Strategically Important Developments

Eskom

PBMR

Transnet

public enterprises

Department:
Public Enterprises
REPUBLIC OF SOUTH AFRICA

May 2007

Strategically Important Developments in the Republic of South Africa

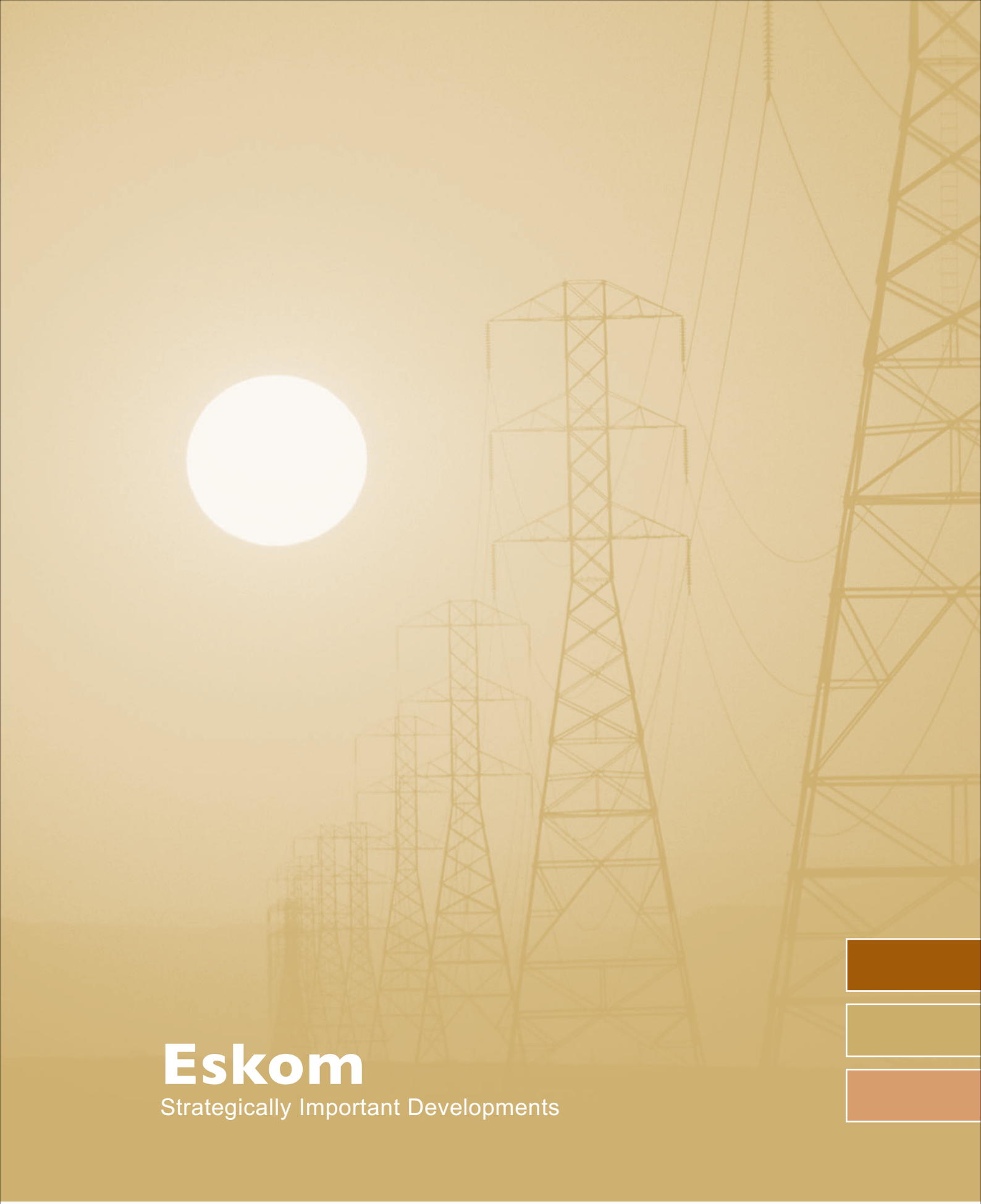
INTRODUCTION

The Department of Public Enterprises (DPE) together with the Department of Environmental Affairs and Tourism (DEAT) is working towards streamlining the Environmental Impact Assessment (EIA) procedures within South Africa, such that these do not delay the completion of critical infrastructure development initiatives which are of particular importance to economic growth within the country. It was perceived that many of those critical infrastructure development projects underpin the attainment of the economic growth targets as enshrined in the Accelerated and Shared Growth Initiative for South Africa (ASGISA).

For a development to classify as a Strategically Important Development (SID), it is considered that it should possess a demonstrable or potentially significant contribution to the national economy. This acknowledges the over-riding importance of the economic growth targets as enshrined in the ASGISA. However, in the South African context, other possible characteristics may also contribute to the classification of a proposed development as a SID. These include the potential for Broad-Based Black Economic Empowerment (B-BBEE), and perhaps also the contribution to a regional or local economy, as opposed to the national economy. The first of these is self-evident, while the second addresses the desire to ensure economic development in specific areas of South Africa.

The existing portfolios of the eight State-owned Enterprises under the DPE These are Alexkor; Denel; Eskom; the Pebble Bed Modular Reactor (PBMR); Broadband InfraCo, South African Airways (SAA); SAFCOL; and Transnet were considered, and SIDs were identified within the development programmes of three of these (Eskom; Pebble Bed Modular Reactor and Transnet). A decision was made to generate a document providing basic details of the SIDs as exist currently, within the portfolios of these three State-Owned Enterprises (SOE). The present document represents the result of that effort.

It is intended that this document should constitute the kernel of a larger and more comprehensive listing of the details of all SIDs within South Africa, in due course. This will require the addition of details on all other SIDs in the country, as may be identified in the future.



Eskom

Strategically Important Developments

public enterprises

Department:
Public Enterprises
REPUBLIC OF SOUTH AFRICA

Eskom:

Descriptions of Strategically Important Developments

INTRODUCTION

Reliable electricity supply is a prerequisite for stability and prosperity and it is Eskom's job to ensure it can supply sufficient power to meet rising demand. Government's plan for 6% economic growth includes investments by energy-intensive industries. Continued pressure on supplies is therefore inevitable.

Ever-increasing demand for electricity in an expanding economy has brought the era of excess capacity to an end. Eskom's net generating reserve margin is lower than the internationally accepted range of 15 to 18%. Our power stations are aging. In many cases, refurbishment is necessary to extend their economically useful life. Continued high load factors at the stations (required to meet demand) put severe stress on all parts of the plant as they are frequently required to operate outside initial design parameters. These loads require a high level of planned maintenance.

To meet these challenges, the Eskom budget for bigger generating and transmission capacity has been stepped up from R97 billion to R150 billion.

The return to service of mothballed stations and the commissioning of two new open cycle gas turbines will increase generating capacity in the short term, enabling Eskom to keep pace with growing demand. However, Eskom will only be able to build up its reserve margins to acceptable levels when new base-load stations are completed. New construction of such large items of infrastructure requires a long lead-time. Eskom will therefore have to manage a system with tight reserve margins for the next four to five years.

Additional generating and transmission capacity has to be urgently constructed to meet rising electricity demand across South Africa's growing economy. Consequently, the R97 billion capacity expansion programme budget, approved in 2004, has been increased to R150 billion, driven by a change in electricity demand growth assumptions from 2,3% to 4,0%. The new budget, approved by the board and our shareholder, covers the five years to 2012. The expanded programme is designed to meet the challenges of electricity reliability and availability and is now aligned to

Eskom:

Descriptions of Strategically Important Developments

INTRODUCTION

government's target of a 6% GDP growth between 2010 and 2014. In terms of the revised plan, Eskom will now deliver an additional 22,000MW by 2017.

Eskom has always prided itself on its environmental planning and management and initiated environmental impact assessments (EIAs) before they were legislated in South Africa; using them as an essential tool in the design of projects and informing long term environmental management plans.

EIAs continue to play a critical role in providing objective information to inform the investment decisions in Eskom at a project level. Eskom and South Africa still benefit from the EIA work undertaken for plants such as the Matimba coal fired power station, the Drakensberg pumped storage plant and the Koeberg nuclear power station.

Eskom is currently involved in a many EIAs for a range of developments. Each of these requires exhaustive public participation processes and close liaison with provincial and national environmental authorities. Nevertheless the EIA process does introduce uncertainty to project lead times, as public appeals, the review of decisions and other legal challenges can stretch EIA timelines out to the stage where project viability is threatened.

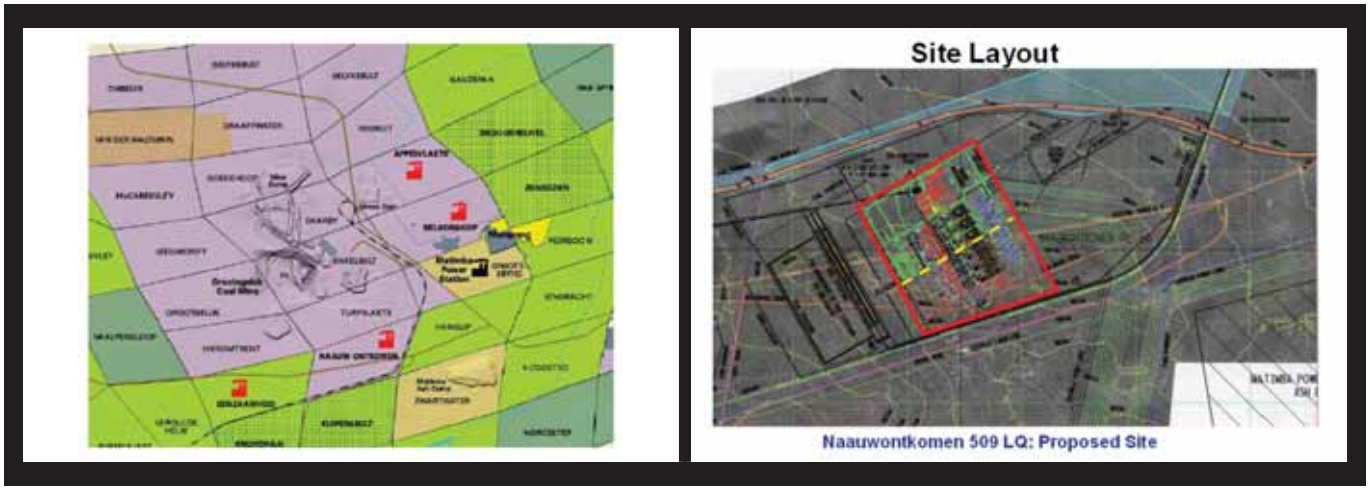
The most critical Eskom SIDs are listed in the following pages, following a map showing their location.

Strategically Important Developments

Map indicating location of Eskom SID EIAs (Generation and Transmission Projects)

Strategically Important Developments

Name of the Development:	Medupi Coal Fired Power Station Previously known as Project Alpha/Charlie (Matimba-B)
Location of the Development:	*Local Area:* Lephalale *Province:* Limpopo
Owner of the Development:	Eskom
General Purpose of the Development:	This project is the first new baseload power station of between 4500MW and 5400MW that will be constructed in Lephalale.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The study area is located approximately 10 km east of Lephalale in the Limpopo Province. Within the study area eight farms were nominated for investigation during the Environmental Scoping Study, for the establishment of a new power station and ancillary infrastructure. The climatic regime of the study area is characterised by hot, moist summers and mild, dry winters.

Sediments and volcanics of the Waterberg Group and Karoo Supergroup underlie the study area. The study area falls within the Mogol River Catchment, which drains into the Limpopo River to the north.

Strategically Important Developments

Reason for the Strategically Important Nature of the Development:

The Medupi facility is the first of the large coal-fired power stations to be constructed in the 21st century. Constraints on electricity availability in South Africa imply that this is an unusually strategically important development.

Phases for the Development:

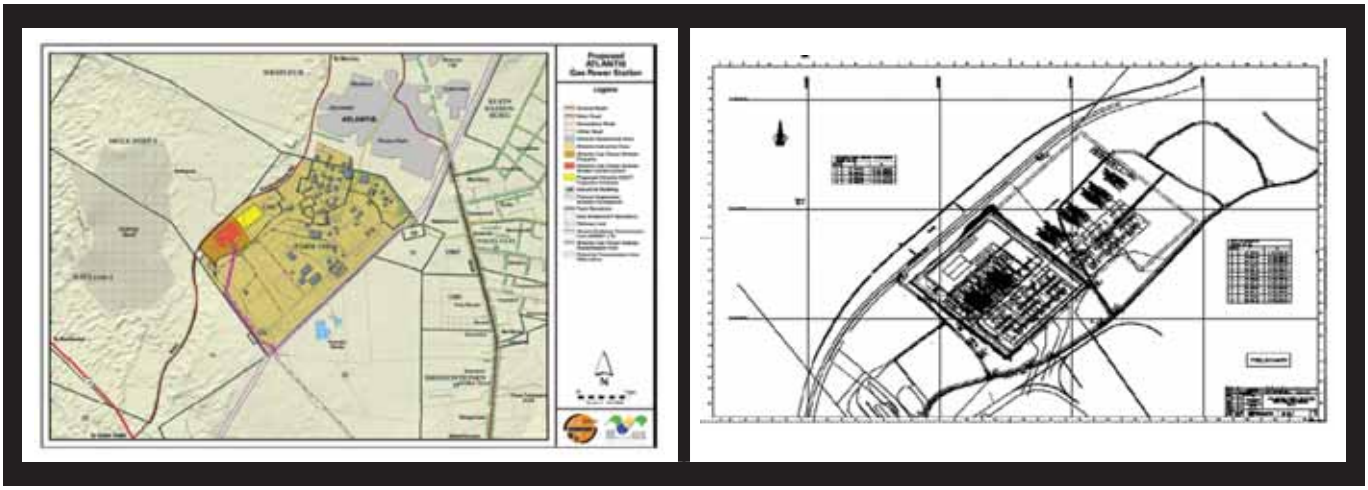
[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Deidre Herbst
Company:	Eskom Holdings Limited (Eskom)
Position	Generation Environmental Manager
Telephone:	Office: 011 800 3501 / Cell: 083 660 1147
E-mail Address:	deidre.herbst@eskom.co.za

Strategically Important Developments

Name of the Development:	Gas-1: Ankerlig OCGT (Atlantis)
Location of the Development:	*Local Area:* Atlantis - Cape Town *Province:* Western Cape
Owner of the Development:	Eskom
General Purpose of the Development:	This project is the first new peak load power station of total output 1,050MW that will be constructed in the Western Cape.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

This project is the first new peak load power station of total output 1050MW that will be constructed in the Western Cape.

Reason for the Strategically Important Nature of the Development:

In 2005, Eskom commissioned an EIA process for an Open Cycle Gas Turbine (OCGT) power plant in Atlantis. The EIA was completed late in 2005 and a positive Record of Decision was issued in December 2005. The generating capacity of the OCGT power plant was based on an annual electricity growth of 2.6%. However, in March 2006, it was established that the growth rate was actually 4.0%. In order to meet the higher growth rate, Eskom is proposing to expand the OCGT power plant (which is currently under construction) by adding four additional OCGT generating

units, each with a capacity of 150MW, hence providing a total of 1,050MW of generating capacity at the Atlantis OCGT site.

In addition Eskom is investigating and proposing the installation of an off-site, dedicated electricity supply for the Koeberg Nuclear Power Station at the Atlantis site, consisting of three 65MW units.

Phases for the Development:

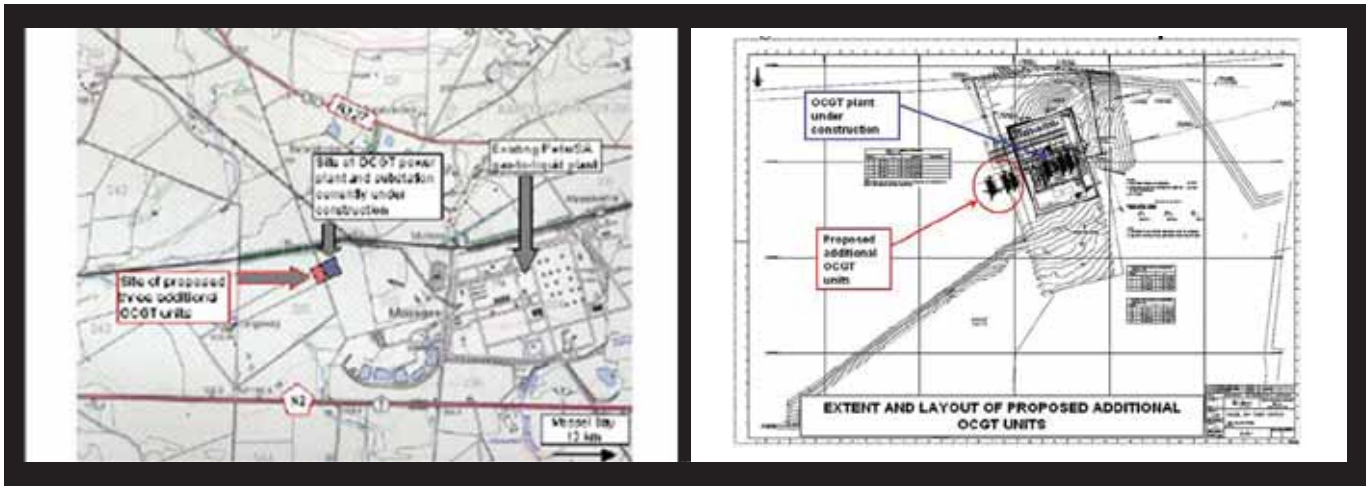
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Deidre Herbst
Company:	Eskom Holdings Limited (Eskom)
Position	Generation Environmental Manager
Telephone:	Office: 011 800 3501 / Cell: 083 660 1147
E-mail Address:	deidre.herbst@eskom.co.za

Strategically Important Developments

Name of the Development:	Gas-1: Gourikwa OCGT (Mossel Bay)
Location of the Development:	*Local Area:* Mossel Bay *Province:* Western Cape
Owner of the Development:	Eskom
General Purpose of the Development:	This project is the first new peak load power station of total output 1,050MW that will be constructed in the Western Cape.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

In 2005, Eskom commissioned an EIA process for an Open Cycle Gas Turbine (OCGT) power plant adjacent to the PetroSA facility in Mossel Bay. The EIA was completed late in 2005 and a positive Record of Decision was issued in December 2005. The generating capacity of the OCGT power plant was based on an annual electricity growth of 2.6%. However, in March 2006, it was established that the growth rate was actually 4.0%. In order to meet the higher growth rate, Eskom is proposing to expand the OCGT power plant (which is currently under construction) by adding three additional OCGT generating units, each with a capacity of 150 MW, hence providing a total of 1,050MW of generating capacity.

Strategically Important Developments

Reason for the Strategically Important Nature of the Development:

The Mossel Bay facility will contribute electricity to the grid in the Western Cape, which is presently undersupplied.

Phases for the Development:

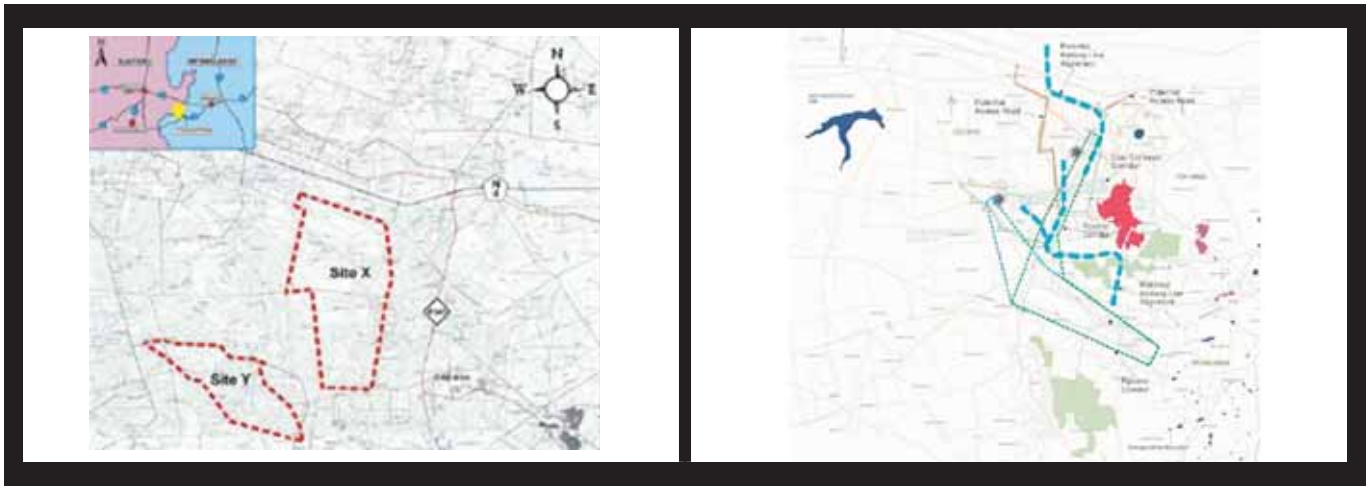
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Deidre Herbst
Company:	Eskom Holdings Limited (Eskom)
Position	Generation Environmental Manager
Telephone:	Office: 011 800 3501 / Cell: 083 660 1147
E-mail Address:	deidre.herbst@eskom.co.za

Strategically Important Developments

Name of the Development:	Project Bravo Coal Fired Power Station (Kendal North)
Location of the Development:	*Local Area:* Witbank *Province:* Mpumalanga
Owner of the Development:	Eskom
General Purpose of the Development:	This is the proposed second new base load power station of 5,400MW that will be constructed in the Witbank area.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The selection of the Witbank geographical area for the location of a new coal-fired power station was largely informed at a strategic level by the availability of coal to supply such a power station. The main body of coal to be utilised by this project is located within an area some 25 km south west of Witbank and generally demarcated by the N4 highway to the north, the N12 highway to the south, and the site of the decommissioned Wilge Power Station on the east. The westerly boundary is close to the R545 road.

Reason for the Strategically Important Nature of the Development:

The Kendal North facility will contribute markedly to the electricity supply of the RSA.

Strategically Important Developments

Phases for the Development:

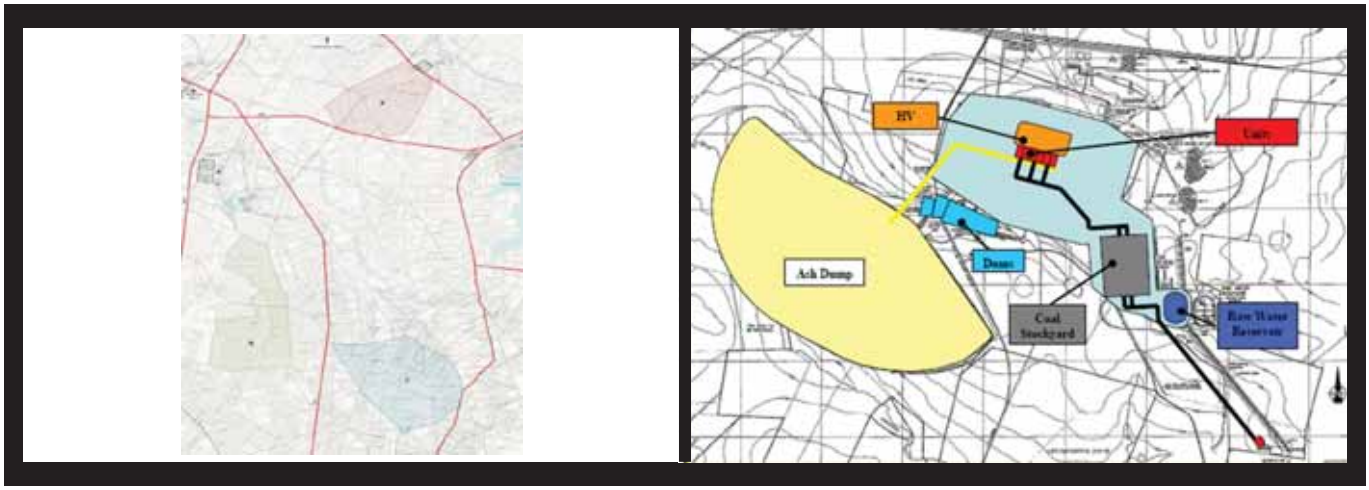
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Deidre Herbst
Company:	Eskom Holdings Limited (Eskom)
Position	Generation Environmental Manager
Telephone:	Office: 011 800 3501 / Cell: 083 660 1147
E-mail Address:	deidre.herbst@eskom.co.za

Strategically Important Developments

Name of the Development:	Project Golf Coal Fired Power Station (Vaal South)
Location of the Development:	*Local Area:* Vaal Triangle *Province:* Free State
Owner of the Development:	Eskom
General Purpose of the Development:	Proposed base load power station of 4,200MW that will be constructed in the Vaal Triangle area.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

Eskom is considering constructing a coal-fired power station in the northern Free State, to the east of Sasolburg and west of the Vaal River. The proposed power station is one of three similar coal-fired power stations being considered for construction by Eskom.

The three candidate sites are located within the Vaal Triangle, the major industrial centre of South Africa. Sasolburg (a town that supports extensive petro-chemical operations) is located some 15 km to the west of the candidate sites. Eskom's existing Lethabo Power Station is located some 15 to 30 km to the north of the candidate sites and several other industries are located north of the Vaal River.

Strategically Important Developments

Reason for the Strategically Important Nature of the Development:
The Vaal South facility will contribute markedly to the electricity supply of South Africa.

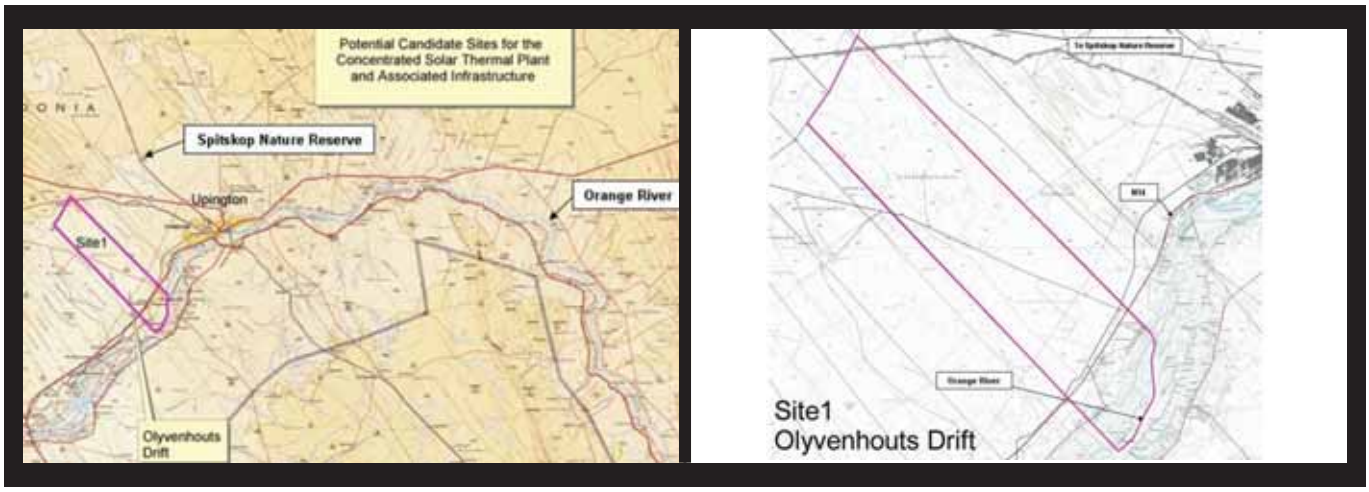
Phases for the Development:
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Deidre Herbst
Company:	Eskom Holdings Limited (Eskom)
Position	Generation Environmental Manager
Telephone:	Office: 011 800 3501 / Cell: 083 660 1147
E-mail Address:	deidre.herbst@eskom.co.za

Strategically Important Developments

Name of the Development:	Concentrating Solar Power Station
Location of the Development:	*Local Area:* Upington *Province:* Northern Cape
Owner of the Development:	Eskom
General Purpose of the Development:	The project involves the proposed establishment of a pilot concentrating solar power plant and associated infrastructure in the Northern Cape Province. The power station is proposed to operate at an installed capacity of approximately 100MW. The pilot plant is part of Eskom's renewable energy strategy, and will supply electricity into the National Grid.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The study area is situated within the Siyanda District Municipality, in the Northern Cape Province adjacent to the Orange River. The Siyanda District Municipality is located to the north of the province and covers an area of 103 771 square kilometres with its borders aligned with Botswana and Namibia. The largest town in the study area is Upington. The population distribution is primarily concentrated in and around the small towns along the Orange River. It is envisaged that the proposed power plant will utilise dry cooling technology as a result of the limited availability of water in the proposed area; but alternative cooling technologies are being investigated. According to design

specification, the dry-cooled station would utilise approximately 200,000 cubic metres of water annually. The Northern Cape Province has one of the highest solar potential values in the world, with a Direct Normal Insolation (DNI) level of approximately 2,900kWh/m2 per year.

Reason for the Strategically Important Nature of the Development:
A number of research demonstration facilities continue to be developed/operated as part of Eskom's renewable energy research programme. These include the operation of Southern Africa's first wind energy demonstration facility in the Western Cape, which was opened in 2003. In addition, Eskom has conducted a number of pilot projects to assess issues related to the renewable power market in South Africa.

Eskom has been involved with renewable energy technologies for some time, through various non-grid electrification initiatives. The programme's ultimate objective is to evaluate whether large scale, renewable electricity generation is a viable supply-side option for Eskom and South Africa. The four areas addressed by the programme are biomass, solar thermal, wave and wind energy.

The successful use of renewable energy technology in South Africa still requires extensive investigation, but the Concentrating Solar Power (CSP) technology has been identified as potentially being viable and capable of being employed on a large scale. In order to meet the future energy needs, Eskom is currently assessing the feasibility of constructing a Concentrating Solar Power (CSP) Plant in the Northern Cape Province.

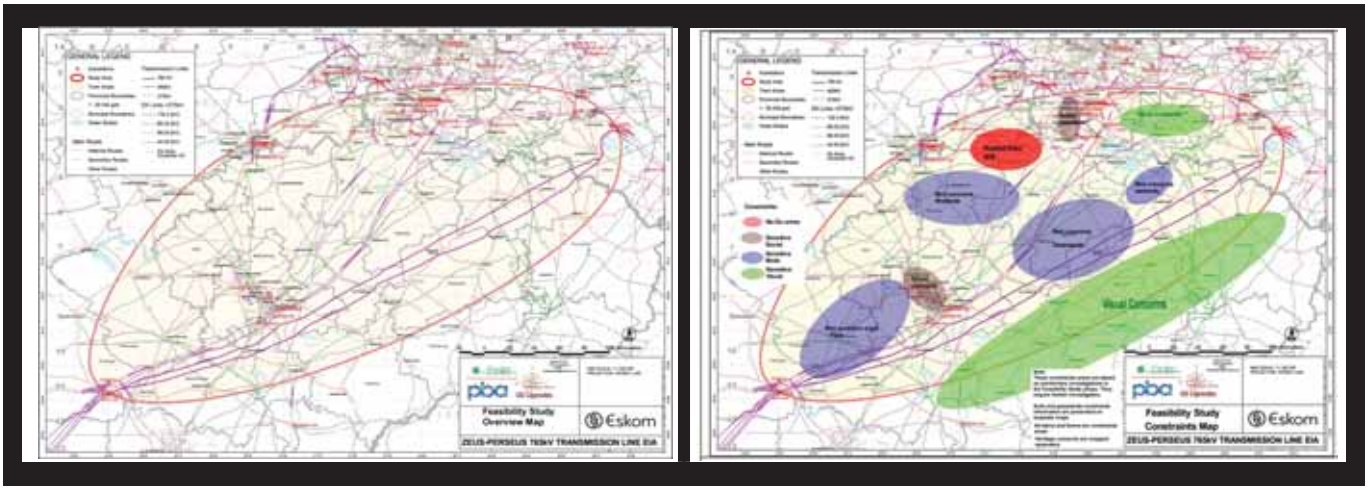
Phases for the Development:
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Dr Louis van Heerden
Company:	Eskom Holdings Limited (Eskom)
Position	Eskom Renewables Research Manager
Telephone:	Office: 011 629 5526
E-mail Address:	Louis.VHeerden@eskom.co.za

Strategically Important Developments

Name of the Development:	Zeus-Mercury and Zeus-Perseus 765kV
Location of the Development:	*Local Area:* Central South Africa *Province:* Mpumalanga; Freestate; Gauteng; North West
Owner of the Development:	Eskom
General Purpose of the Development:	Complete the strengthening of the transmission system into the Cape.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

Most of the power supply to the greater Cape area is provided by the coal fired power stations on the Highveld, mainly in Mpumalanga. As a result, a 'backbone' transmission network from Mpumalanga to the Cape has grown over the years, as demand has increased. Much of this network is now over two decades old and is approaching its peak operational capacity. In addition to the natural growth for electricity demand in the Eastern Cape, a 'step load' (i.e. a rapid jump in electricity demand) is anticipated by May 2009 for the planned aluminium smelter in the Coega Industrial Development Zone (IDZ) near Port Elizabeth. The second step load is expected by May 2012. The substations of Alpha and Zeus are near Standerton, while the Beta and Perseus substations are outside Dealesville, northeast of Bloemfontein. Alpha and Beta are 765kV substations but their capacities are fully utilised and it is proposed to use Zeus and Perseus for the new 765kV network. Two new lines are required in this area and one will

need to be operational by the end of 2008 to meet the demands at Coega. The other is expected within the next 10 years.

Reason for the Strategically Important Nature of the Development:
Coega is part of the Southern Grid that consists of the Eastern Cape network system. Port Elizabeth and East London are the main demand centres. Measures to strengthen the existing network are underway and will help to maintain a reliable supply for the next two years. However, additional 765kV Transmission Power Lines are required between Mpumalanga and Port Elizabeth, and critical sections of the existing network will need these lines to be operational by the end of 2008. A second line is also anticipated over critical sections to meet longer-term demands. The first of these critical sections is between Standerton and Bloemfontein.

Phases for the Development:

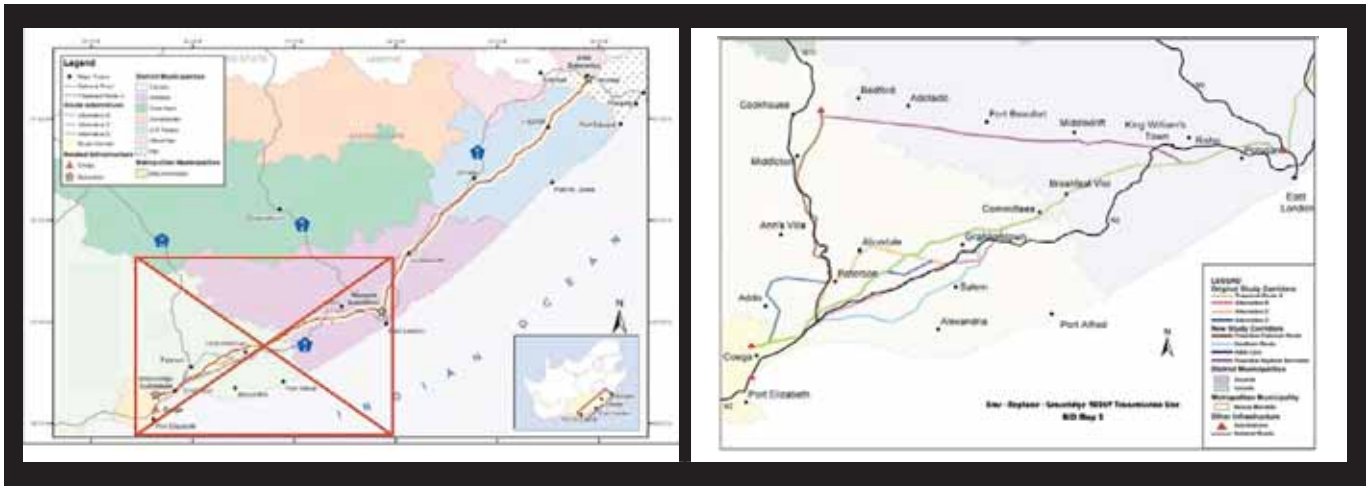
[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Eros-Neptune-Grassridge 400kV
Location of the Development:	*Local Area:* Southern Coast *Province:* KZN; Eastern Cape
Owner of the Development:	Eskom
General Purpose of the Development:	Strengthening of the transmission network in the Port Elizabeth area, in anticipation of developments in the Coega Industrial Development Zone.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The purpose of the proposed transmission line is to provide additional electricity capacity to the Eastern Cape region, with particular focus on the former Transkei and greater East London areas. It is required that the line pass though or near to major centres such as Umtata and Butterworth, in order that these areas may benefit from the power corridor in the future. The alignment of the proposed transmission line from KwaZulu-Natal is motivated by the fact that the existing network requires strengthening, and a line from KwaZulu-Natal to the Eastern Cape would provide a ring feed when operating with the existing power network. Eskom's existing main power corridor runs down the centre of the country (from the coalfields of Mpumalanga, through De Aar and onto the Cape Regions).

Strategically Important Developments

Reason for the Strategically Important Nature of the Development:

Most of the power supply to the greater Cape area is provided by the coal fired power stations on the Highveld, mainly in Mpumalanga. As a result, a 'backbone' transmission network from Mpumalanga to the Cape has grown over the years, as demand has increased. Much of this network is now over two decades old and is approaching its peak operational capacity.

In addition to strengthening the electricity network in the Eastern Cape region, the proposed transmission line will also have the important function of alleviating the supply problems that the Western Cape is currently facing. By providing additional power and a more secure feed to the Eastern Cape, capacity will be freed up to be channelled to parts of the country currently experiencing electricity shortages and network malfunctions.

Phases for the Development:

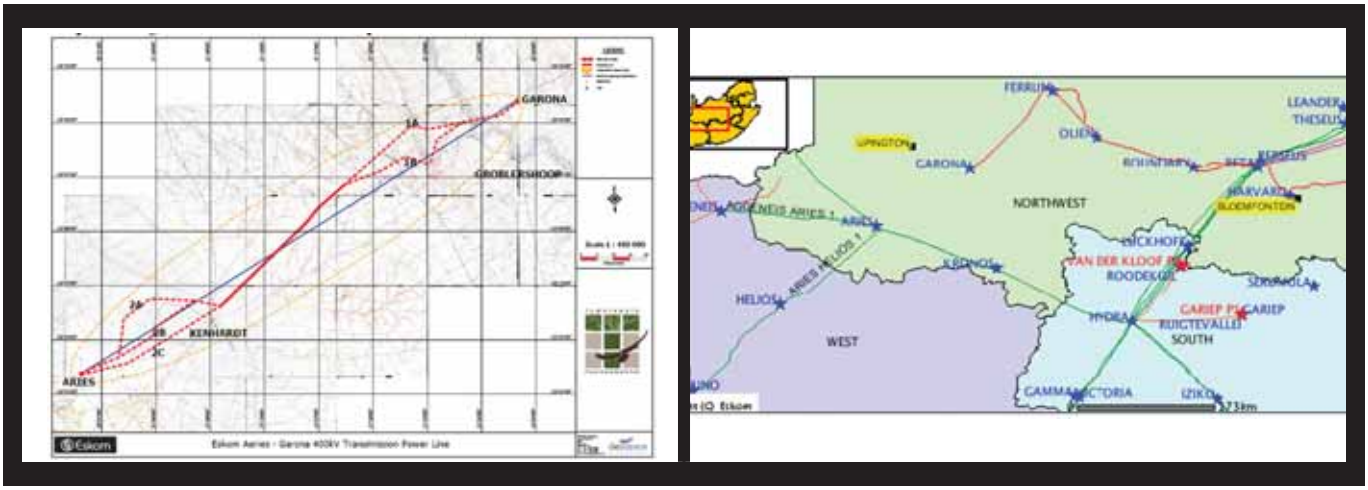
[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Aries-Garona 400kV
Location of the Development:	*Local Area:* North Western part of South Africa *Province:* Northern Cape
Owner of the Development:	Eskom
General Purpose of the Development:	Additional transmission power line infrastructure is required to meet customer load demands in the Cape load centres.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The majority of the terrain that will be affected consists of very sparsely populated areas with low vegetative cover. A comprehensive Environmental Impact Assessment has been completed to ensure that impacts are minimised and mitigation measures proposed for sensitive areas. The nearest populated areas to the study area include the town of Kenhardt and Groblershoop as well as the settlement known as Wegdraai.

Reason for the Strategically Important Nature of the Development:

Most of the power supply to the greater Cape area is provided by the coal fired power stations on the Highveld, mainly in Mpumalanga. As a result, a 'backbone' transmission network from Mpumalanga to the Cape has grown over the

years, as demand has increased. Much of this network is now over two decades old and is approaching its peak operational capacity.

The Cape 400kV transmission network system in the Northern Cape area supports customer loads in the Southern Cape, West Coast, Peninsula and Namaqualand load centres. These four load centres had a combined 2004 peak load demand of 3,540MW. This peak load does not include the supply to Namibia, which can amount to 250MW. Local generation in the Cape region is limited to the Koeberg Nuclear Power Station (1,800MW but only 900MW during refuelling) and the Palmiet Pumped Storage scheme 400MW (near Grabouw). This leaves around 2,450MW of load that presently needs to be fed from sources in Mpumalanga. This also needs to be taken into account when developing the network.

By increasing the supply into the Cape area, the foreseen load growth can be addressed in a suitable and economical manner. Optimisation of the current system is underway (the Cape Strengthening Western Grid project), and will alleviate some problems in the system. The short to medium term needs will be addressed by the increased supply due to the new transmission power lines.

Phases for the Development:

[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za


Eskom

Strategically Important Developments

Name of the Development:	Majuba-Umfolozi 765kV
Location of the Development:	*Local Area:* Eastern part of South Africa *Province:* KwaZulu-Natal; Cape
Owner of the Development:	Eskom
General Purpose of the Development:	Additional transmission power line infrastructure is required to meet customer load demands in the Eastern part of South Africa.

Map showing the location of the development

Description of the Key Features of the Development and its Surroundings:
The transmission line falls within the Provinces of Mpumalanga and KwaZulu-Natal and covers a number of Districts and local municipalities. The main towns include Vryheid, Utrecht and Wakkerstroom. Part of the area is a tourism destination based on birding activities and scenic value.

Reason for the Strategically Important Nature of the Development:
Needed for the strengthening of the eastern part of the transmission grid.

Strategically Important Developments

Phases for the Development:

[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Perseus-Hydra 765kV
Location of the Development:	*Local Area:* Central part of South Africa *Province:* Free State and Northern Cape Provinces
Owner of the Development:	Eskom
General Purpose of the Development:	The proposed transmission power lines are part of a broader network-strengthening programme aimed at increasing available electricity capacity in the Western and Eastern Cape.

Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The study area for this project traverses the Free State and Northern Cape Provinces, and covers approximately 15,940 km^2. The local municipalities potentially affected by the proposed power line include Emthanjeni, Kopanong, Letsemeng, Mangaung, Renosterberg, Thembelihle and Tokoloho. The main towns which are situated within the study area are Dealesville, Petrusberg, Koffiefontein, Oppermans, Luckhoff, Orania, Vanderkloof, Phillipstown and De Aar.

Reason for the Strategically Important Nature of the Development:

Eskom proposes to expand its transmission power line network and associated infrastructure between Dealesville in the Free State Province and De Aar in the Northern Cape Province. The power lines would form part of Eskom's

larger network strengthening programme, which aims to meet increased electricity demand in South Africa, specifically in the Western and Eastern Cape regions.

Phases for the Development:

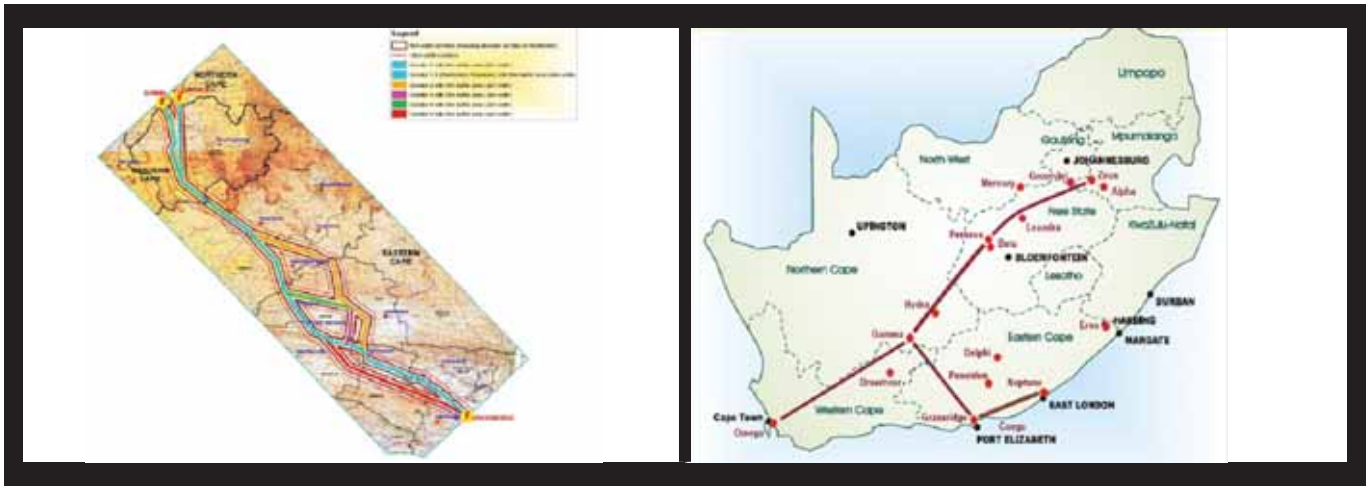
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name: Joyce Mashiteng
Company: Eskom Holdings Limited (Eskom)
Position Transmission Land and Rights Environmental Impact Assessment Manager
Telephone: Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address: joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Gamma-Grassridge 2x765kV Power Line
Location of the Development:	*Local Area:* Western part of South Africa *Province:* Eastern Cape
Owner of the Development:	Eskom
General Purpose of the Development:	Strengthening of the transmission network at critical demand centres.



Maps showing the location of the development

Description of the Key Features of the Development and its Surroundings:

Eskom is planning to strengthen its transmission network by constructing a 765kV transmission line backbone through the centre of the country, which involves constructing new 765kV transmission lines from Standerton to Cape Town, with branch lines to Port Elizabeth. The branch line is necessary to meet current and projected future growth in electricity demand as a consequence of the development of the deepwater harbour at the Port of Ngqura, the associated Coega Industrial Development Zone and incoming industries, many of which have a high demand for electricity.

Strategically Important Developments

Reason for the Strategically Important Nature of the Development:

The purpose and need for the proposed Gamma-Grassridge Transmission Lines is to strengthen the transmission network to the Western and Eastern Cape to meet current and projected future demand, taking due cognisance of the specific requirement to meet the anticipated demand for the Coega IDZ (a key development intervention arising from Government's Growth, Employment and Redistribution Strategy).

Phases for the Development:

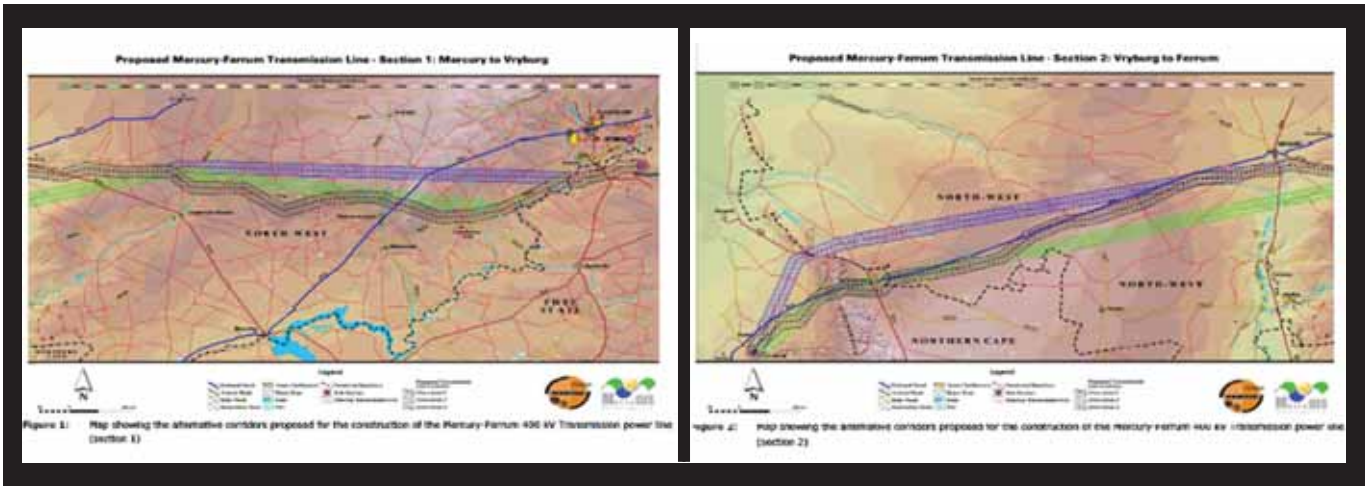
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Mercury-Ferrum-Garona 400kV Transmission Powerline
Location of the Development:	*Local Area:* North Western part of South Africa *Province:* Northern Cape and North West Provinces
Owner of the Development:	Eskom
General Purpose of the Development:	Additional transmission power line infrastructure is required to meet customer load demands in Northern Cape Strengthening (Spoornet).



Maps showing the location of the development

Strategically Important Developments

Phases for the Development:

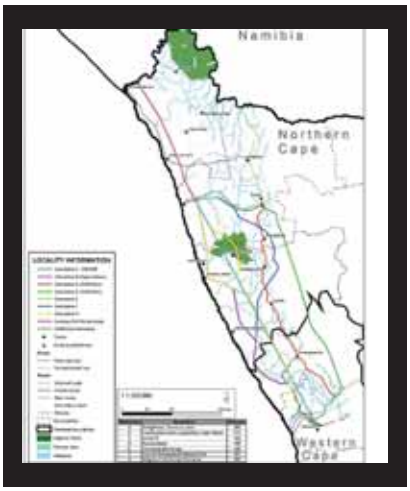
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

Strategically Important Developments

Name of the Development:	Kudu Transmission Power Line integration
Location of the Development:	*Local Area:* North - Western part of South Africa *Province:* Northern Cape
Owner of the Development:	Eskom
General Purpose of the Development:	In order to meet the increasing demand as the South African population and its need for electricity grows, Eskom proposes to import power from Namibia from the 800MW Kudu CCGT power station at Uubvlei, 15km north of Oranjemond. The 800MW Kudu CCGT power station will supply 200MW to Namibia and the balance will be available for integration into the South African grid.



Map showing the location of the development

Description of the Key Features of the Development and its Surroundings:

The proposed development falls within the Northern and Western Cape Provinces. The transmission power-lines will run from the north bank of the Orange River, close to Oranjemond substation, via Gromis substation to Juno substation. Two lines will be constructed from the Namibian side. One line will run only to Oranjemond substation and will be operated at 220kV, until it is necessary to upgrade it to 400kV. The other line is proposed to be constructed directly from the Namibian border via Gromis to Juno substation.

Strategically Important Developments

In the northern part of the study area a large amount of the land on the coastal plain has been disturbed by diamond mining activities to the west. Nature conservation initiatives include the Richtersveld National Park to the east of the study area and the Alexander Bay Lichen Hill Heritage Site, immediately south of Alexander Bay. To the south of Gromis, between the proposed route alternatives, the land is largely used for extensive stock farming. Nature conservation initiatives include the Namaqua National Park, Skilpad Flower Reserve and a proposed reserve in the Knersvlakte. There is arable land in the vicinity of the Olifants River Valley and Lutzville.

Reason for the Strategically Important Nature of the Development:
Eskom proposes to integrate the power from the Kudu CCGT power station into the South African grid via transmission power-lines from the Namibian border. A number of alternative integration options and routes have been proposed to connect to the Western Grid of Eskom and supply the increasing demand in the Cape. This transmission powerline will boost the supply to the Western Cape, which has been plagued by outages in 2006.

Phases for the Development:
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Joyce Mashiteng
Company:	Eskom Holdings Limited (Eskom)
Position	Transmission Land and Rights Environmental Impact Assessment Manager
Telephone:	Office: 011 800 4623 / Cell: 078 457 1594
E-mail Address:	joyce.mashiteng@eskom.co.za

The Pebble Bed Modular Reactor (PBMR):

Descriptions of Strategically Important Developments

INTRODUCTION

It is presently intended that research and development addressing the Pebble Bed Modular Reactor (PBMR) will continue in South Africa. The key facilities involved at this stage are the Demonstration Power Plan (DPP) and the Pilot Fuel Plant (PFP). Environmental Impact Assessments on these two facilities are in distinct stages at the present time, and the Health & Safety reviews for both are awaited (the National Nuclear Regulator being the competent authority, in the latter respect).

Both of the currently proposed PBMR developments have been classified as Strategically Important Developments, due principally to the potential for the PBMR technology to contribute to the future electricity supply in South Africa, but also its possible industrial applications. The two presently proposed PBMR developments are listed in the following pages.

Strategically Important Developments

Name of the Development:	PBMR Demonstration Power Plant
Location of the Development:	*Local Area:* Koeberg *Province:* Cape Town
Owner of the Development:	PBMR / Eskom
General Purpose of the Development:	Demonstration for the pebble bed modular technology.

Map showing the location of the development

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:

The Demonstration Power Plant (DPP) is intended to form the basis for the confirmation of the PBMR technology. At the present time, it is intended that the DPP will be constructed at Koeberg in close proximity to the existing conventional nuclear power plant, although this decision remains open and is being further considered as part of the EIA procedures.

The present version of the DPP involves a facility of 400MW (thermal) capacity, equivalent to 165MW (electric). This is intended to confirm the robust nature of the technology. If successful, decisions will then be made as to the preferred use of the PBMR technology elsewhere in South Africa, and overseas.

Strategically Important Developments

The DPP will depend on a supply of ceramic fuel pellets to be manufactured at the Pilot Fuel Plant, intended to be located at Pelindaba.

Reason for the Strategically Important Nature of the Development:
The PBMR technology is considered to be of strategic importance to the national economy because of the potential for its introduction at a later time to supply electricity, and also in specific industrially-related applications. The latter include applications involving process heat, hydrogen, and other possibilities.

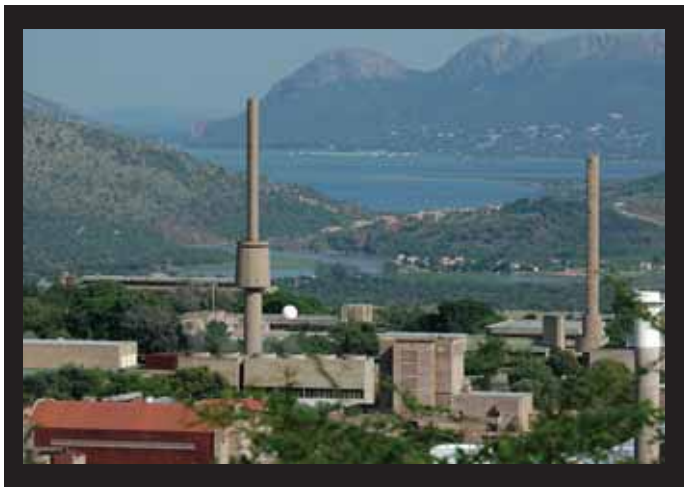
Phases for the Development:
[1] EIA Scoping Report: Completed

Contact Details for Further Information:

Name:	Terence McGowan
Company:	Pebble Bed Modular Reactor (Pty) Ltd.
Position	Senior Consultant
Telephone:	Office: 012 641 1039 / Cell: 083 648 0256
E-mail Address:	terry.mcgowan@pbmr.co.za

Strategically Important Developments

Name of the Development:	PBMR Pilot Fuel Plant
Location of the Development:	*Local Area:* Pelindaba *Province:* Northern Province
Owner of the Development:	PBMR
General Purpose of the Development:	Production of fuel pellets for the pebble bed modular technology.



Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
The Demonstration Power Plant for the PBMR will depend on a supply of ceramic fuel pellets to be manufactured at the Pilot Fuel Plant, intended to be located at Pelindaba.

Reason for the Strategically Important Nature of the Development:
The PBMR technology is considered to be of strategic importance to the national economy because of the potential for its introduction at a later time to supply electricity, and also in specific industrially-related applications. The latter include applications involving process heat, hydrogen, and other possibilities.

Strategically Important Developments

Phases for the Development:

[1] EIA Scoping Report:	Completed
[2] Full EIA:	Completed

Contact Details for Further Information:

Name:	Terence McGowan
Company:	Pebble Bed Modular Reactor (Pty) Ltd.
Position	Senior Consultant
Telephone:	Office: 012 641 1039 / Cell: 083 648 0256
E-mail Address:	terry.mcgowan@pbmr.co.za

Transnet

Strategically Important Developments

public enterprises

Department:
Public Enterprises
REPUBLIC OF SOUTH AFRICA

Transnet:

Descriptions of Strategically Important Developments

INTRODUCTION

Transnet is contributing to the economic growth of South Africa through major infrastructure investments and thereby addressing one of the constraints identified in ASGI-SA namely the cost, efficiency and capacity of the national logistics system.

Transnet is reducing the logistics cost of freight transport to make South Africa competitive in the global economy, through investments of strategic importance.

Sectors included in this process range from the exporting of iron ore at the Port of Saldanha, various other port expansion operations, and strategic elements of the rail expansion programme. The national port and rail infrastructure development plan provides the framework within which these developments take place. An integrated approach is followed to ensure that rail planning is aligned with port planning.

The most critical Transnet SIDs are listed in the following pages.

Strategically Important Developments

Name of the Development:	Expansion of container handling facilities in the Port of Durban
Location of the Development:	*Local Area:* Port of Durban *Province:* KZN
Owner of the Development:	Transnet Limited
General Purpose of the Development:	To increase the container handling capacity in the Port of Durban.

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
This project involves the completion of a feasibility study for expansion of container handling facilities in the Durban Bayhead area.

An Environmental Impact Assessment (EIA) will be carried out for the project.

It is proposed that the development will be done in two phases. It will consist of a dig-out basin in the Bayhead area (currently used for rail purposes), with related infrastructure and back of port facilities to support the terminal. It will also entail a major railnetwork linked to the terminal to transport most of the containers to Gauteng via rail.

Strategically Important Developments

There are several challenges faced by this development, notably the ecological challenges to safely navigate ships to the Bayhead area. All of this will still have to be studied during the EIA process.

Phases for the Development:

[1] Environmental Impact Assessment Process underway.

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Projects
Position:	General Manager: Environmental Management
Telephone:	Office: 011 308 3431 / Cell: 082 657 2320
E-mail Address:	christelle.vandermerwe@transnet.net

Strategically Important Developments

Name of the Development:	Pier 1 Conversion, Durban
Location of the Development:	*Local Area:* eThekwini Municipality *Province:* KwaZulu-Natal
Owner of the Development:	Transnet Limited
General Purpose of the Development:	Port facilities for container handling operations at Pier 1, Port of Durban.

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
The site is located at Pier 1 in the Port of Durban. Pier 1 was originally a multi-purpose terminal. In 1999, KZN DAEA issued a Record of Decision that authorised the conversion of Pier 1 to a container terminal.

Reason for the Strategically Important Nature of the Development:
Container handling facilities are currently reaching the limit of their handling capabilities in all the ports in the country. Durban handles more containers than any other port in South Africa, at the present time. Pier 1 will provide urgent relief for the current container capacity challenges in the Port of Durban.

Strategically Important Developments

Phases for the Development:

[1] EIA Scoping Report:	ROD issued by DAA 1999
[2] Full EIA:	Completed 2005
[3] Commencement of construction:	Commenced 2005

Contact Details for Further Information:

Name:	Khozi Zondi
Company:	National Ports Authority
Position	Environmental Manager
Telephone:	Office: 031 361 8751 / Cell: 083 262 8682
E-mail Address:	khosiz@npa.co.za

Strategically Important Developments

Name of the Development:	New Multi Products Pipeline (NMPP)
Location of the Development:	*Local Area:* From Durban to Gauteng *Province:* KwaZulu-Natal, Free State, Mpumalanga and Gauteng
Owner of the Development:	Transnet Limited
General Purpose of the Development:	To provide sufficient capacity to move product from the coastal terminal to the inland network.

Digital pictures of the area of the development

Description of the Key Features of the Development and its Surroundings:

The strategically important NMPP Project proposes to construct a trunkline and interrelated pipelines totaling approximately 700 km length, new pump stations and delivery depots throughout the KwaZulu-Natal, Free State, Gauteng and Mpumalanga provinces. The new pipelines will be engineered and installed in accordance with internationally accepted standards and procedures, as well being cognisant of South African regulations.

Reason for the Strategically Important Nature of the Development:

Economic growth in South Africa has created an increased demand for petroleum products, particularly in the Gauteng Province. The current Durban-Johannesburg Pipeline is 12 inch in diameter and will become capacity constrained over the next few years due to the increase in product demand and will thereafter be incapable of

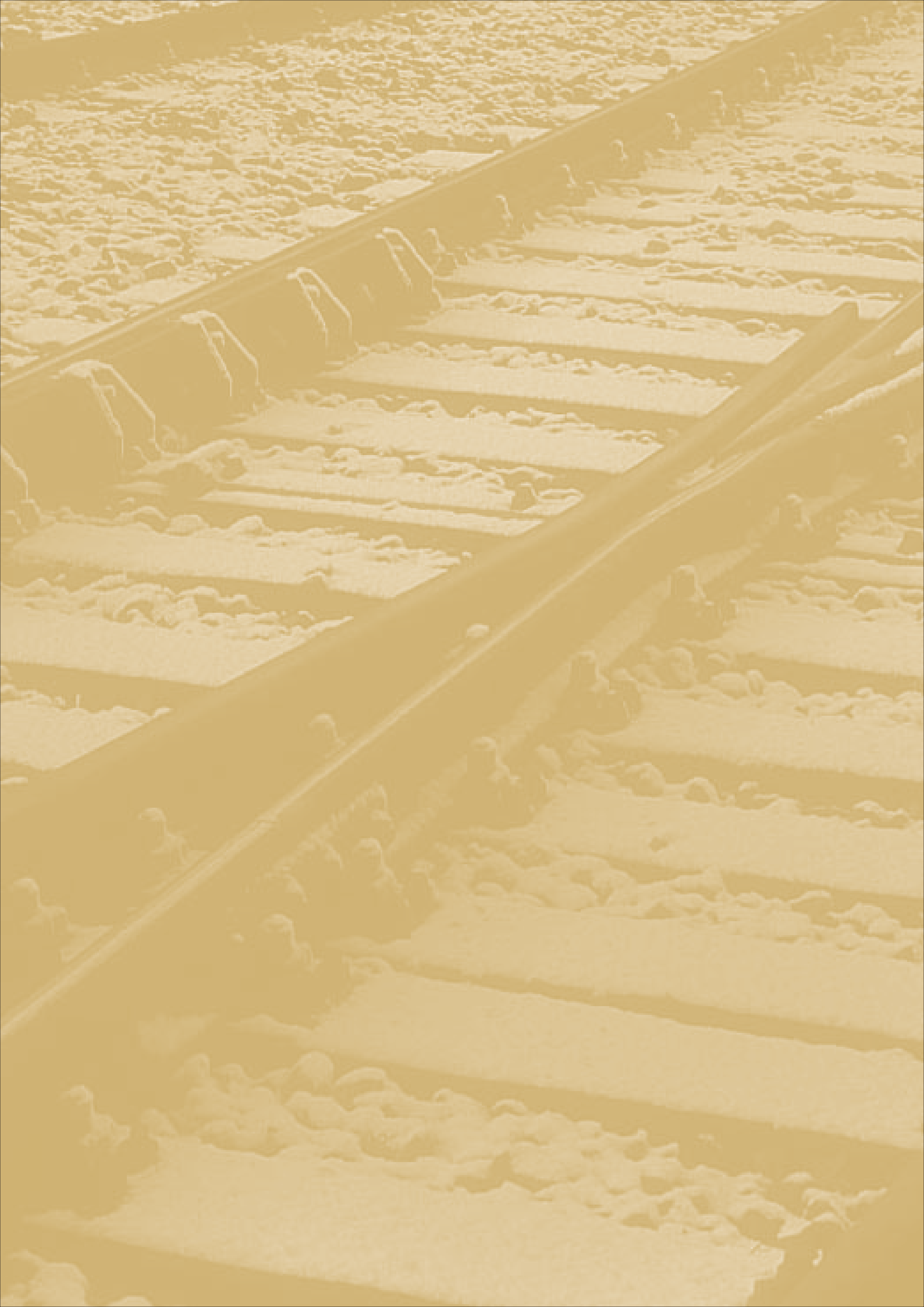
supplying the needs of the Petronet's clients. Petronet therefore propose that new pipelines and associated facilities with greater capacity be constructed which will increase the capacity and flexibility of their existing pipeline network. This project will be known as the New Multi-Products Pipeline (NMPP) project.

Phases for the Development:

[1] Environmental Impact Assessment Process underway.

Contact Details for Further Information:

Name:	Mr Carlos Galego
Company:	Transnet Limited
Position:	Project Director for NMPP project
Telephone:	Office : 011-233 3839 / Cell : 083 570 0598
E-mail address:	Carlos.Galego@fluor.com



Strategically Important Developments

Name of the Development:	Port of Ngqura
Location of the Development:	*Local Area:* Nelson Mandela Metropolitan area *Province:* Eastern Cape Province
Owner of the Development:	Transnet Limited
General Purpose of the Development:	To make the new deep water port operational to service the Eastern Cape region, the Coega Industrial Development Zone.

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
Construction of a new deep water port at the mouth of the Coega River. A phased approach to the development of the port has been adopted. Initially the main port structures were developed which included the eastern breakwater, berths for dry bulk ships and two berths for container ships.

Inland, the port is surrounded by the developing Coega Industrial Development Zone.

Reason for the Strategically Important Nature of the Development:
The container terminal will assist South African Ports to meet some of the expected demand for container facilities in the very short term, that cannot be met by other South African ports whose container terminals are already

running near to full capacity. As a deep water port it will allow containers from larger container ships travelling from international ports to be transferred to smaller container vessels servicing ports along the African coast line.

Very importantly, the Port of Ngqura is the gateway for industries in the IDZ to access foreign markets.

Phases for the Development:

[1] Environmental Impact Assessment:	Completed
[2] Commencement of construction:	Commenced 2002

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Limited
Position:	General Manager: Environmental Management
Telephone:	Office: 011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net

Strategically Important Developments

Name of the Development:	Expansion of MPT Berths and Container Terminal for the Port of Richards Bay
Location of the Development:	*Local Area:* Umhlathuze Municipality *Province:* KwaZulu-Natal
Owner of the Development:	Transnet Limited
General Purpose of the Development:	Provision of additional berthing facilities at the Port of Richards Bay to increase its cargo handling capacity.

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
The development involves the provision of additional berths and back-of-quay hard surface areas for the stacking and temporary storage of cargo. It also includes all marine and land-side requirements such as shipping access and support infrastructure (rail, roads, buildings and services).

Reason for the Strategically Important Nature of the Development:
Richards Bay is presently South Africa's largest dry bulk port (coal). Its container handling capacity is however minimal. Projected increases in container volumes in the near future and beyond make it imperative that the container facilities are expanded. To do this will require the existing MPT terminal to be moved, and additional MPT facilities to be created. The rail network to support the expansionof the port will also have to be considered at a later stage.

Strategically Important Developments

Phases for the Development:

[1] Environmental Impact Assessment process underway

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Limited
Position:	General Manager: Environmental Management
Telephone:	Office: 011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net

Strategically Important Developments

Name of the Development:	Expansion of Bulk Iron Ore Terminal Saldanha (Phase 2)	
Location of the Development:	*Local Area:*	Saldanha
	Province:	Western Cape
Owner of the Development:	Transnet Limited	
General Purpose of the Development:	To increase the capacity of the iron ore terminal at the Port of Saldanha from 47 to 93 Million Tons per Annum.	

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
The expansion involves the provision of additional storage capacity, an additional three stacker-reclaimers and two ship berths together with associated infrastructure. The additional stockpile area will be provided by reclaiming land into Big Bay at Saldanha. The channel will be enlarged to allow larger iron ore carriers to access the facility.

Reason for the Strategically Important Nature of the Development:
The facility, together with the Sishen – Saldanha Ore Line, is dedicated to the export of iron ore from mines in the Northern Cape Province to overseas clients. The export of iron ore is an important foreign exchange earner for South Africa.

Strategically Important Developments

Phases for the Development:
Environmental Impact Assessment process underway

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Projects
Position:	General Manager: Environmental Management
Telephone:	Office: 011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net


CR
96 090
139
A

Strategically Important Developments

Name of the Development:	Expansion of the Sishen - Saldanha Ore Libe (Phase 2)	
Location of the Development:	*Local Area:*	Linear development between Sishen and the Port of Saldanha.
	Province:	Western Cape and Northern Cape
Owner of the Development:	Transnet Limited	
General Purpose of the Development:	To increase the capacity of the line from 41 to 93 Million Tons per Annum.	

Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
The 861km long line is dedicated to transport iron ore from mines in the Northern Cape to the Port of Saldanha. To increase the capacity of the line additional trains will have to be operated and an additional 20 passing loops must be constructed along the line.

Reason for the Strategically Important Nature of the Development:
The rail line, together with the Port of Saldanha, is dedicated to the export of iron ore from mines in the Northern Cape Province to overseas clients. The export of iron ore is an important foreign exchange earner for South Africa.

Strategically Important Developments

Phases for the Development:

[1] Environmental Impact Assessment process underway.

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Limited
Position:	General Manager: Environmental Management
Telephone:	Office: 011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net

Strategically Important Developments

Name of the Development:	Cape Town Container Terminal Expansion
Location of the Development:	*Local Area:* Cape Town *Province:* Western Cape
Owner of the Development:	Transnet Limited
General Purpose of the Development:	Increase capacity of the Container Terminal to 1.6 million TEU per annum.

Digital pictures of the area of the development

Description of the Key Features of the Development and its Surroundings:
Resurfacing of existing area to accommodate additional container stacks. Construction of new staging area for trucks, remodelling of the entrance and exit points to the terminal, provision of additional container moving equipment.

Reason for the Strategically Important Nature of the Development:
The current configuration of container stacking area is limiting the number of containers that can be handled. Additional capacity is urgently required to handle the forecast increase in container throughput. Cape Town terminal mainly service the Western Cape province and it's expansion is urgently needed to support the growing economy of the Western Cape.

Strategically Important Developments

Phases for the Development:

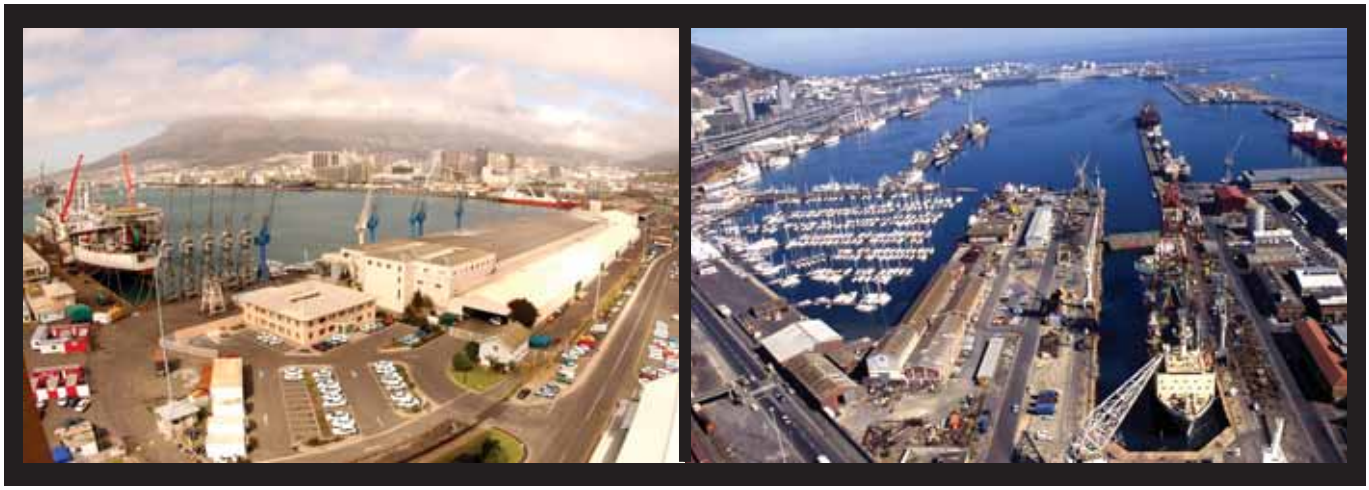
[1] Environmental Impact Assessment process underway

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Limited
Position:	General Manager: Environmental Management
Telephone:Office:	011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net

Strategically Important Developments

Name of the Development:	Cape Town Berth Deepening
Location of the Development:	*Local Area:* Cape Town *Province:* Western Cape
Owner of the Development:	Transnet Limited
General Purpose of the Development:	Increase depth of Ben Schoeman Dock and extend quay structure to accommodate 6th generation container vessels.



Digital picture of the area of the development

Description of the Key Features of the Development and its Surroundings:
Dredging of Ben Schoeman Dock to –15.5m CD to accommodate 6th generation container vessels. Extension of the quay infrastructure into Ben Schoeman Dock by 10m to accommodate super post panamax cranes.

Reason for the Strategically Important Nature of the Development:
To enable the port to handle the next generation of container vessels.

Phases for the Development:
[1] Environmental Impact Assessment process underway

Strategically Important Developments

Contact Details for Further Information:

Name:	Christelle van der Merwe
Company:	Transnet Limited
Position:	General Manager: Environmental Management
Telephone:Office:	011 308 3431 / Cell: 082 657 2320
E-mail address:	christelle.vandermerwe@transnet.net