have provided a detailed and clear decommissioning schedule that at least reflects the plans and process referred to above, under the following conditions before or at the time of its application for suspension:*

- *the clear detailed decommissioning schedule should have been made available for public comment as part of this application process and ought to be available every 6 months through to 2030 for the purposes of progress monitoring; and*
- *the five oldest plants that have reached their schedule end of life dates, namely: Komati; Arnot;*

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*Hendrina; Camden; and Grootvlei ought to have provided evidence of decommissioning arrangements, as required by law or otherwise."*

- 2.3.12 Therefore, the decommissioning table does not satisfy the List of Activities and 2017 Framework requirements for a detailed and clear decommissioning schedule. "Notwithstanding the NAAQS non-compliance requirement and the anticipated health impacts attributed to Eskom's 'old' power stations, the suspension applications should be dismissed on this basis." The condition that decommissioning schedules must be submitted a year from the date of issue of the decisions in this instance by 30 October 2022, does not cure the invalidity of the NAQO decisions, when the List Activities and the 2017 Framework require clear and detailed decommissioning schedules to be submitted as a pre-requisite for the suspension applications to be considered in the first instance. The granting of the suspension of compliance to the six 'old' stations is unlawful and should be set aside.
- 2.3.13 In conclusion, the NAQO's decisions to grant a postponement of compliance timeframes to the Majuba, Kendal and Tutuka 'midlife' power stations, and suspensions of compliance timeframes to the six 'old' stations' in the absence of detailed and clear decommissioning schedules, are contrary to, *inter alia*, the amended List of Activities, the 2017 Framework, NEMA and the Constitution.

### **Mr Michele Rivarola's Grounds of Appeal (Third appellant)**

- 2.4 Mr Rivarola submitted an appeal against the decisions taken by the NAQO in relation to Eskom's Port Rex power station. He submits that:
- 2.4.1 South Africa *"is a signatory to COP 26 and, through its President, has given a firm commitment to reduce its emissions of greenhouse gases. NOx's have high global warming potential (in excess for 100 times that of CO<sub>2</sub>) and their emissions from existing plant can be economically reduced and abated by using specific existing technology. There is no logical reason for not enforcing current air quality standards, costs is not and should not be a determining criterion."*
- 2.4.2 Every person's right to a clean environment that is not harmful to their health is a right that is enshrined in Section 24 of the Constitution. *"The right extends to the custodianship. There are reasonable measures available to prevent pollution and ecological degradation however by*

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*granting relaxations of the current air quality standards (which are already lax in comparison to many other countries' air quality standards). The department is not applying its mind to the preservation of such rights for current and future generations. The department's decisions are dictated by pure and short-sighted economics as there is no price that can be put on environmental health and preservation."*

- 2.4.3 *"No consideration has been given to the effects of the emissions (in particular particulate) on either adjacent populated areas such as factories or residential areas on the other side of the Buffalo River. As a minimum a complete CFD model under prevailing wind conditions from both the east and the west should have been carried out to establish where particulate is likely to come to rest."*

### **Second Appellant's Responding Statement**

- 2.5 In its responding statement to Eskom's appeals, the CER made the following submissions:
- 2.5.1 The effect of Eskom's "updated" MES application on Eskom's appeal and the 2021 NAQO Decisions remain unclear, nor have the second and third appellants been formally notified thereof and provided with an opportunity to comment thereon as per paragraph 12 of the MES, which refers to the public participation process set out in terms of the NEMA and Regulations 41 to 44 of the Environmental Impact Assessment Regulations.
- 2.5.2 In any event, the timeframes for the lawful submission of postponement and suspension applications have now long passed. As such, Eskom cannot permissibly bring any further postponement or suspension applications. The List of Activities and the 2017 Framework are very clear in this regard.
- "Eskom seeks to appeal the NAQO Decisions on their postponement applications in respect of its Matla, Duvha, Matimba, Medupi and Lethabo power stations which were all refused by the NAQO in their entirety."*
- 2.5.3 They (the second appellants) support the NAQO's decision to refuse some of Eskom's applications but disagreed with the decisions to grant alternative limits for Tutuka, Majuba and Kendal power stations, as these decision were unlawful.

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- 2.5.4 It was also unlawful to grant a suspension of compliance timeframes in respect of the Kriel, Camden, Hendrina, Arnot, Komati and Grootvlei power stations without a detailed and clear decommissioning schedule accompanying the application.
- 2.5.5 Moreover, Eskom did not provide the affected parties with copies of its appeal, thereby failing to adhere to regulation 4(1) of the National Appeal Regulations, 2014.
- 2.5.6 Eskom's *points in limine* lack merit in that the NAQO applied clear provisions and requirements, as set out in the regulations, when deciding the postponement applications.
- 2.5.7 In their (the second appellants') view, there is a misalignment with sustainable development and the just energy transition, which they address below.
- 2.5.8 Eskom failed to meet the clear requirements set out in the MES and 2017 Framework. Eskom's contention that a "*strict*" interpretation of the MES is untenable is without merit. The purpose of the Listed Activities and the MES is in line with the principles of sustainable development, and they aim to control atmospheric emissions which may be detrimental to the environment, including social, economic and ecological conditions or cultural heritage.
- 2.5.9 The MES was developed through the consideration of sustainable development and its various aspects, thus the NAQO was required to consider the legal requirements for postponements and suspension of compliance with the MES.
- 2.5.10 They disagree that Eskom's existing and intentional mode of operation, including its approach to compliance with air pollution laws over the past decade, attained or contributed towards sustainable development, as it failed to show good faith and genuine effort to comply with the MES. This, they say, is evidenced by the criminal prosecution regarding Kendal power station and Eskom's failure to install FGD at Medupi despite allegedly receiving loans for this as early as 2010.
- 2.5.11 The way Eskom operates its facilities, even as projected in the Just Energy Transition (JET) and the Enterprise Resource Plan (ERP) 2022, is inadequate to achieve a version of sustainable development that is consistent with the Constitution. Sustainable development is integrally linked with the principle of "*intergenerational justice*" which requires the state to consider the long-term effect of pollution. Furthermore, the poor air quality in the HPA has persisted for many years and the court held in the *Deadly Air case*<sup>1</sup> that this was aviolation of residents' rights in terms of section 24 of the Constitution.

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<sup>1</sup> Trustees for the Time Being of Groundwork Trust & Another vs Minister of Environmental Affairs & Others

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- 2.5.12 Eskom and other industrial polluters' non-compliance with the MES goes against "*development that pays attention to the costs of environmental destruction*" and Eskom's understanding of sustainable development in a constitutional society is flawed.
- 2.5.13 Eskom has failed to demonstrate a reduction in its emissions. They (the second appellants) object to a "*phased-in approach*" to compliance considering that the High Court judgment confirms that the rights in section 24 of the Constitution are immediately realisable.
- 2.5.14 They (the second appellants) encouraged Eskom to accelerate the phase-out of coal and the roll-out of solar PV and/or wind power generation demand on the grid which would have the effect reducing loadshedding as this would reduce energy poverty and air pollution.
- 2.5.15 They referred to evidence indicating the health impacts of the emissions of coal-fired power stations. An example being that of Dr. Holland's report on the assessment of health impacts and associated economic costs of emissions from Eskom's coal plants in 2017, where it was found that severe sickness (chronic bronchitis and asthma) and death (from lung cancer, heart disease, pulmonary disease, strokes, and lower respiratory infection) are attributable to Eskom's emissions.
- 2.5.16 In response to Eskom's first ground of appeal, the CER submits that Eskom appears to be misdirecting itself, as compliance with the MES is a legal issue and complying with the law is non-negotiable. Furthermore, while alleging that the environment is being considered above all, Eskom fails to acknowledge deadly health impacts of non-compliance. There are no safe levels of exposure to several pollutants and Eskom's application of a margin of safety as a determining factor is even more reason to refuse its appeal, considering the thousands of lives that could be saved by enforcing the NAAQS (and the MES).
- 2.5.17 In response to Eskom's third ground of appeal, they do not object to measures being taken to supply households with cleaner energy sources, however that cannot replace current regulatory and legal requirements. The off-setting of air pollution by reducing some sources of emissions and not others is a failure to protect the rights and health of all South Africans, particularly vulnerable communities living closest to the power stations, coal mines and trucking routes, who will continue to be severely harmed by these sources. As such, Eskom's continued reliance on the contribution of other less significant sources of emissions is a muddying of the immediate issue of compliance with the law.

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### Greenpeace Africa's Responding statement

- 2.6 Before I address the responding statement submitted by Greenpeace, I record that on 15 March 2024, the NECA Forum addressed correspondence to the Department wherein it (the Forum) advised that the Forum's report fails to refer to the appeal response that had been filed by Greenpeace in relation to Eskom's application. Nevertheless, the Forum confirms that notwithstanding this omission it (the Forum) has given consideration to the contents of the appeal response report submitted by Greenpeace and notes that it aligns with a number of the findings and recommendations made by the Forum. I am therefore satisfied that this omission has not had a material effect on the recommendations of the Forum. Moreover, I have, per the advice of the Forum, considered the Greenpeace responding statement which I read together with the NECA Forum report. I have therefore considered the responding statement of Greenpeace.
- 2.7 Greenpeace makes the following submissions in their response:
- 2.7.1 Greenpeace Africa has engaged DFFE extensively on this matter, for a significant time period. They strongly object to any attempts by Eskom to evade compliance with the exceedingly weak minimum emissions standards (MES). Standards which serve to protect the human right to clean air enshrined in section 24(a) of South Africa's Constitution which states that everyone has the right to an environment that is not harmful to their health and well-being.
- 2.7.2 Eskom's appeal against postponement decisions goes against this right, as resultant activities lead to harmful impacts on the surrounding environment and communities and are in fact unlawful. Whilst Eskom has submitted an appeal report to DFFE, appealing the decision of the NAQO, Greenpeace Africa submits this appeal report to raise key issues contained in Eskom's appeal report, flagging areas of concern in line with its unwavering view – expressed in numerous submissions concerning the MES, as well as interrelated matters such as climate change, which poses an existential threat. They are appealing based on the First Ground of Appeal: Decisions unlawful, irrational and unreasonable and, in defending its opinion on the NAQO's interpretations of JET, submits that Eskom itself fails to adequately consider key justice elements central to both sustainability and the Just Energy Transition. They assert that Eskom's interpretation of JET reduces and downplays its own responsibility as well as its role in implementing sufficient



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and effective pollution mitigation measures for its operation. Eskom further downplays the severity of harm as a result of non-compliance. Economic gains vs compliance: The emphasis on the negative economic impact of implementing pollution mitigation measures alludes that for Eskom, economic gains matter more than human life. Solely stressing the importance of electricity provision and addition of megawatts to the grid to “ensure well-being”, and its need to meet the national energy demand at all cost.

- 2.7.3 Eskom's approach or defence presented to support their interpretations distract from the core issues of compliance. The utility omits key evidence presented in reports and studies that highlight the impact of Eskom's operations on coal affected communities including illness and premature death - this a key consideration enshrined in the principles of Justice within the Just Energy Transition.
- 2.7.4 Furthermore, it places surprising focus on coal production even in the context of a Just Energy transition which should focus on the shift away from fossil fuels combined with the rapid deployment of renewable energy technologies – a cleaner and least cost alternative which would see Eskom achieve the interrelated goals it rightfully points out i.e.. Energy Security, equity/affordability and sustainability.
- 2.7.5 It is irrational to allow Eskom to hold South Africa to ransom solely based on economics, when people are getting sick and dying prematurely due to the air pollution produced by the utility. Eskom therefore has no grounds to evade responsibility to comply with both the MES, and climate commitments. It cannot hide behind the country's economic challenges, particularly affecting the electricity sector, when it has in fact been a party and key role player behind much of the current context.
- 2.7.6 It (Greenpeace) is in agreement that “to “invest” R300 billion on infrastructure which does not add capacity to the strained national grid and that risks becoming stranded as an asset is a luxury that most developing countries, including South Africa, cannot afford. Eskom's broad position would be that it is more appropriate to invest this level of funding in new clean generation capacity rather than invest at an end of pipe solution at a coal plant with a poor NPV and limited cost-benefit return.”
- 2.7.7 In the case that retrofits are costly and beyond reach for the utility, for its inefficient, old, polluting power stations that fail to meet MES, these plants should cease operating, and/or be



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decommissioned expeditiously, as they continue to cost our economy in numerous direct and indirect ways. It is completely irrational to continue to run these highly polluting coal-fired power stations, which cost more to try to keep running than investments in renewable energy.

### The NAQO's Responding Statements

- 2.8 The NAQO provided her responses and comments to the various appeals/ grounds of appeal as follows:

#### Eskom's appeal against the NAQO's "adverse decisions" and "partial refusals" in relation to Duvha, Matimba, Medupi and Lethabo power stations, and Majuba, Tutuka, Kendal, and Kriel power stations.

- 2.8.1 She confirms the background to these appeals as stated in paragraph 1 of Eskom's appeal and she notes Eskom's introduction as contained therein.
- 2.8.2 She confirms that she issued her decisions on Eskom's applications in terms of section 21 of NEMAQA and that an application may be made to the NAQO for the postponement of the compliance timeframes.
- 2.8.3 She disputes Eskom's definitions of *sustainable development* and *just energy transition* (JET) but she notes that a risk averse and cautious approach is necessary for purposes of sustainable development, which considers the limitations of current knowledge in respect of consequences of decisions and actions. Moreover, she stated that she must promote the protection of the environment by providing reasonable measures to prevent pollution and degradation and for securing ecologically sustainable development while promoting justifiable social and economic development at no sacrifice to the environment and human health. Her decision not to grant decisions in favour of some of Eskom's power stations was based on her view that such a decision would have been unlawful, particularly those in relation to the alternative emissions limit applications.
- 2.8.4 Any challenges to the rationale or alleged unsustainability of the MES should have been dealt with at the inception of the MES through the consultation channels provided, and not through the

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appeal process. She asserts that her decision was based on the requirements for compliance with the MES and the section 21 Notice.

- 2.8.5 She reiterated that sustainable development is an important constitutional consideration with respect to people and their needs being at the forefront of environmental management. However, she disagreed that the case of *Joseph and Others v City of Johannesburg and Others* 2010 (4) SA 55 (CC) (the Joseph case) pertained to a duty to provide electricity. In her view, the Joseph case relates to the termination of electricity supply to tenants and the court's decision was based on procedural fairness, as the tenants were entitled to a pre-termination notice and an opportunity to make representations prior to the disconnection of their electricity.
- 2.8.6 Her decisions were also based on promoting the right to an environment that is not harmful to human health or wellbeing while simultaneously promoting sustainable ecological and justifiable economic and social development.
- 2.8.7 She notes that access to energy, energy security, efficiency and sustainable development are recognised as objectives of the Electricity Regulation Act, 2006 (Act 4 of 2006) (the Electricity Act) and the National Energy Act, 2008 (Act 34 of 2008) (the Energy Act). She reiterated her previous submissions on what constitutes sustainable development and just energy in a developing country; and the relevance of sustainable development and section 24 of the Constitution in decision making.
- 2.8.8 She considered all relevant matters and factors under section 39 of the NEMAQA with the same gravitas and noted that the MES was different and entailed a paradigm shift in realising environmental rights in the Constitution. She stated that various platforms have been established to ensure the Constitutional rights are realised.
- 2.8.9 In response to Eskom's submission that the NAQO had based her decision on incorrect considerations, she reiterated her previous assertion that Eskom should not use the appeal process to challenge the rationale of the MES.
- 2.8.10 Furthermore, in response to the submission that she did not consider the full suite of development issues in relation to air quality, she reiterated that refusal of Eskom's application was due to the fact that its power stations, located in the Priority Areas, were not compliant with the national standards set out in the regulations.
- 2.8.11 In relation to the first ground of appeal, the NAQO reiterated her previous submission in relation to sustainable development and that Eskom's request for an AEL is unlawful due to non-

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compliance with national standards. She further stated that Eskom has been aware of the legal requirements since 2010 and is entitled to use its discretion to select appropriate technology in the absence of such prescriptions.

2.8.12 In relation to Eskom's second ground of appeal, she reiterated the need to comply with the MES and the section 21 Notice, and that Eskom's AEL request was unlawful.

2.8.13 In response to Eskom's third ground of appeal, the NAQO disagreed with the assertion that her decisions to impose conditions on offset plans for these stations was unreasonable. Eskom applied for a postponement in 2015, where favourable decisions were made for some of its power stations, some of which are valid until 31 March 2025 and were still valid in 2021. A negative decision made in 2021 meant that the affected station needed to revert to the decision made in 2015, which required stations located in the Priority Areas to develop and implement offset plans in 2015. However, the approved plans do not exist for Medupi and Matimba, despite the fact that Eskom was required to submit these within 90 days of the decisions being taken, which was in 2021.

### **Matla, Duvha, Matimba, Medupi and Lethabo**

2.8.14 Her refusal to grant Eskom's request for these plants are the subject of an appeal by Eskom.

## **THE NECA FORUM INVESTIGATION AND REPORT**

2.9 On 8 March 2024, the NECA Forum submitted their report in respect of this appeal, setting out the issues and concerns raised, the forum's findings in respect of the issues, and their recommendations. I have considered the contents of the NECA Forum's Report.

2.10 The following is a summary of the findings and recommendations of the NECA Forum:

### **Section 17 of NEMA- Referral to conciliation**

2.10.1 *"The Forum is not mandated, in its TOR, to consider a referral to conciliation. That said, it would appear that the outcome of the Forum's work, including this report which contains*

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*recommendations to the Minister, is a substantially similar outcome to that which would result from conciliation. In addition, the Forum is mandated to consider a wider range of information from a number of parties, and is constituted by a multi-disciplinary team that is equipped to traverse the issues raised by Eskom in more detail and with more accuracy than a single conciliator would be.”*

- 2.10.2 It bears mention that, as a part of the Forum's deliberations, numerous meetings were held with Eskom, with the objective of ascertaining from Eskom what steps have been taken to ensure compliance and the details pertaining to the installation of abatement equipment which will assist compliance. These meetings were exploratory in nature and were held with the objective of ascertaining options for agreement and compliance.
- 2.10.3 To the extent that the DFFE and Eskom have held differing views as to the interpretation of certain legislative provisions, the Forum has engaged with the parties in an attempt to find a common understanding.
- 2.10.4 Constantly liaising with the DFFE and Eskom around interpretation of legal options and the exploration thereof with a view to ensuring compliance with the regulatory framework by Eskom is de facto conciliation by the Forum.

### **Interpretation of the Forum's Main Purpose**

- 2.10.5 The Forum has interpreted its main task, contained in its TOR, as being to provide recommendations to the Minister on how Eskom's coal fleet can achieve sustainable compliance with the MES. To proceed with this task, two aspects require further definition:
- 2.10.6 First is that of 'sustainable compliance'. In this context, sustainable compliance is understood to be the ability of each coal-fired power plant to remain in compliance with its legal requirements whilst considering the additional objectives of the multiple dimensions highlighted by the TOR. These are identified as follows, (including a shortened version in parenthesis) for reference purposes:
- i. Health impacts arising from non-compliance (health)
  - ii. Ambient air quality (air quality)
  - iii. The energy crisis the country is facing (security of electricity supply)

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- iv. Cost of compliance by Eskom (considered as both stand-alone abatement technology retrofits costs and the implications of abatement for the cost of supplying electricity)
- v. Socio-economic considerations (socio-economic)
- vi. Meeting the lower bounds of the NDC (1.5 degrees compatible) and South Africa's international climate commitments (Greenhouse Gas (GHG) emissions).<sup>2</sup>

2.10.7 In the case of Eskom's coal-fired power plants, the multiple objectives that need to be balanced to achieve 'sustainable compliance' apply at different scales, which can be simplified as being plant, municipal, air quality Priority Area (PA) or power system scale, and must be considered as such. For example, the implications of plant closures due to lack of MES compliance will have a *socio-economic* impact at a municipal and PA scale in the form of both direct and indirect job and livelihood loss. The *air quality* impact of any one plant is felt both in the plant's immediate vicinity (Municipality), but also at the PA scale given the dynamics of air dispersion.

2.10.8 Health impacts from a coal-fired power plant correspondingly arise both locally in the communities within the immediate vicinity of the plant, and in populations within the region and beyond, as determined by air dispersion dynamics. Eskom, as a company, will bear the costs relating to retrofits to abate emissions, load reductions or closure of individual power plants before the end of their economic life. Given the central role of Eskom in the power system and the extent of the appeals, these costs to Eskom will also reflect in the cost of provision of electricity to the country. Whilst the costs of individual plant retrofits are determined at a plant scale, given the systemic nature of electricity supply, the cost of electricity provision is most appropriately assessed at the scale of the national power system. Similarly, whether electricity supply is adequate, an acute challenge for South Africa currently, is also most accurately assessed at the power system scale. This is not least because all but one of Eskom's coal-fired plants, representing the bulk of power generation in the country, are facing legal challenges. The impact of reducing air emissions at any

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<sup>2</sup> This particular extract (sub-paragraph (vi)) as taken from NECA Forum Report represents a misunderstanding. Albeit that nothing turns on this issue, I deem it appropriate to clarify the following: the target is not GHG emissions; instead, the target is the NDC range that was submitted to the United Nations Framework Convention on Climate Change (UNFCCC) that the country as a whole must fall within. There is no decision that Eskom specifically must hit the bottom of the range (1.5 degree compatible). Government has always said what our country can achieve within the range depends on financial support.

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one plant on adequacy of electricity supply depends on the dynamics of the power system as a whole.

- 2.10.9 The cost and adequacy of national electricity supply also has a number of important second order effects at the national scale: Inadequate power supply hampers social services such as education, health and healthcare, and water and sewerage supplies. Economic activity and investment which supports job creation and enables social welfare expenditure through tax revenues, are associated with reliable and affordable power. Taking plants offline to retrofit, and reducing coal plant load will have an impact on the electricity system's *GHG emissions*, and from there the country's ability to meet its international climate commitments such as its Nationally Determined Contribution (NDC). Further, the carbon intensity of the power supply has a cost implication under national and international carbon pricing regimes, with important second order effects for economic activity and investment.
- 2.10.10 For analytical tractability, the Forum has made loose associations at each scale between different scale definitions used in the various relevant fields and disciplines relevant to their task. They acknowledge that these are not strictly aligned, but because they are never strictly applied in their approach, this is not a major concern – the association assists in structuring the analysis. Therefore, plant scale is associated with the concept of a municipality, air quality PA at both a provincial and regional level and power system to both Eskom's coal fleet and national scales. They foreground the environmental regulatory and power system terminology throughout the analysis to better communicate the logic of the approach. The entry point and focus remains on the MES as constraining air pollutants from Eskom's coal-fired power plants.
- 2.10.11 The second component requiring interpretation is that of 'the MES' itself. This they have interpreted broadly because, as their report will show, the current formulation of the MES quite simply does not allow for anything that approaches sustainable compliance across the multiple dimensions outlined above. The Forum therefore required a broader interpretation in order to respond to their brief. Their working interpretation of 'the MES' is therefore a *real world* one, focused, in the first instance, on the impact of plant-scale emissions on air quality and health. More specifically, they assume that the required impact of plant scale emissions on AAQ and health must broadly equate to that achieved by the current MES concentration limits. Unlike the other dimensions under the Forum's consideration, which consider relatively (larger, smaller), air emissions have a calibrated optimal level which can potentially be quantified. They acknowledge



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upfront the inherent complexity in determining this equivalence and achieving this quantification and note that this is a contested space. The Forum's analysis beyond the current MES concentration based regulatory framework is therefore only indicative.

2.10.12 For their working interpretation, they retain the requirement for 'the MES' air quality restrictions to apply to individual plants, described in the plant AEL, which is a power plant scale instrument. They also acknowledge that the MES regulations work in concert with regulations pertaining to the AAQ of particular airsheds (local and PA), and the Priority Area Management Plans and their associated regulations governing Priority Area AAQ.

2.10.13 The Forum's instruction can therefore be restated as being to provide recommendations to the Minister on how Eskom's coal fleet can achieve an MES-equivalent impact on air quality and health, whilst considering multiple additional dimensions which impact at different scales. To achieve this, the Forum focused on breadth, and they used the information provided, referred to above, to identify who to consult as well as the relevant geographic locations in which to hold the public consultation meetings. The Forum categorised individuals, groups and/or entities as follows:

- Category A – The Emitters
- Category B – The Appellants (which included emitters)
- Category C – Air Quality Control Officers and Municipalities
- Category D – Civil Society Organisations
- Category E – Public Sector / Government Departments
- Category F – Trade Union Federations
- Category G – Affected Communities
- Category H – Business Organisations / Industry

2.10.14 Notices of the public meetings in relation to communities and community organisations based and/or residing in areas affected by the business of the emitters were to be published 30 days prior to the date of the consultations. In view hereof, the DFFE placed notices of the public meetings on its website:

[https://www.dffe.gov.za/event/deptactivity/minimumemissionstandards\\_publicconsultations#introduction](https://www.dffe.gov.za/event/deptactivity/minimumemissionstandards_publicconsultations#introduction)) and on the SAAQIS website (<https://saaqis.environment.gov.za>). The notices invited all



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I&APs to public consultation hearings and were published on these websites on or about 11 October 2022.

2.10.15 A similar notice was published in the Sowetan newspaper on 31 October 2022. Another notice was published in the Sowetan on the 31 March 2023, inviting the community and I&APs to the public meeting in Kriel.

2.10.16 In addition to the above, and to assist the DFFE to reach as many people as possible, the HNM<sup>3</sup> Team sent mass SMSs and emails to I&APs listed on the databases provided by the DFFE. Further messages and emails were sent to remind I&APs of the public meetings. The following documents refer:

- A report from the SMS portal indicating that approximately 800 SMSs were sent to I&APs between 9 and 11 November 2022;
- Copies of the emails sent to I&APs between 9 and 11 November 2022;
- A report from the SMS portal indicating that about 50 SMSs were sent to I&APs on 5 and 6 April 2023, informing community members of another public meeting to be convened in Kriel on 4 May 2023;
- Copies of the emails sent to I&APs regarding the public meeting in Kriel; and
- A report from the SMS portal indicating that about 300 SMSs were sent to I&APs between 5 and 6 April 2023 inviting them to submit written representations or comments to the Forum on or before 10 May 2023.

### **Community Consultations and Engagements**

2.10.17 The NECA Forum convened public consultation meetings, from 14 November 2022 to 24 November 2022 in the Vaal, parts of Mpumalanga, Lephalale, Saldanha Bay, East London; and Pietermaritzburg. Electronic links were sent out to I&APs to ensure that I&APs that could not physically attend the meetings, could attend virtually. The purpose of the public meetings was to give I&APs an opportunity to engage with the NECA Forum, emitters, the appellants and the DFFE regarding matters related to the applications and appeals in respect of the postponement and suspension of compliance timeframes and the issuance of Provisional Air Emission Licences

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<sup>3</sup> Harris Nupen Molebatsi Attorneys

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(PAELs).

2.10.18 The Forum also held public meetings in respect of the applications and appeals relating to the NAQO's decisions in respect of Green Oil and Lubricants (GOAL) and Hulamin Ltd. These meetings were convened on the 15 November 2022 and 21 November 2022, respectively. However, on or about 15 February 2023, the NECA Forum submitted their report in respect of the GOAL and Hulamin appeals, setting out the issues and concerns raised by the appellants during the consultative process, the Forum's findings in respect of the issues, and their recommendations regarding the best way forward in respect of those appeals to the Minister. As such, the NECA Forum's report of 8 March 2024, does not include any aspect of the GOAL and Hulamin consultations and it only addresses community consultations and other engagements held in respect of Eskom's power stations.

2.10.19 The public meetings were held on the dates and at the venues listed hereunder, and copies of the programme and minutes of the meetings were considered as part of Forum's report:

- I. The consultation in Witbank was held at the A New Hotel on the 14 November 2022 in relation to the Duvha and Kendal power stations.
- II. The consultation in Hendrina was held at the Kosmos City Hall on the 15 November 2022 in relation to the Hendrina, Arnot and Komati power stations.
- III. The consultation in Kriel was held at the Ga-Nala Community Hall in Kriel on 16 November 2022 in relation to the Kriel and Matla power stations. I note that this meeting was interrupted by community leaders and ended without concluding the business of the day.
- IV. The consultation regarding the Port Rex power station was held at the Premier Regent Hotel in East London on 16 November 2022.
- V. The consultation in Ermelo was held at Mayor's Parlour on 17 November 2022 in relation to the Camden and Tutuka power stations.
- VI. The consultation in Amersfoort was held at the Ezamakuhle Community Centre on 18 November 2022 in relation to the Majuba power station.
- VII. The consultation in the Vaal was held at the Riviera Hotel on 22 November 2022 in relation to the Lethabo power station and Arcelor Mittal's plant in Vanderbijlpark.
- VIII. The consultation in Standerton was held at the Stanwest Community Hall in Standerton on 23 November 2022 in relation to the Grootvlei and Tutuka power

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stations.

- IX. The consultation in Lephalale was held at the Bosveld Guest House in Limpopoon 24 November 2022 in relation to the Matimba and Medupi power stations.

## Eskom's presentation

- 2.11 Eskom was present at all the public hearings related to its applications and appeals. Eskom was, in the main, represented by Mr Bryan McCourt at the public meetings but he was, from time-to-time, joined by power station general managers, as well as certain executives such as Ms Deidre Herbst, Eskom's Generation Environmental Manager. Eskom made the following presentations:
- 2.11.1 Eskom provided a brief explanation of its applications for the postponement and/or suspension of compliance timeframes with MES in respect of its power stations. Eskom explained that the NAQO granted applications in its favour in relation to the following power stations: Acacia, Arnot, Camden, Grootvlei, Hendrina, Kriel and Port Rex. It also explained that the NAQO declined its postponement applications in relation to the following power stations: Duvha, Kendal, Lethabo, Majuba, Matimba, Matla, Medupi and Tutuka. In this regard, Eskom indicated that it submitted applications to appeal the NAQO's decision to reject its applications for postponement.
- 2.11.2 Eskom acknowledged that there is pollution emitted by its power stations, but emphasised its commitment to solving the problem and complying with the MES. It added that many of its power stations were very old and there have been many discussions regarding whether to fix the old plants or build new ones.
- 2.11.3 Eskom highlighted that it has been working hard to comply with the MES but indicated that it was concerned about the impact this would have on the country. Some of the concerns raised included economic issues related to job losses as well as the prospect of increased stages of loadshedding.
- 2.11.4 Eskom indicated that some of its solutions to comply with the MES are contained in its 2035 JET Strategy. It intends to close nine power stations by 2035 and implement its offset programme. In this regard, it stated that JET will cost Eskom approximately R60 billion which will bring positive results over the long term. It emphasised that shutting down the power stations in 2035 would result in a 22 GW capacity reduction, thus leading to a total emission load reduction in line with the JET.

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2.11.5 Eskom indicated that it preferred the solutions contained in its 2022 Emission Reduction Plan because some of the options are more practical and affordable. Some of the solutions include:

- Projects directed at reducing PM emissions at the Kendal, Matimba, Lethabo, Tutuka, Duvha, Matla and Kriel power stations;
- Projects directed at reducing NO<sub>x</sub> emissions at the Majuba, Lethabo and Tutuka power stations;
- Projects directed at reducing SO<sub>2</sub> emissions at the Kusile and Medupi power stations; and
- Air quality offset programmes for the Highveld and Vaal Airshed Priority Areas.

### The CER's presentation (second appellant)

2.12 The CER was present at the public hearings held in Witbank, Hendrina, Amersfoort and Lephalale regarding its clients' appeals against Eskom's applications. During the meeting at Witbank, the CER's client, the Vukani Environmental Justice Alliance (VEJA), also contributed to the presentation. At the meeting in Hendrina, groundWork also contributed to the presentation.

2.12.1 The CER stated that Eskom was aware that it had to comply with the MES but that many years had passed, and it had done nothing to ensure that it was compliant. The CER's clients were against the NAQO's decision to approve Eskom's applications for postponement of the compliance timeframes in respect of Majuba, Kendal, Tutuka, Camden, Arnot, Komati, Grootvlei and Kriel. The CER emphasised that Eskom's non-compliance with the MES was in breach of the Constitution.

2.12.2 With reference to the '*deadly air case*', the CER indicated that Eskom's non-compliance has contributed to health issues caused by the pollution emitted from Eskom's power stations. VEJA emphasised the harm caused by pollution in relation to people getting sick and consequently dying as a result of the emissions. In this regard, the CER was of the view that Eskom must compensate people that had fallen ill as a result of the emissions from its powerstations.

2.12.3 The CER was concerned that Eskom failed to submit decommissioning plans in respect of the power stations it planned to shut down.

### General issues and concerns raised by communities

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- 2.13 Following the presentations by the emitters, the DFFE and CER, the chairperson of the NECA Forum opened the platform to all members of the communities and stakeholders to ask questions and give their input. Some of the concerns raised and questions asked at the public meetings were similar in nature and will be dealt with under specific headings below. However, certain concerns were specific to a particular area/plant.
- 2.13.1 Some communities were concerned that they were not represented adequately at the public meetings. They felt the arrangements were poorly managed because members of the communities were not aware of the meetings and as such, people could not attend the meetings. In addition, people were unhappy with some of the venues chosen to host the public meetings because they indicated that they struggled to access such venues as they were faraway from where they reside.
- 2.13.2 In response to the above, the DFFE apologised for failing to notify community members well in advance about the meetings and use effective methods of communication. The DFFE reiterated that it was not “*aggressive enough*” in raising awareness regarding the consultation process. The DFFE indicated that the meetings were held at different types of venues based on factors such as the availability of the venues in specific areas. The DFFE explained that it used a combination of private conference venues and community centres to host the public meetings.
- 2.13.3 Stakeholders requested that the public meetings be rescheduled. In this regard, the Forum and DFFE considered the turn-out and were of the view that many of the public meetings were well attended and it would not be necessary to reschedule the meetings. In addition, the chairperson explained that all I&APs could submit written representations or comments and their input would be incorporated into the report to the Minister. The initial date for the submission of written representations and comments was 30 November 2022, however this date was extended to 31 January 2023, and then further extended to 10 May 2023.
- 2.13.4 In view of the extension of time granted to the Forum by the Minister, it was decided that all I&APs and other stakeholders would be given a further opportunity to submit written representations and comments by 30 November 2023.

### Specific Concerns

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### First Concern: Compliance with the MES by Eskom

- 2.13.5 There were varying concerns regarding Eskom's compliance with the MES as well as the implications of non-compliance. Some people were of the view that Eskom should not be forced to comply with the MES, while others strongly believed that Eskom had no other option but to comply with the law.
- 2.13.6 Several community members expressed concern regarding Eskom's non-compliance with the MES. They stated that Eskom's continued non-compliance with the MES would contribute to increased air pollution and consequently, affect their health.
- 2.13.7 Community members stated that there was no indication that Eskom planned to comply with the law. They justified this by stating that Eskom knew and was made aware several years ago that it had to comply with the MES but it did nothing to reduce its emissions. Eskom was accused of lying about its intention to comply with the MES.
- 2.13.8 Some community members enquired about measures the government was taking to regulate Eskom's power stations to ensure compliance with the law. In this regard, people wanted Eskom to be punished for its inability and/or failure to comply with the law.
- 2.13.9 The communities questioned the accuracy of the data presented by Eskom regarding the sources of air pollution, especially the allegation that it emanated largely from domestic households. People were unhappy with this allegation and felt Eskom was blaming communities and individuals, whilst it and the mining activities were the biggest contributors to air pollution in the area.
- 2.13.10 Community members were also of the view that if Eskom believed that the burning of domestic fuel was the main contributor to air pollution, then it should provide informal settlements with electricity to reduce the impact of air pollution.
- 2.13.11 On the other hand, some people were concerned that forcing Eskom to comply with the law could force Eskom to shut down some of its power stations. They questioned what would happen to people's jobs and the land if the power stations were decommissioned. Community members said they feared the consequences of unemployment as well as increased levels of reduced electricity supply. In addition, some people felt that Eskom should be given more time to fix the stations in order to reduce pollution and comply with the law.

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- 2.13.12 Moreover, in areas such as Lephalale, community members were concerned that the shutting down of power stations would turn the areas into “ghost towns”. They indicated that the power stations attracted economic activity to the areas. For example, mining companies were established for the sole purpose of supplying the power stations and therefore, the mines would also close down if the stations were to shut down.
- 2.13.13 The cost of compliance with the MES was a big concern, especially in the light of the financial values Eskom shared in its presentations. A community member asked what Eskom’s plans and strategies were to raise the R60 billion required to reduce emissions. People felt the cost of abatement technology required to reduce emissions, such as FGD or NOX burners is too expensive.
- 2.13.14 Some community members indicated that Eskom was given money by the World Bank to install FGDs. In this regard, they requested Eskom to account for what happened to the money from the World Bank. Further, it was suggested that Eskom was not doing enough to reduce emissions.
- 2.13.15 Some community members did not believe Eskom’s “excuse” that it is too costly to comply with the MES. Others questioned why the government was not giving Eskom money to address the emissions problem because they were of the view that this would limit the negative implications, such as shutting down power stations.

### The DFFE’s response to the first concern

- 2.14 The DFFE responded to the communities’ concerns above by stating that:
- 2.14.1 The government was not forcing Eskom to close any of its power stations but wanted Eskom to reduce emissions. The DFFE added that it was aware of some measures that could be implemented by Eskom to ensure that Eskom complies with the law.
- 2.14.2 In terms of the law, facilities that are unable to comply with the MES could apply for a postponement or suspension from complying with the MES. The decision to grant that postponement is determined on the merits of each facility and if permission is granted, then certain conditions would accompany the permission.
- 2.14.3 Eskom submitted various postponement applications for a number of its power stations. Some of Eskom’s applications were successful, and others were rejected.



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- 2.14.4 The DFFE indicated that there were many contributors to air pollution. The DFFE acknowledged the impact of pollution hence the rejection of some of Eskom's applications. The DFFE stated that it did not want to make things difficult for Eskom but that the DFFE's mandate is to protect peoples' health and the environment. It was recognised that the DFFE had to be more aggressive regarding raising awareness within communities in respect of air pollution and regarding some of the measures put in place to address the situation.
- 2.14.5 The DFFE stated that the legislation deals with a variety of pollutants and that air pollution is assessed by looking at various sources.

### **Eskom's response to the first concern**

- 2.15 Eskom responded to the communities' concerns by stating that it will comply with the law.
- 2.15.1 Eskom stated that it initially applied for postponements in 2015 and again in 2020. Eskom explained that it has, since 2015, done work at several power stations to reduce emissions. It indicated that some of the NAQO's decisions in relation to its application were that Eskom must immediately implement a PM limit of 50 mg/m<sup>3</sup>. Eskom stated that it was informed that if it could not meet the plant limits, it must shut down the plants. It is important to indicate that the DFFE refuted Eskom's allegation and stated that Eskom was only notified that it had to comply with the law.
- 2.15.2 Eskom explained that it is expected to comply with certain limits by 2025. In this regard, the general manager of Tutuka indicated that Tutuka's emissions should be at 1000mg/cm<sup>3</sup> by 2025. He stated that Eskom started reducing emissions at unit 6 of Tutuka to ensure that the station would be compliant by 2025 and that the rest of the units would follow at a later stage. Eskom stated that Grootvlei was currently compliant. Eskom indicated that sometimes the station exceeded the PM limit, but that it was working hard to ensure that it remained within the limits.
- 2.15.3 Eskom also indicated that it was installing low NO<sub>x</sub> burners to reduce NO<sub>x</sub> emissions at its Lethabo power station. In addition to this, the general engineering manager at Lethabo indicated that some of the technology used to reduce PM include high frequency transformers, and the upgrade of the precipitators.

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- 2.15.4 Furthermore, Eskom used the Grootvlei, Lethabo and Tutuka power stations as case studies to demonstrate that there was an intention to comply with the law. Eskom indicated that it was directing all its resources towards mechanisms that would enable it to comply with the MES.
- 2.15.5 Eskom advised that the implications of retrofitting a power station would result in the shutting down of its units for a period of time. Eskom indicated that the shutdown period would vary from station to station, but it could take anything from 1 year upwards.
- 2.15.6 Eskom's representatives present at the public meetings could not respond to the question regarding what happened to the funds Eskom received from the World Bank. However, the representatives indicated that the installation of FGD at Medupi was delayed and that the first unit would only be installed in 2027. In addition, they also indicated that FGDs were installed at Kusile.
- 2.15.7 Eskom explained that due to the costs associated with installing new technology, it would request financial assistance from the government, the South African National Nuclear Energy Corporation and other funders to enable it to fund some of its plans to reduce emissions.

### **Second Concern: The health impact of air pollution**

- 2.16 Community members complained that emissions from Eskom's power stations negatively affected their health. The concerns are set out below.
- 2.16.1 People enquired about whether Eskom had any records of the number of people that were dying as a result of air pollution.
- 2.16.2 The CER stated that Eskom needed to be pragmatic about how it was going to deal with the health impacts caused by air pollution. It was suggested that Eskom should compensate people suffering from illnesses caused by the emissions from its power plants.
- 2.16.3 Communities were of the view that Eskom was not doing enough to address air pollution and that this resulted in sickness and death. Further, Eskom's presentation did not sufficiently address the health impacts of emissions and how it planned to address this issue. People also stated that emissions from some power stations, such as Majuba, were resulting in children and the elderly contracting respiratory diseases, such as asthma.
- 2.16.4 Community members indicated that they were not comfortable with the gas stoves provided by Eskom in respect of its offset project. People's sentiments were that gas stoves are not safe.

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- 2.16.5 Community members were concerned that the DFFE and Eskom did not invite other departments, such as the health department, to the public meetings. They were of the view that these departments could share information related to health, in particular, respiratory diseases and other ailments resulting from the emissions.
- 2.16.6 Community members indicated that the Matimba power station created a lot of noise pollution, and that this was causing hearing problems for people in the community. A community member was concerned that continued exposure to the noise, especially for children, will have long lasting effects. Some people proposed that the station be closed while others suggested that Eskom invest in technology that can reduce the noise levels.

### **DFFE's response to the second concern**

- 2.17 In response to the communities' concerns, the DFFE stated that it was working closely with the Department of Health regarding the impact of air pollution on the surrounding communities.

### **Eskom's response to the second concern**

- 2.18 In response to the communities' concerns, Eskom stated that:
- 2.18.1 Government would need to advise Eskom on what role it could play in the health sector.
- 2.18.2 It could not make any undertaking regarding compensating people for health issues allegedly caused by emissions from its power plants. Eskom, however, indicated that it had built a number of clinics in various communities and that these had been handed over to the government. Eskom could not share data on how many health facilities it had built nor could it share the location of these facilities.
- 2.18.3 There were costs associated with complying with the law and the key was to balance the cost of health versus the cost of complying with the law.
- 2.18.4 Participating in the offset project was voluntary and as such, it indicated that people who were unsure about the health implications of using gas stoves could opt out of the process.

### **Third Concern: Employment**

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- 2.19 Community members were concerned that the closure of some of Eskom's power stations would lead to major job losses, increasing the number of unemployed people in their communities. Below we set out the concerns regarding employment that were raised at the public meetings:
- 2.19.1 People were of the view that closing power stations would not only affect those employed by Eskom but will affect people working in the supply value chain of Eskom. In this regard, mine workers and engineers would lose their jobs, whilst students and graduates would lose out on training opportunities at Eskom and the coal mines.
- 2.19.2 Another community member stated that any potential employment or skills development programmes must also be extended to people older than 35 years old.
- 2.19.3 Community members lambasted the decision to close the Komati power station as this contributed to unemployment in the area. In addition to this, people were aggrieved that workers that were employed at Komati were not transferred to other power stations.
- 2.19.4 Other community members added that the construction of the Medupi power station did not contribute to any significant changes, nor did it create jobs for people in the surrounding areas.
- 2.19.5 People were concerned about whether the implementation of the JET Strategy would affect employment. One of the concerns related to whether people working in the coal sector would be trained and given skills to work in the renewable sector.
- 2.19.6 Community members were dissatisfied about the statistics generated by Eskom regarding how the JET Strategy would impact employment. Specifically, that 300 new jobs would be created for every 100 jobs lost.
- 2.19.7 A community member asked about the timeframes regarding job losses due to the closure of power stations. Specifically, Eskom was asked how long it will take to re-employ people once the JET proceeds.
- 2.19.8 Some community members argued that they should be compensated if the power stations close down. They suggested that the compensation should be in the form of employment or training for employment in the renewable energy sector.
- 2.19.9 Some community members were aggrieved as they felt that Eskom was making them choose between employment, their health, complying with the law and loadshedding. In this regard,

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concerns were raised about how Eskom's reluctance to comply with the MES will have an effect on employment.

### Eskom's response to third concern

- 2.20 Eskom's response to the concern raised regarding the impact on employment, should it comply with the MES and/or shut down some of its power stations, is addressed below.
- 2.20.1 Eskom stated that it did not have sufficient information regarding the impact the closure of some of the power stations would have on its supply value chain.
- 2.20.2 It also stated that it was working with the government to ensure that facilities were created to help people find employment. It mentioned that all the information was available on its website and that it worked with all stakeholders to raise awareness, including schools.
- 2.20.3 Eskom stated that it had submitted applications for a postponement, and that it wanted to repurpose some of the power stations to generate electricity using alternative methods and create new jobs. It indicated that the people working at the Komati powerstation would be transferred to other stations, whilst others would be trained in renewable energy generation.
- 2.20.4 Eskom indicated that the statement that there would be a loss of 100 000 jobs was based on an estimate of the predicted losses at Eskom, as well as the losses in other industries that are part of its supply chain. It added that job losses were concerning.

### Fourth Concern: Offset Programme

- 2.21 Concerns were raised by varying community members regarding the implementation and cost of the offset programme. The process involves Eskom replacing coal stoves with gas stoves, providing gas heaters and cylinders, and the insulation of ceilings. The concerns below were raised.

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- 2.21.1 Whether Eskom had “*concrete plans*” in relation to the implementation of the offsets. It was suggested by some that the information in relation to the cost and implementation of offsets should be made public.
- 2.21.2 Whether an effective offset programme could reduce pollution created indoors.
- 2.21.3 It was stated that this was not the first time that Eskom had proposed offsets as a solution to deal with indoor air pollution. The implementation of the offset programme was slow and as a result, community members would continue using coal as there were no alternatives.
- 2.21.4 People indicated that they could not afford to purchase gas should they exchange their coal stoves for gas stoves. They added that coal stoves were easier to use than gas stoves.
- 2.21.5 Some community members indicated that they were not interested in exchanging their coal stoves for gas stoves. Further, some community members considered the coal stoves as a part of their history and “*heritage*” because their grandparents and parents used coal stoves.
- 2.21.6 Whether Eskom could give community members electric stoves instead of gas stoves.

### **Eskom's Response to fourth concern**

- 2.22 In response to concerns raised regarding the offset programme, Eskom stated that:
  - 2.22.1 It had exchanged approximately 250 stoves in KwaZamokuhle near the Majuba power station.
  - 2.22.2 People had a choice regarding whether to participate in the project. Eskom added that it was planning to provide about 33 000 households with gas stoves by 2027.
  - 2.22.3 The biggest contributor of air pollution was the use of coal for cooking. It added that the offset project aims to reduce air pollution.
  - 2.22.4 It acknowledged that the price of gas could be more expensive compared to electricity but that that would depend on usage. Eskom further stated that it would not provide any further financial support to households to purchase gas and people would need to make their own provisions to purchase gas.
  - 2.22.5 It was aware that gas stoves could be harmful, especially to children. Eskom also acknowledged that it needed to explain to communities how to manage the risks associated with gas stoves prior to giving people the stoves. It reiterated that the offset project would result in people being healthier.

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- 2.22.6 As part of the programme, it would install ceilings because this would make the houses warmer in winter and cooler in summer. Eskom added that in addition to the gas stove, each household would also receive a gas heater and two gas cylinders.
- 2.22.7 The offset programme focused on RDP houses only and not informal houses, despite the fact that these were also contributing to the pollution.
- 2.22.8 An effective offset programme could reduce air pollution as the use of domestic fuel would decrease.

### **Fifth Concern: Just Energy Transition (JET) Strategy**

- 2.23 There were concerns raised about the impact of the JET Strategy and whether it was feasible to implement the strategy. Some of the issues raised by the community are referred to below.
  - 2.23.1 Eskom should establish information centres to disseminate information regarding the JET Strategy. People wanted details about the JET Strategy, as well as its impact on communities and small businesses.
  - 2.23.2 Community members were not supportive of the JET. One community member stated that he supported the use of mixed energy in dealing with South Africa's energy crisis but did not support the JET Strategy because he felt that its implementation was unrealistic.
  - 2.23.3 The presentation from Eskom did not detail how the JET Strategy would impact their employment prospects, as well as how it would affect their land and livelihoods.
  - 2.23.4 It was not clear why there was a difference between the current abatement system projected to cost R300 billion as opposed to the JET Strategy that would cost R60 billion to implement.

### **The DFFE's response to fifth concern**

- 2.24 In response to the concerns of the communities regarding the JET strategy, the DFFE indicated that:
  - 2.24.1 JET was the responsibility of the Presidential Climate Commission and not the NECA Forum. However, it stated that the community would be consulted on JET.



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- 2.24.2 JET was not strictly related to reducing air pollution.
- 2.24.3 The Integrated Resource Plan (IRP) that addresses the mixed energy use approach was developed by the DMRE.
- 2.24.4 The purpose of public meetings was to discuss the postponement applications and not JET.

### **Eskom's response to fifth concern**

- 2.25 In response to the concerns about the JET Strategy, Eskom stated that:
  - 2.25.1 The JET plan is a government policy, and Eskom is not the only player in the strategy. The independent power producers would also be involved in the generation of energy.
  - 2.25.2 Eskom is trying to find opportunities for small businesses within the community with the long-term view of partnering with them in the implementation of its JET Strategy.
  - 2.25.3 Eskom is working hand-in-hand with the government to implement the JET Strategy. The purpose of JET is to reduce CO2 emissions; and it required external funding to fund its JET Strategy.

### **Sixth Concern: Renewables**

- 2.26 There were various concerns raised regarding the implementation of renewables as recorded below.
  - 2.26.1 Some community members did not want the existing power plants to be destroyed and instead wanted them to be used in addition to solar power plants and other forms of renewable energy to generate electricity.
  - 2.26.2 Some community members supported the use of mixed energy, referring to the use of both renewables and non-renewables to generate more electricity.
  - 2.26.3 Concerns were raised regarding whether the roll out of renewable energy was realistic. Specifically, whether it was possible to replace coal-fired power stations with renewable energy such as solar panels or wind farms.
  - 2.26.4 Concerns were raised regarding the provision of solar panels. Specifically, there was a concern regarding the identity of the service providers used by Eskom to provide the solar panels.

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### **Eskom's response to sixth concern**

2.27 Eskom responded to these concerns as follows:

- 2.27.1 Eskom indicated that government was still considering the Integrated Resource Plan which would guide Eskom on the matter.
- 2.27.2 Some people that worked at Komati would be transferred to other stations, whilst others would be trained in renewable energy generation.
- 2.27.3 It could not respond to the question regarding the service providers that it (Eskom) was using to provide solar power.

### **Seventh Concern: Community engagements**

- 2.28 There were concerns regarding the lack of community engagement by both Eskom and the DFFE. The following concerns were raised by community members:
- 2.28.1 They were not aware of many of the issues raised by Eskom such as the MES, the closure of power stations and the JET. In addition, they wanted better communication and notification from Eskom and the DFFE.
  - 2.28.2 The DFFE never consults the community. In this regard, they wanted better access to DFFE offices so that they could engage with officials regarding issues such as pollution and employment.
  - 2.28.3 The DFFE was not playing an active role in notifying and educating the community on the issues presented by Eskom. They wanted the DFFE to educate them on issues arising from the applications and appeals that were the subject of the public hearings.

### **The DFFE Response to seventh concern**

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- 2.29 The DFFE responded that the DFFE has a unit called Environmental Education that focuses on empowering communities by hosting information workshops.

### **Eskom's Response to seventh concerns**

- 2.30 In response to the issued raised above, Eskom stated that it found that empowering communities allowed people to engage effectively with the issues affecting them. Eskom added that it will endeavour to properly consult community members in future, especially regarding the JET.

### **Other concerns raised at specific public meetings in relation to Eskom**

#### **Witbank: Duvha and Kendal**

- 2.31 In relation to the community meeting held in Witbank regarding the Duvha and Kendal power stations, the community raised the following:
- 2.31.1 Regarding Eskom's ash dumps, what does Eskom plan to do with the excess ash located at the ash dumps emanating from its power stations. The community indicated that Eskom should give small businesses access to the dumps as they could use the ash to make bricks which could be sold for profit.
  - 2.31.2 They enquired about the status of the criminal case against Eskom in relation to exceeding plant standard limits at the Kendal power station.
  - 2.31.3 They enquired about Eskom's transmission lines; and whether Eskom would deviate from complying with its Broad Based Black Economic Empowerment (B-BBEE) requirements to comply with the MES and proceed with its JET Strategy, and how that would affect unemployment.

### **Eskom's response**

- 2.32 In response to these concerns, Eskom stated that:

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- 2.32.1 It was working on installing high transformers to deal with ash at Duvha and Kendal. It further indicated that between 2 and 3 units have been finalised and the work was on-going with regards to the transformers.
- 2.32.2 The issue regarding giving access to ash dumps to communities had not been resolved.
- 2.32.3 The case involving Kendal power station was still ongoing.
- 2.32.4 The question regarding B-BBEE could not be answered by Eskom's representatives present at the public meeting as they were from the environmental department.

### **Amersfoort: Majuba**

- 2.33 In relation to the community meeting held in Amersfoort regarding the Majuba power station, community members raised the below concerns.
- 2.33.1 There were clinic facilities in the area, however these were not sufficient as they only operate during the week. They stated that community members must go to the clinic in town if they sustained injuries or fell ill over the weekend or at night.

### **Eskom's Response**

- 2.33.2 In response, Eskom stated that it was not in a position to address the issue related to the functionality of the health facilities as these belonged to the government. However, the general manager of Majuba stated that Eskom funded the building of schools, clinics, old age homes and police stations in the area. He further added that Eskom established initiatives like taking care of school-going girls to ensure that their academic careers are not disturbed by distributing personal care packages.

### **Standerton: Tutuka and Grootvlei**

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- 2.34 At the meeting held in Standerton regarding the Tutuka and Grootvlei power stations, a community member emphasised the need to upgrade the community hall and requested Eskom to adopt the hall. She concluded by asking for training through the community works programmes.

### **DFFE's Response**

- 2.35 In response, the DFFE stated that there were units within the local and provincial government responsible for awareness activities and that some work had been done within the community. The DFFE, however, acknowledged that there was room for improvement.

## **STAKEHOLDER ENGAGEMENTS**

- 2.36 As part of its TOR, the NECA Forum was required to conduct engagements with other stakeholders. The NECA Forum thus engaged various stakeholders through one-on-one or sector specific meetings. These meetings commenced in September 2022 and ended in February 2024. The nature of these meetings varied from introductory meetings to discussions related to technical aspects of the NECA Forum's TOR, including gathering information to assist the NECA Forum to execute its mandate.

### **Engagements with Eskom and the CER**

- 2.36.1 The Forum met with Eskom, in relation to its postponement and suspension applications that were unsuccessful and the CER, in respect of the NAQO's decisions to postpone or suspend compliance timeframes for some of Eskom's power stations.
- 2.36.2 I note that the NECA Forum's report records that the HNM Team prepared minutes for the majority of these meetings, but that some meetings were not documented because they were technical in nature or confidential information was disclosed/ discussed. In this regard, the NECA Forum was required to strike a balance between guaranteeing the confidentiality of the information supplied by stakeholders to enable them to express their views freely and openly. Furthermore, and based

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on factors such as the complexity of the information shared and stakeholders' requests for further consultations, the Forum convened multiple meetings with some stakeholders.

- 2.36.3 Importantly, I note that notwithstanding the above, the Forum was committed to be as transparent as possible about the details of all discussions it held with stakeholders. Moreover, the NECA Forum confirms that its members acted in good faith and with impartiality in all its engagements with stakeholders.

### **Engagements with the DFFE and the NAQO**

- 2.36.4 It was agreed that the NECA Forum would meet regularly with officials of the DFFE to discuss progress on the work of the Forum and address other administrative issues. The Forum also convened meetings of a technical nature with the DFFE and the NAQO, including provincial air quality officers.

- 2.36.5 The nature of the meetings with the DFFE ranged from progress updates to meetings of an administrative nature. Some of the topics discussed during these meetings include:

- The workplan of the Forum, the Forum's deliverables and the timeframes for the completion of certain tasks.
- The logistics for the public hearings. In this regard, the DFFE agreed that, as the secretariat, they would be responsible for organising the public meetings and would assist the Forum with their travel and hospitality arrangements. With respect to the organisation of the hearings, the DFFE indicated that they would publish notices in national newspapers and provide translators.
- The status of appeals in terms of the NEMAQA. The DFFE clarified that an appeal in terms of section 43 is a wide appeal which enables the Minister to consider new information to the extent that the new information is relevant and had been made available to all I&APs.

### **Engagements with Eskom**

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2.36.6 The NECA Forum convened several meeting with Eskom to gain a solid understanding of its reasons for applying for the suspension and/or postponement of compliance timeframes of the MES. In addition, other meetings with Eskom were convened to gather information on the technical aspects related to their power plants. The NECA Forum also conducted a site visit at Kusile. Eskom explained the FGD technology and demonstrated how it works. The NECA Forum also met with the former Chief Executive Officer (CEO) of Eskom, Mr Andre De Ruyter, and members of his executive team, to discuss Eskom's plans to comply with the MES. Furthermore, Eskom attended all the public consultation meetings held between 11 and 24 November 2022 and presented its reasons for applying for the postponement and/or suspension of the compliance timeframes of the MES, including its view on why its applications should be granted. Eskom also submitted a number of documents to support its applications and appeals and to assist the Forum to better understand matters related to its operations. Save for those that were confidential, the documents provided by Eskom were uploaded on the SAAQIS website. A list of the meetings convened with Eskom are set out in the NECA Forum and for the sake of brevity I have not repeated the list herein. Some of the meetings were technical in nature and, as such, no agendas or minutes were prepared.

### **Engagements with the CER**

- 2.36.7 The NECA Forum held several meetings with the CER. At the first engagement held on 9 September 2022, the Forum presented its TOR. The Chairperson highlighted the fact that the TOR required the Forum to engage various stakeholders and include the information gathered from the engagements in its report to the Minister.
- 2.36.8 The CER explained that it was a group of activist lawyers that defended the rights of communities and civil society organisations in relation to an environment that is not harmful to the health or well-being of present and future generations. Through litigation, advocacy as well as supporting and training activities, its objective is to advance its vision of a more equal society, free of fossil fuels, in which environmental and climate justice is realised and where all people and the planet can flourish.
- 2.36.9 The Forum undertook to be as transparent as possible, subject to the condition that certain information may be confidential. In addition, the Forum stated that the research and analytical



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work might not be accessible, but the members of the Forum will make the information available, if possible.

2.36.10 An official from groundWork, one of the CER's clients in this matter, stated that it was important for community members to be informed about the purpose of the public consultations. Furthermore, he indicated that clear plans ought to be developed to address air pollution. At the second engagement held on 9 November 2022, the CER explained its mandate and its clients' position in respect of the NAQO's decision to postpone or suspend the compliance timeframes regarding Eskom.

2.36.11 The CER reiterated its position that the NECA Forum must be transparent, in that the work of the Forum must be done openly and publicly to build trust in its processes and outcome. To achieve this, the CER specified some measures it believed the Forum should adopt, which included:

- Publishing all documents which the Forum relied on and considered (including all reports and draft documents);
- Publishing all public hearings; and
- concluding as many consultations as possible within the public domain.

2.36.12 The CER made the following statement:

*"First, we would like to make the following crucial contextual points:*

- 1. This is an issue about public health and human lives.*
- 2. Secondly, this is a human rights issue (rights which are entrenched in SA's Constitution). Earlier this year, the Pretoria High Court confirmed – in a case about the Highveld Priority Area – the same area where the majority of facilities in question today are located – that the rights of people living in this area are being breached on a daily basis due to the unacceptable levels of air pollution. The case is referred to as the Deadly Air case. One of our clients in this appeal (groundWork) is an applicant in that court case. The court held that the section 24 rights to an environment that is not harmful to the health and wellbeing is immediately realisable. Constitutional rights are being breached in circumstances where the companies in question are contributing to a public health crisis, causing billions in health costs, and contributing to death and illness. Importantly, there is an option of transitioning to cleaner alternatives to avoid these harms and rights infringements. We understand all too well the complexity of the situation. But when it comes to human rights and human lives – the deaths of vulnerable*

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*people including children and the elderly is simply too high a price to pay for electricity – particularly when feasible, affordable alternatives are available.*

- 3. Eskom and AMSA have a long history of non-compliance with emission limits. Based on monitoring data, Eskom continues to exceed limits in its atmospheric emission licences, largely with impunity. AMSA has, for decades, not complied with various environmental laws, including Hydrogen Sulphide (H<sub>2</sub>S) emission standards. It faced criminal prosecution for these H<sub>2</sub>S exceedances and was issued with a fine as penalty in 2020. Eskom has allowed its emissions performance to deteriorate over the past few years (since 2016), to the extent that there are numerous exceedances of its current Atmospheric Emission Licence (AEL) limits, which in several cases are more lenient than the 2015 Minimum Emission Standards (MES) limits. A 2018 health assessment of Eskom's monthly emission reports for the period April 2016 – December 2017 was completed by energy and air quality specialist Dr. Ranajit Sahu. This study reviewed data from 14 of Eskom's coal-fired power stations, excluding Kusile which is still under construction. Dr Sahu's assessment found that 13 of Eskom's coal-fired power stations reported nearly 3,200 exceedances of applicable daily Atmospheric Emission Licences (AEL) limits for particulate matter (PM), sulphur dioxide (SO<sub>2</sub>), and oxides of nitrogen (NO<sub>x</sub>), during a 21-month period. An aggravating finding from the assessment is that many of these reported exceedances were significantly greater than the applicable AEL emission standards. Eskom has conceded that "it is common cause that the Minimum Emission Standards (MES) serve to ensure that there is compliance with the National Ambient Air Quality Standards (NAAQS)."*
- 4. Importantly, this is also about compliance with the law – laws adopted by Parliament and regulations promulgated by the Minister. Compliance with the law is not negotiable. Prior to promulgation, these laws and minimum emission standards were negotiated over many years with polluting industry. Since then, not only has industry been granted enormous leniency in relation to these laws, but it has succeeded in significantly weakening some of them. In our letter to this Forum of 8 September 2022, we set out our clients' demand for clear and strict timeframes for this process. Given the urgency of the need to address the ongoing rights infringements, resulting ill-health and deaths, which are caused by the unacceptable levels of air pollution from persistent non-compliance with MES at a number of the facilities to be considered in this process, we asked that the work of this Forum be undertaken as*

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*expeditiously as possible. This, in circumstances where compliance with MES would play a major role in reducing high levels of air pollution and make a significant contribution to remedying the breach of Constitutional rights, and in circumstances – such as the AMSA case – where an appeal decision is already woefully overdue (by more than a year) in terms of the legislated time periods.”*

2.36.13 The CER summarised its grounds of appeal in relation to the decisions granted in favour of Eskom. It also explained that it would not give further information in respect of the grounds related to AMSA’s application, because of the review proceedings launched by AMSA due to my decision to suspend the appeal process pending the outcome of the Forum’s processes.

2.36.14 The third engagement was held on 6 April 2023. At this meeting, the Forum presented the matrix of criteria the members developed to assess each appeal. At this meeting, the CER:

- Stated that the Forum ought to consider a cost benefit analysis because it did not trust the modelling undertaken by government. Furthermore, the modelling must take into account the ‘*deadly air case*’ judgment.
- Enquired whether the Forum would consider pollution at a plant level and mitigation measures. The Forum’s response to this enquiry was in the affirmative and it further indicated that it was looking at abatement technologies and would interrogate Eskom’s offset project.
- Indicated that the consultations should have included discussions regarding the health implications of air pollution. Further, that Eskom must consider renewable energy as opposed to relying on coal and gas. In addition, it highlighted that communities did not understand some of the issues discussed during the public consultation process.

2.36.15 The fourth engagement was held on the 27 June 2023, regarding the CER’s proposal on mitigation measures to reduce emissions. The CER presented on the following:

- Firstly, he contextualised the issues around mitigation. He stated that the findings and ideas related to potential mitigation strategies that could be prescribed to reduce the impact of non-compliance with the MES. He added that these measures are formulated in the context of the

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Kusile power station and were not intended to provide an “out” for Eskom to comply with the law.

- He discussed the notion of a *“meaningful and effective health impact mitigation programme.”* He indicated that this would, for example, include mobile clinics for diagnoses; outreach programmes in the form of education and orientation sessions; securing formal collaboration with the public health sector and other necessary decision-makers to support the genesis and operation of the mobile clinics; and ensuring targeted critical respiratory-related care and services to affected individuals that do not have access to adequate healthcare.
- He outlined a couple of concerns emanating from communities. These were that *“individuals in the area derive very little adequate healthcare from the public health system, local clinics are ill equipped to diagnose and treat sufferers of respiratory ailments, community members most often feel left to fend for themselves against harms that they have no control over”*.
- He provided a number of additional solutions which included the establishment of a register of health cases caused by air pollution and the appointment of dedicated liaison personnel within the public health sector. Furthermore, he was of the view that the National Department of Health must be involved in research projects that seek to determine the health impacts caused by non-compliance with the law.
- In addition to the meetings, the NECA Forum addressed questions to and requested clarity on certain aspects of its submissions from the CER. Below, we summarise the Forum's questions to the CER.

2.36.16 In response to whether the CER considered the socio-economic impact on communities should power stations shut down and how any adverse impact could be mitigated, the CER stated:

- *Continued running of polluting coal plants in non-compliance with the law and to the detriment to surrounding communities is arguably not the most sensible route to creating employment. Communities should not have to choose between their health and employment.*
- *Although we recognise that there are socio-economic implications related to the closure of the coal plants, it is also imperative that Eskom and industry comply with health standards that protect communities and are essential for guaranteeing the constitutional right to a safe and healthy environment. Eskom and the government have had 15 years to comply. Their*

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*negligence and inaction should not be rewarded by allowing them to further harm communities.*

- *It is worth also pointing out the adverse socio-economic impacts of coal plants that continue to operate in non-compliance with emission standards. In this respect, we are referring to the external costs associated with Eskom's air pollution, which are borne by people living in the vicinity of the power stations, and by the government."*

2.33.17. In response to how to address and mitigate the reduction of electricity generated due to the shutting down of power stations and the installation of abatement equipment to reduce emissions, the CER stated that it was not an expert in the technologies used to remove emissions nor waste disposal. In this regard, the CER referred to the recommendations made by the panel appointed by government to look into SO<sub>2</sub>, *"which lists one of the disadvantages of Wet FGD as a parasitic power use of 1-2% of the rated output of the boiler"*. In addition, it stated that, *"it is inappropriate for us or our clients to propose solutions to a problem Eskom has created and perpetuated for itself - a problem it has known about (with our clients' warning) since 2010. Eskom should utilise the opportunity to bring clean renewable energy alternatives online urgently."*

2.33.18. The Forum enquired into whether the CER considered the impact of (a) increased water consumption and supply; (b) the sourcing and tracking of lime feed and gypsum; and the environmental impact of (a) and (b) in the removal of SOX. The CER reiterated that it was not an expert in the technologies used to remove emissions nor waste disposal. It further stated that, *"it is important to point out that there are technologies to abate SO<sub>2</sub> that use fundamentally less water. It is well established that the reduction of air pollution at coal plants through pollution control technologies comes with other environmental risks to water, soil and climate, but that does not negate the legal and moral obligation to reduce air pollution."*

2.33.19. In relation to its view on job losses as a result of implementing the JET Strategy, the CER stated that it was not an expert in this area however that *"it is inevitable that coal is on its way out. It is too costly and too harmful to health and climate change. It is our responsibility, both as environmental justice organisations and as attorneys on behalf of our community clients, to defend their rights, their health and their wellbeing from coal pollution."*

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2.33.20. In relation to a question about re-skilling people that worked in the coal sector, the CER indicated that, "The Just Transition Implementation Plan should outline detailed plans for a diversified economy and identify sectors requiring skilled workers. Reskilling should start long before coal-powered PS are retired as is similarly required by Social and Labour Plans in the coal mining sector. To determine reskilling requirements, existing skills need to be defined and career and employment paths need to be identified... Partnerships need to be established with the Sector Education and Training Authorities (SETA's) and institutions of learning to assist with reskilling costs as well as with potential employers to assist with the transition".

2.33.21. The CER strongly disagreed that offsets could improve the overall AAQ. It stated that it had no objection *"to measures being taken to supply households with cleaner energy sources, but this can in no way replace current regulatory and legal requirements. Reducing indoor pollution from cooking and heating should be done in addition to, not instead of, reducing outdoor air pollution"*. In addition, it stated that there was no legislative framework for offsets and that, *"there are a number of potentially significant risks associated with the use of air quality offsets that could, amongst others, result in ongoing non-compliance and exceedances of air quality standards to the detriment of the public as a whole."*

### **Engagements with other Civil Society Organisations**

2.33.22. The first meeting between the Forum and these organisations was scheduled for 10 November 2022, but had to be postponed due to a low turn-out. Following this, the Forum was advised that certain persons, to whom email invitations were sent, had left the organisations. Due to the low turn-out at the first meeting, the HNM Team requested the CER and civil society organisations to extend the invitation to other organisations that would be interested in the subject matter. Having sent additional invitations and reminders for the meetings, the NECA Forum managed to convene two meetings with civil society organisations.

### **Summary of the discussions with other Civil Society Organisations:**

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2.33.23. At the engagement held on 24 January 2023, the Forum presented its TOR and informed attendees that the public consultation process was undertaken between 11 and 24 November 2022. In addition, the organisations were informed that the public hearing that was scheduled to take place in Kriel on 16 November 2022, did not proceed and that one would be arranged at a later date.

2.33.24. The civil society organisations enquired, amongst other things, whether:

- the DMRE could attend future meetings because some of the emissions emanated from mining activities;
- the air quality regulations had been revised to include penalties for failures, by emitters, to prepare, submit and implement air quality management plans; and
- the health impact analysis would look into communities that suffer from chronic illnesses.
- One of the attendees was concerned about the lack of attendance by community-based organisations and stated that these organisations encounter various challenges regarding access to information.

2.33.25. In response to the issues raised at the meeting held on 24 January 2023, members of the Forum stated that they would look into a variety of factors linked to health and planned to meet with other departments and stakeholders. They stated that the DFFE had not finalised the air quality regulations.

2.33.26. At the engagement held on 14 February 2023, the organisations raised the following:

- Issues of transparency and the disclosure of documents by the Forum;
- The lack of awareness about the consultation process;
- Concerns that many of the Forum members did not attend the meeting;
- That the Minister's hands were tied because she has no option but to comply with the law;
- Confirmation of their support for the submissions made by the CER to the Forum; and
- A request that the Forum consider implementing additional monitoring stations in Saldanha Bay.

### **Engagements with the National Departments**



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2.33.27. The first meeting with the national departments was convened on 30 November 2022. However, due to a low turn-out, it was agreed that the NECA Forum would convene another meeting. The meeting was attended by officials from the Department of Trade Industry and Competition (DTIC); the Department of Health (DOH) and the Department of Human Settlements (DOGS). In view of the above, several emails were addressed to the DFFE requesting that it provide updated contact details for the National Departments.

2.33.28. The NECA Forum managed to convene another meeting on 30 March 2023, with some of the National Departments such as the Department of Human Settlements and the Department of Agriculture, Land Reform and Rural Settlements. However, the turn-out was still low. No substantive discussions took place in this regard and further, the national departments requested more time to review the TORs and potentially revert to the Forum with their submissions.

2.33.29. I note that the Chairperson of the Forum engaged with the Director-General of DFFE to request the assistance of her office in arranging meetings with certain departments as the responsibility for arranging meetings lay with the DFFE. Notwithstanding clear interventions, the attendance of meetings by certain departments was low.

### **Engagements with Municipalities**

2.33.30. The Forum convened a meeting with municipalities on 10 November 2022. Concerns raised by the municipalities included their lack of awareness regarding their role, in particular, whether they were expected to enforce the regulations or hold back to allow the NECA Forum to fulfil its mandate. In addition, other concerns raised included clarification regarding the Forum's mandate and whether the municipalities could assist the Forum in providing databases containing information of I&APs.

### **Engagements with the Presidential Climate Commission**

2.33.31. The Forum met the executive director (ED) of the Presidential Climate Commission (PCC) on 13 October 2022. The purpose of the meeting was to discuss the method used by the PCC to

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conduct its public consultation process to enable the NECA Forum to gain a better understanding of the process, as it was required to undertake a similar process. He indicated that the PCC procured the services of an entity, One World, to manage all the logistics related to the process. He further stated that the PCC consulted various stakeholders and the engagements were streamed live on various media platforms. He explained that the role of the PCC was to try to forge a consensus regarding the JET. It was agreed that the Forum's role was different because its consultation process was limited to the appeals and applications submitted by emitters, civil society and other organisations in respect of specific power stations and facilities.

2.33.32. The second engagement, held on 5 December 2022, was with the Head of Mitigation (HoM) at the PCC, regarding power sector modelling. A third engagement was held on 09 November 2023, with the HoM regarding loadshedding. In addition, the PCC responded to various points of clarity raised by the Forum. In a letter to the PCC, dated 15 December 2022, the Forum stated that it was reported that about 3000 jobs would be created for every job lost in the coal sector due to the implementation of the JET.

2.33.33. In addition, the Forum requested the PCC to:

- Quantify what the change in unemployment will be in the HPA and WBPA, if the MES regulations were applied.
- Indicate whether there will be any lag between when jobs are lost and when they are created, and how many months/years the lag would be.
- Provide an estimate of direct, indirect and induced job losses in the coal sector when power stations shut down.
- Indicate what type of re-skilling would be required for employees in the coal sector to get new jobs.

2.33.34. The PCC stated that their employment strategy that was still being developed, *"seeks to mitigate job losses and positively impact communities by identifying all sustainable livelihood activities within communities that are directly impacted by the JET."*

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2.33.35. The PCC indicated that whether new jobs will be created will depend on the scope of the JET.

Citing the study from the World Bank CCDR titled “*South Africa Country Climate and Development Report*”, the PCC stated that jobs could be lost in the chemicals, other petroleum, coal, and electrolysis sectors. It added that this will likely impact Mpumalanga and Lephalale. However, jobs will be created in the fuel cells, hydrogen, electric machinery, other metal ores and platinum group metals sectors. The PCC stated that it was difficult to predict how many jobs would be created as this would also depend on a range of policies and the implementation of such policies.

2.33.36. The PCC stated that Eskom indicated that *“the impact studies are in progress with only Komati Power Station having been completed. Based on options for repowering and repurposing of the Komati Power Station sites with solar PV wind energy, battery storage synchronous condenser and containerised microgrids, about 8 700 temporary jobs supported by construction, including 2,200 created on site over 5 years (53% of losses mitigated) and a further 2 150 sustainable jobs could be created once all projects are operational (incl. 660 direct jobs) (52% of losses mitigated).”*

2.33.37. The PCC also stated that despite having started working on possible re-skilling of people, it did not have any explicit data. However, the PCC stated that the SANEA Energy Skills Roadmap provides information on new skills and competencies that could be required in the energy sector. The PCC added that the CSIR Research on Skills for JET speaks to the skills requirement (upskilling and reskilling) for the Renewable Energy sector.

2.33.38. The PCC stated that 46% of South African exports are at risk if South Africa does not decarbonize. Therefore, it emphasised the importance for the country to achieve a net zero economy.

### Engagement with Port Rex Appellant

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2.33.39. The NECA Forum engaged the third Appellant on 11 November 2022 regarding his appeal against the NAQO's decision to grant Eskom a postponement in relation to complying with the MES at Port Rex. Mr Rivalora informed the Forum that, due to prior commitments, he was unable to attend the public meeting scheduled for 16 November 2022 and undertook to send his input by email. Mr Rivalora submitted written representations via email on 11 November 2022. His email stated the following:

### "Airshed Report"

- *The Airshed report is dated August 2020 and should perhaps be updated to reflect additional and more recent historical and not only data that is older than 3 years*
- *The Airshed report fails to identify surrounding industrial activities where air quality is important in terms of particulate emissions and potential for acid rain*

### Emissions

- *Whilst the power station is small and quantitatively speaking emissions are not in the bigger scheme of things as severe as in larger generating units the following are not being considered:*
- *Nox's have both ozone depleting and global warming potentials (GWP of app300) in the atmosphere with an estimated half-life of between 100 and 150 years. Certain Nox's can combine with water and produce acid rain*
- *SO<sub>2</sub> contributes to global warming and combines with water vapour produces acid rain*
- *The precipitation of excess particulate matter has a negative effect not only on human spaces but also on the surrounding industries and industrial processes.*

### Mitigation and Amelioration Measures

- *There is little or no mention of available or optional mitigation and/or amelioration measures which entail:*
- *Additional flue gas scrubbing systems*

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- *Additional flue gas filtration systems*
- *Changing fuels or blending fuels with low or zero sulphur content*
- *Burning fuels with low or zero sulphur content*
- *Modifying the fuel combustion process and the controls of the fuel combustion process to reduce the emission of Noxs*
- *Reducing the horizon of the application to a maximum of 5 years”.*

### **Engagements with Trade Unions**

2.33.40. The NECA Forum convened three meetings with trade unions. Invitations were sent to members of the varying trade unions. The first meeting, held on 21 February 2023, was attended by representatives from United Association of South Africa (UASA) and the National Union of Metalworkers of South Africa (NUMSA).

2.33.41. The meeting scheduled for 4 April 2023 was cancelled due to the unions having another engagement at the National Economic Development and Labour Council (NEDLAC). The next meeting, held on 16 March 2023, was attended by the Congress of South African Trade Unions (COSATU); the National Union of Mineworkers (NUM); Solidarity and the South African Equity Workers Union (SAEWU). For the benefit of the unions that were unable to attend the first meeting, the Forum again presented its TOR.

2.33.42. The unions enquired into whether appeals had already been submitted by emitters. The Forum confirmed that this was done. In addition, the unions asked the Forum's view on socio-economic issues as well as whether there are socio-economic studies that the Forum considered. In response, the Forum indicated that it was developing a matrix which would consider a range of issues, including socio-economic matters.

2.33.43. In response to a question regarding power sector modelling, the Forum informed the unions that the CSIR was the appropriate public sector organisation with the capability and capacity to undertake the process. The Forum added that the modelling only focused on matters that could occur in the future.

2.33.44. The trade unions requested the Forum to convene more engagements. They were concerned that representatives from organised labour were not at the meeting. The unions indicated that it was

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important for labour to attend the meetings because they needed to understand what was happening at plant level.

2.33.45. Other concerns noted with respect to pollution included additional mitigation and prevention measures that could be implemented to alleviate pollution and address the effects thereof.

2.33.46. In response to a question from the Forum, the unions indicated that some work was done regarding remedial measures and programmes or opportunities to address workers' needs in relation to air quality in specific areas. However, they stated that the work done was not adequate and more was required.

2.33.47. A further meeting was held on 18 April 2023, that was attended by representatives of NUMSA, Solidarity and the UASA. Concerns were raised about the type of documentation, information and studies the Forum was relying on as some resources could be biased and not peer reviewed. Most of the meeting focused on the NECA forum's presentation of the matrix as well as a submission from NUMSA regarding its position on compliance with the MES.

2.33.48. NUMSA stated, amongst other things, the following:

- It fully supports that emitters must comply with the MES as this will result in an environment that is not harmful to the health and well-being of people.
- Compliance must be enforced in the light of the cost implications and at a reasonable pace considering South Africa's unique circumstances, such as load shedding.
- Compliance with the MES will result in stage 8 load shedding for every hour the units are down and stage 15 in 2025. This would adversely affect South Africa's GDP and will have a severe impact on Eskom's assets and revenue, which will result in widespread job losses due to retrenchments.
- Given the MES compliance timelines, the cost of retrofitting most plants will constitute fruitless and wasteful expenditure.
- Furthermore, load shedding will negatively impact access to healthcare and children's rights to education.
- In view of the above, compliance with MES must be balanced against the unintended consequences of shutting down coal-fired plants and the infringement of certain constitutional rights.
- In addition, the UASA undertook to share information with the Forum. In this regard, the

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UASA addressed an email to the Forum on 31 March 2023 and attached to the email was a document, titled *“SEIFSA Load Shedding Impact Assessment on the Metals and Engineering Sector”* (**“assessment report”**), prepared by the Steel and Engineering Industries Federation of Southern Africa (**“SEIFSA”**). The assessment report states that *“The energy crisis that is gripping South Africa presents the most significant risk and binding constraint to the economic prospects of the country. The crisis not only has implications regarding the investment prospects of the country. The crisis has been particularly damaging on the metals and engineering sector, a sector which is the backbone of industrialisation and to which electricity, particularly baseload electricity, is fundamental to its survival.*

### **Employment:**

- *The employment losses, mostly attributable to companies responding to the energy crisis over the reference period, indicate some very concerning trends.*
- *A quarter of companies indicated that they have had to reduce head count in response to the electricity crisis, by as much as a quarter of their employment, equating to 9 432 people.*
- *A third of the sample indicated that they are working short-time due to the electricity crisis.*

### **Production:**

- *The respondents to the survey indicated production declines as much as 34.2% (weighted) as a result of the electricity crisis.*
- *Based on the model in the table below, SEIFSA has calculated that production 1: in the sector is estimated to contract by 2.2% in 2023.*
- *However, factoring in the results from this survey, the forecast for the 2023 year deteriorates to - 5.3% for the 2023 year.*
- *Over the last 15 years, net-investment into the sector has been on the decline, which has led to the value of fixed capital stock deteriorating at -0.3% (CAGR), threatening the competitiveness of the sector.*
- *It is therefore concerning that 42.6% of companies have indicated that they have cancelled investment and/or expansion plans owing to the uncertainty presented by the electricity crisis.*



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- *The value of these investments amounts to R2.64 billion with the potential of creating 1620 new jobs. The split of the nature of investment is included below.”. (sic)*
- *In addition, Solidarity submitted its written representations dated 23 May 2023. Solidarity stated the following: “Solidarity is of the view that consideration relating to these exemptions need to strike a balance between what is best for workers, communities and the environment. The principle of zero harm should serve as a guideline in this instance. Short-, medium- and long-term focus on zero harm require a step approach which means that some objectives will be prioritized in the interim with a clear road map to achieving the end goals later on.*
- *The challenge in this situation is to manage the current crises, stabilize companies and the economy, manage current environmental hazards to which communities are exposed to and to build a path for a cleaner future. This requires sober engagements and a fair balance between saving lives, livelihoods and ensure the sustainability of the environment and a company. All are equally important.*
- *Solidarity is a registered trade union organizing in the energy, coal and mining sectors. Solidarity supports the call to move away from carbon intensive and pollutant heavy forms of energy generation and economic productivity to cleanenergy.*
- *Workers in the energy, mining and coal industries have long felt the cost of pollution to their physical well-being. They also live in communities that are heavily impacted by the high emission levels residents are exposed to.*
- *Many South Africans die prematurely or attract lung illnesses consequently. Clean energy offers a solution to move away from such pollution heavy ways of energy generation and economic productivity.*

*South Africa’s JET however combines not only the need to tackle the climate change crisis, but also an energy generation deficit and a high unemployment rate. All three are existential crises for workers, the economy, and the state. Allthree must be tackled simultaneously.*
- *The economy is still battling to recover and emerge from Covid-19, the lockdown and a recession, a high unemployment rate, a decade of state capture and corruption that has crippled Eskom and many other state institutions.*
- *Solidarity reluctantly agrees with the motivations provided by the various companies for exemption and propose that planning and steps to address the outstanding environmental*

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*requirements be incorporated as part of the exemption in the form of reciprocal commitments. This is not a decision we take lightly. But one we feel is necessary to save livelihoods and lives. Whilst there are serious job security risks if the exemptions are not approved, the economy will continue to bleed from rampant and growing levels of loadshedding, thousands of companies will close and many more thousands of jobs will be lost, and tax revenues to fund public services will be lost. Solidarity supports the granting of the exemptions for the requested timeframes. Whilst supporting the temporary exemptions, urgent steps are required to minimise the negative impact the emissions have on workers and communities.” (sic)*

### **Engagements with Business Organisations**

- 2.33.49. The Forum engaged business organisations namely, Business Unity South Africa, Business Leadership South Africa and the Minerals Council of South Africa on 16 February 2023. Invitations were sent to all major business associations however a number of business organisations did not respond to the invitation.
- 2.33.50. Business enquired into whether the Forum would hold themselves accountable to South Africa’s international commitments and asked who was representing affected communities. In response, the Forum indicated that accountability to international commitments rests with the DFFE and the Department of International Relations and Cooperation (DIRCO). In addition, the Forum explained that communities were represented by community organisations and political parties in the public consultation meetings. Business Unity South Africa confirmed that they would make a submission to the Forum. The submission from Business Unity South Africa was never received by the Forum.
- 2.33.51. Engagements with the South African Local Government Association (SALGA) and Members of the Executive Council responsible for the environment in the provinces (MECs). The NECA Forum attempted to convene meetings with the MECs to be held on 20 May 2023 and SALGA, to be held on 25 May 2023. Both meetings were cancelled due to a lack of availability on part of the MECs and SALGA.
- 2.33.52. In view of the above, the Forum requested the DFFE to arrange other meetings. The Forum planned to meet the MECs and SALGA separately. However, SALGA was unable to attend the

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meeting scheduled for 13 July 2023 and, instead, attended the meeting held on 6 July 2023. The MECs were unable to attend the meeting. However, they were represented by officials from their respective provincial departments. The meeting was attended by SALGA, the Gauteng Department of Agriculture and Rural Development (GDARD) and the Limpopo Department of Agriculture and Rural Development (LDARD). A further meeting was unable to be arranged with the remaining MECs.

2.33.53. The meeting was introductory in nature and during the meeting, the Forum presented its TOR.

2.33.54. The GDARD official asked whether the Forum's work would include proposing solutions to Eskom and what the extension of the running of the power stations would mean for the country's future CO<sub>2</sub> emissions. He added that although there were no power stations in Gauteng, people in the province are affected by emissions coming from the Vaal and Mpumalanga. The Forum's Chairperson confirmed that the Forum would propose solutions for Eskom to consider.

2.33.55. The official from the LDARD stated that she supported the process. She also acknowledged that the Forum had a tough task because they must formulate solutions that balance peoples' health and the economy. Due to the fact that the other MECs, as well as their representatives, were not present at the meeting, the DFFE undertook to arrange a second meeting.

2.33.56. In addition to the above, NECA Forum members also met with various stakeholders to gain a better understanding of analytical and technical aspects relevant to their work. Details of these meetings are set out below.

Date	Organisation	Description
31 October 2022	Meridian Economics	Meeting with Dr Peter Klein from Meridian Economics regarding the feasibility of rolling out of renewable energy.

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30 January 2023	The South African Photovoltaic Association( <b>SAPVIA</b> )	Meeting to discuss the speed at which new Photovoltaic (PV) plants could be installed in South Africa Part 1.
1 February 2023	SAPVIA	Meeting to discuss the speed at which new PV plants could be installed in South Africa Part 2.
16 February 2023	SAPVIA	Continuation of the discussion with SAPVIA.
24 April 2023	The Carbon Trust	Meeting to discuss the Coal Asset Transition Accelerator Presentation on the preliminary modelling and framework results in relation to the early phase out of coal-fired power plants in South Africa.

**Meeting with National Treasury**

2.33.58. In terms of its TOR, the NECA Forum was required to consult with National Treasury. Having been unsuccessful in previous attempts to arrange a meeting with Treasury, the NECA Forum requested that the DFFE arrange a meeting with Treasury on its behalf. The DFFE, successfully scheduled the meeting for 14 November 2023.

2.33.59. The Forum presented its TOR to National Treasury. The discussion largely revolved around the accessibility of the VGBE report, the feasibility of imposing a carbon tax on particular emitters, the imposition of levies/ trading schemes on emitters, conditionalities on capital spend and, lastly, issues relating to the Public Finance Management Act, 1999 (Act 1 of 1999) (PFMA) and imposing potential conditions on emitters. The Forum requested a further engagement with National Treasury around the feasibility of imposing air emission taxes and levies, without response.

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2.33.60. The Forum received a number of written submissions from stakeholders as part of the public participation process. What follows, is a summary in no particular order.

### **Additional Submissions by the CER to the Forum and DFFE**

#### The section 3A consultative process

2.33.61. The CER submits that the section 3A consultative process must be conducted with the following minimum requirements:

- Transparency – stakeholders must have access to all relevant records, documentation and minutes of the Forum’s consultative meetings;
- Clear and strict timeframes in respect of the Forum’s work;
- The applicable legal requirements and appeal processes cannot be forfeited or prejudiced – the CER has a right to be notified of Eskom’s appeal, provided with the appeal and be given an opportunity to respond to it. In addition, the status, process and timeframes going forward for Eskom’s current and latest updated MES application are ambiguous. The CER has written to the Department regarding these issues but has yet to receive a response.
- The CER maintained the stance that the NAQO’s decisions to grant postponement of compliance to the Majuba, Kendal, and Tutuka “midlife” power stations, and suspensions of compliance to the six “old” stations in the absence of detailed and clear decommissioning schedules, are contrary to, inter alia, the amended List of Activities, the 2017 Framework, NEMA, and the Constitution.

2.33.62. The CER made additional comments to the Forum and DFFE on the new reports and information supplied during the consultative process.

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### Eskom's Emission Standard Exceedances and Compliance Track Record

- 2.33.63. Eskom's pollutant emissions from 2021-22 demonstrates the extent of Eskom's high emissions and its inability to comply with even its postponed weak Atmospheric Emission License (AEL) standards.
- 2.33.64. The National Environmental Compliance and Enforcement Report (NECER) 2021/22 demonstrates that Eskom has a track record of AEL non-compliance, the details of which are set out in the report. Eskom's under estimated and under reported its emission exceedances. *"In addition to the non-compliances, Eskom has a staggering track record of exceedances of limits in its AELs – a number of which go unreported and underestimated."*
- 2.33.65. In this regard, a 2019 report by an air pollution expert demonstrated that between April 2016 and December 2017, 14 coal fired power stations reported 3217 exceedances of applicable daily AEL limits. The two most frequent exceedances occurred at Lethabo (PM and NO<sub>x</sub>), Matla (NO<sub>x</sub>), Matimba (SO<sub>2</sub>), Kriel (PM), Duvha (PM) and Kendal (PM).
- 2.33.66. In a report titled *"Eskom Power Station Exceedances of Air Emission License Limits and Emission Intensity from April 2021 to March 2022"*, the following findings were made:
- *"Eskom's 15 power stations reported 2309 exceedances of AEL limits between April 2021 and March 2022. Most of these exceedances were for PM (2003 exceedances by 13 stations) followed by NO<sub>x</sub> (194 exceedances by 6 stations) and Sox (112 exceedances by 3 stations)."*
  - *"Regarding PM exceedances, the worst offenders, with over 100 exceedances per year, were Lethabo, Kendal, Matla, Kriel, Tutuka and Matimba."*
  - *"When it comes to Sox exceedances, most power stations did not exceed their AEL limits for Sox in 2021-2022. In 2021-2022, three Eskom power stations exceeded their AEL limits for Sox a combined total of 112 times. The worst offender was Kusile, with 103 exceedances (Kusile was not operating in 2016-17)."*
  - *"With respect to NO<sub>x</sub>, in 2021-2022, 6 Eskom power stations exceeded NO<sub>x</sub> limits a combined total of 194 times. The worst offender by far was Camden, with 117 exceedances. However, this is an overall improvement from 2016-2017, when 7 out of 14 stations exceeded AEL limits for NO<sub>x</sub>."*

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### 2.33.67. The Extent and Impact of Eskom's Air Emissions

*"There is an undeniable link between exposure to the harmful pollutants emitted by Eskom and the development of respiratory and other illnesses amongst residents of Priority Areas. Further, the effects of the air pollution also have economic implications due to the public health costs."*

2.33.68. In a study conducted by Dr. Mike Holland, assessing the impacts and associated economic costs of Eskom's emissions in 2017, with a specific focus on the role of PM<sub>2.5</sub>, it was found that the following impacts are attributable to Eskom's emissions: *"2239 deaths per year: 157 from lung cancer; 1110 from ischaemic heart disease; 73 from chronic obstructive pulmonary disease; 719 from strokes; and 180 from lower respiratory infection; 2781 cases of chronic bronchitis per year in children aged 6 to 12; 2379 hospital admissions per year; 3 972 902 days of restricted activity per year; 94 680 days of asthma symptoms per year in children aged 5 to 19; and 996 628 lost working days per year."*

2.33.69. The concern here is Eskom's contribution to secondary PM<sub>2.5</sub> as a result of the cumulative SO<sub>2</sub> and NO<sub>x</sub> emissions from its coal-fired power stations.

#### Eskom's Emission Intensity

2.33.70. The above report also makes, inter alia, the following findings in respect of emission intensity between April 2021 and March 2022:

- *Eskom's coal-fired power stations had an average PM emission intensity of 0.33g/kWh..."*
- *"Regarding Sox, Eskom's coal-fired power stations emitted an average of 9.50 grams of Sox per kilowatt hour..."*
- *"When it comes to NO<sub>x</sub>, Eskom's coal-fired power stations emitted an average of 4.29g NO<sub>x</sub>/kWh..."*

2.33.71. The report compares the emission intensity of Eskom's coal-fired power stations with those of China and the US. In this regard, the CER states that the report's findings reveal *"the unacceptable levels of air pollution due to Eskom's coal-fired power stations, especially in*



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*comparison to other countries – including countries notorious for highly polluting industries, like China.”*

### The Health Impacts of Eskom’s Non-Compliance with MES

2.33.72. In a report compiled by the CER and Clean Air (CREA), the emissions, air quality impacts and the resulting health and economic impacts of air pollution from Eskom’s coal power plant fleet are projected under different scenarios of compliance with the MES. The report makes the following key findings, as referenced by CER:

- *“Full compliance with the MES would reduce emissions of SO<sub>2</sub> by 60%, PM by 50%, NO<sub>x</sub> by 20% and mercury by 40%, compared with a scenario of no improvements in emission control technology.”*
- *“Eskom’s proposed retrofit plan...would only reduce SO<sub>2</sub> by 13%, NO<sub>x</sub> by 11% and Hg by 3% compared with a scenario of no improvements in emission control technology” – CER’s main concern is around the small reduction in SO<sub>2</sub> emissions as SO<sub>2</sub> has “by far the largest health impacts..., due to the formation of secondary PM 2.5”*
- *“Eskom’s retrofit plan only realizes one quarter of the health benefits associated with compliance with the MES, due to the dismal failure to address SO<sub>2</sub> emissions.”*
- *“Under Eskom’s planned retirement schedule and emission control retrofits, emissions from the company’s power plants would be responsible for a projected 79 500 air pollution-related deaths from 2025 until end-of-life. On a cumulative basis until the end-of-life of the power plants, compliance would avoid a projected 34 400 deaths from airpollution and economic costs of R620 billion...”*
- *“full compliance with the MES at all plants that are scheduled to operate beyond 2030 would avoid a projected 2300 deaths per year from air pollution and economic costs of R42 billion per year”*
- *“Other avoided health impacts would include 140 000 asthma emergency room visits, 5900 new cases of asthma in children, 57000 preterm births, 35 million days of work absence and 50 000 years lived without disability”*
- *“Requiring the application of best available control technology at all plants, instead of the*

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*current MES, by 2030, would avoid 57000 deaths from air pollution and economic costs of R1000 billion compared to the Eskom [retrofit] plan."*

2.33.73. In the Highveld Health Study: Final Integrated Report: (medical and household survey and HHRA and Human Health Impacts), commissioned by the DFFE, it was estimated that there would be *"a 5 125 decrease in PM10 attributable mortality if annual PM10 NAAQS were met. In the PM2.5 analysis, it was estimated that if PM2.5 annual NAAQS were met, there would be a 4 881 decrease in PM2.5 attributable mortality. The report notes 'It is essential to improve air quality to meet NAAQS and to save lives'."* Households that used coal and gas, especially, as their main source of energy for cooking or heating had a higher percentage of upper respiratory tract illness (URTI). There was almost double the risk of lower respiratory tract illness (LRTI) in houses that used dirty fuels (identified as coal, wood, paraffin and gas in this study (although gas is relatively cleaner than the three former fuels) compared to electricity. It is noted that the report also confirmed that *"lung function showed a decrease after exposure to PM10, PM2.5, SO2, CO and NOx."*

2.33.74. In the Report titled: "Feasibility for Eskom to Abate SO2 Emissions: SO2 Panel Report Findings and Recommendations, it states *"This report looks at the health impacts of SO2 emissions and acknowledges the adverse effects of SO2. It states: 'around the world, SO2 is known to have major impacts on human health that cannot be ignored. South Africa's dire inequality and inequity means that the vulnerable and indigent communities are most affected by SO2.' It recognizes that even in instances when SO2 levels meet the NAAQS, adverse respiratory health impacts related to SO2 exposure occur..."*

*[One of] the recommendations derived from the analysis uses the cost of available and proven technologies to assess the economics of applying the MES values of 250, 500 and 1000 mg/Nm3. The panel undertook a health impact-based Cost-Benefit Analysis, which accounts for the benefits associated with mitigating the health impacts of emissions as well as the costs involved in the mitigation. It found that in both of the scenarios it considered, it is economically beneficial from the national point of view and technically feasible for Eskom plants with less than 5 years of remaining life time...to meet the 1000 mg/Nm3 limit."*

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*"The Report concludes that 'it is technologically feasible and economically beneficial' for all plants that will be operational after-2030 to meet an MES of 1000mg/Nm<sup>3</sup> or lower. It is technologically and economically justifiable for most plants to meet either 250mg/Nm<sup>3</sup> or 500mg/Nm<sup>3</sup>. The results of the CBA show that the highest economic benefits are achieved when plants included in this study meet MES limits of 1000mg/Nm<sup>3</sup> and lower. For most plants, limits of 500mg/Nm<sup>3</sup> and 250mg/Nm<sup>3</sup> provide the highest benefits. Notably, the recommendations of the panel in this Report are not prescriptive." Delaying compliance increases the economic costs incurred due to SO<sub>2</sub> emissions with little effect on the cost of compliance, as most of the cost is a once-off investment cost."*

*"...this panel finds that there are multiple options for the Department to implement MES that will lead to positive societal benefits, including improved public health and positive net impact on GDP and employment."*

*"According to the Panel, the scenario which sets emission limits consistent with the application of best available technology (BAT scenario), taken as 250mg/Nm<sup>3</sup>, on all sources by 2030 on all plants, delivers a 92% reduction in SO<sub>2</sub> emissions. This would require a 14.6% increase in the electricity tariff. The maximum social benefit option, which sets emission limits consistent with the application of BAT, delivers 85% reduction in public health costs and requires a 13% increase in the electricity tariff."*

*"Ultimately, there are positive net benefits to the introduction of the FGD technology".*

- 2.33.75. The CER makes extensive submissions regarding "An alternative solution to the Debt Crisis" and "Tackling the Governance Crisis". In its conclusion, the CER provides an overall view of its proposal. To avoid a prolix document, I have not repeated CER's detailed submissions. For the purpose of this decision, I deem it sufficient to record CER's concluding remarks on its proposals. CER states that in its research, a transition to renewable energy that is driven through the market at Independent Power Producer Supply will not only fail to deliver sufficient electricity to those most in need (the poor and working class) but it will also hold back the transition to renewables happening at the speed and scale that is needed to meet sufficiently ambitious greenhouse gas emission reduction targets. CER therefore proposes that focus be on the following three elements: Build a 'New Eskom', fully public and serving the people; Secure a

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democratic and just energy transition; and Work towards socially owned renewable energy. CER proposes the following:

- *Conduct a forensic audit of Eskom's debt. Some of that debt is odious and must be declared so and repudiated. For the remainder, the Eskom debt must be restructured in such a way that billions of rands are not used from the fiscus to bail out Eskom, but surpluses in government institutions like the UIF and GEPF are invested in Eskom, subject to the utility's fundamental transformation along the lines of democratic accountability and the transition to renewable energy.*
- *Halt any plans to unbundle Eskom. Government has chosen to adopt a process of unbundling and deepening corporatization, rather than explore viable options. Unbundling will cause job losses and drive electricity as a profit-making enterprise rather than a fundamental public service.*
- *Build global cooperation (rather than competition) around the use of renewable energy technologies in the interests of stopping runaway climate change and the health of our people. This will mean loosening the stranglehold of international trade law with its intellectual property restrictions, and allowing for greater deployment of the technology, facilitated, in many cases, by Public-Public partnerships*
- *End the REI4P programme and focus instead on building/rebuilding skills, competencies and technologies internally to take on the rollout of renewable energy.*
- *Develop a planned approach to the shift to a low-carbon economy. The planning process must also take into account an honest appraisal of the technical challenges, such as storage, that will be faced in the shift to renewables, and develop strategies to deal with these.*
- *Use public financing to build a public system, not subsidise a for-profit one.*
- *Build a future Eskom according to key public ethos principles. These include ensuring affordable access for all; providing quality and efficiency, as well as environmental sustainability; subjecting all decision-making and operational running decisions to public ethos criteria; expanding public participation in Eskom decision-making processes; and ensuring transparency and accountability in the running of Eskom.*
- *Rather than breaking down and dividing up, we are calling for a thorough restructuring and reorganization, along different principles: (i) Cooperation rather than competition; (ii)*

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*Meeting public need rather than financial profit lines; (iii) Accountability and transparency rather than opaqueness and obfuscation; and (iv) Open public funding rather than private sector subsidization."*

### The Alternative Information and Development Centre's (AIDC's) Submission

2.33.76. The Alternative Information and Development Centre's (AIDC) provided its submission on the Applications for Postponement/ Suspension of MES Compliance Timeframes including the Related Appeals and the NECA Forum Process. It endorsed the submission of the CER dated 31 January 2023 and, in addition, seeks to submit that *"Debt is central to why Eskom cannot meet its MES. AIDC had long been urging the government to adopt a number of financial measures which would free Eskom from its mountainous debts."* In this respect, the AIDC referenced three reports / articles, which it summarised be NECA Forum report sets out the proposals that the CER has made to address "Eskom's debt crisis"; and to tackle the "Governance crisis". I have read and considered the proposals made by the CER on these issues. In summary, the CER proposes that an alternative solution to the debt crisis is to use the Government Employee Pension Fund (GEPF) to fund Eskom; and that state-owned enterprises such as Eskom can be democratized and become more efficient and effective in the delivery of electricity other essential public services by following the principles of *Access, affordability and equity; Quality and efficiency; Environmental sustainability; Public ethos; Participation and Transparency and accountability.*

### Presidential Climate Commission's ("PCC") Response to NECA Forum Queries

2.33.77. The PCC referred the NECA Forum to several reports, which it deemed relevant to the issues raised by the NECA Forum. The NECA Forum considered these reports when reaching its findings and recommendations. These are referred to below.

### PCC Response Summary

2.33.78. The PCC agrees with the assessment that more jobs will be created in new energy industries than will be lost in coal. This is true when considering the jobs in the construction and

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maintenance of renewable energy infrastructure and bearing in mind that the infrastructure will need to be reconstructed approximately every 20 years. Job creation is expected in the non-coal mining sectors and in renewables. When considering Mpumalanga, the CSIR has concluded that unless there is a very high penetration of renewables in Mpumalanga, there are still likely to be net-job losses.

2.33.79. There is a mis-timing between the loss of coal jobs and the creation of new jobs, especially if the renewable energy rollout is delayed. Coal losses will be fairly predictable as they are driven by prescribed closure schedules. This mis-timing would potentially be exacerbated should plants need to shut down to comply with the air quality minimum emissions standards. The new energy job gains may not be in the same geographic location as the jobs loss. As a result, job creation efforts need to extend to the localization of new energy component manufacture, renewable energy component recycling and more general regional economic diversification.

2.33.80. The jobs may not be comparable in terms of skills, permanence, collective bargaining protection and wages. The jobs created may therefore not support as many people per household as existing jobs, which is of course offset by there being many more jobs in new energy. It is uncertain what the impact of coal closure and opportunity creation will have on migrant labour.

2.33.81. According to the Country Climate and Development Report (CCDR), jobs are expected to be lost in the chemicals, other petroleum, coal and electrolyzers sectors while jobs will be created in the fuel cells, hydrogen, electric machinery, other metal ores, platinum group metals and electricity (RE). Jobs will be created in the Highveld Priority Area, Waterberg Priority Area and elsewhere in South Africa. There will almost certainly be a lag between jobs lost and gained. The lag can be reduced by effective forward planning that engages with communities and workers, a strong investment programme backed by clear industrial policy and a long-term skills development programme. Strong stakeholder coordination and alignment will be required.

2.33.82. In relation to Komati Power Station, the PCC notes the following:

- *“Of the 810 jobs that were supported in 2020...an estimated 19 jobs would be retained to maintain infrastructure with 791 jobs being at risk.*

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- *The Komati Power Station supported 4270 direct and indirect jobs"*

2.33.83. Eskom has commissioned studies to understand the impact of power station shutdowns on the society and economy in respect of the following additional power stations, the outcomes of which are not yet available:

- Grootvlei;
- Hendrina;
- Camden;
- Arnot;
- Matla;
- Kriel;
- Duvha
- Tutuka; and
- Kendal.

2.33.84. In relation to Komati, and based on options for repowering and repurposing the sites with solar PV wind energy, battery storage synchronous condenser and containerized microgrids about 8700 temporary jobs supported by construction, including 2200 created on site over 5 years (53% of losses mitigated) and a further 2150 sustainable jobs could be created once all projects are operational (incl. 660 direct jobs) (52% of losses mitigated). Further 46% of South African exports are at risk if South Africa does not de-carbonise.

### Sasol – Response to Queries from the National Environmental Consultative and Advisory Forum

2.33.85. The set of Minimum Emissions Standards (MES), in their view, is rigid in that it does not allow for specific/unique conditions of a plant/facility to be taken into consideration in the regulation thereof. These considerations have a significant impact on the dispersion of the plume and ultimately the ambient air quality.

2.33.86. Moreover, the MES does not provide for the consideration of conclusions from relevant atmospheric impact studies (that could provide insight into how these unique conditions within operations impact ambient air quality) to inform how that facility is sustainably regulated



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2.33.87. There is some precedent for taking stack height and associated dispersion benefit into consideration when setting emission limits.

2.33.88. The Good Engineering Practice (GEP) stack height requirement is designed and imposed to ensure that emissions from a stack do not result in excessive ambient concentrations of a pollutant.

2.33.89. It is recognised that taller stacks may have a transregional impact but that it can be managed by assigning emission budgets to the facilities in question.

2.33.90. In relation to its assertion that there may be mechanisms outside of the current MES legal framework that allow for the principle of "flexibility with accountability" that enables sustainable air quality improvement aligned to NEMA, Sasol states "Air quality improvement [should be] regulated and managed in a manner that enables the plant/facility to have flexibility on the 'how', but with accountability" – "this will shift the aim of improved air quality away from requiring plants/facilities to comply with the provisions of various regulatory requirements in a fragmented and rigid way... This will also potentially allow for optimization of efforts and integration of air quality improvement and other regulatory imperatives such as GHG reduction and waste minimization."

### The measurement of compliance

2.33.91. Compliance with the MES can be governed and measured in two ways – by pollutant concentration or pollutant load. Assessing pollutant load would be a more accurate approach to evaluating the contribution of individual facilities' impact on the receiving environment. However, they support that this is on the proviso that the emission mass of a given pollutant of a facility is also demonstrated, through appropriate monitoring or modelling, not to have significant ambient impact.

2.33.92. Under the use of a bubble approach, emissions from different point sources within a facility are all regarded as if it originated under a single enclosed 'done' or 'bubble'. This is an effective way to provide flexibility with accountability.

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### Pollution Prevention Plans

2.33.93. The benefits of enabling facilities to achieve air quality improvement via flexible Pollution Prevention Plan include:

- Facilities can develop a fit for purpose approach to achieve desired outcomes;
- Enabling the alignment of various, fragmented air quality requirements to be achieved via a single mechanism to achieve a common goal;
- It enables air quality improvements through a holistic, onsite emission footprint reduction;
- It enables interrelated pollutants to be managed in an optimized way to manage primary and secondary impacts;
- It enables integrated environmental management where interrelated environmental impacts can be optimally managed; and
- It enables simultaneous mitigation through on and offsite measures.

### Exemption

2.33.94. Sasol remains of the view that the other mechanisms are more fit for purpose and therefore, consideration should be given to the application of these to avoid a reliance on exemptions which may be a less appropriate vehicle for enabling flexible and sustainable air quality improvement.

2.34. I now turn to deal with the Forum's Report.

## **3. THE FORUM'S REPORT**

3.1. The Forum undertook an immense amount of work over 18 months including the consideration of voluminous submissions made by a number of parties; conducting a community and stakeholder engagement process across the country; overseeing power system modelling; and detailed technical analysis using other analytical tools. To avoid a prolix document, I do not intend to repeat the contents of the Forum's report herein. The Forum's report, which is over 500 pages is

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available for download on the Department website under the folder: NECA Forum Report.

- 3.2. I note that the NECA Forum report states *"In the event that the Report is made publicly available, confidential information will be redacted"*. The NECA Forum has therefore provided me with a redacted Report which has now been made available for download on the Department's website, under the above stated heading. I understand the redacted portions of the report relates to commercial third party information and information that was provided to the NECA Forum in confidence.

### 4. Evaluation

- 4.1. I will first deal with the points in limine raised by Eskom. At the core of both points in limine is Eskom's desire to have the disputes arising from this appeal referred to a facilitator or to an arbitrator for resolution.
- 4.2. I must at the outset state that I am aware that section 17 of the NEMA confers on me the power to refer a matter to conciliation as follows:

*"(1) Any Minister, MEC or Municipal Council—*

*(a) where a difference or disagreement arises concerning the exercise of any of its functions which may significantly affect the environment, or*

*(b) before whom an appeal arising from a difference or disagreement regarding the protection of the environment is brought under any law,*

*may, before reaching a decision, consider the desirability of first referring the matter to conciliation and— (i) must if he, she or it considers conciliation appropriate either—*

*(aa) refer the matter to the Director-General for conciliation under this Act; or*

*(bb) appoint a conciliator on the conditions, including time limits, that he, she or it may determine; or*

*(cc) where a conciliation or mediation process is provided for under any other relevant law administered by such Minister, MEC or Municipal Council, refer the matter for mediation or conciliation under such other law; or*

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*(ii) if he, she or it considers conciliation inappropriate or if conciliation has failed, make a decision: Provided that the provisions of section 4 of the Development Facilitation Act, 1995 (Act No. 67 of 1995), shall prevail in respect of decisions in terms of that Act and laws contemplated in subsection 1 (c) thereof.*

*(2) Anyone may request the Minister, a MEC or Municipal Council to appoint a facilitator to call and conduct meetings of interested and affected parties with the purpose of reaching agreement to refer a difference or disagreement to conciliation in terms of this Act, and the Minister, MEC or Municipal Council may, subject to section 22, appoint a facilitator and determine the manner in which the facilitator must carry out his or her tasks, including time limits.*

*(3) A court or tribunal hearing a dispute regarding the protection of the environment may order the parties to submit the dispute to a conciliator appointed by the Director-General in terms of this Act and suspend the proceedings pending the outcome of the conciliation."*

### 4.3. Section 3A of NEMA empowers me as follows:

*"3A. Establishment of fora or advisory committees.—The Minister may by notice in the Gazette—*

- (a) establish any forum or advisory committee;*
- (b) determine its composition and functions; and*
- (c) determine, in consultation with the Minister of Finance, the basis and extent of the remuneration and payment of expenses of any member of such forum or committee."*

4.3.1. Eskom contends that the NAQO misconstrued the DFFE's mandate by adopting a strict interpretation of the MES such that she considered only the protection of the environment, and that she failed to consider other balancing factors relevant to the matter as provided for in section 2 of NEMA. Moreover, her assertion that *"Eskom has made minimal effort to fully comply with the standards,"* is factually incorrect. Eskom contends that the NAQO's decisions *"do not result in the coordination and harmonisation of policies, legislation and actions relating to the environment"*. Moreover, the meanings of *"sustainable development"* and *"just energy transition"* are in dispute. At the core of the first point in limine is Eskom's contention that these issues are worthy of the Minister appointing a facilitator to call and conduct meetings of interested and affected parties

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and the Minister should therefore do so in accordance with section 17(2) of NEMA, should the Minister find section 17(1) of NEMA to be inapplicable.

- 4.3.2. Eskom contends that Section 17(1), alternatively section 17(2), of NEMA is applicable in the circumstances of this matter; and as its primary relief, Eskom seeks to have the disagreement about the functions of the DFFE, the NAQO and the Minister referred to conciliation.
- 4.3.3. In my consideration of this appeal, I had regard to the empowering provisions under section 17 of NEMA and section 3A of NEMA. Having considered the complexity and volume of the issues arising in this matter, and the central role that Eskom plays as the energy provider to the country, I deemed it appropriate to establish a forum under section 3A of NEMA, rather than to refer the matter to conciliation. The Forum is capacitated with a wide mandate and with the necessary technical and legal skill to advise me on the range of issues arising in the appeals pending before me in relation to the decisions that were taken by the NAQO on the MES and the applications for postponement of compliance timeframes with the MES. It is noteworthy that the NECA Forum records that although it is not mandated to consider a referral to conciliation, it is apparent that the outcome of its work, including its recommendations in its report are substantially similar to that which would have resulted from conciliation. In fact, in my view, the Forum has achieved more than conciliation would. On this aspect, I refer to the Forum's statement that it is mandated to consider a wider range of information from a number of parties, and is constituted by a multi-disciplinary team that is equipped to traverse the issues raised by Eskom in more detail and with more accuracy than a single conciliator would be. Moreover, it held numerous meetings with Eskom, to ascertain from Eskom what steps have been taken to ensure compliance with its environmental obligations and the details pertaining to the installation of abatement equipment to assist compliance. These meetings were exploratory in nature and were held with the objective of ascertaining options for agreement and compliance. Regarding the alleged differing views between Eskom and the DFFE on the interpretation of certain legislative provisions, the Forum engaged with the parties in an attempt to find a common understanding with a view to ensuring compliance with the regulatory framework.

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4.3.4. I must also point out that consultations extended beyond that of the parties to the appeals. The Forum consulted with a wide range of stakeholders, such as affected communities, local authorities, business organisations, trade unions, and organs of state.

4.3.5. I am therefore satisfied that Eskom's point in limine has been rendered moot by the work undertaken by the Forum.

4.4. I now turn to deal with the grounds of appeal.

### The grounds of appeal

4.5. I am aware of the right to just administrative action as provided for in section 33 of the Constitution and entrenched in the Promotion of Administrative Justice Act, Act 3 of 2000 (PAJA), which requires that administrative action must be lawful, reasonable and procedurally fair. I am also aware that a decision is unlawful if the decision maker lacks the authority to take the decision in terms of an empowering provision. If an administrator makes a decision that is not allowed by law, the decision is unlawful. Moreover, an administrative decision must be rational and reasonable. I understand this to mean that the decision taken by an administrator must make sense based on the information that was considered during the decision-making process.

4.6. I am also aware that the internal appeal process is a critical means to ensuring just administrative action and it provides aggrieved parties and the administrative decision makers a remedy for correcting, reviewing or appealing administrative decisions using the administration itself.

4.7. Importantly, section 43 of NEMA confers on me wide powers of appeal, which means that I may consider any new information provided to me on appeal, such as the information gathered and the recommendations contained in the NECA Forum report.

4.8. I am mindful that Eskom is South Africa's primary supplier of electricity, which is central to people's economic activities and their social and psychological well-being. It is evident that there are a number of competing factors that are at the heart of this appeal, that must be considered and balanced to arrive at a reasonable and justifiable decision. These factors are copiously set out in Forum's Report. I also note the various additional consultations held in an attempt to

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provide me with an informed report supported by additional studies as well as setting out various reports relating to the 16 Eskom facilities under appeal,

### **ESKOM'S GROUNDS OF APPEAL**

- 4.9. The grounds of appeal raised by Eskom can be dealt with under three themes as follows:
- 4.9.1. The NAQO's decisions are unlawful, irrational and unreasonable because relevant considerations were not considered;
- 4.9.2. The NAQO's decisions are unlawful, irrational and unreasonable because the NAQO failed to give adequate consideration to the AIR and the fact that ambient air quality generally complies with the applicable NAAQS and acceptable margin of safety;
- 4.9.3. The NAQO's decisions are unlawful, irrational and unreasonable because the conditions imposed are irrational.

#### **First ground of appeal**

- 4.10. I note that Eskom contends that the NAQO's decisions are unlawful, irrational and unreasonable because relevant considerations were not considered. In this regard, I am in agreement that the NAQO must make a decision, based on a number of competing factors. I further agree that the subordinate legislation must be interpreted with consideration for the principles contained in Chapter 2 of NEMA and to give effect to the Constitution. This however cannot result in the NAQO having carte blanche to overlook the MES and the provisions contained in the List of Activities. Eskom's challenge ought to be directed to the List of Activities itself. I am further in agreement with the NECA Forum that the NAQO is not afforded the power that Eskom purports.

#### **Second ground of appeal**

- 4.11. In terms of regulation (12A)(a), an existing plant "*may submit an application regarding a new plant standard to the National Air Quality Officer for consideration if the plant is in compliance with other emission standards but cannot comply with a particular pollutant or pollutants.*"



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- 4.12. In terms of regulation (12A)(b), *“An application must demonstrate a previous reduction in emissions of the said pollutant or pollutants, measures and direct investments implemented towards compliance with the relevant new plant standards.”*
- 4.13. In terms of regulation (12A)(c), the NAQO, in consultation with the licensing authority may grant an alternative emission limit or emission load if – *“there is material compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for;”* or *“the Atmospheric Impact Report does not show a material increased health risk where there is no ambient air quality.”*
- 4.14. The first two requirements must be complied with in addition to at least one of the two requirements set out in regulation (12A)(c). Compliance with the NAAQS and a positive AIR are not factors which, on their own, must result in granting the indulgence contemplated in regulation 12A of the List of Activities. I am in agreement with the NECA Forum’s interpretation that compliance with the provisions of regulation (12A)(a) of the List of Activities is peremptory and therefore, if an applicant does not comply with that provision, it is not eligible for an indulgence in terms of regulation 12A. In relation to a number of these plants, Eskom is applying for an alternative limit in terms of all three pollutants regulated by the MES and it is on that basis disqualified from applying in terms of regulation 12A. Material compliance with the NAAQS and consideration of an AIR would only become relevant where an applicant meets the pre-requisite criteria set out in regulations (12A)(a) and (12A)(b).
- 4.15. In relation to Lethabo, Matimba and Medupi, the alternative limits applied for in respect of certain pollutants exceed existing plant standards which is not permissible.

### Third ground of appeal

- 4.16. In relation to Eskom’s third ground of appeal, I agree with the Forum that the NAQO is not empowered to impose new conditions where an adverse decision has been made. To the extent that conditions were imposed on Eskom based on a previous decision which predated Eskom’s applications in or about 2019, those conditions would continue to apply.

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## CER'S GROUNDS OF APPEAL

### Majuba, Tutuka, Kendal and Kriel

- 4.17. I note that Eskom's application in respect of these plants was partially granted by the NAQO and they are thus classified by Eskom as "*partial refusals*". As set out above, the second appellant (CER) appealed those portions of the NAQO's decision which grant Eskom what it applied for.
- 4.18. In relation to Majuba, the second appellant's appeal seeks to challenge a very narrow portion of what Eskom applied for and what it was granted.
- 4.19. In terms of regulation 11A of the List of Activities, "*An existing plant may apply to the National Air Quality Officer for a once-off postponement with the compliance timeframes for minimum emission standards for new plant as contemplated in paragraph (10). A once-off postponement with the compliance timeframes for minimum emission standards for new plant may not exceed a period of five years from the date issue. No once-off postponement with the compliance timeframes with minimum emission standards for new plant will be valid beyond 31 March 2025.*"
- 4.20. Although Eskom requested a NO<sub>x</sub> limit of 1400 mg/Nm<sup>3</sup> until 31 March 2026, the NAQO only granted Eskom a postponement until 31 March 2025, with an emission limit of 1300 mg/Nm<sup>3</sup>, which is in excess of the existing plant standard. Regulation 11D of the List of Activities clearly states that no postponement of compliance timeframes or a suspension of compliance timeframes shall be granted for compliance with the minimum emission standards for existing plants. In other words, the NAQO is not empowered by these regulations to grant an emission limit that is "weaker" than existing plant standards. In this regard, the submission made in the second appellants appeal is persuasive. This legal argument was also relied on by the second appellant in relation to its appeal of the NAQO's decision in respect of Kendal.
- 4.21. In relation to Tutuka, the second appellant's appeal seeks to challenge the NAQO's decision to the extent that it granted Eskom a postponement for compliance with the MES for NO<sub>x</sub> until

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31 March 2024, with a corresponding limit of 1100mg/Nm<sup>3</sup> which is stricter than what was applied for.

4.22. It would appear that the NAQO's decision to grant Eskom this postponement was consistent with clause 11A of the List of Activities however the second appellant contends that a decision of this nature is in conflict with the 2017 National Framework.

4.23. In this regard, I note that much of the 2017 National Framework mirrors the wording of and the requirements stipulated in the List of Activities. However, on page 61 of the 2017 National Framework, it introduces the following caveat to applications for the postponement and suspension of compliance timeframes, which is not contained in the List of Activities:

*"A proponent of a Listed Activity will be allowed to apply for a postponement or suspension of the compliance date and such an application be considered based on the following conditions being met:*

*...*

*Ambient air quality in the area is in compliance with the applicable National Ambient Air Quality Standards..."*

4.24. The second appellant places reliance on the above provision and contends that because Tutuka is in the HPA, the AAQ in the area is not in compliance with the NAAQS and, therefore, Eskom's postponement application was ineligible for consideration and the NAQO's decision must be set aside. In this regard, it is the Forum's understanding that NO<sub>x</sub> pollution has improved in this priority area and the hourly NO<sub>2</sub> NAAQS of 106ppb was seldom exceeded after 2012.

4.25. I am therefore in agreement with the NECA Forum that the grounds of appeal relied on by Eskom for these power stations are not sufficiently persuasive to warrant a recommendation that the NAQO's decision be set aside, as requested by Eskom.

**Hendrina, Kriel, Grootvlei, Arnot and Camden**

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- 4.26. The second appellant's appeal in respect of these plants is essentially based on the assertion that Eskom failed to submit with its applications to the NAQO, a clear and detailed decommissioning schedule, as required by the law. The second appellant avers that the NAQO had no discretion to accept an application of this sort without a detailed decommissioning schedule and accordingly, the applications should not have been considered in the first instance. The relief sought is that the NAQO's decisions in respect of these applications be declared unlawful and set aside.
- 4.27. While it is appreciated that much of the information that the second appellant expected to be contained in a decommissioning schedule is valuable for many stakeholders, the NECA Forum does not agree that it is a legislative requirement to include such information in a clear and detailed decommissioning schedule. The concept of a "decommissioning schedule" is not defined in either the Listed Activities or the 2017 Framework. No definition for "detailed decommissioning schedule" or "clear decommissioning schedule" exists in the applicable legislative framework either.
- 4.28. In order for me to evaluate the ground of appeal, it is necessary to determine the following:
- Whether the Committed emission abatement retrofits and power station decommissioning dates that illustrate Eskom's overall atmospheric emissions reduction plan and the accompanying explanations submitted by Eskom constitute a decommissioning schedule; and
  - If so, whether it satisfies the legislatively imposed threshold of "clear and detailed".
- 4.29. On the face of it and in the absence of a definition, it appears to be a decommissioning schedule. It details, *inter alia*, the year by which Eskom plans to decommission various stations. The NAQO does not refer to decommissioning schedules or a lack thereof in any of the decisions. The NAQO does, however, impose an additional condition on these power plants, which is that they submit a decommissioning plan in the timeframe stipulated.

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- 4.30. It is implied from the NAQO's decision that Eskom's application satisfied the requirements in terms of the documentation to be submitted. It is inferred that the NAQO imposed the condition of submitting decommissioning plans within the stipulated time-period to solicit further information from Eskom in respect of the decommissioning set forth. The NAQO afforded Eskom one year within which to submit this information, which demonstrates an appreciation for the complexity of producing such a plan and the multi-faceted issues arising from the decommissioning of a power plant.
- 4.31. I am further in agreement with the NECA Forum that one cannot assume that the NAQO conflated a "decommissioning schedule" with a "decommissioning plan", as alleged by the second appellant. In the absence of evidence to the contrary, the two terms must be read to have different meanings. It is however noted that the second appellant has misconstrued the condition imposed by the NAQO in the decisions. The NAQO's decisions required Eskom to submit a decommissioning plan within one year from the decision and not a decommissioning schedule as asserted by the second appellant in paragraph 67.6 of its appeal.
- 4.32. I further note that Eskom categorises Kriel as one of the plants for which it received a partial refusal. The reason for this is that with its application for suspension of compliance timeframes with minimum emission standards for new plant, Eskom requested a limit of 125 mg/Nm<sup>3</sup> for PM for its North Stack until 2025, which is in excess of existing plant standard and for NO<sub>x</sub>, it requested a limit of 1600 mg/Nm<sup>3</sup> which is also in excess of existing plant standard. Eskom thus appealed this partial refusal.
- 4.33. In view of the above, I have noted the NECA Forum's submission that the ground of appeal relied on by the second appellant is not legally sound and ought to be dismissed. I am also not persuaded by Eskom's grounds of appeal insofar as they relate to Kriel. In this regard, it is important to note that Paragraph 11C is very explicit that if an existing plant has been granted once-off suspension of the compliance timeframes in terms of paragraph 11B, it must comply with minimum emission standards for existing plant from the date of granting of the application and during the period of suspension until decommissioning. Thus, to the extent Eskom wants the NAQO's decision to grant it a suspension in terms of 11B to remain in place, it cannot with that

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be granted limits that are weaker than existing plant standard for NO<sub>x</sub> and PM. I am therefore persuaded to uphold the NAQO's decision in respect of Hendrina, Grootvlei, Arnot, Camden and Kriel, including the conditions imposed by the NAQO on Eskom in respect thereof.

4.34. In addition to upholding the NAQO's decision, I am adding to the condition to submit a decommissioning plan, and stipulate the following minimum requirements:

4.34.1. General information about the power plant;

4.34.2. Engineering/activity plan;

4.34.3. Cost of decommissioning and fully funded financing plan;

4.34.4. Rehabilitation and / or repurposing plan;

4.34.5. Public consultation and stakeholder engagement strategy / plan - A part of this needs to be specific to directly affected parties (employees, contractors, suppliers, service providers, etc). Organised labour needs to be engaged noting that Eskom is not alone in ending the life of projects and dealing with the consequences, workforce downscaling, etc. There are lessons to be learned from other sectors and operations, two of which are: (i) how to avoid genuine efforts at finding resolutions being hijacked by special interest groups (ii) how to moderate expectations, especially because Eskom is an SOE, with many citizens viewing SOEs as having an infinite pool of resources (money) to meet every need, demand, etc. The point is that this is not 'ordinary'/'run-of-the-mill' stakeholder engagement (it is tailored, specific, focussed, and extremely complex because there will be many competing needs and desires).

4.34.6. A socio-economic conditions and impact assessment report (Local economic development; employment; health; diversification plan);

4.34.7. Health and safety risk assessment;

4.34.8. Air Quality Impact assessment;

4.34.9. Geotechnical assessment (restoration of the land; water waste);

4.34.10. Local economic development and diversification plan; and

4.34.11. Alternatives to decommissioning.

4.35. I am further empowered to uphold the NAQO's decision and vary the conditions contained therein by the provisions of section 43(6) of the NEMA, which states that, "*The Minister or an*

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*MEC may, after considering such an appeal, confirm, set aside or vary the decision, provision, condition or directive or make any other appropriate decision, including a decision that the prescribed fee, or any part thereof, be refunded...”*

- 4.36. The five power plants which have been dealt with namely, Hendrina, Grootvlei, Arnot, Camden and Kriel are, according to Eskom, due to be decommissioned by 2030. Accordingly, all five power plants applied for once-off suspensions of compliance timeframes with the MES for new plant. It follows that these plants must therefore comply with the limits contained in the NAQO's decision for each plant, until their decommissioning. It follows further that these plants must be decommissioned by 2030 and, under no circumstance, can operate beyond this date, as it would completely undermine the regime in terms of which they have been afforded an indulgence.
- 4.37. The issue in dispute raised by the second appellant relates to the nature of Eskom's application and a technical interpretation of whether it complied with the requirements. The ground of appeal does not *per se* go to the issue of emissions or a dispute in respect of compliance with the MES because it is quite clear that the legislative framework intended to include a mechanism which afforded older plants, and in particular those due to be decommissioned by 2030, an indulgence.
- 4.38. In the circumstances, I have noted the NECA Forum's view, which I accept, that the second appellant's appeal and Eskom's appeal for Kriel should be dismissed and the NAQO's decisions be upheld with the variance of conditions as set out in paragraph 4.34 above.
- 4.39. Eskom is further instructed to submit decommissioning plans within 12 months of the issuance of this decision. The decommissioning plans in respect of each of the above power stations should follow the format set out in paragraph 4.34.
- 4.40. I am therefore persuaded to uphold the NAQO's decision in respect of Hendrina, Grootvlei, Arnot, Camden and Kriel, including the conditions imposed by the NAQO on Eskom in respect thereof.

### MR RIVAROLA'S APPEAL



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- 4.41. In relation to Port Rex, I note that although the station is a gas turbine station rather than a coal-fired power station, it fits within the same category as the Hendrina, Kriel, Grootvlei, Arnot and Camden power stations for the reason that it will be decommissioned by 31 March 2030 and thus made an application to the NAQO under regulation 11B of the List of Activities.
- 4.42. In terms of regulation 11B of the List of Activities, *"An existing plant to be decommissioned by 31 March 2030 may apply to the National Air Quality Officer before 31 March 2019 for a once-off suspension of compliance timeframes with minimum emission standards for new plant. Such an application must be accompanied by a detailed decommissioning schedule. No such application shall be accepted by the National Air Quality Officer after 31 March 2019."*
- 4.43. I further note that Eskom has indicated that Port Rex is scheduled to be decommissioned by 2030 and this was confirmed by Mr Nelson at the public hearing held on 16 November 2022 in East London. Accordingly, Port Rex falls within the category of power plants to which this provision relates. This provision grants the NAQO the power to grant power plants a suspension of compliance with the MES for new plant and that is what Eskom applied for in respect of its Port Rex powerplant.
- 4.44. I further note that regulation 11B of the Listed Activities states that an application in terms of that provision must be accompanied by a decommissioning schedule. I am further under the impression, as per the advice from the NECA Forum, that Eskom did not submit a decommissioning schedule for Port Rex in the way it did for its coal fleet. I therefore direct Eskom to furnish the NAQO with a decommissioning schedule and a decommissioning plan.
- 4.45. Regulation 12 of the Listed Activities provides for additional requirements in respect of what an application in terms of regulation 11B must include:
- An air pollution impact assessment compiled in accordance with the regulations prescribing the format of an AIR (as contemplated in Section 30 of the Act), by a person registered as a professional engineer or as a professional natural scientist in the appropriate category;

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- detailed justification and reasons for the application; and
- a concluded public participation process undertaken as specified in NEMA and the Environmental Impact Assessment Regulations made under section 24(5) of the aforementioned Act.

4.46. I am further advised, which advice I accept, that Eskom's application for Port Rex substantially complies with regulation 12 of the Listed Activities. The third appellant's appeal does not directly challenge the legal basis for the NAQO's decision. The grounds of appeal are broad and appear to take issue with the regulatory framework which the NAQO applied. Each ground will be addressed in turn below.

### **First Ground of Appeal**

4.47. In his first ground of appeal, the third appellant notes South Africa's international undertakings in respect of emission reductions. This general point does not in itself present a persuasive challenge to the NAQO's exercise of power in terms of Eskom's Port Rex application. The third appellant further alleges *"there is no logical reason for not enforcing current air quality standards, costs is not and should not be a determining criterion"*. In the Forum's view, in this particular case, the NAQO is enforcing air quality standards and acting within the confines of the List of Activities, which envisages the type of concession that the NAQO's decision grants. To be specific, the NAQO's decision requires Port Rex to emit at a level that is equal to or lower than existing plant standards and the effect of the decision is to grant Port Rex a suspension of compliance timeframes for new plant standards only.

4.48. In relation to this ground of appeal I am in agreement with the NECA Forum that this ground of appeal is without substance and is therefore accordingly dismissed.

### **Second Ground of Appeal**

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- 4.49. The second ground of appeal is based on the constitutional right enshrined in section 24 of the Constitution. It is alleged that the DFFE's decisions (which the Forum assumes includes the NAQO's decision in respect of Port Rex) "*are dictated by pure and short sighted economics as there is no price that can be put on environmental health and preservation.*"
- 4.50. This ground of appeal is very vague and unsubstantiated, and it is further unclear how the economic impact of compliance on Eskom would inform the DFFE or the NAQO's decisions. While I agree that there are obligations that are imposed on various parties to uphold and ensure that environmental rights enshrined in the Constitution are respected and upheld, I do not accept this as a basis for overturning the decision taken by the NAQO in respect of Eskom's Port Rex application.
- 4.51. In view of the above, this ground of appeal is dismissed.

### Third Ground of Appeal

- 4.52. In this ground of appeal the third appellant notes that no consideration has been given to the effects of the emissions on adjacent populated areas, such as factories or residential areas.
- 4.53. This ground of appeal is based on assumptions that contradict the position advanced by Mr Nelson during the public hearing. Mr Nelson emphasized the infrequent use of Port Rex as a peaking station and indicated that there have been no complaints received from the surrounding community with regard to emissions. It should further be noted that Port Rex is not situated in a priority area nor situated in a location with particularly bad air quality. The threshold with which Port Rex must comply is thus contained in the Listed Activities. I am advised that, in addition, Eskom submitted, with its application for Port Rex, a very lengthy AIR. The Forum notes that this document is dated 2020, however that is because the application was made in 2020 and there is no obligation on Eskom to have updated this report since. From the submissions made by Mr Nelson in 2022 at the public consultation, it seems that the impact of Port Rex's emissions have not deteriorated since. The third appellant does not appear to contesting the findings of this report

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nor specify what particular concerns he believes would be confirmed if an updated study were conducted.

- 4.54. In light of the aforementioned this ground of appeal is dismissed.
- 4.55. In dismissing this appeal in its entirety, I retain the condition imposed by the NAQO that Eskom must submit a decommissioning plan, according to my direction in paragraph 4.34 above.

### Recommended interim solution

- 4.55. I have considered and I accept the Forum's recommendation that based on its analysis of the applicable legislative framework, an interim solution is required to address the challenges that Eskom faces, which is lawful and that seeks to balance the competing interests which include, among others, the impact of non-compliance with the MES on health; ambient air quality standards; the energy crisis facing South Africa; the cost of retrofitting plants, socio-economic considerations and commitments to reducing GHG emissions. In view of the fact that, for a number of its plants, Eskom does not meet the requirements to obtain an indulgence in terms of the provisions of the List of Activities, the Forum's view is that the only way for Eskom to comply is to obtain an exemption from the List of Activities or certain provisions thereof, in terms of section 59 of NEMAQA.

- 4.56. Section 59 of the NEMAQA states as follows:

*(1) (a) Any person or organ of state may, in writing, apply for exemption from the application of a provision of this Act to the Minister.*

*(b) No exemption from a provision of section 9, 22 or 25 may be granted in terms of paragraph (a).*

*(2) An application in terms of subsection (1) must be accompanied by reasons.*

*(3) (a) The Minister may require an applicant applying for exemption to take appropriate steps to bring the application to the attention of relevant organs of state, interested persons and the public.*

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*(b) The steps contemplated in paragraph (a) must include the publication of a notice in at least two newspapers circulating nationally—*

*(i) giving reasons for the application; and*

*(ii) containing such other particulars concerning the application as the Minister may require.*

*(4) The Minister may—*

*(a) from time to time review any exemption granted in terms of this section; and*

*(b) on good grounds withdraw any exemption.*

*(5) The Minister may on such conditions and limitations determined by the Minister delegate any of the powers contained in this section to—*

*(a) the MEC responsible for air quality in a province; or*

*(b) a metropolitan or district municipality.*

4.57. I concur with the Forum's interpretation of section 43(6), in terms whereof it is permissible for me as the appeal authority to make a procedural order, the purpose of which would be to provide Eskom with an opportunity to apply for an exemption in terms of section 59 of the NEMAQA. I have also considered that the granting of such an exemption, in these circumstances, may infringe the constitutional right to a healthy environment, which includes the right to clean air, albeit that such infringement is temporary in nature. In this regard, I accept the Forum's advice that it is necessary to consider whether in granting an exemption in terms of a law which is not a law of general application, can permissibly limit the right. I agree with the Forum that such an exemption in the circumstances of the matters before me, would constitute an authorisation to limit the right to a healthy environment. The Forum therefore advises me that in exercising my discretion in this regard, I am required to fulfil the requirements of section 36 of the Constitution, namely that the power granted under section 59 (the law of general application) must be exercised in accordance with the factors listed in section 36 as follows:-

- The nature of the right: The right is contained in section 24 of the Constitution, which includes taking into account the promotion of economic and social development.
- The purpose of the limitation: In this case, the purpose of the limitation is to avoid a social and economic catastrophe caused by excessive amounts of loadshedding.
- The nature and the extent of the limitation: the exemption should be granted subject to certain

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conditions and for a limited period of time.

- The relationship between the limitation and its purpose: the limitation will prevent the closure of plants which would otherwise have to close to comply with a potential adverse decision of the Minister and thereby avoid additional levels of loadshedding.
- Whether there are less restrictive means: there are no less restrictive means which cannot be accommodated by the setting of conditions and the transitional nature of the exemption.

4.58. I concur with the Forum's recommendation that if any section 59 exemption is granted, which will depend on the merits of each application, it be subject to limitations and conditions. The Forum sets out examples of conditions that could be imposed on Eskom to ensure that it is not granted an unlimited indulgence in perpetuity and which will go some way towards protecting the rights and interests of those persons most impacted by Eskom's continued air emissions. These limitations and conditions are informed by the analytical work done by the Forum.

### Limitations and conditions

4.59. I note that the Forum recommends that whether I uphold certain of the appeals and reject others or if Eskom submits an application in terms of section 59 of NEMA, it is important that I consider whether to impose conditions on Eskom. I do not intend to address these in this appeal decision. This is an issue that I will consider during my consideration of Eskom's section 59 exemption applications.

4.60. In terms of the National Environmental Framework of 2017, there are four main sources of emissions having an adverse impact on AAQ in the HPA, VTAPA and the WBHPA, these are listed, in order of prevalence, below:

- Listed Activities contemplated in section 21 of NEMAQA;
- Burning of domestic fuel (coal/wood/paraffin);
- Vehicle emissions; and
- Mining emissions.

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4.61. I nevertheless record that I agree with the Forum that, while there is no explicit legal obligation on Eskom to address emissions from the burning of domestic fuel (coal/ wood/ paraffin); vehicles; and mining activities, it has some of the largest operations in the Priority Areas. Therefore, more is required from Eskom to not only comply with section 21 of NEMAQA, but to implement further measures to address other sources of emissions that adversely affect AAQ in the areas in which it operates. In addition, the National Environmental Framework requires stakeholders to adopt a holistic approach to addressing issues related to air quality. In view of the above, Eskom must be held to a higher standard should I uphold its appeals or make any other appropriate decisions. I note that the Forum sets out emission reduction conditions, conditions based on socio-economic, transparency and governance conditions. These conditions are provided on a once-off basis and must be subject to specific time periods. The conditions will require regular review, underpinned by updated analyses.

### Achieving emission reductions: contextual information

4.62. I note that all of the proposed solutions require making these plants unavailable to the power system, either temporarily, whilst abatement technologies are retrofitted, or more permanently, as units / plants operate at reduced load or are taken offline. As was very clearly demonstrated in the NAQO Decisions scenario in section 13.2 of the Forum's report, given the constraints of loadshedding for the timeframes for which conditions are being contemplated, conditions that achieve a reduction in local air emissions must be traded off against increased risk of loadshedding during the period until 2030. Once loadshedding is resolved, the options of reducing plant utilisation and taking plants offline earlier become abatement options which can be considered together with retrofits under a reformed regulatory regime. Key differences between three local air pollutants and their abatement technologies, emerging from the discussion in section 11 of the Forum's report, have guided the Forum's consideration of abatement conditions. These are summarised in the Table below on Characteristics of local air pollutants and their abatement technologies and underpin the remainder of the abatement conditions discussion, which I proceed to deal with separately for each pollutant. Reducing coal burnt as an abatement option is not inherently pollutant-specific and therefore is not captured in the table.



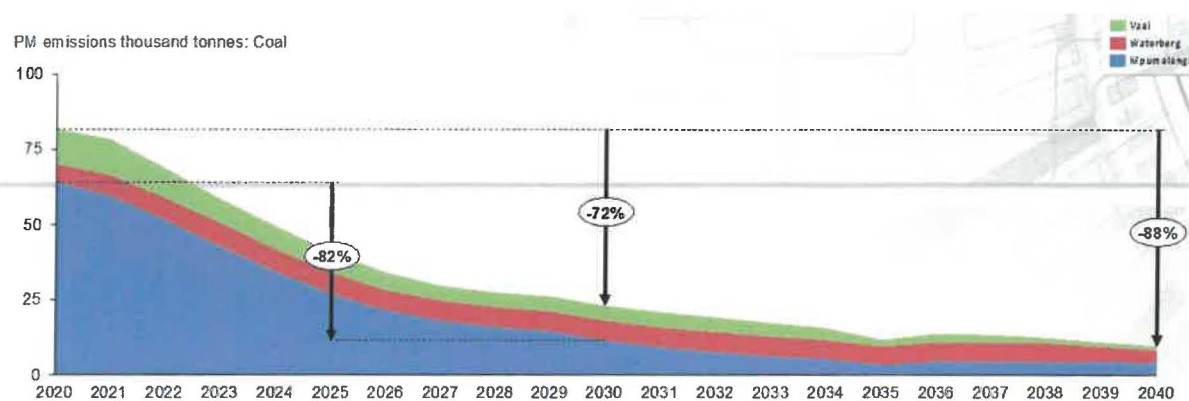
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<b>Pollutant</b>	<b>Relative capital cost</b>	<b>Technical difficult to install and time required</b>	<b>Health impacts</b>
PM	Low	Low	High
NOx	Medium	Medium	Low
Sox	Medium	Very High	High

- 4.63. The Forum conducted further power system and multi-dimensional analyses to better understand the implications of possible abatement conditions. The basis for this exploration was Eskom's Board Approved Emission Reduction Plan 2022 (the Eskom's ERP 2022). This Plan has been offered by Eskom as what the utility views as being possible and sensible to make progress on air pollution issues, despite its lack of ability to comply with its current AELs. The ERP 2022 was developed by Eskom with reference to the current concentration limits based regulatory regime. Therefore, the only abatement options considered in the Plan were abatement technology retrofits and closing power plants early (Tutuka's closure date was brought forward from 2041 to 2030). Under the ERP, apart from the interventions outlined for the 5 oldest plants, Eskom proposes installing FGD only at Medupi, and LNB retrofits at Lethabo, Tutuka and Majuba. Whilst Eskom has undertaken its own power system modelling as input to defining its ERP 2022, it was important for the Forum and for me to take an independent view of this Plan, and understand its implications both from the Forum's multi-dimensional, multi-scalar perspective and within its own power system modelling environment, in order to ensure comparability with other scenarios explored. This section reports on and summarises this analysis. The 'Eskom ERP 2022' scenario specified for power system modelling describes the abatement technologies approved by Eskom's Board in its Emission Reduction Plan (ERP) 2022, updated with progress information from Eskom's November 2023 MES Update submitted to the Forum. Eskom's ERP 2022 is compared against the reference case (Baked-in- progress), of doing nothing further on local air pollution.

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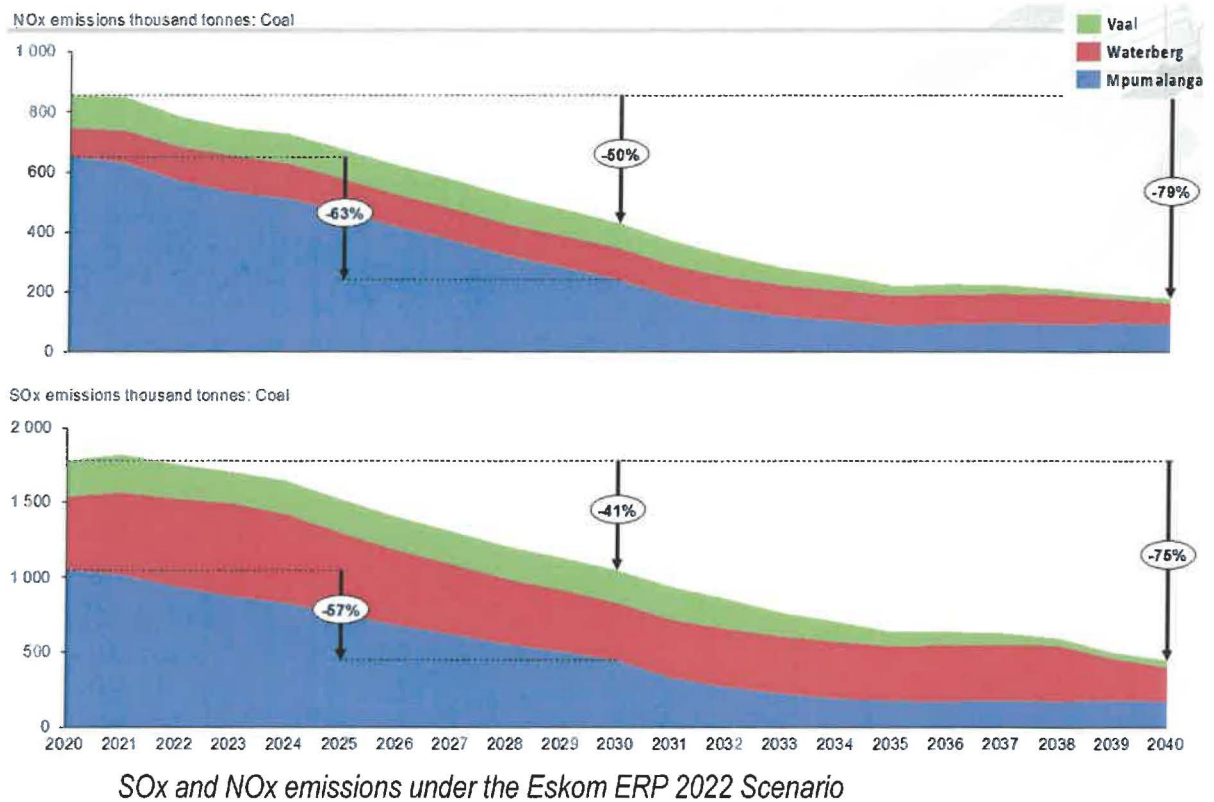
- 4.64. The Forum's power system modelling shows that local air pollution improved under Eskom's ERP 2022 more than the improvements associated with doing nothing. Eskom's ERP 2022 achieves a slight additional PM reduction, when compared to the reference case, over the modelled period in the VPA and WHBA due to the additional PM projects undertaken in this scenario, but the impact is very slight.



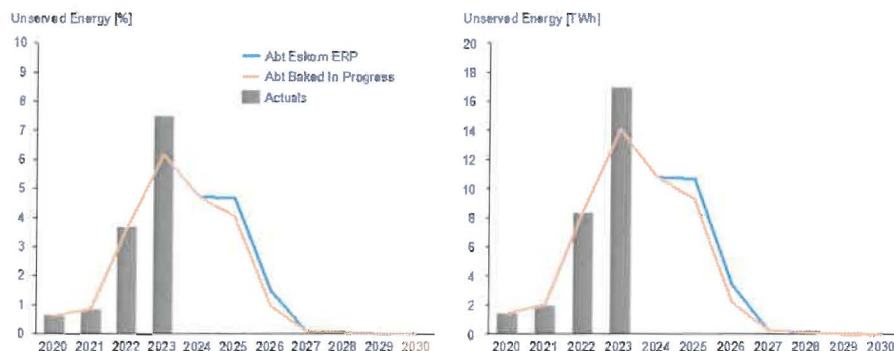
*Coal power generation and PM emissions from Eskom's ERP 2022*

- 4.65. I note that the Eskom ERP 2022 also achieves a significantly improved 7% reduction in coal related NO<sub>x</sub> emissions in the HPA and 11% in the VPA (Lethabo) compared to the reference case. On SO<sub>x</sub> emissions, a significant 23% reduction is achieved in the WPA due to Medupi's FGD.

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- 4.66. Eskom's ERP 2022 scenario performs less well in terms of CO<sub>2</sub> emissions from the fleet, which are left unchanged, compared to the Baked-in-Progress reference case. There is also a significant 2% increase in the cost of supplying electricity above that of the Baked-in-Progress scenario, due to the costs of the abatement retrofits, in particular Medupi's FGD. In terms of unserved energy, Eskom's ERP 2022 causes an increase in unserved energy of 5% of a stage applied consistently over the period until 2030 versus that of the reference case (or just under 3 extra months of Stage 1). This is due to the extension of the routine plant GOs required in order to install abatement equipment, demonstrated in the below figures:



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### *Eskom ERP 2022 implications for security of supply (middle loadshedding sensitivity)*

- 4.67. The multi-dimensional, multi-scale matrix for Eskom's ERP 2022 again compares the impact of the ERP 2022 against the status quo depicted below, where nothing further is done on local air pollution. The ERP 2022 matrix shows an improvement in regional and local air pollution and health compared to when nothing is done, but the improvement is still falling short of what is required by policy. The risk to security of power supply in the period until 2030 increases as the abatement retrofits are undertaken, and there is a not-insignificant increase to the cost of power. There is no change to municipal socio-economics.

### *Multi-dimensional analysis for Eskom ERP 2022*

	National			Regional		Municipal	
	Security of Supply to 2030	Future cost of electricity	International GHG commitment compliance	PA air quality	Municipal air quality	Municipal health	Municipal socio-economics
Counterfactual: Baseline / BIP			Long term compliance challenges				
Eskom ERP 2022	~ an additional stage for 3 months	~2%					

- 4.68. The Forum conducted further power system and multi-dimensional analyses to explore whether the multi-dimensional impacts of Eskom's ERP 2022 could be improved through the imposition of abatement conditions. This analysis is discussed according to each pollutant in the sections below.

### PM Abatement

- 4.69. PMs are the priority pollutant from a health perspective, and the least expensive and technically challenging to address in terms of mitigation options. PM is also the pollutant for which Eskom has the most comprehensive abatement plan. Six of the mid-life coal plants — Duvha, Kendal, Lethabo, Matla, Tutuka and Matimba – are not yet operating in compliance with the MES new plant standards for PMs. Abatement projects are planned for each of these plants to bring them

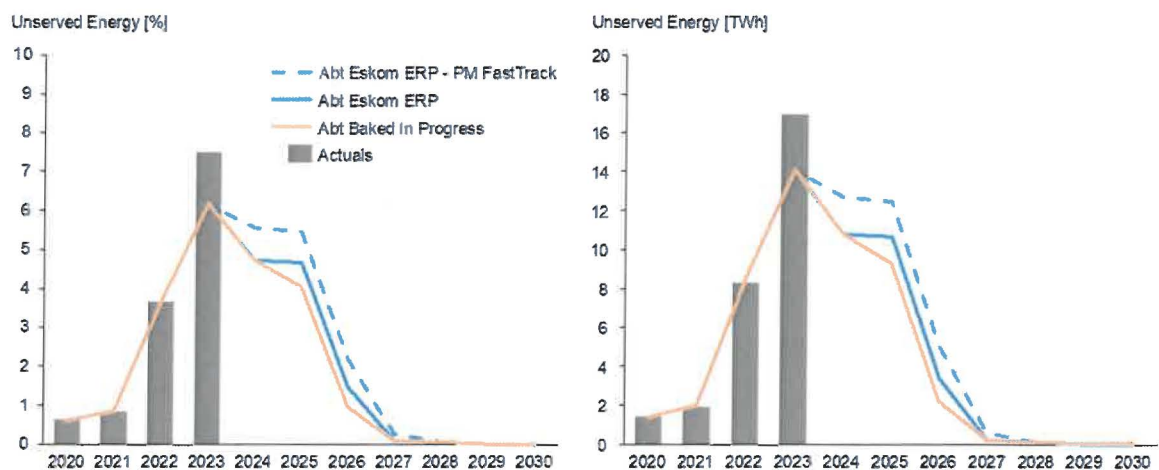


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into compliance, as per Eskom's Board approved ERP 2022 schedule, although not within time to meet the 31 March 2025 New Plant Standard compliance deadline.

At the Forum's request, Eskom presented on the potential to accelerate these PM projects. The Minister notes this information as set out in the Forum's Report, the details of which were disclosed on a confidential basis.

4.70. The Forum advises that it seems likely that Eskom will bring all of its mid-life plants into PM MES New Plant Standard compliance by 2028. In this regard, Eskom indicates that these projects can only be implemented during GOs in order to avoid increasing the risk of loadshedding, and that there is some risk around this given that the outage duration and timing is outside of the control of the PM project programme. In addition, Eskom identified timing risks associated with contractors and supply chains, but stated that until this point, the programme has been outperforming many of its timeframe targets. I note that the Forum has therefore assumed that the outage duration and timing risk can be managed if the PM retrofit projects are prioritised above containing outage duration. The impact of the accelerated PM programme was tested in the Forum's power system modelling, with results provided below.



4.71. The multidimensional matrix for Eskom's PM Fast-Track scenario indicates that fast tracking the PM projects comes at a trade-off between additional loadshedding risk and a short-term improvement in PM emissions in the HPA and VPA. As PM is the most harmful of the three pollutants to health, it may be that a degree of increased loadshedding risk can be tolerated by

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the country in order to accelerate the PM retrofits to ensure plant compliance by the 31 March 2025 deadline.

### *Multi-dimensional analysis for Eskom ERP 2022*

	National			Regional		Municipal	
	Security of Supply to 2030	Future cost of electricity	International GHG commitment compliance	PA air quality	District municipal air quality	District Municipal health	District municipal socio-economics
Counterfactual: Baseline / BIP			Long term compliance challenges				
Eskom ERP 2022		Largely due to Medupi FGD					
Eskom ERP 2022 PM Fast Track	Worst case: the equivalent of an additional stage for a 12 month period.	Largely due to Medupi FGD		Short term improvement in PM in HPA and VPA	Short term improvement in PM in HPA and VPA	Short term improvement in PM in HPA and VPA	

### NO<sub>x</sub> Abatement

4.72. NO<sub>x</sub> is a low health concern, LNBs are relatively inexpensive, and not unduly challenging to install. Duvha, Matla, Lethabo, Majuba, Tutuka and Matimba remain non-compliant for NO<sub>x</sub>. Eskom's ERP 2022 anticipates only retrofitting Lethabo, Majuba and Tutuka with low NO<sub>x</sub> burners, and undergoing an optimisation process at Matimba. Eskom does not intend to install low NO<sub>x</sub> burners at Duvha and Matla, as these plants are identified for closure by 2034.

4.73. The Forum concurs with Eskom's ERP 2022 plan in the case of NO<sub>x</sub> for the following reasons:

- Because NO<sub>x</sub> is less of a health concern than PMs, installation of LNBs should not increase the risk of loadshedding whilst this remains a concern. Hence fast-tracking of LNB projects is not possible.
- LNBs are not unduly technically challenging to install, hence this should proceed as planned at Lethabo and Majuba. Tutuka's LNB project is already underway.
- Given Matla and Duvha's retirement schedule, together with the loadshedding constraint, LNB should not be made a condition at these plants so these plants would only comply with

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existing plant standards until retirement.

The Forum also recommends that as soon as there is space identified within the margin of electricity supply adequacy beyond that required for the PM retrofit projects, consideration can be given to both accelerating the LNB projects at Lethabo and Majuba, and the retirement of Matla and Duvha. In each instance, the mitigation option of reducing output by closing non-compliant units or running these at a reduced load should explicitly be considered for their impact on cost of electricity supply.

### SO<sub>x</sub> Abatement

- 4.74. I have noted that the Forum records that it considered the cost benefit of FGD, in relation to the various Eskom stations. Eskom, however, remains responsible to evaluate and decide on the best cost effective way to ensure that they come into compliance with the new plant MES for SOX.

## 5. DECISION

- 5.1. In reaching my decision on this appeal, I have also taken the following into consideration:

- 5.1.1. The information contained in the various project files;
- 5.1.2. The Grounds of Appeal submitted by the first appellant;
- 5.1.3. The Grounds of Appeal submitted by the second appellant;
- 5.1.4. The Ground of Appeal submitted by the third appellant;
- 5.1.5. The responding statement submitted by the second appellant;
- 5.1.6. The responding statement submitted by the second respondent;
- 5.1.7. The responding statement submitted by the NAQO;
- 5.1.8. The NECA Forum Report dated 8 March 2024;
- 5.1.9. The objectives and requirements of the relevant legislation, policies and guidelines; and
- 5.1.10. Relevant case law.



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- 5.2. Having considered and evaluated each of the grounds of appeal in turn, I accept and concur with the recommendation of the NECA Forum.
- 5.3. In terms of section 43(6) of NEMA, I have the authority, after considering appeals, to confirm, set aside or vary the decision, or to make any other appropriate decision. Having duly considered the abovementioned information, I have decided that an appropriate order in the circumstances of this matter is as follows:
- 5.3.1. In relation to **the Power stations to be decommissioned** (Hendrina, Grootvlei, Arnot, Camden and Kriel) Eskom is directed to submit decommissioning plans within 12 months of the issuance of this decision, including the conditions imposed by the NAQO on Eskom in respect thereof. The decommissioning plans must follow the minimum requirements:
- 5.3.1.1. General information about the power plant;
  - 5.3.1.2. Engineering/activity plan;
  - 5.3.1.3. Cost of decommissioning and fully funded financing plan;
  - 5.3.1.4. Rehabilitation and / or repurposing plan;
  - 5.3.1.5. Public consultation and stakeholder engagement strategy / plan - A part of this needs to be specific to directly affected parties (employees, contractors, suppliers, service providers, etc). Organised labour needs to be engaged noting that Eskom is not alone in ending the life of projects and dealing with the consequences, workforce downscaling, etc. There are lessons to be learned from other sectors and operations, two of which are: (i) how to avoid genuine efforts at finding resolutions being hijacked by special interest groups (ii) how to moderate expectations, especially because Eskom is an SOE, with many citizens viewing SOEs as having an infinite pool of resources (money) to meet every need, demand, etc. The point is that this is not 'ordinary'/'run-of-the-mill' stakeholder engagement (it is tailored, specific, focussed, and extremely complex because there will be many competing needs and desires);
  - 5.3.1.6. A socio-economic conditions and impact assessment report (Local economic development; employment; health; diversification plan);
  - 5.3.1.7. Health and safety risk assessment;

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- 5.3.1.8. Air Quality Impact assessment;
  - 5.3.1.9. Geotechnical assessment (restoration of the land; water waste);
  - 5.3.1.10. Local economic development and diversification plan; and
  - 5.3.1.11. Alternatives to decommissioning.
- 5.3.2. In respect of the **remaining facilities** (Matla; Duvha; Tutuka; and Kendal), Eskom is directed to submit, within 60 days of the issuance of this decision, an application in terms of section 59 of the NEMAQA for an exemption in respect of each of these facilities from the provisions of the Act, for my consideration and determination. I will consider the merits of each application based on reasons for the application and the information provided in support of each facility. Eskom must ensure that all relevant organs of state, interested and affected parties are notified of its applications for exemption and provided with an opportunity to comment thereon.
- 5.4. I note the Forum's work in developing a number of conditions and limitations which I may impose on Eskom should any of its section 59 exemption applications be successful. I shall at that stage consider this aspect of the Forum's work in more detail.
- 5.5. In arriving at my decision on the appeal, I have not responded to every statement set out in the appeal, and where a particular statement is not directly addressed, the absence of any response thereto should not be interpreted to mean that I have not considered that statement, or that I agree with, or abide by the statement made.
- 5.6. I have also not listed each and every annexure, document or report considered, and the absence of any such annexure, document or report should not be interpreted to mean that I have not considered same, or that I agree with, or abide by the findings made therein.
- 5.7. In addition, should any party be dissatisfied with any aspect of my decision, they may apply to a competent court to have this decision judicially reviewed. Judicial review proceedings must be instituted within 180 days of notification hereof, in accordance with the provisions of section 7 of the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) (PAJA).

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MS B D CREECY, MP

MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

DATE: 22/5/2024