

## 5. NEED AND DESIRABILITY

This chapter summarises the national and policy framework relevant to the need and desirability for the proposed project. “Need and desirability” is the consideration of the strategic context of a development proposal within the broader societal needs and the public interest.

The DFFE guideline on need and desirability (GN No. R891 of 20 October 2017) notes that while addressing the growth of the national economy through the implementation of various national policies and strategies, it is also essential that these policies take cognisance of strategic concerns such as climate change, food security, as well as the sustainability in supply of natural resources and the status of our ecosystem services. The guideline further notes that at a project level (as part of an impact assessment process), the need and desirability of the project should take into consideration the content of regional and local plans, frameworks and strategies. These are considered below.

### 5.1 CONSISTENCY WITH NATIONAL POLICY AND PLANNING FRAMEWORKS

#### 5.1.1 White Paper on the Energy Policy of the Republic of South Africa (1998)

The White Paper on the Energy Policy (1998) is an overarching policy document which was to guide future policy and planning in the energy sector. The policy objectives include the stimulation of economic development, management of energy related environmental and health impacts and diversification of the country’s energy supply to ensure energy security.

The paper states that the government will “promote the development of South Africa’s oil and gas resources...” and “ensure private sector investment and expertise in the exploitation and development of the country’s oil and gas resources”. The successful exploitation of these natural resources would contribute to the growth of the economy and relieve pressure on the balance of payments. Before the development of the country’s oil and gas resources can take place, there is a need to undertake exploration activities to determine their extent and the feasibility of utilising these resources for production.

#### 5.1.2 New Growth Path (2011)

The New Growth Path (NGP) reflected the commitment of Government to prioritise employment creation in all economic policies and set out the key drivers and sectors for employment which was the focus of Government. The identified focus sectors were infrastructure, agriculture, mining, manufacturing, tourism and the green economy.

The NGP further identified the need to develop macroeconomic strategies and microeconomic measures to achieve sustainable expansion of work opportunities and output. The NGP stated that one microeconomic measure is South Africa being the driving force behind the development of regional energy, transport and telecommunications infrastructure. Priorities in this regard included strengthening the regional integration of energy by undertaking urgent improvements in electricity interconnectors and exploring other opportunities for enhancing clean energy across central and southern Africa, including natural gas.

#### 5.1.3 National Development Plan 2030 (2013)

The National Development Plan (NDP) 2030 provides the context for all growth in South Africa, with the overarching aim of eradicating poverty and inequality between people in South Africa through the

promotion of development. It provides a broad strategic framework to address poverty and inequality based on the six focused and interlinked priorities. One of the key priorities is “faster and more inclusive economic growth”. To transform the economy and create sustainable expansion for job creation, an average economic growth exceeding 5% per annum is required. The NDP supports transformation of the economy through changing patterns of ownership and control.

Environmental challenges are in conflict with some of these development initiatives. As such, the NDP emphasises the need to:

- Protect the natural environment;
- Enhance the resilience of people and the economy to climate change;
- Reduce carbon emissions in line with international commitments;
- Make significant strides toward becoming a zero-waste economy; and
- Reduce greenhouse gas emissions and improve energy efficiency.

The NDP makes numerous mentions of the need to act responsibly to mitigate the effects of climate change. Diversification of the energy mix away from fossil fuels will be key as energy generation makes up 48 percent of South Africa’s GHG emissions. The NDP indicates that “the country will explore the use of natural gas as a less carbon intensive transitional fuel” and that there is a requirement for “increasing exploration to find domestic gas feedstock... to diversify the energy mix and reduce carbon emissions”. Thus, the ongoing exploration of local natural gas reserves is a key action required to ensure that natural gas is a viable transitional fuel for use in the national electricity generation mix.

#### **5.1.4 Draft Integrated Energy Plan (2013)**

The Draft Integrated Energy Plan (IEP) (2013) considered how current and future energy needs can be addressed. The plan considered security of supply, increased access to energy, diversity in supply sources and primary sources of energy, and minimising emissions. The plan indicated that projected demand for natural gas between 2010 and 2050 would be second only to petroleum products, primarily due to increased growth in the industrial sector.

The Draft IEP stated that given South Africa is a net importer of oil, the liquid fuels industry and its economy is vulnerable to fluctuations in the global oil market. Current natural gas consumption exceeds production, with the majority of demand being met through imports from Mozambique.

The plan stated that the use of natural gas as an alternative electricity generator must be considered in moderation due to limited proven reserves, but that it has significant potential both for power generation, as well as direct thermal uses. The role of renewable energy to deliver the intended policy benefits of improved energy security and reduced greenhouse gas emissions is also acknowledged in the plan. The availability of untapped renewable energy resources within the country is highlighted. The DMRE (previously under the Department of Energy) has implemented the Renewable Energy Independent Power Producers procurement process to increase the share of renewable energy technologies in the energy mix but, due to the intermittent nature of renewable energy systems and the variability in electricity load requirements, storage remains the most important challenge to the widespread use of renewable energy. Consequently, the need to incorporate fossil fuels and nuclear power to ensure that there is both sufficient base-load electricity generating power to meet the minimum needs and peak-load power to meet the needs during peak periods is acknowledged. The use of natural gas for power generation is also considered as an

option to assist South Africa to move towards a low carbon future given that natural gas has a lower carbon content than coal.

### 5.1.5 Operation Phakisa (2014)

In July 2014 the South African Government launched Operation Phakisa, which is an innovative, pioneering and inspiring approach that will enable South Africa to implement its policies and programmes better, faster and more effectively. Operation Phakisa aims to unlock the economic potential of South Africa's oceans. In this regard four priority sectors have been selected as new growth areas in the ocean economy, including:

- (a) Marine transport and manufacturing activities, such as coastal shipping, trans-shipment, boat building, repair and refurbishment;
- (b) Offshore oil and gas exploration;
- (c) Aquaculture; and
- (d) Marine protection services and ocean governance.

In terms of offshore oil and gas exploration, the goal is to further enhance the enabling environment for exploration of oil and gas, resulting in an increased number of exploration wells drilled, while simultaneously maximising the value captured for South Africa. In this regard, a key target identified by Operation Phakisa is the drilling of 30 exploration wells in ten years.

As the proposal by CGG entails the exploration for future prospects, which could be subjected to possible future exploration drilling, they are deemed to be in line with the objectives of Operation Phakisa.

In terms of marine protection, the 2011 National Biodiversity Assessment had noted that offshore ecosystems in South Africa were poorly protected. An offshore MPA project (2007- 2011) initiated plans to increase protection of offshore ecosystems, the project was advanced towards implementation during Operation Phakisa Oceans Economy. The process culminated in the gazetting of 20 new MPAs, which came into effect on 1 August 2019 and expand the protection of South Africa's mainland ocean territory to 5%.

### 5.1.6 Integrated Resources Plan (2019)

The Integrated Resource Plan (2019) was gazetted in October 2019. In order to achieve the outcomes envisaged in the National Development Plan, the Integrated Resource Plan provides a path to meet electricity needs over a 20-year planning horizon to 2030 and will be used to roll out electricity infrastructure development in line with Ministerial Determinations. The plan aims to balance a number of objectives, namely, to ensure security of supply; to minimize cost of electricity; to minimize negative environmental impact (emissions), and to minimize water usage.

The Integrated Resources Plan (2019) notes that there is a requirement to pursue a diversified energy mix with respect to electricity production which reduces the country's reliance on a few primary energy sources. Natural Gas is listed as one of the alternative sources which can be used in a flexible manner to complement renewable energy sources. It is further noted that there is currently a reliance for the importation of gas and that the use of local and regional gas resources will allow for scaling up within manageable risk levels. It is further noted that the "exploration to assess the magnitude of local recoverable shale and coastal gas are being pursued and must be accelerated". In this regard, the proposed project could support this requirement through the on-going exploration to determine the nature and extent of potentially viable offshore resources which could include gas finds.

### 5.1.7 South African Economic Reconstruction and Recovery Plan (2020)

The South African Economic Reconstruction and Recovery Plan's interventions are in pursuit of the National Development Plan goals of reducing unemployment, poverty and inequality. This document sets out a reconstruction and recovery plan for the South African economy that is aimed at stimulating equitable and inclusive growth. For the past decade, the South African economy has experienced stagnation which has put a strain on the effort to tackle the historical structural inequalities, unemployment and poverty. There is consensus that there needs to be substantial structural change in the economy that would unlock growth and allow for development. Government's conviction is that South Africa has to massively mobilise all its resources and efforts in economic activities to put the economy in a sustainable recovery trajectory. The Covid-19 pandemic deepened the economic crisis in South Africa with many people losing their jobs. As a result, inequality is expected to widen and poverty to deepen.

One of the priority intervention areas is Energy Security, which is critical for the maintenance of a stable economy and is also important in ensuring growth. Specific interventions in the energy sector include creating and securing additional supply, including gas, and finalising the Petroleum Resources Development Bill and related fiscal measures to enable Upstream Sector Investments.

The proposed project could support meeting this priority intervention in Energy Security, through the ongoing exploration to determine the nature and extent of potentially viable offshore resources, which could include gas finds.

### 5.1.8 National Climate Change Response White Paper (2014)

The National Climate Change Response Paper presents the South African Government's vision for an effective climate change response and the long-term, just transition to a climate-resilient and lower-carbon economy and society. South Africa's response to climate change has two objectives:

- Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity.
- Make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner.

The Paper acknowledges that South Africa has relatively high emissions for an emerging economy. The energy intensity of the South African economy, largely due to the significance of mining and minerals processing in the economy and the coal-intensive energy system, means that South Africa is a significant emitter of GHGs. The majority of South Africa's energy emissions arise from electricity generation.

The Paper sets out South Africa's overall response strategy through strategic priorities, leading to a series of adaptation, mitigation, response measures and priority flagship programmes. Policy decisions on new infrastructure investments must consider climate change impacts to avoid the lock-in of emissions intensive technologies into the future. In the medium-term, the Paper indicates that a mitigation option with the biggest potential includes a shift to lower-carbon electricity generation options. The Renewable Energy Flagship Programme is identified as possible driver for the deployment of renewable energy technologies. Renewable energy and not fossil fuel /gas is ultimately recommended for climate change mitigation.

### 5.1.9 Paris Agreement - United Nations Framework Convention on Climate Change (2015)

The Paris Agreement is a comprehensive framework that aims to guide international efforts to limit GHG emissions and to meet challenges posed by climate change. The Paris Agreement was adopted on 12 December 2015 at the 21<sup>st</sup> session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC CoP21). The agreement was signed by South Africa on 22 April 2016.

The Paris Agreement aims to limit the global temperature increase to below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. Parties aim to reach global peaking of GHG emissions as soon as possible, recognising that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century. Each individual country is responsible for determining their contribution (referred to as the “nationally determined contribution”) in reaching this goal. The Agreement requires that these contributions should be “ambitious” and “represent a progression over time”. The contributions should be reported every five years and are to be registered by the UNFCCC Secretariat. As a signatory to the Agreement, South Africa will be required to adopt the agreement within its own legal systems, through ratification, acceptance, approval or accession.

*“As a signatory to the Paris Agreement, South Africa is required to investigate alternatives to existing industries which have high carbon-emissions. A shift away from coal-based energy production within the energy sector and increased reliance on alternative energy sources is therefore anticipated. The increased use of natural gas can, in the short term, serve as bridge on the path to the carbon-neutral goal of the Paris Agreement”* (Source: <http://www.energylawexchange.com/the-paris-agreement-on-climate-change-implications-for-africa/>).

## 5.2 NEED AND DESIRABILITY SUMMARY

South Africa, like the rest of the world, is vulnerable to climate change, which will have an impact on water resources and food production, and increase the vulnerability of impoverished communities, amongst others. There is thus global concern of the need to reduce carbon emissions and achieve carbon neutrality by 2050. South Africa, as one of the top 20 global emitters, with a high dependency on fossil fuels, will need to make substantial emission cuts. However, the rapid transition to carbon neutrality presents a potential risk to economic growth and sustainable development if not managed properly. Thus, South Africa needs to balance the need to reduce emissions with the need to grow its economy and create jobs.

There is a drive from national and provincial Government to stimulate development and grow the economy of South Africa with a strong focus on job creation in all sectors, whilst protecting the environment. The COVID-19 pandemic has deepened the economic crisis in South Africa and, as a result, inequality is expected to widen and poverty to deepen. To facilitate this economic growth, there is a critical need to ensure that there is sufficient capacity in the country’s energy supply by diversifying the primary energy sources within South Africa. In this regard, South Africa needs to balance the three core dimensions of what has been defined as the “energy trilemma”: (1) affordability and accessibility, (2) energy security and (3) environmental sustainability. In weighing up these core dimensions, South African Government policy currently supports exploration for indigenous hydrocarbon resources and currently promotes the use of natural gas as part of the energy mix up to 2030 (per the IRP, 2019).

Although the use of hydrocarbons is not fully aligned with other National plans and policies, which identify the need to reduce the reliance on fossil fuels and shift to lower-carbon electricity generation options in order for South Africa to reduce its GHG emissions and meet commitments in this regard, natural gas is included in the energy mix of the country to serve as a transition or bridge on the path to a carbon-neutral goal (as per the Paris Agreement) and provide the flexibility required to complement renewable energy sources. In addition to the use of natural gas for electricity generation, the many other uses (e.g. transportation fuels, asphalt, and feedstocks for making the chemicals, polyurethane, solvents, plastics and other synthetic materials) will also need to see adaptation and mitigation during this transition period.

It is acknowledged that the proposed exploration activities would not result in the production of hydrocarbons, but rather the generation of information on possible indigenous hydrocarbon resources in the area of interest off the Southeast Coast. By gaining a better understanding of the extent, nature and economic feasibility of extracting these potential resources, the viability of developing indigenous gas resources would be better understood.

The proposed exploration has no direct influence on South Africa's reliance on hydrocarbons and whether consumers use more or less oil or gas, nor on which types of fossil fuels contribute to the countries' energy mix. The proposed project will not necessarily change how fossil fuels are used and has no direct influence on GHG emissions that would arise from the consumption of fossil fuels. These aspects are influenced by South Africa's energy and climate change related policy, the financial costs of the various energy sources and consumer choices in this regard.

The proposed project will potentially lead to South Africa being able to optimise its own indigenous resources to provide the hydrocarbon needs, rather than having to import, as at present. It won't necessarily change how fossil fuels are used in the short- to medium-term in the transition to the goal of carbon neutrality by 2050. **These National strategic policy issues fall beyond the scope of this Basic Assessment.**