

Draft Offshore Oil and Gas Sector Plan: Input for Marine Spatial Planning (MSP)

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Introduction:

I. Purpose of a Marine Sector Plan as part of MSP

Marine Sector Plans specify the overall development objectives and priorities of each marine sector for the coming two decades from a national point of view.

They specify and outline the spatial claims and interests of each sector for South Africa's marine area as a whole – the “spatial ask” of each marine activity and interest. This includes proposed zones and spatial regulations including their location and extent.

The Marine Sector Plans therefore summarise the national spatial and sector priorities that each marine sector would like to see translated into the Marine Area Plans across the Marine Planning Areas as part of the coming Marine Area Plan development processes. The Marine Planning Areas encompass the area between the high-water mark (landmass boundary line) and the exclusive economic zone as seaward boundary.

The Marine Sector Plans are therefore not the integrated Marine Area Plans.

Rather, they are critical inputs for the next step of developing integrated cross-sectoral Marine Area Plans. As such, the Marine Sector Plans serve as the sectors' proposals that will then need to be further discussed and negotiated across sectors and in multi-actor constellations as part of the Marine Area Plan development.

II. Logic of Marine Sector Plans and Marine Area Plans

Each of the various Marine Sector Plans follows the same structure, which comprises of the following sections:

- Part 1: Background and context
- Part 2: Sector development objectives
- Part 3: Sector development guidelines
- Part 4: Proposed marine zones and spatial regulations
- Part 5: Maps
- Part 6: Future outlook

Each Marine Sector Plan is developed on the basis of the spatial management system approach that applies for MSP (see gazette no. 42657, notice no. 1090 from 23. August 2019). This approach foresees a spatial management system that consists of:

- a) general development guidelines
- b) sector development guidelines, and
- c) a zoning scheme with spatial regulations.

This uniform approach to area-based management will provide for coherence and consistency across all Marine Sector Plans and, eventually, all four Marine Area Plans.

The system builds on South Africa's spatial planning approach on land in terms of regulations of uses and defined zones for particular uses. While the general development guidelines are broad enough to apply to all Marine Area Plans, sector development guidelines may vary between Marine Area Plans to accommodate the social, economic and ecological differences of each of the four Marine Planning Areas and to meet distinct Marine Area Plan objectives. The principles of the zoning scheme will also apply throughout all Marine Sector/Area Plans, although the precise details of the zones regarding spatial regulations and their allocation in space will obviously vary.

a) General development guidelines

The purpose of the general development guidelines is to provide a framework for planners and sectoral decision-makers to enable sustainable ocean development throughout the Marine Planning Areas. Guidelines of this nature are essential for achieving South Africa's vision for sustainable ocean use and the Marine Spatial Planning goals (see the National MSP Framework, gazette no. 42657, notice no. 40860 from 26. May 2017). The final set of general development guidelines will be developed in close consultation with all relevant stakeholders during the preparation of the Marine Area Plans.

b) Sector development guidelines

In addition to the general development guidelines, sector development guidelines will be developed for specific maritime sectors in the respective Marine Planning Areas. Their aim is to promote the sustainable development of the respective sectors in line with (national and sub-national) sector objectives (e.g. as already specified in sector policies, strategies or plans, or as specified in dedicated consultation processes). They will be based on the best available science. As in the case of general development guidelines, the full complement of objectives and associated development guidelines for maritime sectors will be developed in collaboration with the respective stakeholders during the preparation of the respective Marine Sector Plans and, eventually, the Marine Area Plans.

Like the general development guidelines, sector development guidelines will apply throughout the entire Marine Planning Area, irrespective of any zoning scheme and sector prioritisation that may additionally apply.

c) Zoning scheme

“Zone” in the context of the zoning scheme of the Marine Area Plans means a defined category of sea use that is shown on the map for the Marine Area Plan. Zones will be delineated using coordinates and depicted on a map as a schematic representation.

Zones go beyond the general and sector development guidelines in that they pre-define desired combinations of use for specific marine areas. They are arranged in the Marine Planning Areas in such a way as to enable the best possible pattern of use that can be obtained at the time, based on the best available evidence at the time and stakeholder interests. Zones allow priorities to be set for certain uses and activities based on criteria such as suitability, compatibility and desirability, and can be used to restrict activities in certain marine areas. The advantage of a zoning scheme is a more coordinated spatial approach that minimises conflicts, creates greater transparency for developers and investors, and makes processes such as licensing more efficient.

Zones reflect the general and sector development guidelines to the best extent possible in that they provide for detailed spatial regulations.

Zones and their regulations are based on the following types of use:

- Primary use is an activity that is given priority in a particular zone. Other activities are only allowed in the zone if they do not impede the primary use.
- Consent use is an activity that is compatible with the primary use of the zone and which can be approved in a primary use zone under specified conditions.
- Prohibited use is an activity that is not allowed in the zone as it would impede the primary use.

Zones and their regulations will be defined as part of Marine Area Plan development processes based on consultation of all public and private stakeholders with an interest or mandate in the (respective) Marine Planning Area.

The regulations of each zone do not replace existing sector regulations for specific uses (e.g. marine protected area regulations, fisheries regulations, UNCLOS, port regulations). Rather, their specific purpose is to guide development and, in some cases, complement the existing regulations on a spatial planning level. In particular, any licensing that may impact the environment still needs to go through an EIA. EIAs will need to also consider the regulations set out in the respective zoning scheme.

The zones that can apply in South Africa's Marine Area Plans are based on current and prospective uses and activities. The zones are justified on the basis of the sustainable development needs and objectives of maritime sectors and human interests. They intend to ensure and enable:

- preferred access to key areas and resources for marine users (e.g. key fishing areas, known geological resources, suitable areas for the anchoring of ships),
- a safe operating environment for industries (e.g. for mining, marine aquaculture, or marine tourism operations, or to avoid the historically dumped ammunition becomes a danger to other uses),
- protection, and in some cases, enhancement of the resources or features the sector or interest requires (e.g. nursery and spawning grounds, bio-diverse areas, marine species threatened by extinction, migration routes of marine species),
- sustained provision of the marine (and coastal) ecosystem services harnessed by marine users (e.g. clean water, food, cultural, spiritual, recreational).

It is against this background that each of the Marine Sector Plans will propose, where needed and sensible, zones and regulations as well as their locations. These zones will serve as the basis for developing the negotiated Marine Area Plans.

Zones are named for their respective primary uses. In a Mining Zone, mining constitutes the primary use; in a Marine Aquaculture Zone, marine aquaculture constitutes the primary use and so on. Consent and prohibited uses are specified for each zone depending on compatibilities with the primary use.

The types of zones may change with changing requirements, the development of new (co-) uses, or in line with the specific needs of a particular Marine Planning Area.

Areas not zoned (for) in Marine Planning Areas are general use areas. This means no priority is given to a specific use in such areas. Uses and activities may overlap in these areas but are not conflicting enough to warrant zoning. Re-zoning may occur in the future as Marine Area Plans are updated to accommodate changes in use necessary to meet developmental needs of the country at the time. The mechanism and timescale for revising Marine Area Plans will follow the requirements outlined in the MSP Act (Act No. 16 of 2018).

Zones are delineated and arranged in Marine Planning Areas based on:

- the natural conditions and environmental opportunities and constraints of the Marine Planning Area,
- the distribution of key resources within the Marine Planning Area (e.g. geological resources),
- existing spatial allocation and regulations within the Marine Planning Area (e.g. marine protected areas, areas closed for certain types of fishing),
- specific sectoral needs and constraints within the Marine Planning Area, and
- opportunities for co-location and synergy between uses and activities.

Developing and agreeing on a zoning scheme is an essential element in the preparation of a Marine Area Plan. As in the case of general and sector development guidelines, the zoning scheme itself – together with more detailed definitions of the primary uses (if required), as well as the consent and prohibited uses for each zone (including the conditions under which consent uses can be approved in a primary use zone) – will be developed in close collaboration with all relevant public and private stakeholders during the preparation of the Marine Sector Plans, and, eventually, the Marine Area

Plans. A particular concern of the planning process is to ensure that marine activities are aligned with terrestrial activities and that this is reflected both in terrestrial and marine area plans (e.g. aligned zoning schemes).

Once a Marine Area Plan comes into force, the zoning scheme will be binding to all sectors in line with the regulations that apply for each zone.

The knowledge baseline for all Marine Sector Plans is detailed in the National Data and Information Report (NDIR, 2021), which will inform the development of the sector development objectives and guidelines as well as the delineation and arrangement of proposed zones in the Marine Planning Areas.

The NDIR gives a description of how the different sectors are currently using the South African ocean space and how they intend to continue using the ocean space in the future in order to meet their sectoral objectives. The document draws together sectoral information in order to generate a better understanding of the current and future interests of relevant marine activities in the South African marine space. In doing so it conveys a multi-sector perspective and serves as the foundation for the development of Marine Sector Plans and, eventually, the Marine Area Plans in South Africa. It also collates all information on existing legislation as well as spatial layers that are needed to embark on spatial planning.

Part 1: Background and context

South Africa is endowed with rich geological resources in the sea, including hydrocarbons like oil and gas. These are valuable economic assets for the country. Finding and mapping concentrations of offshore oil and gas resources that would merit commercial production is therefore a key priority for the South African government.

Although oil and gas resources were first discovered in 1969 and production commenced in the 1990s, the oil and gas industry is still in its infancy, and further exploration will be required to unlock the potential of the nation's petroleum resources.

Since the oil and gas sector is in an early development phase, major investment in exploration activity is required before the sector's potential can be realised. This is an area of high risk but with huge economic potential that requires substantial capital investment. Operators range from multi-national to smaller locally owned oil and gas companies. Currently there are twenty (20) active exploration and seven (7) production rights over the offshore petroleum blocks. The advancement of oil and gas exploration in South Africa has not been rapid as envisaged by the Operation Phakisa, whereby the Oil and Gas Lab formulated an objective to 'drill 30 exploration wells in the next 10 years. This 30-well aspiration is unlikely to be achieved in the three remaining years of the target set out through Operation Phakisa, with only two (2) exploration wells and one (1) pilot well, having been drilled post 2014 in the South Coast Basin. Despite the fact that most exploration rights are already in their second or third renewal period, the majority of offshore operators are still in the early stages of their exploration efforts. As such it will take a significant amount of time before these operators are prepared to transition from exploration to production activities in the event of a discovery. Though it is worth indicating that one of the exploration rights offshore, in block 11B/12B, is in the process of the said transition. This in turn risks delaying South Africa's transition to reliance on a more diversified energy portfolio.

Various factors have contributed to the slow development of the oil and gas sector in South Africa, including external factors such as the persistent periodic global oil price shocks that have characterised the industry since the sub-prime crisis of 2008. A period of low oil prices that set in during 2014 slowed investment appetite in the sector both globally and in South Africa, and the slow recovery which began in 2017 was reversed quickly with the onset of the Covid-19 pandemic and imposition of lockdown in 2020.

It is essential to have a stable, certain and predictable regulatory environment in order to attract both domestic and foreign capital-intensive investments. The development of the Upstream Petroleum Resources Development Bill, which may be key in facilitating progress and advancement in the sector in line with the objectives of Operation Phakisa, is in progress.

Securing the future of the upstream oil and gas sector will confirm its position as a strategic and indispensable part of South Africa's Integrated Resource Plan, giving opportunity to diversify South Africa's energy production portfolio, address energy challenges and secure low carbon emissions in the future through gas resources. It can therefore be said that the sector offers significant potential for contributing to the country's socio-economic development.

The minimisation of the environmental impacts associated with exploration and production activities offshore is a fundamental concern for the South African government. In order to preserve the environment while efficiently maximising hydrocarbon recovery, exploration and production activities have to be undertaken as per the prescribed regulatory framework.

Both the sector's development objectives and guidelines are based on national policies, and on relevant legislation and respective regulations, including but not limited to:

- The Mineral and Petroleum Resources Development Act (No. 28 of 2002) and associated regulations.
- The Petroleum Pipelines Act (No. 60 of 2003)
- The Petroleum Products Act (No. 120 of 1977)
- The Gas Act (No. 48 of 2001)
- The International Trade and Administration Act (No. 71 of 2002)
- The National Environmental Management Act (No. 107 of 1998) and associated regulations.
- The National Environmental Management: Waste Act (No. 59 of 2008)
- The National Environmental Management: Protected Areas Act (No. 57 of 2003)
- The National Environmental Management: Air Quality Act (No. 39 of 2004)

Part 2: Sector development objectives

On the basis of South Africa's relevant legislation and respective regulations, and policies, the following development objectives are identified that guide future development of the sector as part of and through MSP:

1. Create an enabling environment for the exploration and development of oil and gas resources within South Africa's offshore Exclusive Economic Zone (EEZ)
2. Prioritise the exploration and development of domestic oil and gas reserves to support the broader economic growth objectives of South Africa
3. Prioritise early phase exploration with the intention of locating leads and prospectivity in the greater part of the EEZ
4. Attract foreign investment interest by international petroleum companies to further develop South Africa's underexplored hydrocarbon reserves, in addition to contributing positively towards job creation and skills development in South Africa, including attracting global service companies to set-up regional hub in South Africa.
5. Create an industry which delivers effective risk management across all its operations and which is especially vigilant in testing operational impacts on current and future environments
6. Maximize the recovery of potential hydrocarbon reserves sustainably and efficiently through a focus on industry-led innovation, enhancing the skills base and ensuring supply chain growth for the benefit of ordinary South Africans
7. Contribute to satisfying the future energy demands for the country while balancing this with the protection of the marine environment and those communities who rely on it

8. Exploration and production of oil and gas resources is developed in an orderly and sustainable manner, consistent with section 24 of the Constitution of the Republic of South Africa and environmental legislative framework, to ensure that while benefits are realised, environmental and socio-economic concerns are addressed.
9. The security of tenure for oil and gas rights holders as provided for in terms of section 2(g) of the Mineral and Petroleum Resources Development Act (No. 28 of 2002) must be safeguarded.

Part 3: Sector development guidelines

On the basis of the sector development objectives, the following sector development guidelines are identified that guide decision-makers in both the offshore hydrocarbon and in other sectors when implementing the Marine Area Plans:

Oil and Gas: Sector development guideline no.	Guideline
OG: SecDG1	The South African government will work with the industry and other relevant stakeholders to maximise offshore hydrocarbon exploration and production whilst ensuring that the level of environmental risks associated with these activities are regulated to achieve minimal impact on the marine and coastal environment. In this regard, applicants and holders are required, where applicable, to undertake environmental impacts assessment(s) for the proposed activities and obtain all mandatory authorisations and permits before any activities are allowed within the EEZ.
OG: SecDG2	All oil and gas regulatory authorities will ensure that oil and gas operations are undertaken in accordance with regulatory requirements, and execute prescribed enforcement measures in cases of non-compliance.
OG: SecDG3	Production of resources will be limited to the areas where productions rights are granted and associated potential impacts will be localised. Oil and gas resources will be developed to the maximum extent practicable, provided this is compatible with the receiving environment such as sediment layers and habitats.
OG: SecDG4	The following factors will be taken into account on a case by case basis when reaching decisions regarding exploration and production activities: <ul style="list-style-type: none"> ● Whenever possible, new subsea infrastructure associated with the production activities (e.g. pipelines, subsea trees, manifolds, etc.) should be sited adjacent to or in close proximity to existing structural installations.¹ ● Exploration and production activities should maintain regulated safety zones to all other marine uses such as existing subsea infrastructure and sea surface production facilities, fisheries, known marine historic sites and shipping activities, to minimise potential impacts on these uses and promote safe and efficient navigation. ● Environmental impact assessments for various oil and gas activities will consider and suggest appropriate distances to be maintained for marine uses not specified above.
OG: Sec DG5	Other marine users not limited to fisheries, shipping, and tourism should observe and adhere to regulated safety zones applicable to oil and gas activities.

¹ On Underwater Infrastructure see the respective sector plan.

OG: SecDG6	A risk-based approach should be applied by rights holders and decision makers concerning the removal of redundant structural production installations. Consideration should be given to such installations being left in situ where this would minimise impact on other marine users and the natural environment.
OG: SecDG7	Offshore oil and gas regulatory authorities will ensure that adequate risk reduction measures are in place, and that operators have sufficient emergency response and contingency strategies in place.
OG: SecDG8	Government, the industry and other relevant stakeholders such as local authorities should work together to maximise benefit to communities from the sector and its development.
OG: SecDG9	Marine and terrestrial planners, decision makers and developers should give consideration to the facility requirements for the processing of oil and gas resources on land when such need arises. Impacts of such infrastructure developments on the marine and coastal environment should be minimised to the extent possible.
OG: SecDG10	Oil and Gas industry and various authorities including academia, will work together to enhance offshore scientific research opportunities not limited to environmental, biodiversity, and metocean.

Part 4: Proposed marine zones and spatial regulations

One type of proposed priority zone is delineated in relation to offshore oil and gas activities²:

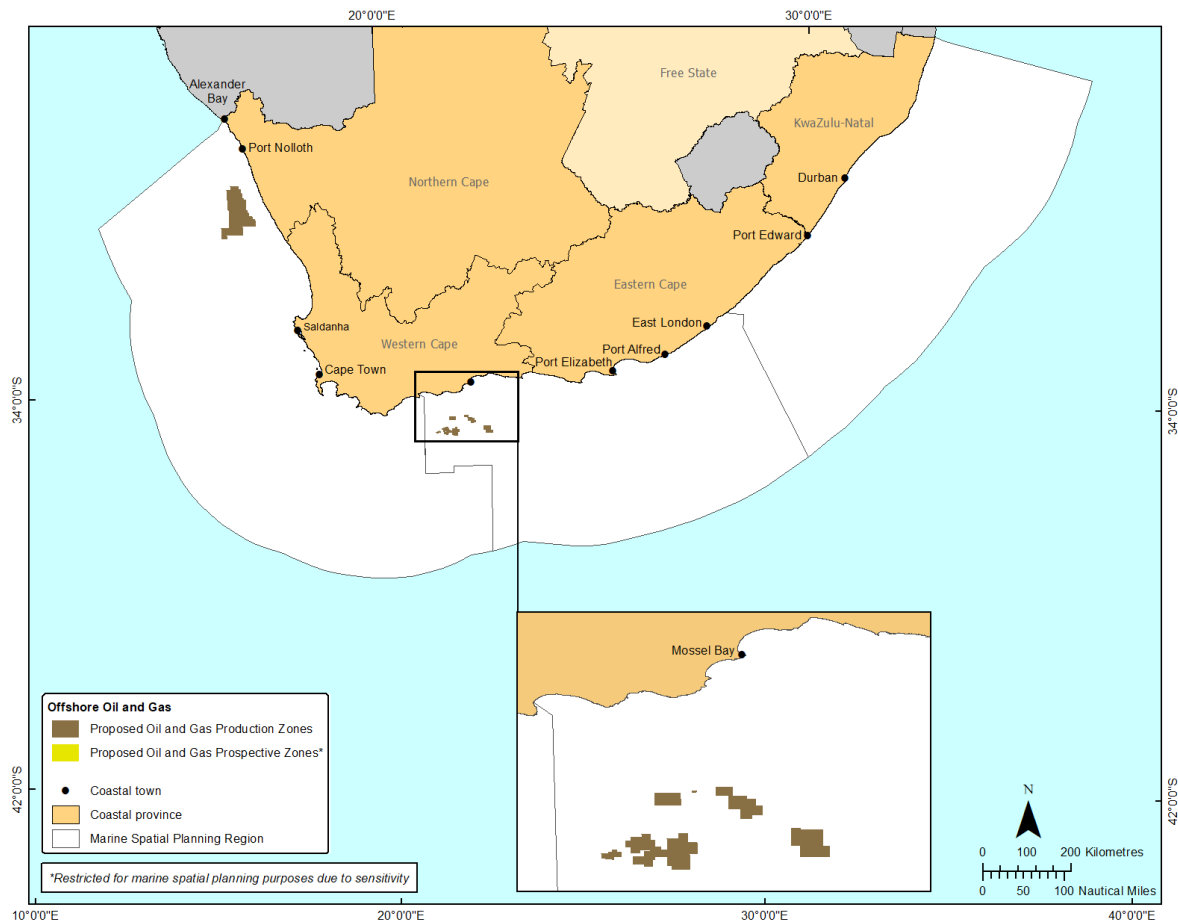
1. Proposed Oil and Gas Production Zones
2. Proposed Oil and Gas Prospective Zones

Type of zone	Spatial regulations	Justification
Proposed Oil and Gas Production Zones	<p>In Proposed Oil and Gas Production Zones (see part 5), priority is given to the extraction of oil and gas resources.</p> <p>The following uses are prohibited in this zone as they would impede the primary use and conflict with the sector's development objectives:</p> <ul style="list-style-type: none"> • Military practices <p>Adjacent to sea surface oil and gas infrastructure shipping is prohibited based on the existing Traffic Separation Scheme (TSS) south of Mossel Bay. If and when required, new TSS's may be introduced as new oil and gas platforms and infrastructure are being developed to minimize risks.</p> <p>Further restrictions that result from the safety requirements of production operations may apply and are likely to be temporal, i.e. they only apply when extraction is actively taking place (e.g.</p>	<p>The Proposed Oil and Gas Production Zones are required to ensure that: (i) long-term investment is secured to facilitate the production of oil and gas resources, and (ii) security of tenure is safeguarded. This will ultimately contribute to the</p>

² Offshore oil and gas exploration activities are permitted to take place everywhere, unless the spatial regulations of other sector's zones (in Marine Sector Plans and eventually the Marine Area Plans) list the activity as consent use or prohibited use.

	<p>restricted access for fishing vessels and commercial ships). Users are required to ensure whether production activities are taking place based on information provided by the maritime transport authorities and announced publicly.</p> <p>The following activity is regulated in the zone as it could impede the primary use. It can be approved as consent use:</p> <ul style="list-style-type: none"> • Laying of new underwater communication cables • Strict spatial environmental protection that would be incompatible with production activities (e.g. gazetting of new Marine Protected Areas). <p>For this use, agreement should be sought with PASA and the licence holder on where such infrastructure can be placed without impeding current or future offshore oil and gas operations.</p> <p>All other activities not specified above are allowed in this zone when production operations take place based on the principle of compatibility with the primary use, provided that relevant sector regulations are complied with.</p>	socio-economic development of the country.
Proposed Oil and Gas Prospective Zones	<p>In Proposed Oil and Gas Prospective Zones, priority is given to the future development of oil and gas extraction.</p> <p>No uses are prohibited in this zone.</p> <p>The following activities are regulated in the zone as they could impede the primary use. They can be approved as consent use:</p> <ul style="list-style-type: none"> • Strict spatial environmental protection that would be incompatible with future production activities (e.g. gazetting of new Marine Protected Areas) • Laying of new underwater communication cables <p>For this use, agreement should be sought with PASA and the licence holder on where such infrastructure can be placed without impeding future offshore oil and gas operations.</p> <p>All other activities not specified above are allowed in this zone based on the principle of compatibility with the primary use, provided that relevant sector regulations are complied with.</p>	<p>The Proposed Oil and Gas Prospective Zones are required to ensure that Medium and High rated prospective areas (high chance to find oil and gas) and High Graded resource areas, identified during the exploration phase, are secured for future petroleum development. These zones have a combined size of 307 536 km² and cover 40% of the Western Marine Planning Area, 25% of the Southern Marine Planning Area, 30% of the Eastern Marine Planning Area and 0% of the</p>

Part 5: Map



NOTE: Map depicting the Proposed Oil and Gas Production Zones, comprising all awarded production licence areas. The delineations of the Proposed Oil and Gas Prospective Zones are restricted for marine spatial planning purposes due to sensitivity.

Part 6: Future outlook

Much of the EEZ remains relatively unexplored. Prospectivity evaluations continuously evolve as rights holders progress through their exploration phases, and more data is collected to support interpretation models in pursuit of identifying location for exploration drilling.

The interest to explore oil and gas resources offshore has grown in recent years with the ultimate aim of finding commercially viable reserves. To secure marine areas for future production of oil and gas resources, reliable knowledge of resources/reserves is critical. Such evidence is required to inform future updates of the Marine Area Plans, which in turn necessitates enhanced exploration activities.

Trends in the oil and gas industry are however strongly dependent on global demands as reflected by the commodity prices. In addition, the global fight against climate change and related mitigation efforts may result in decreasing investments into the sector over time. Overall, this makes it difficult to reliably predict the concrete future extraction activities of the sector in the marine areas. Technological innovation may also lead to increased production activities as this might allow easier access to and

extraction of offshore hydrocarbon resources, which are currently economically non-viable due to their nature, location or form of occurrence.

Given this context the oil and gas sector will hold its position as a medium to long term strategic and indispensable sector as part of South Africa's Integrated Resource Plan. As such it will continue to provide an opportunity to diversify South Africa's energy production portfolio, address energy challenges and secure low carbon emissions through an enhanced use of gas resources.

Furthermore, the oil and gas sector can play a significant role in helping to reduce costs of potentially intensifying investments in developing marine renewable energy production (especially wind projects) through the application of skills and knowhow of the sector's marine operations. An additional positive interaction is expected to exist between the emerging carbon capture and storage sector (CCS) and the oil and gas sector with the potential for re-use of (redundant) infrastructure, shared use of existing pipelines and utility corridors and transfer of relevant skills and expertise.

Developing the position of South Africa as a hub for oil and gas exploration and production in the SADC region is key to maintaining and developing the competitiveness and long-term future of its oil and gas sector. In supporting South Africa's economic recovery, the Department of Minerals Resources and Energy, and the Petroleum Agency of South Africa, pledges to work closely with upstream oil and gas industry to maintain its competitiveness and facilitate the transfer of skills and knowledge to other sectors.