

# NATIONAL DEPARTMENT OF ENVIRONMENTAL AFFAIRS' (DEA) STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) FOR A PHASED GAS PIPELINE NETWORK AND EXPANSION OF THE ELECTRICITY GRID INFRASTRUCTURE IN SOUTH AFRICA

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## BACKGROUND INFORMATION DOCUMENT

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## INTRODUCTION

In order to realise the potential of the gas reserves in the country and to contribute to the transition to a low carbon economy, the Operation Phakisa Offshore Oil and Gas Lab (August 2014) has set a target of achieving 30 exploration wells in the next 10 years. In addition, the need to accelerate the planning for gas to power as part of the Government's Integrated Resource Plan (IRP) and for State Owned Entities to pre-plan for the logical development of gas transmission servitudes within South Africa was identified. The phased development of an onshore gas transmission pipeline network therefore forms part of the infrastructure envisaged as an enabler for the offshore oil and gas exploration and has the potential to unlock further possibilities for the growth of the gas industry in South Africa.

To support the objectives of the Operation Phakisa Oceans Economy Oil and Gas Lab and to ensure that when required, environmental authorisations are not a cause for delay, the Department of Environmental Affairs (DEA), Department of Energy (DoE) and the Department of Public Enterprises (DPE) (representing iGas, Eskom and Transnet) intend to apply a Strategic Environmental Assessment (SEA) methodology to identify and pre-assess suitable gas routing corridors.

## BACKGROUND TO GAS PIPELINE NETWORK AND ELECTRICITY GRID INFRASTRUCTURE EXPANSION SEA

In April 2017, the DEA appointed the Council for Scientific and Industrial Research (CSIR) to undertake a SEA for a Phased Gas Pipeline Network and for the expansion of the electricity grid infrastructure (EGI) corridors that were assessed as part of a separate SEA Process (in response to the Government's Strategic Infrastructure Build Program, Strategic Integrated Project SIP 10: Electricity transmission and distribution for all) which concluded in 2016.

The SEA will be focussed on nine corridors identified as part of Operation Phakisa as key areas where gas transmission pipelines are required in order to meet future energy requirements. As noted above, this SEA will also include two additional corridors to expand the EGI corridors previously assessed. The SEA will assess the environmental, social and economic constraints and opportunities for gas pipeline and EGI development within these corridors. The results of the assessment will serve to inform suitable routing options for gas pipelines and EGI expansion.

It is intended that the final corridors will be submitted to Cabinet for approval to ensure buy-in from all Departments and to encourage the embedment and integration of these corridors into the Provincial and Local planning mechanisms to secure long term energy planning.

The SEA is expected to be completed by mid 2019.

A full description of the SEA vision and objectives is available on Page 5 of this document.

### SEA Focus Areas: The Corridors

The proposed gas pipeline corridors are defined as follows (refer to Figure 1):

- 1) From Saldanha Bay to Atlantis and from Atlantis to Mossel Bay on the south coast.
- 2) From Mossel Bay to Coega on the south coast.
- 3) An inland corridor from Saldanha to Mosselbay and Coega.
- 4) From Coega to Durban on the east coast.
- 5) From Durban to Richards Bay and to the border of Mozambique to facilitate an import option.
- 6) A strengthening of the existing Lilly Pipeline from Sasolburg to Richards Bay and Durban by a second pipeline following a similar route.
- 7) From Sasolburg to the border of Mozambique.
- 8) From Saldanha Bay to Abraham Villiers Bay (landing point for the Ibhubesi field).
- 9) From Abraham Villiers Bay to northwards to the Namibian border (Oranjemund), to link to potential Kudu gas extraction.
- 10) From Mossel Bay and Coega to the Shale Gas areas.

The additional two EGI corridors assessed as part of this SEA are located along the coast, north-west and north-east of the country.

**National Strategic Environmental Assessment for a Gas network and EGI Expansion in South Africa**

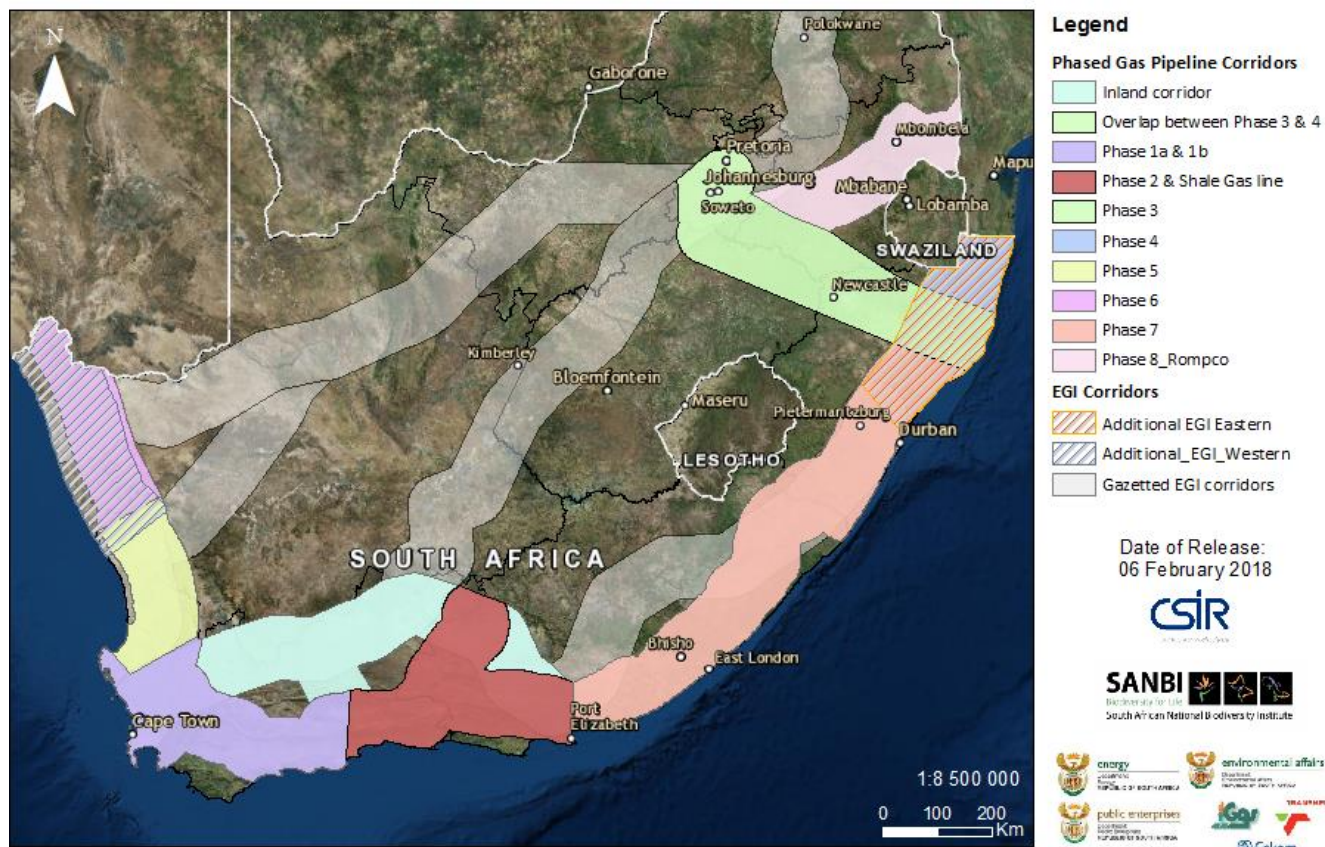


Figure 1: Proposed Corridors: The SEA Focus Areas

## VISION OF THE SEA

Strategic gas pipeline network and EGI is expanded in an environmentally **responsible** and **efficient** manner that responds **effectively** to the country's economic and social development needs.

## OBJECTIVES OF THE SEA

The overall objective of this SEA is framed as:

*"In partnership with the Department of Energy and Department of Public Enterprises representing iGas, Eskom and Transnet, and in consultation with relevant stakeholders, identify routing corridors, environmental management measures such as norms or standards with the intent to streamline the environmental authorisation process or to exempt the development of linear infrastructure associated with energy provision, including a gas pipeline network and electricity grid infrastructure, from environmental authorisation, as well as interventions required to secure on the long term the energy planning corridors and zones identified."*

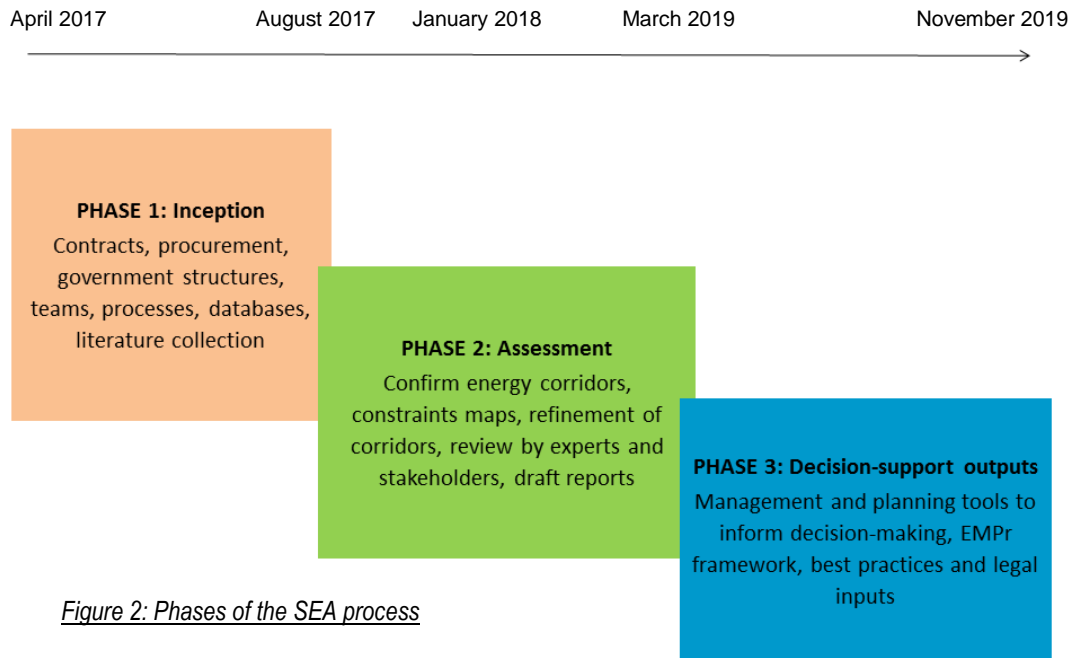
A SEA is an environmental assessment tool used to (i) determine environmental implications of strategic development, policies & plans, (ii) integrate environmental, social and economic considerations, (iii) shape future development and onsite assessment requirements. While the Environmental Impact Assessment (EIA) tool is used to evaluate the impacts of a proposed development on a small scale site, the SEA tool is used to evaluate the opportunities and constraints of the strategic development at regional scale. By focusing on higher-level processes, the SEA tool can provide a framework for future project-level assessments/requirements within the pre-assessed regional scale.

The SEA aims to ensure that the development of a gas transmission pipeline network and EGI would be:

- Effective
  - Identify strategic energy corridors at a national scale based on future energy supply and demand requirements, environmental sensitivities as well as social and economic development priorities at a national, regional and localised level.
- Efficient
  - Pre-assessing environmental sensitivities to avoid fatal flaws and focus on the site specific level of assessment required, with the aim to exempt the developments under consideration from environmental authorisation within the gazetted corridors or to streamline the applicable environmental authorisation process within the corridors.
  - Enabling the developers the flexibility to consider a range of route alternatives within the pre-assessed corridors to avoid land negotiation issues.
  - Improve coordination to implementation through the promotion of dialogue and collaborative governance between authorities mandated to approve or license aspects of gas pipeline and EGI development
- Responsible
  - Develop a site specific development protocol which prescribes the level of site specific assessment required and prescribes the assessment process.
  - Share research learnings with government, academic and public forums to promote environmental assessment.
  - Contribute to skills development by involving interns in the delivery of the project and through the widespread promotion and sharing of the research findings.

## PHASES OF THE SEA

The SEA process has been designed in three overlapping phases as indicated in Figure 2 below.



*Figure 2: Phases of the SEA process*

## NEXT STEPS

The corridors (100km in width to enable the identification of routing alternatives) will be the focus areas of the SEA. The SEA Project Team are currently undertaking constraints mapping within the corridors to identify key environmental and engineering constraints that should be avoided when planning a transmission pipeline or power line. As part of this exercise the CSIR will also undertake positive mapping and look for favourable areas for transmission pipeline development based on social and economic development opportunities.

As part of this process the SEA Project Team will also consult with a wide range of stakeholders including government, industry and specialists in order to validate findings from the assessment but to also receive additional input based on national, provincial and local priorities.

The SEA Project Team will be engaging with key stakeholders through the following:

1. A series of public meetings (the first round of public meeting was held from 01 November to 13 November 2017. A second round was held in October 2019);
2. A series of sector specific meetings;
3. Placing regular feedback and information on the dedicated project website;
4. Gathering written comments sent either via email ([gasnetwork@csir.co.za](mailto:gasnetwork@csir.co.za)) or via the SEA website: <http://gasnetwork.csir.co.za>).

Additional information can be found on the dedicated project website: <https://gasnetwork.csir.co.za>.

Please register your interest in the project by submitting your name and contact details (i.e. contact number, email address and postal address) to the following address: [gasnetwork@csir.co.za](mailto:gasnetwork@csir.co.za) or register on the SEA website: <http://gasnetwork.csir.co.za>.