The Latest Developments in LNG Projects

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"Pushing the Envelope" in Financing Terms and Security Packages

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"Pushing the Envelope" in Financing Terms and Security Packages

- Context: Changes in Commercial Realities
- Traditional Structure of LNG Projects
- Evolving Project Structure
- Integration of the Value Chain
- Qatargas II: Ownership Integration
  - Structure
  - Financing
- Marathon Equatorial Guinea: contractual integration
- Angola LNG structure
- Sourcing the Capital

Taylor-DeJongh LNG Experience

Atlantic Basin

Qatargas II LNG Qatar
FA to Lenders
US$5 bn

Equatorial Guinea LNG
FA to Sponsors
US$1.7 bn

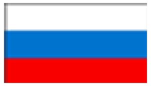
Sonatrach,
Skika Trains 4,5,6
Algeria
FA and Debt Arranger
US$250 mm

Atlantic LNG
Train 1
Trinidad
FA to Sponsor
US$1 bn

Jamaica LNG Jamaica

FA to Sponsor
Confidential

Angola LNG Angola
FA for Project Company
US$1.5 bn

Tambeyneftegaz
Russia

FA to Sponsor
Confidential

Pacific Basin

Alaska LNG and Pipeline USA
FA to State
US$12 bn

RasGas LNG Train 3 Qatar
FA to Sponsors
US$1.4 bn

Qatargas Upstream LNG Qatar
FA to Lenders
US$600 mm

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Changes in Commercial Realities Drive Changes in Financing Structures

Changes in Commercial Realities

Traditional LNG Trade

- Primarily a point-to-point business based on long term take-or-pay Gas Sales and Purchase Contracts ("GSPA").
- Commitment Term: Over 20 years with pricing formula fixed.
- Usually with a 100% take-or-pay commitment.
- Offtaker was usually an investment grade highly credit-worthy utility.

Traditional Project Structure

Upstream and downstream segments historically financed by separate investment groups

- Upstream:
  - NOCs concentrate on upstream development and transport
  - IOCs focus on liquefaction
  - PSA versus Sale of Gas to plant
- Downstream:
  - Dedicated supply source
  - Creditworthy utilities (high investment grade)
- Nature of the Offtake Contract:
  - FOB plant
  - Take-or-pay
  - Oil-indexed pricing
  - Floor price
  - Back-to-back liability clauses minimize residual risk at terminal
  - Long-term (20 years)

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Evolving Project Structure

- Integration of value chain
  - Upstream sponsors are moving down the value chain and offtakers are investing upstream.
  - Netback structures.
  - But, still, separate financing of liquefaction, shipping, and regasification.
- Nature of Offtake Contracts
  - Project lenders willing to take market price risk.
  - Volume commitment by creditworthy buyer is still required. No credit for spot sales.
  - Financing process begun on the basis of LOI/HOAs instead of “termed” GSPAs.
- Shipping
  - Project sponsors seek control over shipping to maximize marketing flexibility.
- Buyer Flexibility
  - Destination flex; seasonal swaps.

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Integration of Value Chain

- Still necessary for the capex commitment.
- Field, liquefaction, shipping, regas, market – all must be in place.

- Ownership integration
  - QGII, and QGIII
- Contractual integration
  - Marathon EG
  - Sakhalin
  - Tangguh
- Equity gas linkages/ integration
  - Angola LNG

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Qatargas II: Ownership Integration

- JV between QP (70%) and ExxonMobil (30%).
- $9.3 billion two-train financing with Train I targeting the UK.
  - Debt: $6.5 billion; Equity: $2.8 billion
- Capacity (Two-Trains):
  - 15.6 MTPA of LNG
  - 6 MMTA of condensates
  - 1.7 MMTA of LPG

represent substantial portion of revenues

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Qatargas II (contd.)

- The first project to fully integrate the entire LNG supply chain under one sponsorship group – netback in full
  - Upstream development and liquefaction: QP & ExxonMobil.
  - Shipping: Time Charter Agreements (8 LLNG vessels per train, financed separately).
  - Regas Terminal (South Hook LNG, Ltd): QP (70%), ExxonMobil (30%) with £600 million in debt financing (including £180 million in ExxonMobil sponsor loan).
  - Offtaker: ExxonMobil Gas Marketing Europe (EMGME).
    - Volume commitment; open price risk.
  - Condensate marketing
    - Volume commitment; open price risk.

Qatargas II: Allocation of Key Risks

- UK gas price risk borne by project and, therefore, its lenders.
- Volume risk passed through to EMGME via a 25-year GSPA backed by ExxonMobil credit support.
- Development and construction risks associated with the liquefaction plant and new downstream infrastructure (ships and regas terminal) transferred to project sponsors through the financial completion test.
- Provisions of the completion test include liquefaction, shipping and regasification (at the South Hook terminal) of a defined LNG cargo.

Qatargas II: Financing

Attractive Pricing and Generous Tenors

- Commercial Bank Facility
  - $3.6 billion, 15 years
  - Pricing: 50 bp (yrs 1-5) rising to 125 bp (yrs 13-15)
- Islamic Facility
  - $530 million, 15 years
  - Structured to mimic Bank Facility
- ECA-Guaranteed Facilities
  - $805 million, 16.5 yrs (SACE: $400 million at 21bp, US Ex-Im: $405 million at 2 bp)
- ExxonMobil Sponsor Loan
  - $1.9 billion (as mirror facilities)

Qatargas II: Financing (contd.)

Security Package

- Delineation of security interests among the different lender groups along the integrated value chain (liquefaction, shipping and regasification) can be complex.
- Security documents provide compliance with Islamic financing requirements and *pari passu* treatment of all Senior Debt facilities.

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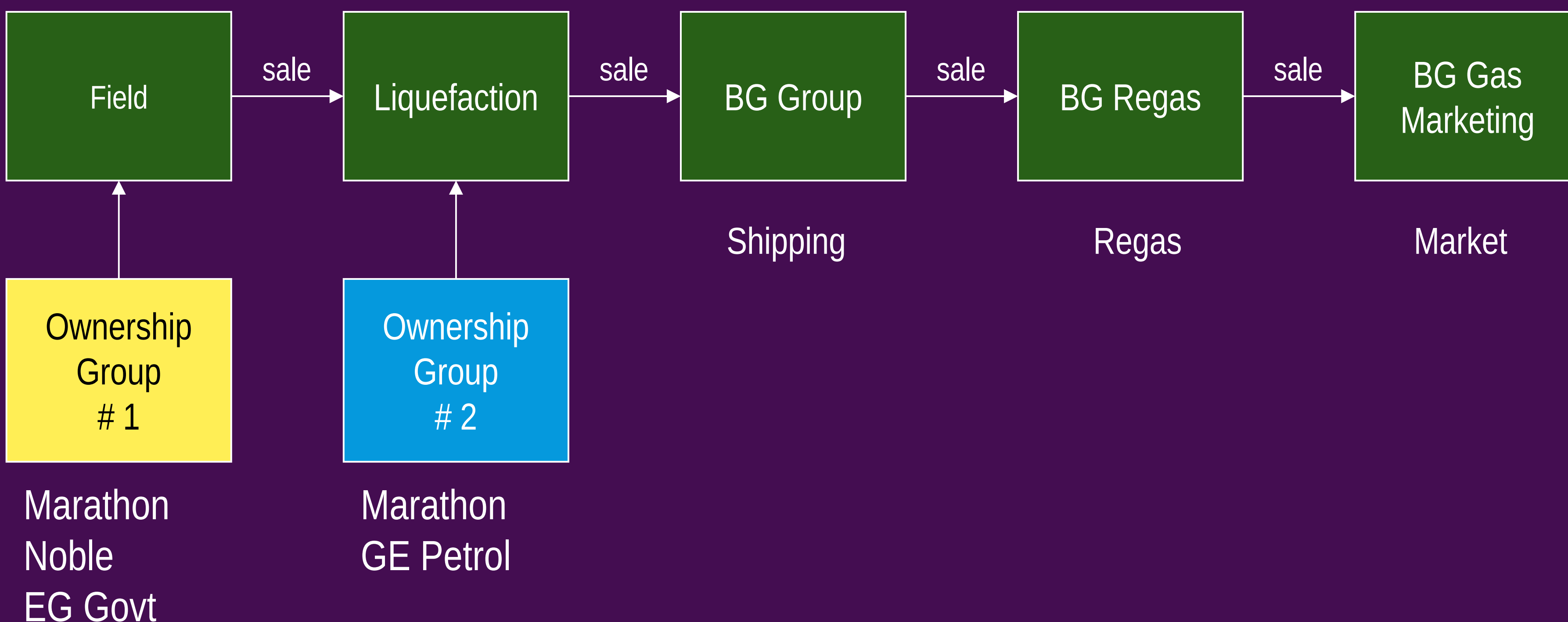
Contractually Integrated Value Chain

Marathon Equatorial Guinea LNG



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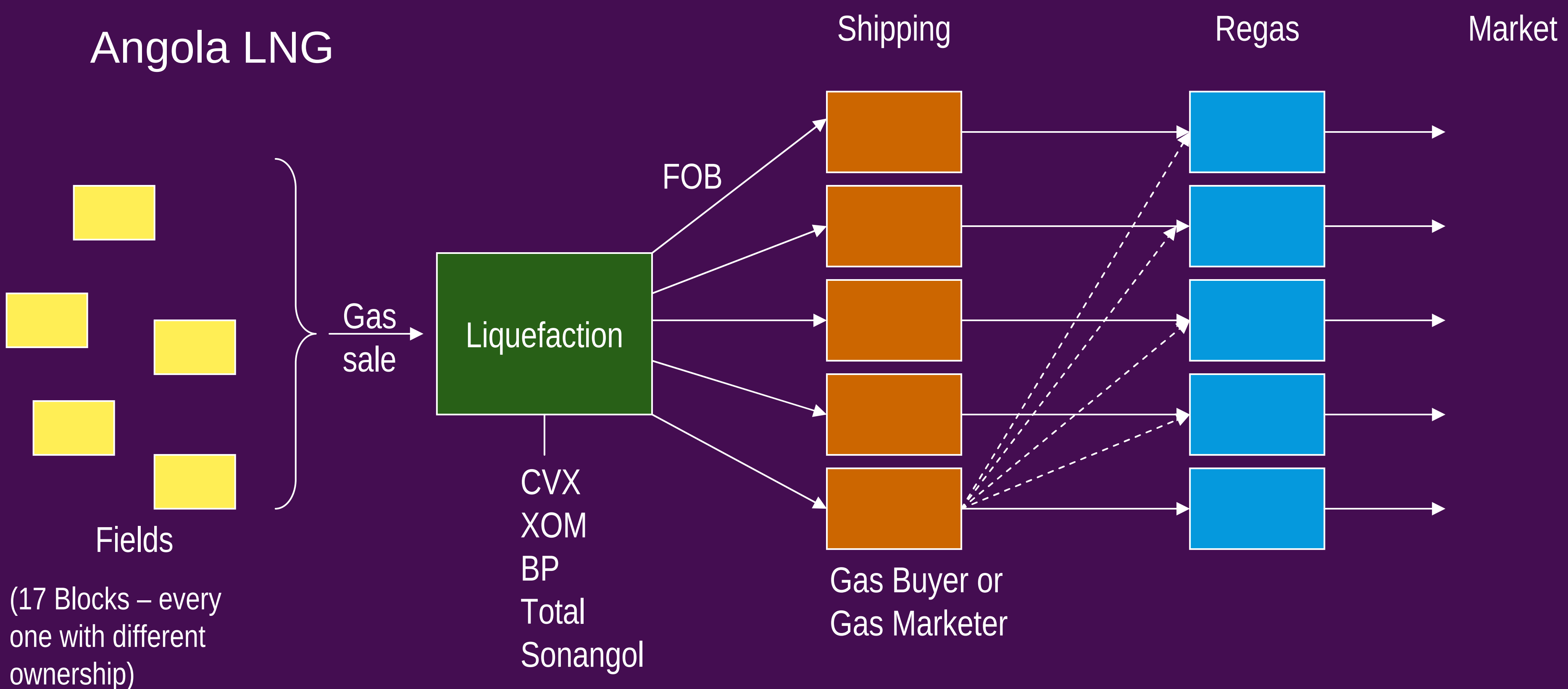
Equity Gas Integrated Scenario

Angola LNG



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Sourcing the Capital

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Sourcing the Capital

LNG Costs throughout the chain

	Unit Cost	Capex Range
Exploration and Production	$.05 - $1.0/MMBtu	$1 – $3 Bn
Liquefaction	$.08 - $1.2/MMBtu	$1.5 – $4 Bn
Shipping	$0.4 - $1.0/MMBtu	$2 -$4 Bn
Regasification and Storage	$0.3 - $0.5/MMBtu	$0.4 - $0.8 Bn
Total		~$5 - $12 Bn

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Sourcing the Capital (contd.)

Lender Requirements

- Completion undertakings.
- Security package – strong, enforceable.
- Offshore accounts.
- Debt service reserve accounts.
- Low “breakeven” LNG price.
- Long-term offtake commitments and market access.

Sourcing the Capital (contd.)

Different risks; different sources:

- Regas, shipping and liquefaction components offer different types of market and political risk profiles → less direct competition for debt funding.

- Liquefaction projects are skewed towards emerging market locations (except: Snoehvit and Australia's projects) → higher political risk usually requires strong ECA (not just for PRI but also for actual lending capacity). Even Qatargas II turned to ECAs in order to get debt capacity.

Sourcing the Capital (contd.)

- U.S. (and Mexico) regas facilities should require less political risk cover than the average LNG export project → more likely to attract simple commercial bank debt without ECA/MLA cover.
- With exception of Mexican Altamira project, other regas projects involve US$ sales, avoiding currency transfer and convertibility risks.
- Shipping financing does not compete with either liquefaction or regas in the debt markets. Asset-based lending among specialized institutions.

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Conclusion

- We are in the midst of the evolution of LNG from minor niche, point-to-point energy trade, to a globalized business.
- Suppliers have multiple liquefaction plants with considerable optionality:
  - Within Atlantic Basin
  - Within Pacific Basin
  - And even, from Qatar and Oman, between Atlantic and Pacific Basins.
- The evolving commercial realities and flexibilities are driving new flexibilities in lender risk profiles.

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