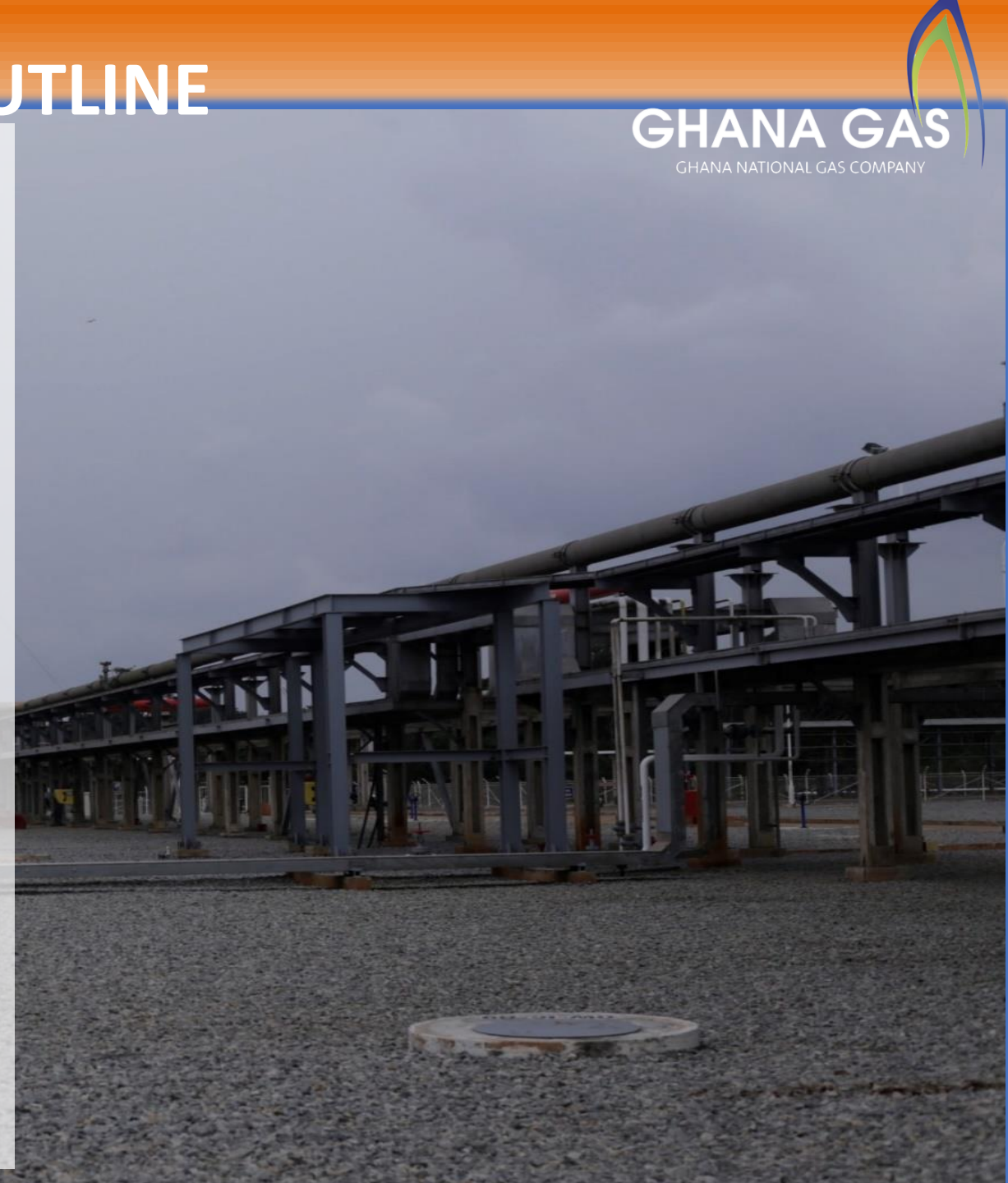




# **Dissecting African Gas Strategies and Opportunities**

# PRESENTATION OUTLINE

- ❑ SIGNIFICANCE OF OIL AND GAS RESERVES IN AFRICA
- ❑ OVERVIEW OF GHANA'S OIL AND GAS SECTOR
- ❑ GHANA'S STRATEGY TOWARDS NATURAL GAS DEVELOPMENT
- ❑ OPPORTUNITIES IN GHANA'S OIL AND GAS VALUE SECTOR
- ❑ STRATEGY TO HARNESS THE FULL POTENTIAL OF OIL AND GAS RESERVES
- ❑ CHALLENGES TO GAS PROJECTS
- ❑ RECOMMENDATIONS



- Oil/Natural Gas/NGLs export for revenue
- Domestic use of Natural Gas/NGLs for Sustainable Energy & as feedstock for fertilizer/petrochemical industry



- Economic growth and structural transformation

# SIGNIFICANCE OF OIL AND GAS RESERVES IN AFRICA

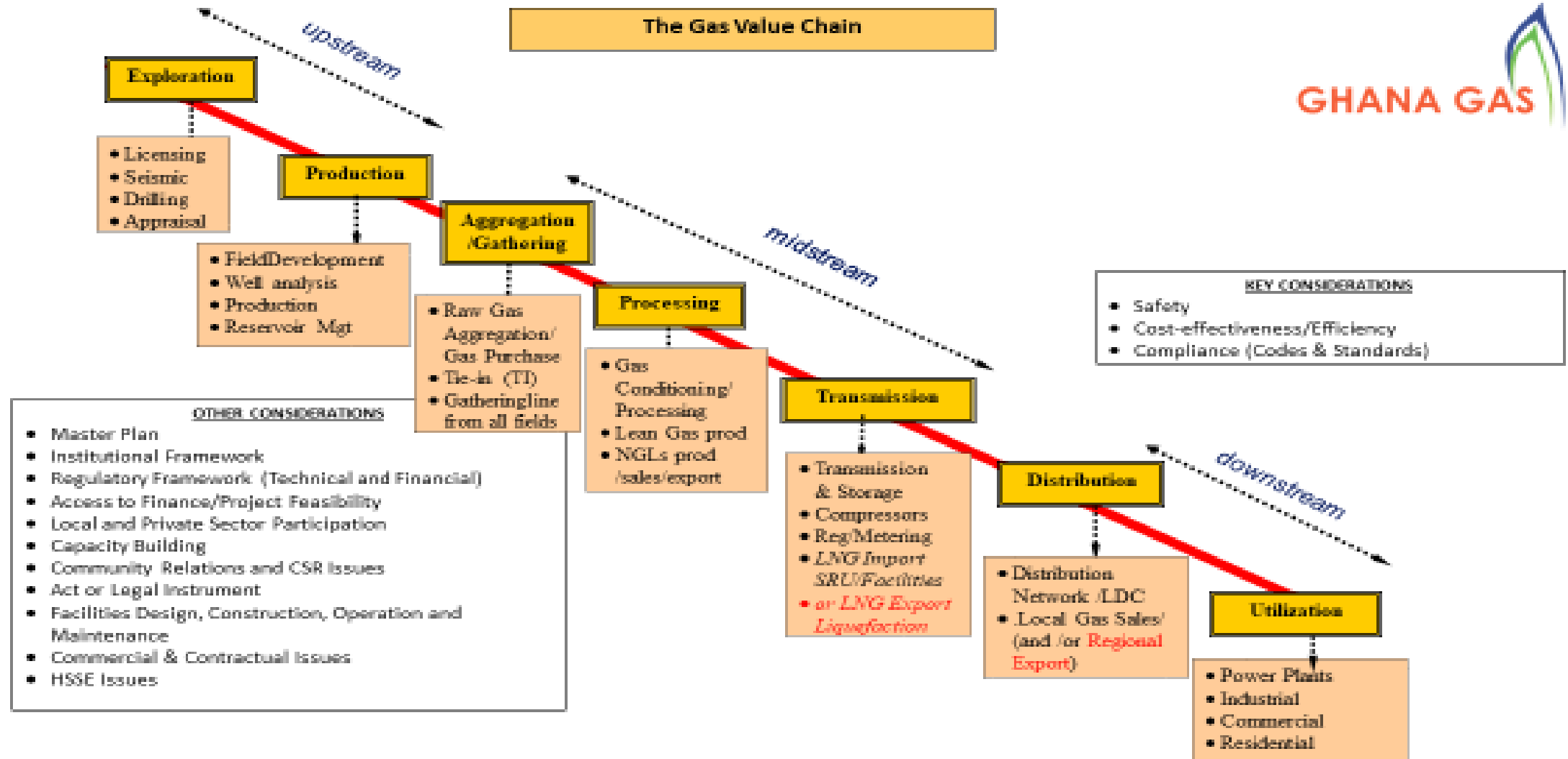


- ❑ The growth of a country is largely dependent on the optimal development and utilisation of its energy resources in a sustainable manner.
- ❑ Climate change is an issue in Sub-Saharan Africa but poverty is the biggest killer in Sub-Saharan today.
- ❑ Sub-Saharan Africa is home to 33 of the world's 46 least-developed countries (LDCs) with an average income per head of less than \$1,018 a year.
- ❑ Africa's countries must expand at 6-7% a year if poverty is to be reduced in a big way and if the life chances of hundreds of millions of people are to be improved.
- ❑ Hence Energy Transition must be situated within the context of the Sustainable Development Goals (SDG), particularly SDG 7 which is to ensure access to affordable, reliable and sustainable energy for all.
- ❑ Access to oil and gas can strengthen power system and begin displacing wood, biomass, charcoal, etc.

## About Ghana Gas:

- ❑ Ghana National Gas Company Limited (Ghana Gas) is a limited liability company, solely own by the Government of Ghana.
- ❑ Ghana Gas is to build, own and operate gas infrastructure required for the **gathering, processing, transporting and marketing** of natural gas resources in **Ghana** and **internationally**.

# OVERVIEW OF GHANA'S OIL AND GAS SECTOR



# OVERVIEW OF GHANA'S OIL AND GAS SECTOR



## □ Upstream Activities:

- ❖ 2 oil and gas fields – Jubilee Partners
- ❖ 1 gas field - ENI

## □ Midstream:

- ❖ 12 inch 58km Gas Gathering Pipeline
- ❖ 150 MMSCD Capacity Gas Processing Plant
- ❖ 111km Gas Transmission Pipeline and Associated Facilities

## □ Downstream:

- ❖ Bulk Distribution Companies/Oil Marketing Companies (OMCs)
- ❖ Distribution Network
- ❖ Power Sector – Thermal Plants, Hydro Plants & Solar
- ❖ Industrial Customers

- ❑ Using natural gas as the transition fuel and adopting realistic schedule toward the de-carbonization agenda.
- ❑ Cure Africa's energy poverty with the its vast reserves by investing in natural gas projects to generate require power at affordable cost.
- ❑ Explore the extensive use of natural gas for economic development, e.g. Petrochemical, Agriculture, Power, Transportation industries etc.
- ❑ Capital Mobilization toward renewable infrastructure. Exporting excess production to the global market for foreign exchange for investment into renewables



# OPPORTUNITIES IN GHANA'S OIL AND GAS VALUE SECTOR

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Development of new fields etc.

- ❖ Gas Processing Plant
- ❖ New Gas Pipeline
- ❖ LNG import
- ❖ Pipeline Gas import
- ❖ Regulatory and Policy Support
- ❖ Jobs Creation

# CHALLENGES TO GAS PROJECTS

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Despite the height attained in Ghana Gas' gas sector, there has been impediment to natural gas developments.

- Lack of Access to Capital for Natural Gas Projects
- Unclear Institutional and Regulatory Framework
- Unattractive Fiscal Regimes
- Inadequate local/private sector participation in the energy sector

# RECOMMENDATIONS

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- African Government should make a conscious effort to protect Oil and Gas project through legislation
- African countries should collaborate and build human capacity to man and participate in Natural Gas Projects
- Africa to establish a bank to finance Natural Gas project for the common good of the continent





GHANA GAS

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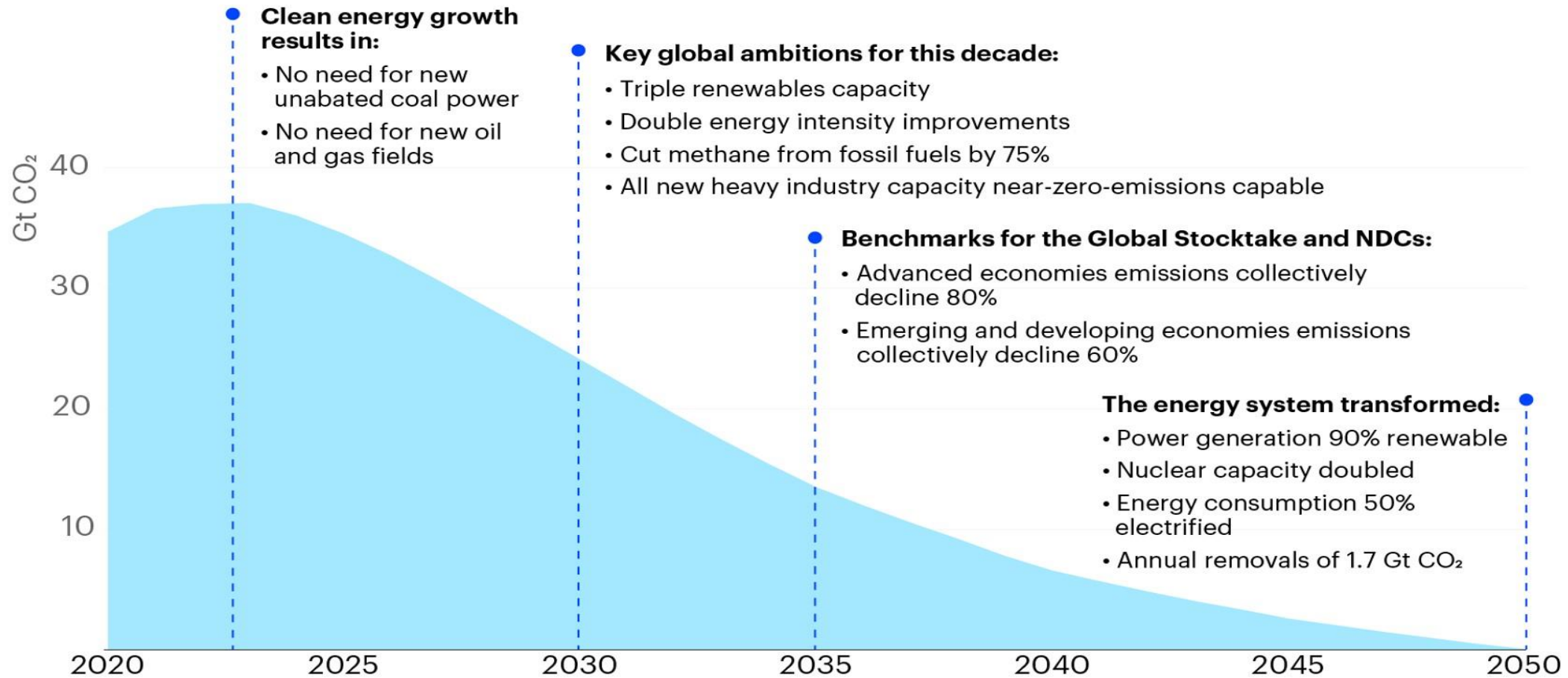


# ENERGY TRANSITION – FROM GLOBAL PERSPECTIVE

## IEA's Roadmap to Net Zero Emissions by 2050

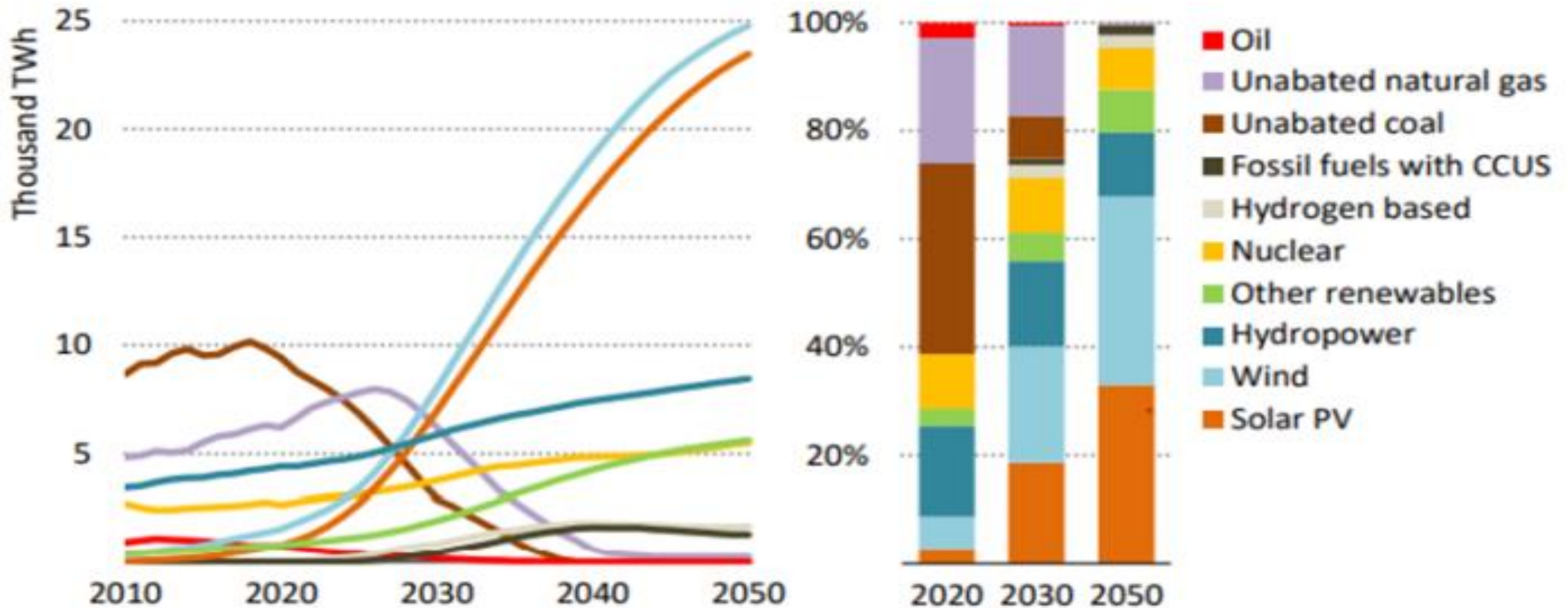
Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update

increase in global clean energy spending from USD 1.8 trillion (EUR 1.7trn) in 2023 to USD 4.5 trillion a year by the early 2030s.

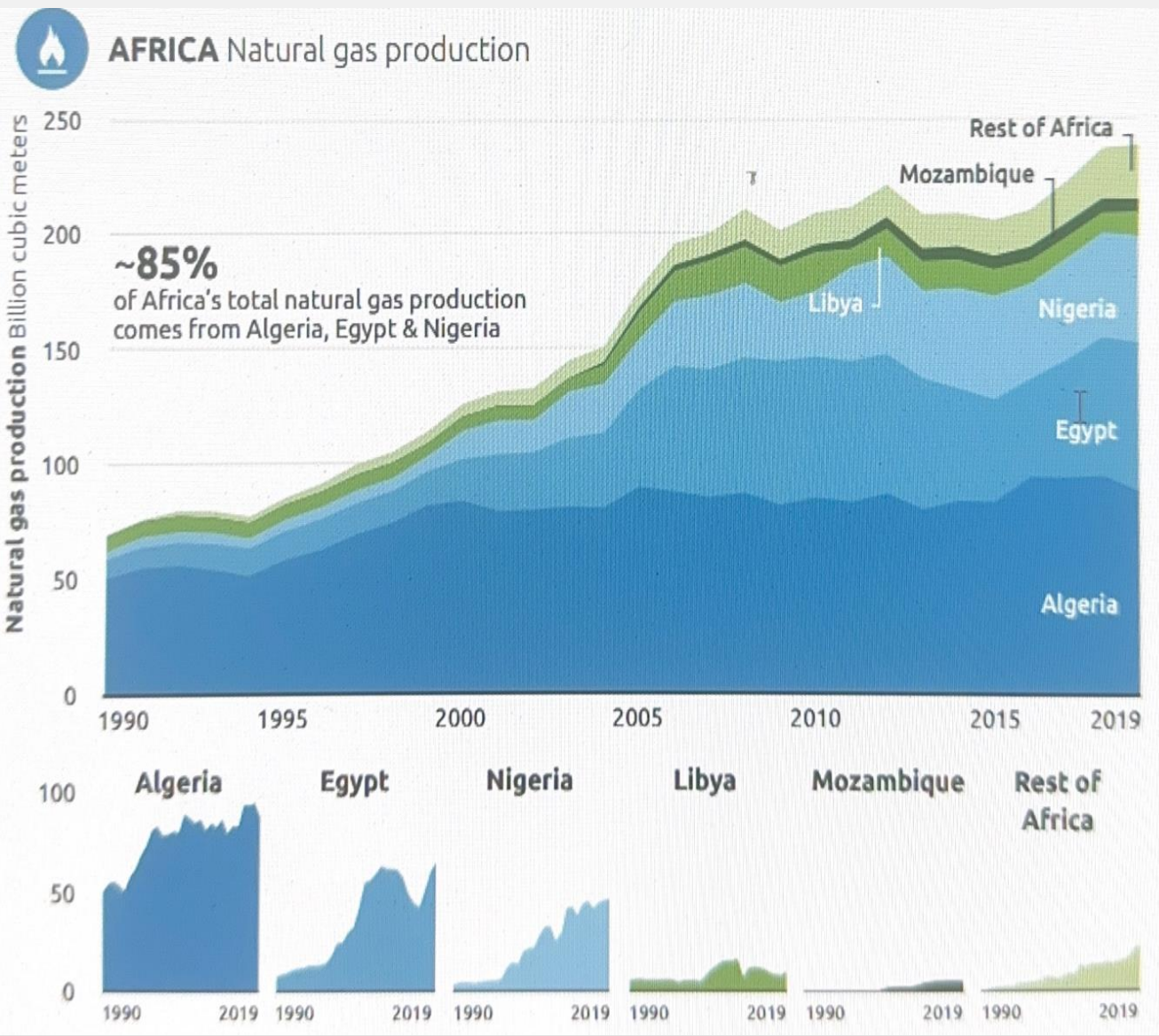
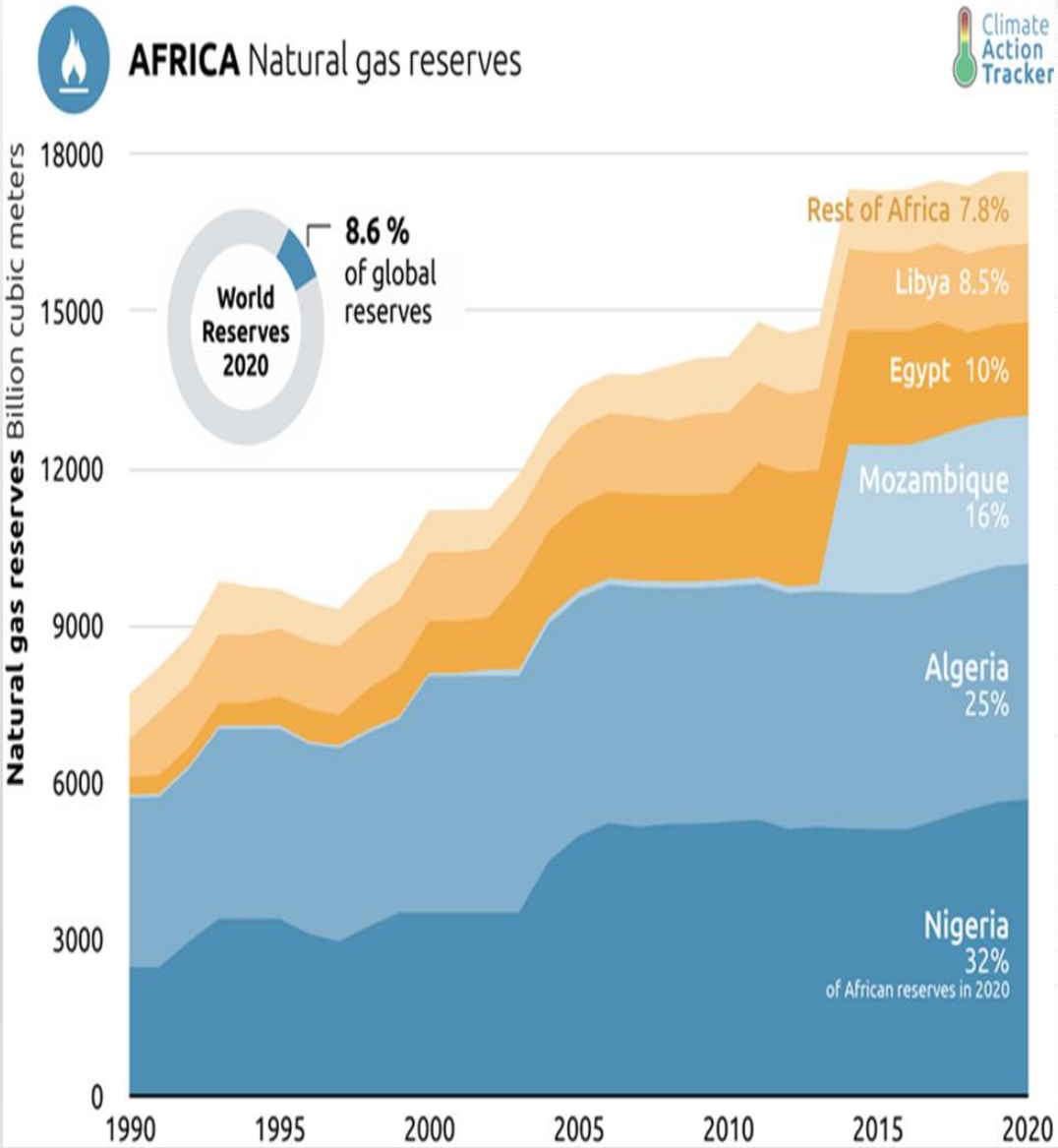


# ENERGY TRANSITION – FROM GLOBAL PERSPECTIVE

**Figure 3.10** ▶ Global electricity generation by source in the NZE

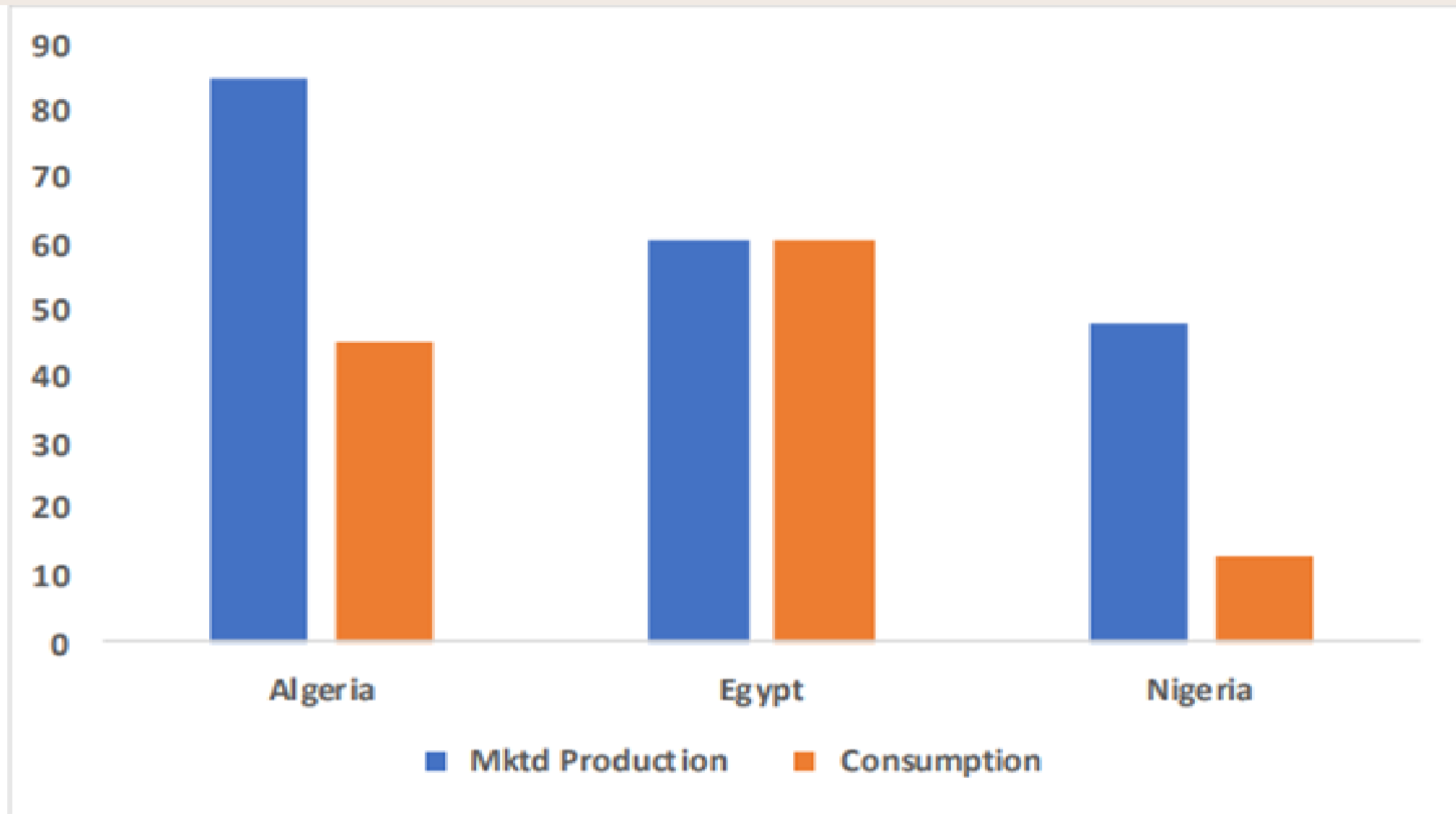


# ENERGY TRANSITION – FROM AFRICA PERSPECTIVE





# ENERGY TRANSITION – FROM AFRICA PERSPECTIVE



Source, GECF, 2021



# SIGNIFICANCE OF NATURAL GAS RESERVES IN AFRICA

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- ❑ **Energy Security:** As a cleaner substitute to coal and oil, it helps diversify energy sources, reducing reliance on fuel imports given Africa's reserves and enhancing energy resilience.
- ❑ **Cleaner Energy Transition:** Natural gas serves as a bridge fuel in Africa's transition towards cleaner energy sources. Its lower carbon footprint compared to coal and oil which emits 101kg/GJ and 72Kg/GJ respectively compared to 56KG/ from natural gas aligning with global climate change mitigation goals.
- ❑ **Export Potential:** African countries with abundant natural gas reserves have the opportunity to become key players in the global LNG market . On average , Africa over the past three decades has utilized only 17% of the natural gas recovered with a large exports to other economies .

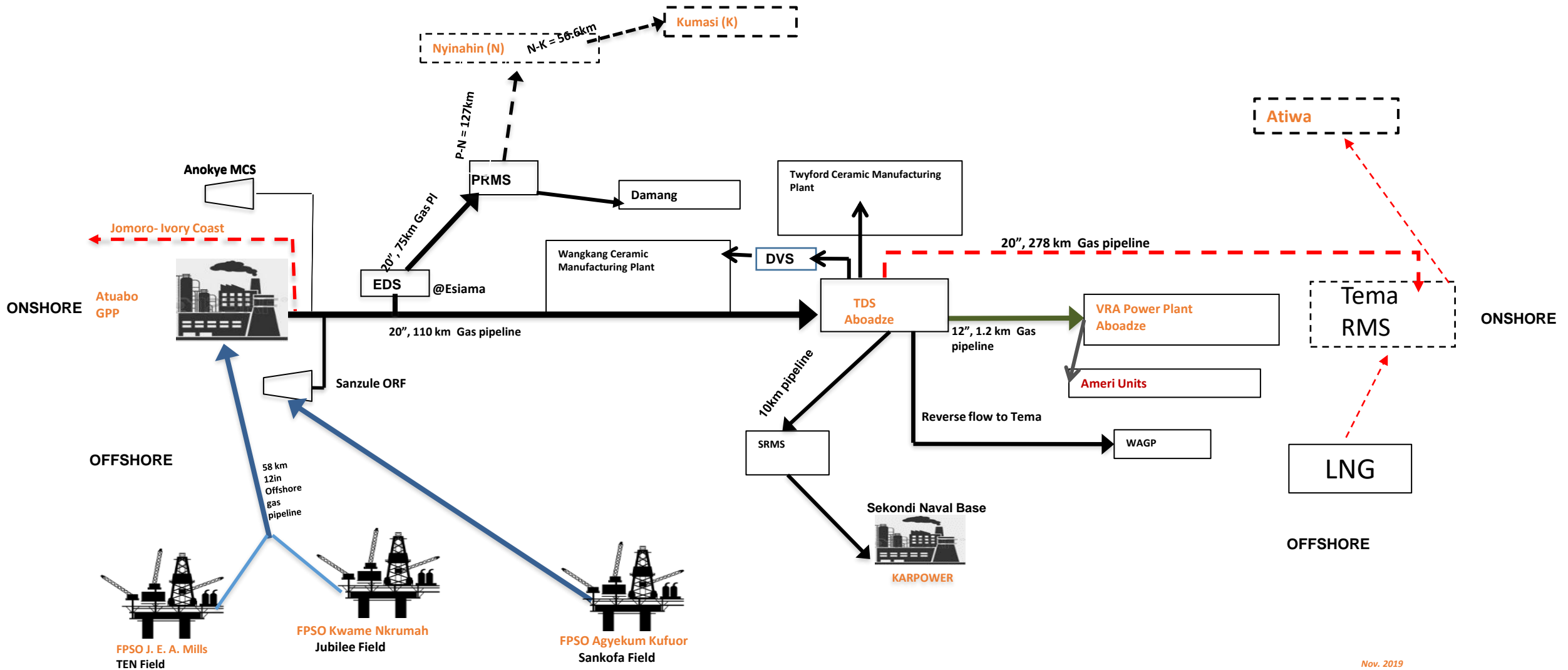
# SIGNIFICANCE OF NATURAL GAS RESERVES IN AFRICA

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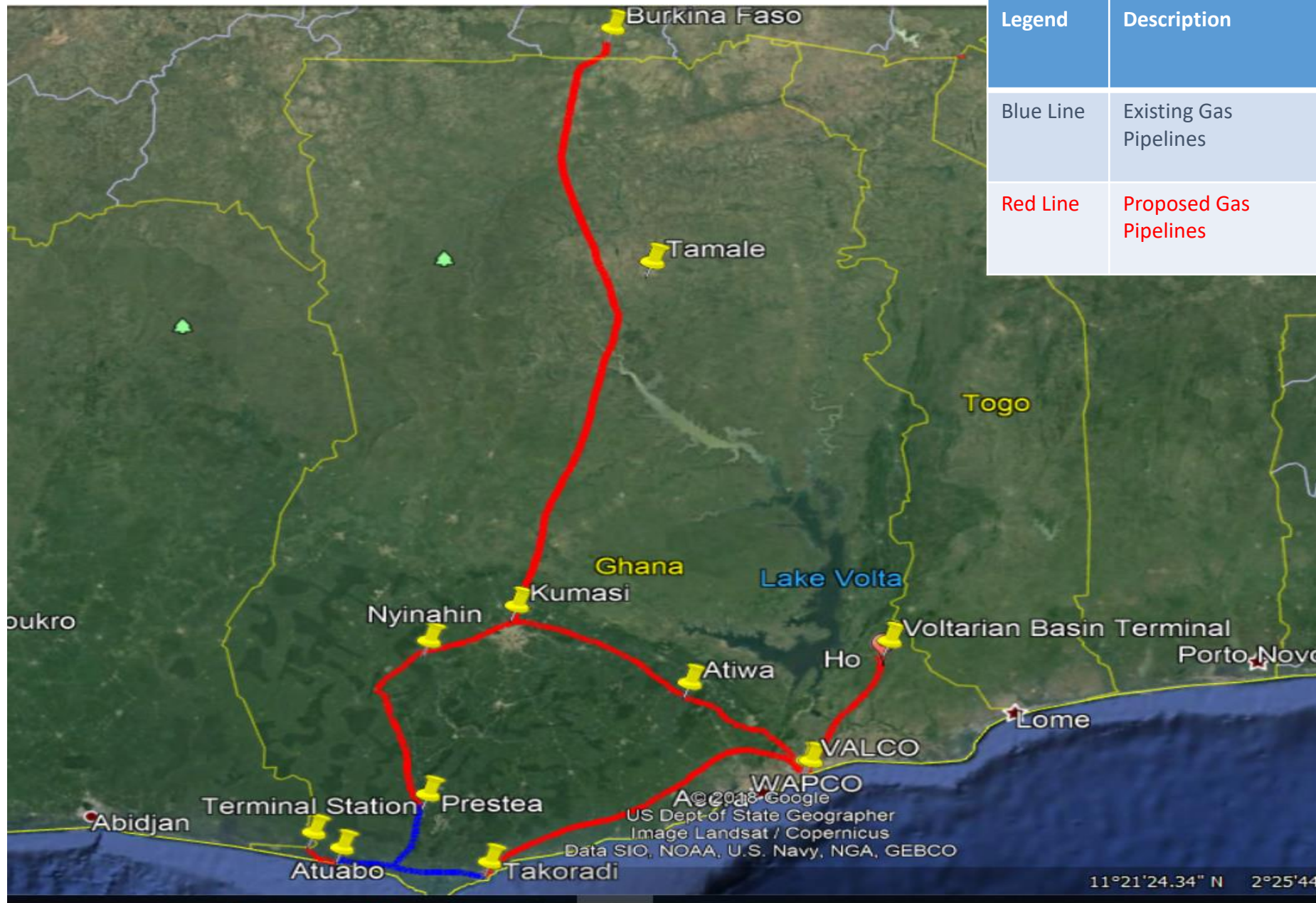
- ❑ **Industrial Applications:** Natural gas serves as a feedstock for various industrial processes including petrochemicals, fertilizers and manufacturing to enhance productivity and diversification of the economy and create job opportunities.
- ❑ **Economic Development:** The development of natural gas infrastructure such as pipelines and LNG infrastructure, stimulates economic growth by attracting investments, fostering trade partnerships and promoting regional integration (example WAGP).
- ❑ **Capital Mobilization:** The exploitation of the natural gas in Africa places the continent at an advantage to bridge the gap between the continent and the developed world. As Africa seeks to transition from fossil to renewables, the revenue from natural gas can be channeled towards renewable infrastructure development.

# Existing and Proposed Gas Infrastructure



Nov. 2019

# Gas Infrastructure Plan for Ghana



**NB: Prestea to Kumasi pipeline currently under construction by GENSER**