



Understanding LNG: The Global and Alaska Context



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Agenda

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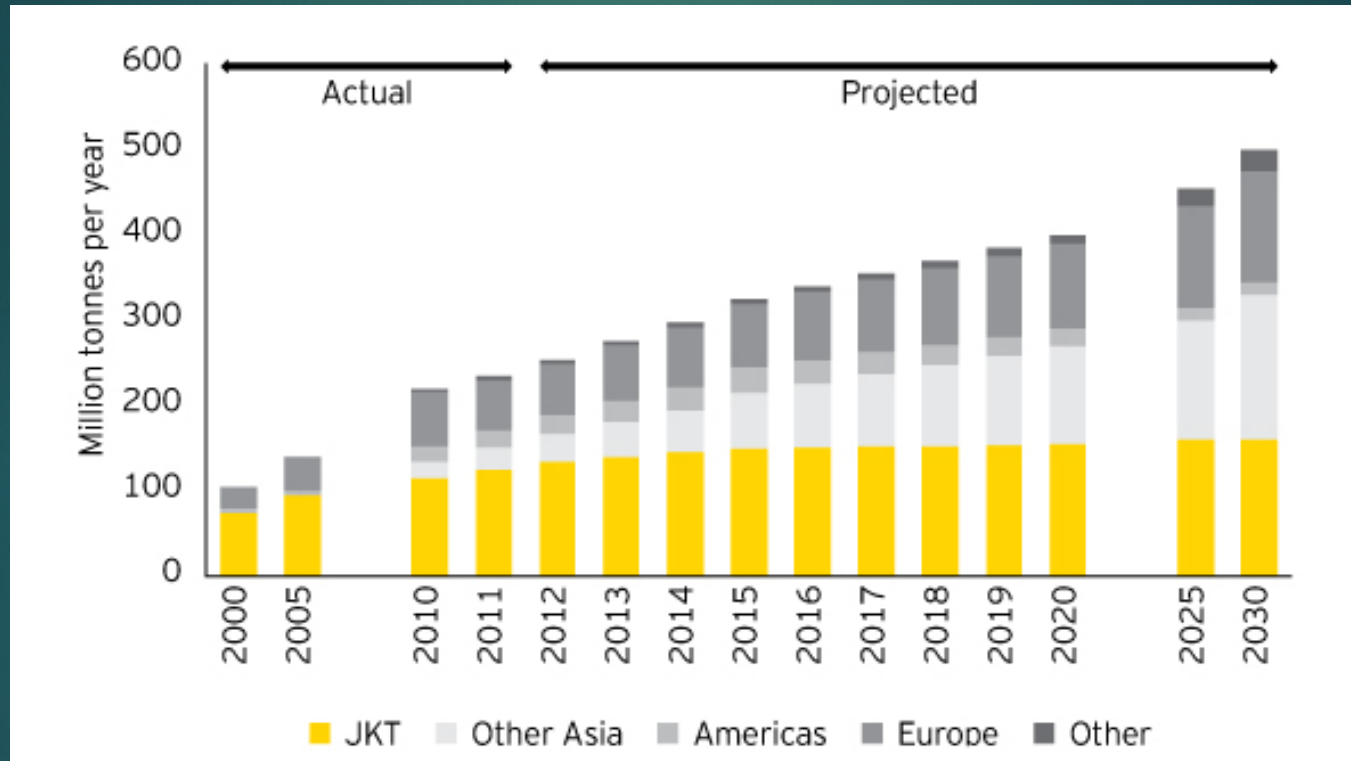
July 15, 2013

- ▶ Current global LNG context
 - ▶ Supply
 - ▶ Demand
 - ▶ Price
 - ▶ Competitive projects
- ▶ Alaska context
 - ▶ What's in it for Alaska
 - ▶ Managing expectations
 - ▶ Fixing fiscal terms



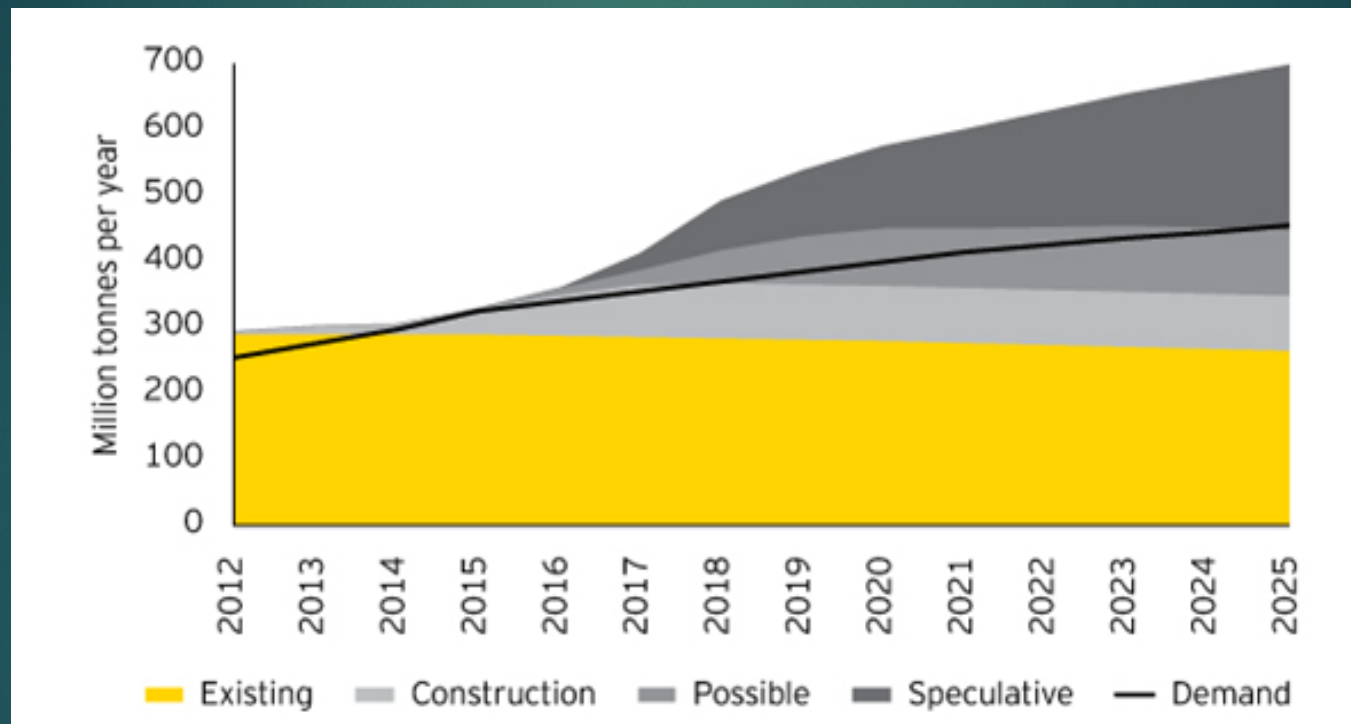
Global LNG context: Increasing Demand

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Source: Ernst & Young assessments of LNG demand growth
<http://www.ey.com/GL/en/Industries/Oil---Gas/Global-LNG--New-pricing-ahead---LNG-demand-growth>

Global LNG context: But, increasing supply



Source: EY assessments of LNG supply growth
<http://www.ey.com/GL/en/Industries/Oil---Gas/Global-LNG--New-pricing-ahead---LNG-supply>

Global LNG context: Price

- ▶ Atlantic and Pacific Basins have different price structures
- ▶ Significantly higher prices currently in Pacific Rim
- ▶ But serious questions about whether that persists long term; market is evolving

Global LNG context: Highly competitive market

Alaska's competitors

- Qatar, with more than 10 bcf a day capacity
- Australia, adding \$200 billion in export capacity; expected to overtake Qatar by end of decade
- Angola LNG to come online 2013
- Papua New Guinea scheduled to start up 2014
- The window: Australia, Angola, Papua New Guinea coming into market 2010s; Alaska looking to 2020s

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More competition

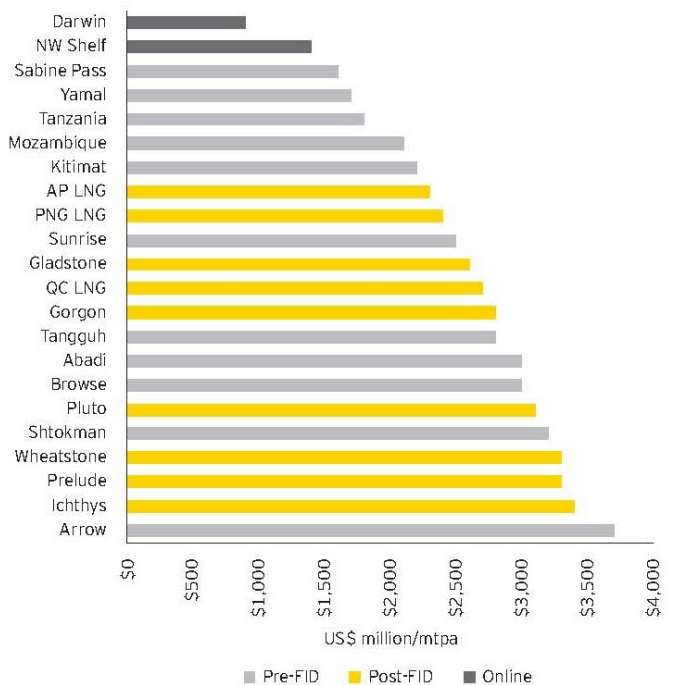
- At least three LNG terminals proposed in Russia
- All looking to sell gas into Asian markets
- Mozambique, Tanzania with 120 tcf of discoveries
- Israel, Eastern Mediterranean could be on the list
- British Columbia projects lining up to win approval:
Chevron, Apache, Shell, Malaysia's Petronas, BG Group, Korea Gas, PetroChina, Mitsubishi

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... **plus** US Gulf of Mexico projects, **plus** overland Russian & other pipeline gas, China shale **and** coal

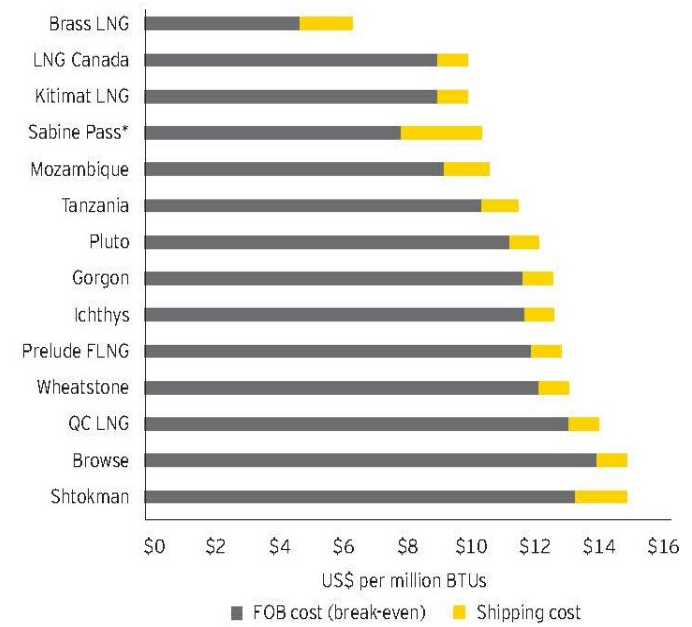
Global LNG context: Cost competition

Figure 3. Total capital costs to supply: selected LNG projects
(total capex to first LNG supply)



Source: Credit Suisse Global Equity Research, Global LNG Sector Update, 7 June 2012

Figure 6. Nominal new-build LNG costs: selected LNG projects
(assumes delivery to Tokyo Bay)



*Assumes US\$4 Henry Hub spot gas

Source: Deutsche Bank Markets Research, Global LNG, 17 September 2012

Source: Ernst & Young, Global LNG: Will new demand and new supply mean new pricing? (2013)

Global LNG context: Alaska's market opening

- ▶ Alaska's opportunity is in the 2020's openings
 - ▶ Includes contract reopeners
- ▶ Overall keys
 - ▶ Cost competitive
 - ▶ Ability to accomplish (risk)
 - ▶ Competitive return

Alaska context: What's in it for Alaska

- ▶ Improved oil economics (more investment, more production, extended field life)
- ▶ Increased and more secure instate gas supply
- ▶ Construction jobs
- ▶ Gas related state revenues

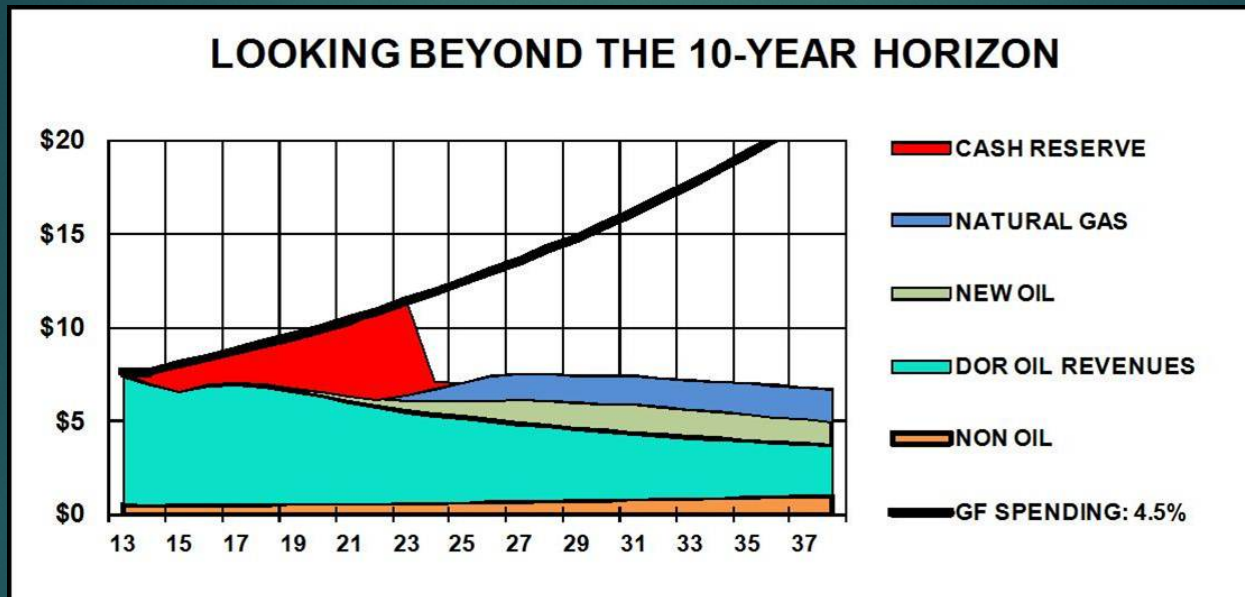
But ...

- ▶ ... important, but unquantified
- ▶ ... at world-market driven price levels
- ▶ ... temporary blip
- ▶ ... limited

Managing expectations

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“Natural gas is assumed to be monetized through a pipeline to tidewater, exporting 3.5 bcf per day starting in 2023. Because of the high cost of getting the gas to market, the netback value on the North Slope – which is the basis for taxes and royalties – is small. ... The net present value of that gas production [to the state] over the 50-year period is estimated at \$11.7 billion.”

Alaska context: Fixing state fiscal terms

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- ▶ **Critical** to project economics, but the challenge is the path to accomplishing it
- ▶ Some discussion about addressing gas taxes this coming session
- ▶ **But** there are concerns
 - ▶ As we have seen on the oil side, not a permanent (or even long-term) fix
 - ▶ The public is not well prepared for the issue
 - ▶ Potential for tax issue exhaustion and blow back in advance of the SB 21 referendum
- ▶ Stranded Gas Act remains on the books and provides opportunity for crafting a long-term solution

Summary

- ▶ Alaska's LNG opportunity is real, but subject to significant international competition and risk
- ▶ There are material benefits to Alaska, but we need to be careful to not overstate or overly rely on them
- ▶ The project requires durable fiscal terms, but need to be thoughtful in approaching given SB 21 referendum and lack of durability of tax statutes