

2017

The Middle East
LNG Institute



LNG Whitepaper



How Best to Transition from LNG Exporter to Importer?



Contents

- 02 **MIDDLE EAST LNG: How Best to Transition from LNG Exporter to Importer?**
- 04 **Stream 1** What are the Top 3 Steps to Facilitate an LNG Import Ecosystem in the Middle East?
- 06 **Top Three Recommendations**
- 08 **Stream 2** What are the Top 3 Steps to Maximize the Value of Middle Eastern LNG Export?
- 10 **Top Three Recommendations**
- 12 **GIQ Survey Results:**
The Best Strategies for the Middle East to Transition from an LNG Exporter to an Importer?



MIDDLE EAST LNG

How Best to Transition from LNG Exporter to Importer?

The Middle East is entering largely uncharted territory as it explores comprehensive solutions to rebalancing one of the starkest juxtapositions in the global energy market.

The region holds more than 40% of global gas reserves and Qatar is the world's biggest LNG exporter, yet the volume of LNG imports required by the region is quickly rising as domestic demand outpaces pipeline supply. Collaboration in identifying cost-effective and easy-to-implement strategies to create both an integrated import ecosystem and maximise the revenues of a growing export market is a priority for the region's leadership, many of whom have long focused on their dominant role in global oil markets.

The Middle East could develop a gas hub where the commodity is freely traded with transparent prices by 2025, according to 29% of respondents to a GIQ Industry Survey. Another 37% said sometime after 2030 would be more realistic, while 13% believed 2020 possible – a higher percentage than many energy stakeholders expected. Alongside identifying collective data, price and regulatory parameters, the region must cost-effectively navigate market disruptions up to 2020. More than a third (36%) of survey respondents believed that the 50m tons of homeless LNG cargoes by 2020 – product without a predefined home – will be the biggest disruptive element in global LNG markets in the next three years.

In the last three years alone, LNG imports into the region grew by more than 380% against a backdrop of relatively stagnant activity in other major energy demand hubs. In the midst of such growth, transparency is key. Therein lies the value of S&P Global Platts' Middle East Marker (MEM), which was launched in January of this year. MEM is a daily assessment of the spot price of cargoes to reflect the growing importance of the Middle East as a destination, rather than exporter, of cargoes. The MEM covers cargoes delivered into Dubai, Egypt, Jordan, Kuwait and Pakistan, where collective LNG imports have soared from 5.9 billion cubic metres (bcm) of gas in 2014 to 28.6 bcm in 2016.

“The Middle East must master a delicate juggling act; meet rising regional demand and outpace increasingly strong competitors in the global export market.”

Egypt, Jordan, Poland and Pakistan became LNG importers for the first time in 2015. Pakistan signed a 15-year agreement to import up to 3.75m tons of LNG a year from Qatar in a \$16 billion deal last February, for example. Bahrain, Vietnam, Honduras, South Africa and the Philippines also report rising LNG demand, while Indonesia started imports into its Arun terminal in 2015 after the facilities had been used for production since 1977. Many sweet spots for new and established exporters looking to expand their market share are on offer, but competition is tough.

The US' first LNG export from the country's Sabine Pass on the Gulf of Mexico last February through the newly-widened Panama Canal marked a game changer that influences every aspect of the global LNG ecosystem. The US' share of global export capacity will jump to 14% by 2020 from base zero today, according to consultancy Energy Aspects, thus leveraging the country's access to buyers in the Pacific and Atlantic basins. Just under a quarter (24%) of the country's LNG exports were delivered to the Middle East and India in January of this year, which eats up potential market share for regional exporters looking to add to their client list. It also sends a very clear message from competitors across the Atlantic: watch out – empty, our ambitions are not.

Australia is also well positioned to become one of the world's biggest LNG exporters thanks to a \$200 billion investment into the country's LNG industry over the last decade and to its strategic position in Asia. According to 23% of survey respondents, Australian LNG exports reaching full capacity will be the most disruptive event in the global LNG market up to 2020, while 15% argued that the biggest impact will be felt by the growing influence of the US as an exporter. Either one has the potential to push Qatar from its number one spot by 2020.

Cooperation between countries in the region and between companies – both state and private – must immediately become a stronger theme to give clarity on key data points. The historical performance of existing infrastructure, the supply gaps per season, the rate of investments into different parts of the supply chain and the policies and legalities that underpin the growing market are all vital pieces of knowledge. LNG infrastructure is never cheap and a greater awareness of the best strategies for joint ventures and public private partnerships (PPPs) will also give regional and international investors a clear viewfinder into market dynamics and whet their appetite.

The evolution of the Middle East's LNG market cannot happen haphazardly – this will largely result in expensive mistakes. The status quo is being rewritten – new demand, new supply, new hubs – and an ability to flex to these dynamic conditions will create the winners of a market that is climbing to the top of the global energy hierarchy. ■

17%
The Middle East accounts for nearly a fifth of global gas production and 14% of its consumption.

10%
‘Lower for longer’ oil-indexed LNG prices will be the main disruptive factor for the global LNG market this year, according to 10% of survey respondents. Oil prices are more than 70% lower than in 2014.

80%
The Middle East accounts for a large share of global gas reserves, but 80% of those reserves are located in just two countries – Iran and Qatar.

120
Last year, the US revived a 120-year old maritime route to transport LNG to the Middle East – Kuwait and Dubai were first. It was last used to import US oil, before the region's own crude boom reduced traffic.

500,000
Swelling populations in the Middle East add to LNG import demands. Half a million more people are expected to flock this year to join the 12 million people already living in Cairo, one of the world's fastest growing cities.

125
Another 125m tons of LNG is likely to come to market in 2017, according to consultants Wood Mackenzie.

200
Australia has invested approximately \$200 billion into its LNG industry over the last decade.

X2
The Middle East's gas demand is expected to almost double by 2040, according to the IEA.

Global Crossroads

Fortunate geography gives the Middle East's import and export ambitions a competitive edge. At the crossroads between Europe, Africa and Asia, the region lies at the heart of the new energy corridor known as the New Silk Road. Local and global investors' appetite to support the region's growing energy hubs also helps, with interest in the UAE's Port of Fujairah topping the list. The Port's strategic geography just south of the Strait of Hormuz and its reputation as one of the world's most established energy hubs makes it the best spot for a LNG exporting hub in the Gulf, according to 73% of survey respondents. Surprising in equal measure is that 5% voted for war-stricken Yemen, while Abu Dhabi, home of the region's first LNG export in 1977, received no votes.



WORKSHOP – STREAM 1

What are the Top 3 Steps to Facilitate an LNG Import Ecosystem in the Middle East?

Strategies to cost-effectively funnel LNG imports into the Middle East to meet soaring domestic demand are rapidly moving centre stage in local governments' energy roadmaps. The International Energy Agency (IEA) expects gas demand in the Middle East to nearly double by 2040 and BP's latest Energy Outlook forecasts that the global LNG market will grow seven times faster than pipeline gas trade and will account for half of the world's traded gas up to 2035, compared to today's 32%. The Middle East benefits from having Qatar on its doorstep. But there is room for Doha to supply more than the current 40% of the region's needs. A greater emphasis on speed appears to

be emerging, after what has been a relatively slow start. Saudi Arabia-based Arab Petroleum Investment Corp (Apicorp) estimates that \$10.3 billion of investments have been earmarked to build LNG import facilities across the Middle East and North Africa (MENA) in the medium term. In 2009, Kuwait became the first Gulf country to import LNG and construction of the country's onshore LNG terminal near the Al Zour refinery is due for completion in the early 2020s. Bahrain is scheduled to install a floating storage regasification unit (FSRU) at the port of Hidd next year, while the UAE's Sharjah National Oil Corporation (SNOC) will start importing LNG into the emirate's Port of Hamriyah in the first half of 2018. It also appears that a chartered

2009
Kuwait became the first Gulf country to start importing LNG eight years ago.

\$10.3bn
The size of investments assigned to building LNG import infrastructure across MENA in the medium-term illustrates the region's emphasis on securing supply.

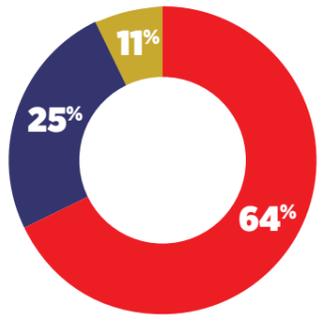


“There are still many black holes in the Middle East’s LNG import ambitions. The infrastructure network is insufficient to meet rising demand, for which there is no pause button. A united effort is the best solution.”

floating storage and regasification unit (FSRU) at Ruwais in Abu Dhabi is currently favoured over initial plans to build an LNG import facility in the emirate of Fujairah. Still, the Port of Fujairah is pushing ahead with plans for its first ship-to-ship LNG transfer and it is evaluating interest in onshore bunkering facilities. Saudi Arabia is eyeing LNG imports as it currently uses up to 1m b/d of oil for power generation. Riyadh and fellow Middle Eastern leaders' support of the Paris Agreement, a global climate change deal, is deepening appetite for LNG as it is a more environmentally-friendly fuel and burns 40% fewer carbon emissions than coal during power generation. The FSRU market has emerged as a highly popular option amongst Middle Eastern countries as it enables them to begin imports on short notice and rapidly expand, or reduce, capacity. FSRUs are relatively cheap and their flexibility enables importers to sidestep issues caused by strained economics, fractious politics

What are the Top 3 Steps to Facilitate an LNG Import Ecosystem in the Middle East?

- Better access to the LNG market through developed infrastructure, which serves the whole system.
- Stronger regional cooperation.
- Removal of subsidies.



and extreme weather. Egypt is a case in point, with the country taking two units last year after importing an inaugural LNG cargo in 2015. Offshore LNG supplies also proved vital to supporting Yemen's war-torn port city of Aden after fighting compromised the country's own LNG facilities. It is little surprise then that the global capital expenditure for floating facilities is expected to rise by 264% to \$41.6 billion between 2016 and 2022, compared to \$11.4 billion between 2011-2015, according to Douglas Westwood's World FLNG Market Forecast. There are still many black holes that need to be plugged to realize the Middle East's LNG import ambitions. Speed is of the essence to ensure that blueprints detailing regulatory, trading and legal guidelines, as well as basic infrastructure like communications, are acted upon. Above all, countries need to identify and pursue a common set of goals. ■

X7
The global LNG market could grow seven times faster than pipeline gas trade and could account for around half of all globally traded gas by 2035, up from 32% now, according to BP.

40%
How will Qatar's role as a supplier of nearly half the Gulf's LNG import needs change as Doha counters increasingly tough competition in global markets?



STREAM 1 Top Three Recommendations

1. A United Infrastructure Network

A widespread and robust infrastructure network that encompasses all, rather than a few, is required to provide strengthened import hubs and distribution across the Middle East. A country must have a range of LNG sources for energy security, both to plug a deficit and to provide a safety net when other gas supplies are hindered. Plans to build LNG import infrastructure must generate a baseline income to justify the cost of construction, but forecasting LNG volumes is not a simple task. Seasonal demand, unexpected outages and the growth of renewable and nuclear markets are all factors at play. A country's LNG demand profile can change dramatically. Egypt moved from exporting 16.2 bcm of the 61.3 bcm it produced in 2010, to consuming almost all the 48.8 bcm it produced domestically in 2014, for example, according to the BP Statistical Review of World Energy.

A new era of cooperation across the Middle East

can accelerate the growth of import hubs, with 73% of survey respondents to an industry survey identifying the UAE's Port of Fujairah as the best-placed energy hub to fulfil this purpose. Greater collaboration would also hasten efforts for better transparency for the price and legal architecture. Cooperation can extend to establishing a network of FSRUs, which are less expensive, have quick access to market and are geographically flexible. Combining these efforts creates a robust series of strategies to hedge against stranded supply, or unfilled pockets of demand – both are stressful and expensive scenarios. A fragmented approach, such as building LNG import infrastructure for one client, client, is risky. The customer could end up paying more for their LNG as growth in the renewables and nuclear power markets reduces the cost of both energy sources, or the customer could exercise their monopoly on a product that is required for the country's energy security.

X3

In 2014, the Middle East's three main importers – Kuwait, Israel and the UAE – received 6.1 bcf of gas equivalent; in 2016, imports into the region quadrupled to 24.5 bcf, according to S&P Global Platts.

1/3

Egypt received around one third of the region's LNG imports in 2016.

2nd

As the world's second largest bunkering hub, the Port of Fujairah is best placed to be the region's primary LNG hub.

2. Stronger Regional Cooperation

Cooperation amongst Middle Eastern countries will be the relief valve for the growing pressure on the region to cost-effectively satisfy LNG demand. Efforts must extend to carving out market-based solutions for pricing and data transparency and supporting the growth of strategic LNG import hubs, such as the Port of Fujairah. Poor communication and ill-directed competition will further weaken today's fragmented market and see that the entire region ultimately falls short of its potential. The need for more regional allies is blindingly clear; the 230-mile Dolphin Pipeline remains the only transnational submarine pipeline in the Gulf, connecting supply from Qatar's North Field to the UAE and Oman.

Frank conversations amongst countries and between state and privately owned entities on the demand outlook is the first step to creating a strategic map showing how gas and LNG can flow freely across the region to where it is needed most, unhindered by inevitable natural,

political and security glitches. The flow of LNG imports and exports between Argentina and Chile changes throughout the year, for example, with the cooperation ensuring that neither country is left short. This template could be applied across the Middle East. Regional cooperation does not translate into a lack of independence as countries are advised to better their energy security by having more than one source of gas and LNG supply. LNG can also be used to complement existing gas markets by acting as an insurance policy for when gas flows are strained, or halted. Realizing plans for a GCC-wide gas grid is obviously the ideal first step to better connectivity. But infrastructure must be designed with the demand profile of the 22nd century in mind, as populations and demand across the Middle East will continue to soar. Half a million people are expected to flock this year to Cairo, already home to 12 million people, while Qatar's population of 2.6 million could swell eightfold by 2050, for example.



3. Removal of Subsidies

Cutting gas subsidies will improve the Middle East's energy economies by curbing high domestic consumption and import bills, with subsequent savings redirected to building urgently-needed LNG import infrastructure. In 2014, MENA was home to 5.5% of the world's population and 3.3% of its GDP, yet it accounted for a staggering 48% of its energy subsidies, according to the World Bank. Efforts to facilitate growth and create price stability during the colonial era and post-independence quickly evolved into the overconsumption that is common place today. Subsidies, which some argue are legacy contracts, also encourage inefficiency at a time when the Middle East is trying to widen its global LNG export market. Nearly a third (29%) of

survey respondents said removing all government subsidies that fix domestic natural gas prices at very low levels is the most important next step to ensure that the Gulf maintains its position as an LNG exporting region. Momentum to cut LNG subsidies is building, with countries enjoying the tangible relief from cuts made for other energy products. The UAE saves \$7 billion a year after ending petrol subsidies in August 2015, for example. Whether LNG subsidy cuts are absolute, or mimic the Iran's more selective 'Targeted Subsidy Reform Act in 2010', must be decided upon – soon. Whatever the route, two points are certain; LNG subsidies must be cut and reform must be guided by a comprehensive education process. ■

7

Cutting petrol subsidies from August 2015 saves the UAE \$7 billion a year.

48%

MENA accounted for nearly half of the world's subsidies in 2014, despite being home to just 5.5% of the global population.

230

The Dolphin Pipeline remains the Gulf's only transnational submarine pipeline, stretching just 230 miles from Qatar to the UAE and Oman.

2010

Iran kickstarted its official subsidy reforms seven years ago with a template that could help guide the Gulf's LNG subsidy cuts.

17%

Saudi Arabia emerging as an LNG importer would be the most important step in the Gulf's journey as a global LNG hub, according to nearly a fifth of survey respondents.



WORKSHOP – STREAM 2

What are the Top 3 Steps to Maximize the Value of Middle Eastern LNG Exports?

The Middle East's energy leaders are looking at an old conversation with fresh eyes. Maximising the value of gas reserves and subsequent LNG exports is more important than ever as rising global LNG demand opens a window of opportunity for the region to deepen its foothold. Plus the 'collapse' of oil prices since mid-2014 is galvanizing many oil-centric treasuries to revive dusty blueprints on how to diversify their energy production and export markets.

An expanded infrastructure, easier access to capital, strategic port locations and transparent pricing structures are integral to the foundation from which a global LNG export ecosystem can flourish up to 2018 and beyond. Qatar, the UAE and

Yemen illustrate the value of leveraging the region's export potential. Qatar raced to the front of the gas pack in the 1980s as neighbours focused on oil production. Fast forward three decades and the country meets 40% of the region's LNG demand.

But Australia and the US threaten to steal Qatar's crown by 2020, with the latter reviving a 120-year old maritime route to send LNG cargoes to Dubai and Kuwait last year. The US and Australia's combined volume is expected to account for more than 90% of new LNG exports by 2020 and to represent most of a 45% increase in liquefaction capacity between 2015 and 2021. Amid intensifying competition, Qatar lifted a 12-year moratorium on development on its North Field, the world's largest natural gas

45%
Most of a 45% increase in liquefaction capacity between 2015 and 2021 will originate in the US and Australia.

1980s
Qatar has spearheaded the Middle East's gas game by breaking away from the crowd – the majority focused on oil production – more than thirty years ago.

2020
The US and Australia's growing LNG export capacity means either could push Qatar from its pole position as the world's biggest LNG exporter in just three years.

“Pivoting the Middle East’s energy spotlight on LNG exports makes good business sense. But that is only the first step. Data and pricing transparency, integrated infrastructure and flexible delivery methods are must-haves for the region to ringfence more market share.”

field, in April this year. The move will increase current production by around 10%, which will add around 400,000 b/d of oil equivalent to Qatar's production. But will it be enough to keep competitors at bay?

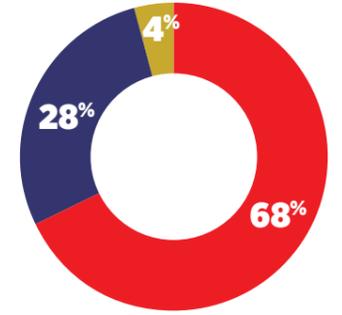
Iran, which has the world's second largest natural gas reserves, has ambitious export plans following the lifting of most of its sanctions in January 2016. But Tehran will most likely have to focus on satisfying domestic demand, as it is the world's fourth-biggest market for natural gas, following the US, Russia and China. Doha can breathe easy for a while; Iran currently exports less pipeline gas than Myanmar or Kazakhstan, jointly home to less than 1% of global reserves.

Established and budding Middle Eastern LNG exporters must navigate customers' firm demands. This includes an increasingly frequent avoidance of long term contracts – historically the bread and butter of LNG deals – in favour of short term deals. Shell's LNG Outlook advises that LNG sellers need a large portfolio and sufficient flexibility to supply a growing number of countries. Those who can adapt the quickest will top the league table. Exporters must also keep in mind that oil-indexed LNG prices are likely to remain low for a while, with Brent oil prices unlikely to average above \$60s/bl this year. This is positive for importers' profit margins, but unwelcomed by exporters.

Meanwhile, ambitious Middle Eastern LNG

What are the Top 3 Steps to Maximize the Value of Middle Eastern LNG Exports?

- Flexibility delivery.
- Trusted supplier.
- LNG as a bunker fuel.



exporters must be ready to pounce upon the opportunity from the International Maritime Organization's (IMO) decision in October last year to implement a considerably lower sulphur cap on marine fuel as soon as 2020, instead of the 2025 alternative. LNG as a fuel contains virtually zero sulphur, which will serve exporters well when the new cap of 0.5% m/m (mass/mass), down from the current 3.5% m/m, comes into force in just three years.

But there is an obvious, yet oft-side lined, catch to bolstering the region's LNG export ecosystem; ensuring a greater supply of domestic gas production. The Middle East needs to unlock the treasure chest beneath its soil – the region is home to 40% of the world's gas reserves – to satisfy both domestic demand and burgeoning export ambitions. ■

70%
Roughly two thirds of Australia's LNG export portfolio is comprised of shipments to Japan – a coveted Asian customer.

2005
In April, Qatar lifted a 12-year moratorium on development of its North Field – the world's biggest natural gas field.



STREAM 2 Top Three Recommendations

1. Flexible Delivery

The power dynamics at the negotiating table have shifted. A need for flexibility lies at the core of customers' new rulebook and producers must remain relevant by adapting to different volumes, timings and destinations with minimal fuss and cost. The oldest supply contracts have been particularly inflexible with volume, destination and pricing restrictions that are not generous to the end-user. Producers cannot afford for this old habit to die hard – adaptability is key. The majority of survey respondents (43%) said that flexibility, including a willingness for short-term contracts, is the most important next step to ensure that the Gulf maintains its position as an LNG exporting region. The spot and short-term

market for LNG represented almost 50% of global imports last year. Qatar, which benefits from having an independent value chain, illustrated its flexibility when it immediately diverted every possible ton of LNG to support long-time ally Japan following the Fukushima nuclear crisis in 2011. Political shifts also reveal export opportunities that Middle Eastern producers must be quick to seize upon. For example, Doha is eyeing ways to counter competition from producers in the US and Russia to support the UK's exit from the EU. Qatar already supplies 90% of the LNG imports required by the UK, the world's fifth largest economy, but manufacturing growth means demand is likely to rise.

24%

The Middle East and India were home to a quarter of the US' LNG exports in January this year alone. Qatar will have to fight hard to retain market share.

1st

Qatar's LNG exports to Poland from last June marked the European country's first such imports from the Middle East.

2011

Qatar got a gold star for flexibility when it sent additional LNG supplies to Japan following the 2011 Fukushima nuclear disaster.

2. Enhancing Supplier-Buyer Trust

Expect the unexpected – an apt motto for the global energy markets, including LNG. Over the course of a contract, which can stretch past three decades, market dynamics will inevitably be buffeted by political, economic, social and natural influences. As the LNG market grows, so will opportunities for disturbances. A transparent and flexible partnership between suppliers and buyers is integral to finding the smoothest possible path to energy security and profitability. LNG producers' willingness to consider shorter term contracts for their coveted Asian clients is a wise move to build trust and stronger partnership. Building LNG storage capacity near Asian customers was identified by 14% of survey

respondents as the most important next step to ensure the Gulf maintains its position as an LNG exporting region. To deepen bankers' confidence in the LNG market, especially as some suppliers shift to a preference for short-term deals, means buyers are investing in suppliers' value chains to become shareholders of upstream LNG operations. In time, buyers' commitment to suppliers' operational chains could whittle down the amount of 'homeless LNG' – product without a pre-determined home – which is currently expected to reach 50 million tons by 2020. Building robust bridges of trust is essential to have a firm foothold in what is an intensely competitive market.



3. Growth of LNG as a Bunker Fuel

Considered the 'greenest' hydrocarbon, LNG will play a central role in linking the old with the new; facilitating Middle Eastern countries' evolution from hydrocarbon to low-carbon economies. There are many opportunities for LNG as the unprecedented shift towards greener growth in the global energy markets gains pace. The IMO's decision last October to implement a 0.5% sulphur cap as soon as 2020, instead of in 2025, is a case in point. Most LNG has no detectable sulphur and LNG-fuelled vessels' emission of particles and nitrogen oxide are considerably lower than that of vessels using other marine fuels.

Adjusting infrastructure to suit LNG bunkering would elevate the global influence of local ports, such as the UAE's Port of Fujairah. Already the world's second largest bunkering hub, Fujairah is preparing to become an LNG server. LNG bunkering can reduce the daily fuel costs for a

vessel by \$10,000, but creating the architecture to make LNG bunkering common place will only succeed if customers demand the infrastructure. Middle Eastern refiners must break the chicken-egg scenario of which comes first – the demand or infrastructure – and actively guide the global shipping market towards a preference for LNG bunkering. Active promotion in Singapore and other major energy hubs is paying dividends. A pro-LNG bunkering message must filter down from the top of the region's energy hierarchy to leverage the current window of opportunity through to 2020, especially as some shippers may prefer to invest in scrubbers. A robust legal framework and detection methods for the 0.5% sulphur cap must also be created to ensure that those avoiding compliance through easy loopholes do not dash momentum for the wider market. ■

1977

Indonesia's Arun terminal was used for LNG production for nearly four decades before being converted to accept LNG imports from early 2015. What other sweet spots await exporters?

42%

Japan's Jera, the world's biggest single LNG importer, plans to reduce its long-term imports by 42% by 2030.

2025

The IMO's new sulphur cap will be applied in 2020 instead of the alternative start date of 2025. Political momentum behind the Paris Agreement is helping garner industry support for the quasi-surprise start date.

2028

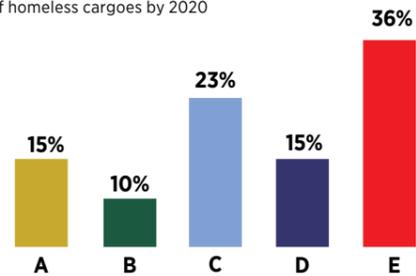
The energy industry said in 2008 that LNG bunkering would only be commercially viable by 2028, yet it is already an established process. How influential will LNG bunkering be by 2020?

70

There are currently 99 LNG-fuelled vessels operating globally, with 93 more in the order book and around 70 that are considered ready for LNG on order, according to DNV-GL in late-January.

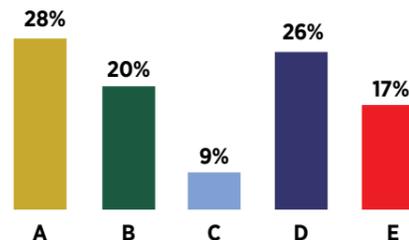
Which of the following will be the single biggest disruptive element in the global LNG markets through to 2020?

- A US becoming an LNG exporter
- B Lower for longer oil-indexed gas prices
- C Australian LNG exports reaching full capacity
- D Perceived switch in power from sellers to buyers
- E 50 million tons of homeless cargoes by 2020



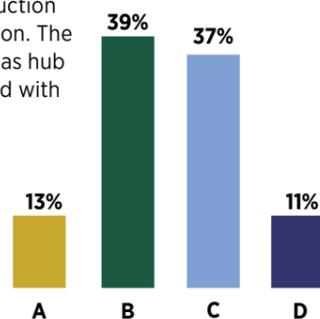
Which of the following is the most important next step to help the Gulf's transition from an LNG exporting region to an importing region?

- A Build regionally connected infrastructure
- B Commit to transparency around pricing
- C Abandon oil-indexed pricing on LNG exports before crude prices rise any further
- D Build permanent onshore LNG re-gasification plants
- E Saudi Arabia to join list of LNG importing countries



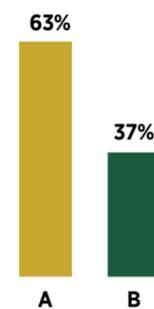
The Middle East holds more than 40% of the world's gas reserves, 17% of its production and 14% of its consumption. The region could develop a gas hub where gas is freely traded with transparent prices by:

- A 2020
- B 2025
- C 2030+
- D Never



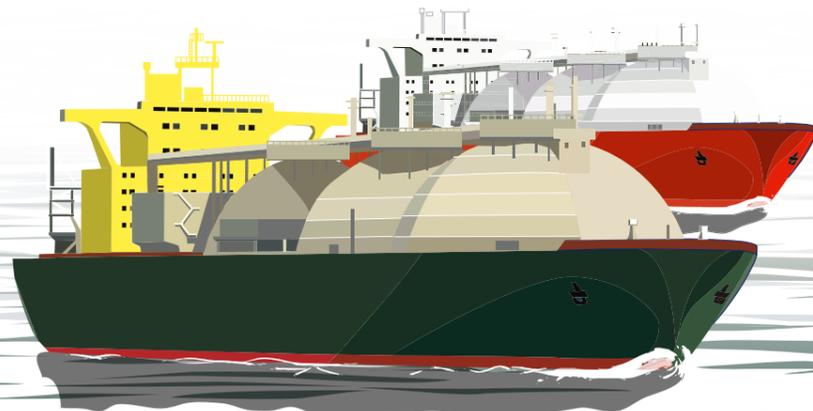
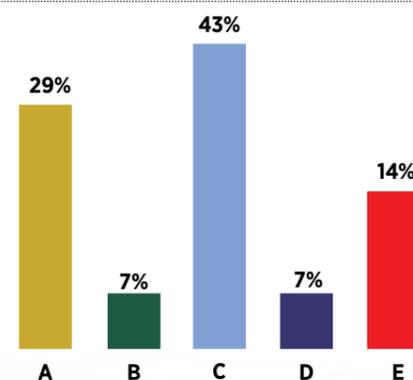
Over the past three years, the Middle East's LNG imports (including Egypt & Pakistan) have grown by almost 400%. Do you expect Abu Dhabi (ADGAS) to renew its LNG exports to Japan's Tokyo Electrical Power Company after the agreement expires in 2019?

- A Yes
- B No



Which of the following is the most important next step to ensure that the Gulf maintains its position as an LNG exporting region?

- A Remove all government subsidies that fix domestic natural gas prices at very low levels to drive investment in new supply
- B Abandon oil-indexed LNG pricing
- C Demonstrate much greater flexibility, including on shorter term contracts
- D Lead the world in transitioning tanker fleets to use LNG as a bunker fuel in aftermath of IMO's introduction of 0.5% sulphur cap by 2020
- E Build LNG storage capacity near Asian customers



Participants

Abdulrahmin Mohamed, Communication, External Affairs, Security & NOC Manager, Sharjah National Oil Corporation(SNOC)
 Adil Al Maazmi, Dry Chartering Manager, ADNATCO-NGSCO
 Ahmed Al Muhairi, LNG Fleet Manager, ADNATCO-NGSCO
 Ahmed Al Qasimi, Gas Directorate, ADNOC
 Ahmed Al Suwaidi, Gas Directorate, ADNOC
 Ahmed El Tannir, Deputy General Manager, Al Masaood Oil & Gas
 Andy Hayward, Regas Manager-Abu Dhabi, Excelerate Energy
 Annalisa Jeffries, Price Methodology & Market Specialist, S&P Global Platts
 Ard van Hoof, Business Development Middle East, Vopak
 Aslam Moola, Middle East Director - Commercial & New Business Development, Vopak
 Aziz Kassim, Sr. Director Business Development and Origination - Middle East, Excelerate Energy
 Bora Bariman, Head of Energy & Marine, National Bank of Fujairah
 Bruce Smith, Business Advisor, Abu Dhabi Water and Electricity Company (ADWEC)
 Capt. Mayed Al Ameiry, Dy. Harbour Master, Port of Fujairah
 Capt. Mohamed Al Ali, SVP Operation, ADNATCO-NGSCO
 Capt. Mousa Murad, General Manager, Port of Fujairah
 Capt. Taleb Al Yammahi, Dy. Harbour Master, Port of Fujairah
 Capt. Tamer Masoud, Harbour Master, Port of Fujairah
 Daniel Bustos, Chief Development Officer, Excelerate Energy
 David Worrall, Independent Consultant & LNG Specialist
 Desmond Wong, Managing Editor, S&P Global Platts
 Dr. Leila Benali, Corporate Planning, Saudi Aramco
 Emad Abdulkarim, Deputy Director - International Marketing, Kuwait Petroleum Corporation, KPC
 Fouad Al Wahedi, VP Strategy and Corporate Development, ADGAS
 Francois Brice, Abu Dhabi Water & Electricity Company (ADWEC)
 George Moustakas, General Manager, Aegean
 Hamed Al Marzooqi, Director, Marketing & Commercial, Emirates LNG
 Hatem Al-Mosa, CEO, Sharjah National Oil Corporation (SNOC)
 Ian Swords, LNG Business Development, Trafigura
 Iannis Mardell, Strategy & Corporate Development Advisor, ADGAS

Ibrahim Jadallah, Business Development Manager, KIZAD
 Jarmo Stoopman, General Manager, Vopak
 John Roper, Managing Director and Head of Middle East, Uniper Global Commodities SE
 Juma Al-Araimi, Oman LNG
 Khalid Seflan, VP Intergrated Supply & Trading, BP Middle East
 Marc Howson, Senior Managing Editor - LNG, S&P Global Platts
 Mehrdad Feizi, Gas Transportation and Storage Analysts, GECF
 Mike Peters, Team Lead for MENA & SA, Shell Middle East LNG Trading
 Mouza Al Shamsi, Gas Directorate, ADNOC
 Noura Al Mashjari, Assistant Manager Marketing UMC - Marketing & Commercial, Dolphin Energy
 Othman Al Mass, SEWA
 Othmane Irain, Head of LNG, B.B. Energy
 Padina Saffarzadeh, Business Development manager SA | UAE, Wilhelmsen Ships Service Dubai, UAE
 Paul Himsworth, Managing Director, Vitol Dubai Limited
 Paul Young, Head of Energy Products, Dubai Mercantile Exchange (DME)
 Pedro Pinilla, Asset Manager, Excelerate Energy
 Rabia Al Marzouqi, Director Marketing & Commercial, Dolphin Energy
 Robin Mills, CEO, Qamar Energy
 Sami Kamel, General Manager Global Strategic Marketing Operations, GE Power
 Sharief Al Awadhi, Director General, Fujairah Free Zone
 Sirine Tajer, Managing Director, MENA Energy Partners
 Stephen Jurgenson, Partner, Winston & Strawn
 Stephen Miller, Operations Manager, Emirates LNG
 Stuart Wood, Vice President, Global Product Development & Management, S&P Global Platts
 Syed Adeeb, Contracts Engineer and Gas Market Intelligence, Abu Dhabi Water & Electricity Company (ADWEC)
 Tetsuro Kuwabara, Board Director, Pavilion Gas
 William List, Terminal Manager, Fujairah Oil Tanker Terminals
 Yousif Al Muhairbi, Gas Directorate, ADNOC

SUPPORTED BY:



**The Middle East
LNG Institute**

@LNG_Institute