

BACKGROUND INFORMATION DOCUMENT

KELVIN POWER STATION COMBINED CYCLE GAS TURBINE PLANT



PURPOSE OF THIS DOCUMENT:

- This Background Information Document (BID) provides you, as an Interested and Affected Party (I&AP), an overview of the proposed project.
- The BID invites you, as an I&AP, to participate in the required Public Participation Process.
- The BID provides you, as an I&AP with an opportunity to contribute and participate in the formulation of the Scoping and Environmental Impact Assessment (EIA) Reports.
- The BID also provides you, as an I&AP an opportunity to provide the project team with

INTRODUCTION:

Kelvin Power (Pty) Ltd (“Kelvin”) (hereafter referred to as the applicant) has appointed Environmental Impact Management Services (Pty) Ltd (EIMS) as the Environmental Assessment Practitioner (EAP) to assist with undertaking the required authorisation processes (including the statutory public participation), and to compile and submit the required documentation in support of the proposed project as described herein.

It is anticipated that several listed or regulated activities contained in the following legislation will potentially be triggered by the proposed project:

- Environmental Authorisation (EA) in accordance with the National Environmental Management Act.
- Atmospheric Emissions Licence in accordance with the requirements of the National Environmental Management: Air Quality Act- NEM:AQA (Act 39 of 2004).
- Waste Management Licence in accordance with the requirements of the National Environmental Management: Waste Act- NEM:WA (Act 59 of 2008).
- Water Use Licence (WUL) in accordance with the National Water Act – NWA (Act 36 of 1998)The exact enviro-legal requirements and activities will be confirmed during the Authority pre-application meetings of this project.

Aim of the Background Information Document (BID):

The aim of the BID is to:

- Provide an overview of the Environmental Authorisation/Licensing Applications as well as the public participation processes which will be undertaken for the proposed project;
- Allow Interested and Affected Parties (I&APs) the opportunity to obtain a broad understanding of the proposed project and to request or share information; and



your comments, concerns and objections to the proposed project.

- Provide details on how I&APs can register their interest with and submit comments on the project. It is important to note that only registered I&APs will receive further communication regarding the project for the duration of the EIA process (i.e. invitation to review and comment on the Scoping and EIA Reports).

LOCATION, SCALE, AND EXTENT OF THE PROPOSED PROJECT:

LOCATION

The proposed project and activity are proposed to be undertaken at the following location:

- The proposed project is located on Zuurfontein Farm 33-IR portion 391 R/E, Ekurhuleni Metropolitan Municipality, Gauteng Province. The centre point of the site is approximately 26° 6'45.84"S, 28°11'36.42"E.)
- Regional Description:
 - Municipality: Ekurhuleni Metropolitan Municipality
 - Province: Gauteng Province
- Closest town or point of interest: The site is approximately 4km West South West of Kempton Park CBD. .

Please refer to locality map at the end of this BID.

PROJECT DESCRIPTION:

The applicant wishes to develop a Combined Cycle Gas Turbine (CCGT) Power Plant at the Kelvin Power Station. The net output will be approximately 600 megawatts. The CCGT Power Plant will comprise of one H class gas turbine, a heat recovery boiler and a steam turbine. The main structures comprising the plant include a gas turbine building, steam turbine building, water treatment plant, heat recovery steam generator, mechanical draft cooling tower, EHV substation, exhaust stack, auxiliary buildings and administration buildings. Other possible infrastructure includes additional water and treated sewage wastewater supply pipelines, as well as electricity transmission lines to the CityPower Sebenza substation adjacent to the power station.

The existing power plant comprises the still operational B station was built in the 1960s and comprises seven 60MW steam turbines and 8 pulverised coal boilers, and the now decommissioned A Station which was built in the 1950s. The A station ceased operations in 2012. A pre-feasibility study was concluded in 2023 to assess the various technology options available to generate 450MW to 650MW on the current site. This study's objective was to identify proven technology available for generation on the available site considering the infrastructure available. The study concluded that a CCGT Power Plant with a net output of approximately 600MW comprising one H class gas turbine, a heat recovery boiler and a steam turbine, would be the optimum technology for this site. The site allocated to the new plant is in the area of the redundant A station auxiliary plant formerly occupied by the A station dry coal store, coal tipplers, coal stockpile and cooling towers.

LEGISLATIVE REQUIREMENTS

The proposed project requires certain authorisations, approvals, permits, and/or licences. The following requirements have specifically been identified:

Relevant Legislation	Listed activities or triggers	Authorisation, Approval, Licence, or Permit requirement:
Chapter 5 of the NEMA	NEMA LN2, Activity 2: The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more.	Environmental Authorisation
	NEMA LN2, Activity 6: "The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding-	



	<p>(i) activities which are identified and included in Listing Notice 1 of 2014;</p> <p>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</p> <p>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</p> <p>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day."</p>	
Chapter 4 of the NWA	NWA, Section 21 Water Uses: Section 21 (g)	Water Use Licence (WUL)
Chapter 5 of the NEM:AQA	Specific listed activities to be confirmed.	Air Emissions Licenses (AEL)
Chapter 5 of the NEM:WA	Specific listed activities to be confirmed.	Waste Management License (WML)

As a consequence of triggering the provisions above, there is a requirement to undertake an Environmental Impact Assessment Process (EIA). The EIA is to be undertaken in accordance with the requirements of the NEMA EIA Regulations (GNR982, 2014 as amended).

IMPACT ASSESSMENT PROCESS

An EIA process is a planning and decision making tool, to describe and assess the physical, biological, social, and economic impacts which a given development or project may have. To be able to inform the decision-making process, it is important for public issues and concerns to be identified timeously, to enable the EIA team to evaluate them.

The EIA process allows for the environmental consequences of a proposed project to be identified up-front, investigated throughout the impact assessment process, and taken into consideration by the decision-making authorities. The EAP and various specialists also identify potential negative and positive impacts that could arise as a result of the proposed project and identify applicable mitigation measures required, to avoid or reduce negative impacts and to enhance positive impacts.

A board overview of EIA process is provided:



Public Participation

Initial Call to Register:

- Advertisements, site notices, posters, letters to landowners and pre-identified I&APs. The aim of this step is to inform people of the proposed activity and to encourage initial comment and feedback.
- Ongoing Public Participation, incl: dissemination of information by means of public meetings and focus group meetings (where applicable), draft reports (Scoping & EIA), and project updates.

Scoping Phase

Collation of initial comments, concerns, objections and specialist investigations, into a concise report (Scoping Report) which provides feedback on the following:

- Nature of the activity;
- Description of the receiving environment;
- Identification of potential feasible alternatives;
- Identification of potential positive and negative impacts; and
- Identification of knowledge gaps.

Impact Assessment Phase

Aim of this phase is to investigate and comparatively assess the identified alternatives and make a recommendation of the most preferred alternative. In addition the identified impacts are assessed and relevant management and mitigation measures listed for inclusion in an EMPr. The EIA culminates in the compilation of an EIA Report.

Once the relevant processes have been completed and the final documentation submitted to the competent authority, the competent authority reviews the application and makes an informed decision. The I&APs will be informed of the decision and their right to appeal in the event that they disagree with the decision.

PRELIMINARY ENVIRONMENTAL IMPACTS

One of the key drivers to a successful EIA is to ensure that potential impacts (both positive and negative) are identified and investigated. Additional impacts may be identified during the Scoping phase and relevant specialists will be included into the EIA team in order to accurately and objectively assess these potential impacts. A number of potential environmental impacts associated with the proposed project have been identified. Preliminary identified potential impacts to be assessed in this EIA process include amongst others:

- Air Quality Impacts;
- Climate Change Impacts;
- Noise Impacts; and
- Socio-economic impacts

The above-mentioned impacts should not be construed as the only impacts that will be identified during the course of the EIA. Based on public consultation, specialist input and further detailed assessments, additional impacts will likely be identified and assessed.

All potential impacts will be identified and assessed following an impact assessment methodology guided by the requirements of the NEMA EIA Regulations. The broad approach to the significance rating methodology is to determine the environmental risk (ER) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/likelihood (P) of the impact occurring. This determines the environmental risk. In addition, other factors including cumulative impacts, public concern, and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the ER to determine the overall significance (S).

Furthermore, based on the identified impacts and their ratings, mitigation and management measures are recommended for the applicant and these are included in an Environmental Management Programme (EMPr) towards ensuring that any negative impacts that cannot be avoided are minimised and managed, and positive impacts maximised.

Specialist studies may be utilised to guide and inform the assessment of the potential impacts. The specialist studies identified to be included in this assessment include:



- **Air Quality Assessment ;**
- **Socio-economic Assessment;**
- **Climate change Study;**
- **Noise Assessment;**
- **Heritage (including palaeontology) Assessment;**
- **Major Hazard Installation (MHI) Assessment.**

The need for further specialist studies may be identified through the scoping process.

HOW TO GET INVOLVED

Should you feel that you may be interested in, or affected by, this project, it is essential that you register as an Interested and Affected Party (I&AP) in which case you will be kept informed regarding the project and afforded an opportunity to participate in the process. Please note that only registered I&APs will be included in future correspondence regarding the project and associated updates. You may register and/or comment as an I&AP in any of the following ways:

- Complete the I&AP registration form and questionnaire and return it to EIMS via email, fax or post;
- Submit written comments, registrations, or requests to EIMS via email, fax or post; and/or
- Via telephone call.

It is important to note that the EIA process is guided by legally stipulated timeframes and as such, in order to ensure your continued and valuable involvement in the project, we request that your registration requests and any preliminary comments are submitted to EIMS (contact details provided below) by **15 March 2024**

Please note that further to the above, all registered I&APs will also be notified in due course of further participation opportunities, as well as the availability of the Scoping Report and Environmental Impact Report upon which comments will be solicited.

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Further information will be available at www.eims.co.za/public-participation/. Please note that in the event that you are unable to access the website due to data constraints please contact EIMS for alternative arrangements.

