

DRAFT

*From Projects to Systems:
The Role of Collaboration in Emerging
Gas Provinces*



XODUS



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Introduction

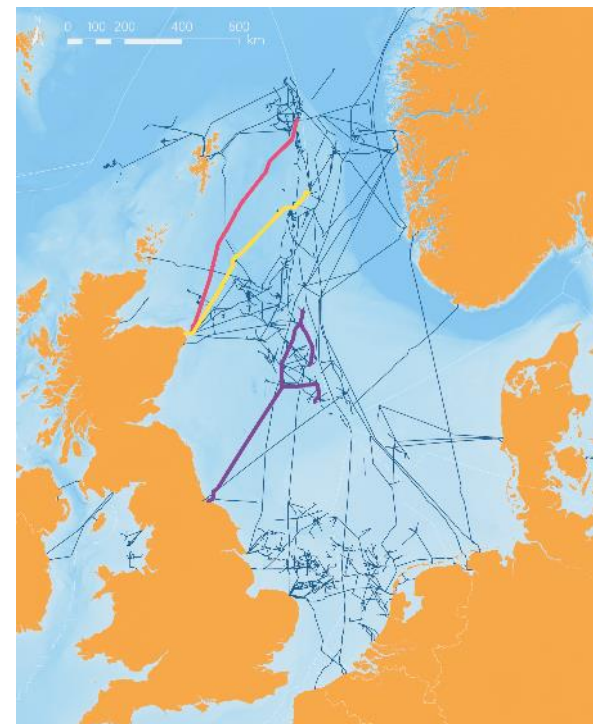
- This year NAMCOR commissioned a comprehensive Gas Monetisation Strategy Study to better understand Namibia's long-term gas opportunities and the potential role of gas in supporting national development. The work has been finalised, and we look forward to sharing more insights in due course.
- One of the themes that emerged from this exercise is the importance of collaboration in gas development. Around the world, the most successful gas provinces have often been built not through isolated projects, but through cooperation between stakeholders, shared infrastructure, and long-term planning.
- We thought it would be valuable to bring that discussion to the Namibia Oil & Gas Conference. Rather than presenting the study itself, we have asked Xodus, who supported NAMCOR in this work, to share some broader observations on how collaborative approaches have shaped gas development internationally and why these lessons may be relevant for Namibia as the country continues its journey as an emerging energy producer.
- The presentation should be viewed as a contribution to the discussion on Namibia's future energy system, rather than a presentation of the study findings themselves.

Basin Development

- Developments are project-led
- Infrastructure built field by field
- Optimised by individual operators
- Leads to duplication and stranded value
- Hubs evolve based on when larger fields are in decline and facilities have ullage

Integration typically happens later in the life of a basin, after the larger fields have been developed, and not by design from the start

Evolution of UK North Sea Infrastructure



Stage 1 — Point-to-point
1960s single pipelines

Stage 2 — Expansion
70 – 80s tie-backs and hubs

Stage 3 — Integrated system
90s network

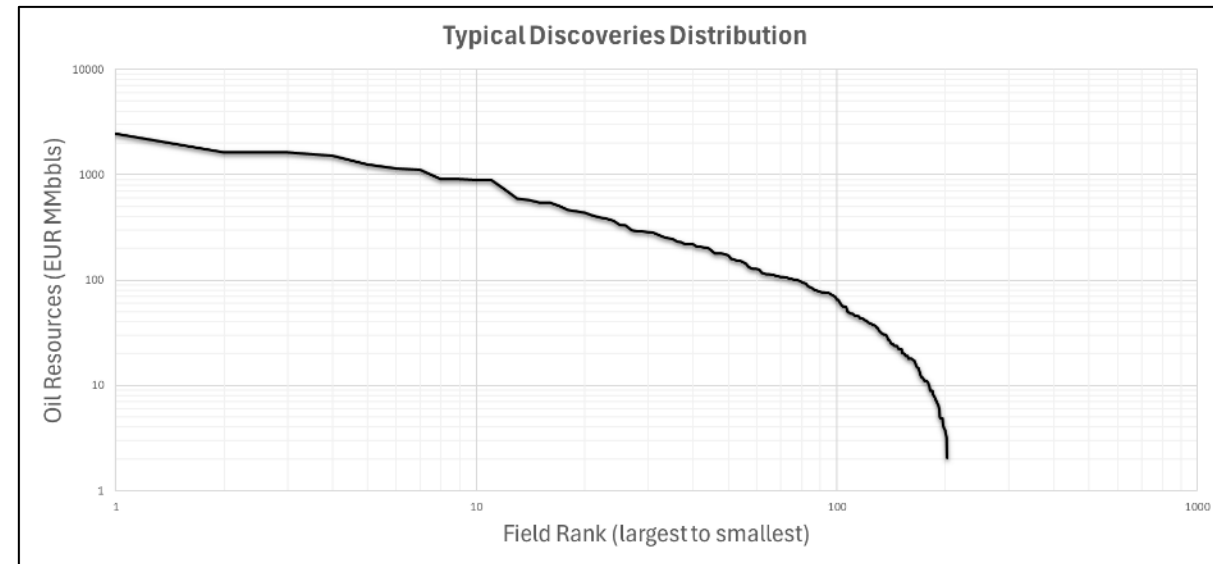


Collaborative Development: From Projects to Systems

- Chart shows the typical field size distribution for a mature basin
- There are more small fields and fewer large fields
- Larger fields are developed first

What is collaborative development?

- Shared infrastructure across developments
- Standardised “plug-and-play” connections
- Lower cost to connect new (smaller) fields
- Unlocks the long tail of discoveries

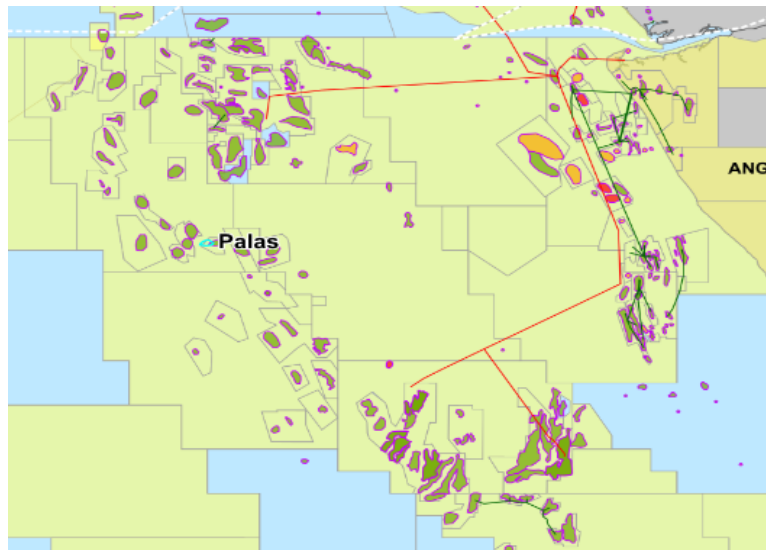


Resource Density Enables Collaboration

Shared infrastructure requires proximity and economic feasibility, not just intent

- Discoveries must be dense and geographically clustered
- Enables short tie-backs and lower connection costs to hubs
- Supports scalable shared infrastructure systems
- Proven in mature basins (e.g. Angola Lower Congo)

Angola Lower Congo – Mature, High Density



From Rystad Energy

Namibia Orange basin– Emerging Comparable Density



From Sintana Energy

Projected density in Namibia basins (e.g. Orange basin) is similar to mature basins such as the Lower Congo, creating the conditions for shared infrastructure

Namibia Emerging Resource Base

What conditions could support collaborative gas development?

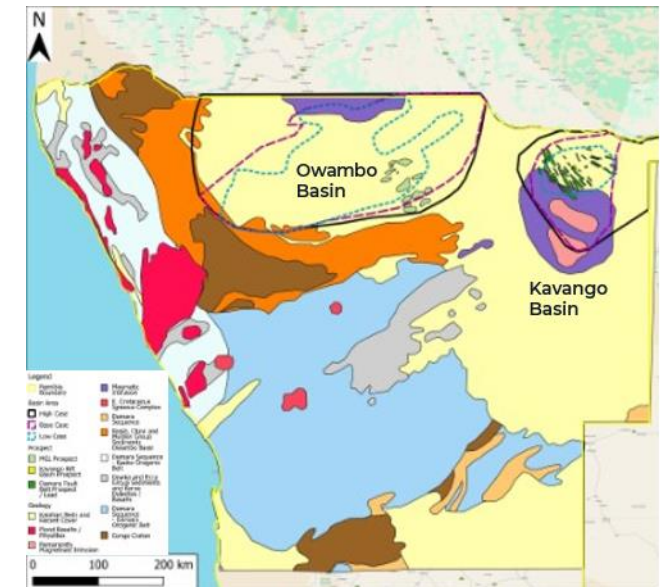
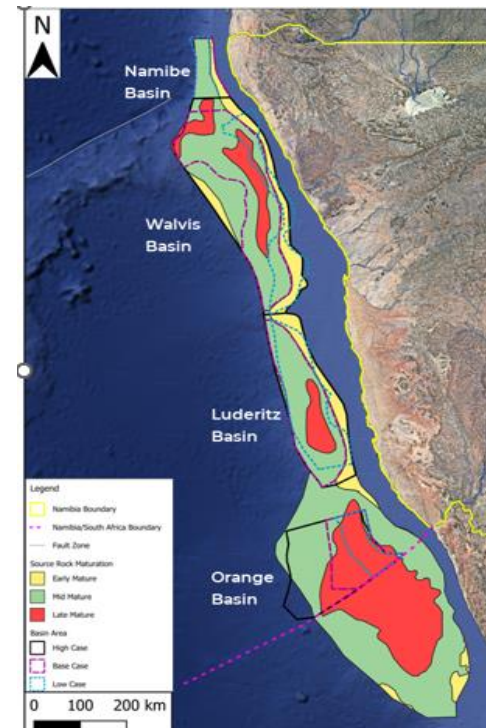
NAMCOR recently completed a comprehensive gas strategy assessment to better understand Namibia's long-term gas opportunity.

The work combined:

- Basin-by-basin resource analysis for oil and gas
- Bottom-up supply assessment
- Demand and market analysis
- Development scenario modelling
- Infrastructure and commercial evaluation

While the detailed findings will be communicated separately, the work reinforces the importance of considering gas developments at a basin and system level linked to oil developments, rather than only on a project-by-project basis.

Namibia Basins

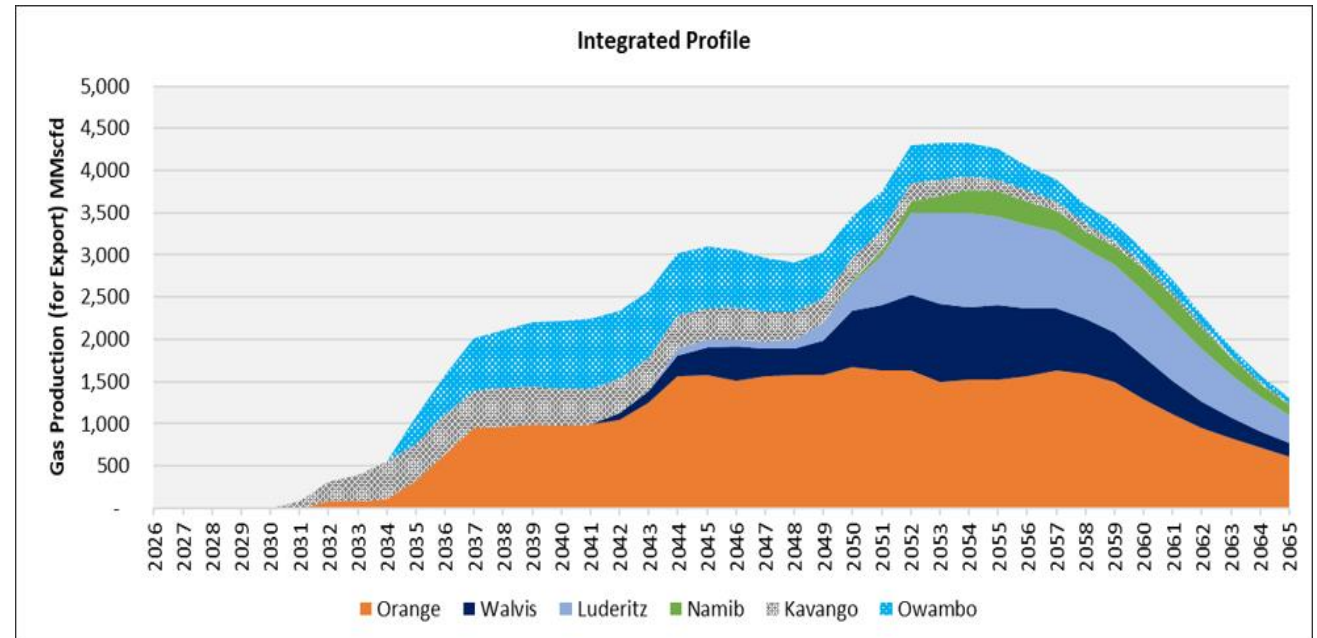


Maps modified from NAMCOR (2024) *History on Namibian onshore & offshore exploration activities.*, and Vera, J., Granado, P., & McClay, K. (2010). *Structural evolution of the Orange Basin gravity-driven system, offshore Namibia. Marine and Petroleum Geology - MAR PETROL GEOL.* 27. 223-237.

Namibia Emerging Resource Base

How much gas could Namibia produce?

- Integrated profiles estimate total gas production; both associated with oil, and non-associated
- Combining 4 offshore and 2 onshore basins
- By 2050 there could be up to 3 Bscfd



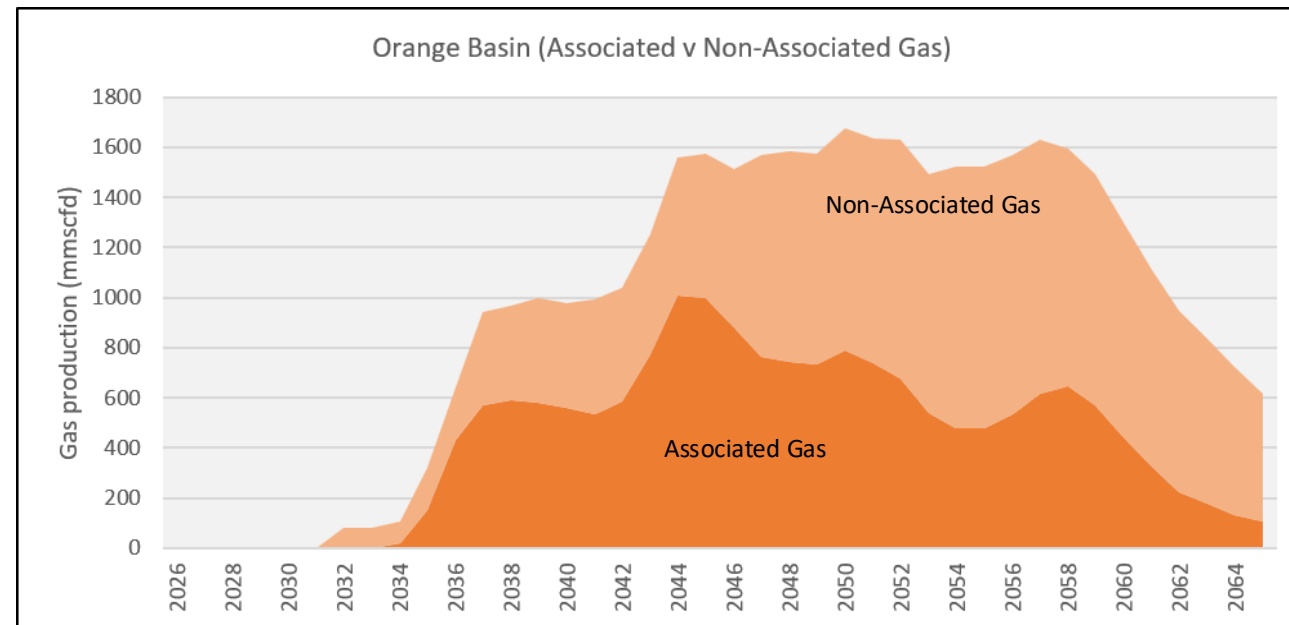
Namibia's Gas Potential

Namibia Emerging Resource Base

Associated v Non-Associated Gas

- Reservoir management strategies for oil production mean gas re-injection likely to be preferred for most fields
- This limits associated gas availability in near term
- Associated gas will become available as fields mature and GOR increases (gas breakthrough)
- Associated gas from Orange basin alone could reach 1 Bscfd in 2040s

Resource Potential (Orange Basin)



The Real Challenge: Risk, Not Cost

Why joint infrastructure is difficult

It creates significant long-term value (optimized midstream/downstream costs), but:

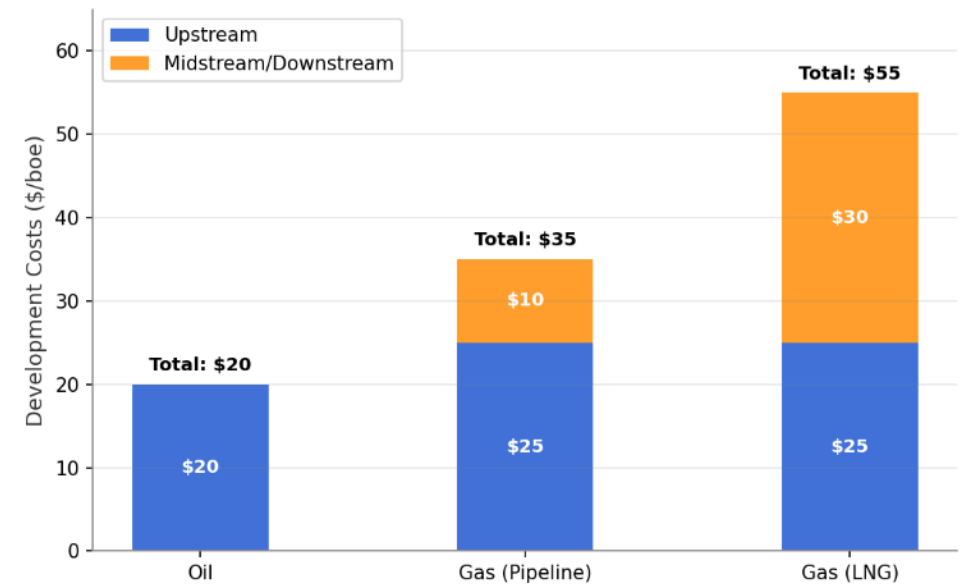
- Confidence in sufficient volumes being available for domestic gas is needed to justify building infrastructure for domestic gas
- To create sufficient infrastructure capacity for collaboration, the first project carries the risk — future projects capture the value
- This creates a “volume-risk gap”

Gas amplifies the challenge

- Higher upfront capex than oil (~2× Oil for Pipelines)
- Higher minimum economic scale (~3× FPSO/LNG)
- Strong dependence on shared infrastructure

The challenge is not cost sharing — it is risk sharing

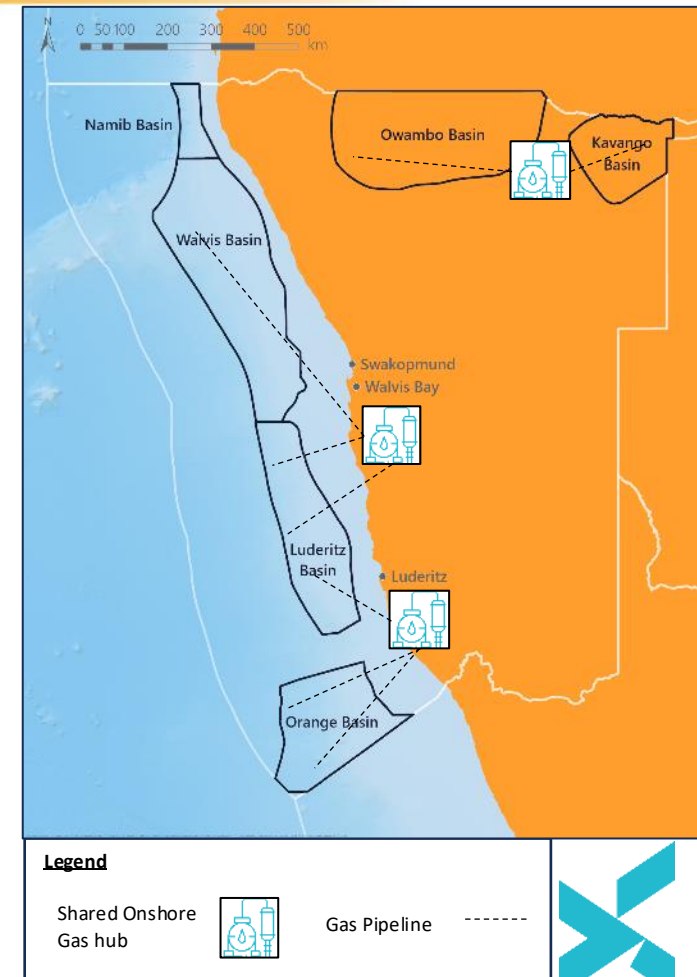
Total Development Cost Structure



From Fields to a Basin System

A practical model for basin-level optimisation

- Offshore backbone infrastructure
- Clustered field development (tie-backs)
- Shared hubs (onshore or offshore)
- Potential cross-border integration



Unlocking Infrastructure Through Demand

The missing piece: demand

- Domestic demand remains limited
- If associated gas has no value to an operator then it is not incentivised to do anything other than inject (or flare) the gas

What enables collaboration: demand at scale

- Industrial use
- Regional integration
- Emerging demand (e.g. digital infrastructure)

The objective:

- Higher gas sales price for operators than selling to LNG
- Lower gas price for end user than buying from LNG or other energy sources

Local demand can unlock gas resource exploitation by enabling higher-value uses beyond LNG.

Possibilities for new pathways to gas monetization through increased local demand, such as data centres





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THANK YOU