

A detailed description of all legislation pertaining to the proposed Roggeveld Wind Farm project, and the permitting thereof, is contained in *Annex A*. The regulatory framework relevant to the project is briefly described below.

2.1 ENERGY RELATED POLICY, PLANNING, STRATEGIES AND GUIDELINES

National Policy regarding the need for expansion of electricity generation capacity in South Africa is informed by ongoing strategic planning by the Department of Energy (DoE), the National Energy Regulator of South Africa (NERSA) and Eskom.

The following are of particular relevance to the proposed wind energy facility:

- **Integrated Energy Plan (IEP), 2003:** The IEP provides a framework in which specific energy policies, development decisions and energy supply trade-offs can be made on a project-by-project basis. Although the IEP recognises that SA is likely to be reliant on coal for at least the next 20 years as the predominant source of energy, it also recognises the potential and need to diversify energy supply.
- **National Integrated Resource Plan (IRP), 2003/2004:** The IRP provides a long term (2003-2022), cost effective resource plan for meeting electricity demand, which is consistent with reliable electricity supply and environmental, social and economic policies.
- **Electricity Regulation Act and Regulations (Act No. 4 of 2006):** The aims of the Electricity Regulation Act is to achieve efficient, effective and sustainable electricity supply, development and operation to ensure the needs of electricity users in South Africa are met and their interests safeguarded. This will be achieved through the facilitation of investment in the supply industry, access to electricity, promotion of use of diverse energy sources, promotion of competitiveness and a fair balance between the players in the industry and end users.
- **White Paper on the Energy Policy of the Republic of South Africa, 1998:** The **White Paper** identifies key objectives for energy supply within South Africa, such as increasing access to affordable energy services, managing energy-related environmental impacts and securing energy supply through diversity. The White Paper supports investment in renewable energy initiatives such as the proposed Roggeveld Wind Farm.
- **Renewable Energy Policy in South Africa, 1998:** This policy supplements the Energy Policy and sets out Government's vision, policy principles, strategic goals and objectives for promoting and implementing renewable

energy in SA. Government has set the following 10-year target for renewable energy: *“10 000 GWh renewable energy contribution to final energy consumption by 2013 to be produced mainly from biomass, wind, solar and small scale hydro. This is approximately 4% (1 667 MW) of the estimated electricity demand (41 539 MW) by 2013”* The White Paper on Renewable Energy also states that *“It is imperative for SA to supplement its existing energy supply with renewable energies to combat Global Climate Change which is having profound impacts on our planet. Wind energy is a clean, renewable resource and should be developed in SA”*.

- **White Paper for Sustainable Energy for the Western Cape (Final Draft, 2008):** Part of the Western Cape Provincial Government’s strategy is aimed at removing a number of barriers (e.g. energy pricing, legal, institutional, low levels of investment confidence) currently hindering the province from reaching its energy goals. It suggests that special focus should be given to renewable sectors and associated technologies in particular to achieve critical mass of installation, and thus drive down establishment costs and ensure permanent employment opportunities. It also established targets of 15% electricity from renewable resources by 2014 and reducing carbon emissions by 10% by 2014 measured against the 2000 emission levels.
- **The Electricity Regulations on New Generation Capacity, Government Notice R721 (August 2009):** These regulations provide for the establishment and regulation of power purchase agreements with independent power producers (IPPs), guidelines governing procurement and the renewable feed-in tariff (REFIT) programme. The proposed renewable energy facility will provide an additional electricity supply through renewable energy sources. G7, as the IPP, will be required to comply with guidelines governing the procurement programme.
- **Draft Western Cape Integrated Energy Strategy:** This document outlines the key energy concerns and opportunities facing the Western Cape and proposes a range of policies, strategies and actions that will allow the Province to develop a sustainable portfolio of energy solutions, while also reducing pollution and increasing access to energy for all citizens in the Province. The Provincial Government of the Western Cape (PGWC) supports an approach to energy planning, which takes into account environmental, social and economic considerations and research and development around renewable energy and energy efficient technologies.
- **Climate Change Strategy for the Western Cape:** The strategy was developed by PGWC and further supports renewable energy projects (such as wind) in an effort to reduce the Province’s carbon footprint. It also contains an Action Plan for pursuing economic opportunities and to pro-actively develop alternative energy resources through renewable energy projects.

- **Regional Methodology for Wind Energy Site Selection: A Guideline Document prepared by the Department of Environmental Affairs and Development Planning (DEA&DP):** The DEA&DP developed a document titled Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape - Towards a Regional Methodology for Wind Energy Site Selection (Western Cape Provincial Government, May 2006). This document is intended to assist in the identification of areas suitable for the establishment and implementation of wind energy developments from an environmental perspective but also to encourage responsible and rational wind energy developments, which are beneficial not only to developers, but also to communities at large. It was not however, the intention of this methodology to consider local level issues in significant detail, but rather that these issues should be considered at a site specific level (through an EIA).

2.2 NATIONAL ENVIRONMENTAL POLICY, REGULATIONS AND GUIDELINES

2.2.1 National Environmental Management Act (NEMA)

NEMA requires that activities be investigated that may have a potential impact on the environment, socio-economic conditions, and cultural heritage. The results of such investigations must be reported to the relevant authority. Procedures for the investigation and communication of the potential impact of activities are contained in Section 24 (7) of the Act.

Section 24(C) of the Act defines the competent decision-making authority which is normally the provincial environmental department. However, as set out in Section 4.1 of the 'Guideline on Environmental Impact Assessments for Facilities to be included in the Electricity Response Plan', Government Notice (GN) 162 of 2010, all EIA applications from Independent Power Producers (IPPs) or those involving co-generation, where these are included in the IRP, the National Department of Environmental Affairs (DEA) shall be the competent authority.

2.2.2 NEMA Regulations

Note that on 18 June 2010 new EIA Regulations (Government Notice No R. 543, 544, 545 and 546) were promulgated in terms of Section 24(5) of NEMA. These regulations came into effect on 1 August 2010, replacing the regulations of 21 April 2006. However the regulations provide for transitional situations and Section 76(1) of June 2010 states that: '*An application submitted in terms of the previous NEMA regulations and which is pending when these Regulations take effect, must despite the repeal of those regulations be dispensed with in terms of those previous NEMA regulations as if those previous NEMA regulations were not repealed*'.

Therefore since the application for this proposed project was submitted to the DEA on 10 June 2010, prior to the commencement of the new regulations, the

application will continue under the 2006 EIA Regulations as if they had not been replaced.

For this reason the following listed activities from the EIA Regulations (Government Notice R386 and R387) published in terms of the previous NEMA regulations would be triggered by the proposed project and may potentially have a detrimental effect on the environment:

Regulation R386

Activity 1: “The construction of facilities or infrastructure, including associated structures or infrastructure, for –
(m) any purpose in the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including – (i) canals; (ii) channels; (iii) bridges; (iv) dams; and (v) weirs.”

Activity 7 - “The aboveground storage of dangerous goods, including petrol diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic metres but less than 1 000 cubic metres at any one location or site.”

Activity 12 - The transformation or removal of indigenous vegetation of 3 hectares or more or of any size where the transformation or removal would occur within a critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

Activity 15 - “Road construction if wider than 4m or with reserve wider than 6m unless within ambit of another listed activity or which are access roads of less than 30 m long”

Activity 16: The transformation of undeveloped, vacant or derelict land to -
(b) residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute infill and where the total area to be transformed is bigger than 1 hectare.

Regulation R387

Activity 1: The construction of facilities or infrastructure, including associated structures or infrastructure, for –
(a) the generation of electricity where –
 (i) the electricity output is 20 megawatts or more; or
 (ii) the elements of the facility cover a combined area in excess of 1 hectare;
(l) the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more;

Activity 2: “Any development activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be, 20 hectares or more.”

In terms of Section 76 (3) of June 2010, promulgated in terms of the Environmental Impact Assessment Regulations R543 of the National Environmental Management Act, 1998 (Act No. 107 OF 1998), where an application submitted in terms of the previous NEMA regulations, is pending in relation to an activity of which a component of the same activity was not listed under the previous NEMA Notices, but is now listed in terms of section 24(2) of the Act, the competent authority must dispense of such application in terms of the previous NEMA regulations and may authorise the activity listed in terms of section 24(2) as if it was applied for, on condition that all impacts of the newly listed activity and requirements of these regulations have also been considered and adequately assessed by the applicant. For this reason ERM has checked whether or not certain listed activities under the EIA Regulations of 2010 would be triggered. These are listed in Annex A.

Government Notice R385 sets out the procedures and documentation for Scoping and EIA that need to be complied with.

Guidelines published in terms of NEMA EIA Regulations, are relevant to the proposed project, in particular:

- Guideline 3: General Guide to Environmental Impact Assessment Regulations, 2006;
- Guideline 4 Public Participation in support of the Environmental Impact Assessment Regulations, 2006; and
- Guideline 5: Assessment of alternatives and impacts in support of the Environmental Impact Assessment Regulations, 2006.

2.2.3

Other Applicable Legislation and Guidelines

National Level

- National Environmental Management: Protected Areas Act (NEMPAA) (Act 57 of 2003).
- Conservation of Agricultural Resources Act (Act 43 of 1983).
- National Water Act (Act No. 36 of 1998).
- Mineral and Petroleum Resources Development Act (Act No 28 of 2002).
- National Environmental Management: Biodiversity Act (Act No. 10 of 2004).
- Development Facilitation Act (Act No 67 of 1995).
- National Heritage Resources Act (Act No. 25 of 1999).
- Electricity Regulation Act (Act No. 4 of 2006).
- Aviation Act (Act No. 74 of 1962).
- Occupational Health and Safety Act (Act No. 85 of 1993).
- Subdivision of Agricultural Land Act (Act No. 70 of 1970).

- Noise Control Regulations promulgated in terms of the Environment Conservation Act (Act No. 73 of 1989).

Provincial Level

- Western Cape Planning and Development Act (Act No. 7 of 1999).
- Department of Environmental Affairs & Development Planning (DEA&DP) NEMA EIA Regulations Guideline and Information Document Series, 2009.
- Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape, 2006.

Local Level

- Municipal Systems Act (Act No 32 of 2000).

International:

- Equator Principles;
- IFC Performance Standards; and
- Clean Development Mechanism (CDM).

2.3 **REGULATORY HIERARCHY**

The regulatory framework governing energy generation projects such as the proposed wind farm at Roggeveld, is as follows:

2.3.1 **National Level**

Department of Energy (DoE): DoE is responsible for policy relating to all energy forms, including renewable energy. For example the White Paper for Renewable Energy specifically provides for wind energy. DoE is also the controlling authority in terms of the Electricity Act (Act No. 41 of 1987).

National Energy Regulator of South Africa (NERSA): NERSA is responsible for regulating all aspects of the electricity sector and will ultimately issue licences for wind energy developments.

Department of Environmental Affairs (DEA): DEA is responsible for Environmental Policy and is the controlling authority in terms of NEMA and the EIA Regulations promulgated in terms of NEMA. As the current application is for the establishment of a wind farm by an independent power producer (G7), DEA is the competent authority for this project and is charged with the responsibility of considering whether or not to grant environmental authorisation and under what conditions.

Department of Transport and Public Works: The department is responsible for roads and granting of exemption permits for the conveyance of abnormal loads on public roads.

Department of Transport – Civil Aviation Authority (CAA): The CAA is responsible for Aircraft movement and radar and hence needs to be consulted regarding possible measures to be taken into account to mitigate potential impacts on such activities.

South African Heritage Resources Agency (SAHRA): SAHRA regulates enforcement of the National Heritage Resources Act (Act No 25 of 1999) and associated provincial regulations which provides legislative protection for listed or proclaimed sites, nature reserves and proclaimed scenic routes.

2.3.2 *Provincial Level*

Provincial Government of the Western Cape – Department of Environmental Affairs and Development Planning (DEA&DP): A commenting authority on this project.

Provincial Government of the Northern Cape- Department of Environment and Nature Conservation (DENC): A commenting authority on this project.

Heritage Western Cape: A commenting authority on this project, in terms of section 38(8) of the National Heritage Resources Act and the potential effect on heritage resources including archaeology, palaeontology and cultural landscape.

Heritage Northern Cape: The commenting authority with respect to section 38(8) of the National Heritage Resources Act and cultural heritage aspects including archaeology, palaeontology and cultural landscape.

CapeNature: Responsible for ensuring that developments do not compromise the biodiversity of an area and therefore this department considers the significance of impacts specifically on threatened ecosystems as identified in the National Spatial Biodiversity Assessment.

Wildlife and Environment Society of SA: responsible for ensuring that development does not compromise long-term environmental sustainability.

2.3.3 *Local Level*

The study area is located within the Karoo Hoogland Local Municipality of the Northern Cape and within the Laingsburg Local Municipality of the Western Cape. In terms of the Municipal Systems Act (Act No 32 of 2000), it is compulsory for all municipalities to conduct an Integrated Development Planning (IDP) process to prepare a five-year strategic plan for the area under their control. Bioregional Planning involves the identification of priority areas for conservation and their placement within a planning framework of core, buffer and transition areas. These could include reference to visual and scenic resources and the identification of areas of special significance. The local municipalities are commenting authorities on this EIA.

Activities undertaken during site preparation, construction and operation may require additional permits, over and above the Environmental Authorisation. G7 is responsible for ensuring that the necessary permits are in place in order to comply with national and local regulations. Additional permit requirements are described below.

2.4.1

Heritage

The protection and management of South Africa's heritage resources is controlled by the National Heritage Resources Act (NHRA), 1999 (Act No. 25 of 1999). The objective of the NHRA is to introduce an integrated system for the management of national heritage resources.

Archaeology, Palaeontology and Meteorites

According to Section 35 (Archaeology, Palaeontology and Meteorites) and Section 38 (Heritage Resources Management) of the South African National Heritage Resources Act, paleontological heritage impact assessments (PIAs) and archaeological impact assessments (AIAs) are required by law in the case of developments in areas underlain by potentially fossiliferous (fossil-bearing) rocks, especially where substantial bedrock excavations are envisaged, and where human settlement is known to have occurred during prehistory and the historic period. Depending on the sensitivity of the fossil and archaeological heritage, and the scale of the development concerned, the paleontological, and archaeological impact assessment required may take the form of (a) a stand-alone desktop study, or (b) a field scoping plus desktop study leading to a consolidated report. In some cases these studies may recommend further paleontological and archaeological mitigation, usually at the construction phase. These recommendations would normally be endorsed by the responsible heritage management authority, in this case Heritage Western Cape (HWC) and the South African Heritage Resources Agency (SAHRA), to whom the reports are submitted for review. *Table 2.1* outlines when a permit is required depending on the sensitivity of the heritage resources.

Table 2.1

Permitting Requirements for Fossil, Built Environment and Stone Age Archaeology

PERMIT APPLICATION SECTION 35 - FOSSILS, BUILT ENVIRONMENT FEATURES, SHIPWRECKS & STONE AGE ARCHAEOLOGY (Ref : NHRA 1999: 58):

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;
 - (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
 - (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or paleontological material or object, or any meteorite.
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Burial Grounds and Graves

A Section 36 permit application is made to the South African Heritage Resources Agency (SAHRA) which protects burial grounds and graves that are older than 60 years, and must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit. SAHRA must also identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with these graves and must maintain such memorials. A permit is required under the conditions listed in *Table 2.2 and Table 2.3*.

Table 2.2 *Permitting Requirements for Burial Grounds and Graves*

**PERMIT APPLICATION SECTION 36 - BURIAL GROUNDS & GRAVES
(REF: NHRA 1999 : 60)**

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves
 - (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals
 - (d) SAHRA or a provincial heritage resources authority may not issue a permit for The destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant
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Table 2.3 *Permitting Requirements for Heritage Resources Management*

PERMIT APPLICATION SECTION 38 (Ref: NHRA 1999 : 62)

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
 - (b) the construction of a bridge or similar structure exceeding 50 m in length;
 - (c) any development or other activity which will change the character of a site exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.
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2.4.2 *Borrow Pits*

A borrow pit refers to an open pit where material (soil, sand or gravel rock) is removed for use at another location. G7 are likely to require the use of borrow

pits for certain earthworks operations, such as the construction of roads, embankments, bunds, berms and other structures.

The establishment of borrow pits is regarded as a mining activity and is legislated in terms of the Mineral and Petroleum Resources Development Act (No. 28 of 2002) (MPRDA). A mining permit must be obtained from the Department of Minerals and Energy prior to the establishment of borrow pits on the site.

2.4.3 *Water Use*

There are licensing procedures that need to be followed for particular “water uses”. Water uses that may be of relevance to the development of wind farms and associated road construction include the following:

- taking of water from a water resource, including a water course, surface water, estuary or aquifer (i.e. borehole);
- altering the bed, banks, course or characteristics of a water course; and/or
- impeding or diverting of a flow in a water course.

2.4.4 *Abnormal Vehicle Loads*

Wind turbine components will be delivered to site using road transport and due to the size of the components, the vehicles used to deliver turbine components will be considered abnormal loads in terms of the Road Traffic Act (Act No 29 of 1989). A permit for a vehicle carrying an abnormal load must be obtained from the relevant Provincial Authority. The vehicle must comply with the Administrative Guidelines for Granting of Exemption Permits for the Conveyance of Abnormal Loads, issued by the Department of Transport, 2009.

2.4.5 *Site Access*

The site will be accessed via the R354. Some existing public roads may need to be upgraded to facilitate the transport of the turbines and other construction materials to the site. Within the site area, existing farm tracks will be used, some existing farm tracks will be upgraded and new gravel roads may be constructed to facilitate movement of construction and maintenance vehicles.

It is likely that there will be two or more site access roads including one accessing the south of the site from the R354 and one accessing the north of the site from the R354. There may also be a site access road accessing the centre of the site from the R354. In addition to site access roads, there will be a network of roads between each of the turbines. Site access roads will be up to 12 m wide with drainage trenches adjacent to the road.

A number of different site access road options are being considered as part of the development. The final design of the access roads will be based on a

number of environmental, technical and economic considerations which will be explored during the EIA process and detailed project design phase.

2.4.6 *Aviation Communications*

Written approval or a permit must be obtained from the South African Civil Aviation Authority that the wind farm will not interfere with the performance of aerodrome radio Communication, Navigation and Surveillance (CNS) equipment, especially radar. The approval or permit must be submitted to the Director: Environmental Impact Evaluation.

