FINANCING NORTH AMERICAN LNG PROJECTS

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King & Spalding LLP
Change and the Challenge for Financiers of New LNG Infrastructure
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1. Potential demand for ECA–backed finance
2. Evolution of the LNG Industry
3. Sources of finance for LNG infrastructure
4. Bankability of LNG offtake commitments
   – Key risk factors
   – Possible risk mitigation strategies
5. Trends in LNG infrastructure finance
Potential demand for ECA-backed financing

- Political risk exposure across the LNG value chain
  - More exposed than other cross-border projects?
  - No stranger to political risk
- Commercial bank lending limits
- Competitive cost of ECA financing
- Ability to cover commercial risk
<table>
<thead>
<tr>
<th>Location of Planned or Proposed Export Projects (greenfield and expansion)</th>
<th>Level of political risk (Source: Euromoney)</th>
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<td>• Angola</td>
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<td>• Australia</td>
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<td>• Bolivia</td>
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<td>• Brunei</td>
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<td>• Chile</td>
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<td>• East Timor</td>
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<td>• Egypt</td>
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<td>• Equatorial Guinea</td>
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<td>• Norway</td>
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<td>• Oman</td>
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<td>• Papua New Guinea</td>
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<td>• Russia</td>
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<td>• Trinidad and Tobago</td>
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<td>• UAE</td>
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<td>• US</td>
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<td>• Venezuela</td>
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<td>• Yemen</td>
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<tr>
<td>Location of Planned or Proposed Import Projects (greenfield and expansion)</td>
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<td>• Bahamas</td>
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<td>• Brazil</td>
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Instances of political risk in the LNG industry

• **Libya**: US trade embargo on Libya (1982) forced the withdrawal of Exxon from the Marsa el-Brega LNG facility.

• **Italy**: environmental opposition prevented ENEL from obtaining approvals to construct a receiving terminal at Montalto di Castro on the west coast of Italy to receive LNG under its sales agreement with Nigeria LNG.

• **India**: political events contributed significantly to the demise of the Dabhol power and Metropolis gas projects in India. It is unclear whether the LNG sales contracts for the project (Oman LNG and Adgas) have yet been terminated.

• **Indonesia**: Aceh separatist activity forced ExxonMobil to cease operations at the Arun LNG facility in March 2001. Limited operations resumed in July 2001.

• **Indonesia**: Some attribute China’s choice of the Australian NWS LNG project to concerns over security at Tangguh.

• **East Timor**: after its cessation from Indonesia (2002), East Timor rejected the Timor Gap Treaty causing delay to the Bayu-Undan and Greater Sunrise LNG projects.
In what sense is the LNG industry evolving?

• Traditional structure of the LNG value chain
• Traditional model under pressure since mid-90s:
  – Security and stability of oil supplies
  – Deregulation of electricity and gas markets
  – Depleting pipeline gas supplies/ increasing production costs
  – Substantial reduction in unit cost of LNG
  – Environmental pressures
• Pressures re-shaping LNG value chain
Changing Requirements for Finance in the LNG Chain

• What effect is the industry’s evolution having on the demand for finance?

• Where will the focus of financing activity be?

• What sources of finance are likely to fund investment activity?
Distribution of Capital Costs

Links

Upstream
- Field development
- Gas extraction
- NGL extraction
- Field-facility transportation

Midstream
- Pre-treatment
- Condensate removal
- Liquefaction
- Storage facilities
- Port/berths
- Loading facilities

Shipping
- LNG carriers

Downstream
- Receiving facilities
- Port/berths
- Storage facilities
- Regasification
- Grid/customer connections

Approximate Allocation of Capital Expenditure

- 28% of capex
- 36% of capex
- 26% of capex
- 10% of capex
Sources of Finance for the LNG Supply Chain

Links

Upstream
- Field development
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Sources of Finance

- Sponsor equity
- Corporate borrowing
- Commercial bank lending
  - Borrowing base
  - Co-financing
- Multilateral agencies
- Islamic financing

- Sponsor equity
- Buyer equity
- Corporate borrowing
- Export credit agencies
- Multilateral agencies
- Commercial banks
- Capital markets
- Local banks
- Islamic financing
- EIB

- Sponsor equity
- Buyer equity
- Shipowner equity
- Leveraged leasing market
- Commercial banks
- Islamic financing
- Export credit agencies

- Sponsor equity
- Seller equity
- Offtaker equity
- Private equity
- Commercial banks
- Local banks
- EIB
- Monoline insurers
- Export credit agencies
- Multilateral agencies

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Bankability of LNG offtake commitments

- Evolution and financing fundamentals
- Essential requirement for any limited recourse liquefaction project financing:
  - take-or-pay commitment from creditworthy buyer(s) covering operating expenses and debt service
  - tolling commitment from creditworthy gas supplier
- Key offtake risk factors
- Possible risk mitigation strategies
Counterparty Risk

- Established LNG buyer (Tokyo Gas), new participant (CNOOC) or SPV (Dabhol)?
- Financial strength a major concern
- Nature and strength of shareholders
- Position in downstream gas market
- Access to key LNG infrastructure
Potential Risk Mitigants - Counterparty Risk

- Long term credit support
  - Parent company/shareholder guarantees
  - State support for NOC offtaker
  - Key shareholder retention undertakings
  - Credit enhancement from creditworthy (or credit enhanced) offtakers

- Short term liquidity protection
  - Global payment security arrangement
  - LC covering “cargoes on the water”

- Performance risk mitigation
  - “grandfathering” privatisation/liberalisation risk
  - Contingent shipping and regas capacity support
  - Support for terminal operations
Master Payment Security Arrangements

Gas consumers

- Power
- LDC
- Petrochem

Master Payment Trust Account

$1

- Regasification costs
- Terminal financing cash waterfall structure

$2

- Transportation costs (if FOB sale)
- Vessel financing/charterparty cash waterfall

$3

- LNG Costs
- LNG export project financing structure

$4

- Global reserve/escrow account (6 or 12 months)

$5

- Skid

LNG Buyer

- Currency conversion risk
- Supplement if necessary

Shareholders

Third Party Payment Instructions

- Assignment of take-or-pay rights/receivables

If related to LNG Buyer or sponsor, an undertaking from sponsor to cause payment into account

Key Documents

- Master Intercreditor Agreement
- Project Co-ordination Agreement

Opex

Financing Fees & Expenses

- Principal

- Interest

- Debt Service Accruals Account

- Debt Service Reserve Account

- Other including dividends
Completion risks

- Considerable completion risks in LNG chain
- Upstream completion risks
  - Multiple fields/phased developments
- Midstream completion risks
  - Technology/scale
  - Practical constraints
- Downstream completion risks
  - Transportation, terminal and trunkline
Potential Risk Mitigants - Completion Risk

- Practical risk mitigation
  - Existing infrastructure (Trinidad)
  - Existing revenues (NLNG Plus)
- Financial risk mitigation
  - Completion guarantees/DSU
  - Cost overrun commitments and/or standby funding
  - Liquidated damages/performance bonds
Upstream Risks

• Traditional approach to reserve risk
• Gas reserves: associated / non-associated gas
• Regulatory or contractual framework for development
• Field development plans, costs and decision-making
• Identity of operator / contractor group
• Financial strength of contractor group
• Diversion/processing risk and shortfall allocations
• Upstream political risks
Potential Risk Mitigants – Reserve Risk

• Host government support/undertakings
• Meaningful upstream monitoring/audit rights
• Detailed project co-ordination arrangements
• Conditions precedent/disbursement milestones
• Upstream step-in rights for LNG supplier?
Potential Risk Mitigants – Reserve Risk

• Possible sponsor support:
  – Information covenants (work programmes, budgets)
  – Undertakings as to development obligations (and approval of subsequent developments)
  – Remain as operator
  – Not vote to remove operator
  – Retain interest in gas producing assets
  – Application of insurance proceeds
Downstream Market Risk

• Traditional allocation of volume risk
• Trend towards greater volume flexibility
  – Contract duration (MLNG/Tokyo Gas)
  – Level of take-or-pay commitment
  – Downward quantity tolerance (OLNG/Kogas)
  – Optional cargoes
• Evaluating target markets:
  – Different characteristics of target markets
  – Volumes to different target markets (ME)
Potential Risk Mitigants - Downstream Market

• Contractual mitigants
  – Take-or-pay volume commitment
  – Tolling arrangement: removes volume risk
  – Shipping on FOB terms
  – Destination Flexibility

• Liquidity support
  – Flexible repayment structures and reserves
  – Feedgas payments subordinated to debt service
  – Security over additional asset pool (NLNG Plus)

• Possible additional sponsor support
  – Obtain/share regasification capacity
  – Performance undertakings as terminal operator
Revenue Risk

• Predictability necessary for base financing case

• Traditional mechanisms:
  – Pricing linked to oil index (e.g., JCC)
  – S-curve to smooth out high/low oil prices
  – “Sit-down” provisions in Asian trades
  – Floor/ceiling price (Ras Laffan)

• LNG has lost “premium fuel” status: must compete
Revenue Risk (continued)

• Current pricing trends
  – Less/no oil indexation
  – Price “re-opener” provisions
  – Gas-on-gas pricing (HH)
  – Search for appropriate pricing reference points

• NWS Australia LNG/CNOOC: 30% index-linked to oil combined with oil price cap (no floor price)

• Tangguh / SK Corp/Posco: oil linkage below 30%

• Tangguh / CNOOC: only 20% oil indexation combined with oil price cap (no floor price)
Potential Risk Mitigants - Revenue Risk

• Delivered cash cost competitiveness
• Contingent price support (Ras Laffan)
• Availability of financial risk products
• Link feedstock gas price to LNG price
• Tolling arrangements: removes margin risk
Trends in LNG Infrastructure Finance

• Greater risk/reward potential for developers

• Financing challenge facing project developers

• Developer response to risk migration: Value Chain Integration
  – Supply-side integration (QP/EM)
  – Buy-side integration (UF/ENI)
Value Chain Integration – Ownership Flows

Supply Side

- QP/EM gas assets
- BG/Petronas gas assets

- Liquefaction
  - Qatar (Ras Laffan/Qatargas)
    - South Hook LNG (UK) QP/EM
    - Rovigo LNG (Italy) QP/EM
  - Egypt (ELNG)
    - Brindisi LNG (Italy) BG/Enel
    - Dragon LNG (UK) BG/Petronas

Buy Side

- Power assets
  - Power assets (Edison)
  - Power assets (Enel)
- Receiving terminal
  - Gas assets
  - Segas (Egypt)
    - UF/ENI
  - Oman LNG
    - UF
  - UF/ENI
Trends in LNG Infrastructure Finance

- Competition for limited recourse debt financing

The race is on....
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Key Areas of Expertise

• In-depth Industry Experience Worldwide:
  – Export Terminals and Upstream Development
  – Import Terminals
  – LNG and Gas Sales Agreements
  – Shipping Contracts and Maritime Issues
  – Construction and Other Major Project Contracts

• Project Financing Experience

• Experience in Representing ECAs on Project Finance

• US and English Law Capability

• EU and US Regulatory Expertise
Thank You