



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

### **TERMS OF REFERENCE FOR THE APPOINTMENT OF EXPERT PANEL TO PROVIDE STRATEGIC AND TECHNICAL GUIDANCE TOWARDS EFFECTIVE MANAGEMENT OF SULPHUR DIOXIDE EMISSIONS FROM OLD AND EXISTING PLANTS**

#### **1. BACKGROUND**

The Department of Environmental Affairs (DEA) has a constitutional mandate for ensuring the citizens' right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of the present and future generations. These rights are managed and enforced through the National Environmental Management Act, 1998 (NEMA), including the Specific Environmental Management Acts (SEMAs) promulgated to deal with specific environment issues. The National Environmental Management: Air Quality Act, 2004 (AQA), whose main objective is to enhance the quality of ambient air, is the SEMA for air quality management in the country.

One of the tools that the AQA uses for controlling industrial emissions to the atmosphere is the traditional permit or licence which identifies activities that may only operate if they are correctly permitted to do so by the regulatory authority, and only if the conditions set in the permit or licence are met. Once identified, these activities are known as Listed Activities and require an Atmospheric Emission Licence (AEL) in order to operate. Section 21 of the AQA also requires the setting of minimum emission standards for specified pollutants or mixtures of substances emitted by the identified activities. The permissible amount, volume, emission rate or concentration of the pollutant or mixture of pollutants must be specified as well as the manner in which measurements of such emissions must be carried out.

To this end, the Minister has in March 2010 published the first list of activities and their associated minimum emission standards (MES) in the gazette (Government Gazette No.33064, Notice No.248 of 31 March 2010). This list was repealed by an amendment Notice of 2013 (Government Gazette No 37054, Government Notice No. 893 of November 2013). Further minor amendments were made on the 2013 Notice and published as Government Gazette No 38863 (Government Notice No. 551 of June 2015). This list of activities provides the minimum requirements for emissions control and reporting for significant emission sources in the country.

Along with the publishing of the listed activities, compliance timeframes with the MES had been set for the listed activities. With regard to compliance timeframes with MES, Section 21 Notice stipulates that: new plants must comply with new plant emission standards immediately; existing plants must comply

with existing plant standards by 01 April 2015; and existing plants must comply with new plant standards by 01 April 2020. However, an application may be made to the National Air Quality Officer for the postponement of the compliance time frames for existing plants.

The postponement provision saw a number of postponement applications being made with the National Air Quality Officer (NAQO). Upon the NAQO's assessment of these applications, it became evident that the major challenge that facilities are battling with, which may lead to rolling postponements, is the inability to adequately and effectively manage sulphur dioxide emissions to be in compliance with the MES. The most affected industries in this case are in the chemical and energy sectors, particularly Sasol facilities and Eskom power stations.

The above challenges were mentioned and discussed at the sittings of the Portfolio Committee on Environmental Affairs, upon which it was recommended that an Expert Panel be established that would undertake an independent assessment of the viability to retrofit abatement technologies that would mitigate the emissions of SO<sub>2</sub> from old facilities such as Eskom power stations and Sasol South Africa operations.

Preparatory work towards addressing the above recommendation has been done and these Terms of Reference were developed to provide guidance on the establishment of the Panel – subject to approval by the Minister – as she is empowered to establish the Panel.

## **2. OBJECTIVES OF THE AIR QUALITY EXPERT PANEL**

The main objectives of the Expert Panel are to—

- 2.1 Conduct a comprehensive review on the effectiveness of the implementation of the postponement provision and the associated SO<sub>2</sub> emission limits as they apply to old plants that have been granted postponements decisions.
- 2.2 Advise the Minister of Environmental Affairs and the affected companies in identifying and implementing mechanisms, technologies, technical and or regulatory tools or action plans that would assist in addressing SO<sub>2</sub> compliance challenges.

## **3. FUNCTIONS OF THE AIR QUALITY EXPERT PANEL**

- 3.1. The general function of the Expert Panel is to advise the Minister on air quality management related matter as they apply to compliance with SO<sub>2</sub> emission standards
- 3.2. Evaluate, assess and identify environmentally friendly and cost-effective technologies, strategies, action plans, legal instruments that would assist industry to comply with MES for SO<sub>2</sub>.

- 3.3. Make available research information and publications or peer-reviewed case studies on how SO<sub>2</sub> emissions challenges have been dealt with internationally and how this can be used in the South African context.
- 3.4. Identify areas of cooperation, mutual benefit and potential conflict that would arise among the affected parties as a result of implementing the recommendations of the Panel and provide guidance on how these could be managed.
- 3.5. Make recommendations to the Minister on how best to implement or enforce the above technologies, strategies, action plans and legal instruments, in the short, medium and long-terms.
- 3.6. Develop monitoring tools that will be used to monitor and assess the impact and effectiveness of the above mentioned tools.

#### **4. SCOPE AND EXTENT OF WORK**

- 4.1 Establish the status quo with respect to compliance with the granted postponement emission limits for SO<sub>2</sub> on all affected facilities. Therefore, as part of this project a situational analysis and needs assessment must be undertaken and the results thereof be captured in a report, which in addition to defining the past and current postponement situation must also address the encountered problems, needs and key issues that have to be addressed. This analysis must be undertaken in consultation with relevant stakeholders and representatives from industry, Government, NGOs and the affected communities' representatives.
- 4.2 Assess the extent to which various abatement technologies are available and utilized to minimize SO<sub>2</sub> emissions by facilities that have been granted postponement decisions.
- 4.3 Review various literature sources on abatement technologies and options.
- 4.4 Conduct a review of applicable legislation and identify different government departments' mandates and responsibilities that have been impacted by the postponement provision.
- 4.5 Assess the implications of the newly promulgated postponement provisions on existing facilities that have been granted postponement decisions and on potential new applications.
- 4.6 Identify and record the extent of the challenges with regard to the implementation of the postponement provisions and the associated SO<sub>2</sub> minimum emission limits
- 4.7 Estimate costs to industry related to the implementation of the postponement provision as it relates to SO<sub>2</sub> compliance

- 4.8 Conduct extensive consultation or engagement with all affected facilities owners and interested and affected stakeholders to collate and categorize their inputs, with regard to the following:
- 4.8.1 Implementation challenges encountered and possible solutions;
  - 4.8.2 Determination and verification of the requirements of the postponement provisions as it relates to SO<sub>2</sub> emission compliance.
- 4.9 Additional work that may be identified before or during commencement of project activities that would result in improving the outcome of the project may be undertaken, subject to agreement amongst the parties concerned. Such work would be subjected to Ministerial approval should it result in additional costs to the project budget.

## 5. COMPOSITION OF THE EXPERT PANEL

- 5.1. The Expert Panel must consist of not fewer than 10 members from industry, research and academic institutions appointed by the Minister.
- 5.2. Members of the Panel are expected to have intensive, expert and technical knowledge regarding pollution abatement and control issues in the chemical and or energy industrial sectors. The Table below provides a list of the minimum required skills and experience.

SECTOR	SKILLS	MINIMUM QUALIFICATIONS
Chemical Industry	Experience in: pollution prevention and control techniques; industrial processes and design; environmental designs principles and techniques; cleaner production; resource efficiency, expertise in the design of industrial processes and plants	MSc/MEng (Chemical Engineering/Civil Engineering) or Engineering Design or equivalent/relevant qualification
Energy Industry	Experience in: pollution prevention and control techniques; industrial processes and design; environmental designs principles and techniques; cleaner production; resource efficiency; developing ways of improving existing processes; technical expertise in all matters to do with energy and environmental control.	MSc/MEng (Mechanical/Chemical Engineering or Engineering Design or equivalent/relevant qualification
Administration	Experience in: general facilitation of workshops and meetings; collation of different inputs into reports, experience in managing groups of people with different opinions; and report writing	Report writing experience

5.3 Taking into account that the objectives of the Panel cut across the mandate of different government institutions, consultation with representatives from the following government institutions needs to be prioritized.

INSTITUTION	RATIONALE
Department of Science and Technology (DST).	To provide inputs on the available pollution prevention technologies and their availability and suitability for the South African environment.
Department of Public Enterprises (DPE).	On the basis that Eskom, as a state owned entity is highly impacted by the postponement provision, consultation with the DPE to provide information on available funding and management issues that could have a bearing on the affected entities' ability to comply with the postponement provision, is necessary
Department of Water and Sanitation	To provide information on the availability of water needed to implement some of the abatement technologies such as FGD which requires availability of huge amount of water. This may include management and treatment of polluted waste water resulting from the use of such abatement technologies.
Other government departments to be consulted for relevant input and guidance:	<ol style="list-style-type: none"> <li>1. Department of Health (DOH).</li> <li>2. Department of Trade and Industry (DTI).</li> <li>3. Department of Energy (DoE).</li> <li>4. Any other relevant institution/s</li> </ol>

## 6. APPOINTMENT PROCEDURE OF MEMBERS OF THE AIR QUALITY EXPERT PANEL

6.1. The Minister must through advertisement in the media circulating nationally invite nominations for appointment of members of the Panel.

6.2. Any nomination made pursuant to an advertisement contemplated above must be supported by the following information:

(a) Personal details of the nominee; and

(b) Nominee qualifications, expertise and experience.

6.3. The Minister must appoint the required members of the Panel from the list of all nominees submitted pursuant to an advertisement contemplated above.

- 6.4. Appointments of members of the Panel must be made in such a way that the Panel is composed of members covering the appropriate expertise and experience in the field of air quality management.

## **7. TENURE OF SERVICE OF MEMBERS OF THE AIR QUALITY EXPERT PANEL**

- 7.1. The timeframe for the appointment of a member of the Panel shall be for a period of not more than one year from the date of appointment by the Minister and such appointment shall be permanently suspended upon completion of the assignment, unless otherwise stated/required by the Minister.
- 7.2. A member of the Panel whose tenure of service has expired is eligible for re-appointment, and shall continue to participate until such time their re-appointment has been finalized.
- 7.3. The Minister may extend the tenure of service of a member/members of the Panel for a specified period.

## **8. TERMINATION MEMBERSHIP**

- 8.1. A member's tenure of service is terminated if a member—
- (a) resigns by submitting a one month's written notice to the Minister, but the Minister may accept a shorter period in certain circumstances;
  - (b) is absent from three consecutive meetings of the Panel without written permission from the chairperson of the Panel, and the chairperson may not unreasonably refuse permission on good cause shown by a member of the Panel;
  - (c) neglects to properly perform a function or functions of the Panel;
  - (d) use his or her position, privilege or knowledge as a member of the Panel for private gain or to improperly benefit another person.
- 8.2. The Panel must develop rules and procedure, subject to the laws of the Republic of South Africa, on due process applicable to the termination of membership.
- 8.3. A member ceases to be a member of the Panel if his or her tenure of service has expired, or if his or her membership is terminated after following due process by the Chairperson.

## **9. FILLING OF VACANCIES**

- 9.1. The Minister must fill a vacancy or vacancies in the Panel occasioned by the—
- (a) expiry of tenure of service of a member or members of the Panel;
  - (b) resignation of a member or members of the Panel; or

(c) termination of membership.

9.2. The Minister must appoint a person or persons to fill a vacancy or vacancies by following the appointment procedure set out in paragraph 6 above.

## **10. CONDITIONS OF APPOINTMENT OF MEMBERS OF THE AIR QUALITY EXPERT PANEL**

- 10.1. A member must perform the functions of the Panel in good faith and without favour or prejudice.
- 10.2. A member of the Panel must be willing and able to devote sufficient time to contribute meaningfully to the work of the Panel.
- 10.3. A member may not use his or her position, privilege or knowledge as a member of the Panel for private gain or to improperly benefit another person.
- 10.4. A member of the Panel may not act in a way that compromise the credibility, impartiality, independence or integrity of the Panel.

## **11. MANAGEMENT OF THE FUNCTIONING OF THE AIR QUALITY EXPERT PANEL**

- 11.1. DEA shall provide secretariat service to the Panel
- 11.2. Interactions between the Panel and the Secretariat shall be through e-mails and telephone.
- 11.3. The operations of the Panel must be in accordance with acceptable standards such as timely distribution of documents for any scheduled meetings.
- 11.4. The Secretariat shall keep all records of the meetings and also ensure co-ordination and organization of face-to-face meetings.
- 11.5. Minutes of meetings shall be made available to members of the Panel.
- 11.6. Panel meetings shall be convened if comprised of minimum of 75% confirmed members.
- 11.7. The Panel is accountable to the Minister in terms of the decisions made.

## **12. MEETINGS OF THE AIR QUALITY EXPERT PANEL**

- 12.1. Members of the Panel shall meet once every two months for the first six months and quarterly thereafter and as and when requested to attend to urgent matters.
- 12.2. If the Chairperson is not available to chair a meeting, members present must nominate another member to preside at the meeting.
- 12.3. Sufficient time must be allocated for review, discussion and formulation of recommendations.

### **13. DISTRIBUTION OF DOCUMENTS**

- 13.1. Summary documents of all discussions, findings and recommendations which are ready for distribution shall be circulated to the members at least a week in advance.
- 13.2. The summary should highlight areas requiring the attention of the Expert Panel.

### **14. CONFIDENTIALITY**

- 14.1. Members of the Panel will be subjected to confidentiality agreements.
- 14.2. Members of the Panel will advise the Chairperson on the confidential or sensitive nature of documents presented to the Panel and will not disclose it to any party, unless approval to that effect has been granted by the Minister.
- 14.3. Members of the Panel must honour the confidentiality of documents presented to the Panel, including protecting individual research ideas.

### **15. SUBCOMMITTEES**

- 15.1. The Panel may establish one or more subcommittees to assist it in the performance of its functions.
- 15.2. The members of the subcommittee or subcommittees must consist of members of the Panel
- 15.3. The Panel may determine procedures applicable to any subcommittee or subcommittees.
- 15.4. The Department of Environmental Affairs (DEA) is responsible for providing secretariat support to any subcommittee or subcommittees.

### **16. FUNDING-RELATED MATTERS**

- 16.1. Members of the Panel shall be remunerated at hourly rates for all work done following the Department of Public Service and Administration Guidelines, details of which will be discussed with the appointed members.
- 16.2. The DEA shall bear the full administrative, travel and accommodation cost of all expenses incurred as a result of the workings of the Panel in relation to the aforementioned objectives.