

Integrated Environmental Authorisation and Water Use License Application for the proposed ash disposal at Kendal Power Station

BACKGROUND INFORMATION DOCUMENT

November 2012

PURPOSE OF THIS DOCUMENT

This Background Information Document (BID) provides Interested and Affected Parties (I&APs) with information on the Environmental Impact Assessment (EIA), Waste Management License Application (WMLA) and Water Use License Application (WULA) being undertaken by Zitholele Consulting for continuous ash disposal at Kendal Power Station. This document is aimed at notifying I&APs of the following proposed activities;

1. Extending the current continuous ash disposal facilities (**DEA Reference number 14/12/16/3/3/3/63**).
2. Identify and construct a new ash disposal facility with a 30 year lifespan which will be used till the end of Kendal (**Awaiting reference number from DEA**).

This BID also provides I&APs with the opportunity to register as stakeholders in this process; and comment on the proposed projects.

The purpose of an EIA is to identify and evaluate potential impacts, to recommend measures to avoid or reduce negative impacts and to enhance positive impacts. The licensing of waste management activities through a WMLA is the primary means by which these activities are regulated. The decision-making authority for both the EIA and WMLA is the Department of Environmental Affairs.

You will be included in the stakeholder database and receive further documents for review and comment/s. Your comments will ensure that all issues of concern are incorporated. **To raise your concerns complete the enclosed registration sheet, write a letter, call or email the public participation office.**

All documents will be available on the internet at www.eskom.co.za/eia and www.zitholele.co.za.

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BACKGROUND

Eskom is the South African utility that generates, transmits and distributes electricity. Eskom supplies about 95% of the country's electricity and about 60% of the total electricity consumed in Africa. Eskom plays a major role in accelerating growth in the South African economy by providing a high-quality supply of electricity.

Kendal Power Station is a coal-fired power station situated South-West of the town of Ogies in Mpumalanga which became operational in 1993. It has an indirect dry-cooling system, which means it uses significantly less water in its cooling processes than conventional wet cooled power stations. Kendal has six 686 megawatt (MW) units that generates 4 116 MW.

The current ash disposal facilities at Kendal Power Station are running out of capacity due to the high ash volumes being produced, in addition the life span of Kendal has also been extended to 2053.

PROPOSED PROJECTS

The continuous ash disposing will require an Environmental Authorisation (EA), Waste Management License (WML) and Water Use License (WUL). The EIA and WMLA will be done as an integrated Environmental Impact Assessment (EIA) process and the WULA as a parallel process.

The mentioned ash disposal projects will be dealt with as separate applications by the Department of Environmental Affairs (DEA), and shall include the following:

1. Extending the current ash disposal facilities at Kendal Power Station including the emergency dump and ash return water dams. (**DEA Reference 14/12/16/3/3/3/63**).
2. Identify and construct a new facility with a capacity for 30 years to cater for the remaining operational life of the power station until 2053 (**Awaiting reference from DEA**).

The separate applications to DEA is a result of the urgency of this project due to the current disposal facilities running out of space and also allowing a longer time period for the site identification and authorisation of the 30 year facility.

A single public participation process is being undertaken to ensure that issues relevant to ash disposal from Kendal Power Station are addressed in an integrated manner. During this process separate environmental authorisation reports will be generated for each of the facilities i.e. separate Scoping, EIR, EMP reports will be generated for each Project.

The proposed area earmarked for **Project 1**, which is the continuation of the current ash disposal facilities, lies adjacent and to the north of the existing ash disposal site and is vacant land owned by Eskom. It is envisaged that the total area will be ~310ha in size. As an integral part of the project 1 EIA process, a footprint optimisation study will be undertaken to

investigate operational efficiency and implementation of footprint reduction strategies (such as disposal on top of the existing dump – if technically and economically viable). The efficiency at the existing ash disposal facility is also being improved in a hope to extend the life of the current facility until 2019. The second facility will take approximately seven years to become operational, and will thus not be able to receive ash before late in the year of 2019.

The **Project 2** EIA will identify, propose and assess feasible sites for locating the ash disposal facility, different technologies for the managing of ash disposal and various possible designs for an ash disposal facility as well as dust control measures.

Potential sites for this will be investigated within a 10 km radius of the Kendal Power Station during this study. This BID shall also be distributed to surrounding landowners and stakeholder within this radius.

It is anticipated that **Project 2**: 30 year Ash Disposal Facility will have an estimated total footprint of 1000 hectares, including associated infrastructure components which may consist of:

- A conveyor belt system for the transportation of ash to the disposal facility;
- ash return water dam/s;
- Services including electricity and water supply in the form of power lines, pipelines, and associated infrastructure; and
- Access and maintenance roads to the ash disposal facility.

The ash that will be produced until 2053 is estimated at around 250 million m³ and the proposed disposal facility will be approximately 62 m high at the end of its lifespan.

LEGAL REQUIREMENTS

Both projects are subject to the legal requirements outlined below. The applicable legal processes will be conducted simultaneously as an integrated process complemented by a combined public participation process and parallel Water use license application (WULA). These projects are subject to legal compliance from the following:

- a) National Environmental Management Act (NEMA), No 107 of 1998 and the EIA Regulations, 2010; and
- b) National Environmental Management Waste Act (NEM: WA), No 59 of 2008.
- c) National Water Act, No 36 of 1998

NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA)

Both projects require an Environmental Impact Assessment (EIA) in terms of the National Environmental Management Act (NEMA), No 107 of 1998 and the amended EIA regulations and listings (Government Notice R.543 to 546, published in June 2010). The Department of Environmental Affairs (DEA) is the Competent Authority.

As per Government Notice R.543 of June 2010, the competent authority must consult with every government organ that administers a law relating to a matter affecting the environment relevant to an application for an environmental authorisation.

Therefore, the Department of Water Affairs, Mpumalanga Department of Economic Development, Environment and Tourism, Nkangala District Municipality, Victor Khanye Local Municipality and Emalahleni Local Municipality are commenting authorities in this process.

This process includes Scoping and Environmental Impact Report (S&EIR) Phases, which are applicable to all projects likely to have significant environmental impacts due to their nature or extent, activities associated with potentially high levels of environmental degradation, or activities for which the impacts cannot be easily predicted.

In terms of Government Notice R.545 of 2010, the following listed activities require that a S&EIR be undertaken and are applicable to this proposed project:

- **Activity 6:** The construction of facilities or infra-structure for the bulk transportation of dangerous goods:
 - (i) in solid form, outside and industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day.
- **Activity 15:** Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, industrial or institutional use where the total area to be transformed is 20 hectares or more.

In terms of Government Notice R.544 of 2010, the following listed activities require that a Basic Assessment be undertaken for the proposed project (these activities having a lesser impact than those of the activities requiring an S&EIR will result in one EIA being undertaken for the proposed project):

- **Activity 11:** The construction of:
 - (i) canals;
 - (ii) channels;
 - (iii) bridges;
 - (iv) dams;
 - (v) weirs;
 - (vi) bulk storm water outlet structures;
 - (x) buildings exceeding 50 square metres in size; or
 - (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

- **Activity 12:** The construction of facilities for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of Activity 19 of GNR 545.
- **Activity 18:** The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from:
 - (i) a watercourse;
- **Activity 22:** The construction of a road outside urban areas:
 - i) With a reserve wider than 13,5 metres;
 - ii) Where no reserve exists where the road is wider than 8 metres, or
 - iii) For which an EA was obtained for the route determination in terms of Activity 5 of GNR 387 of 2006 or Activity 18 of GNR 545 of 2010.
- **Activity 24:** The transformation of land bigger than square 1000 metres in size, to residential, retail commercial, industrial or institutional use, where at the time of coming into effect of this Schedule such land was zoned as open space, conservation or has an equivalent zoning.
- **Activity 26:** Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
- **Activity 29:** The expansion of facilities for the generation of electricity where:
 - i) The electricity output is increased by 10 MW or more, excluding where such expansion takes place on the original development footprint;
 - ii) Regardless the increased output of the facility, the development footprint will be increased by 1 hectare or more.
- **Activity 47:** The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre:
 - i) With a reserve wider than 13,5 metres;
 - ii) Where no reserve exists where the road is wider than 8 metres;
 - iii) Excluding widening or lengthening inside urban areas.

Therefore, for the proposed ash disposal projects at Kendal Power Station, a S&EIR has to be undertaken.

NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT (NEM:WA)

With the proclamation of the National Environmental Management Waste Act (NEM: WA), No 59 of 2008, all waste related activities previously listed under the National Environmental Management Act

(NEMA), No 107 of 1998 have been repealed and are now listed under the NEM:WA

Government Notice R.718, Section 19 (1) of the NEM:WA highlights the waste management activities that require environmental licensing. The listings comprise two Categories:

- **Category A**, which identifies activities that require a Basic Assessment process; and
- **Category B**, which identifies activities that require a full scoping and environmental impact report process to be followed.

In terms of Government Notice R.718, Category B the following activities require authorisation:

Activity 9: The disposal of any quantity of hazardous waste to land.

Activity 11: The construction of facilities for activities listed in Category B of this Schedule.

As described in the Regulations "a person who wishes to commence, undertake or conduct an activity listed under this Category, must conduct an environmental impact assessment process, as stipulated in the environmental impact assessment regulations made under Section 24(5) of the NEMA as part of a waste management license application".

Therefore the proposed development requires the submission of a waste management license application as well as a Scoping and Environmental Impact Report (S&EIR) to the DEA.

WATER USE LICENSE APPLICATION (WULA)

There are a number of small rivers, streams, pans, drainage lines and wetlands in the 10km radius around Kendal Power Station on which the projects may have a potential impact. A small stream also runs through the Eskom property to the north of the existing ash disposal facility, the direction of the proposed continuous ash disposal facility under Project 1. Both Projects will therefore require a Water Use License Application (IWULA) in terms of Section 21 of the National Water Act (No 36 of 1998) (NWA). Various other water uses during construction and operation of the ash disposal facility will require licensing. A full list of water uses to be licensed will be identified during the early stages of the EIA phase.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

An Environmental Impact Assessment (EIA) is a planning and decision-making tool undertaken in terms of the National Environmental Management Act (NEMA), Act No 107 of 1998. An EIA is a management tool that helps to identify and mitigate any potential impacts that a new development might have prior to the construction or implementation of the development.

TECHNICAL AND PUBLIC PARTICIPATION PROCESSES

An EIA has two parallel and integrated processes namely, a **technical** and a **public participation** process.

The **technical process** investigates "hard" information: facts based on scientific and technical studies, statistics or technical data. It identifies the potential negative and positive consequences of a proposed project or development at an early stage and recommends ways to enhance positive impacts and to avoid, reduce or mitigate negative impacts.

The EIA regulations require that an Environmental Management Programme (EMProg) be developed. The EMProg provides recommendations on how to operate and implement the project. The provisions of the EMProg are legally binding on the developer and its contractors.

Public participation ensures that the EIA process is fair, open and transparent. It also provides stakeholders with sufficient information and gives them opportunity to contribute by reviewing and commenting on the information.

Arrangements with regards to negotiations with landowners, if necessary, for land and servitudes and compensation will be shared with the stakeholders during the public participation process of the EIA.

However these negotiations will take place in a separate process. The findings of the EIA will assist landowners and Eskom to determine the extent of local impacts in support of any negotiations that might be necessary.

Public participation is designed to provide sufficient and accessible information to Interested and Affected Parties (I&APs) in an objective manner to assist them to:

- Raise issues of concern and make suggestions for alternatives and enhanced benefits;
- Contribute local knowledge;
- Verify that their issues have been captured and considered by the technical investigations; and
- Comment on the findings of the EIA.

PHASES IN AN EIA

SCOPING PHASE

The **first phase** of an EIA is the Scoping Phase, which is conducted to gain an understanding of the potential environmental issues that are relevant to the project and to determine where further information is required, in the form of specialist studies/investigations.

The Scoping Report and Plan of Study for the EIA are submitted to the DEA for review and to approve the proposed approach to the detailed investigation required in the next phase.

Activities involved in the Scoping Phase include:

- Meetings with authorities to agree on process and study requirements;
- Initial public and landowner notification, which includes placing of site notices, the distribution of letters, this BID and an invitation to contribute to the EIA process to I&APs in the project area and beyond;
- Advertisements in local and regional newspapers to announce opportunities to participate;

- Progress feedback letter to be issued and announcements to be made of the availability of the Draft Scoping Report (DSR) and Issues and Responses Report (IRR);
- Identification of feasible alternatives;
- Distribution of a DSR, including IRR, for comment – To be available in **December 2012**;
- Convening a stakeholder meeting in the project area to obtain comment on the DSR;
- Submission of a Final Scoping Report (FSR), capturing all issues raised for the impact assessment, to the DEA;
- Submit the Plan of Study for the EIA to the DEA;
- Distribution of the FSR for comments; and
- Distribution of a progress feedback letter to stakeholders.

ENVIRONMENTAL IMPACT REPORT PHASE

The **second phase** is the Environmental Impact Report (EIR) Phase, which entails undertaking various specialist studies and compiling a Draft EIR.

As part of the assessment, an Environmental Management Programme (EMProg) as well as an Operational Plan will also be submitted to the DEA for approval. By following the EMProg, Eskom and its contractors will ensure compliance to environmental regulations during the planning, construction, operation and decommissioning (if applicable) phases.

The list of identified specialist studies required for this EIR (to date) is listed below (all seasonal dependent studies will be undertaken in the wet season):

- Ash Classification;
- Facility Design, Operational Plan and Topographical Survey;
- Terrestrial Ecology Assessment (Fauna and Flora);
- Avifauna Assessment;
- Heritage Impact Assessment;
- Social Impact Assessment;
- Surface Water Assessment and Wetland Delineation;
- Ground Water Assessment;
- Geotechnical Assessment;
- Traffic Assessment;
- Air Quality Opinion;
- Noise Assessment;
- Aquatic Ecology Assessment;

- Soils and Land Capability Assessment;
- Visual Impact Assessment; and
- GIS for mapping purposes.

The names of the specialists who will undertake these studies are available from the public participation office.

Specific activities in this phase will include:

- Specialist studies focused on outcomes of the Scoping Phase and issues raised by stakeholders;
- Progress feedback to stakeholders;
- Compilation of a Draft EIR and EMProg indicating the potential positive and negative impacts and measures to enhance positive impacts and to reduce or avoid negative impacts;
- Environmental Impact Statement, highlighting the preferred alternative and reasons thereof;
- Advertise the availability of the Draft EIR and EMProg in local and regional newspapers;
- Distribution of the Draft EIR and EMProg, including Issues and Responses Report, for comment;
- A stakeholder meeting in the project area to present the findings of the EIR for stakeholder comment; and
- Distribution of the Final EIR and EMProg for comment.

The EIR and EMProg will then be finalised and submitted to the DEA for a decision.

DECISION-MAKING

This involves notifying the registered I&APs about the decision from the Competent Authority, the DEA in this case. The DEA must accept or reject this report within 105 days. Stakeholders will be advised of the DEA's decision if an Environmental Authorisation has been granted or not and of the appeal procedure should they wish to appeal the decision.



Kendal power station will be operational until 2053

Your comments are important.

The purpose of an Environmental Impact Assessment is to provide the decision-making authority with sufficient information on which to base their decision to grant or refuse an Environmental Authorisation and if granted, to define conditions for the development. The contributions made by stakeholders from all sectors of society will ensure informed decision-making.

You are invited to participate freely and to submit any comments or information you feel may be useful to the EIA process. Registered interested and affected parties are entitled to comment, in writing, on all written submissions to the competent authority (Department of Environmental Affairs) and to bring to the attention of the competent authority, any issues which the party believes may be of significance to the consideration of the application.