Report No: 4263/401629

ENVIRONMENTAL IMPACT ASSESSMENT

OPEN CYCLE GAS TURBINE POWER PLANT IN MOSSEL BAY: ADDITIONAL UNITS

FINAL SCOPING REPORT

November 2006

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PROJECT DETAILS

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TITLE	Environmental Impact Assessment. Open Cycle Gas Turbine Power Plant in Mossel Bay: Additional Units
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CLIENT	Eskom Holdings Limited
PROJECT NAME	Mossel Bay OCGT Additional Units
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EXECUTIVE SUMMARY

BACKGROUND AND INTRODUCTION

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 by the Department of Environmental Affairs and Development Planning (DEA&DP) in December 2005. The generating capacity of the OCGT power plant was based on an annual electricity growth of 2.6%. However, in March this year, it was established that the growth rate was actually 4.1%. In order to meet the higher growth rate, Eskom is proposing to upgrade the OCGT power plant (which is currently under construction) by adding three additional OCGT generating units immediately adjacent to it. Accordingly, in terms of the National Environmental Management Act (NEMA) (No. 107 of 1998), Eskom has appointed Ninham Shand Consulting Services to undertake this EIA for the proposed three additional OCGT units and any additional supporting infrastructure.

PROJECT DESCRIPTION

The proposed additional units would be located immediately to the west of the present OCGT power plant and will be incorporated into the general OCGT power plant precinct i.e. the entire area would be fenced off with a single access road.

Associated with the three generating units would be:

- A fuel storage facility with a total storage capacity of 5.4 million litres;
- Two conservancy tanks, each with a capacity of 6 000 litres;
- A control room;
- A fuel supply pipeline;
- A water supply pipeline; and
- A High Voltage (HV) yard.

At this stage of the feasibility and planning process, it is likely that the fuel storage and conservancy tanks would be located between the existing OCGT units and the proposed additional units. Fuel and water supply would be by means of continuations of the existing pipelines within the OCGT precinct. The HV yard would be located immediately north of the proposed two units and would enable the transfer of the electricity generated via bus bars to the HV yard associated with the OCGT power plant currently under construction. From there, electricity would be transported to the Proteus substation via the authorised, and presently being constructed, 400 kV transmission lines.

ALTERNATIVES

The proposed additional units are essentially an upgrading of the OCGT power plant and accordingly alternative geographical locations will not be considered in this EIA. In terms of specific sites, the area to the west of the OCGT power plant is the only feasible option. This is

due to the OCGT HV yard to the north, PetroSA's expansion plans to the east and the potential expansion of the landfill site to the south.

Alternative technologies for this capacity increase will not be considered in this Scoping and EIA process. The power station currently under construction comprises specific gas turbine technology, hence from an integration point of view, it is required to utilise the same technology for the additional generating units. OCGT technology is off-the-shelf, and using this technology, will assist in meeting the deadline of winter 2008 for the additional units to be operational.

Process alternatives (e.g. measures to abate oxides of nitrogen) have been examined in the previous EIA process and the alternatives selected during that process will be implemented for the proposed OCGT units as well. Hence process alternatives will not be further investigated as part of this Scoping and EIA process.

Specific mitigation measures will be identified and assessed during the EIA Phase.

PUBLIC PARTICIPATION

The approach to the public participation has been informed by the NEMA EIA regulations (Regulation No.385). The key components of the public participation during the Scoping Phase are summarised below:

- A meeting with the landowners of the proposed site on 30 August 2006. The purpose of the meeting was to describe the proposed activities and to provide a consent form for the landowners to complete (the completed consent form was submitted to the environmental authorities as an annexure to the Application Form).
- Placing a media notice in the local newspaper, the Mossel Bay Advertiser on 6 October 2006. The media notice informed the public about the proposed project, invited the public to register and comment, notified the public of the lodging of this Draft Scoping Report in local libraries and informed them of the intention to present the Draft Scoping Report to the Environmental Liaison Committee that was established for the existing OCGT power plant. A copy of the media notice, which was published in English and Afrikaans, can be found in Annexure A.
- Lodging the Draft Scoping Report for public review and comment at the Mossel Bay and D'Almeida Public Libraries on 9 October 2006. In addition, the report was placed on the Eskom and Ninham Shand websites at www.eskom.co.za/eia and www.ninhamshand.co.za, respectively.
- Posting a letter to all I&APs who were registered during the previous EIA process (for the authorised OCGT power plant) to inform them of the proposed activities and of the availability of the report. A copy of the letter can be found in Annexure F. A copy of the Executive Summary of this Draft Scoping Report was included with the letter.
- Erecting an on-site notice in an appropriate place, giving notification of the EIA process being undertaken.
- Meeting with the existing Environmental Liaison Committee (ELC) for the OCGT power plant, to present the findings of this Draft Scoping Report and to elicit questions and

comments on the proposed activities. This occurred on 12 October 2006, when a slot was provided on the agenda of a scheduled ELC meeting.

- Recording comments, queries and issues raised as well as responses thereto. Annexure G provides a copy of the notes taken on 12 October 2006, together with the complete minutes of the ELC meeting. No other responses were received during the comment period provided.

CONCLUSION AND WAY FORWARD

The Final Scoping Report identifies the environmental issues and concerns raised in response to the proposed addition of two OCGT units adjacent to the OCGT power plant currently under construction near the PetroSA facility in Mossel Bay. The issues and concerns were informed largely by the EIA process that was undertaken for the present OCGT power plant.

As a result of the scoping process undertaken thus far, the following specialist studies have been identified as necessary:

- Air quality study;
- Ecological study
- Visual impact assessment;
- Noise study;
- Traffic study; and
- Social study.

These studies will assist in informing the EIA Phase, along with essential contributions from the other components of the project team. Please refer to Annexure B. for the draft Plan of Study for EIA (PoSEIA). The draft PoSEIA describes the proposed approach to the EIA Phase.

This Final Scoping Report is being submitted to DEA&DP for their consideration and acceptance. Once such acceptance is received, the EIA Phase can continue and a Draft EIA Report will be compiled and subjected to public review. Comments received will be addressed and captured in a Final EIA Report, which will then be submitted to DEA&DP for their final consideration and decision-making.

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GLOSSARY OF TERMS

Base load	Base load refers to the electricity generated to meet the continuous need for electricity at any hour of day or night.
Environment	The external circumstances, conditions and objects that affect the existence and development of an individual, organism or group; these circumstances include biophysical, social, economic, historical, cultural and political aspects.
Environmental impact	An environmental change caused by some human act.
Environmental Impact Assessment (EIA)	A study of the environmental consequences of a proposed course of action.
Environmental Impact Report (EIR)	A report describing the assessment of the environmental consequences of a proposed course of action.
Peaking	Peaking refers to the periods between 07:00 and 09:00 in the mornings and 18:00 and 20:00 in the evenings when electricity use is at its greatest.
Public Participation Process	A process of involving the public in order to identify needs, address concerns, choose options, plan and monitor a proposed project, programme or development.
Red Data Book (South African)	An inventory of rare, endangered, threatened or vulnerable species of South African plants and animals.
Scoping	A procedure for determining the extent of, and approach to, an EIA, used to focus the EIA to ensure that only the significant issues and reasonable alternatives are examined further.
Scoping Report	A report that describes the proposed project and documents the processes, issues and public participation associated with the Scoping Phase.

ABBREVIATIONS

BID	Background Information Document
CARA	Conservation of Agricultural Resources Act (No. 43 of 1983)
DEA&DP	Department of Environmental Affairs and Development Planning (provincial)
DEAT	Department of Environmental Affairs and Tourism (national)
ECA	Environment Conservation Act (No. 73 of 1989)
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EIR	Environmental Impact Report
ELC	Environmental Liaison Committee
GTL	Gas-to-liquid
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape
I&APs	Interested and Affected Parties
IEP	Integrated Energy Plan
IEM	Integrated Environmental Management
ISEP	Integrated Strategic Electricity Planning
Km	Kilometer
kV	Kilovolts
m	Metres
m^3	Cubic metres
MW	Megawatt
NEMA	National Environmental Management Act (No. 107 of 1999)
NERSA	National Energy Regulator of South Africa
NIRP	National Integrated Resource Plan
NO_x	Oxides of nitrogen
OH	Open House
OCGT	Open Cycle Gas Turbine
ppm	Parts per million
RoD	Record of Decision
SO_x	Oxides of sulphur
ToR	Terms of Reference
VIA	Visual Impact Assessment

1 INTRODUCTION

1.1 BACKGROUND

Eskom Holdings Limited (Eskom) is the primary supplier of electricity in South Africa, providing approximately 95% of the electricity consumed. The decision to pursue an expansion of Eskom's electricity generation capacity was based on national policy and informed by on-going strategic planning undertaken by the national Department of Minerals and Energy (DME), the National Energy Regulator of South Africa (NERSA) and Eskom. The hierarchy of policy and planning documentation that reflects this state of affairs is illustrated by Figure 1 and is further described below.

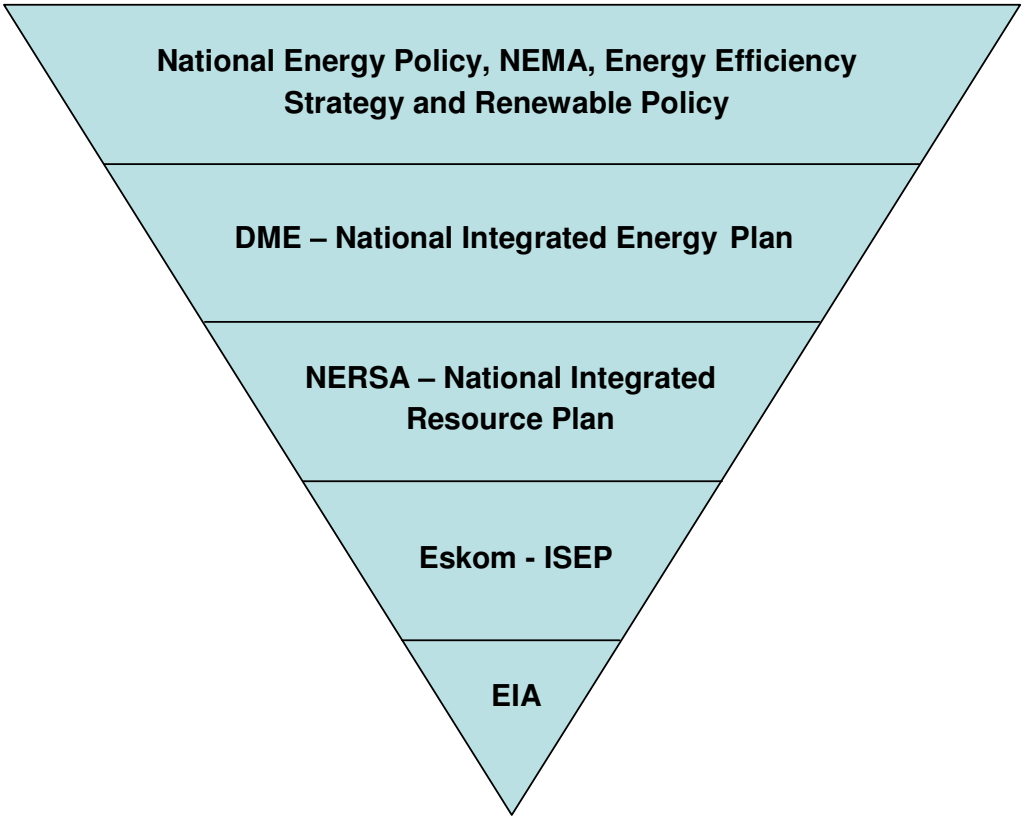

Figure 1: Hierarchy of policy and planning documents

1.1.1 White Paper on the Energy Policy of the Republic of South Africa - 1998

Development within the energy sector in South Africa is governed by the White Paper on a National Energy Policy, published by DME 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;
- Stimulating economic development;
- Managing energy-related environmental and health impacts; and
- Securing supply through diversity.

Furthermore, the National Energy Policy identified the need to undertake an Integrated Energy Planning (IEP) process in order to achieve a balance between the energy demand and resource availability, whilst taking into account the health, safety and environmental[1] parameters. 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.

1.1.2 Integrated Energy Plan (IEP) – 2003

The DME 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 a security of supply and minimising 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 has concluded that, based on energy resources available in South Africa, coal will be the primary fuel source for the current expansion period.

1.1.3 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 objective of the NIRP is 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. These include:

- 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 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.

[1] Environmental parameters include economic and social aspects.

The outcome of the NIRP determined that while the coal-fired option of generating electricity would still be required over the next 20 years, additional energy generation facilities would be required by 2007.

1.1.4 Eskom Integrated Strategic Electricity Planning (ISEP) – 2005

Eskom applies an Integrated Strategic Electricity Planning (ISEP) process to identify long-term options regarding both the supply and demand sides of electricity provision in South Africa. The most recently approved ISEP plan (October 2005) identifies the need for increased peaking[2] supply by about 2006/7 and base load[3] by about 2010. Figure 2 below illustrates Eskom's "project funnel", which shows the range of supply options being considered by Eskom to meet the increasing demand for electricity in the country[4]. There are currently 34 projects in the project funnel ranging from research projects to new-build projects.

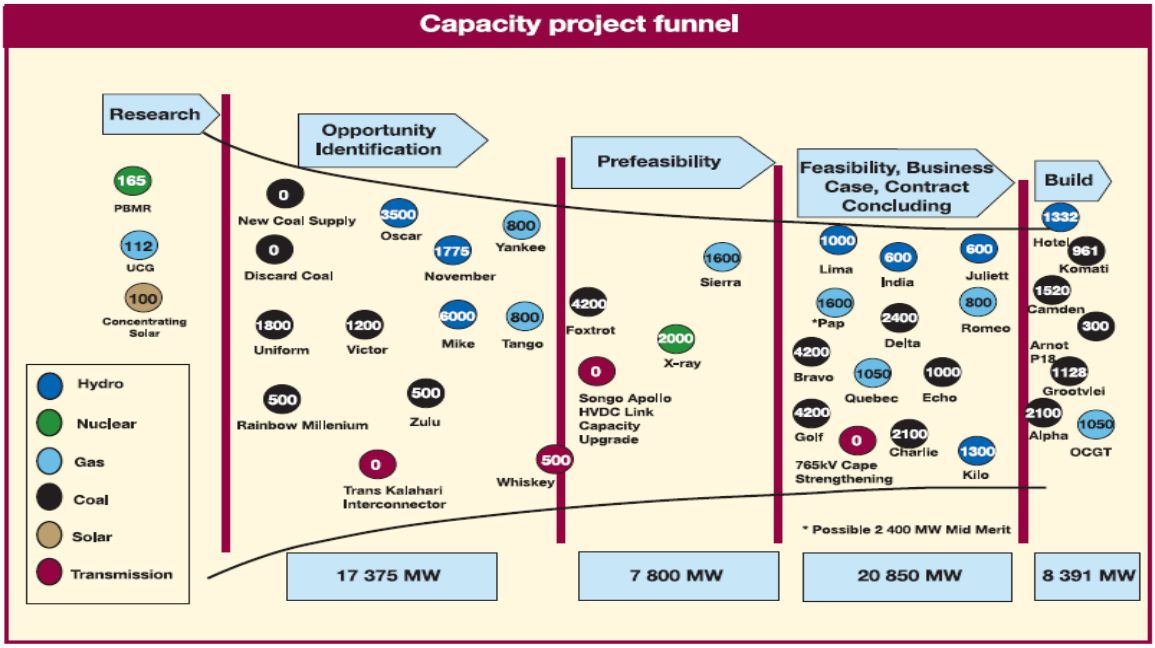

Figure 2: Project funnel

The OCGT power plants currently being constructed in Mossel Bay and Atlantis as well as the proposed additional units fall within the "Build" portion of the project funnel.

1.2 THE PROPOSED PROJECT

As a consequence of the above-mentioned forward planning process, two OCGT power plants were proposed in the Western Cape, one in Atlantis near to Cape Town and the other adjacent

[2] Peaking refers to the periods between 07:00 and 09:00 in the mornings and 18:00 and 20:00 in the evenings when electricity use is at its greatest.
[3] Base load refers to the electricity generated to meet the continuous need for electricity at any hour of day or night.
[4] Please note that within each category (e.g. the "prefeasibility" category) of the funnel, the position of a project relative to other projects within that category is not an indication of its state of relative progress.

to the PetroSA facility (previously known as Mossgas) near Mossel Bay. Both these OCGT plants were authorised by the provincial Department of Environmental Affairs and Development Planning (DEA&DP) in December 2005 and construction commenced in February 2006.

Since then, there has been continued high growth in the demand for electricity[5]. Using the planning processes in place, Eskom has established that there is a need for additional peaking capacity in order to meet the revised projected growth in demand for electricity nationally. The most feasible option to meet these needs by the winter of 2008 is to install an additional 1050 MW of open cycle gas turbine generating capacity. It is proposed that this capacity be added to the Atlantis and Mossel Bay plants, both of which are currently under construction.

In order to achieve the above, Eskom therefore proposes to construct up to three additional turbine units of a nominal capacity of 150 MW each, to increase the capacity of the existing Mossel Bay OCGT power plant currently under construction. The balance of the required additional capacity is proposed to be constructed at the Atlantis OCGT site, which is the subject of a separate EIA.

Each unit would generate approximately 150 MW of electricity, meaning that the proposed activity is listed in terms of Government Notice No. R. 387, under Chapter 5 of the National Environmental Management Act (NEMA) (No. 107 of 1998), and accordingly requires authorisation from the competent environmental authority via an Environmental Impact Assessment (EIA) process. In this case the competent environmental authority is DEA&DP (see section 1.3 below and Annexure E in this regard).

This EIA is being undertaken for three additional generating units at the Mossel Bay OCGT power plant. As there is insufficient space within the precinct of the power plant currently being constructed, it is proposed to locate the additional units immediately to the west of the existing power plant site, on Portion 1 of Farm Patrysfontein, Number 228. Please refer to Annexure C for a locality map. The site of the OCGT power plant is located approximately 13 km west of the town of Mossel Bay and approximately 1 km northwest of the PetroSA facility. A letter of consent from the landowner, as contemplated in Regulation 16 of Government Notice No. R. 385, under Chapter 5 of NEMA, has been received and submitted with the application form to the relevant environmental authorities.

The Mossel Bay OCGT power plant would be fuelled with liquid distillate fuel (kerosene-based or diesel) from the adjacent PetroSA gas-to-liquid (GTL) facility. No new transmission lines would need to be constructed. Each generating unit would be connected to a transformer in an extended high voltage (HV) yard that would step up the voltage of the electricity generated before feeding it into the approved 400 kV transmission lines currently under construction and thus into the Proteus substation.

[5] 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 4,1%.

1.3 THE EIA PROCESS TO DATE

The Environmental Impact Assessment (EIA) being undertaken was initiated in September 2006 with the completion and submission of the NEMA EIA Application Form. The purpose of the Application Form was to:

- register the proposed project with the relevant environmental authority;
- identify those proposed activities that would require environmental authorisation; and
- identify and motivate for any exemption from the EIA regulations.

In this case, a motivation for exemption from having to consider alternatives was submitted with the NEMA EIA Application Form. Alternatives are discussed in more detail in Section 3.2 of this report.

Because Eskom is a State Owned Enterprise, the national Department of Environmental Affairs and Tourism (DEAT) is the default competent environmental authority. However, due to the provincial DEA&DP having adjudicated on the initial Mossel Bay OCGT application and their concomitant familiarity with the implications of the proposed additional units, DEAT has delegated this responsibility to DEA&DP. See the letter from DEA&DP of 17 October 2006 in this regard, included as Annexure E of this report.

The sequence of documents produced thus far in the EIA process is:

- The NEMA EIA Application Form, which represented the formal initiation of the EIA process;
- A Draft Scoping Report that was distributed for public comment during October 2006; and
- This finalised Scoping Report.

The Draft Scoping Report of October 2006 has been finalised in light of comments received after the first round of public engagement (discussed further in Section 5) and is being submitted in its present final form to DEA&DP for their consideration.

1.4 APPROACH TO THE PROJECT

Figure 3 below illustrates the EIA process that is being followed for the proposed development, and the project is currently awaiting acceptance by DEA&DP of the Final Scoping Report, i.e. for the Scoping Phase of the process.

The EIA process, as described in Chapter 3, Part 3 of the NEMA regulations (Regulation 385) comprises:

- The submission of an Application Form;
- A Public Participation Process;
- The compilation and submission of a Scoping Report;
- The compilation and submission of a Plan of Study for EIA; and

- The compilation and submission of an EIA Report.

This report documents the Scoping Phase and has been finalised in light of public engagement and submitted to the environmental authority. The EIA Phase will now follow the Scoping Phase, once DEA&DP has accepted the Scoping Report and Plan of Study for EIA.

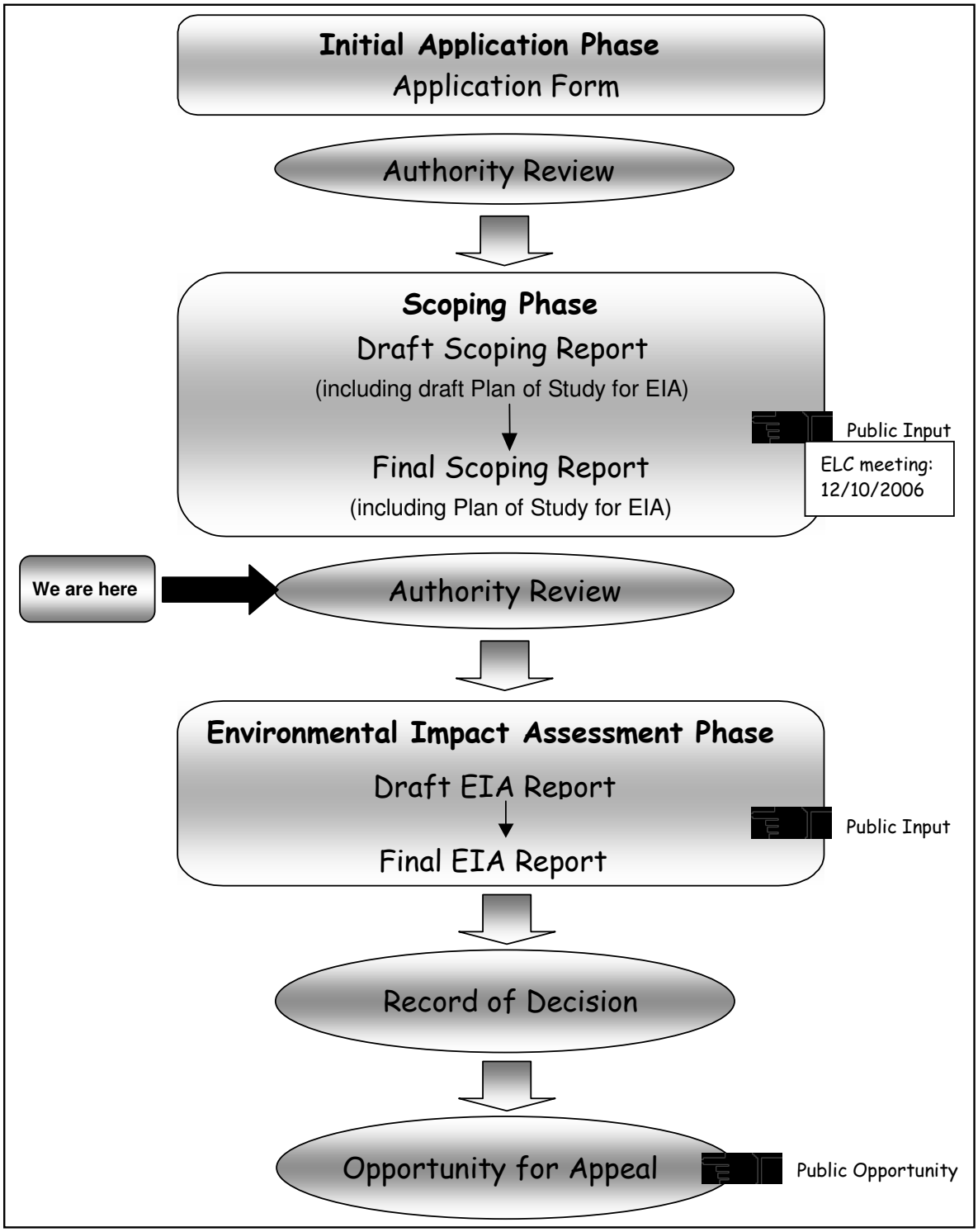

Figure 3: The EIA Process

1.4.1 Authority involvement

Apart from DEA&DP, there are other authorities who would need to be informed about the proposed project and be provided with an opportunity to comment. These include Heritage Western Cape, the Department of Water Affairs and Forestry, the Mossel Bay Municipality and the Air Pollution Control Officer (APCO): Western Cape. These authorities will be provided with copiers of this Final Scoping Report, as a precursor to their needing to comment on the Final EIA Report when it becomes available.

1.4.2 Decision making

Should this Final Scoping Report and Plan of Study for EIA be accepted by DEA&DP, the EIA Phase of the EIA process can commence. An EIA Report documents the EIA Phase, and it is on this report that DEA&DP would base their decision on whether to authorise the proposed activity or not.

1.5 ASSUMPTIONS AND LIMITATIONS

- Strategic, forward planning deliberations are reflected in the IEP, NIRP and ISEP planning processes and do not form part of this EIA.
- Eskom's internal site screening process, as described in Section 3.2.3 of this report, together with the EIA process undertaken for the initial OCGT project, form the point of departure for this EIA process.
- While there is a requirement to examine the "no go" alternative, this option would amount to there being no changes in the regional biophysical and socio-economic situation, or in the national electricity generation situation. In effect, this proposed project will be assessed against the "no go" alternative and accordingly, the "no go" alternative is not being evaluated at the same level of comparative detail as the project alternatives.

1.6 STRUCTURE AND SCOPE OF THIS REPORT

This report is structured as follows:

Chapter One	*Provides the introduction, legislative requirements and background to the study*
Chapter Two	*Describes the study area*
Chapter Three	*Describes the project components*
Chapter Four	*Describes the potential impacts and specialist studies*
Chapter Five	*Describes the public participation process*
Chapter Six	*Concludes the report and provides recommendations*

2 STUDY AREA

This chapter is informed primarily by the reporting and specialist studies that were undertaken for the initial OCGT EIA process.

2.1 FLORA

The Cape Action Plan for the Environment (CAPE) project (Cowling *et al* 1999) maps the whole study area (at a relatively coarse scale) as being on the edge of Blanco Fynbos / Renosterveld Mosaic and Riversdale Coast Renosterveld (57% and 83.5% irreplaceable respectively, according to that analysis). The South African Botanical Institute (SANBI) vegetation map (Mucina & Rutherford 2003) maps the PetroSA area as a mix of Albertinia Sand Fynbos and Mossel Bay Shale Renosterveld. The recent National Spatial Biodiversity Assessment (Rouget *et al* 2004) indicates that the Sand Fynbos is a Vulnerable vegetation type (74% remaining) and Shale Renosterveld (42% remaining) is an Endangered vegetation type. However, the Subtropical Thicket Ecosystem Planning (STEP) project, which refers to the entire study area as Herbertsdale Renoster Thicket (Cowling *et al* 2003), accurately describes the mix of Thicket and Renosterveld vegetation in the area. This vegetation type is dominant in the area between the Gouritz River and Mossel Bay, occurring on the shale and conglomerate hills, but has been heavily impacted by agriculture, and as a result persists mostly on the steeper slopes. Rapid urbanisation is having a substantial negative impact on this vegetation type (on both flats and steep slopes) in the Mossel Bay, Hartenbos and Groot Brak areas, where it is also impacted by quarrying activities. Herbertsdale Renoster Thicket has been reduced to 38% of its original extent, with a conservation target of 25% (of the original extent), and it is thus regarded as an Endangered vegetation type in terms of STEP (Pierce 2003). The fact that both STEP (Pierce 2003) and the National Spatial Biodiversity Assessment (Rouget *et al* 2004) find that the area supports endangered vegetation types in a regional and national context is significant.

Site specific information will be forthcoming in the EIA Phase after a specialist botanical/ and or ecological study has been undertaken.

2.2 AVIFAUNA

According to the South African Bird Atlas Project (SABAP) data available for the study area (1:50 000 topo sheet no. 3421BB, Herbertsdale), one hundred and fifty seven bird species have been recorded in the area, of which 22 species are known to have been breeding.

Of the swimming, diving and wading birds, the expected array of cormorants, herons, egrets, geese and ducks has been recorded. It is interesting that flamingoes have not been recorded, probably due to the absence of suitable shallow water bodies. African black duck have also not been recorded but this might be due to their cryptic nature.

As far as diurnal raptors are concerned, the only two surprising absentees are the black eagle and the African goshawk. The fact that no owls were recorded can only be ascribed to observational shortcomings, since barn and eagle owls are likely to occur. Neither the common European or fierynecked nightjar have been recorded and this, together with the absence of owls, would suggest that nocturnal observations were limited.

Terrestrial and ground nesting birds are well represented, as are the aerial-feeders. As far as the latter are concerned, a few of the summer visitors are absent from the records.

The conglomeration of species that make up the passerines comprises the bulk of the remaining records. The array that is represented is typical of what would be expected to occur in the variety of habitats represented in the study area. With reference to the bird species within the study area which would have a particular conservation status, the following have been identified as being present:

- Cape cormorant ~ near threatened

This cormorant is endemic to southern Africa and is more common on the west coast than the east, where the study area is located. Essentially a marine species, they breed on offshore islands and feed in coastal waters. Nesting occasionally occurs on the mainland close to the shoreline or in estuaries but always in dense colonies. There are no records of them breeding in the study area.

- Secretary bird ~ near threatened

Widespread throughout South Africa, this large ground-feeding bird does not spend much time in flight. Nevertheless, although they are ungainly on take-off and landing, secretary birds are strong fliers and can soar to great heights. Roosting and nesting occurs on the tops of trees but there are no breeding records in the study area.

- Cape vulture ~ vulnerable

Cape vultures were historically known to roost in a deeply incised section of the Gourits River just north of where it cuts through the Langeberg mountains south of Van Wyksdorp. Although these birds forage very widely, the records from the study area indicate no breeding activity and a low frequency of reporting.

- African marsh harrier ~ vulnerable

Typically found over marshlands, this resident raptor also occurs over cultivated lands. However, their feeding behaviour is to fly low over the ground. They also nest at ground level, although there are no records of breeding in the study area. This harrier is known to perch on low structures such as fences but also soars to some height.

- Black harrier ~ near threatened

The black harrier is a local migrant and occurs in a wide range of habitats. It typically hunts close to the ground where it also perches on termite mounds or low structures. Nesting also occurs close to the ground, although there are no breeding records from the study area.

- Blue crane ~ vulnerable

The blue crane has broadened its range in the last few decades into the extensive croplands of the Western Cape. Feeding and nesting on the ground, this bird nevertheless flies strongly and soars to considerable height. There are records of it breeding in the study area.

- Stanley's bustard ~ vulnerable

A resident of the eastern arid and grassveld areas of South Africa, this bustard feeds and nests on the ground. There are no breeding records from the study area. Although it is a strong flyer and achieves some height, it is not known to use elevated perches such as trees or transmission line towers.

- White stork ~ Protected under Bonn Convention on Migratory Species

The white stork visits southern Africa from Europe during the northern winter. Although they do not breed here, these storks congregate in large numbers where sources of food are to be found. They are ground foraging birds and although they seek out dry savannahs and open grasslands when wintering, they also tend to congregate near to drainage lines and impoundments. The flight behaviour of white storks is to soar at considerable height on thermal air currents.

2.3 VISUAL SIGNIFICANCE OF THE AREA

The N2 National Road carries a high volume of tourist and other traffic between Cape Town and the Garden Route. The visual quality of the area is important for tourists. Any changes to the landscape can therefore have an impact on the tourist trade as well as affecting the visual experience of the local population.

Many people consider Mossel Bay as the start of the Garden Route. When driving towards Mossel Bay from Cape Town, there is a sense of the changing landscape as the sea draws closer in the south and the jagged peaks of the Outeniqua Mountains rise more and more spectacularly above the proximate landscape to the north.

Approximately 7.5km east of the site, along the N2 at the Mossel Bay turnoff, the land drops dramatically away and the bay, the mountains, the seaside villages and the water bodies that are characteristic of the Garden Route are suddenly in full view of the viewer. This view is one of the signature vistas in the area and on the Garden Route. Compared to the landscape east of this point on the N2, (the Garden Route proper), the scenic quality of the landscape west of this point, (in the vicinity of the proposed OCGT plant) is less visually stimulating although it is still a beautiful and interesting landscape.

Views along the N2 west of Mossel Bay tend to be drawn northwards to the mountains in the distance. This means that travellers tend to look to the peaks beyond, across the PetroSA site, Mossdustria, the site of the current OCGT power plant and the proposed three additional units.

2.4 FAUNA

Due to the farming activities within the study area over many years, indigenous terrestrial faunal diversity is restricted. However, there is evidence of various small mammals such as rodents, porcupines, and small antelope within the study area. In addition, PetroSA's nature reserve is located adjacent to the refinery, between the southern security fence and the N2 National Road. Species found with the Nature Reserve include springbok, Burchell's Zebra, grysbok and Cape hares.

2.5 GEOLOGY AND DRAINAGE

The study area is underlain by sandstone and shale beds of the Table Mountain and Bokkeveld Groups. North of Mossel Bay, rocks of the Enon Formation and other similar younger deposits (of Cretaceous and Tertiary age) are found. These rocks are deposited in an east to west elongated trough and are considered to extend offshore.

The Kouga Formation is the principal aquifer in the study area and its recharge area lies north of the refinery.

A minor seasonal tributary of the Blinde River, which drains to the south, has its source approximately 1 km to the south-southwest of the proposed OCGT power plant site. However, the site is particularly flat and as a consequence is not well drained. A shallow water table is likely to occur in an area approximately 800 m to the east of the proposed site, i.e. closer to the PetroSA facility.

2.6 CLIMATE

The study area falls within a Mediterranean-type climate with hot summers and wet winters. The annual precipitation is approximately 400-600 mm, peaking in spring and autumn. Winds are typically from the southeast during summer months, while winter frontal systems cause north and westerly winds. Strong winds with an average speed of 20 km/h are experienced during winter, whilst the average wind speed in summer is approximately 15 km/h (PetroSA, undated).

The average mean temperature in summer is approximately 25°C and the average mean temperature in winter is approximately 14°C.

2.7 EXISTING INFRASTRUCTURE

The N2 National Road is located approximately 1.5 km south of the OCGT power plant, whilst the R327 is located to the north. The Kleinberg-Mossdustria railway line is located immediately north of the site. The Proteus substation is located 10 km northwest of the proposed power plant site and two 132 kV transmission lines run in a northwesterly direction between the PetroSA facility and the Proteus substation. Two new 400 kV transmission lines were approved as part of the original OCGT project and are presently under construction.

2.8 HERITAGE / CULTURAL RESOURCES

This paragraph provides an overview of archaeological knowledge of the greater Mossel Bay area, to contextualise the study area in particular. A cave at Cape St Blaize that was excavated in 1888 by Lieth and by Goodwin in the 1920s revealed an extensive archaeological deposit dating from 200 000 years ago (Middle Stone Age) to the relatively recent shell middens of pre-colonial San and/or Khoekhoen herders. For many years since the excavations of Cape St Blaize cave, very little archaeological research has taken place in the area until the extensive cave and rock shelters of Pinnacle Point were brought to the attention of Prof Curtis Marean (Stoneybrook University, New York) and Dr Peter Nilssen (Mossel Bay Archaeological Project). A detailed program of research commenced, funded by the American National Science Foundation. This has resulted in the excavation of several sites, providing in the discovery of some very early fragmentary human remains and a complex Middle Stone Age sequence. Work is currently in progress. No colonial period archaeological research has ever taken place in the area so very little is known about early colonial period settlement, apart from that which is historically recorded. In terms of the study area itself, no prior studies have taken place.

Since the study area lies in a rolling open landscape away from the coast, the expectation is that the kind of archaeological material that will be found will consist of open scatters of Early and Middle Stone Age artefacts (with rarer concentrations of later material) which tend to occur ubiquitously throughout Southern Africa. It is only when such scatters are found in association with fossil bone or in clusters of discernable density that significant impacts can occur. Since no rocky outcrops, shelters or natural foci were found during a site inspection of the study area, occurrences of Late Stone Age archaeological material are not expected to be frequent.

2.9 SOCIO-ECONOMIC ASPECTS

The Gross Geographic Product (GGP) of the greater Mossel Bay area is the value of all the final goods and services produced within the local economy during a specific period. It is therefore an indication of the level of production and size of the local economy in the study area. The Mossel Bay economic profile is provided in Figure 4.

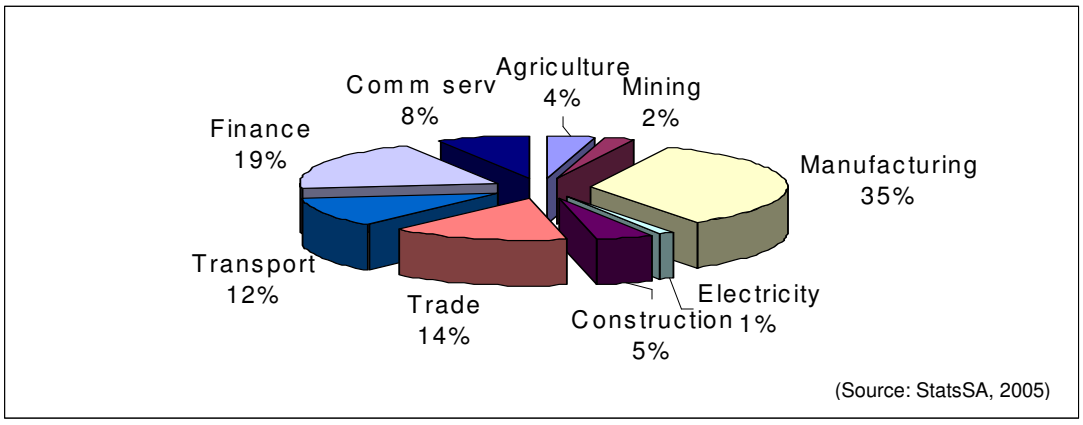

Figure 4 : Mossel Bay economic profile, 2003 (current values)

Figure 4 illustrates that the Mossel Bay economy is fairly well diversified, namely that it is not concentrated in a specific sector, with the most important sector contribution being the Manufacturing Sector (35%) followed by the Finance and Community Services Sectors (8%) and the Trade Sector (14%). The Electricity Sector which consists of electricity, water and gas contributes 1%. The Mossel Bay area's economic performance is therefore not dependent on a single economic activity for its future growth and sustainability and has reduced influence from negative external factors.

The degree to which an economy is diversified can be illustrated in a terms of a Tress Index. The Tress Index is measured on a scale of 1 to 100. The higher the value of the Tress Index in an area, the more concentrated is the economy and the lower the value the more diversified the economy. The local Tress Index is 44.55, showing that the economy of Mossel Bay is more diversified than those of Knysna (49.81) and the Western Cape Province (54.75) as a whole. This is good as the majority of local economies in South Africa are struggling with concentrated economies that desperately need to be diversified. Mossel Bay, on the other hand, appears to have a healthy distribution of economic activity.

Mossel Bay has always had a very strong industrial character that was traditionally driven by the large oil storage reserves located at Voorbaai, as well as a large number of industries involved in shipbuilding and ship repair. Most of these industries are concentrated around the harbour and predominantly serve the fishing industry. Other industries are related to agro-processing (specifically milk extracts) and therefore an agglomeration of agro-industries in Mossel Bay has been developing. There are surprisingly few industries using products or by-products of the PetroSA GTL facility.

In addition, during recent years, the town has developed a fairly strong tourism industry. The industrial character of the town initially hampered the development of the tourism industry. However, it would appear as if the very strong tourism development in the neighbouring towns along the Eden coast, most notably George and Knysna, has now spilled over to Mossel Bay. The tourism market in Mossel Bay is mainly middle income and domestically based.

A summary of the Mossel Bay economy's main trends and dynamics is as follows:

- The primary sector of the Mossel Bay economy appears to be declining, the secondary sector is experiencing growth in its share of the economy and the tertiary sector appears to be increasing its proportionate share.
- Sectors showing strong growth in general are Building and Construction, Trade, Transport and Finance while the Manufacturing and Electricity Sectors show a slow decline. These trends are expected to continue into 2007, although future decisions for Eskom could influence growth for the Electricity Sector post 2010. The implications of this proposed growth has positive implications for the property market. The additional growth combined with the growth in the construction sector, implies that in the medium term there will be a continued growth in the property market.
- The economy of Mossel Bay is relatively well diversified. This is a good sign as the majority of local economies in South Africa are struggling with concentrated economies that desperately need to be diversified.

- The main sectors in which Mossel Bay has a comparative advantage in the region are Tourism, Construction, Utilities (electricity/gas/water), Manufacturing and Agriculture. This has further good implications for the property market as these sectors can be more fully developed.

As a separate exercise to the project-level EIA documented in this report, Eskom commissioned an evaluation study on the broad macroeconomic impact of the construction of the two OCGT power plants at Atlantis and Mossel Bay[6].

2.10 PLANNING FRAMEWORK

The proposed additional units would be located primarily within PetroSA's landholding, which is zoned for industrial use. However, an estimated 25 hectares of the proposed site extends into adjacent land zoned as agricultural. Subdivision and re-zoning will therefore need to be undertaken and this will be done as a separate process to this EIA. The application to the Mossel Bay Municipality in this regard would be initiated during the EIA process.

[6] Global Insight SA, 2005. *High-level Macroeconomic Impact Analysis: The Construction of Two OCGT Peaking Power Stations.* Final Report.

3 THE PROPOSED PROJECT

3.1 INTRODUCTION

As indicated earlier, the proposed project entails the addition of three generating units adjacent to the OCGT power plant that is currently under construction near the PetroSA GTL facility in Mossel Bay. Please refer to Annexure D for a site layout plan.

Associated with the three generating units would be:

- A fuel storage facility with a total storage capacity of 5.4 million litres;
- Two conservancy tanks, each with a capacity of 6 000 litres;
- A control room;
- A fuel supply pipeline;
- A water supply pipeline; and
- An HV yard.

At this stage of the feasibility and planning process, it is likely that the fuel storage and conservancy tanks would be located between the existing OCGT units and the proposed additional units. Fuel and water supply would be by means of continuations of the existing pipelines within the OCGT precinct. The extended HV yard would be located immediately north of the proposed three units and would enable the electricity generated to then be transported to the Proteus substation via the authorised, and presently being constructed, 400 kV transmission lines. The total area required to be subdivided and re-zoned for the proposed units and associated infrastructure is approximately 25 ha. The additional area will be incorporated into the OCGT power plant precinct. Access would be via the access road to the existing OCGT power plant.

3.1.1 The OCGT technology and operation

The OCGT units would produce electricity by means of hot gas turning a turbine that powers a generator (see Figure 5). The OCGT power plant technology is based on the Brayton cycle which describes what happens to air as it passes through the system and specifies the relationship between the volume of air in the system and the pressure it is under.

According to the Brayton cycle, air is initially compressed, increasing its pressure as the volume of space it occupies is reduced. This compressed air is then heated at a constant pressure. Heat is added by injecting fuel into the combustor and igniting it on a continuous basis. The hot compressed air is then allowed to expand, reducing the pressure and temperature and increasing its volume. This expansion takes place within the turbine, where the expansion of the hot gasses against the turbine blades turns a shaft. This shaft extends into a generator, which produces electricity. The Brayton cycle is completed by a process where the volume of air is decreased (that is, the temperature decreases) as heat is absorbed into the atmosphere. The units would be fuelled by a form of liquid distillate fuel (kerosene-based or diesel) acquired from PetroSA.

It is envisaged that the proposed three additional units would operate for an average of five hours per day during weekdays. This, however, is dependent on electricity demand and system requirements. It could thus be necessary to operate in an emergency situation for up to eight hours at a time. Such situations are unlikely, however, and the objective of the OCGT power plant is to provide peaking power within a relatively short time after starting the plant.

The operation of the gas turbine results in airborne particles being deposited on the compressor blades. Because soiling of the compressor results in the reduction of the thermal efficiency of the gas, the compressor blades require regular cleaning. The cleaning may occur while the plant is off-line or on-line. The cleaning is undertaken using a hydrocarbon-based solvent, which will be mixed with water to form an emulsion. Effluent produced by the off-line cleaning would be drained from the compressor using a controlled process which passes through an oil separator and thereafter temporarily stored in the conservancy tanks. Effluent from the conservancy tanks would be transported to the PetroSA wastewater treatment facility via purpose-designed tanker.

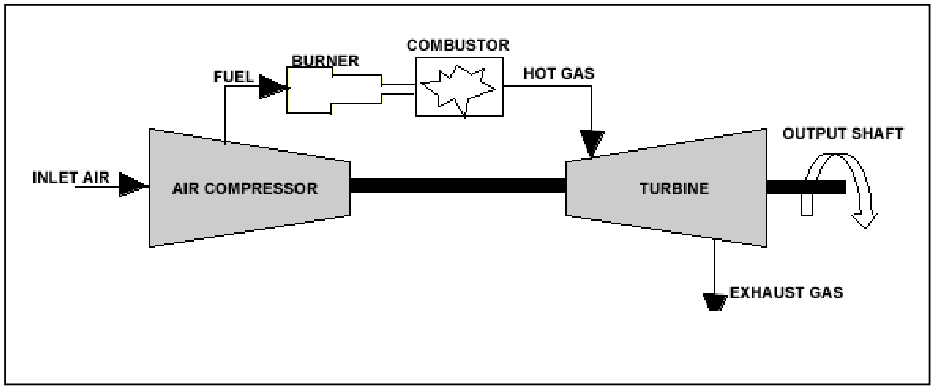

Figure 5 : A typical gas turbine unit

The three proposed OCGT units would be from the same supplier and would have exactly the same technical specifications as the units currently being installed.

(a) Extent and Layout

The site layout of the OCGT power plant under construction and the three additional units are illustrated in Annexure D. As can be seen, the proposed units would be situated immediately adjacent to and to the west of the existing OCGT plant. The additional area will be incorporated into the OCGT power plant precinct. From a visual and operational perspective the additional units would represent an upgrading and slight extension to the existing OCGT power plant. Access would be via the access road to the existing OCGT power plant. The highest points of the proposed units would be the 30 m high emission stacks.

(b) Emission Control Measures

Although OCGT technology is considered to be a 'clean' technology, it does produce emissions such as oxides of sulphur (SO_x), oxides of nitrogen (NO_x), particulates and greenhouse gasses e.g. carbon dioxide. The exhaust gasses of the additional three OCGT units would be discharged to the atmosphere through the stacks.

These emissions and their potential impacts on ambient air quality and nearby communities will be the subject of a specialist air quality study. It is anticipated that, as discussed in the EIA for the existing OCGT plant, the only emission of concern with respect to meeting South African air quality standards is NO_x. In this regard, the dry NO_x abatement measures implemented in the existing OCGT units would also be employed in the proposed additional units.

Dry NO_x abatement

Most gas turbine manufacturers offer low NO_x burners in their gas turbines. These burners limit the formation of thermal NO_x through lean and staged combustion of the fuel. When burning natural gas, these systems can achieve NO_x levels as low as 25ppm. These systems are referred to as "dry low NO_x systems" because the technology does not require water for NO_x abatement.

3.1.2 Fuel supply

The existing fuel supply pipeline from PetroSA would supply the fuel for the proposed additional OCGT units. The length of the pipeline would be extended to traverse the existing OCGT precinct to the proposed additional units. The proposed pipeline would be installed above the ground for maintenance and safety reasons, e.g. to detect possible leaks which would have a potential environmental impact. It would be of mild steel, 100 mm or 150 mm in diameter and designed to operate at 10 bar gauge. The civil design of the pipeline would be such that spills would be adequately contained. A pipeline risk assessment was done in the previous EIA, and the results showed that the pipeline would not present any risk to persons off-site.

3.1.3 Water supply

The proposed units would only require potable water for blade washing, domestic use and fire protection. The approximate volume required per month for these purposes would amount to 30 000 litres. This would be supplied by PetroSA per the existing agreement with Eskom, from the formal supply provided to PetroSA by the Mossel Bay Municipality.

3.2 ALTERNATIVES

3.2.1 Strategic alternatives

Alternative methods of generating electricity are identified in DME's Integrated Energy Plan (2003), the National Integrated Resource Plan (2003/4) undertaken by the National Energy Regulator of South Africa, and Eskom's ISEP (2005) and will not be considered further in this Scoping and EIA process.

3.2.2 Process alternatives:

Alternative technologies for generating peaking capacity will not be further considered in this Scoping and EIA process. .

3.2.3 Site alternatives

The identification of Mossel Bay as a location for additional OCGT generating units was undertaken as part of an Eskom internal site screening exercise prior to this EIA.

The section following in italics is a synopsis of the site screening and was provided as a personal communication by N Gewers of Eskom's Generation Division.

The following criteria were used in this exercise:

- *Location*
- *Ability to obtain environmental approval timeously to construct the proposed plant before winter 2008*
- *Transmission integration*
- *Fuel logistics*
- *Design and construction schedule for the new proposed capacity*

Seven sites were initially investigated (in no particular ranking): Avon and Georgedale in Kwazulu-Natal, Coega Industrial Development Zone (IDZ) in the Eastern Cape, and Atlantis (adjacent to existing OCGTs), Aurora, Saldanah and Mossel Bay (adjacent to existing OCGTs) in the Western Cape. The Saldanah, Aurora and Coega sites were rejected early in the process based on the remote likelihood of obtaining environmental authorisations in time to construct the plant to be operational by winter 2008 ("Greenfield sites").

An EIA is currently being conducted on the KZN sites, Avon and Georgedale. However, Eskom is not the applicant for this particular EIA, and hence concerns were raised that firstly environmental approvals may not be ready in time to meet the deadline of winter 2008,and secondly, the time it might take to obtain these sites and convert the environmental approvals to Eskom. Thirdly, fuel supply options to these sites must still be investigated in detail, however, it was predicted that it would be virtually impossible to construct a pipeline

from the Durban or Richards Bay harbour to the site, and that transportation of fuel by road would be a complex operation. Hence these two sites were seen as not feasible from this perspective. It was however noted during the exercise that from a transmission integration point-of-view, the KZN and Eastern Cape sites were most preferred.

The Atlantis and Mossel Bay sites were found to be most preferable, based on the following:

- *Regarding environmental authorisation, RoDs have been received for these OCGTs in December 2005, so a shortened environmental impact assessment process is envisaged.*
- *Regarding fuel supply and logistics, Mossel Bay would receive its fuel from the nearby PetroSA Gas-to-Liquids plant, and Atlantis from a nearby refinery. Also, although not finalised, natural gas from the potential West Coast gas fields could become an option to fuel the Atlantis units, which are inherently designed for dual-firing, in future. The option of installing a pipeline from a nearby refinery to Atlantis or fuel transportation via rail, is also currently been investigated.*
- *Regarding transmission integration, generating units at Atlantis and Mossel Bay can be fairly easy integrated into the national transmission network. At both sites, no new transmission lines, for example, would be needed for this integration.*
- *Regarding design and construction schedules, OCGTs are currently being constructed at both sites, hence from a design and construction schedule perspective, the additional units would be "added" to the existing schedule, to be commercially operational by winter 2008.*

Hence no site alternatives will be further investigated as part of this Scoping and EIA process.

Accordingly it is proposed to construct three additional units adjacent to the OCGT power plant under construction in Mossel Bay. Siting the additional units immediately to the west of the OCGT precinct is the only viable option as:

- The HV yard lies to the north;
- PetroSA's expansion plans and the potential expansion of the landfill site preclude the east and south respectively from being considered; and
- There is no space within the OCGT precinct to include additional units.

Accordingly there are no other alternative sites that will be considered. Alternative geographical locations are not considered as locating the additional three units adjacent to the OCGT power plant under construction means that impacts are consolidated and that no additional transmission lines, access roads, or fuel supply pipelines beyond the power plant precinct would be required.

3.2.4 Project alternatives

Project alternatives (e.g. alternatives regarding NO_x abatement, road access, fuel supply pipeline routes, etc.) have been discussed and assessed during the previous EIA process. Accordingly, the appropriate alternatives have already been implemented.

In terms of specific mitigation measures, these will follow in the EIA Phase of this process, when potential impacts are assessed.

4 POTENTIAL IMPACTS AND SPECIALISTS STUDIES

4.1 CONSTRUCTION PHASE IMPACTS ON THE BIOPHYSICAL AND SOCIO ECONOMIC ENVIRONMENTS

These are impacts on the biophysical and socio-economic environment that would occur during the construction phase of the proposed project. They are inherently temporary in duration, but may have longer lasting effects e.g. pollution of a wetland during construction could have effects that may last long after construction is over. Construction phase impacts could potentially include:

- Impact on flora;
- Impact on fauna;
- Heritage impacts;
- Erosion and land degradation;
- Noise disturbances for adjacent landowners;
- Waste and litter pollution;
- Water pollution;
- Dust management;
- Traffic and access disturbances; and
- Safety risks.

Based on the temporary duration of the construction phase and the fact that negative impacts of construction can be readily predicted and mitigated, generally speaking, more attention will be given to the operational phase impacts of the proposed units than to the construction phase impacts. However, wherever relevant, specialist studies would consider construction phase impacts, and in certain cases, would be focussed on construction phase impacts e.g. impacts on terrestrial flora and fauna are mainly construction phase impacts.

It should be noted that a comprehensive construction phase Environmental Management Plan (EMP) was developed to regulate and minimise the impacts during the construction phase of the existing OCGT power plant. This EMP will be modified to include the proposed additional units.

4.2 OPERATIONAL PHASE IMPACTS

Given their long term nature, operational phase impacts will come under close scrutiny in the EIA Phase of this EIA.

4.2.1 Socio-economic environment

- Visual impact;
- Impact on ambient noise quality; and
- Impact on socio-economic conditions.

4.2.2 Biophysical environment

- Impact on flora;
- Impact on air quality; and
- Impact on water resources (availability of water as well as ecological integrity of water bodies/ courses).

The operation of the proposed additional units would be in accordance with the same operational EMP as for the rest of the OCGT power plant. The operational EMP is designed to mitigate negative impacts associated with the operational phase of the project and will be informed by the mitigation measures proposed by the specialists.

4.3 SPECIALIST STUDIES

In order to understand some of the above-mentioned potential impacts in more detail, and to enable more informed decision-making, it is proposed to undertake the following specialist studies.

4.3.1 Air quality study

The proposed additional generating units will result in the release of gaseous emissions, viz. sulphur dioxide, NO_x and particulates. The proposed air quality study would investigate potential impacts and provide recommendations or mitigation measures.

The Terms of Reference (ToR) for the air quality study would be to supplement the existing air quality study (for the OCGT power plant presently being constructed) by taking into account an additional three OCGT generating units. The ToR for the original OCGT air quality study are presented in Annexure B.

4.3.2 Noise study

Noise would be generated by the intake of air into the gas turbines, the generators, transformers, the pumps' pneumatic controls and the ventilation system. The gas turbine air intake facility would generate the most noise as it is not enclosed. Noise will also be generated during the construction phase.

The ToR for the noise study would be to supplement the existing noise study (for the OCGT power plant presently being constructed) by taking into account an additional three OCGT generating units. The ToR for the original OCGT noise study are presented in Annexure B.

4.3.3 Ecological study

The ToR for the ecological study would be to supplement the existing ecological study (for the OCGT power plant presently being constructed) by investigating the proposed site for the additional three OCGT generating units. The ToR for the original OCGT ecological study are presented in Annexure B.

4.3.4 Visual study

The ToR for the ecological study would be to supplement the existing visual study (for the OCGT power plant presently being constructed) by incorporating an additional three OCGT generating units into the visual assessment. The ToR for the original OCGT visual study are presented in Annexure B.

4.3.5 Traffic study

An issue that emerged during the public participation process undertaken to date (see Section 5 and Annexure G below) was that the intersection with the N2 National Road and the proximity to the Dana Bay intersection are presently experiencing congestion. It will therefore be necessary to review the traffic study undertaken for the approved OCGT power plant, reassess the situation and suggest possible mitigation or control measures.

4.3.6 Social study

Another issue that emerged during the public participation process undertaken to date (see Section 5 and Annexure G below) was that the means of managing work seekers, skills transfer and commercial expectations established for the approved OCGT power plant is no longer functional. A social scientist will therefore be appointed to investigate this matter and provide a possible plan of action.

5 THE PUBLIC PARTICIPATION PROCESS

5.1 INTRODUCTION

Public participation is an essential component of the EIA process. The process of public involvement encourages interested and affected parties (I&APs) to raise their concerns and to comment on the proposed project, during the planning and design phases of the proposed development.

5.2 APPROACH TO THE PUBLIC PARTICIPATION PROCESS

The approach to the public participation has been informed by the NEMA EIA regulations (Regulation No.385). The key components of the public participation during the Scoping Phase are summarised below:

- A meeting with the landowners of the proposed site on 30 August 2006. The purpose of the meeting was to describe the proposed activities and to provide a consent form for the landowners to complete (the completed consent form was submitted to the environmental authorities as an annexure to the Application Form).
- Placing a media notice in the local newspaper, the Mossel Bay Advertiser on 6 October 2006. The media notice informed the public about the proposed project, invited the public to register and comment, notified the public of the lodging of this Draft Scoping Report in local libraries and informed them of the intention to present the Draft Scoping Report to the Environmental Liaison Committee that was established for the existing OCGT power plant. A copy of the media notice, which was published in English and Afrikaans, can be found in Annexure A.
- Lodging the Draft Scoping Report for public review and comment at the Mossel Bay and D'Almeida Public Libraries on 9 October 2006. In addition, the report was placed on the Eskom and Ninham Shand websites at www.eskom.co.za/eia and www.ninhamshand.co.za, respectively.
- Posting a letter to all I&APs who were registered during the previous EIA process (for the authorised OCGT power plant) to inform them of the proposed activities and of the availability of the report. A copy of the letter can be found in Annexure F. A copy of the Executive Summary of this Draft Scoping Report was included with the letter.
- Erecting an on-site notice in an appropriate place, giving notification of the EIA process being undertaken.
- Meeting with the existing Environmental Liaison Committee (ELC) for the OCGT power plant, to present the findings of this Draft Scoping Report and to elicit questions and comments on the proposed activities. This occurred on 12 October 2006, when a slot was provided on the agenda of a scheduled ELC meeting.
- Recording comments, queries and issues raised as well as responses thereto. Annexure G provides a copy of the notes taken on 12 October 2006, together with the complete minutes of the ELC meeting. No other responses were received during the comment period provided.

This Final Scoping Report has been updated in light of all comments received during the Public Participation Process and submitted to DEA&DP. DEA&DP's acceptance of the Final Scoping Report and Plan of Study for EIA will then allow the EIA Phase to proceed.

6 CONCLUSION AND WAY FORWARD

This Draft Scoping Report identifies the environmental issues and concerns raised in response to the proposed addition of three OCGT units adjacent to the OCGT power plant currently under construction near the PetroSA GTL facility in Mossel Bay. The issues and concerns were informed largely by the EIA process that was undertaken for the present OCGT power plant.

As a result of the scoping process undertaken thus far, the following specialist studies have been identified as necessary:

- Air quality study;
- Ecological study
- Visual impact assessment;
- Noise study;
- Traffic study; and
- Social study.

These studies will assist in informing the EIA Phase, along with essential contributions from the other components of the project team. Please refer to Annexure B. for the draft Plan of Study for EIA (PoSEIA). The draft PoSEIA describes the proposed approach to the EIA Phase.

This Final Scoping Report is being submitted to DEA&DP for their consideration and acceptance. Once such acceptance is received, the EIA Phase can continue and a Draft EIA Report will be compiled and subjected to public review. Comments received will be addressed and captured in a Final EIA Report, which will then be submitted to DEA&DP for their final consideration and decision-making.

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Personal Communications:

R Chippe, Client Office Manager, Generation Division, Eskom.
N Gewers, Environmental Management, Generation Division, Eskom.

ANNEXURE A:
Copies of newspaper notices

ANNEXURE B:
Plan of Study for Environmental Impact Assessment

ANNEXURE C:
Locality Map: Mossel Bay OCGT

ANNEXURE D:
Extent and layout of additional OCGT units

ANNEXURE E:
Delegation of decision-making authority to DEA&DP

ANNEXURE F:
Letter of notification to interested and affected parties

ANNEXURE G:
Notes and minutes from ELC meeting of 12 October 2006

REPORT DISTRIBUTION CONTROL-SHEET

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