

**Global LNG –
Disruptive Transformation
Society of Petroleum Engineers**

Energy Markets Global Limited

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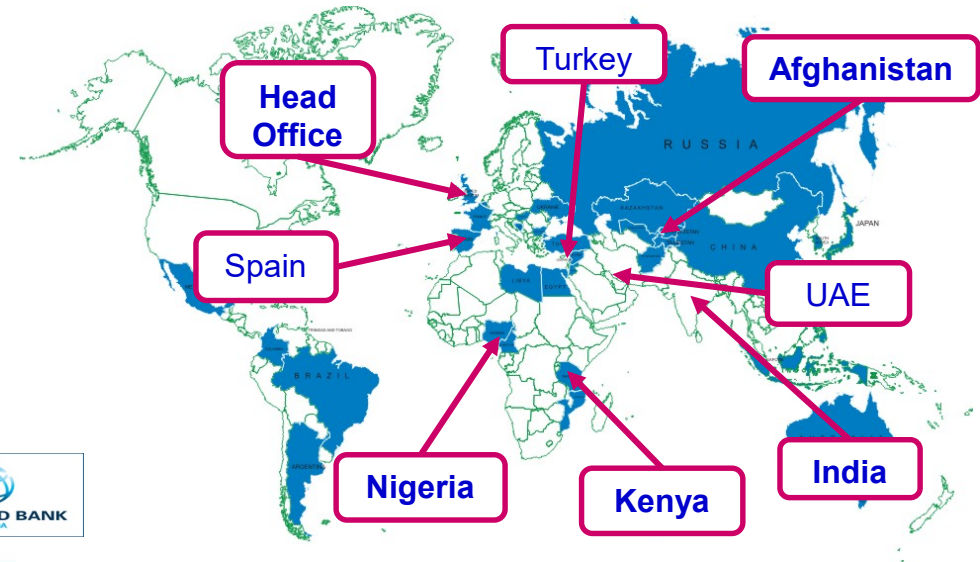
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Energy Markets Global Limited

- International consultancy, training, implementation
- Economic, regulatory, commercial, strategy, M&A support, forecasting, policy, legal, gas & power engineering
- Natural gas, gas to power, electricity, LNG, LPG, petroleum products, biofuels, renewable energy, climate change
- Headquartered in London, operating from 1997



LNG and storage strategy - follow-up study -

Final Presentation

European Commission, Brussels

27 September 2017

Energy Markets Global Limited

EMG LNG Studies Since 2017

- 2017, Dubai LNG
- 2018, Central and South Asian LNG Markets
- 2018, Indonesia – Pertamina LNG Strategy
- 2019-2020, Afghanistan – Gas Pricing, World Bank
- 2020, Nigeria – LNG project feasibility studies

Introduction

LNG is an industry going through disruptive transformation

- LNG and the LNG Value Chain
- The traditional LNG industry worldwide
- Drivers for change
- Characteristics of energy trading markets
- New players
- LNG pricing
- The future

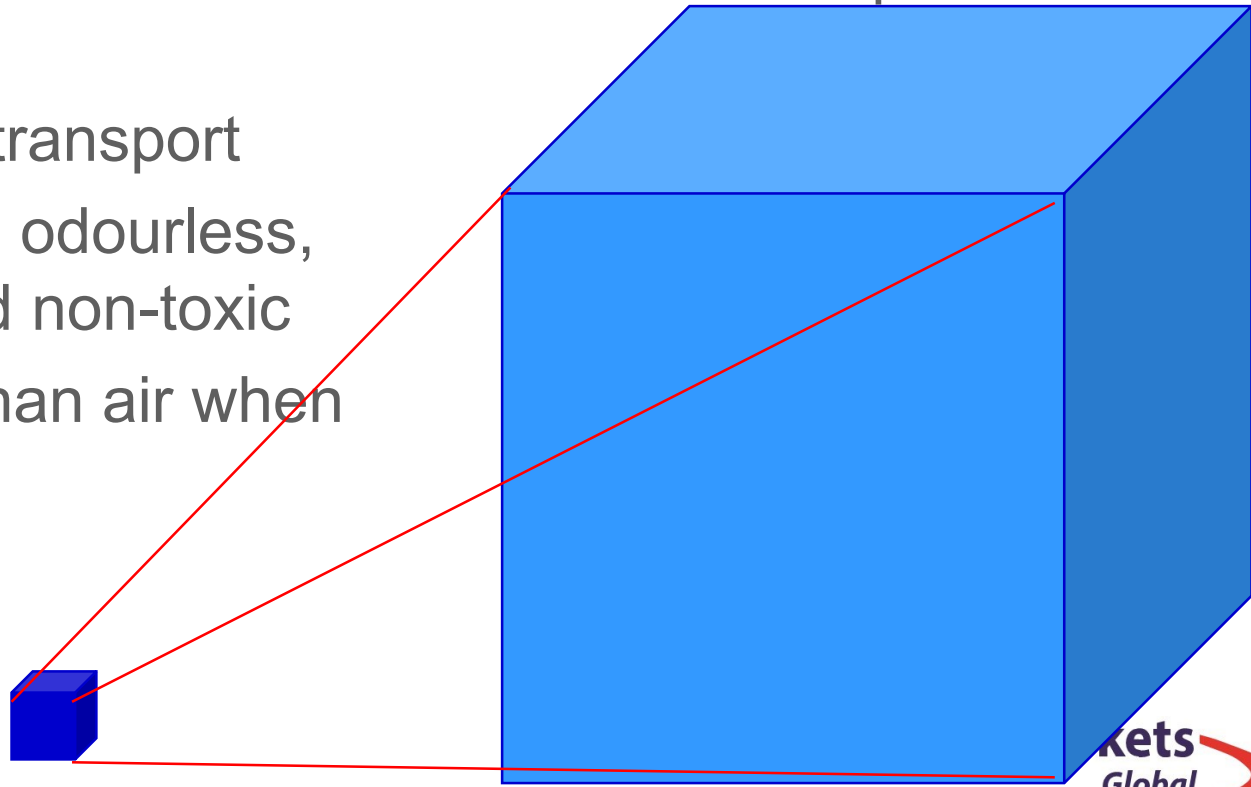
LNG and the LNG Value Chain

Some conversion factors

- 1 MT LNG = 1420 m³ NG equiv.
= 50108 ft³ NG equiv.
= 50.23 MMBTU
= 2.5 m³
- 1 m³ LNG = 600 m³ NG
= 22.19 MMBTU
- 1 m³ NG = 0.037 MMBTU
- 8-10% of NG is used to cool it to LNG

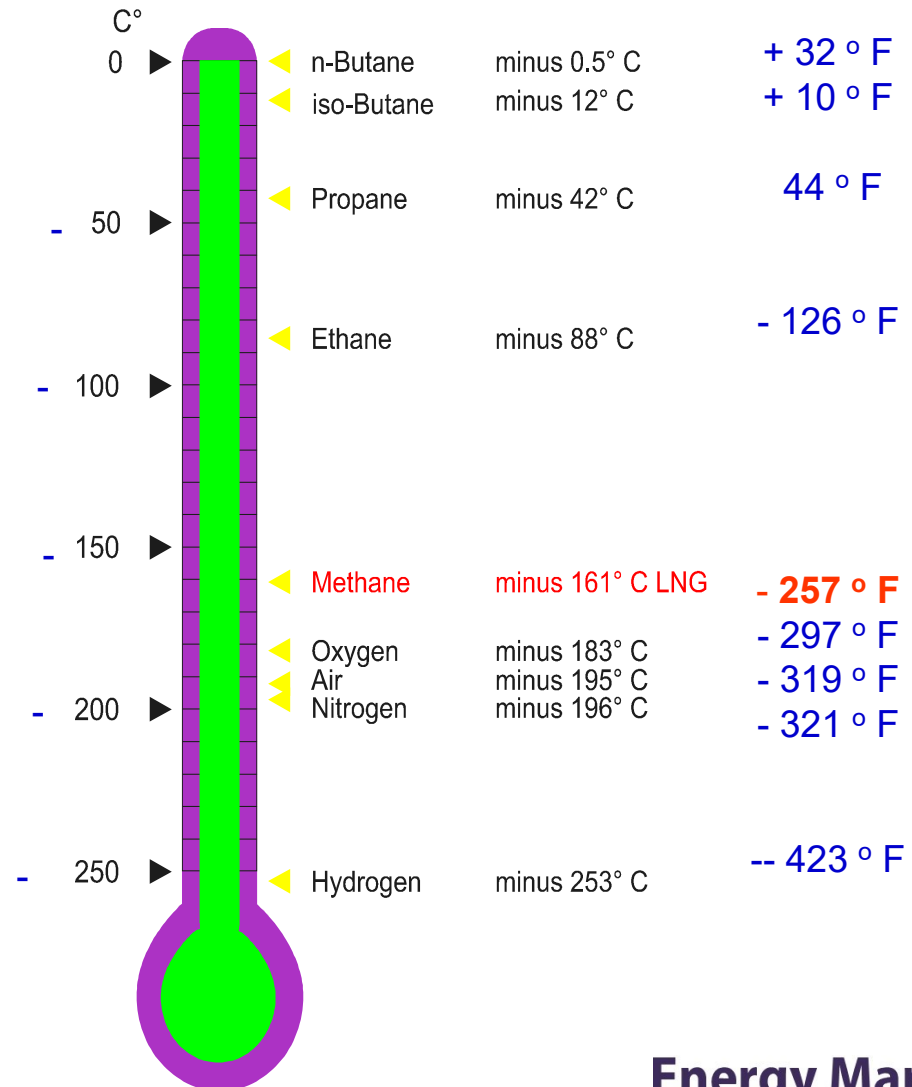
What Is LNG?

- LNG is natural gas which has been super-cooled to -161°C and changed from gas to liquid
- Liquefaction reduces volume by 600-to-1
- Stored cold in insulated containers at near atmospheric pressure
- Safe to store and transport
- LNG is colourless, odourless, non-corrosive, and non-toxic
- Becomes lighter than air when vapourised

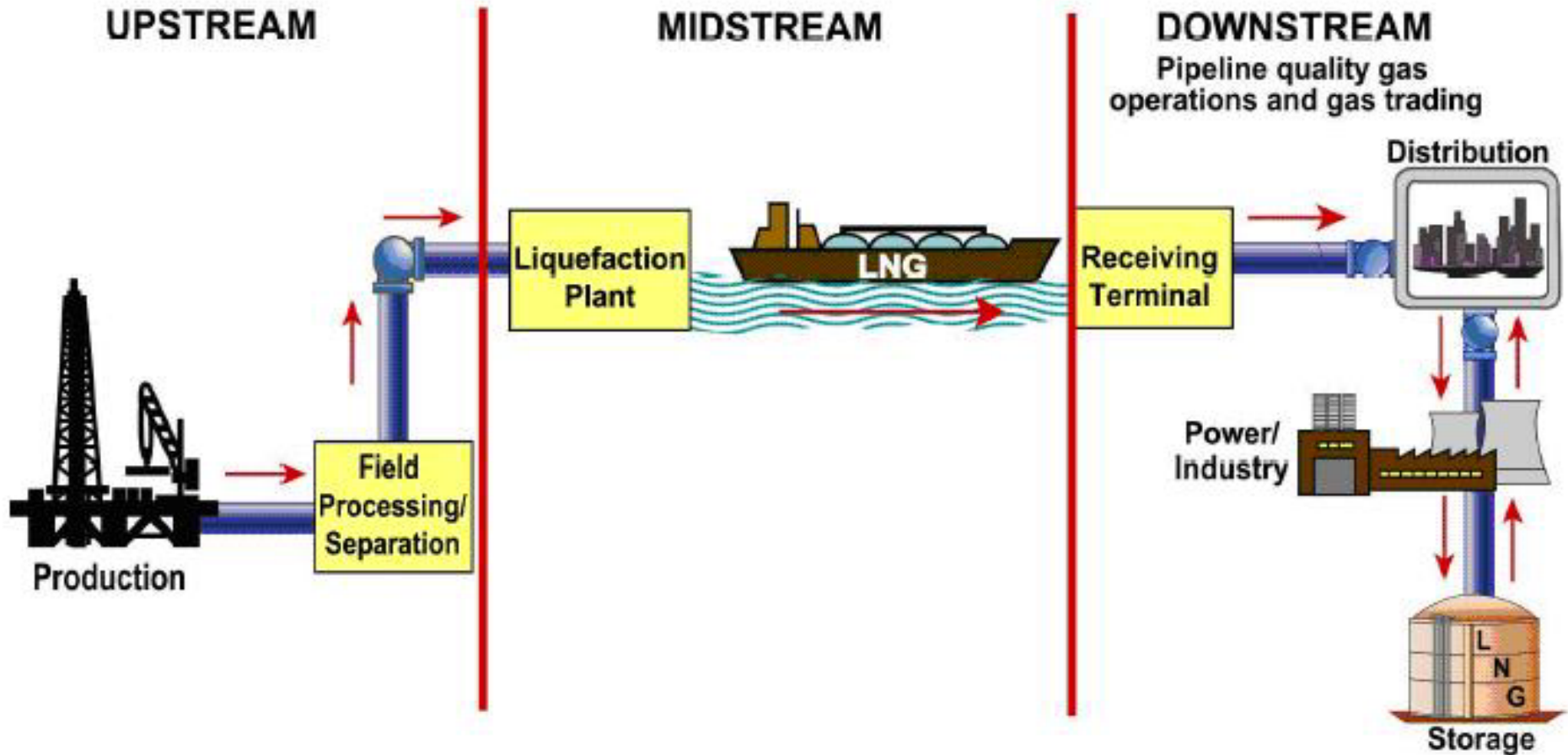


How Cold is LNG?

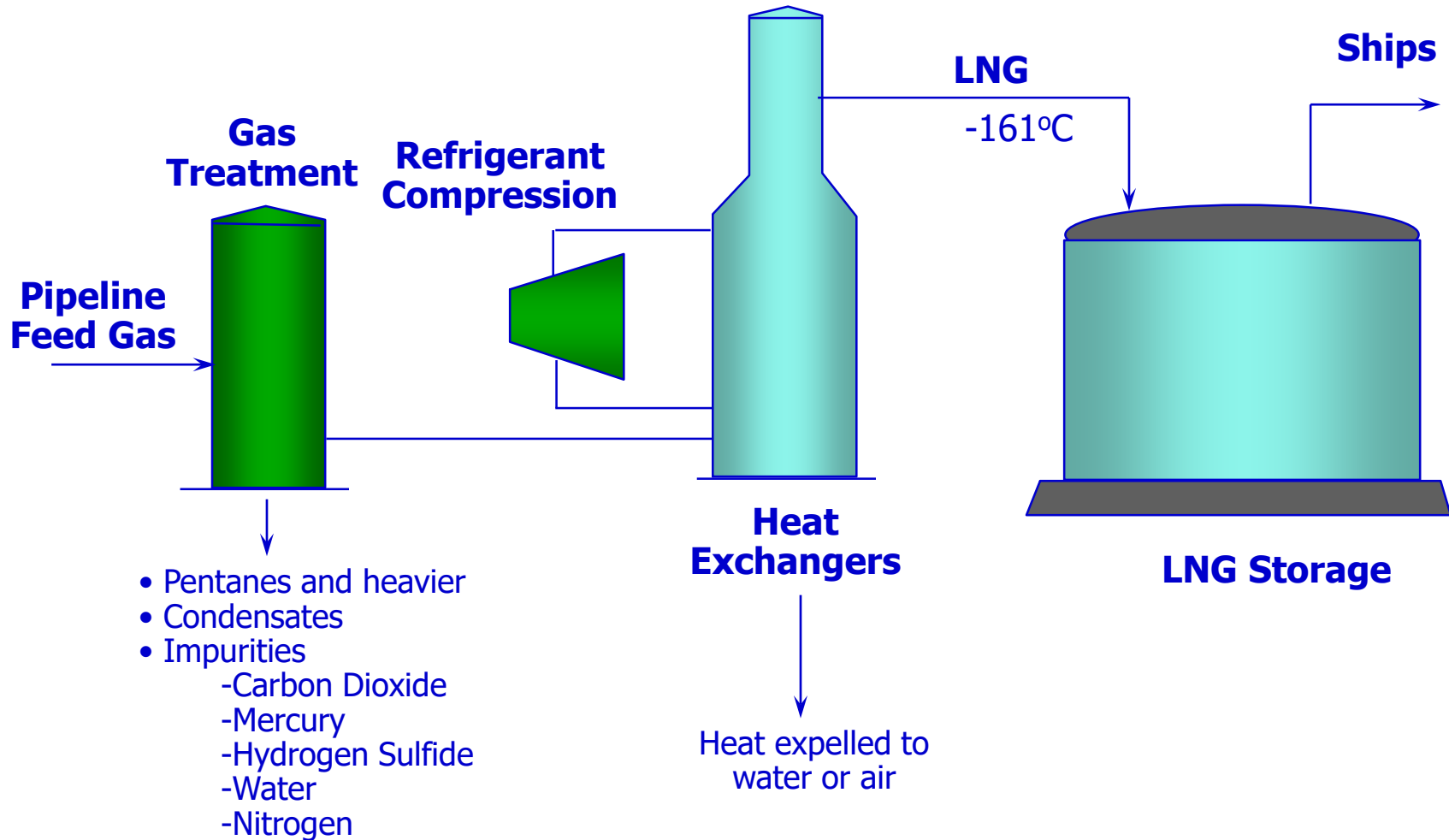
Liquid Temperatures at Atmospheric Pressure



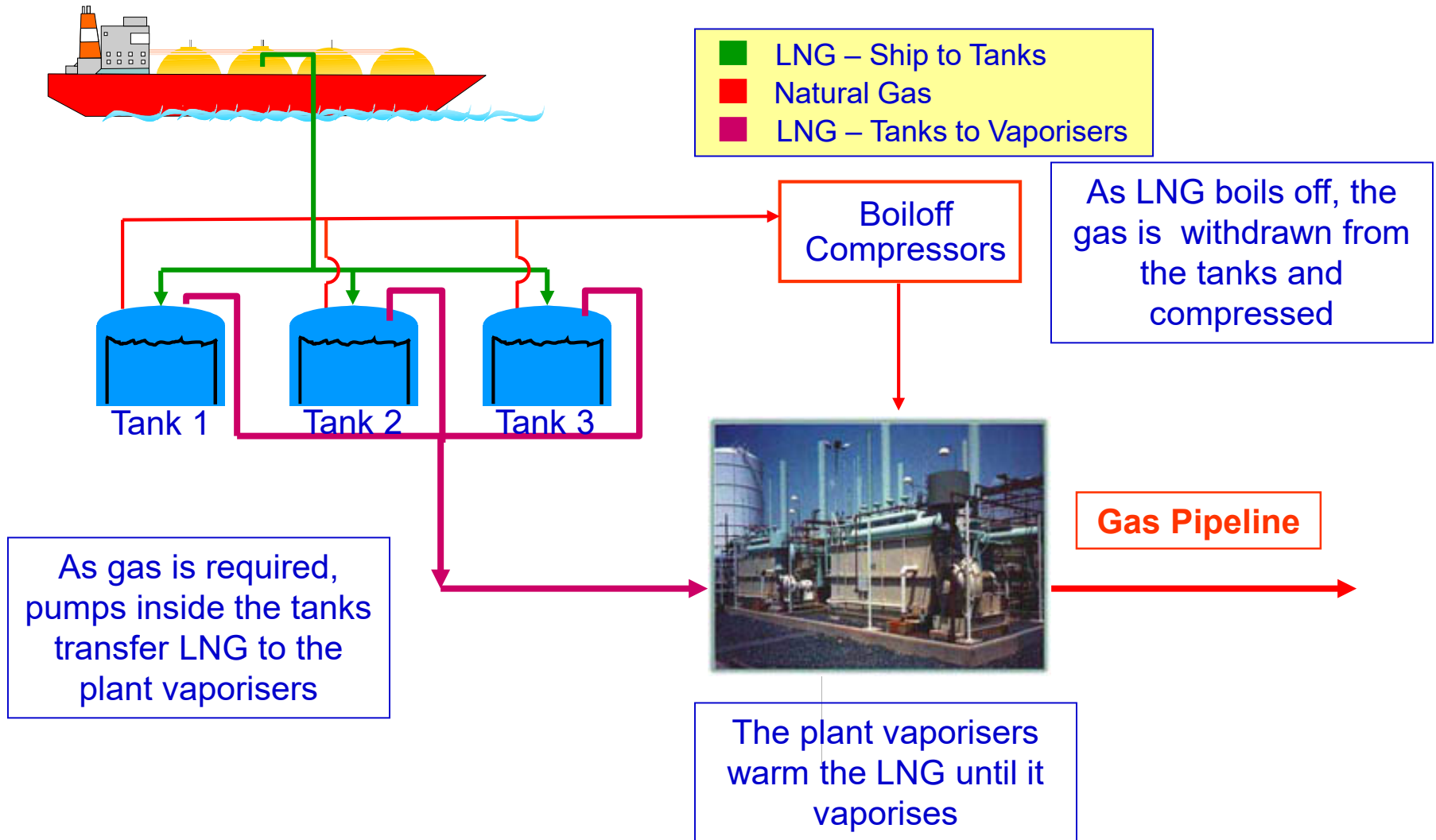
LNG Process Value Chain



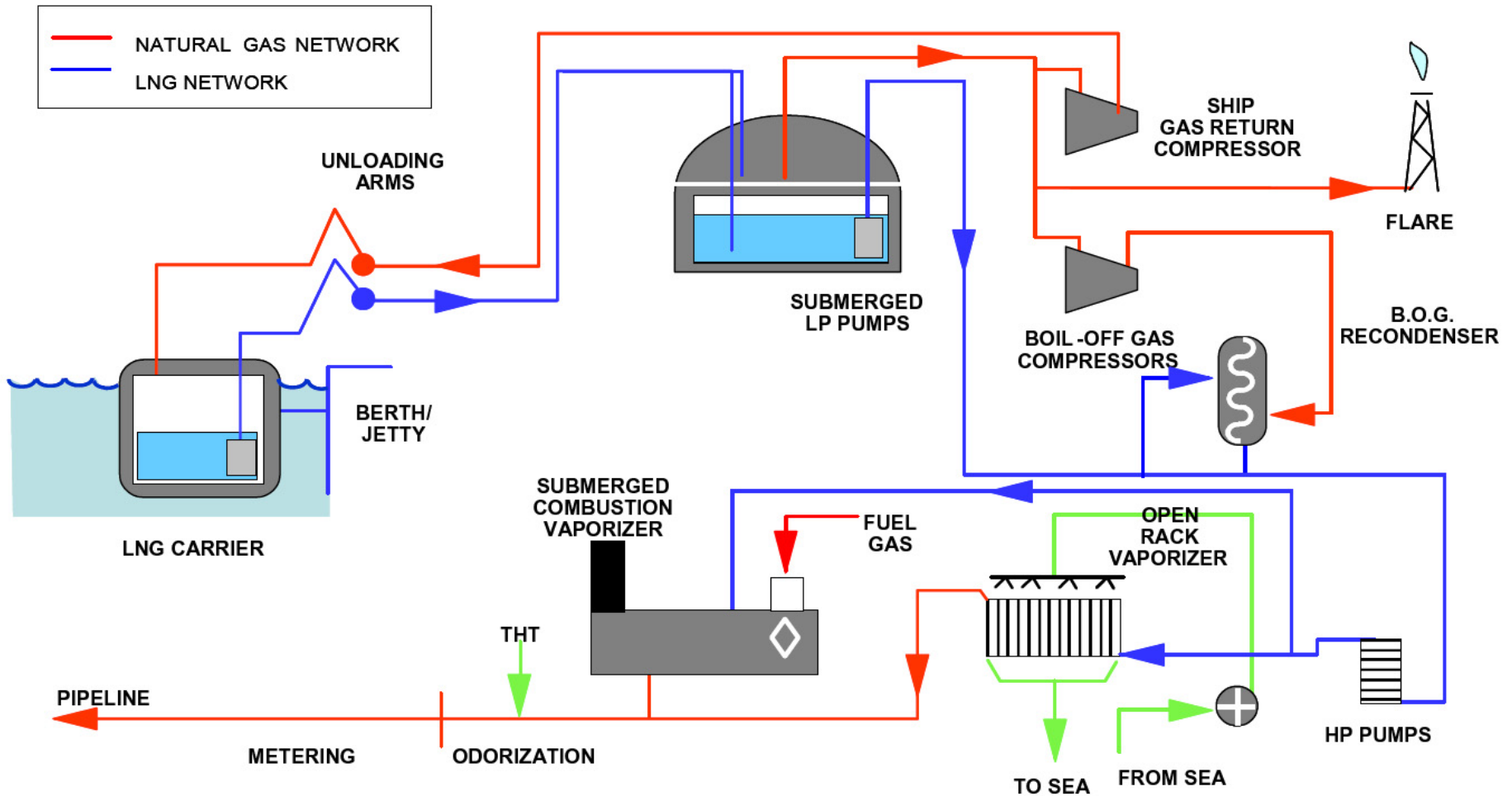
LNG Production Process



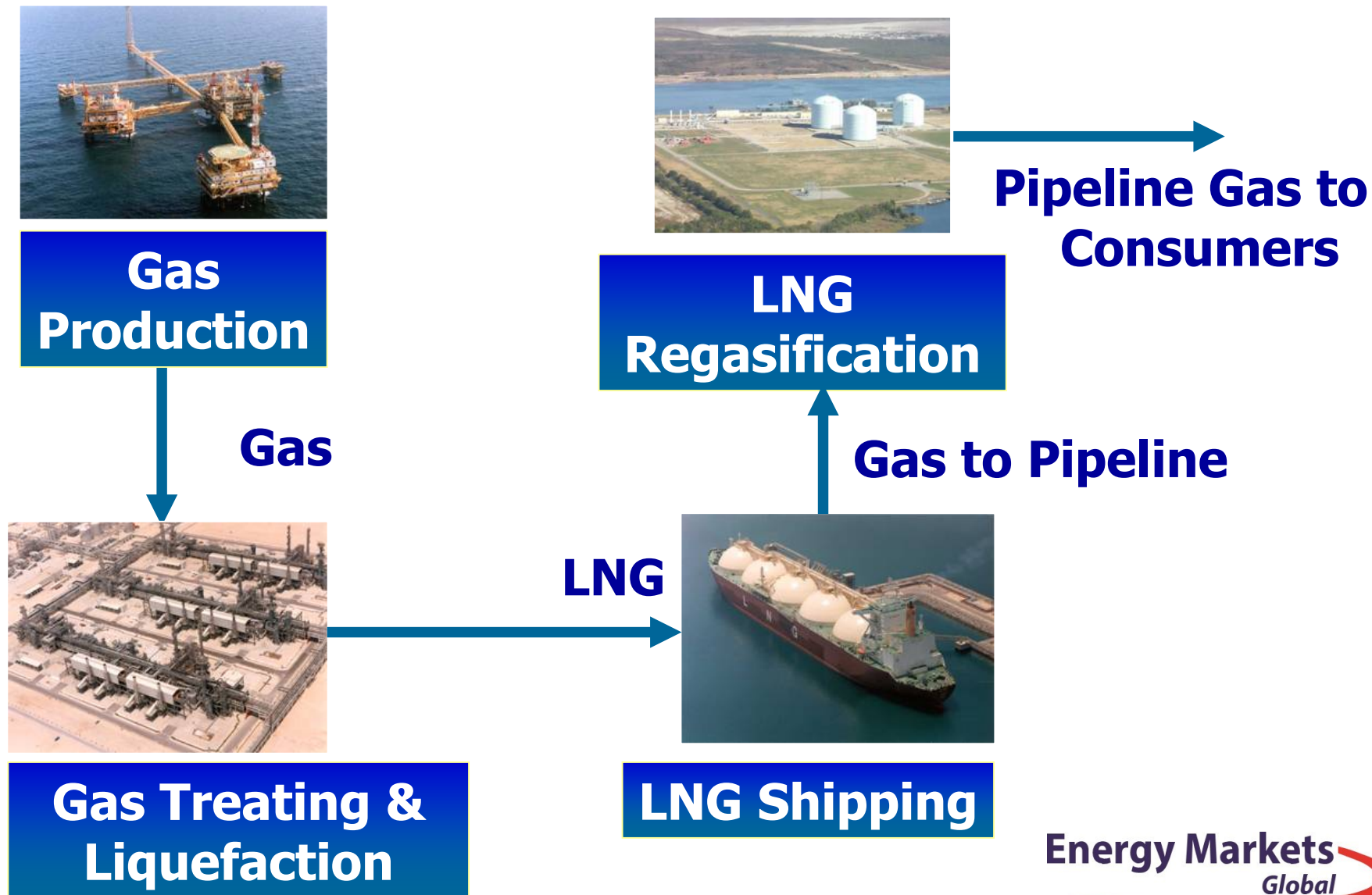
Receiving Terminal – LNG/Gas Flow



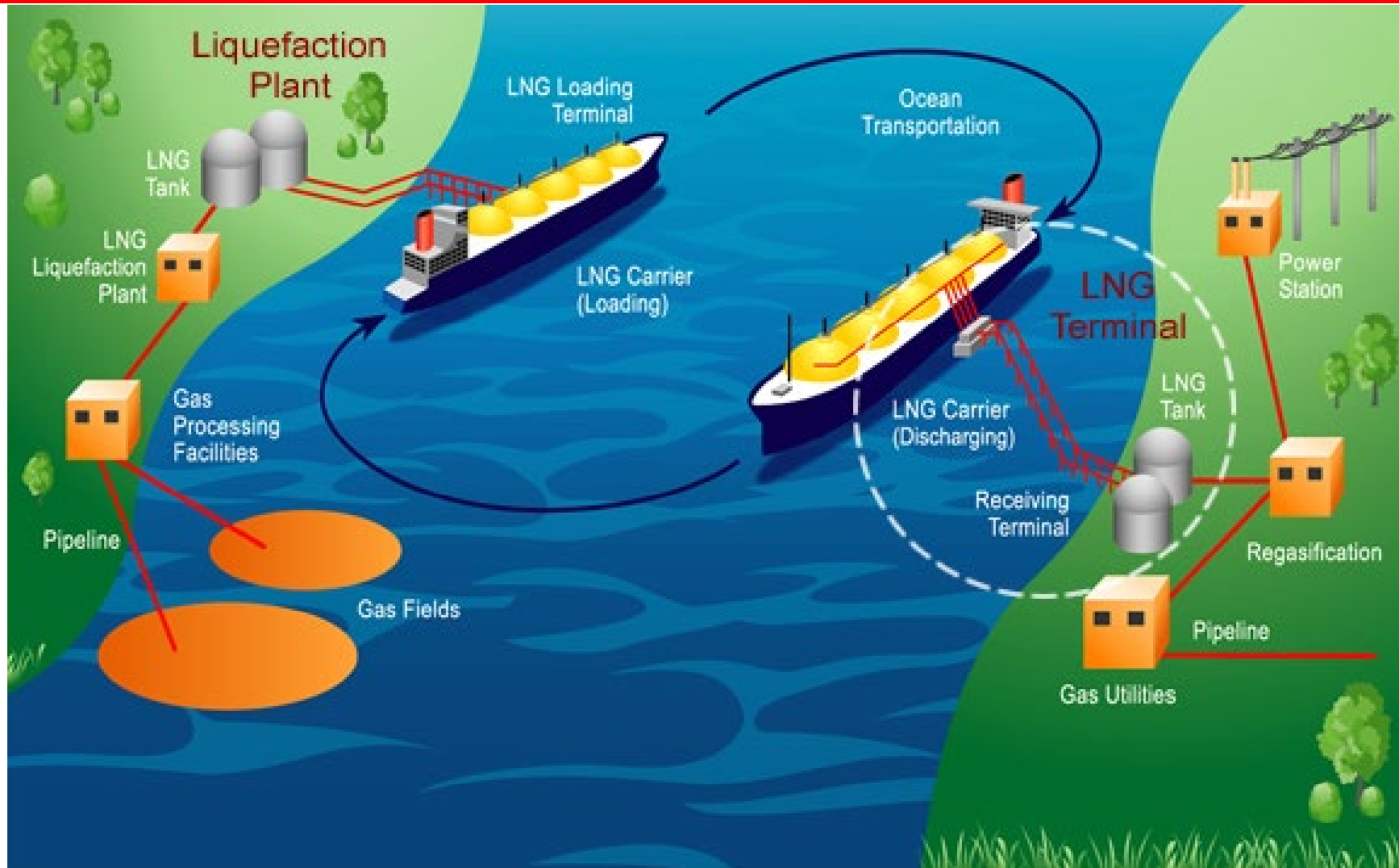
LNG Regasification Process



LNG Value Chain



LNG Value Chain



LNG Shipping

- Double-hulled ships
- LNG is stored in a special containment system within the inner hull
- Kept at atmospheric pressure at -161°C



LNG Ships – Membrane Design

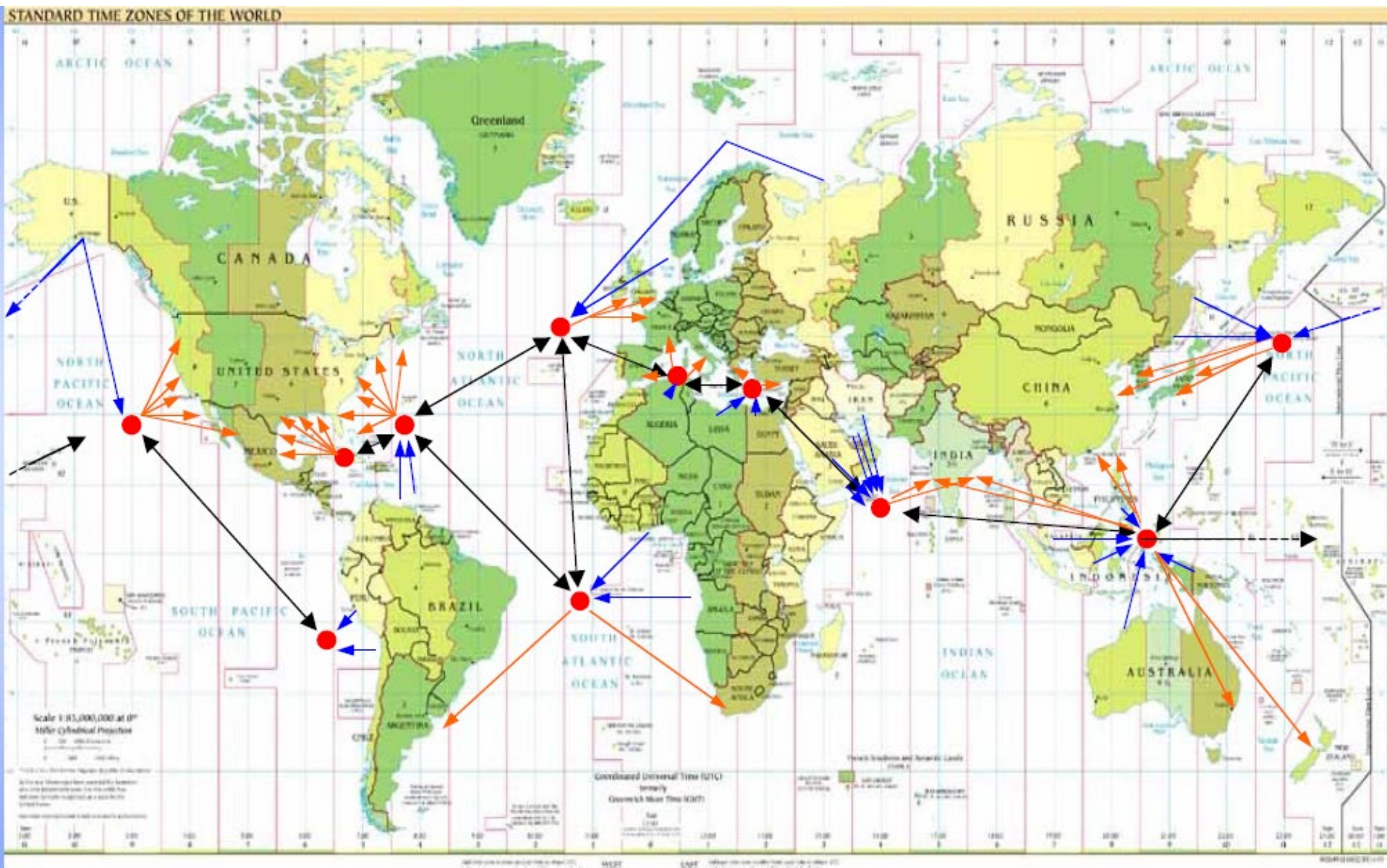


LNG Vessel – Moss Sphere Design



The traditional LNG industry worldwide

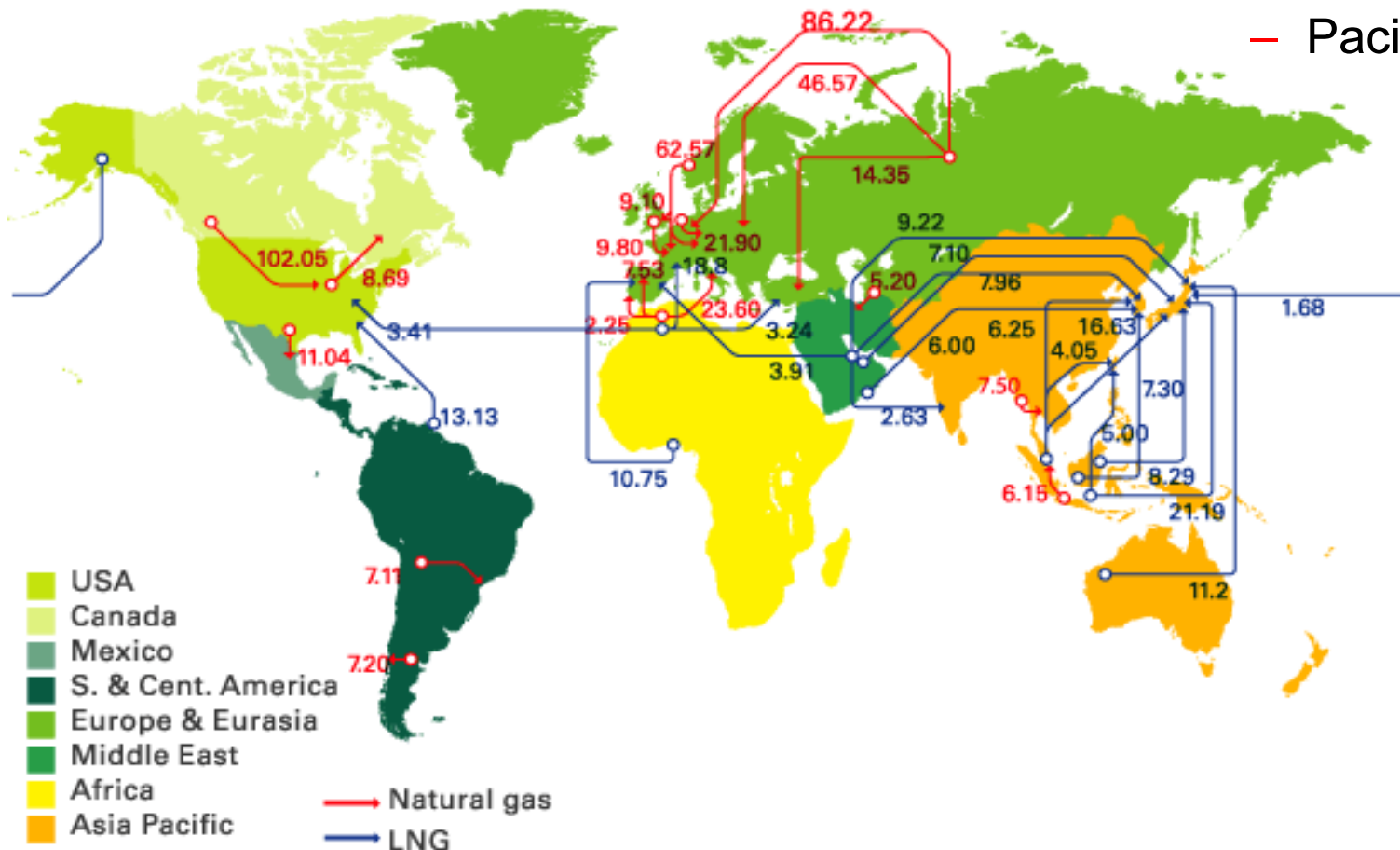
Global LNG Transportation Network



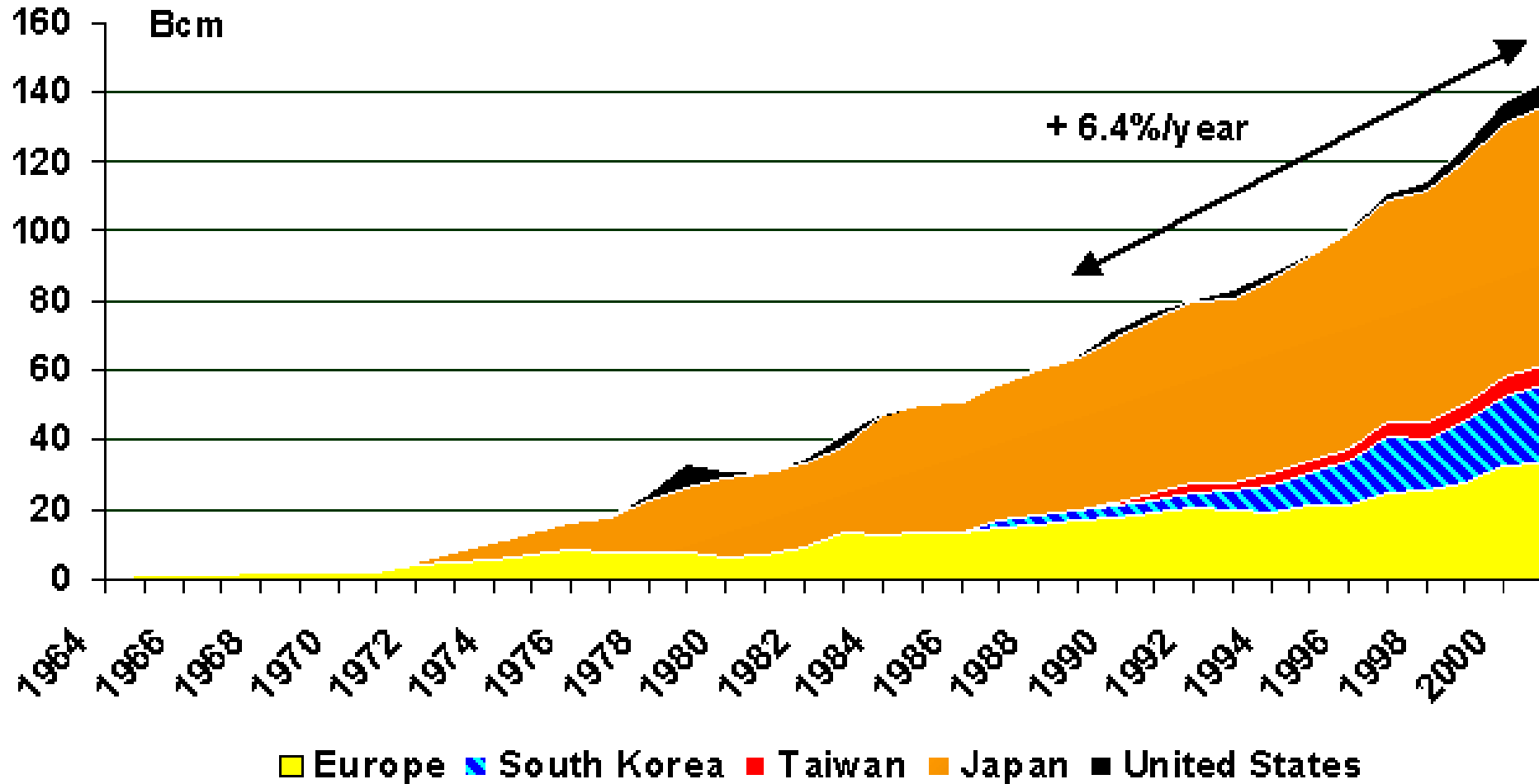
International Gas Trade Flows - 2004

- LNG is in two major basins
 - Atlantic Basin
 - Pacific Basin

Trade flows worldwide (billion cubic metres)



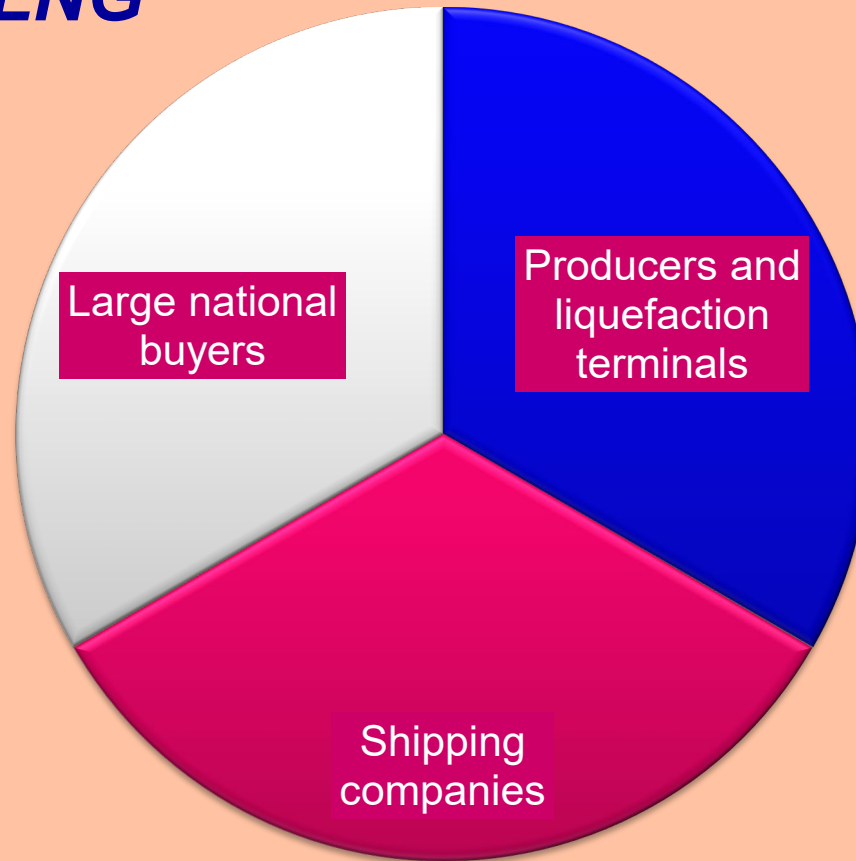
Historical LNG Import Trade



Source: CEDIGAZ, World Gas Industry, 2001

LNG: Traditional Industry Players

Traditional LNG Business



Traditional Industry Structure

- A few major players (few buyers and sellers)
 - Major producers and liquefaction terminals
 - Major LNG shipping companies
 - Major national buyers
- Contracts
 - Long term contracts (30 years, slowly moving to shorter term, 1-5 years)
 - Rigid clauses, destination clauses
- LNG trading
 - Very little
 - No standardised contracts
 - No financial trading (spot, futures, derivatives, hedging...)
- Pricing
 - Oil indexation
 - No transparent pricing
 - Negotiated for each long term contract

Drivers for change

New Developments – Floating LNG



Marine Liquefaction

Floating Storage and Regasification Unit

LNG by Truck



Source: Bioenergy International



Source: LOC Group

Barriers to and Drivers of Liquidity in LNG

- Barriers to liquidity
 - Concentration of players
 - LNG trading suitability
 - Rigidity of contractual terms
- Drivers for liquidity
 - Global economic growth
 - Energy efficiency
 - Excess capacity
 - New markets and new end users
 - Market liquidity

Drivers for Change

- Technology
 - FSRU (Floating Storage and Regasification Units)
 - FLNG (Floating Liquefied Natural Gas)
 - Q-Max tankers
 - LNG by truck
 - LNG bunkering (ship to ship)
- New centres of supply and demand
- New business models
- New players
- New trading patterns

- Each of these feed on the others and have implications for a whole new LNG industry

Three key factors drive trading markets

1. A market crisis or other major driver for change
2. Deliberate government action to create the environment for a market
3. The market then develops by itself

Characteristics of Energy Trading Markets

Energy Commodity Trading Markets and LNG

- Four types of energy trading market
 - Spot • ✓
 - Forward • ?
 - Futures • ?
 - Derivatives • X
- Other characteristics of energy trading
 - Entry of new players • ✓
 - Shorter-term and smaller contracts • ✓
 - Resale and secondary markets • ✓
 - Capacity trading • ?
 - Decline in take-or-pay commitments • ?
 - Spot and futures price indexation • ?

Drivers for LNG Trading

1. Many suppliers • ✓
2. Many customers • ✓
3. Customer pressure / Industry Crisis • ?
4. Diversity of supplies • ✓
5. Flexibility of supply • ✓
6. Weather variations • ✓
7. Storage • ✓
8. Network to network competition • ✓
9. Maturity of networks • X
10. Transmission constraints • X
11. Timing of industry restructuring • X

LNG: State of LNG Trading Markets

1. Market crisis

- Supply overhang
- New technology

2. Government actions (EU)

- Ship fuelling regulations
- Destination clauses
- Regulated regasification terminals

3. Market actions

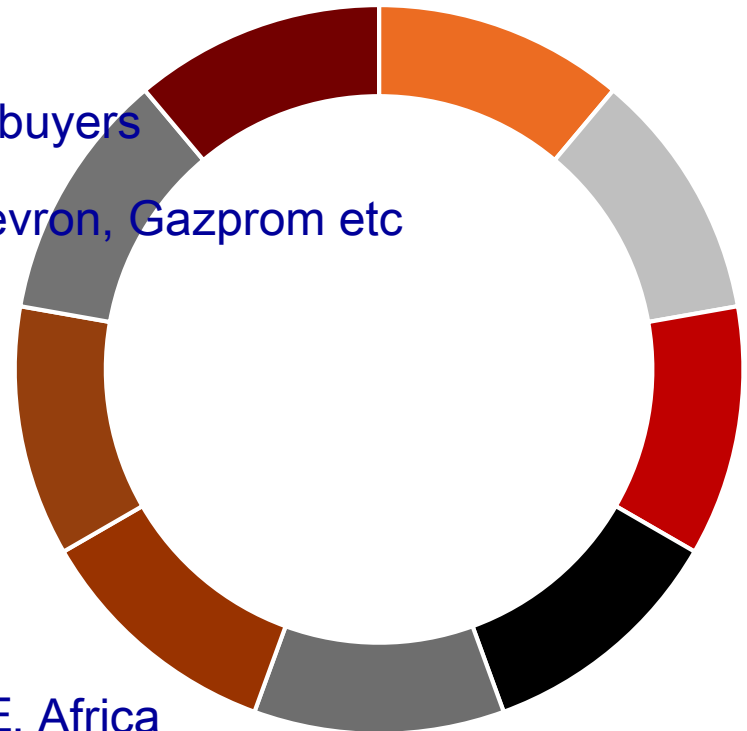
- New business models
- Luck (US shale gas)

New players

LNG: New industry players and business models

- Traditional producers - IOCs & NOCs
- Liquefaction terminals - JVs of producers and buyers
- Aggregators / portfolio players - Shell/BG, Chevron, Gazprom etc
- Shipping companies
- New US LNG companies - Cheniere
- Project developers - Höegh, Golar
- Traditional buyers - Japan, SK
- Emerging market national buyers – S Asia, ME, Africa
- New Traders: Swiss traders, Trafigura, Vitol, Glencore

LNG Chain



LNG: New Business Models bringing flexibility

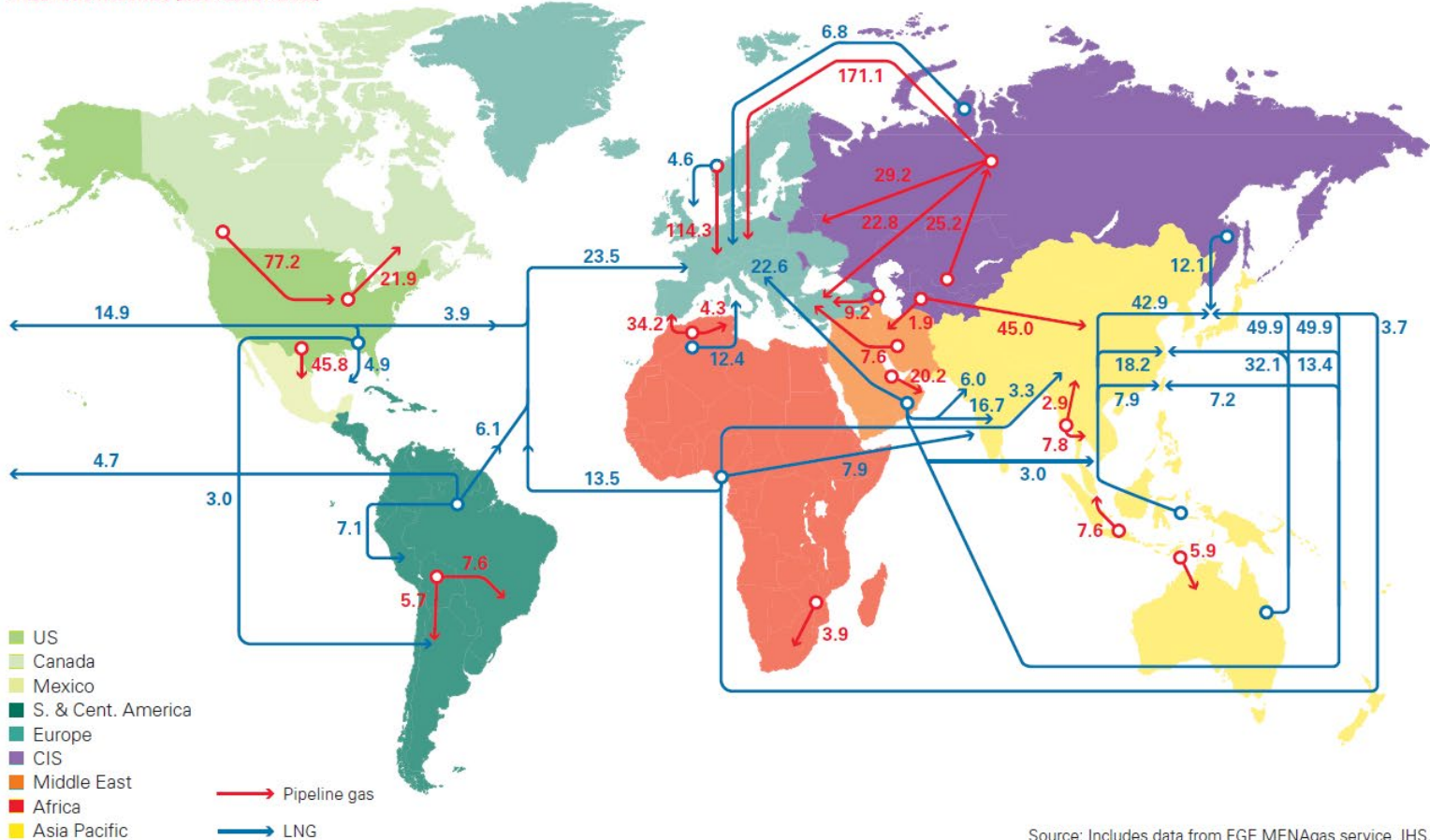


New emerging market buyers	<ul style="list-style-type: none">• FSRUs• National buyers with surplus supplies to resell
Contracts	<ul style="list-style-type: none">• Increasing take or pay flexibility• Buyers renegotiating prices• Exporters maintaining existing export contracts + contracting new domestic market imports
Infrastructure	<ul style="list-style-type: none">• Buyers buying stakes in liquefaction plants• Traders investing into infrastructure
Government actions	<ul style="list-style-type: none">• Hubs + Re-exports• Removal of destination clauses + shipping fuels + regulated regas

International Gas Trade Flows - 2018

Major trade movements 2018

Trade flows worldwide (billion cubic metres)



Source: Includes data from FGE MENAgas service, IHS.

Source: BP Statistical Review of World Energy, 2019

LNG pricing

LNG: Example – US DOE, US LNG Publication



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ENERGY | Fossil
Energy
OFFICE OF OIL & NATURAL GAS

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- Traditional players (IOCs) say LNG prices cannot be published
- Anti-competitive and destroys market
- Yet US LNG export prices are already published!

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VESSEL-BORNE EXPORTS OF DOMESTICALLY-PRODUCED LIQUEFIED NATURAL GAS (LNG)

Table 2a

Date of Departure	Name of Exporter	Supplier	Docket Number	Docket Term	Country of Destination	Name of Tanker	Departure Terminal	Volume (Mcf of Natural Gas)	Price at Export Point (\$/MMBtu)	Notes
1/7/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Japan	Methane Lydon Vorey	Sabine Pass LNG Terminal	3,111,137	\$ 3.72	
1/20/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Spain	Sestao Knutsen	Sabine Pass LNG Terminal	2,946,374	\$ 3.72	
1/4/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Clean Ocean	Sabine Pass LNG Terminal	3,455,279	\$ 7.52	(S)
1/9/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Malta	Gaslog Santiago	Sabine Pass LNG Terminal	867,340	\$ 4.52	(F)
1/9/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Jordan	Gaslog Santiago	Sabine Pass LNG Terminal	2,428,613	\$ 4.52	(F)
1/7/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Cool Voyager	Sabine Pass LNG Terminal	3,423,332	\$ 7.52	(S)
1/11/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	India	SCF Mitra	Sabine Pass LNG Terminal	3,022,568	\$ 4.52	
1/19/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Spain	Rioja Knutsen	Sabine Pass LNG Terminal	3,644,042	\$ 7.01	(S)
1/17/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Japan	Creole Spirit	Sabine Pass LNG Terminal	3,703,484	\$ 7.52	(S)
1/18/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Maran Gas Pericles	Sabine Pass LNG Terminal	3,025,173	\$ 4.52	(F)
1/18/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Maran Gas Pericles	Sabine Pass LNG Terminal	394,212	\$ 7.52	(F)(S)
1/24/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	China	Maran Gas Achilles	Sabine Pass LNG Terminal	3,391,087	\$ 4.52	
1/25/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Portugal	Golar Kalvin	Sabine Pass LNG Terminal	3,442,365	\$ 7.01	(S)
1/26/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Stena Crystal Sky	Sabine Pass LNG Terminal	3,706,516	\$ 7.52	(S)
1/28/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Spain	Methane Spirit	Sabine Pass LNG Terminal	3,411,662	\$ 7.00	(F)(S)(S)
1/29/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Japan	Maria Energy	Sabine Pass LNG Terminal	3,718,018	\$ 7.52	(S)
1/31/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Jordan	Galea	Sabine Pass LNG Terminal	2,039,021	\$ 7.52	(S)
2/2/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Portugal	Clean Ocean	Sabine Pass LNG Terminal	1,691,600	\$ 6.90	(F)(S)
2/2/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Spain	Clean Ocean	Sabine Pass LNG Terminal	1,765,661	\$ 6.90	(F)(S)
2/3/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Turkey	La Mancha Knutsen	Sabine Pass LNG Terminal	3,705,488	\$ 6.99	(S)
2/5/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	India	Pala LNG	Sabine Pass LNG Terminal	3,399,239	\$ 3.90	
2/9/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Mexico	Cool Voyager	Sabine Pass LNG Terminal	3,427,498	\$ 7.07	(F)(S)
2/11/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Turkey	Oak Spirit	Sabine Pass LNG Terminal	3,696,672	\$ 6.90	(S)
2/12/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	China	Maran Gas Amphipolis	Sabine Pass LNG Terminal	3,464,663	\$ 3.90	
2/14/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Rioja Knutsen	Sabine Pass LNG Terminal	3,606,218	\$ 6.99	(S)
2/15/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Chile	Gemmas	Sabine Pass LNG Terminal	2,950,188	\$ 6.90	(S)
2/17/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	China	Maran Gas Pericles	Sabine Pass LNG Terminal	3,444,825	\$ 3.90	
2/20/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Mexico	Ribera del Duero	Sabine Pass LNG Terminal	3,667,663	\$ 5.33	(F)(S)
2/20/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Kuwait	Golar Penguin	Sabine Pass LNG Terminal	3,378,113	\$ 5.29	(F)
2/23/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Jordan	Madrid Spirit	Sabine Pass LNG Terminal	2,944,820	\$ 3.90	
2/24/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Mexico	Stena Crystal Sky	Sabine Pass LNG Terminal	3,705,611	\$ 5.99	(F)(S)
2/26/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Japan	Stena Clear Sky	Sabine Pass LNG Terminal	3,705,036	\$ 6.90	(S)
2/28/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	China	Clean Planet	Sabine Pass LNG Terminal	3,428,365	\$ 6.99	(S)
3/2/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	South Korea	Gaslog Gibraltar	Sabine Pass LNG Terminal	3,583,666	\$ 3.02	
3/6/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Mexico	Cool Voyager	Sabine Pass LNG Terminal	3,404,694	\$ 5.10	(F)(S)
3/9/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Jordan	Maran Gas Apollonia	Sabine Pass LNG Terminal	3,358,596	\$ 3.02	
3/12/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Jordan	Golar Kalvin	Sabine Pass LNG Terminal	3,296,471	\$ 5.51	(S)
3/15/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Pakistan	Gaslog Skagen	Sabine Pass LNG Terminal	3,165,927	\$ 3.02	
3/17/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	South Korea	Clean Ocean	Sabine Pass LNG Terminal	3,457,554	\$ 4.34	(F)(S)
3/19/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Turkey	Oak Spirit	Sabine Pass LNG Terminal	3,520,905	\$ 4.42	(F)
3/20/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Dominican Republic	GOF Suez Point Fortin	Sabine Pass LNG Terminal	2,933,786	\$ 5.37	(F)
3/22/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Thailand	Methane Alison Victoria	Sabine Pass LNG Terminal	3,112,643	\$ 3.02	
3/24/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	15-171-LNG	Short-Term	Mexico	Creole Spirit	Sabine Pass LNG Terminal	3,707,229	\$ 4.54	(F)(S)
3/28/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Mexico	Rioja Knutsen	Sabine Pass LNG Terminal	3,615,696	\$ 5.51	(S)
3/30/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-111-LNG	Long-Term	Kuwait	Valencia Knutsen	Sabine Pass LNG Terminal	3,360,169	\$ 3.02	
3/30/2017	Sabine Pass Liquefaction, LLC	Sabine Pass Liquefaction, LLC	10-85-LNG	Long-Term	Chile	Galina	Sabine Pass LNG Terminal	2,951,103	\$ 6.02	(S)

[S] Spot - a one-time transaction for near-term delivery of a specific quantity of LNG at a specific location. Prior to 2006, spot cargos could be included in either long-term or short-term authorization types.

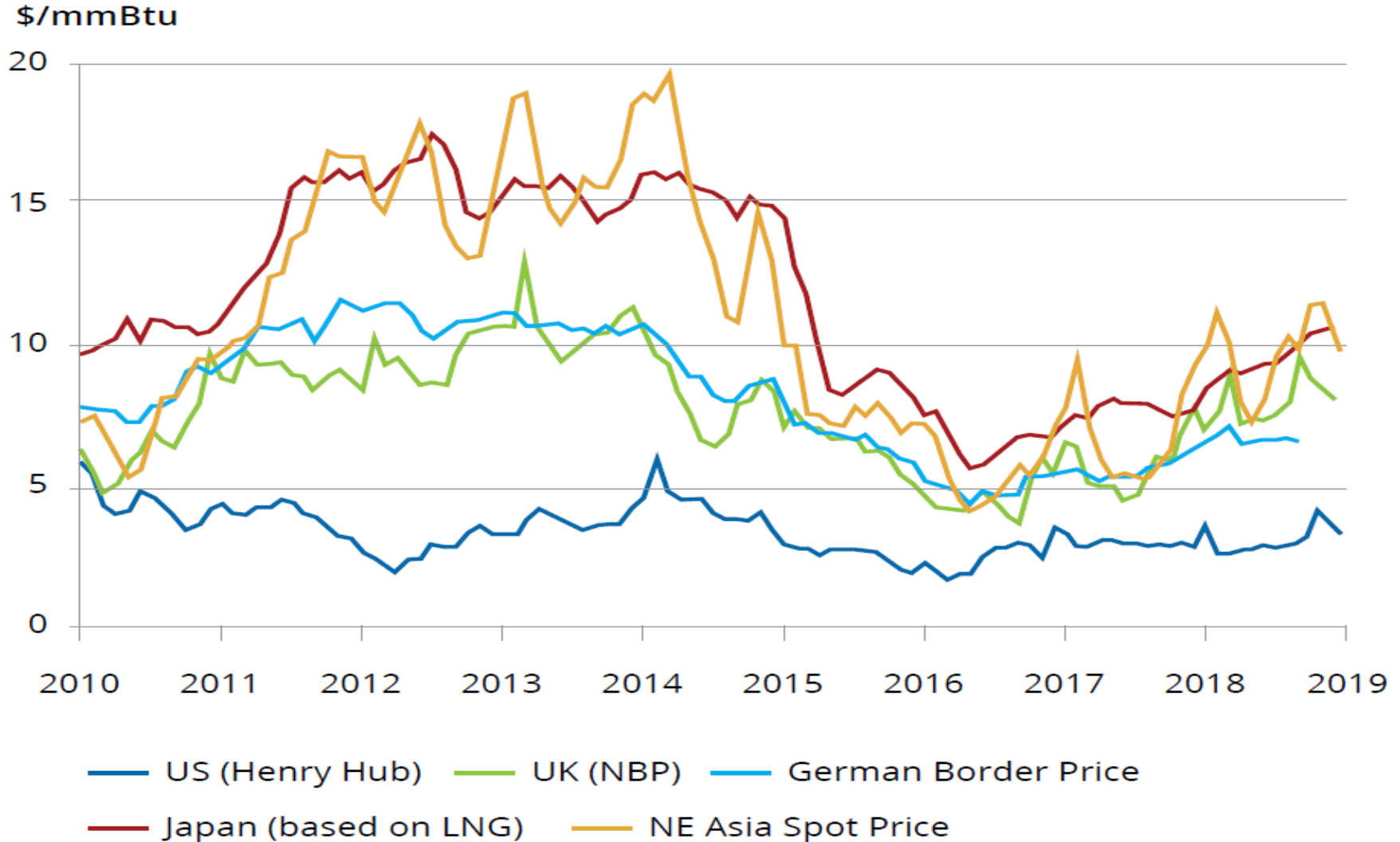
[F] Split cargo - a single shipment of LNG where portions of the cargo have different transactional characteristics. For instance, a single cargo can have more than one buyer, supplier, price, unloading port, or DOE authorization.

[C] Commissioning cargo - pre-commercial cargo loaded while export facility operations are still undergoing final testing and inspection. Commissioning cargos may occur multiple times for the same facility as individual LNG trains enter service.

[L] Liquefaction fees - liquefaction fees have been included in the cargo's price. Export prices for cargos made pursuant to long-term sales and purchase agreements (SPAs) or contracts do not include liquefaction fees unless indicated.

Countries of destination are current as of publication date. Any updates to countries of destination reported will be published in the next scheduled LNG Monthly.

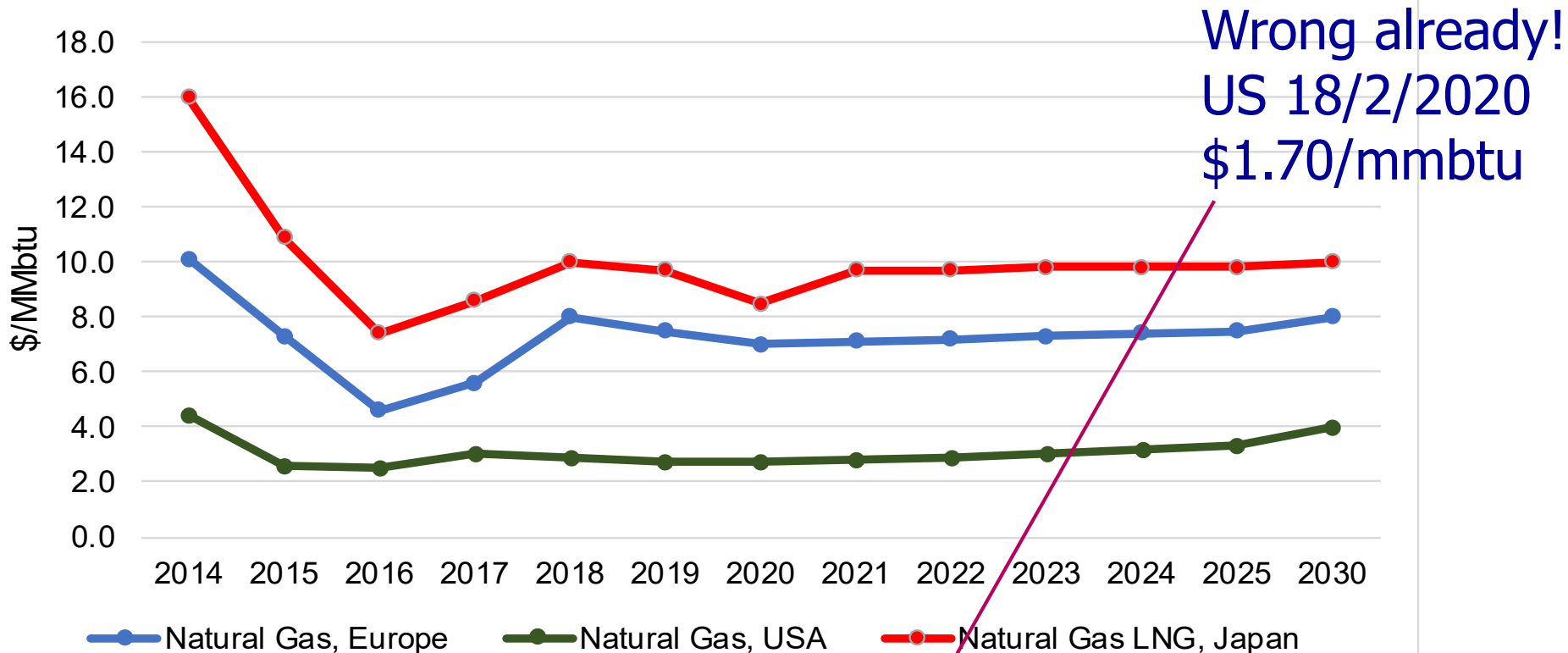
Monthly Average Regional Gas Prices, 2010-2018



Source: IGU 2017 World LNG Report, based on IHS Markit, Cedigaz, US DOE

World Bank Gas Price Forecast, 2014-2030

World Bank Gas Price Forecast (USD/MMbtu)



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030
Natural Gas, Europe	10.1	7.3	4.6	5.6	8.0	7.5	7.0	7.1	7.2	7.3	7.4	7.5	8.0
Natural Gas, USA	4.4	2.6	2.5	3.0	2.9	2.7	2.7	2.8	2.9	3.0	3.2	3.3	4.0
Natural Gas LNG, Japan	16.0	10.9	7.4	8.6	10.0	9.7	8.5	9.7	9.7	9.8	9.8	9.8	10.0

Source: Data: World Bank Commodities Price Forecast, October 29, 2018; Analysis: EMG

The future

EMG LNG Predictions

- LNG will become like oil
 - An internationally traded product, hubs, pricing points
- Supply will exceed supply for the 2020s
- Large demand growth in emerging markets
- US becomes the world marginal + largest supplier
- Europe a commercial battleground
 - US LNG versus Russian PNG
- US Henry Hub LNG will set / influence LNG prices worldwide
- New technologies
 - Ship to ship bunkering
 - LNG by truck
 - Lower costs liquefaction, shipping and regas
 - Financial derivatives products

Forecasts of LNG Supplies

Total Global LNG Capacity (million tonnes LNG)

Group	Number	Capacity MMT	Cumulative Capacity MMT	Global 2015	Global 2020	Global 2025	Global Cumulative 2015	Global Cumulative 2020	Global Cumulative 2025	Europe 2015	Europe 2020	Europe 2025	Europe Cumulative 2015	Europe Cumulative 2020	Europe Cumulative 2025
Capacity 2016	49	338.60	338.60	338.6	338.6	338.6	338.6	338.6	338.6	55.0	55.0	55.0	55.0	55.0	55.0
Under Construction / FID	13	93.45	432.05	0.0	93.5	93.5	338.6	432.1	432.1	0.0	28.0	28.0	55.0	83.0	83.0
Speculative 2025	30	242.37	674.42	0.0	0.0	242.4	338.6	432.1	674.4	0.0	0.0	32.0	55.0	83.0	115.0
Cancelled	9	46.90	721.32	0.0	0.0	46.9	338.6	432.1	721.3	0.0	0.0	0.0	55.0	83.0	115.0
Total	101	721.3		338.6	432.1	721.3				55.0	83.0	115.0			

Total Global LNG Capacity (GWh LNG)

Group	Number	Capacity GWh	Cumulative Capacity GWh	Global 2015	Global 2020	Global 2025	Global Cumulative 2015	Global Cumulative 2020	Global Cumulative 2025	Europe 2015	Europe 2020	Europe 2025	Europe Cumulative 2015	Europe Cumulative 2020	Europe Cumulative 2025
Capacity 2016	49	14,143	14,143	14,143	14,143	14,143	14,143	14,143	14,143	2,297	2,297	2,297	2,297	2,297	2,297
Under Construction / FID	13	3,903	18,047	-	3,903	3,903	14,143	18,047	18,047	-	1,170	1,170	2,297	3,467	3,467
Speculative 2025	30	10,124	28,171	-	-	10,124	14,143	18,047	28,171	-	-	1,337	2,297	3,467	4,804
Cancelled	9	1,959	30,130	-	-	1,959	14,143	18,047	30,130	-	-	-	2,297	3,467	4,804
Total	101	30,130		14,143	18,047	30,130				2,297	3,467	4,804			

Note, Conversion

1 mm tonne LNG =	15,110 GWh
	41.77 GWh/day

Source: EMG LNG Supplies Database

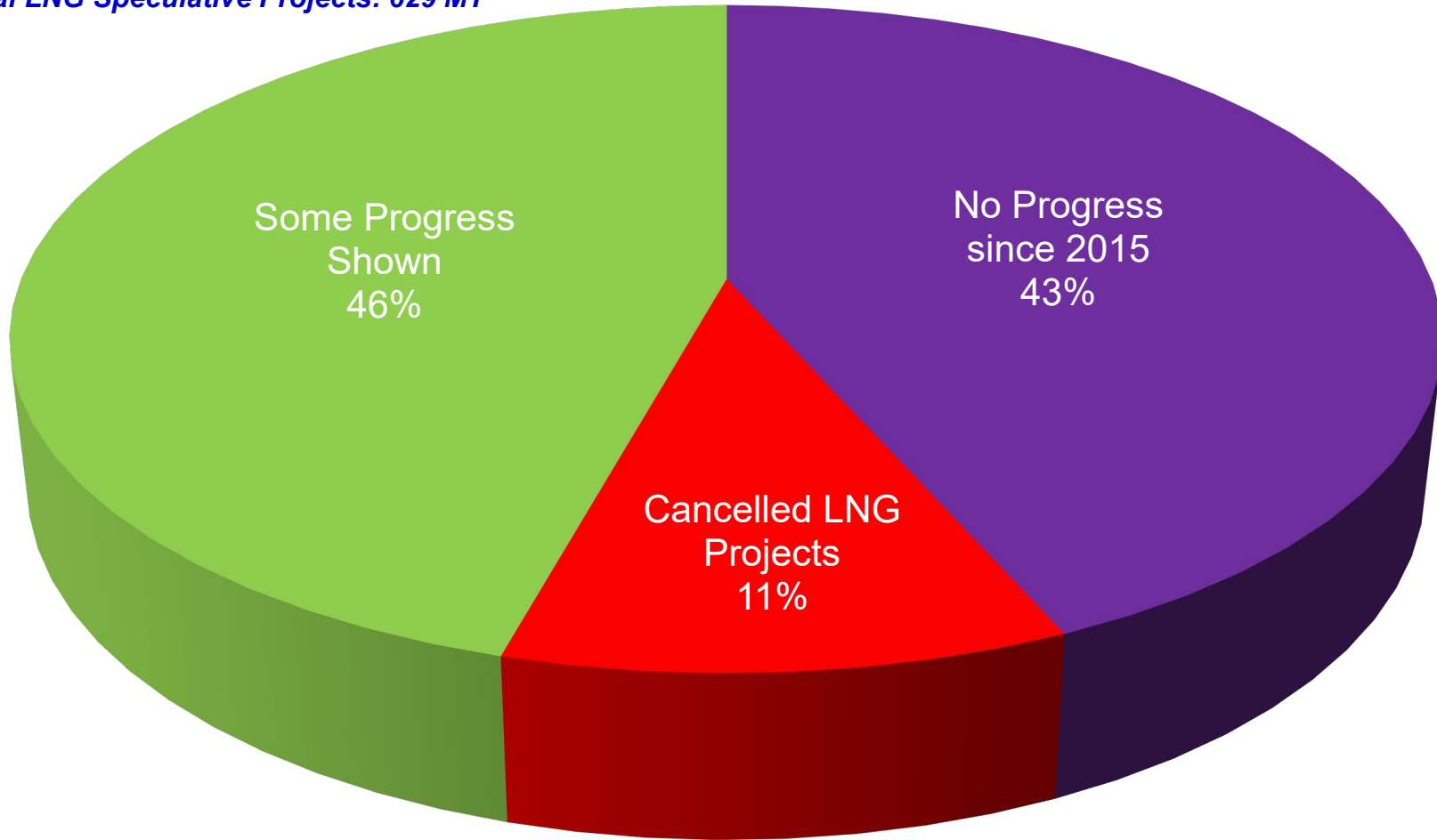
Assumptions for LNG Supply Forecasts

- Pacific Basin supplies supply Asia only
- Existing liquefaction plants
 - Supplies to markets are average of last five years
- Under construction / FID taken
 - Atlantic Basin supplies are to owners in approximate proportion to their ownership in long term contracts
 - Remaining (uncommitted) Atlantic Basin supplies are 30% to Latin America and 70% to Europe
 - Mozambique and Yemen supplies are 20% to Europe
- Speculative
 - 50% probability will proceed
 - 75% probability for US converted Import Terminals and expansions
 - 90% probability for US plants with contracted buyers in place

Speculative LNG Projects

March - Sep 2017

Total LNG Speculative Projects: 629 MT



Some Progress Shown: 287.8 MT

No Progress since 2015: 273.5 MT

Cancelled LNG Projects: 68 MT

Afghanistan Gas Price – Henry Hub +



Henry Hub Pricing to Northern Pakistan

Henry Hub + Liquefaction + Transportation
\$2.6 + \$2.8 + \$1.5 (MMBTU)

Source: EMG



Thank you!

Any Questions?

Email: enquiries@energymarketsglobal.eu