Shell
LNG
TOMORROW'S FUEL TODAY

Great Lakes Maritime Research Institute & Duluth Seaway Port Authorities

May 21,2013

Troy Geiger & Kent Watt
LNG for Transport - Americas

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DEFINITIONS AND CAUTIONARY NOTE

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 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 announcement "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. These expressions are also used where no useful purpose is served by identifying the particular company or companies. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this announcement refer to companies in which Shell either directly or indirectly has control, by having either a majority of the voting rights or the right to exercise a controlling influence. The companies in which Shell has significant influence but not control are referred to as "associated companies" or "associates" and companies in which Shell has joint control are referred to as "jointly controlled entities". In this announcement, associates and jointly controlled entities are also referred to as "equity-accounted investments". The term "Shell interest" is used for convenience to indicate the direct and/or indirect (for example, through our 23 per cent shareholding in Woodside Petroleum Ltd.) ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

This announcement contains forward looking statements concerning the financial condition, results of operations and businesses of Shell and the Shell Group. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell and the Shell Group to market risks and statements expressing management’s expectations, beliefs, estimates, forecasts, projections and assumptions. These forward looking statements are identified by their use of terms and phrases such as "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and the Shell Group and could cause those results to differ materially from those expressed in the forward looking statements included in this announcement, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. All forward looking statements contained in this announcement are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward looking statements. Additional factors that may affect future results are contained in Shell's 20-F for the year ended 31 December 2012 (available at www.shell.com/investor and www.sec.gov). These factors also should be considered by the reader. Each forward looking statement speaks only as of the date of this announcement, 21 May 2013. Neither Shell nor any of its subsidiaries nor the Shell Group undertake any obligation to publicly update or revise any forward looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward looking statements contained in this announcement.

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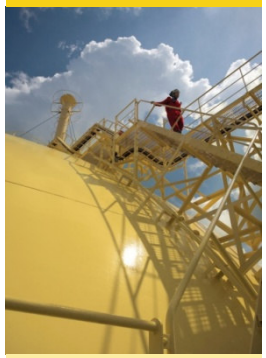
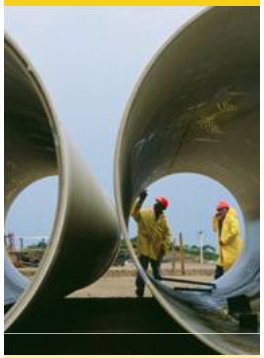
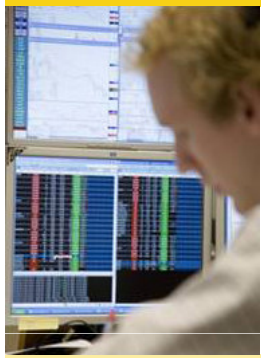
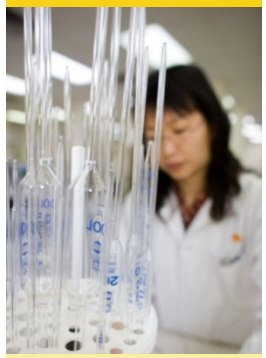
INTEGRATED NATURAL GAS LEADERSHIP

Exploration & Production	Liquefaction	LNG Shipping	Regas, pipelines, storage	Marketing & trading	Technology
					
One of the world's largest gas producers	Largest LNG supplier	Largest ship operator	Strategic positions, active portfolio management	Global positions and capabilities	Leader in LNG and gas conversion technologies

Note: Among International Oil Companies

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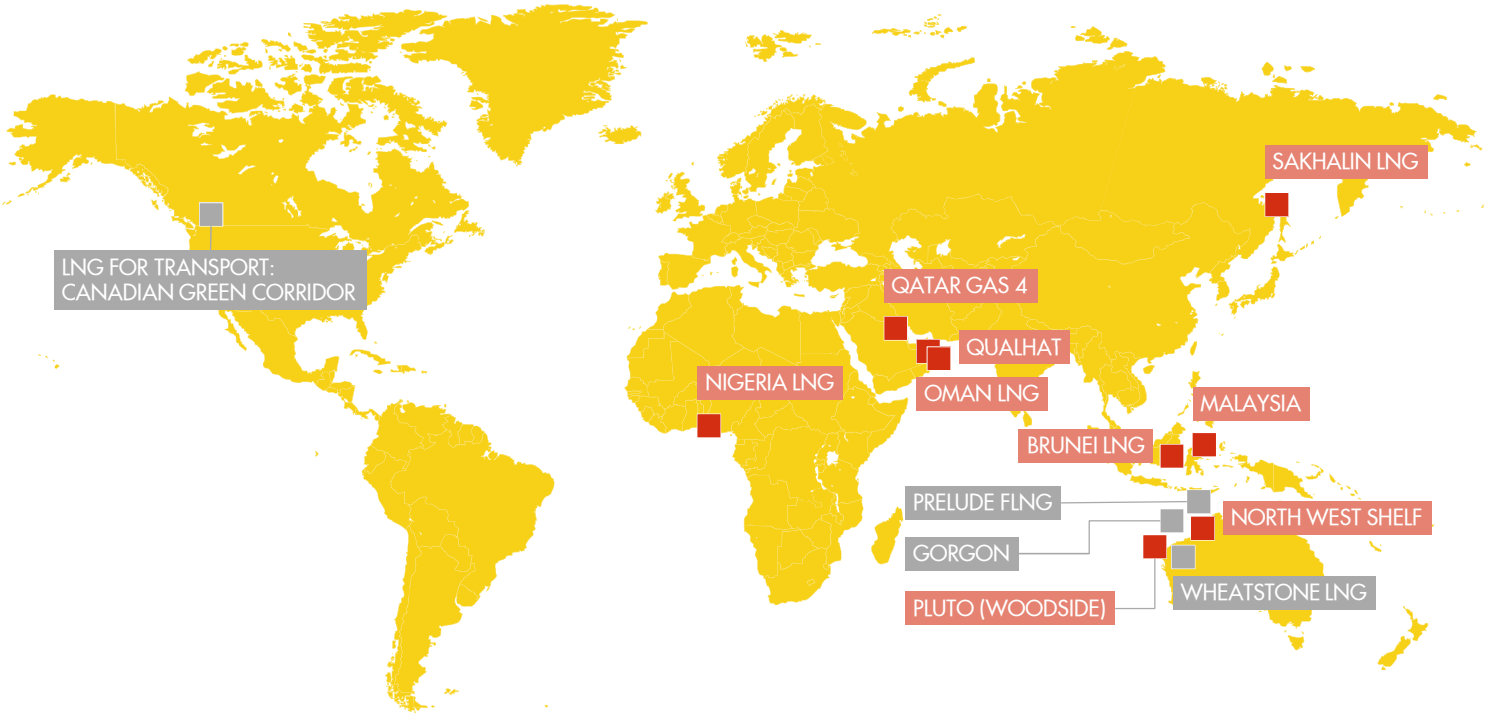
LEADERSHIP IN GLOBAL LNG

SHELL LNG SUPPLY PORTFOLIO



- LNG - OPERATION
- LNG – CONSTRUCTION

- Shell ventures delivered >30% of 2011 global LNG volumes
- ~ 22 mtpa onstream
- ~ 7+ mtpa under construction
- ~20+ mtpa of future LNG options

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DOWNSTREAM LEADERSHIP

- With around 43,000 service stations in more than 80 countries, Shell has the largest single-branded fuel retail network in the world
- Shell has interests in more than 30 manufacturing sites
- Our distribution network
  - has some 150 distribution facilities and more than 1,500 storage tanks
  - moves products through 9,000 kilometres of pipeline
  - has a global fleet of 2,600 trucks that travel 860,000 km every day
  - makes a delivery somewhere in the world every 13 seconds
- Trading volumes are around 13 million barrels of oil equivalent per day

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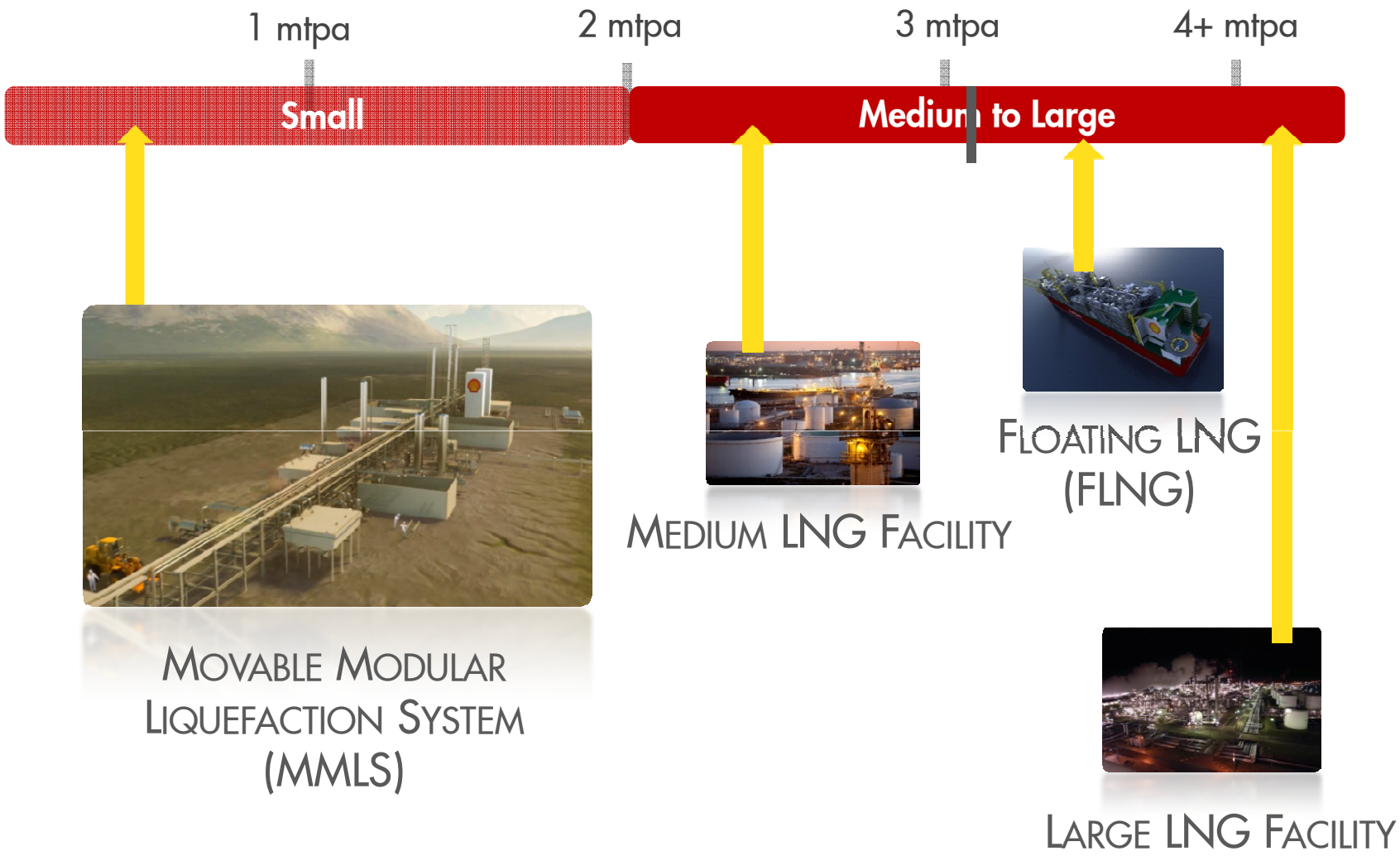
WHAT IS SMALL SCALE LNG?



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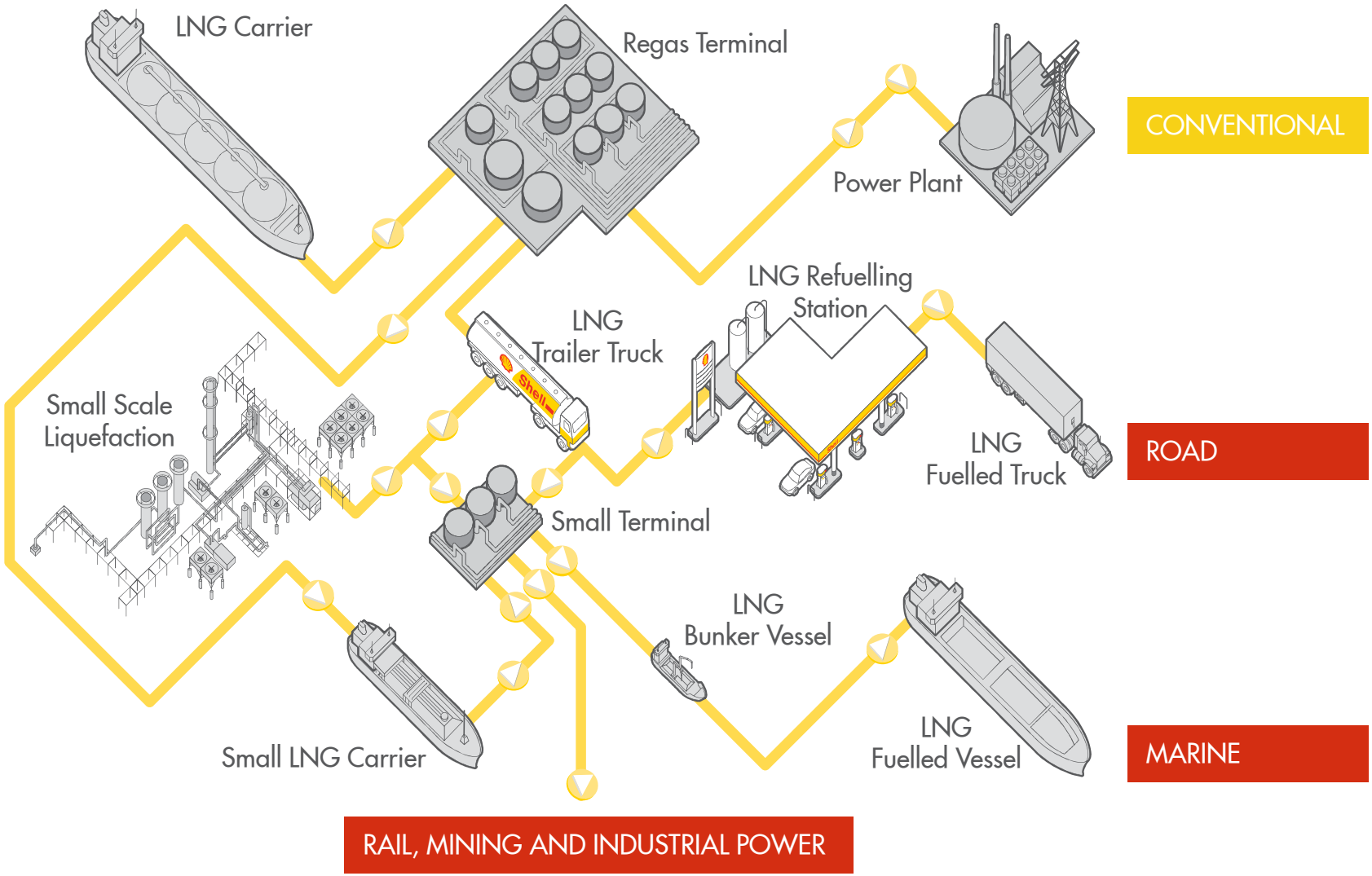
SUPPLY CHAIN: CONVENTIONAL VS LNG FOR TRANSPORT



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LNG AS A TRANSPORT FUEL

- **Supply:** Abundant domestic gas reserves in North America
- **Cost:** lower cost alternative to diesel
- **Environment:** Lower emissions: NOx, SOx and particulate matter

DRIVERS

- **Vehicle technology:** Developing technology
- **Infrastructure:** Investment required to build robust infrastructure
- **Regulatory:** requires framework that facilitates infrastructure and market development

CHALLENGES

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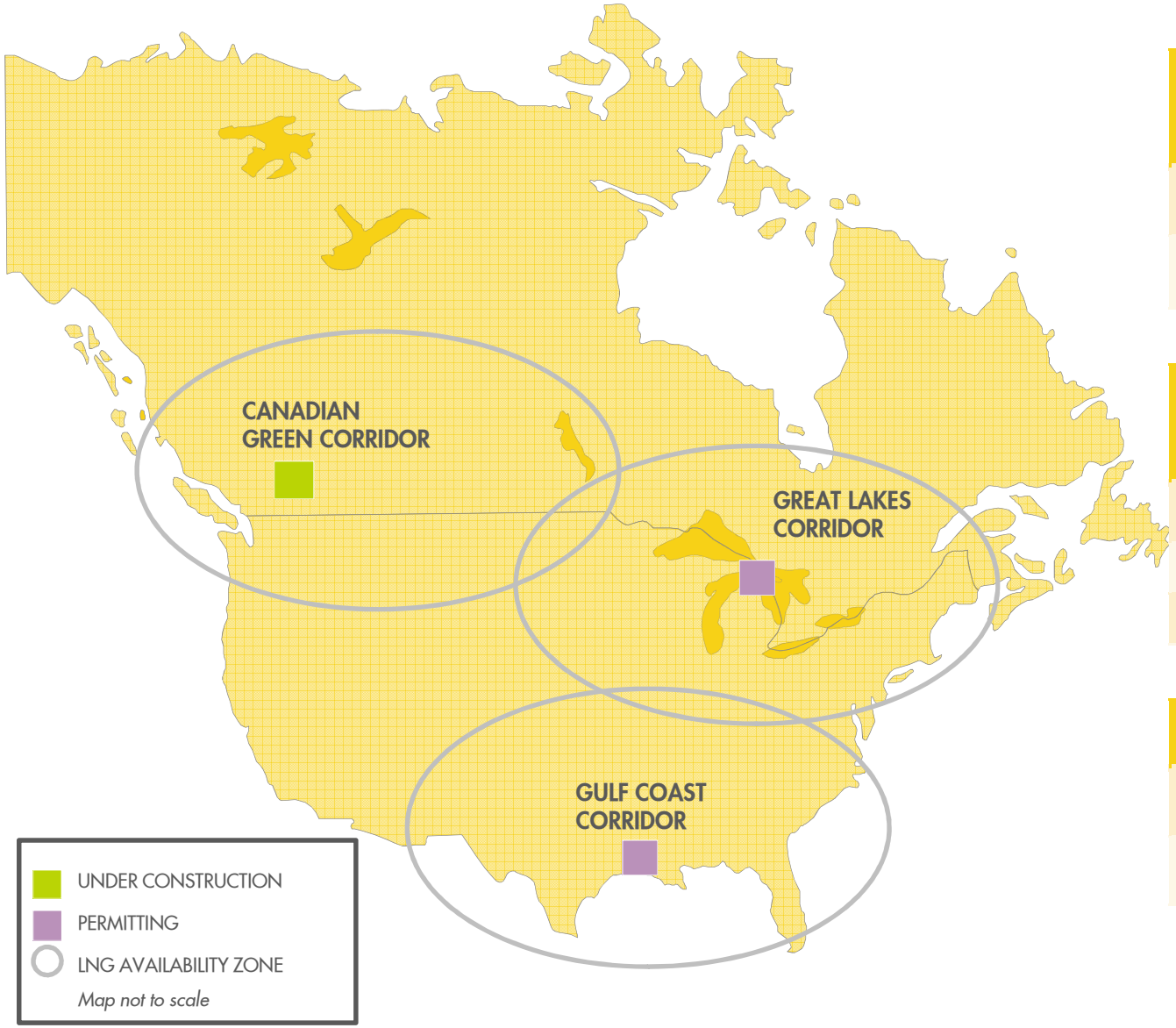
SHELL LNG FOR TRANSPORT – NORTH AMERICA



LNG Station Development

- Flying J (Canada)
- Travel Centers of America (USA)
  (Agreement in negotiations)

Technology Development

- Westport Innovations
- Wärtsillä
- General Electric

Shell use of LNG

- Onshore drilling
- Marine vessels

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CANADIAN GREEN CORRIDOR

- LNG production + distribution
- On-road and industrial uses
- LNG Production: Construction underway of Movable Modular Liquefaction System (MMLS), expected to produce 0.25 mtpa
- LNG available at Shell Flying J stations

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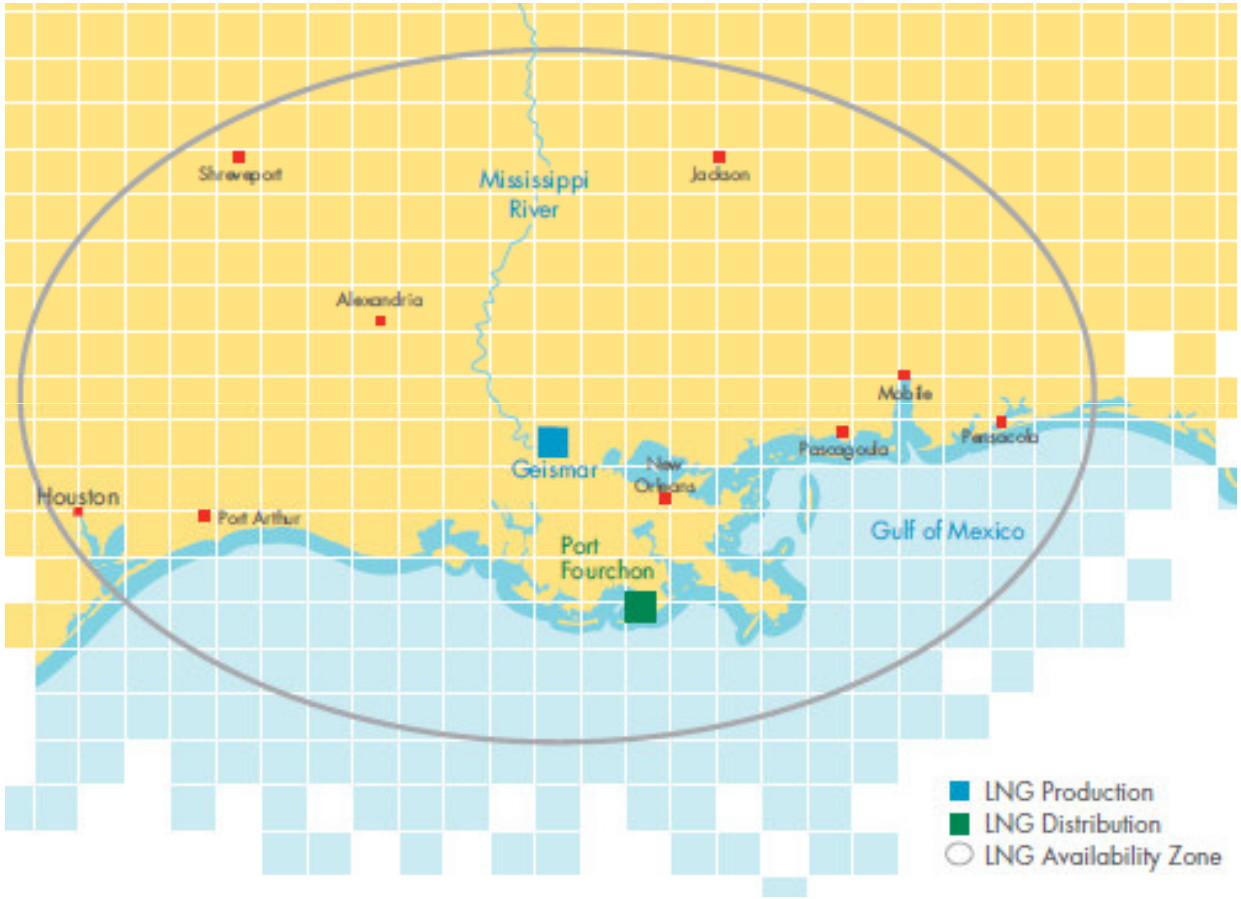
GULF COAST CORRIDOR

- LNG production + distribution
- Marine, on-road, industrial and rail
- LNG Production : Movable Modular Liquefaction System (MMLS), expected to produce 0.25 mtpa
- Expected first LNG plant in the US able to load trucks, barges, and rail cars



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GREAT LAKES CORRIDOR

- LNG production + distribution
- Marine, on-road, industrial and rail
- LNG Production : Movable Modular Liquefaction System (MMLS), expected to produce 0.25 mtpa
- Expected first LNG use in Great Lakes freighters

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SHELL: ENABLING CONVERSION TO LNG

CHALLENGES	SHELL LNG
Conversion Cost	OEM partnerships
LNG availability	Small-scale liquefaction (MMLS)
Lack of LNG infrastructure	Corridor strategy
Security of Supply	Long-Term Supply Agreements
Lack of Regulatory Framework	Industry collaboration & regulator engagement
Operational Excellence	Shell expertise and experience

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