

ALASKA LNG (AK LNG): PROJECT OVERVIEW AND UPDATE

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where are we now › the agenda over the next 12-18 months

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Project Stage	Pre-FEED		FEED			Construction					Online		
Project Milestones	Move to FEED		FID								Debottleneck / expansion		
Marketing	MOU/HOA SOA Plan		HOA/SPAs SOA Plan			SPAs for any unsold LNG							
Financing	Initial talks		Defining terms / signing loans			Possible additional financing					Refinance		
Project Structure & Ownership	Define initial structure		New partners / redefine ownership			New partners / redefine ownership					New partners possible		
Investment (Project)	\$400–\$500 mm		\$1,500–\$2,000 mm (Equity)			\$45–65 billion (Debt and equity)					O&M Met from cash flow		
Investment (SOA)	\$50–\$125 mm		\$200–\$500 mm (Equity)			\$6–\$15 billion (Debt and equity)					O&M Met from cash flow		

THE AGENDA FOR THE NEXT 12-18 MONTHS

- Technical** Driving down costs, route, location, etc.
- Commercial** Domestic gas, off-take and balancing, LNG disposition, financing
- Organizational** Joint-venture agreements, lease modifications
- Fiscal** Form of fiscal stabilization, property tax
- Regulatory** Progress towards export approval and FERC permitting process

SELLING LNG: PATTERNS FROM RECENT PROJECTS

Share to pre-sell	Over 70% in long-term (20-years) contracts before or soon after taking FID
Counter-parties	Average 2.9 buyers per project (range from 1 to 6)
Price exposure	US projects linked to Henry Hub; others mostly oil-linked
Contract size	1 million tons per annum (mmtpa) to 4+ mmtpa (132–530 mmcf/d)
Transfer point	No trend between FOB/DES; increasing tendency to destination flexibility
Equity partners	About a third (30%) of the buyers had equity in the project

Focus on performance over time

LNG contracts last a long time; volatility is inevitable, and the goal is a plan that suits the state's interests over time, not a plan that delivers the best result at every point over a 20-year timeframe.

Focus on risk not the “highest” price

The highest price today may not be the highest price tomorrow; and the highest price could mean being priced out of a market and having LNG unsold; the state should focus on understanding its risk tolerance and developing a portfolio mix that serves its exposure appetite.

Don't outsource your risk profile

Selling LNG through its partners, the state would also be assuming their risk tolerance—even though the state might have a different risk appetite. Judge offers on their ability to satisfy the state's risk profile.

Build in-house expertise

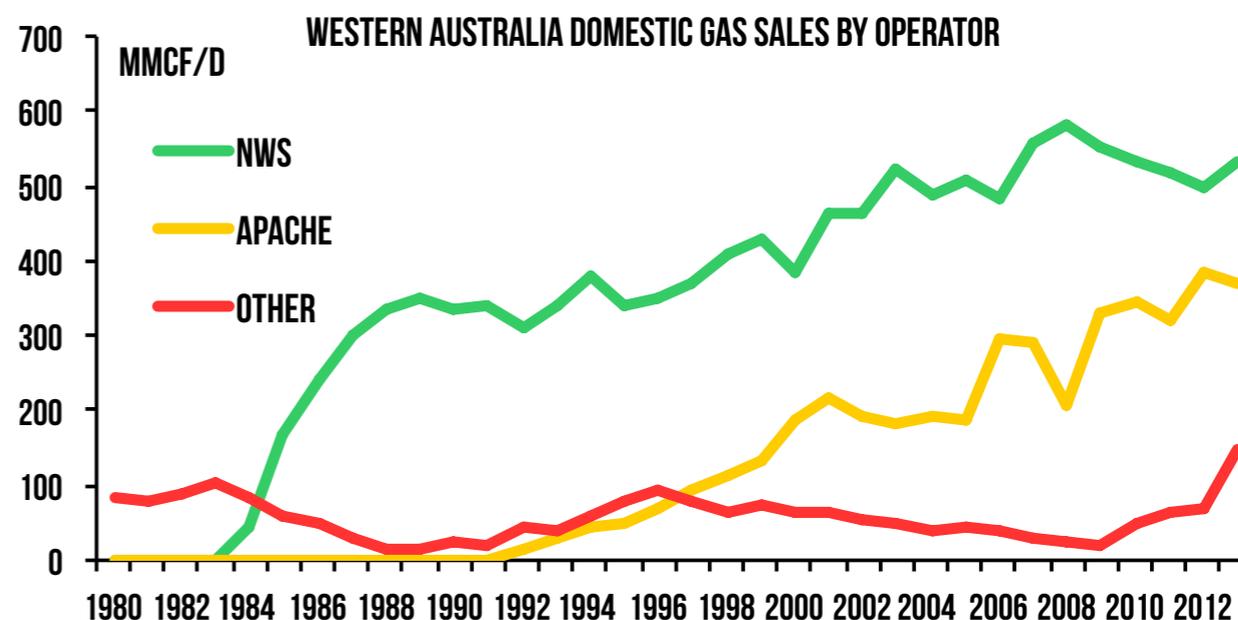
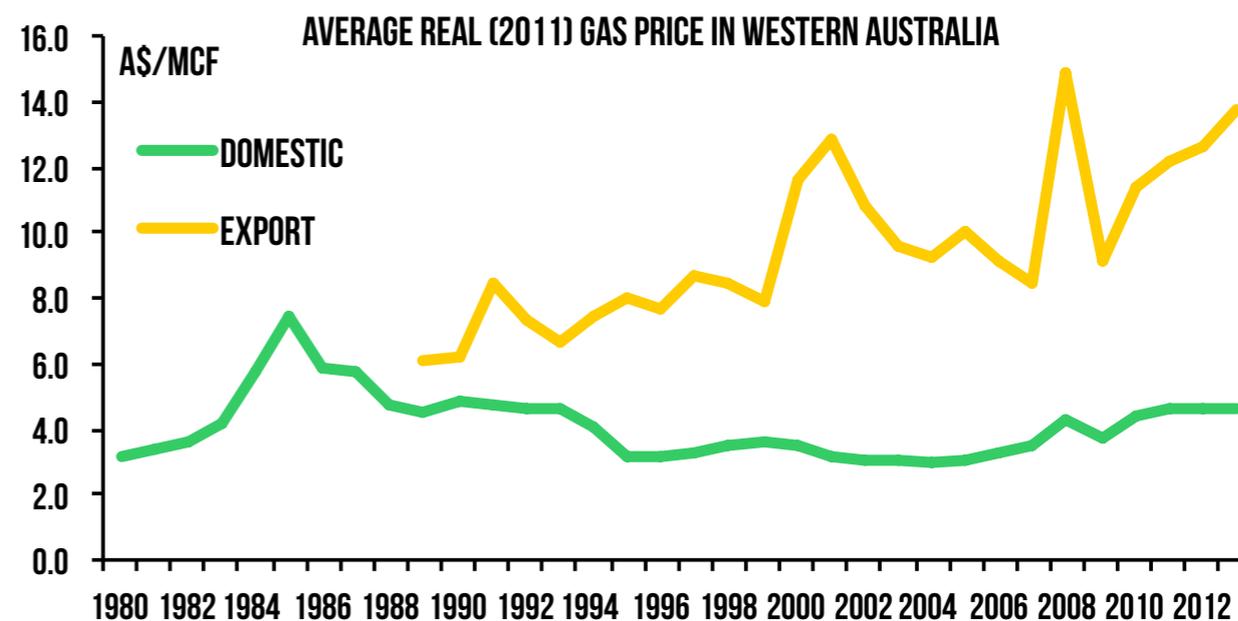
The LNG market is highly fragmented, and expertise makes a difference; an autopilot approach will not serve the state's interests over the long term.

WHAT LEVERS DOES THE STATE HAVE?

- Share to pre-sell** Does Alaska want to pre-sell 100% of its output?
- Counter-parties** How many counter-parties? Few are simpler but concentrate risk
- Price exposure** Oil vs. Henry Hub indexation; S-curves and other protections
- Volume risk** How important are steady sales to the state?
- Transfer point** Will the state be involved in shipping?
- Equity partners** Will the judge select buyers based on their interest to invest in AK LNG?
- Intangibles** What other interests does the state have? For example, links to foreign sovereigns

LNG and domestic gas in Western Australia

1. No set link between export and domestic prices.
2. Companies will still want to produce gas for local market even though exports are available.
3. WA's reservation policy created an overhang in 1980s that lowered prices and stymied investment.
4. Reservation policy leading LNG projects to pay attention to local market—but markets still matter.
5. Policy and advance planning is no substitute for close oversight and diligent regulation.



Sources: (1) Government of Western Australia, Department of Mines and Petroleum, Quantity and Value 2013; Australian Bureau of Statistics, Consumer Price Index; (2) Australian Petroleum Production & Exploration Association (APPEA), Annual production statistics 2013

HOW WILL LNG IMPACT DOMESTIC GAS IN ALASKA?

Alaska's own experience fits Western Australia case study

- . Domestic prices have sometimes correlated with exports, and other times they have not.
- . Prices in the Cook Inlet in recent years have been driven by local market forces, not export prices.
- . Entry of smaller players shows that you can attract players who are chiefly focused on the local market.

Path forward for Alaska

- . Tempting to make sure that local demand is met before LNG exports; but there is always a risk that in doing so, the local market could be flooded to the point that new entrants could be dissuaded from exploring for and producing gas.
- . Alaska should be thinking about a broad policy toolkit to encourage functioning markets rather than focus on the narrow question of how AK LNG will affect local prices.

VARIOUS FINANCING OPTIONS OPEN TO LNG PROJECTS

Balance Sheet Finance

- Project sponsors provide funds
- Funds can combine debt and cash flow
- Guaranteed by project sponsor (recourse)
- Rate depends on sponsor's balance sheet
- Easier if all parties have strong balance sheets

Project Finance

- Third parties lend to project directly, not to sponsors
- Sponsors put up some equity (e.g. 30%)
- Guaranteed by projected revenues (non-recourse)
- Rate depends on project risk
- Easier to accommodate riskier sponsors

Key Questions for State of Alaska

- What mix of debt and equity?
- Will debt be specific to LNG project, or broader state balance sheet liability?
- Will equity come from recurrent revenues, or other sources?
- What role does the permanent fund play and how does this affect restricted / unrestricted revenue?

PROJECT FINANCE WELL ESTABLISHED IN LNG

IHS estimates that LNG projects raised over **\$97 billion** in third-party financing since 2000

Financing from project sponsors, export credit agencies, multilateral banks and commercial banks

Commercial loans can also secure sovereign guarantees as insurance

The Japan Bank of International Cooperation (**JBIC**) is the largest single provider of funds

Examples

Australia Pacific LNG	\$5.8 billion	US EXIM, China EXIM, banks
Ichthys	\$20 billion	JBIC, Korea and Australia EXIM, banks, sponsors (\$4 bn)
Papua New Guinea	\$14 billion	Six ECAs and 17 banks, ExxonMobil
Peru	\$2.25 billion	IADB, US EXIM, Korea EXIM, IFC, others
Sakhalin-2	\$6.4 billion	JBIC, NEXI, banks
Tangguh	\$3.5 billion	JBIC, ADB, banks

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