State of Alaska Special Session

LNG Business Development Commercial Context

The State of Alaska
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Claudio Steuer, Director

- LNG project strategy, business development, commercial negotiations:
  - **Nigeria LNG** (T1-6 Liquefaction)
  - **Angola LNG** (Liquefaction)
  - **Congo FLNG** (Liquefaction)

- LNG project strategy, competitive intelligence, development, commercial negotiations, advisory:
  - **Shell, ENI, NewAge, Saipem, Centrica**
  - **Shell Petroleum Development Company of Nigeria**
  - **Bontang LNG**
  - **Brass LNG**
  - **Darwin LNG**
  - **Egypt LNG**
  - **Kashagan Gas**
  - **North West Shelf LNG**
  - **Venezuela LNG**

- Gas and LNG contract negotiations, dispute resolution, and arbitration:
  - Negotiated and concluded 20+ MoUs and 10 GSA/LNG SPAs.
  - Successful support / negotiation of GSA/SPAs, Price Reviews, Contractual Disputes and Arbitration with a total value over $25 bn.

Phillip Fletcher, Partner

- LNG project finance transactions:
  - **Lake Charles LNG** (Liquefaction)
  - **Yemen LNG** (Liquefaction)
  - **Nigeria LNG** (Liquefaction)
  - **Bonny Gas Transport** (LNG shipping)
  - **Sines LNG** (Regasification)

- Other multi-sourced natural resources project finance transactions:
  - **Sadara Integrated Chemicals Project** (US$12.5 billion)
  - **Petrorabigh Refining and Petrochemicals Expansion Project** (US$5.5 billion)
  - **Oyu Tolgoi Copper and Nickel Mine** (US$4 billion)

Manzer Ijaz, Partner

- On-shore LNG export transactions:
  - **Tanzania LNG**
  - **Leviathan FLNG**
  - **Damietta LNG**
  - **Tamar FLNG**
  - **Libya LNG**
  - **Nigeria FLNG**
  - **PNG FLNG**
  - **Algeria LNG**

- Cross-border pipeline transactions:
  - **East-African Pipeline Project**
  - **Chad-Cameroon Pipeline Project**
  - **Nabucco Cross-Border Pipeline**
  - **Early Oil Phase/BTC Pipeline projects**
  - **Kashagan Caspian Transportation System**
  - **Tengiz Field/CPC Pipeline Project**
  - **Metgas LNG Regas and Cross-Border Pipeline Project**

Presentation Outline

- What are the current challenges with AKLNG process?
- What is Alaska doing to progress AKLNG?
- What else can be done?

Current Challenges with AKLNG process

As noted in the Governor's report *"Summary Report on the Review of the Alaska LNG Project Process"* as of 24 September 2015

Causes:

•Producers have their own independent perspectives on AKLNG including assessment against other LNG and capital investment alternatives

•Differing Alaska / Producers return on investment requirements

•PBU / PTU differences in ownership, investment requirements, and field maturity

•Project structure increases complexity and may affect implementation of project financing

Current Challenges with AKLNG process

As noted in the Governor's report *"Summary Report on the Review of the Alaska LNG Project Process"* as of 24 September 2015

<u>Consequences:</u>

•No alignment on when AKLNG should begin Front End Engineering and Design or take Final Investment Decision

•Producers seek greater fiscal certainty than Alaska is prepared to provide

•AKLNG decision making dynamics lead to "least common denominator veto"

What is Alaska doing to accelerate AKLNG ?

- Alaska is:
  - actively negotiating to finalize commercial agreements (including fiscal stability terms)
  - funding pro-rata share of project development costs
  - evaluating royalty-in-kind (RIK) election

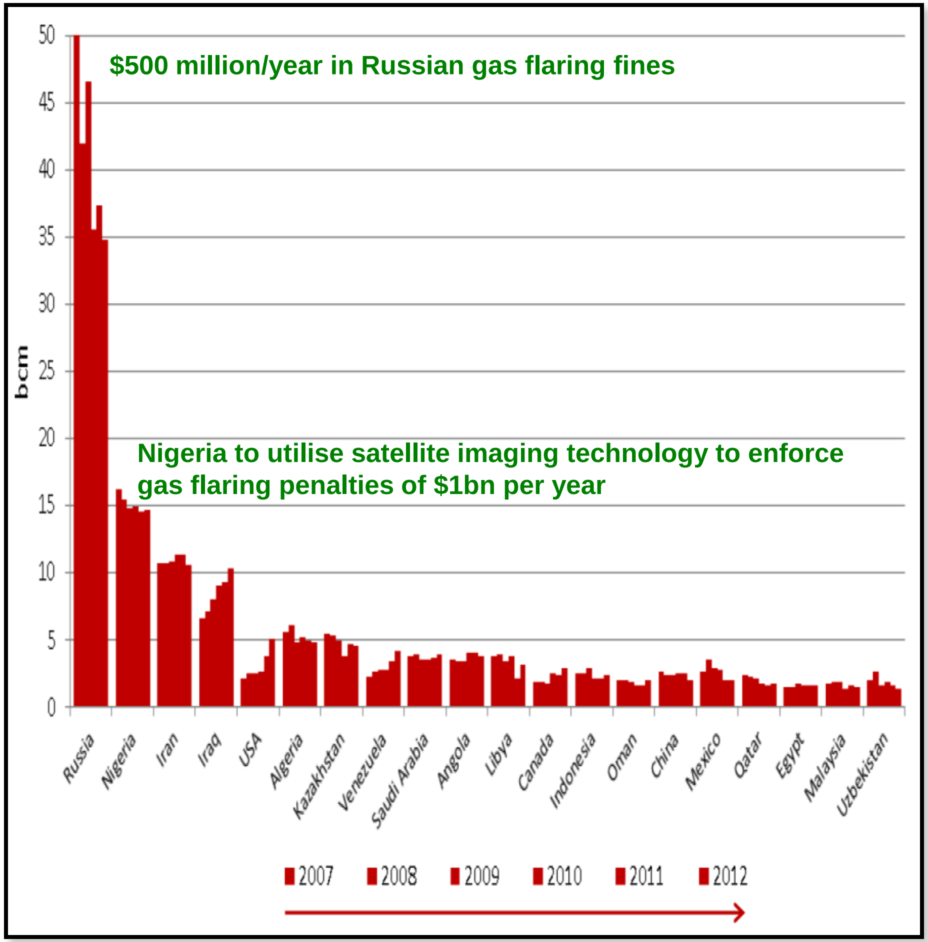
What else can be done to accelerate AKLNG ?

- Can the gas reserve tax be effective ?
- Can milestones for the achievement of Front End Engineering and Design and Final Investment Decision with appropriate remedies (e.g. withdrawal requirements) be effective ?
  - Should the continuing members of AKLNG have the ability to proceed independently in case one or more producers elect not to participate in AKLNG ?

Have other countries used penalties to unlock value ?

- Gas flaring reduction projects and penalties have been used in a number of countries (Russia, Nigeria, Angola, etc.) to implement the necessary infrastructure and unlock value from natural gas

Gas Flaring



- ~460 bcf of natural gas flared yearly ~$56bn
- ~300 mtpa of CO2 emitted
- ~750bn kWh of power generation
- 10 countries, 10 oil majors and 7 institutions support WB/GGFR target

Nigeria Gas Flaring Incentives / Disincentives including:

- Associated Gas Re-Injection, 1979
- Illegal to Flare Gas, 1984
- Associated Gas Fiscal Arrangement, 1992
- Gas Flaring Penalty, $3.50 per 1,000 scf (pending bill raises to $5.00 per 1,000 scf)

In 10 years Nigeria converted 33 Bcf/yr of flared gas into $4.3 Billion gas exports

Source: World Bank GGFR, OPEC,

Nigeria Success Story

- Oil revenues drove initial energy strategy
- Gas flaring while domestic market short of gas for power and industries
- New oil projects needed to have a “home” for the AG
- Threat of gas flaring penalty assisted LNG FID in ’95
- 30 years to find the “right mix” of incentives / disincentives to FID 1st train
- 33 Bcf/yr of previously flared gas created $4.3 billion/year in export revenue
- After 15 years, 3000 cargoes generated $85 billion in exports and $15 billion in taxes and dividends to Nigeria

Can Milestones/Withdrawal Requirements be Effective ?

- Production Sharing Contracts across the globe customarily include work program milestones and relinquishment for failure to meet milestones

Nigeria Example:

- List of essential milestones to enable subsequent FIDs provided all stakeholders with sufficient motivation and commitment to deliver additional growth

What if AKLNG does not work for a producer ?

- It is prudent for any project developer (including Alaska) to consider alternative strategies to address the possibility that one or more participants may not wish to progress with the project
  - Large projects are inherently challenging and frequently encounter change including in the identity of the participants

What if AKLNG does not work for a producer ?

- If a producer is not interested in progressing with AKLNG, it remains critical to ensure that gas supply certainty continues through the withdrawing party committing to supply its share of gas to an LNG project

What if AKLNG does not work for a producer ?

- As with any developer, the remaining AKLNG participants may face the need to introduce different parties into the project:

  – other producers, midstream asset developers and investors including private equity, infrastructure and/or LNG or gas off takers incentivized to develop and operate projects on the basis of differing investment objectives and hurdle rates than those required by a producer

  – The remaining participants in AKLNG may as a consequence, also need to explore modifications to the existing AKLNG business model to address the needs of potential participants

What if AKLNG does not work for a producer ?

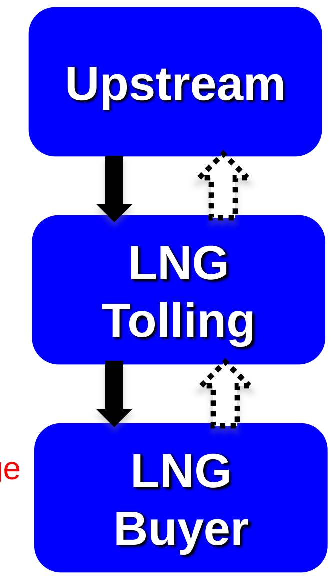
- The remaining AKLNG members, as an example, could seek to adapt the AKLNG “integrated” model to the LNG export projects in the lower 48 states by ensuring:
  - dedicated and secure gas availability and supply
  - midstream developers/investors incentivized by appropriate market rates of return; and
  - targeted, interested buyers of LNG or gas in key demand markets

Lower 48 Business Model

Deep gas supply market priced on Nymex Henry Hub with ample transportation capacity

Independent utility infrastructure investor with an guaranteed ROI structure.

Buyer takes upstream and LNG volume risk in exchange for a “cost plus basis” based on Nymex Henry Hub.



Alaska “Lower 48” Model

PB / PT large gas reserves with gas transmission pipeline. Ability to price as HH ?

AKLNG partners with/without other infrastructure investor

Buyer takes upstream and LNG market volume risk in exchange for a “cost plus basis”.

Conclusion

- AKLNG structure and process provide an attractive way to unlock gas resources
- Lack of alignment as to the pace AKLNG should proceed remains a challenge
- A gas reserves tax is one element that might enhance the incentives to proceed with AKLNG
- Ensuring gas supply dedication at this stage from each producer will provide assurance that an LNG project can proceed even if one or more producers withdraw.

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