5 July 2023

IRO – Briefing session Africa

Weet waar je nee tegen zegt !

The Association of Dutch Suppliers in the Offshore Energy Industry

GUSHIKAMA
BUSINESS CONSULT

Topics

1. Introduction and background
2. Regional context energy
3. Senegal – Update
4. Namibia – Update
5. Tanzania – Update
6. JV and partnerships
7. Events in the Africa region
8. Recommendations
9. Contact details

Introduction and background

- Energy landscape Africa (source IEA)
- Controversy between energy poverty and carbon footprint
- Mature territories
- Emerging territories
- Selection : focus on the emerging countries

Namibia
Tanzania
Senegal

Energy Landscape Africa

Figure 2.4 ▹ Total primary energy supply by fuel and region in the SAS

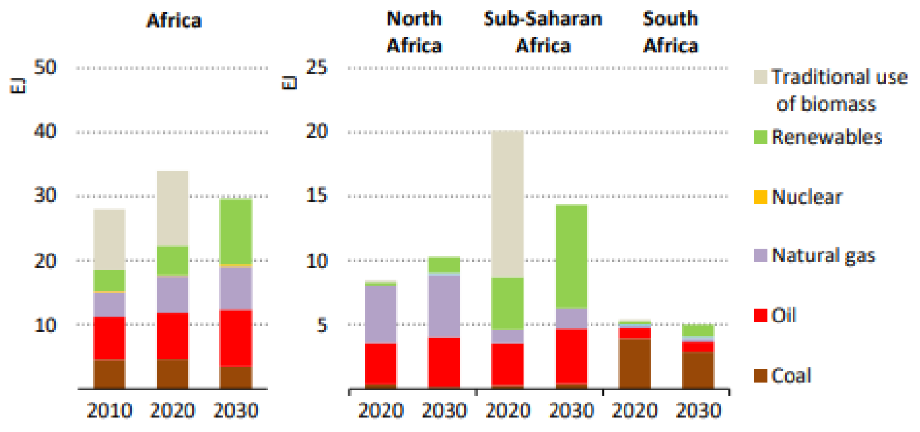


Figure 2.26 ▹ Natural gas discoveries and final investment decisions for LNG projects in Africa, 2011-2020

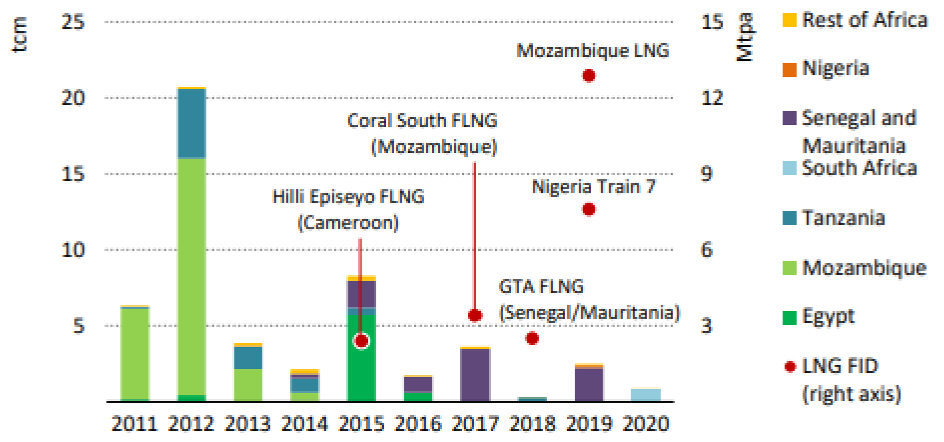


Figure 2.15 ▹ Energy consumption in productive uses by sector and fuel in the SAS

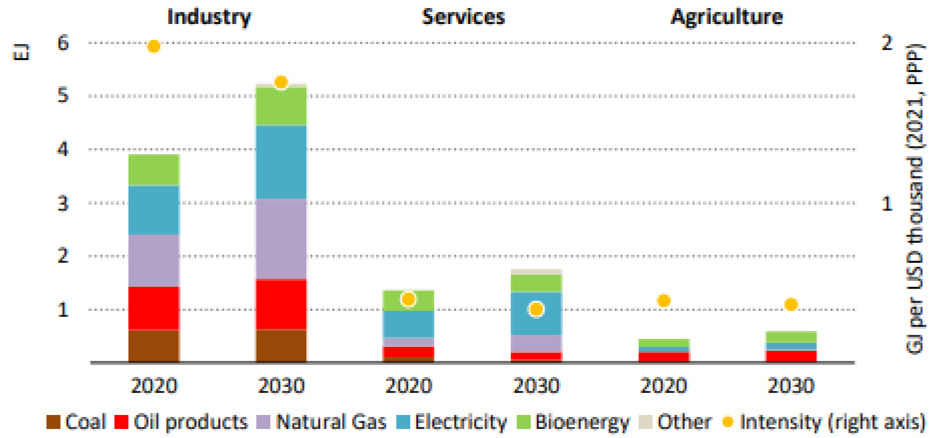
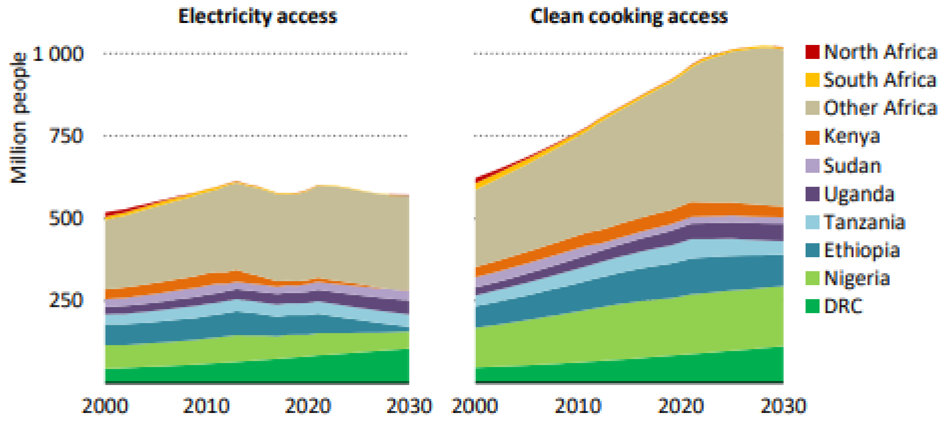


Figure 3.1 ▹ Population without access to modern energy services by region/country absent new access measures in Africa



Senegal

1. Offshore Energy overview
2. Stakeholders & regulators
3. Schedule
4. Doing Business in Senegal
5. Risks and Mitigation
6. Recommendations

‘Liguey nguir elek’

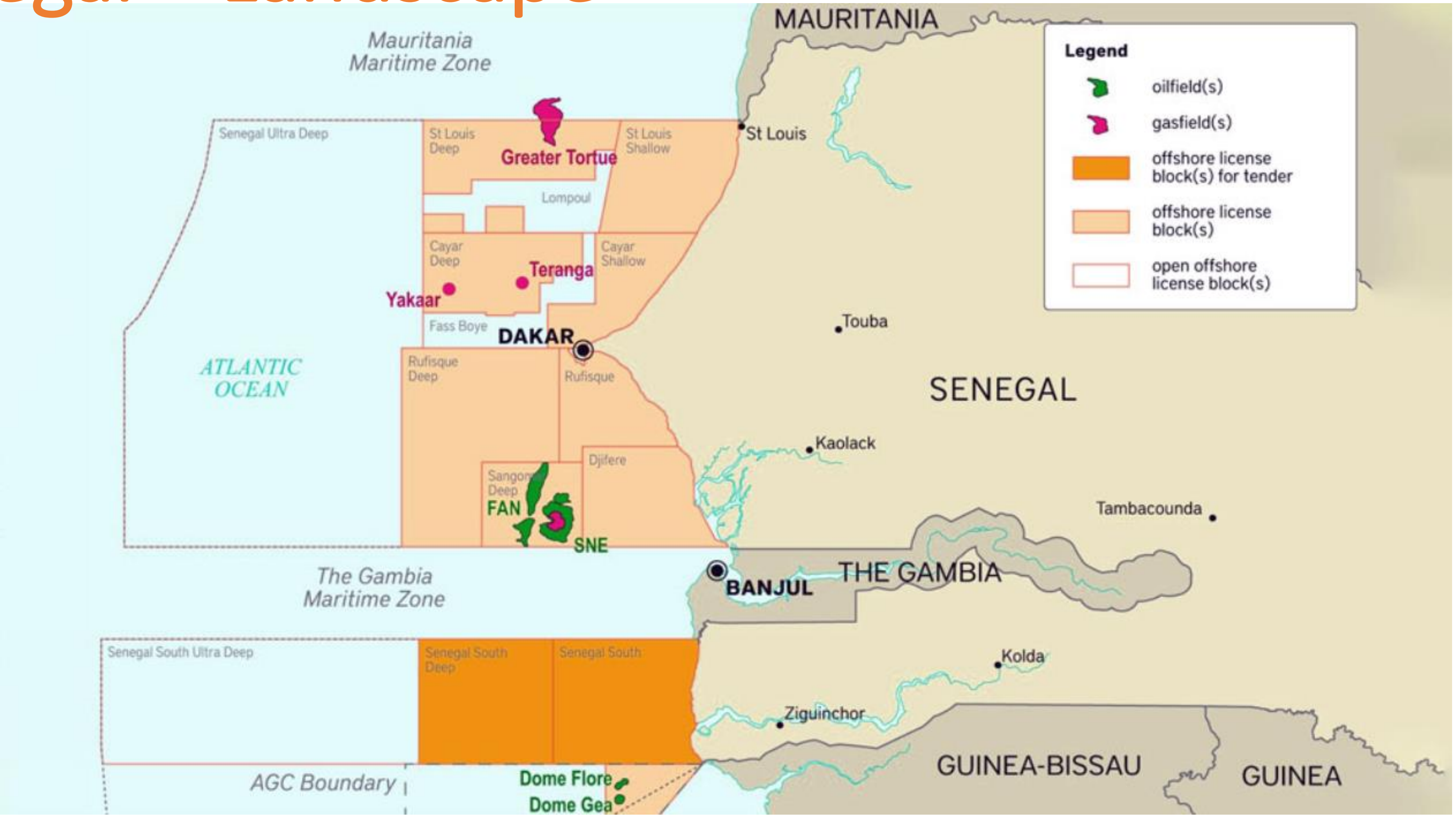
This is the theme of the Plan Senegal Emergent and means Work for the future in Wolof

Senegal – Landscape

Senegal's NOC, Petrosen is working towards positioning the country as a global energy hub, with the role of Senegal and Africa's vast hydrocarbon resources in driving energy security, employment creation, gross domestic product growth and industrialization. The company, in collaboration with a suite of energy majors, is spearheading a number of large-scale developments, all of which promise new opportunities for revenue generation, domestic market growth and electrification. These include the 15 trillion cubic feet Greater Tortue Ahmeyim (GTA) Liquefied Natural Gas (LNG) project – being developed in partnership with global majors bp and Kosmos Energy and in collaboration with Mauritania – as well as the 100,000 barrel-per-day Sangomar Oil Field Development have made clear the potential for large-scale offshore developments. The country anticipates its first oil and gas production from Phase 1 of the GTA and the Sangomar developments in 2023.

In addition to these developments, Petrosen is running a massive campaign to drive continued industry growth post-first production. With large-scale projects such as GTA Phase 2 and a wide range of exploration, downstream, midstream and gas-to-power projects are underway and being planned.

Senegal – Landscape



Senegal – GTA Project

Senegal – Timeline

- Exploration and appraisals continued
- BP GTA Phase 1 – First Gas Q4-2023
- BP GTA Phase 2 – FID 2025
- BP Yakaar Phase 1 – FID 2024
- BP Yakaar Phase 1 – First Gas 2027
- Woodside Sangomar Phase 1 – First Oil Q4-2023

Senegal – Stakeholders and regulators

KEY FEATURES OF THE FORTHCOMING NATURAL GAS TRANSMISSION SYSTEM

Production sites

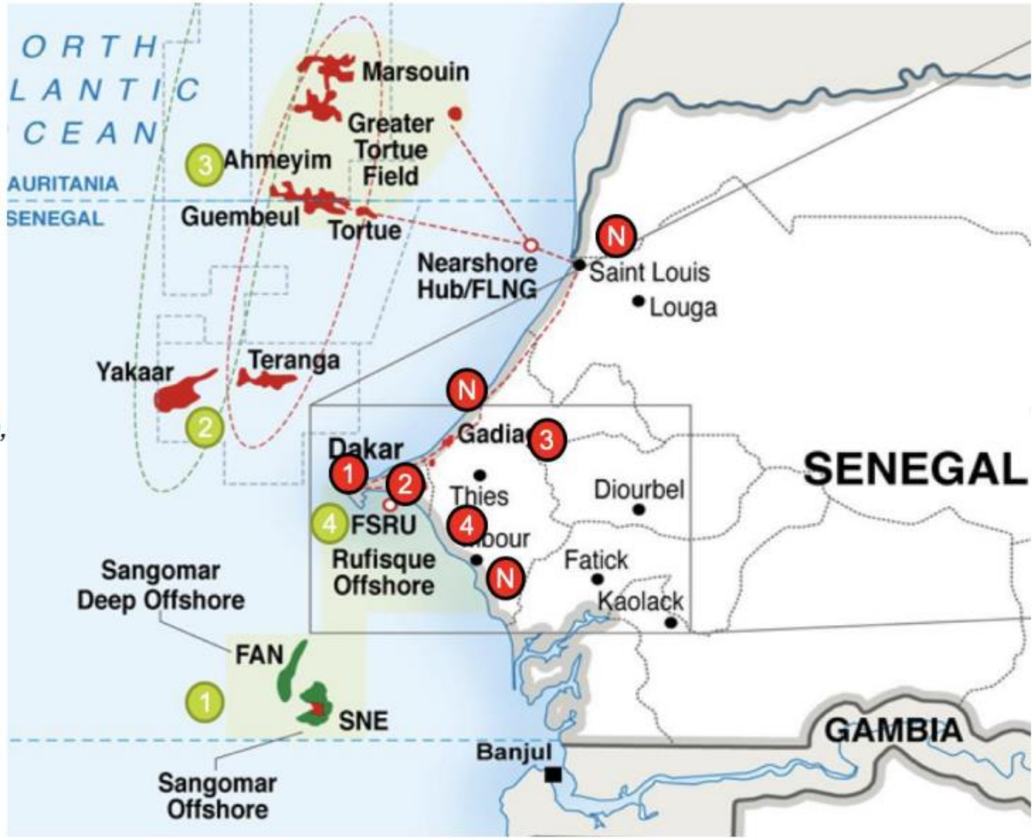
1. SNE
2. YAKAAR
3. GTA
4. FSRU (potentiellement)

Delivery sites

1. Bel Air
2. Cap des Biches
3. Tobène
4. Malicounda
5. New Powerplants *(Mboro, Kayar, Nord,…)*
6. Industrials *(phase 2)*

Key figures (estimates)

- Nearly 400 km of pipelines
- USD 500 millions total cost (all segments included)



Senegal – Stakeholders and regulators

CNSCL
COMITE NATIONAL DE SUIVI DU CONTENU LOCAL
Secrétariat Technique

PETROSEN

INPG SENEGAL
INSTITUT NATIONAL DU PÉTROLE ET DU GAZ

RSE SENEGAL

COS PETROGAZ

ITIE
Initiative pour la Transparence dans les Industries Extractives du Sénégal

République du Sénégal
Un Peuple, un But, une Foi
MINISTÈRE DU PÉTROLE ET DES ENERGIES

Senegal – Risk and Mitigation

- Project schedules affected by COVID pandemic - FID's postponed
- Regulatory framework complicated with different regime for GTA and SN national projects
- Supply chain under development
- Offshore culture under development (HSE !)
- Local Content regime ambitious
- English language major issue !

Namibia

1. Offshore Energy overview
2. Stakeholders & regulators
3. Schedule
4. Doing Business in Namibia
5. Risks and Mitigation
6. Recommendations

As Namibians, let us hold hands to deliver on the commitments of the Harambee Prosperity Plan II (2021-2025)

President of the Republic of Namibia

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Namibia – Landscape

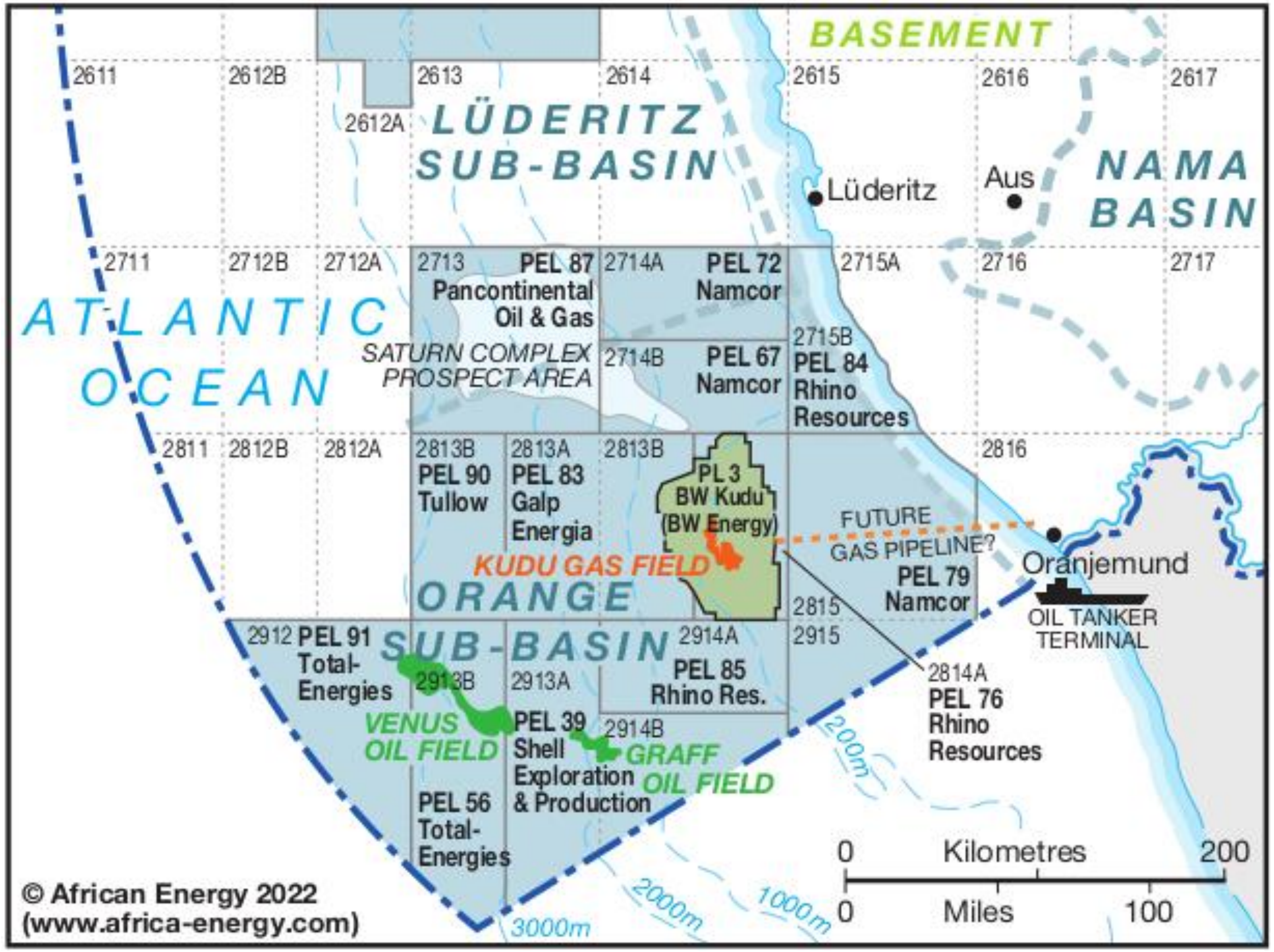
In 2022 and 2023, Namibia witnessed three large-scale oil and gas finds by energy majors Shell, TotalEnergies and Qatar Energy. The discoveries will place the country as one of the top oil producers by 2035 while doubling Namibia's GDP in the next ten years. As such, NAMCOR is accelerating the development of the finds. NAMCOR is talking about a fast-tracked program, if the appraisal program is a success.

Namibia is targeting first oil production by 2029. In addition to the 2022-23 finds, Namcor intends to support the Kudu gas project. NAMCOR is "planning to produce 400 MW of power from gas, with operations starting in 2026." The pre-Front End Engineering and Design (FEED) study has been completed, while the FEED study is expected to be completed by Q1 2024. Power generated from the project will be used for domestic purposes, as well as for export to regional markets. Meanwhile, Namibia's investment potential transcends oil and gas, with the country making strides towards establishing itself as a global hydrogen producer and exporter. To this effect, Namibia-global partnerships have played a fundamental role, and as the green market opens up even further, opportunities for bi- and multilateral partnerships are growing.

Namibia – Landscape

- Simultaneous development of onshore renewable energy and offshore fossil developments
- Offshore break-through by Shell and TotalEnergies in Deepwater
- Offshore : Oil and Gas discoveries. Exploration ongoing
- Offshore : shallowwater and deepwater projects
- NOC Namcor key stakeholder in attracting investors
- Opportunity – combined onshore and offshore investments

Namibia IOC Stakeholders



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Namibia – Namcor

NAMCOR's Role in the Governance of oil and gas resources in Namibia

	Upstream			Downstream			
	Exploration	Field development	Production	Refining/ re-gasification	Trading and imports	Storage	Marketing and distribution
Summary of activity	• Primary area of upstream activity, with 22 exploration wells drilled to date • Three major discoveries offshore Namibia (Graff, Venus & Jonker discoveries). Appraisal activities have commenced	• Total and Shell commenced appraisal activities to fast-track development of the Graff-I and Venus discoveries. • Venus Development expected to start by 2025. • Kudu development expected to start 2024	• No production in Namibia to date • Kudu FDP discussions ongoing, first gas expected Q4 2026. • Venus first oil expected 2028/29	• No activities to date • None planned	• Government regulated market, dominated by International Oil and Gas companies which operate across the whole of the downstream value chain • Major companies include ENGEN, Puma, Vivo and Total and NAMCOR • Numerous retail sites across the country		
NAMCOR activity	• Promotion, data management and provision of technical advice to the Ministry of Mines & Energy • Carried Interests in 98% issued licences with average 10%, including new oil discovery license blocks. • Seeking to farm-out part PEL equity share	• NAMCOR actively working with Shell and Total towards development of Graff-I and Venus discoveries. • On Kudu NAMCOR is supporting BW Kudu towards FID (expected 2024)	• Supporting BW Kudu towards FDP for Kudu proposed for end of 2022 • NAMCOR through a tri-partite SPV is near completion for acquisition from Sonangol of 10% in Block 15/06 in Angola, equivalent to production of over 10.5Kbopd	• NAMCOR in unique position to participate in refining projects in Namibia	• NAMCOR imports refined products for its Namibian clients and for exports	• NAMCOR operates the 75MM litre strategic storage facility. • NAMCOR derives revenue from hoisting agreements with other industry players	• ~11% market share within wholesale sales • Manages 3 depot facilities across the country • Sells branded lubricants • Own and operate retail sites

Namibia – Timeline

- Exploration and appraisals continued
- BW Kudu: FID 2024
- BW Kudu: Development start 2024
- BW Kudu: First gas Q4 2026
- TotalEnergies Venus: FID expected 2024
- TotalEnergies Venus: First Oil expected 2028/2029
- Shell Graff : FID expected 2024/2025

Namibia – Risk and Mitigation

- Projects are not yet mature – FID's pending
- Regulatory framework under development – model not yet defined
- Logistics complicated
- Total absence of supply chain
- Offshore culture under development (HSE !)

Tanzania

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4. Doing Business in Tanzania
5. Risks and Mitigation
6. Recommendations

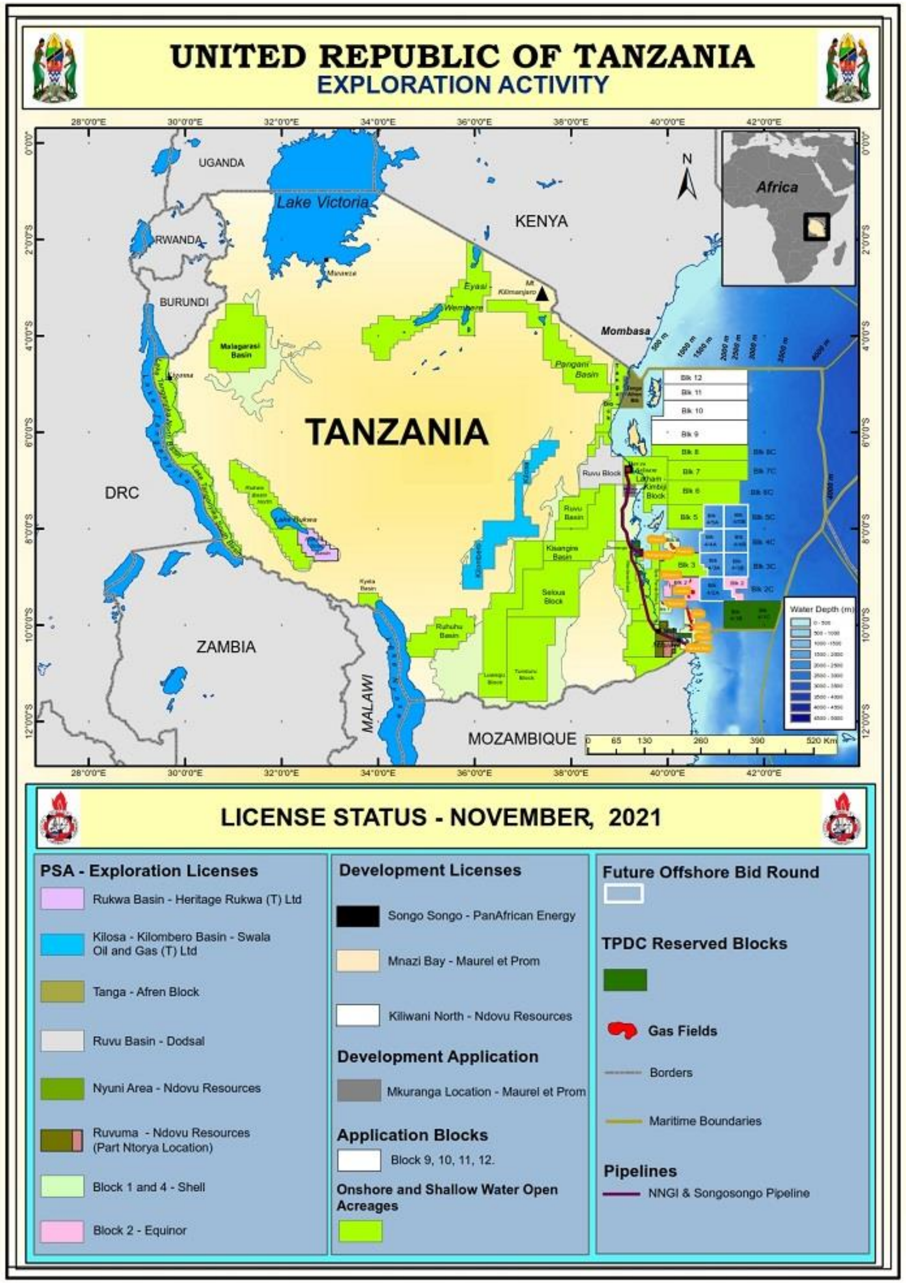
"KAZI IENDELEE“

This is the national slogan in Tanzania which means : the work must continue

Setting the scene – Tanzania Oil and Gas

Over the last decade, large deposits of natural gas have been discovered off the southern coast of Tanzania. This project refers to the offshore (deepwater) activities operated by Equinor (block 2) and Shell (blocks 1 and 4), based on production from the offshore blocks and LNG production either onshore (Lindi-Likong'o site acquired by TPDC) or alternatively offshore.
Due to the adverse business climate negotiations on progressing the development has been stalled and have recently (2021) resumed.

There is a drive to bring the project(s) to operational phase now. He drive from the TZ government is linked to an increased interest in investment in natural resources. The operators are interested due to the nature of the product : low carbon LNG, which fits the long-term strategy of both Equinor and Shell.



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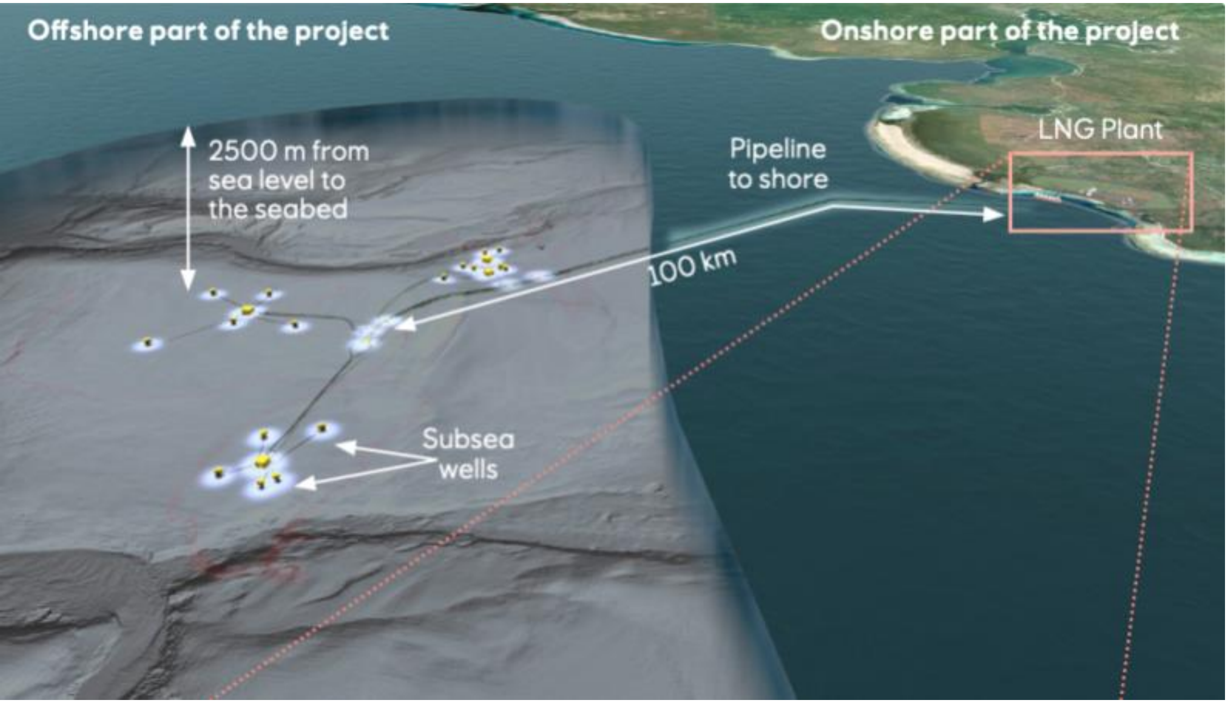
Tanzania - Shell / Equinor LNG projects

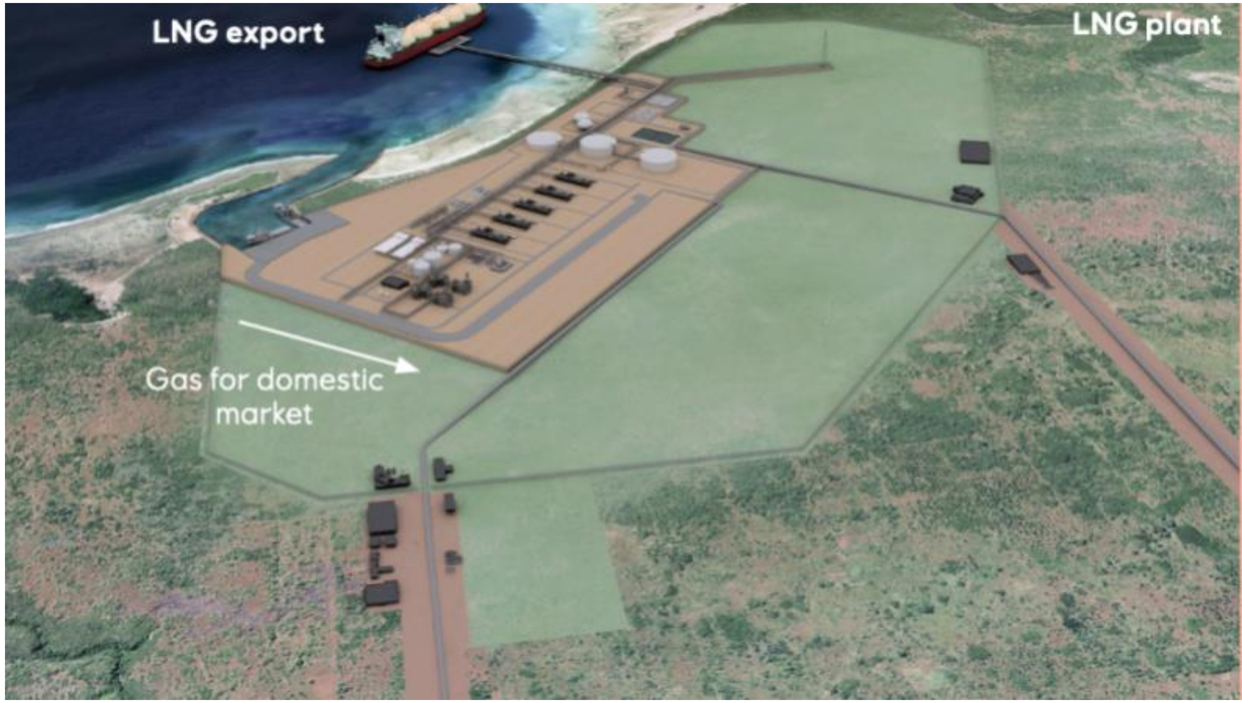
Technical viability : the project is technically feasible, although there are still unknowns when it comes to pipeline routing and the total investment (40Bn US$)
Commercial viability : very high as the product (LNG) will be extremely low carbon and as such attractive in the market.
Social viability : government and regulators receptive to proceed. Considering the energy transition processed globally, now is the time to act.

Timeline estimate

Q2-2023	Host Government Agreement headlines concluded
Q4-2023	Host government Agreement detailed version completed and signed
Q2-2024	Project FEED completed – main tenders ready to be launched
Q1-2025	Tender processed completed
Q2-2025	Final Investment Decision
Q1-2031	First LNG delivered

Tanzania - Shell / Equinor LNG projects





Tanzania : Legal context– Primary Laws

- Petroleum Act 2015;
- Energy and Water Utilities Regulatory Authority Act 2006;
- Tanzania Extractive Industries (Transparency and Accountability) Act 2015;
- Oil and Gas Revenues Act 2015;
- Environmental Management Act 2004;
- Tanzania Investment Act 1997;
- Tanzania Investment Act RE 2002
- Income Tax Act RE 2008;
- Income Tax Act RE 2019
- VAT Act RE 2019
- Petroleum (General) Regulations 2011;
- National Natural Gas Policy 2013;
- Petroleum (Natural Gas Pricing) Regulations 2016; and
- Petroleum (Local Content) Regulations 2017
- Natural Wealth and Resources Contracts (Review and Re-Negotiations of Unconscionable Terms) Act 2017
- Natural Wealth and Resources (Permanent Sovereignty) Act 2017

Tanzania – Stakeholders and regulators

- The minister of energy has primary responsibility for the development of the petroleum sector and grants licenses for upstream exploration and development.
- The Oil and Gas Advisory Bureau advises Cabinet on strategic matters relating to the oil and gas economy.
- The Petroleum Upstream Regulatory Authority (PURA) regulates and monitors the petroleum upstream sub-sector for mainland Tanzania.
- The Energy and Water Utilities Regulatory Authority (EWURA)established under the Energy and Water Utilities Regulatory Authority Act 2006, exercises regulatory powers in respect of midstream and downstream petroleum and natural gas activities under the act.
- The Tanzania Petroleum Development Corporation (TPDC) advises the government on:

1. policy matters pertaining to petroleum industry;
2. participating in petroleum reconnaissance, exploration and development projects;
3. carrying out specialized operations in the petroleum value chain using subsidiary companies;
4. handling the government’s commercial participating interests in the petroleum sub-sector;
5. managing the marketing of the country’s share of petroleum received in kind;
6. developing in depth expertise in the petroleum industry;
7. investigating and proposing new upstream, midstream and downstream ventures local and international; and
8. contracting, holding equity or participating in oil service and supply chain franchises and other licenses.

Tanzania – Risk and Mitigation

- Regulatory framework under development – Project Law will clarify
- Fiscal regime considered very strict with volatile compliance issues
- Requirement for partnerships to operate as an international company
- Time schedule – still depending on formal Project Law and signature of HGA and PSA
- Local Content regime will be strict
- Security issues in South (Onshore LNG facility)

Africa – JV's and partnerships

- Regulated environment often driven by Local Content requirements
- Purpose : benefits for both parties
- Compliance, compliance, compliance
- Systematic project approach

The Business side of JV's

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- Invest in proper partner selection and mutual Due Diligence – this takes time and money
- Consult all relevant expertise (legal, fiscal, organisational, cultural, compliance)
- Building a JV is a project – manage it like that

- Investissez du temps et de l'argent pour la sélection de votre partenaire en JV et la Due Diligence mutuelle.
- Consultez les experts (légaux, fiscales, organisationnels, culturels, conformité)
- Créer une JV est un projet – qui se gère comme tel !

- Define the scope of your cooperation and the terms &conditions
- Manage expectations both internally in your organisation and with your JV partner

- Définissez le périmètre et les conditions pour votre collaboration
- Managez les attentes – aussi bien au sein de votre entreprise que celles de votre partenaire JV

- Be fully transparent and open
- Structure your communications from the start
- Build relation of trust

- Soyez transparent et ouvert
- Mettez en place une structure de communication des le début
- Construisez la relation de confiance

We can assist - info@gushikama.com – www.Gushikama.com – Nous vous accompagnons

Africa – Events in the region

- Participation is a good first step
- Offer knowledge sharing

Africa - Events in the region

- NOG Energy Week (July 2023)
- Namibia Oil & Gas Conference (Aug 2023)
- Tanzania Energy Congress (Sept 2023)
- Mozambique Gas & Energy Summit & Exhibition
- Africa Oil Week (Oct 2023)
- Africa Energy Week (Oct 2023)
- MSGBC Conference and Exhibition (Nov 2023)
- Angola Oil & Gas conference and exhibition (Nov 2023)

Recommendations and actions

- Early engagement in Namibia and Tanzania for sustainable and compliant country entry required
- Senegal develops as regional hub for MSGBC Offshore ecosystem
- Combined effort between operators HQ and local teams as well as regulators
- TZ: Compliance requires attention and monitoring
- NM: Build relation of trust.
- SN : Regulatory framework under development. Language !
- Minimum : registration with regulators and Local Content agencies
- Seek tax briefing by local tax consultant
- Seek legal briefing by local legal consultant
- Engage with local business partner to bridge the cultural and language gaps. This can be done on a consultancy basis.

Capex of 100 Bn US$ until 2030 in Namibia, Tanzania and Senegal. Will you participate ?

Discussion and questions

Introduction

About Gushikama Business consult

Gushikama Business Consult is an independent consultancy company. Gushikama Business Consult is the preferred partner when it comes to growing or expanding your business and assessing and de-risking new ventures. The services include support for new country entries, assessing markets and defining the strategy for creating new opportunities. Gushikama is the word in Kinyarwanda for integrity, resolution and perseverance. Kinyarwanda is the language spoken in Rwanda, the country of a thousand hills, in the very heart of the African Continent.

About Peter Boon

I am an experienced business development professional with demonstrated success working in the global energy and maritime industries, civil construction and infrastructure. My commercial capabilities were developed in a technical services environment but are applicable to the services business in general. I am part of an extensive network of experts in doing business in Africa as well as Commercial and Business Development leaders.
I have grown to be passionate about working in Africa and have developed a high level of cultural awareness, supported by exceptional language skills. My mission is to achieve a balance between commercial sustainability and the UN SDG’s, for instance by living up to local content commitment. Knowledge transfer and coaching comes naturally.

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