The declaration of Controlled Emitters

Session 6.2

Presenter: OLEBOGENG MATSHEDISO    7th Annual Air Quality Governance
                                      Lekgotla
                                      30 October 2012
                                      Orion Safari Lodge, Rustenburg
Presentation Overview

• Background
• Legal Mandate
• Proposed Controlled Emitters
• Small Boilers- the first Controlled Emitters
• Conclusion.
Background

• Since the development of AQA S.21 Notice on listed activities, numerous questions have been raised on problematic activities that are not covered under this Notice.

• The use of S.23 provisions to deal with small-scale but widespread emissions sources.

• 5th Annual Air Quality Lekgotla – concerns regarding non-listed boilers.
Presentation Objective

To provide air quality officers with progress made in declaring identified sources as controlled emitters in terms of S.23 of the NEM: Air Quality Act, 2004 (Act No.39 of 2004).
Legal Mandate

SECTION 23 OF AQA:

• Provides for the declaration of controlled emitters of
  – any appliance or activity,
  – any appliance or activity falling within a specified category,

• if it results in atmospheric emissions which through ambient concentrations, bioaccumulation, deposition or in any other way, presents a threat to health or environment or which the Minister/MEC reasonably believes present such a threat.
Legal Mandate

SECTION 24 OF AQA:

• Section 23 Notice **MUST** establish emission standards, which must include setting permissible amount, volume, emission rate or concentration of any specified substance or mixture of substances that may be emitted from the controlled emitter.

• The Minister **MUST** prescribe the manner in which measurements of emissions from controlled emitters must be carried out.
Controlled Emitters

• Small boilers (The process at Ministerial Level);
• Temporary Asphalt Plants (Consultation on the draft Notice underway); and
• Temporary charcoal plants (New proposal by some AELA).
SMALL BOILERS
Identified Atmospheric Problems

• Significant air pollution source because they:
  – largely use dirty fuels- significant release of Particulates, SO$_2$, CO and NO$_X$ (criteria pollutants).
  – Dark smoke release causing obscuration.

• Unregulated fuels and sources.

• Most of the designs have relatively short smokestacks, thus increase in potential to impact at the troposphere.

• Operated within or at close proximity to residential areas.
Approach

• Ensure emission control of boilers less than 50 MWth using provisions of Section 23 of NEM: AQA (Act No.39 of 2004).
  – National declaration, therefore ensuring consistent, country-wide control.
  – Eliminate dark smoke.
  – Control criteria pollutants release to ensure attainment to national ambient air quality standards.
  – Promote combustion efficiency, therefore reducing the particulate matter release.
  – Promote GEP to smokestack erection, ensuring good dispersion.
Standard Setting Process

- Database of registered boilers/fuel burning appliances;
- Statistics on boilers sold in the country, specifications and abatement retrofitting feasibility;
- Consultation with authorities (AQOF);
- SABS Process; and
- Ministerial process.
Focus Areas

• A registration and compliance monitoring system.
• Dark smoke control measures- relevancy of the Ringlemann charts.
• Stack height requirements.
• Gaseous emissions, where to start?
• Control fuels – is it not time to explore the use of this tool?
The Draft S.23 Notice

APPLICATION:
Small boilers will be defined as boilers with design capacity equal to 10MW but less than 50MW net heat input, capable of burning biomass, solid, liquid and/or gaseous fuels or a combination of these fuels.

ENFORCEMENT OF THE NOTICE
• Local authorities shall implement the requirements of this Notice.
• The Notice does not exempt boilers (as fuel burning appliances) from other legal requirements such as registration with municipality prior to installations/operation.
The Draft S.23 Notice

COMPLIANCE TIMEFRAMES

• New Plants- immediate compliance.
• Existing plants- 5 years.
• No transition from existing.

COMPLIANCE MONITORING

• Annual reporting of emissions has been proposed.
• The frequency of reporting shall be determined by the responsible authority.
The Draft S.23 Notice

EMISSION LIMITS

Proposed emission limits have been set taking the following into account:

• Most of the small boilers have no abatement equipment attached to them (except for dust).

• Current control can achieve emission limits of 250 mg/Nm\(^3\) if operated efficiently or 180 mg/Nm\(^3\) if stricter controls implemented.

• Retrofitting abatement equipment not always be feasible.
The Draft S.23 Notice

EMISSION LIMITS

• Concentration based limits are proposed for
  – Particulate Matter
  – Sulphur dioxide

• Limitation of dark smoke and black smoke during start up, shut downs and soot blowing activities (Ringlemann charts).
Conclusion

• Controlled emitter tool provides us with an opportunity to explore emissions control outside the licensing tool.

• Comprehensive source-databases/emission inventories necessary information for decision making.

• Empowering provision to be prescriptive in establishing requirements.
A way forward

• Section 56 & 57 process for small boilers underway, declaration envisaged by March 2013.

• Consultation with AQO on the draft Notice for Temporary Asphalt Plants, prior to recommendation to the Minister.

• Temporary Charcoal Plants??
Ke a leboga