

REPUBLIC OF SOUTH AFRICA



Unlocking the Economic Potential of South Africa's Oceans

Offshore Oil and Gas Exploration Executive Summary

15 August, 2014

Overview

Context

- Although South Africa's oil and gas sector is in early development phase, it has the potential to create large value for the country in the long run
- Developing an oil and gas industry takes decades in Nigeria it took 15-20 years from the moment of licensing until first production
- South Africa has possible resources of ~9 bn barrels of oil and 11 bn barrels oil equivalent of gas, but uncertainty is large
- Oil and gas exploration requires significant investments, particularly in South Africa's deepwater offshore environment where a single exploration well can cost over \$150m. To achieve 30 exploration wells in the next 10 years investments in the range of \$3-5 bn are needed. Given that exploration success rates are below 15%, investors see these opportunities as risky

Vision - what success could look like

- In order to get an accurate view of actual prospectivity, exploration activity must increase the lab has set an aspiration to achieve 30 exploration wells in the next 10 years
- Assuming South Africa could achieve production levels of 370,000 barrels of oil and gas per day (the likelihood is hard to assess at this stage) this would create up to 130,000 jobs with annual GDP uplift of \$2.2 bn, while reducing dependence on expensive oil and gas imports

What you need to get there

- Infrastructure although infrastructure is not currently a constraint to exploration, particularly for gas, further coordination with other stakeholders may be helpful to incorporate the potential implications of offshore production into infrastructure plans
- Environment to address concerns on potential negative impact of offshore oil and gas E&P several initiatives are proposed, of which joint emergency response drills, and operationalisation of the international oil pollution fund are two examples of "quick wins"
- Capability development a collaborative skills strategy roadmap and sub-surface research capability should be developed .
- **Supply chain (local content)** although limited opportunities arise to develop local content in the exploration phase (potential for local seismic work is assessed), a mechanism should be developed for the production phase based on global best practices
- Institutional arrangements to maximise value for the country, adequate institutional governance is critical to ensure efficient and effective reservoir management, licensing, planning, data management and auditing
- Legislative to affirm investor confidence, clarity and stability must be provided on the full legislative, regulatory and contractual package



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Executive Summary

- Overview
- Case for Change
- Lab Vision and Charter
- Initiatives
- Budget Requirement
- Targets and KPIs
- Governance Structure





Multiple organisations spanning the public sector, private sector and academia participated in the oil and gas lab



CPHAKISA 3

The lab followed a collaborative 6 week process, resulting in detailed recommendations and implementation plans...







6 Weeks





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OVERVIEW SA's oil and gas sector is in an early development phase







OVERVIEW The oil and gas industry can create huge value



Example 2: Abu Dhabi today



2 ...Which take time to materialise Norway oil and gas production 300 Ultimate



A Timeline of failure, patience and success

- 1958: Norwegian Geological Survey says: "The chances of finding...oil...off Norwegian coast can be discounted"
- **1963:** Norway asserts rights over North sea acreage
- **1966:** Exploration drilling starts; initial wells are dry
- **1969:** Ekofisk found (enormous discovery)
- **1971:** Ekofisk begins production
- 2012: Petroleum product exports ~\$ 95 bn p.a.



OVERVIEW It takes a long time to develop an oil and gas industry





OVERVIEW

South Africa has possible resources of ~9 bn barrels of oil and ~60 tcf of gas offshore, but uncertainty is high



1 At current level: 595 kb/d oil consumption and 160 Bcf/y gas consumption SOURCE: Petroleum Agency SA, EIA



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In order to get a view on the hydrocarbon prospectivity of South Africa's offshore basins, it is necessary to drill exploration wells **ILLUSTRATIVE -**EXAMPLE OF

exploration wells

drilled

Identified resources scenario Uncertainty range at T=1 Resources Uncertainty range at T=0 Uncertainty range at T=2 Drilling of exploration wells will reduce uncertainty range in resource estimates¹ SA **T=1** T=2 today E.g. 10 E.g. 30

exploration wells

drilled

SA 12

SUCCESS CASE

T=0 Seis-

mic

available

Developing the upstream oil and gas sector could bring significant value to the country





Example of what success could look like: 370 000 barrels of oil and gas produced per day

Direct, indirect and induced effects, average over 20 years



1 410 kb/d petroleum import and 60 kboe/d natural gas imports

SOURCE: OECD STAT, ILO, Global Insight, MGI Economics research analysis, Rystad U-cube, EIA, Stats SA, team analyses



ILLUSTRATIVE

Furthermore, the development of gas could increase South Africa's independence and help build downstream industries

SIMPLIFIED ILLUSTRATION





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LAB VISION AND CHARTER

Upstream oil and gas faces different challenges at different stages of the life-cycle; South Africa is at the initial stage

10 yrs	5 yrs	30 yrs	2 yrs
Exploration & appraisal	Development	Production	Abandonment
 Risks Dry hole or non-commercial discovery Industrial accidents/environmental degradation 	 Lower recoverable reserves than expected Project not commercially viable Industrial accidents/ environmental degradation 	 Production performance lower than expected Security (piracy/politics) Industrial accidents/ environmental degradation 	 Environmental degradation
 Investment ~ \$150-250 m (expl. well) + \$500 m -\$1 bn (appraisal) 	■ ~ \$5 bn	 ~\$300 m per year in operating cost 	▪ \$~ 500 m –1 bn
Revenue ▪ \$0	■ \$O	 ~\$1 bn per year or more 	■ \$0



LAB VISION AND CHARTER

Thus the lab aspires to determine the extent of South African offshore oil and gas reserves through exploration

OIL AND GAS LAB VISION

South Africa should ...

... create an environment that *promotes exploration* ...

... in order to *drill 30 exploration wells* in the next 10 years ...

... while simultaneously *maximising the benefits for South Africa*



In order to reach this aspiration, six barriers need to be overcome

South Africa is not maximising its potential from oil and gas exploration. This may impair our ability to achieve lab aspirations A Potential infrastructure constraints

Concerns around the environmental impact of the sector

Low integration of the local supply
 chain into oil and gas exploration and production (limited local procurement)

Lack of adequate **local skills and** technical capability to support E&P

Ineffective institutional arrangements
 for managing exploration and production

E Lack of **legislative** clarity



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INITIATIVES What does South Africa need?

A Infra- structure	 	To enable successful offshore oil and gas exploration, adequate infrastructure like port facilities , pipeline networks and multi-purpose research vessels needs to be developed
B Environ- ment	-	To address the environmental concerns related to offshore oil and gas exploration and production, several initiatives are proposed, of which joint emergency response drills and the operationalsation of the international oil pollution fund are two examples of "quick wins"
Supply chain (local content)		In order to support local content development , an integrated plan needs to be developed – a champion organisation could be instrumental to drive this roadmap and involve stakeholders at an early stage
D (Local) skills	8	Although limited opportunities arise to develop local skills in the exploration phase, the potential for R&D, particularly in the sub-surface area, has been assessed. A skills strategy roadmap , based on global best practices, should be developed for the exploration and production phase
Institutions	•	To maximise value for the country, adequate institutional governance is critical in terms of ensuring efficient and effective reservoir management, licensing, planning, data management and auditing
F Legislative		To affirm investor confidence, clarity and stability must be provided on the full legislative, regulatory and contractual package



Based on these needs the Offshore Oil & Gas Exploration lab has identified 11 initiatives





INITIATIVES The initiatives identified have been evaluated for implementation timing





Results schedule

Lab initiatives target tangible results within the next 12 - 18 months

Initiative **Timing of impact** Impact Provide legislative clarity and Initiate common stakeholder view on what constitutes Aug 2014 stability win-win fiscal terms DMR 1-stop shop regulator **Build end-to-end institutional** Streamlined licensing process structure Jan 2016 Building and retaining core skills in line with functions The appointment of University and Development Chairs **Develop/implement skills strategy** to drive knowledge generation and human capacity roadmap Jan 2015 building and transformation **Develop/implement local content** Reduce costs of marine environment R&D roadmap Jan 2016 Exploit the broader research A wealth of new ecosystem, marine data and ocean-B3 opportunities presented by offshore related renewable energy data starts flowing to key Jan 2016 oil and gas exploration data users Improved coordination, cooperation, alignment, etc. -Conduct joint industry/government the 1st step towards a world-class oil spill response emergency response drills Jul 2015 capacity Promote awareness of the oil and Measurably improved availability of, and public access to, factual information relating to oil and gas exploration gas industry Jan 2016 Valid claims for compensation for pollution damage **Operationalise IOPC fund B2** caused by oil will be paid by the IOPC Fund Mar 2015 Develop phased gas pipeline network Complete Pipeline Network Strategy Jun 2015 **Develop capability for sub-surface** Formalised technical capability building programme Aug 2015 research and data gathering Enhance environmental governance Professional capacity building experts secured and Jun 2015 capacity of the oil and gas regulator project well underway



LAB VISION AND CHARTER Critical lab initiatives focus on ensuring the exploration and appraisal of oil and gas



Exploration & appraisal



What issues could prevent the exploration and appraisal of oil and gas?

- If legal and economic terms are too tight oilcos do not drill => No exploration and hence no discovery
- If fiscal terms are too loose, South Africa loses out
 => Socio-political resistance makes drilling difficult

 If South Africa does not have the correct institutional structure, its ability to strike a balance in fiscal terms erodes => Over time, a win-win balance for government and industry fails to materialise How do lab initiatives address this?



Provide clarity on legal and economic terms

🔁 Buil

Build end-to-end institutional structure

These issues can prevent investment in exploration and appraisal, and hence prevent the discovery of oil and gas. Lab initiatives are designed to provide South Africa with near-term win-win partnership with oilcos *and* the capability to develop more such partnerships over time.



LAB VISION AND CHARTER

Lab initiatives also address issues that can potentially prevent rapid development of the industry, should oil and gas be found

5 yrs

Development



What issues could slow development of the industry even if oil and gas is found?

- If there is a public backlash on environmental or other issues, development of oil and gas will be slower =>Slow industry development
- If there is insufficient skills and capability development in South Africa, development of the industry may be hostage to public concern on lack of beneficiation => Slow industry development
- Development of a gas pipeline network will be necessary for rapid development of gas should it be found

If these elements are not addressed, the development of the South African oil and gas industry may be slow, even if oil and gas is found

How do lab initiatives address this?

- 31 Operationalise IOPC fund
- E2 Enhance environmental governance capacity of the oil and gas regulator
- 3 Promote awareness of the oil and gas industry
- Develop/implement local content roadmap
- D1 Develop/implement skills strategy roadmap
- A1 Develop phased gas pipeline network

Lab initiatives are designed to increase speed of development of oil and gas discoveries



LAB VISION AND CHARTER

Opportunities for cross-beneficiation between government and industry were also considered by the lab



- During the exploration phase, oil companies could collect a great deal of information which could be very valuable for South Africa => Opportunity for South Africa to benefit from oilco data collection
- Over time, there are opportunities for South Africa to control more of the value chain for sub-surface research and data gathering, particularly in the gathering of primary data=> Opportunity for South Africa to deepen capabilities in sub-surface research as oil and gas prospectivity increases

These constitute opportunities for South Africa to better control knowledge and information in respect of its oil and gas resources, particularly if prospectivity is found to be good How do lab initiatives address this?

B3 Exploit the broader research opportunities presented by offshore oil and gas exploration

Develop capability for sub-surface research and data gathering

Lab initiatives are designed develop both the understanding/knowledge base of oil and gas resources as well as associated capabilities



INITIATIVES Initiatives have been ranked in priority and budget requirements have been specified

Highest priorityF1Provide legislative clarity and stability0Image: Signal Sig			Cumulative budget required (Rm)
 Build end-to-end institutional structure 598 Develop/implement skills strategy roadmap 62.79 Develop/implement local content roadmap 99.58 Exploit the broader research opportunities presented by offshore oil and gas exploration Conduct joint industry/government emergency response drills Conduct joint industry/government emergency 12.75 Promote awareness of the oil and gas industry 8.22 Operationalise IOPC fund 0.68 Develop phased gas pipeline network 1763 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil 11.10 	Highest priority	F1 Provide legislative clarity and stability	• 0
 Develop/implement skills strategy roadmap 62.79 Develop/implement local content roadmap 99.58 Exploit the broader research opportunities presented by offshore oil and gas exploration Conduct joint industry/government emergency response drills Conduct joint industry/government emergency 12.75 Promote awareness of the oil and gas industry 8.22 Operationalise IOPC fund 0.68 Develop phased gas pipeline network 1763 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil and gas regulator 	priority	E1 Build end-to-end institutional structure	■ 598
 C1 Develop/implement local content roadmap 99.58 C2 Enhance environmental governance capacity of the oil and gas regulator C2 Develop capability for sub-surface research and cata gathering C2 Enhance environmental governance capacity of the oil and gas regulator C2 Develop capability for sub-surface research and cata gathering C2 Develop capability for sub-surface research and cata gathering C2 Develop capability for sub-surface research and cata gathering C2 Enhance environmental governance capacity of the oil and gas regulator 		D1 Develop/implement skills strategy roadmap	62.79
 Exploit the broader research opportunities presented by offshore oil and gas exploration Conduct joint industry/government emergency response drills Promote awareness of the oil and gas industry Promote awareness of the oil and gas industry Operationalise IOPC fund Oevelop phased gas pipeline network 1763 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil and gas regulator 		C1 Develop/implement local content roadmap	99.58
 Conduct joint industry/government emergency response drills Promote awareness of the oil and gas industry 8.22 Operationalise IOPC fund 0.68 Develop phased gas pipeline network 1763 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil and gas regulator 		B3 Exploit the broader research opportunities presented by offshore oil and gas exploration	18.16
 Fromote awareness of the oil and gas industry 8.22 Operationalise IOPC fund 0.68 Develop phased gas pipeline network 1763 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil and gas regulator 11.10 		B1 Conduct joint industry/government emergency response drills	12.75
 B2 Operationalise IOPC fund A1 Develop phased gas pipeline network D2 Develop capability for sub-surface research and data gathering E1 Enhance environmental governance capacity of the oil and gas regulator M1 Develop the oil and gas regulator M2 Develop the oil and gas regulator M3 Develop the oil and gas regulator M3 Develop the oil and gas regulator M3 Develop the oil of the oil and gas regulator M3 Develop the oil of th		E3 Promote awareness of the oil and gas industry	■ 8.22
 A1 Develop phased gas pipeline network D2 Develop capability for sub-surface research and data gathering E2 Enhance environmental governance capacity of the oil and gas regulator 1763 264.13 		B2 Operationalise IOPC fund	• 0.68
 Develop capability for sub-surface research and data gathering Enhance environmental governance capacity of the oil and gas regulator 11.10 		A1 Develop phased gas pipeline network	1763
Enhance environmental governance capacity of the • 11.10 oil and gas regulator		D2 Develop capability for sub-surface research and data gathering	264.13
		E2 Enhance environmental governance capacity of the oil and gas regulator	11.10



The legislative workstream has identified specific action steps to address issues which could prevent exploration

Illustrative timeline for creating legislative stability and certainty



Picture assumes projects that are technically and economically viable
Assuming no delays from, e.g., conflicts with marine protected areas



E1

The lab recommends empowering a 1-stop-shop regulator via a smooth transition process



In the short term this fulfils the selection criteria and can be accommodated in the proposed MPRDA Amendment if upstream oil and gas is established as a separate region or clauses 47 to 64 and 66 to 69 are kept in abeyance

The impact of the options...

In the long term, as commercially viable deposits are discovered, a better option is to establish upstream oil and gas under separate legislation, which also establishes the regulator in its own right

- DMR endorsed and Cabinet approved model that can be immediately implemented
- Operational institutional structure for regulating and licensing of the upstream oil and gas sector
- Efficient institutional systems and processes:
 - Regulate timelines and service level agreements between role players
 - Clarify prequalification criteria for prospective licensees
- Institutional capability across all exploration and production technologies as well as economic modelling, environmental and operational oversight and enforcement



C1 The localisation of supply chain initiative reflects lab aspirations for broader South African benefit from oil and gas

		Root causes
	Total procurement spend on goods and services in the exploration phase is small relative to the entire project value chain	 Oil and gas exploration is not associated with high levels of procurement spending when compared to the development and production phases of the project cycle
Lack of SA suppliers' participation in upstream oil & gas exploration supply chain/ procurement	Lack of information on SA companies capable of producing and supplying goods and services	 SA has not seen a lot of exploration activity in the recent past – company and supplier development have suffered as a result No overarching industry and public entity bodies involved in registration, verification and support to local supplier development (with exception of PetroSA)
	No agreed local content targets, instruments or enforcement agencies	 Government and industry have not agreed upon policy objectives and targets for local content No industry wide supplier and enterprise development training and support programmes in place (with exception of PetroSA)



A champion organisation needs to drive the development of local skills for the offshore oil and gas industry

Steps to develop local skills

1. Form a working group (government, industry and tertiary institutions) to develop the skills strategy roadmap for the industry and governance, based on activities related to the offshore oil and gas project life cycle.

1.1 The skills strategy roadmap must include the **mechanism for knowledge generation**. This can be through University Chairs, Centres of Excellence and Centres of Competencies.

1.2 The skills strategy roadmap must identify the **professional associations** (e.g., Society of Petroleum Engineers SPE) to drive knowledge and skills exchange.

2. Develop the **pathway for vocational**, **technological and engineering skills** for the oil and gas industry.

A champion organisation is required

- To form the working group that will develop the skills strategy roadmap
- To own and implement the strategies as detailed in the skills strategy roadmap
- To ensure that institutions of higher learning have the capabilities and capacities to develop the required skills



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Budget overview: oil and gas

Total budget

All figures in Rm

#	Initiative	2014/15		2015/16		2016/17-	2016/17- 2018/19		
	Develop phased gas pipeline		Govt: 3		Govt: 7		Govt: 16		Govt: 26
A1	network	4	Non Govt: 1	25	Non Govt: 18	1734	Non Govt: 1,718	1763	Non Govt: 1,737
B1	Conduct joint industry/ government	0.56	Govt: 0.56	2.88	Govt: 1.95	0 31	Govt: 4.69	12 75	Govt: 7.20
ы	emergency response drills	0.50	Non Govt: 0	2.00	Non Govt: 0.93	5.51	Non Govt: 4.62	12.15	Non Govt: 5.55
D 2	Operationalize IOPC fund	01	Govt: 0	0.12	Govt: 0.05	0.55	Govt: 0.22	0.69	Govt: 0.27
DZ	Operationalise IOPC fund	0.	Non Govt: 0	0.12	Non Govt: 0.07	0.55	Non Govt: 0.33	0.00	Non Govt: 0.41
	Exploit the broader research		Govt: 5.26		Govt: 12.80		Govt: 0		Govt: 18.16
В3	opportunities presented by offshore oil and gas exploration	5.26	Non Govt: 0	12.80	Non Govt: 0	0	Non Govt: 0	18.16	Non Govt: 0
	Develop/implement local content		Govt: 23		Govt: 23.68		Govt: 52.9		Govt: 99.58
C1	roadmap	23	Non Govt: 0	23.68	Non Govt: 0	52.9	Non Govt: 0	99.58	Non Govt: 0
	Develon/implement skills strategy		Govt: 0.9		Govt: 10.82		Govt: 40.45		Govt: 52.18
D1	roadmap	1.70	Non Govt: 0.8	12.64	Non Govt: 1.82	48.45	Non Govt: 8	62.79	Non Govt: 10.61
	Develop conchility for each curface		Govt: 151.80		Govt: 109.63		Govt: 2.70		Govt: 264.13
D2	research and data gathering	151.80	Non Govt: 0	109.63	Non Govt: 0	2.70	Non Govt: 0	264.13	Non Govt: 0
F 4	Build end-to-end institutional	125.00	Govt: 125.90	100	Govt: 138	224 40	Govt: 334.10	509	Govt: 598
	structure	125.90	Non Govt: 0	130	Non Govt: 0	334.10	Non Govt: 0	290	Non Govt: 0
	Enhance environmental		Govt: 0.03		Govt: 0.50		Govt: 10.57		Govt: 11.10
E2	governance capacity of the Oil and Gas Regulator	0.03	Non Govt: 0	0.50	Non Govt: 0	10.57	Non Govt: 0	11.10	Non Govt: 0
E2	Promote awareness of the oil and	0.08	Govt: 0.08	0.25	Govt: 0.25	7 80	Govt: 7.89	0.00	Govt: 8.22
Ε3	gas industry	0.00	Non Govt: 0	0.25	Non Govt: 0	7.09	Non Govt: 0	0.22	Non Govt: 0
		Go			Govt: 304.68		Govt: 469.52		Govt: 1084.83
TOTA	TOTAL		Non Govt: 1.80	325.5	Non Govt: 20.82	2200.47	Non Govt: 1730.95	2, 838.41	Non Govt: 1753.58

1 There is a provisional ZAR 50 million considered in planning, from possible payment of the disputed arrears and, hence, may not be a cost if negotiations with the IOPC Fund are favourable. A further dispute is around whether industry or government is responsible for these disputed arrears



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KPI: Oil and Gas (1/5)

				Target						
#	KPI description	KPI owner	Baseline	2014/15	2015/16	2016/17	2017/18	2018/19		
Oil and G	as Lab									
A1: Deve	lopment of Phased Gas Pi	peline Network								
1	Pipeline Network Phases defined	iGas / PetroSA (CEF)	Not initiated	Pipeline phasing identified						
2	Define pipeline length and size	iGas / PetroSA (CEF)	Not initiated	Complete by 31.04.2015	Define pipeline length and size					
3	Secure Servitudes	iGas / PetroSA (CEF)	Not initiated			50% of Phases 1 & 2 completed	100% of Phases 1 & 2 completed	50% of Phase 3 completed		
B1: Joint	industry-government Eme	ergency Response Drills								
1	IOC Emergency Response Committee Established	Andre Share	N/A	Formalised Report on IOC policies; formalised committee						
2	Establishing an Incident Management Team (IMT)	Andre Share / Nosipha Sobekwa	DEA's Oil Spill Response Team; IOC individual response	Emergency Response Plan	Established IMT					
3	Emergency Response Training Plan & Drills	Andre Share/ Incident Management Organisation Command/ M. Mabuza	Oil Spill Response Team / DAFF/ Ltd training			Oil Spill Response Training Plan	First practice drill	Conduct second practice drills		



KPI: Oil and Gas (2/5)

#	KPI description	KPI owner	Baseline	Target					
				2014/15	2015/16	2016/17	2017/18	2018/19	
B2: Oper	ationalise the Interna	ational Oil Pollu	ution Compensa	ation (IOPC) Fund	d				
1	The IOPC Fund Risk Indicator: Improved confidence in SA's capacity to respond to significant oil spills and oil spill impacts through fully operationalised IOPC Fund	Dries van Niekerk / Adv. Jeannine Bednar- Giyose	High Risk	High Risk	Low Risk	Low Risk	Low Risk	Low Risk	
B3: Expl	oiting the Broader Re	esearch Oppor	tunities Preser	nted by Offshore	Oil And Gas Ex	ploration			
1	Collaborative Research Indicator	Head Data Management Services??	0%	0%	10%	50%	75%	80%	
2	Ocean-Related Renewable Energy Knowledge Disemination Indicator	Dr. Thembakazi Mali, Senior Manager: Clean Energy Solutions	0%	0%	0%	10%	50%	75%	
3	Marine Environment Knowledge Disemination Indicator	Dr. Kelly	0%	0%	0%	10%	50%	75%	



KPI: Oil and Gas (3/5)

#	KPI description	KPI owner	Baseline	Target					
m .			Baseline	2014/15	2015/16	2016/17	2017/18	2018/19	
C1: Deve	lop Upstream Oil & Gas Lo	ocal Content Roadmap							
1	Set targets for minimum local production and supply in proportion to total domestic upstream O&G value chain spend	Garth Strachan, Deputy Director General	PetroSA has a Procurement Policy that takes into account Broad-Based Black Economic Empowerment t and fair and objective procurement processes National industry wide local content targets no in place.	Convene multistakehold er forums to assess and agree upon targets for local content. Also, stakeholders set objectives for socio- economic targets and measures to assess impact.	Convene multistakehold er forums to assess and agree upon targets for local content. Also, stakeholders set objectives for socio- economic targets and measures to assess impact.	Complete agreement on local content roadmap with all stakeholders by December 2016. Framework set in place for reporting, monitoring and evaulation.	Continuous updating and impact assessment	Continuous updating and impact assessment	
2	Establish national enterprise & supplier development and training programmes for upstream O&G	Garth Strachan, Deputy Director General	PetroSA has a well defined supplier development programme with targets that are evaluated and reviewed annually. National industry wide competitive supplier development programme not in place.	Establish criteria for supplier development	Establish supplier registration and certification mechanism	Put in place agreement and mechanisms with all stakeholders on establishing training and development initiatives, programmes and facilities for supplier development	Increase the number of small and medium enterprises that have access to training and development programme s.	Increase the number of small and medium enterprises that have access to training and development programmes	



KPI: Oil and Gas (4/5)

#	KPI description	KPI owner	Baseline	Target					
			Bascinic	2014/15	2015/16	2016/17	2017/18	2018/19	
C1: Deve	lop Upstream Oil & Gas Lo	ocal Content Roadmap							
D1: Colla	aborative Skills Strategy R	oadmap							
1	Skills and human capacity strategy roadmap report	Dr F Prinsloo	0	1	0	0	0	0	
2	Appointment of University and Development Chairs	Dr F Prinsloo	0	2	2	2	2	2	
3	Number of Petroleum GeoSciences graduate engineers	Dr F Prinsloo	70	180	280	320	380	430	
D2: Deve	elop capability for sub-surf	face research and data gather	ring						
1	Identify the Technical Capability built programmes for reservoir information activities	DST/DEA/ DMR	Informal process, no documentation	Completed Checklist					
2	Review and Assess the Mechanism to formalise the Reservoir Technical Capability	DST/DEA/ DMR			Clause effected on the E & P Licensing Rights				
3	Develop Reservoir Information Acquisition Infrastructure	DST/DEA/ DMR					Equip Multipurpos e Vessel		
4	Establish a multi agency Ocean R&D Strategy and implementation programme	DST/DEA/ DMR	Programme non existent		10%	20%	30%	40%	



KPI: Oil and Gas (5/5)

#	KPI description	KPI ownor	Pacalina	Target					
#	Refuescription	RFI OWNEI	Daseillie	2014/15	2015/16	2016/17	2017/18	2018/19	
E1: Stre	amlined End to End institu	tional structure							
	Migrate PASA from CEF Group to DMR - Public Entity	DG Ramontja or CEO new entity	PASA with licensing directly in DMR with MPRDA amendment bill		Functioning licensing and regulating entity by January 2016				
E2: Enha	nce environmental govern	nance capacity of the Oil and G	as regulator						
2	Compliance with standard operating procedures	Linda Garlipp, Chief Director: Legal Services	Not applicable SOPs not yet in place	-	-	50%	90%	98%	
3	Compliance Monitoring Indicator	Director: Environmental Management?	0%	0%	5%	8%	9%	10%	
E3: Prom	note awareness of the Oil	and Gas industry							
1	Gap & Needs Analysis Report		PASA's public advertising/aw areness unit		Initiate data collection; draft conceptual design on key issues	Final reports: Existing and required information on offshore exploration awareness; Public Concerns			
2	Output Information Platforms	Director-General				1 to 2 public awareness campaigns concerns; create website with functional information	- Develop a document repository system that is accessible by public users		
3	National Launch	Director-General					Launch Date: Public Awareness Unit		

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Proposed oil and gas governance structure

 Steering Committee: Meeting once a month Initiative owners to provide progress updates Make decisions and provides guidance / direction to the team Resolve conflicts Oversee all other matters related to workstream 			e r	 DG of DMI DG of DOI DG DEA DTI DG Water Deputy Press 	R E and Sanitation esident's Office (HR (Council)	 Head of O CEO of CE CEO PAS/ Coastal Pr 	ceans Secretariat F A ovinces			
Working level: Meeting more	A1) Phased gas	Secretariat: Delivery Unit	B2)	B3) Exploiting	C1) Local	D1) Skills	D2) sub-surface	E1) End-to-end	Outcome Facilitator (DPME)	E3) Promote	F1) Provide fiscal
Meeting more frequently (i.e. bi-weekly) • Liaise directly with Delivery Unit and respective DPME Outcome Facilitator	 Dynamics (gas pipeline network) Owner: Ompi Aphane (DDG: DoE) Other key implementors: Landi Themba (DoE), Neville Ephriam (Igas) S Ncemane (CDC) Dee Fischer (DEA) 	 emergency response drills Owner: Mondi Mayekiso, DDG: Oceans & Coasts, DEA Other key implementors: Yazeed Peterson (DEA) A Molden (SAPIA) TNPA Sean Lunn (OPASA) Brig David Garnett (NAT JOINTS) Collins Makhado (SAMSA) 	Operationalise IOPC fund Owner: • DDG (DoT) Other key implementors: • J. Bednar- Giyose (NT) • D. van Niekerk (SARS) • Sipho Mbatha (SAMSA) • Yazeed Peterson (DEA) • Sandia de Wet (DIRCO) • A Moldan (SAPIA)	Marine Research Opportunities Owner: • Thomas Auf de Hyde, DDG: DST Other key implementors: • Peter Lukey and Ashley Naidoo (DEA) • Sean Lunn (OPASA) • NRF • Kerry Sink (SANBI) • Thembakazi Mali (SANEDI) • Sean Johnson (PASA) • CSIR and NRF • Russ Berkoben	Owner: Garth Strachan (DDG: DTI) Other key implementers: A Mukandila (DTI) Sean Lunn (OPASA) M Xiphu (SAOGA) IDZs (CEOs) S Ncemane (CDC) Jacky Molisane (DPE) Mmabatho Matiwane (PEtroSA) Lunga Saki (CEF/SASDA)	 Dynamic Strategy roadmap Owner: Florus Prinsloo (DHET) Other key implementors: Mpumi Mnconywa (DoL) Sean Lunn (OPASA) M Xiphu (SAOGA) A Singh (Eskom) Docoure (NMMU) Dr Sipho S (DPSA) (CEOs)SETAS /FETs 	 Derived States and Comparison of the set of th	Covner: Musa Mabuza (DDG: DMR) Other key implementors: T Zungu (DoE) Y Chetty (Cef) Greg Botha (CGS) Sizwe (SAMSA) N Tantsi (PetroSA Legal)	 Cylennice capacity of regulator Owner: Alf Wills, DDG: Environmental Advisory Services, DEA Other key implementors: Musa Mabuza (DDG: DMR) Dee Fischer and Alan Boyd (DEA) Khethiwe Dlamini (Ugu Munic) Head of the "end-to-end institutional structure" for O&G regulation (see E1). 	Owner: • Musa Mabuza (DDG DMR) Other key implementors: • Dave v Spuy (PASA) • Sean Lunn (OPASA) • M Xiphu (SAOGA)	 terms clarity Cowner: Fundi Tshadzibana(NT)/Musa Mabuza Other key implementors: Musa Mabuza Tseliso Maqubela N Tantsi (PetroSA) B Ncanywa (DoE - Legal) M Xiphu (SAOGA) Andreas (DMR Legal) Sean Lunn (OPASA)

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