

# Cost competitiveness

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Liquefied natural gas (LNG) markets are rapidly evolving, accelerated by a sustained period of oversupply. In a price-driven market, cost competitiveness is key. Asset operators and investors need to take steps across their portfolio to ensure full cost competitiveness. And in many cases improving cost competitiveness will involve navigating positions in joint ventures that require cooperation across the venture management and other partners.

Key visible trends are impressing the need to focus on cost competitiveness amid increasing price sensitivity and pressure on seller margins.

- Buyer consolidation is underway with over 40 MTPA \* 16 percent of global demand purchased through consortiums with a stated aim of increasing short term positions and lowering purchasing costs.
- Un-contracted production capacity is rising with 45 MMTPA of contracted capacity (almost 20 percent of current demand) expiring between 2015 and 2020.
- Spot and short term trades are increasing, having reached almost 30 percent of overall trades in 2015.
- Commercial terms are being reviewed, with major buyers in Japan, China and India seeking to renegotiate supply arrangements.
- Late-life, depreciated assets are following off long term contracts holding the ability to price purely at variable costs.

A starting point to understand exposures and opportunities is to benchmark performance on a landed cost basis and a variable operating cost basis. Looking at simple quartile performance levels relative to benchmarks can create a call to action. An obvious opportunity in improving cost competitiveness is improving operating costs. However there are also a number of steps that can be taken across an LNG

asset portfolio to ensure fuller cost competitiveness. These include:

- **Exploring alternative business model and demand strategy:** What alternative business models should be in place to service current demand and capture additional market share as well as create demand in new markets? There is an opportunity to explore alternative business models and value chain participation that could secure and spur further LNG Demand e.g. partnerships with other value chain and financial participants.
- **Optimizing supply across the customer portfolio:** How could the portfolio be optimized to ensure customers are served from lowest cost locations.
- **Reviewing commercial terms:** How to ensure feed gas and LNG contracts are negotiated to provide the best possible terms under current and expected market conditions.
- **Optimizing tax and fiscal regime terms across the portfolio value chain:** How to ensure the best tax and fiscal regime terms.

Potential opportunities provide opex savings, margin improvements and incremental utilization opportunities. Within assets there is considerable value to unlock in the following areas:

- reliability
- maintenance
- turnarounds
- operations
- logistics
- shipping
- procurement
- support.

Across assets, latent value exists, in the following areas that can add 3 to values of up to 5 percent of procurement spend and/or support function spend:

— **Procurement:** jointly procure common shares and indirect equipment with other ventures.

— **Warehousing:** create centrally-located global warehouses for critical spares.

— **Shared services:** establish global shared services for value adding activities.

**Finding hidden value entails challenging the business to think beyond agreed targets and KPIs; stretching existing views on the art of the possible**

Area	Key value opportunities	Value stack
<b>Shutdowns and turnarounds</b>	<ul style="list-style-type: none"> <li>— Tightening control over TAR preparation, scope challenge and freeze; reducing TAR durations and aligning frequency to leading practice.</li> <li>— Targeting TAR duration of 20–25 days and frequency of 8–10 years for major inspections.</li> </ul>	<b>Shutdowns and turnarounds (30%)</b>
<b>Reliability</b>	<ul style="list-style-type: none"> <li>— Optimizing Reliability Centered Maintenance for critical equipment; optimizing preventative vs. corrective maintenance and instituting robust lookback/RCA processes.</li> <li>— Delivering a PM/CM ratio of 80:20, and asset reliability of 97%–99%.</li> </ul>	
<b>Maintenance execution</b>	<ul style="list-style-type: none"> <li>— Improving maintenance planning to optimize risk-based work selection; improving time on tools through better work package scoping, streamlining permit processes and aligning KPIs to outcomes.</li> <li>— Achieving time on tools of 40%–60% and schedule break-in of 3%–6%.</li> </ul>	
<b>Materials management</b>	<ul style="list-style-type: none"> <li>— Aligning materials management strategies to plant design and operating needs; improving controls to reduce rework and non value-add activities; reselling unused stock and consolidating warehouses.</li> <li>— Delivering overall inventory reduction of 2–4%, and inventory turnover of up to 5 times.</li> </ul>	<b>Reliability and maintenance execution (23%)</b>
<b>Supply chain/ procurement</b>	<ul style="list-style-type: none"> <li>— Reducing on- and off-contract spend with top suppliers, rationalizing the supplier tail and rationalizing demand through robust category management.</li> <li>— Building on achieved supplier rate reduction by targeting 13–25% reduction in spend with top suppliers, 5–10% tail rationalization, and spend per procurement FTE of US\$18m–US\$36m.</li> </ul>	
<b>Logistics</b>	<ul style="list-style-type: none"> <li>— Reducing non-productive time by improving integrated planning and route scheduling; reducing unscheduled journeys and instituting demand-side controls.</li> <li>— Targeting non-productive time of 14% on marine vessels, seat utilization of 85% on aviation vessels.</li> </ul>	<b>Materials management, supply chain and logistics (21%)</b>
<b>Support functions</b>	<ul style="list-style-type: none"> <li>— Aligning staffing to business activity levels and challenging service levels; reducing complexity through standardization and automation; increasing use of shared services.</li> <li>— Delivering total FTE/HR and Finance FTE of ~ 100 and 50 respectively, IT costs/IT FTE of ~ US\$11k.</li> </ul>	
<b>Tax, treasury and other</b>	<ul style="list-style-type: none"> <li>— Challenging current interpretation of tax rules to minimize tax liabilities, deploying excess cash into diverse short/medium term portfolios, situating staff in lowest cost locations, aligning travel and training to business needs.</li> </ul>	<b>Support functions and other (17%)</b>
<b>Shipping</b>	<ul style="list-style-type: none"> <li>— Converting DES cargoes to FOB, releasing spare capacity through sale or charter; optimizing bunkering vs. boil-off use.</li> <li>— Achieving LNG vessel utilization of 80–85%, and dry dock frequency of 5 years.</li> </ul>	<b>Shipping (9%)</b>



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Mary Hemmingsen is a regular author on the LNG industry and speaker, moderator and chair at industry conferences around the world and brings over 25 years of experience as an energy business leader in asset management and related business development. This includes leadership in the development and delivery of policy, strategy, initiatives and projects for energy, power, utilities and related infrastructure businesses in a range of capacities in both the public and private sector and for major utilities and global energy and asset managers. She advises a number of largest LNG global players on their interests in development, contracting and portfolio management.

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