

# 17<sup>th</sup> INTERNATIONAL CONFERENCE & EXHIBITION ON LIQUEFIED NATURAL GAS (LNG 17)



LNG Supply and Demand:  
“the Greater Middle East Paradox”  
By: Mehdi Chennoufi,  
General Manager Origination West ,Shell Trading  
18/04/13

International Organizers



Host Association



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Reserves: Our use of the term “reserves” in this presentation means SEC proved oil and gas reserves. Resources: Our use of the term “resources” in this presentation includes quantities of oil and gas not yet classified as SEC proved oil and gas reserves. Resources are consistent with the Society of Petroleum Engineers 2P and 2C definitions. Organic: Our use of the term Organic in this presentation includes SEC proved oil and gas reserves excluding changes resulting from acquisitions, divestments and year-average pricing impact. The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this presentation “Shell”, “Shell group” and “Royal Dutch Shell” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to subsidiaries in general or to those who work for them. 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# PREAMBLE

## Largest Producer In Europe

### Natural Gas Field Found In Lush Dutch Meadows

WASHINGTON — (AP) — A natural gas field has been discovered in the lush Dutch meadows, the largest in Europe. The field, located in the province of Groningen, is estimated to contain 100 billion cubic feet of gas. The discovery was made by a team of geologists led by the Dutch government. The field is located in the province of Groningen, which is one of the most densely populated areas in the Netherlands. The discovery is expected to increase the Netherlands' natural gas production significantly.

**BEST BUYERS IN TOWN**

- 1960 Chevrolet 4 C. 200 Plymouth Sedan
- 1960 Chevrolet 6 C. 200 Chrysler Sedan
- 1961 Rambler Sedan 200 Lincoln Sedan
- 1961 Plymouth Sedan 200 Rambler Sedan
- 1961 Rambler 6 C. 200 Plymouth Sedan
- 1960 Ford Sedan 200 Ford Sedan
- 1960 Dodge Sedan 200 Rambler 6 C. 200
- 1960 Rambler Sedan 200 Ford Sedan
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- 1960 Dodge Sedan 200 Cadillac 6 C. 200
- 1960 Rambler Sedan 200 Oldsmobile 6 C. 200
- 1960 Ford 6 C. 200 Plymouth Sedan
- 1960 Dodge Sedan 200 Dodge Sedan
- 1960 Rambler Sedan 200 Plymouth Sedan
- 1960 Dodge Sedan 200 Cadillac 6 C. 200
- 1960 Rambler Sedan 200 Oldsmobile 6 C. 200

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## Energy Revolution Ahead For Europe

By JOSE CHAMBLAIN  
 The world is about to witness a revolution in energy. The search for oil in the North Sea is expected to yield a vast supply of natural gas. This discovery is expected to revolutionize the energy industry in Europe. The gas is expected to be used for power generation and industrial purposes. The discovery is also expected to reduce the dependence on oil from the Middle East. The gas is expected to be used for power generation and industrial purposes. The discovery is also expected to reduce the dependence on oil from the Middle East.

## Crews Strike Natural Gas In North Sea

LONDON. (AP) — Drilling crews have struck natural gas in the North Sea 42 miles off the English Coast, the British Petroleum Co. (BP) announced today. The gas is not in commercial quantities, but the well is being drilled deeper in the hope that a larger amount will be found. Drilling is taking place from a Texas Tower platform. A year ago the British government granted licenses for petroleum exploration in the North Sea to 22 companies. The strike by BP was the first reported in the 100,000 square mile section of the North Sea allotted to Britain by international agreement. The search for oil in the North Sea attracted many companies after natural gas deposits were found at Groningen, the Netherlands, in 1960. Traces of natural gas have been found off Germany. A spokesman for BP said the chance of finding a trace of oil or gas from a well was 1 in 10 and of finding it in commercial quantities 1 in 50.



# PREAMBLE

12 March 2013 Last updated at 09:53 GMT

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## Japan extracts gas from methane hydrate in world first

**Japan says it has successfully extracted natural gas from frozen methane hydrate off its central coast, in a world first.**

Methane hydrates, or clathrates, are a type of frozen "cage" of molecules of methane and water.

The gas field is about 50km away from Japan's main island, in the Nankai Trough.

Researchers say it could provide an alternative



Methane hydrate is also known as burnable or flammable ice

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## Oil Climbs From Four-Week Low as Iran Warns of Hormuz Supply Disruption

By Grant Smith - Jan 16, 2012 10:55 PM GMT+0400

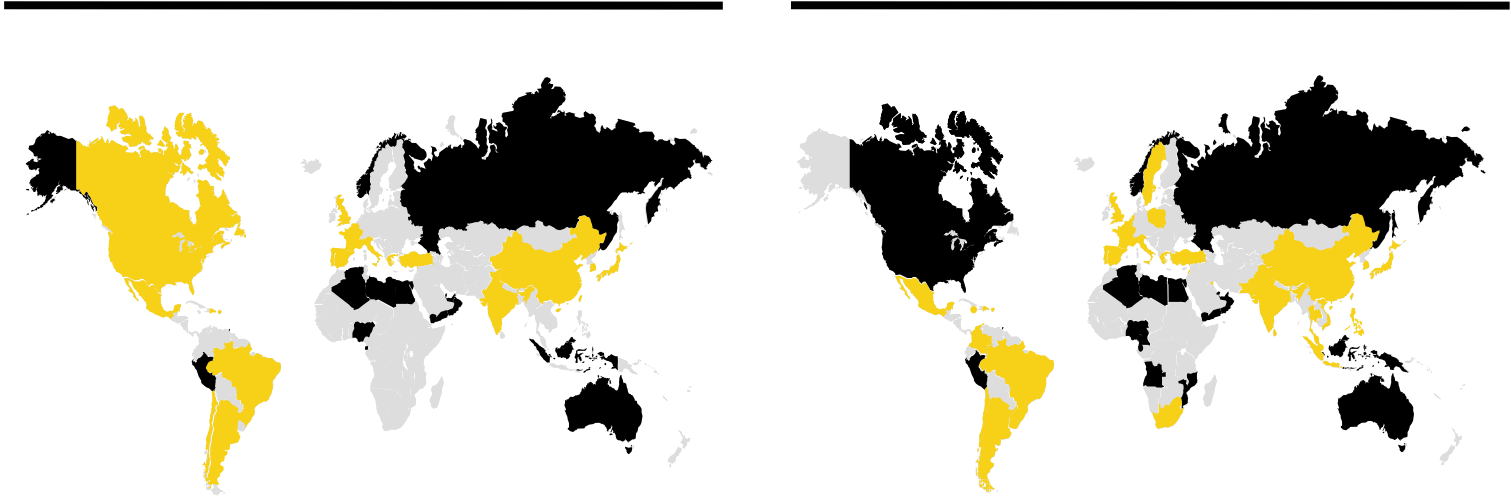
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**Japan's most powerful earthquake since records began has struck the north-east coast, triggering a massive tsunami.**

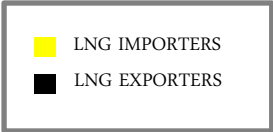
# GLOBAL LNG MARKET DEVELOPMENTS

2010

2020



# COUNTRIES	1990	2000	2010	2011*	2020 EST
EXPORTERS	8	12	18	18	~25
IMPORTERS	9	11	24	25	~40

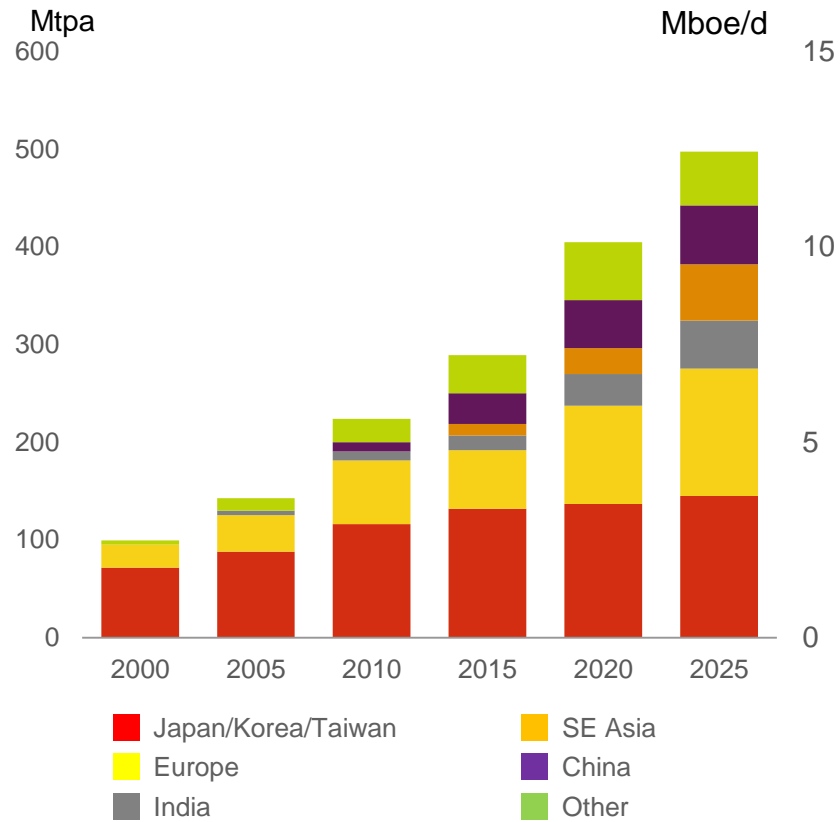


**NUMBERS OF COUNTRIES IMPORTING LNG EXPECTED  
TO ALMOST DOUBLE BETWEEN 2010 AND 2020**

\* Source: PFC Energy (2011 Actuals)

Source: Wood Mackenzie LNG (April 2010)

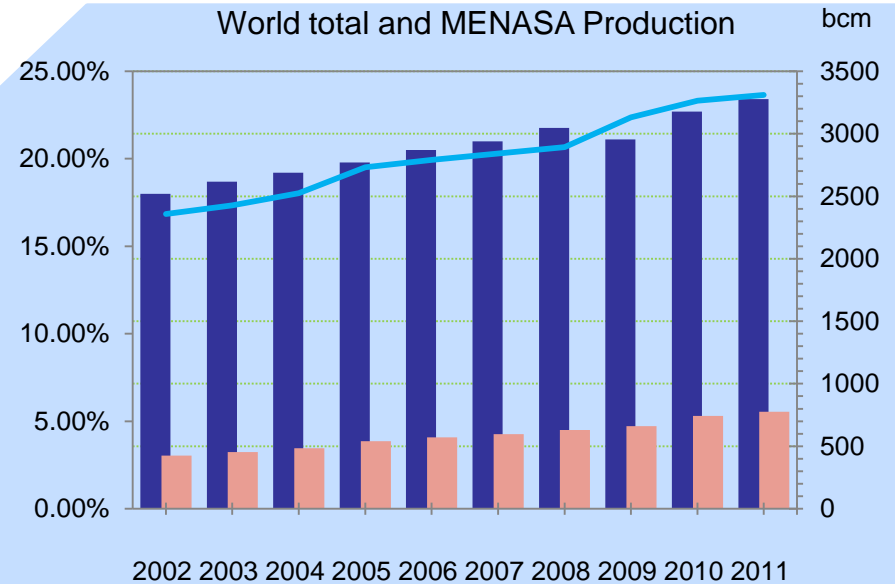
# GLOBAL LNG DEMAND (EXCL. NORTH AMERICA)



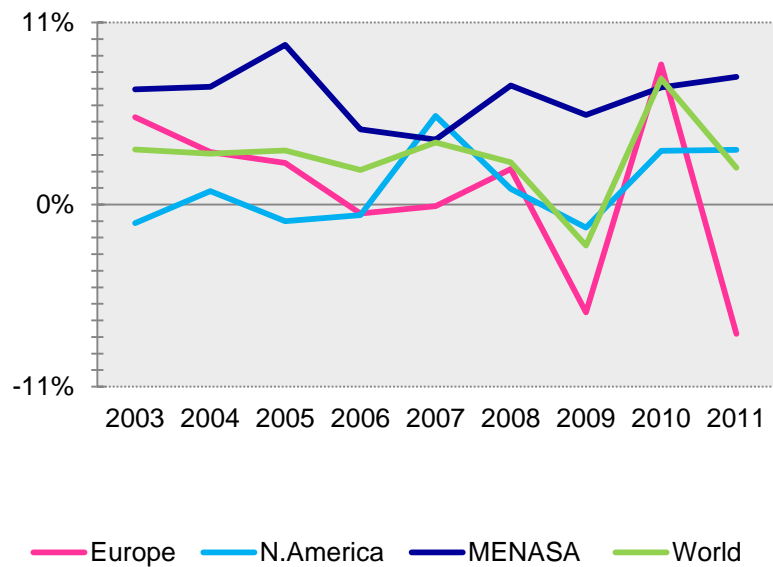
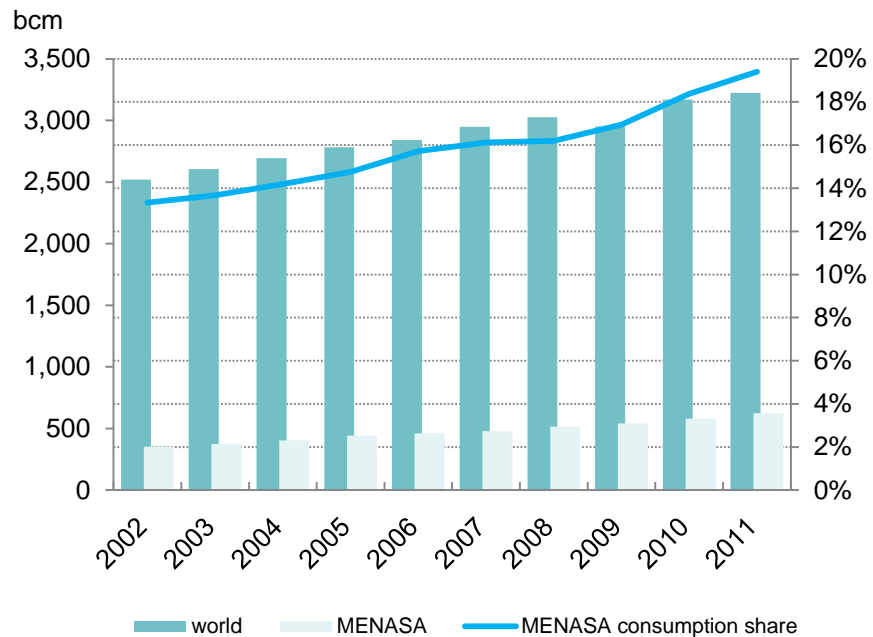
ROBUST GROWTH FOR LNG DEMAND;  
MORE THAN HALF OF THIS GROWTH COMING FROM EMERGING AP/ME MARKETS

\* Source: Shell Analysis

# MENA-SA: A GLOBAL LEADING GAS SUPPLIER



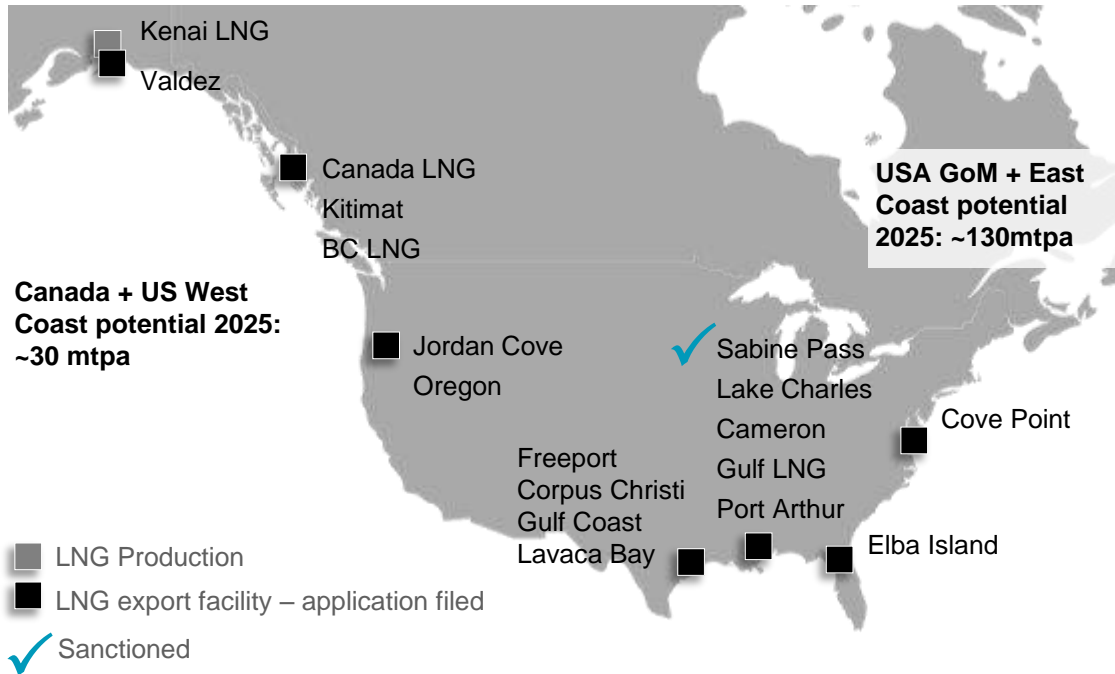
# IT IS ALSO A GROWING GAS CONSUMER, OUTPACING OTHER MARKETS





# US EXPORTS: GAME CHANGER?

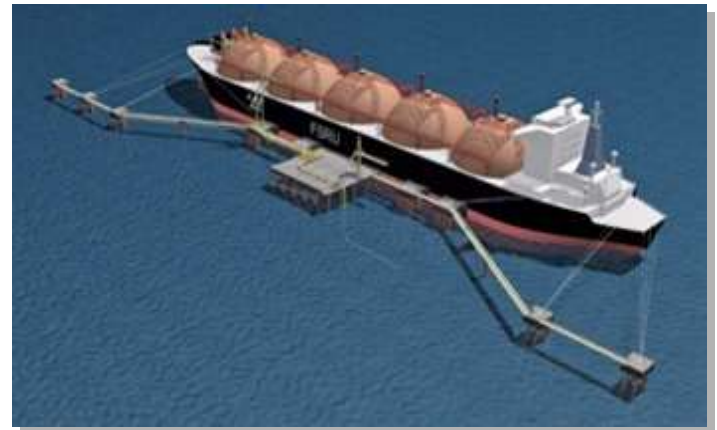
## INDUSTRY LNG EXPORT PLANS



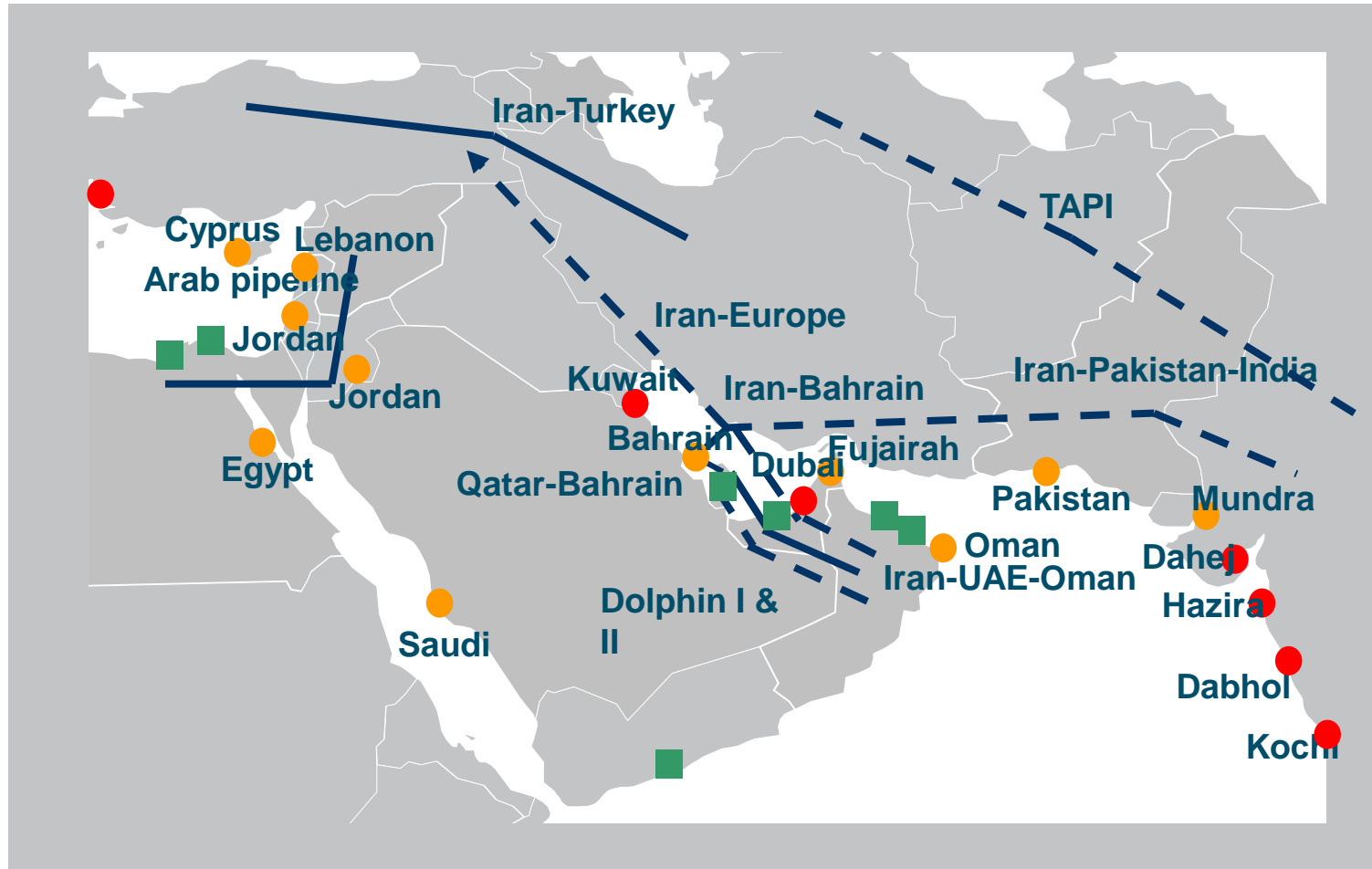
- If all proposed projects go ahead over 130 mtpa will be introduced in the market .
- This represents 30% of global LNG supply by 2020. Shell estimates 50% of this to be actually on stream by 2020.

## FSRU's- COULD THAT BE THE CAUSE?

For Floating Storage and Regasification Unit our experience in Dubai has shown this can significantly reduce construction time for regas to 18 - 24 months



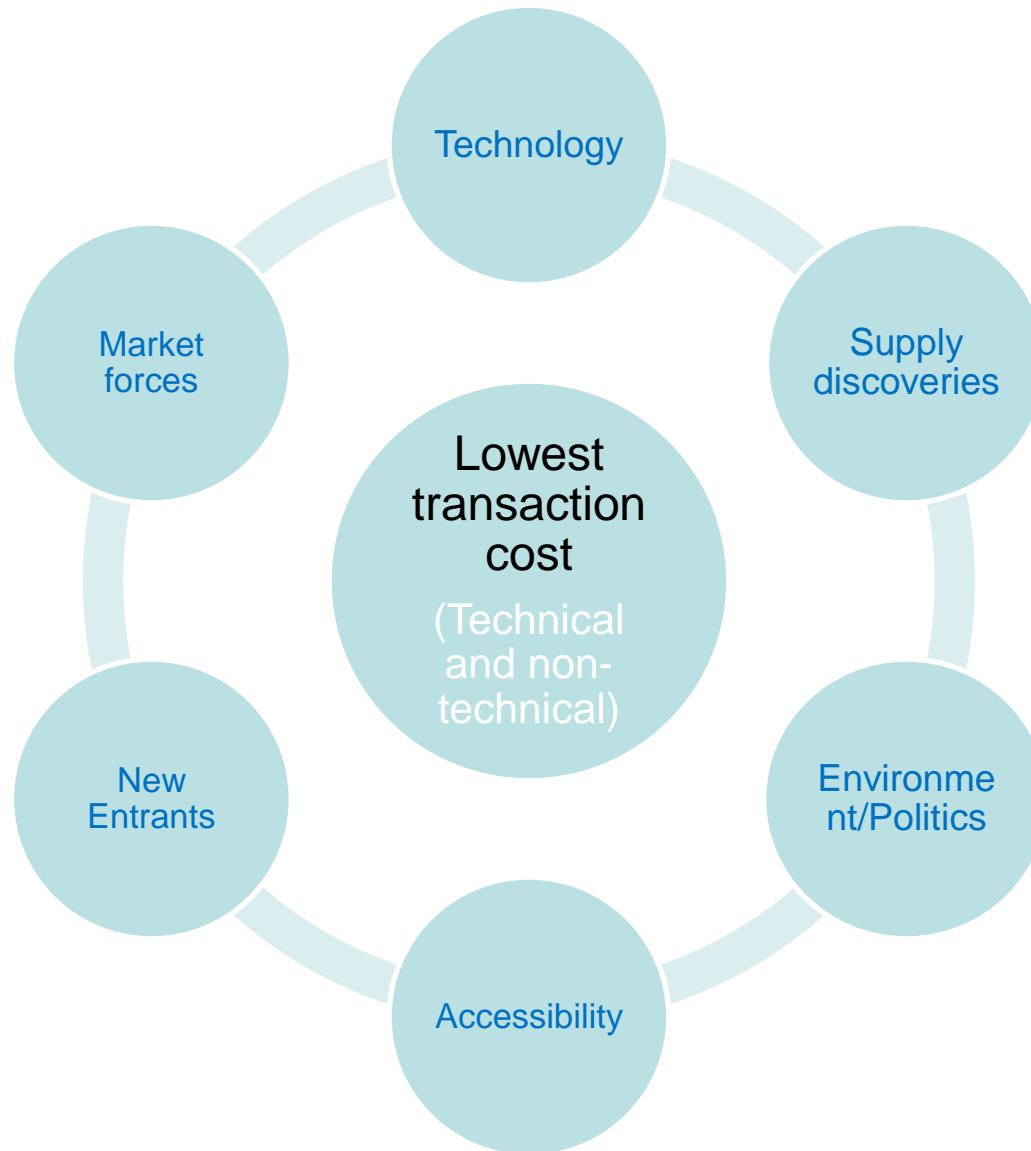
# POLITICS- LNG MARKET ENABLER?



- Existing pipelines
- - - Upcoming pipelines
- Existing LNG regas terminal
- Potential LNG regas terminal
- Liquefaction plants
- Under construction

\*\* Source: FACTS global

# LNG MARKET DYNAMICS



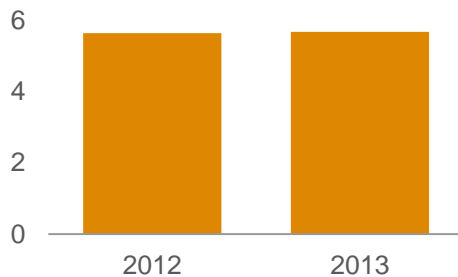
# INDUSTRY-LEADING INTEGRATED GAS PORTFOLIO



- Leveraging Shell's scale + market growth
- Technology and project delivery capabilities
- Potential doubling of capacity
- 2012: ~0.8\* mboe/d; 20 mtpa LNG

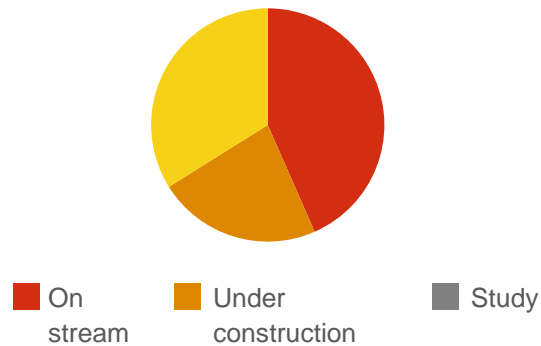
## CAPEX

\$ billion



## RESOURCES

8.2 billion boe



## SHELL GLOBAL LNG GROWTH

million tonnes per annum

