

---

## **2 LEGAL REQUIREMENTS**

---

Environmental legislation in South Africa was promulgated with the aim of, at the very least, minimising and at the most preventing environmental degradation. The following Acts and Regulations are applicable to the Kusile Railway Project:

### **2.1 The Constitution of the Republic of South Africa (Act 108 of 1996)**

Section 24 of the Constitution states that: Everyone has the right

- (a) *to an environment that is not harmful to their health or well-being; and*
- (b) *to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*
  - prevent pollution and ecological degradation;
  - promote conservation; and
  - secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development

The current environmental laws in South Africa concentrate on protecting, promoting, and fulfilling the Nation's social, economic and environmental rights; while encouraging public participation, implementing cultural and traditional knowledge and benefiting previously disadvantaged communities.

### **2.2 National Environmental Management Act (No 107 of 1998)**

The EIA for this proposed project will be conducted in terms of the EIA Regulations that were promulgated in terms of Section 24 (5) of the NEMA. The National Department Environmental Affairs (DEA) is the competent authority responsible for issuing environmental authorisation for the proposed project. The Gauteng Department of Agriculture Conservation and Environment (GDACE) and the Mpumalanga Department of Agriculture and Land Administration (MDALA) are key commenting authorities.

#### **2.2.1 Environmental Impact Assessment Regulations: 385 - 387 of 21 April 2006**

A full EIA is 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 comparison a Basic Assessment is required for projects with less significant impacts or impacts that can easily be mitigated. The difference between the processes relates to the nature of the proposed development in terms of its potential impact on the environment, and this is reflected in the level of detail that information is collected in as well as the level of interaction with I&APs.

In terms of Government Notice Regulation (GNR) 387, activity 1(s), a full Environmental Impact Assessment comprising both Scoping and Impact Assessment, is necessary for the proposed construction of a railway line. This main activity is listed as follows:

**Activity 1(s):** The construction of facilities and infrastructure, including structures or infrastructure for rail transportation, including the following:

- {i} Railway lines;
- {ii} Stations;
- {iii} Shunting yards.

Additional activities that are being applied for under Regulation GNR 387 are listed below:

**Activity 1(c)** The above ground storage of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 1 000 m<sup>3</sup> (1 000 000 lt or 1 Mlt) at any one location, including the storage of one or more dangerous goods in a tank farm.

**Activity 1(e)** Any process or activity which requires a permit or licence in terms of legislation governing the generation or release of emissions, pollution, effluent or waste which is not identified in Government Notice No. R. 386 of 2006.

**Activity 1(l)** The transmission and distribution of above ground electricity with a capacity of 120 kV or more.

**Activity 2** Any development activity, including associated structures, where the total area of the development is, or is intended to be, 20 ha or more.

**Activity 10** Any process or activity identified in terms of section 53(1) of the NEM: Biodiversity Act, 2004

The following activities in accordance with Regulation GNR 386 (Basic Assessment activities) are also included in the EIA application, to provide for supporting infrastructure associated with the proposed construction of the railway line:

**Activity 1 (m)** Activities within the 1:10 flood line. The construction of facilities for any purpose in the 1:10 flood line of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including:

- {iii} canals, channels, bridges, dams, weirs

**Activity 1 (p)** Facilities for the temporary storage of hazardous waste

- Activity 4** The dredging, excavation, infilling, removal or moving of soil, sand or rock exceeding 5 m<sup>3</sup> from a river, tidal lagoon, tidal river, lake, in-stream dam, floodplain or wetland.
- Activity 7** The above ground storage of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 m<sup>3</sup> (300 000 lt) but less than 1 000 m<sup>3</sup> (1 Mlt) at any one location or site.
- Activity 13** The abstraction of groundwater at a volume where any general authorisation issued in terms of the National Water Act, 1998 (Act 36 of 1998) will be exceeded.
- Activity 14** The construction of masts of any material or type and of any height, including those used for telecommunication broadcasting and radio transmission, but excluding –Masts of 15 metres and lower exclusively used
- {i} By radio amateurs; or
  - {ii} For lighting purposes
  - {iii} Flag poles; and
  - {iv} Lightning conductor poles.
- Activity 15** The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long
- Activity 16** (a) The transformation of undeveloped, vacant or derelict land to establish infill development covering an area of 5 ha or more, but less than 20 ha.
- (b) The transformation of undeveloped, vacant or derelict land to residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute infill where the total area to be transformed is bigger than 1ha (10 000 m<sup>2</sup>)
- Activity 20** The transformation of any areas/zones for use as public open space or for a conservation purpose to another use.

***Since the project comprises activities that require both a Basic Assessment and EIA levels of investigation, all activities will be assessed to the detail required for a full EIA process.***

The NEMA can be regarded as the most important piece of general environmental legislation. It provides a framework for environmental law reform and covers three areas, namely:

- Land, planning and development;
- Natural and cultural resources, use and conservation; and
- Pollution control and waste management.

The law is based on the concept of sustainable development. The objective of the NEMA is to provide for co-operative environmental governance through a series of principles relating to:

- The procedures for state decision-making on the environment; and
- The institutions of state which make those decisions.

The NEMA principles serve as:

- A general framework for environmental planning;
- Guidelines according to which the state must exercise its environmental functions; and
- A guide to the interpretation of NEMA itself and of any other law relating to the environment.

### **2.2.2 What are the NEMA principles?**

Some of the most important principles contained in NEMA are that:

- Environmental management must put people and their needs first;
- Development must be socially, environmentally and economically sustainable;
- There should be equal access to environmental resources, benefits and services to meet basic human needs;
- Government should promote public participation when making decisions about the environment;
- Communities must be given environmental education;
- Workers have the right to refuse to do work that is harmful to their health or to the environment;
- Decisions must be taken in an open and transparent manner and there must be access to information;
- The role of youth and women in environmental management must be recognised;
- The person or company who pollutes the environment must pay to clean it up;
- The environment is held in trust by the state for the benefit of all South Africans; and

- The utmost caution should be used when permission for new developments is granted.

### **2.3 Environment Conservation Act (Act No 73 of 1989)**

The Environment Conservation Act (ECA) is a law that relates specifically to the environment. Although most of this Act has been replaced by the NEMA there are still some important sections that remain in operation. These sections relate to:

- Protected natural environments;
- Littering;
- Special nature reserves;
- Waste management;
- Limited development areas;
- Regulations on noise, vibration and shock; and
- EIA.

### **2.4 Additional Acts and Frameworks**

In addition to the ECA and NEMA, the following Acts have some bearing on the proposed activities:

#### The National Heritage Resources Act (No. 25 of 1999)

The proposed construction of the railway line comprise certain activities (e.g. changing the nature of a site exceeding 5 000 m<sup>2</sup> and linear developments in excess of 300 m) that require authorisation in terms of Section 38 (1) of the Act. Section 38 (8) of the Act states that, if heritage considerations are taken into account as part of an application process undertaken in terms of the ECA, there is no need to undertake a separate application in terms of the National Heritage Resources Act. The requirements of the National Heritage Resources Act have thus been addressed as an element of the EIA process, specifically by the inclusion of a Heritage Assessment.

#### Expropriation Act (No. 63 of 1975)

Eskom has a policy of “willing buyer, willing seller”, and therefore endeavours to purchase land where ever possible or necessary. However, the State and State-owned-enterprises can acquire the rights to use or possess the requisite land through the Expropriation Act (No 63 of 1975). The Expropriation Act requires the determination of compensation based on the principle of market value (i.e. what would the value be in the event of both a willing buyer and a willing seller trading the land). There is a suite of additional legislation, which, in conjunction with the Expropriation Act, would be used to determine the compensation value.

### Occupational Health and Safety Act (Act No 85 of 1993)

This Act makes provisions that address the health and safety of persons working at the proposed plant and railway. The Act addresses amongst others the:

- Safety requirements for the operation of plant machinery;
- Protection of persons other than persons at work against hazards to health and safety, arising out of or in connection with the activities of persons at work;
- Establishment of an advisory council for occupational health and safety; and
- Provision for matters connected therewith.

The law states that any person undertaking upgrades or developments for use at work or on any premises shall ensure as far as is reasonably practicable that nothing about the manner in which it is erected or installed makes it unsafe or creates a risk to health when properly used.

### National Railway Safety Regulator Act (Act No 16 of 2002)

The Act makes provisions to provide for:

- The establishment of a Railway Safety Regulator;
- Its objects and functions and for the manner in which it is to be managed;
- Its staff matters: to provide for safety standards and regulatory practice for the protection of persons, property and the environment; and
- Matters connected therewith.

### Department of Environmental Affairs and Tourism Integrated Environmental Management Information Series

The Department of Environmental Affairs and Tourism (DEAT<sup>1</sup>) Information Series of 2002 and 2006 comprise 23 information documents. The documents were drafted as sources of information about concepts and approaches to Integrated Environmental Management (IEM). The IEM is a key instrument of NEMA and provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. The aim of the information series is to provide general guidance on techniques, tools and processes for environmental assessment and management.

## **2.5 Electricity Planning Processes**

The following section provides supplementary information on Eskom's planning processes, which existed at the commencement of this project, and under which the EIA processes for the Kusile Power Station was undertaken. These planning processes are under review, but the review would not result in the importance of this project being any less, as the rail provides

---

<sup>1</sup> Now referred to as the Department of Environmental Affairs (DEA)

support to the Kusile Power Station operational regime. The proposed planning process is in line with the new Electricity Regulations Act, 2006, and the Regulation No 32378 of 5 August 2009. The regulations stipulate the following on integrated resource planning for new generation capacity:

1. the process of developing the integrated resource plan shall include the:
  - a. adoption of the planning assumptions;
  - b. determination of the electricity load forecast;
  - c. modelling and scenario planning based on the planning assumptions;
  - d. determination of a base plan derived from a least cost generation investment requirement;
  - e. risk adjustment of the base plan, which shall be based on –
    - i. the most probable scenarios, and
    - ii. government policy objectives for a diverse generation mix, including renewable and alternative energies, demand side management and energy efficiency
  - f. approval and gazetting of the integrated resource plan.
2. The system operator, in consultation with the energy planner and the regulator, shall be responsible for executing regulation the above-mentioned process (1);
3. The energy planner, in consultation with the regulator, shall approve the policy input insofar as the risk adjustment contemplated under regulation 91.e) above;
4. The system operator shall provide the regulator with any information that the regulator might request in relation to the integrated resource plan;
5. The Minister shall provide the integrated resource plan and publish it in the government gazette for implementation;
6. The regulator –
  - a. Must consider applications for licences in accordance with the determination in line with sub-regulation (5) above;
  - b. May, in terms of section 14(1)(q) of the Act, impose a license condition on the buyer to buy all the new generation capacity procured by the system operator in accordance with the approved integrated resource plan;
  - c. Shall issue rules relating to the keeping of relevant information and the rendering of returns by licences pursuant to integrated resource planning.

The integrated resource plan, which is also referred to as the Country Plan is under review and will be approved by the Department of Energy prior to execution.

## Historic Electricity Planning

### ***Integrated Energy Plan (IEP) – 2003***

The DM (Department of Minerals<sup>2</sup>) commissioned the IEP to provide a framework in which specific energy policies, development decisions and energy supply trade-offs can be made on a project-by-project basis. The framework is intended to create a balance in providing low cost electricity for social and economic development, ensuring security of supply and minimizing the associated environmental impacts. The IEP projected that the additional demand in electricity would necessitate an increase in electricity generation capacity in South Africa by 2007. Furthermore, the IEP concluded that, based on energy resources available in South Africa, coal will be the primary fuel source for the current expansion period.

### ***National Integrated Resource Plan (NIRP) – 2003/2004***

In response to the White Paper's objective relating to affordable energy services, the National Electricity Regulator (now NERSA) commissioned a NIRP. The objectives of the NIRP are to determine the least-cost supply option for the country, provide information on the opportunities for investment into new power stations and evaluate the security of supply.

The national electricity demand forecast took a number of factors into account. They are:

- A 2.8% average annual economic growth;
- The development and expansion of a number of large energy-intensive industrial projects;
- Electrification needs;
- A reduction in electricity-intensive industries over the 20 year planning horizon;
- A reduction in electricity consumers – NIRP anticipates people switching to the direct use of natural gas;
- The supply of electricity to large mining and industrial projects in Namibia and Mozambique; and
- Typical demand profiles.

### ***White Paper on the Energy Policy of the Republic of South Africa – 1998***

Development within the energy sector in South Africa is guided by the White Paper on the Energy Policy, published by the Department of Minerals (DM) in 1998. This White Paper sets out five objectives for the further development of the energy sector. The five objectives are as follows:

- Increased access to affordable energy services;
- Improved energy governance;

---

<sup>2</sup> Previously known as the Department of Minerals and Energy.

- Stimulating economic development;
- Managing energy-related environmental and health impacts; and
- Securing supply through diversity.

Furthermore, the Energy Policy identified the need to undertake an Integrated Energy Planning (IEP) process in order to achieve a balance between energy demand and resource availability, whilst taking into account health, safety and environmental aspects. In addition, the policy identified the need for the adoption of a National Integrated Resource Planning (NIRP) approach to provide a long-term cost-effective resource plan for meeting electricity demand, which is consistent with reliable electricity supply and environmental, social and economic policies.