



AN INTRODUCTION TO
SHELL LNG
FOR TRANSPORT

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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. **Resources plays:** our use of the term ‘resources plays’ refers to tight, shale and coal bed methane oil and gas acreage.

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. 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 presentation refer to companies in which Royal Dutch 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 presentation, 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% shareholding in Woodside Petroleum Ltd.) ownership interest held by Shell in a venture, partnership or company, after exclusion of all third-party interest.

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. 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 Royal Dutch Shell 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”, “intend”, “may”, “plan”, “objectives”, “outlook”, “probably”, “project”, “will”, “seek”, “target”, “risks”, “goals”, “should” and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this presentation, 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 potential litigation and regulatory measures as a result of climate changes; (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 presentation 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 Royal Dutch Shell’s 20-F for the year ended 31 December, 2013 (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 presentation, **19 March, 2014**. Neither Royal Dutch Shell nor any of its subsidiaries 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 presentation. There can be no assurance that dividend payments will match or exceed those set out in this presentation in the future, or that they will be made at all.

We use certain terms in this presentation, such as discovery potential, that the United States Securities and Exchange Commission (SEC) guidelines strictly prohibit us from including in filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov. You can also obtain this form from the SEC by calling 1-800-SEC-0330.

ENERGY OUTLOOK BY 2050



9 BILLION people, **75%** living in cities
(2 BILLION more than today)



2 BILLION vehicles
(800 MILLION at the moment)



Many **MILLIONS** of people will rise out of energy poverty; with higher living standards energy use rises



Energy demand could **DOUBLE** from its level in 2000... while CO₂ emissions must be **HALF** today's to avoid serious climate change



Twice as efficient, using **HALF** the energy to produce each dollar of wealth

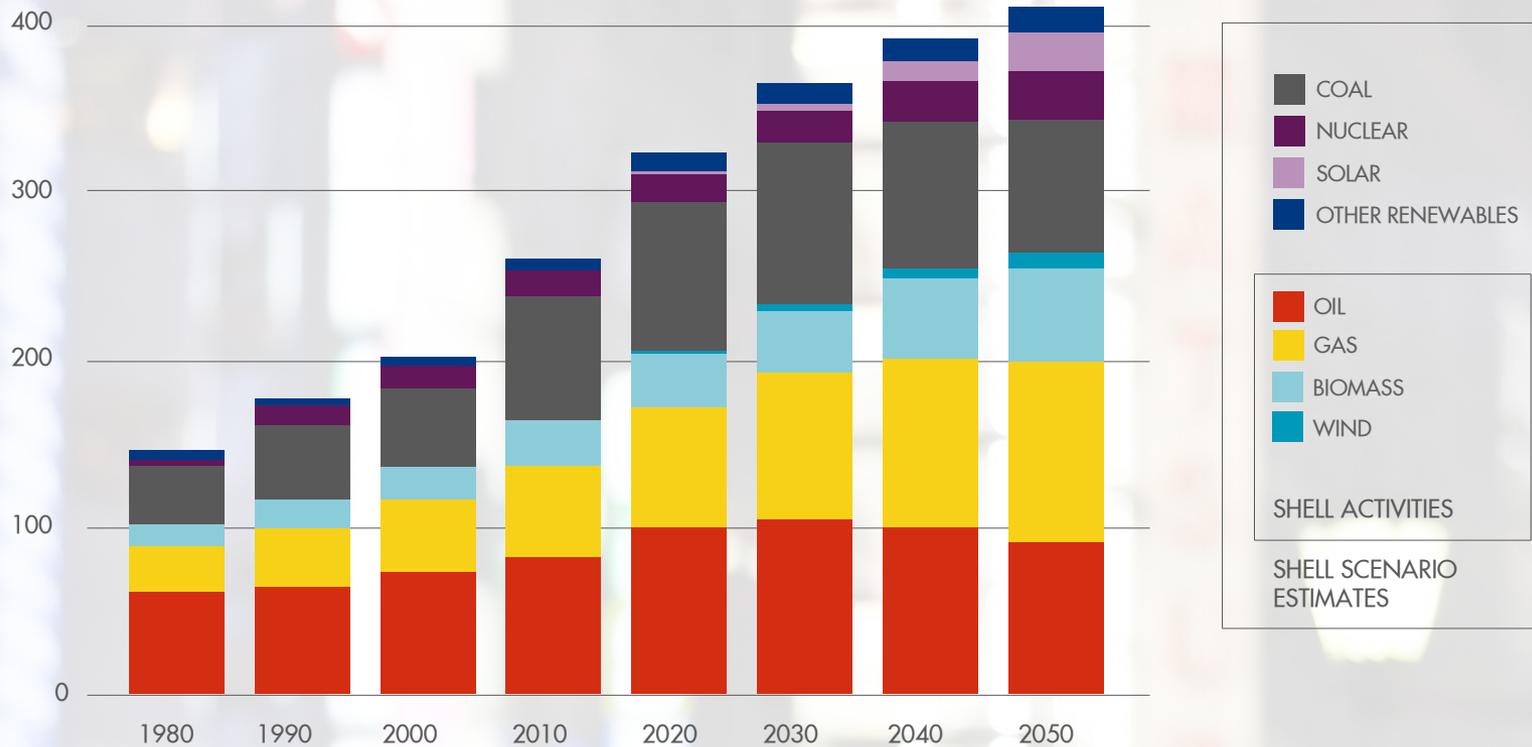


Renewables could supply up to **30%** of the world's energy

ENERGY LANDSCAPE

ROBUST LONGER TERM FUNDAMENTALS

Energy demand outlook in million boe/d



THE CASE FOR GAS

ABUNDANT

- Gas resources can supply >230 years of current global gas production
- LNG supplies could meet one-fifth of global gas needs by 2020

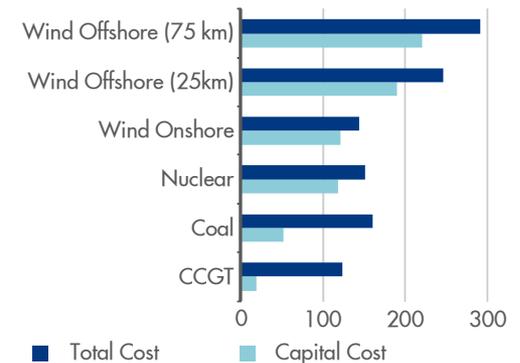
Source: IEA World Energy Outlook, WoodMackenzie, Shell Interpretation

ACCEPTABLE

- Replacing coal with gas for electricity generation is the cheapest and fastest way to meet CO₂ reduction targets
- Gas fired power plants emit around 50% less CO₂ than coal fired plants.

AFFORDABLE

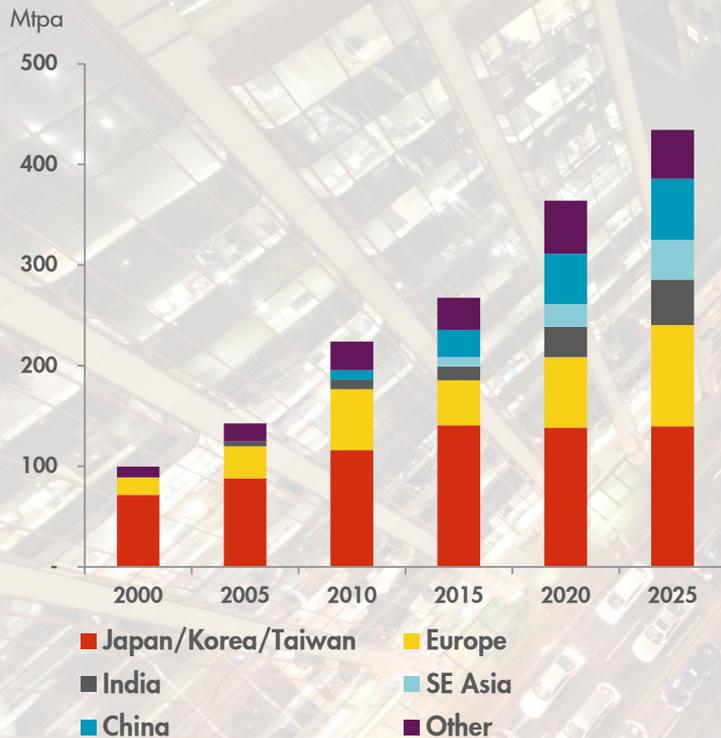
Gas as a source for power generation is a lower cost alternative.



CCGT: Combined Cycle Gas Turbine
Total Cost = Capital + Fuel + Operating
Source: DECC (Mott MacDonald) June 2010

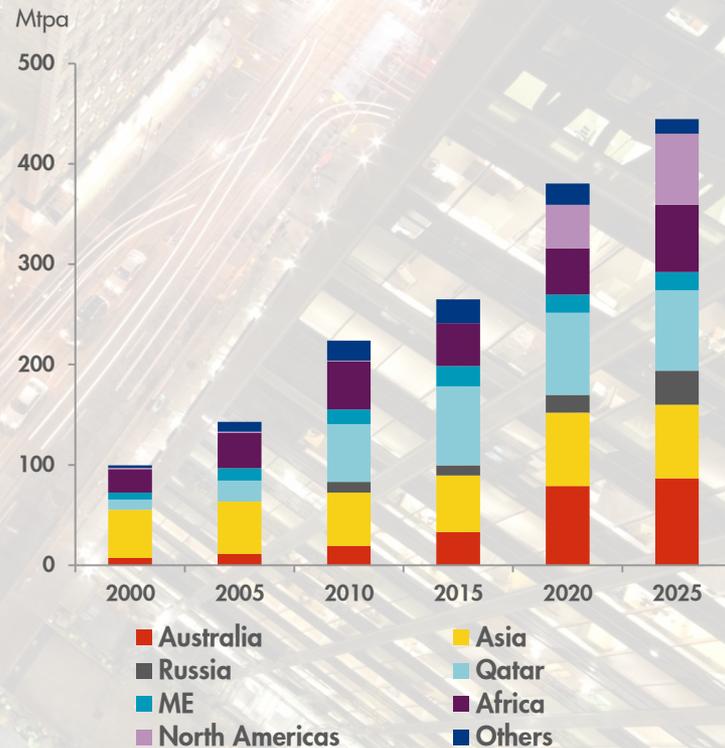
LNG SUPPLY & DEMAND

LNG DEMAND



Impact of limited supplies
(existing supplier issues, deferred projects)
Results in 2012 supply to be lower than 2011

LNG SUPPLY*



* Risked view of all LNG supply projects

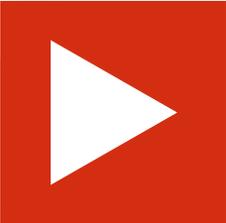
Source: Shell analysis, 2013 IEA New Policies Scenario

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LNG AS A TRANSPORT FUEL



THE STORY



NO SINGLE SOLUTION FOR OIL BASED TRANSPORT



**THERE IS NO
"SILVER BULLET"**

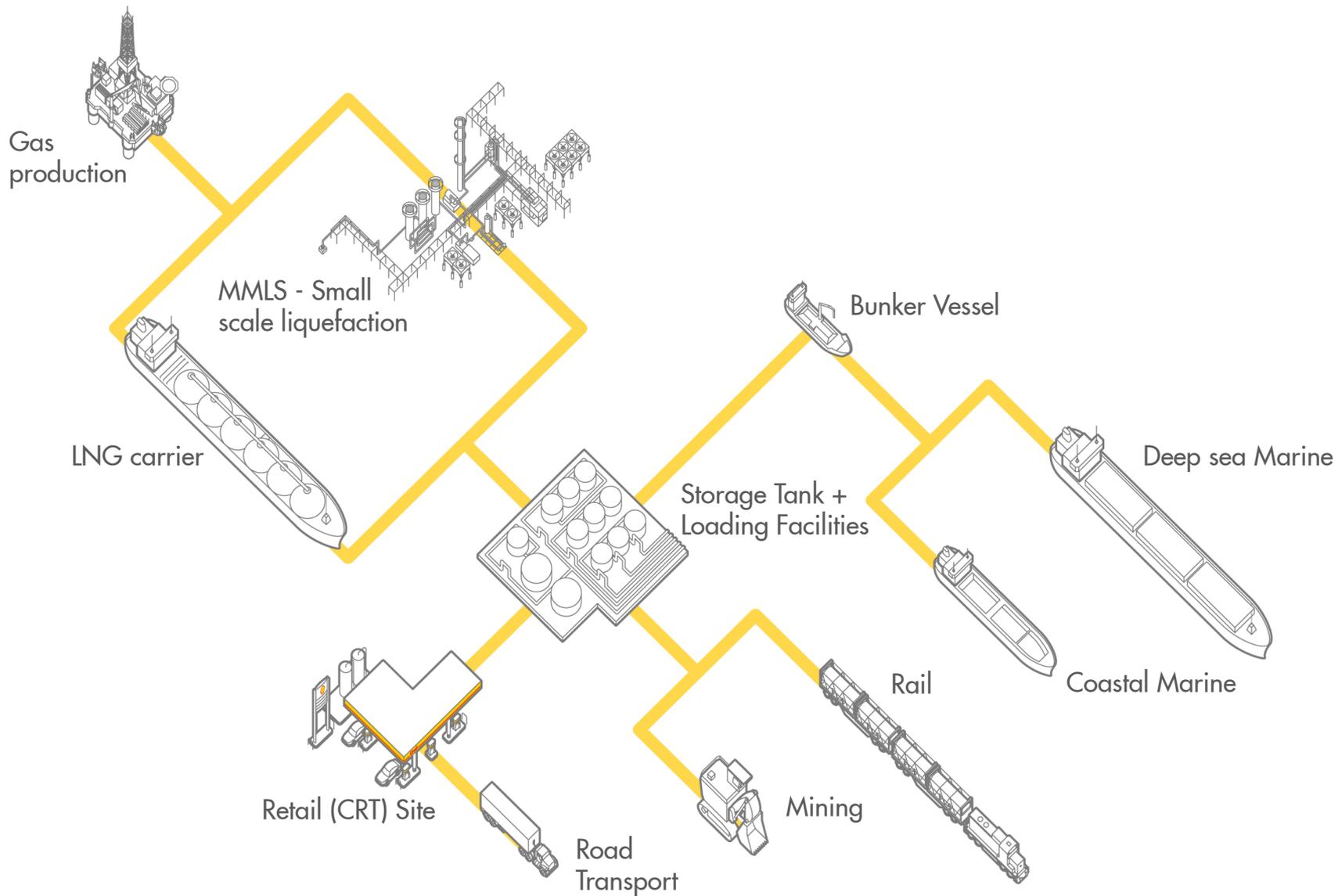
**LNG IS ONE
OPTION IN AN
EVOLVING FUEL MIX**

**AVAILABLE
ACCEPTABLE
AFFORDABLE**

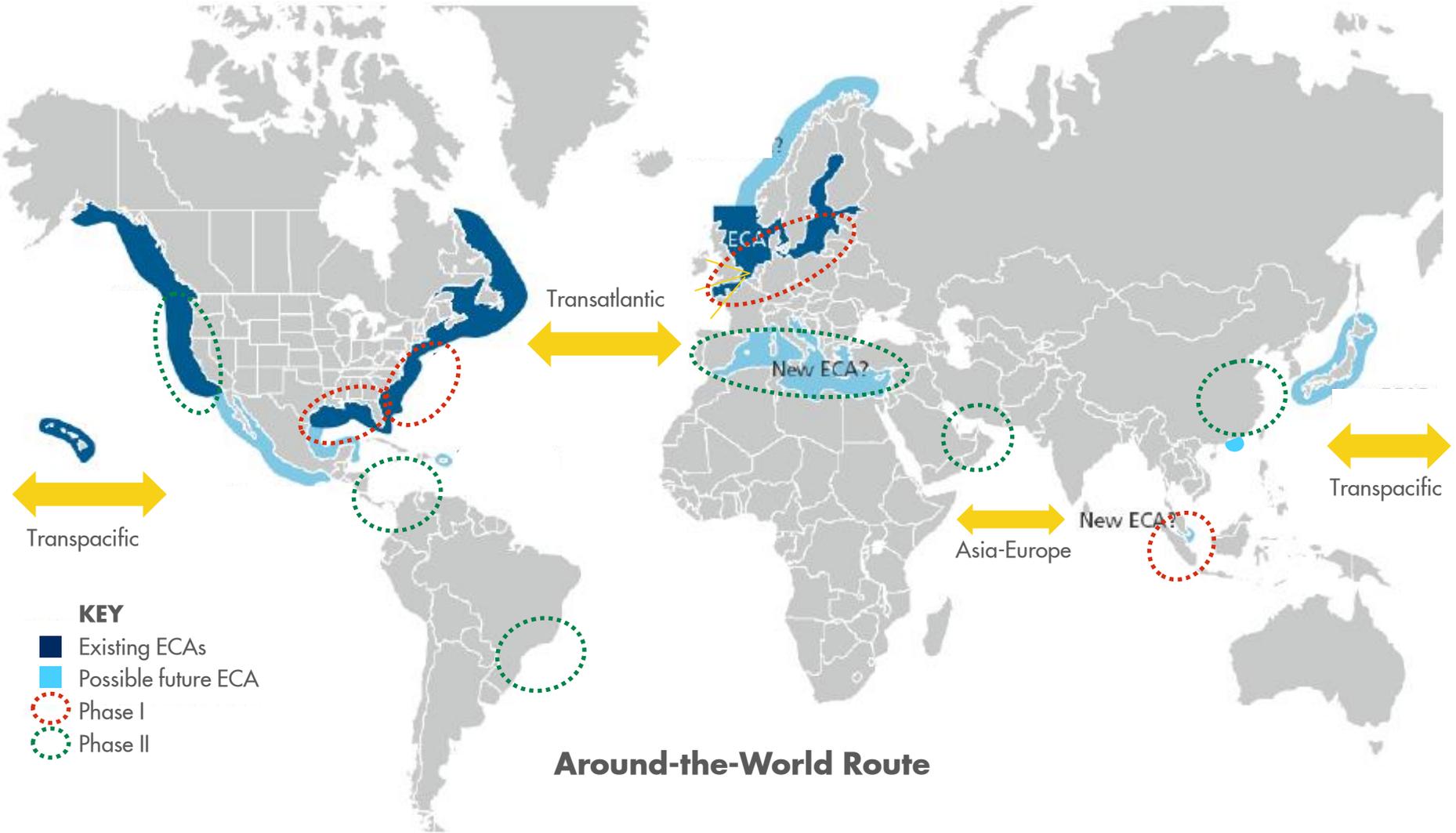
GAS TO TRANSPORT OPTIONS



INTEGRATED VALUE CHAIN



DEVELOPING A GLOBAL MARINE BUNKER SUPPLY NETWORK



TECHNOLOGY LEADERSHIP: CURRENT LNG PROJECTS

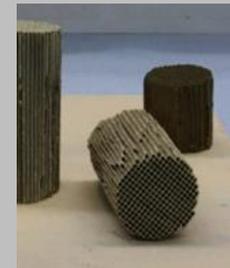
SHELL & DNV KEMA: TECHNOLOGY LEADERSHIP IN LNG QUALITY

Shell & DNV GL are partnering on gas quality modeling and reactor and engine testing. The goal is to integrate the capabilities of the parties to enable cost and time efficiency in working towards commercial goals and OEM collaboration.



WTW/EMISSIONS: SUPPORTING METHANE CATALYST DEVELOPMENT

Leveraging Shell's Catalyst Expertise and Capabilities in high-throughput experimentation to support the accelerated development of improved methane oxidation catalysts to reduce the lifecycle GHG footprint of LNG as a transport fuel.



OEM TECHNOLOGY AVAILABILITY

MARINE SEGMENTS



CRUISES



CONTAINER



PLATFORM SUPPLY VESSEL

OEM OFFERINGS



- 4 Stroke DF – Current Offer
- 2 Stroke – 2017
- Retrofit – No Plans



- 4 Stroke DF – Current Offer
- 2 Stroke – Current Offer
- Retrofit – 2015



- 4 Stroke SI – Current Offer
- 2 Stroke DF – Current Offer

MARINE SEGMENTS



FERRIES



RO-RO



INLAND WATERWAYS

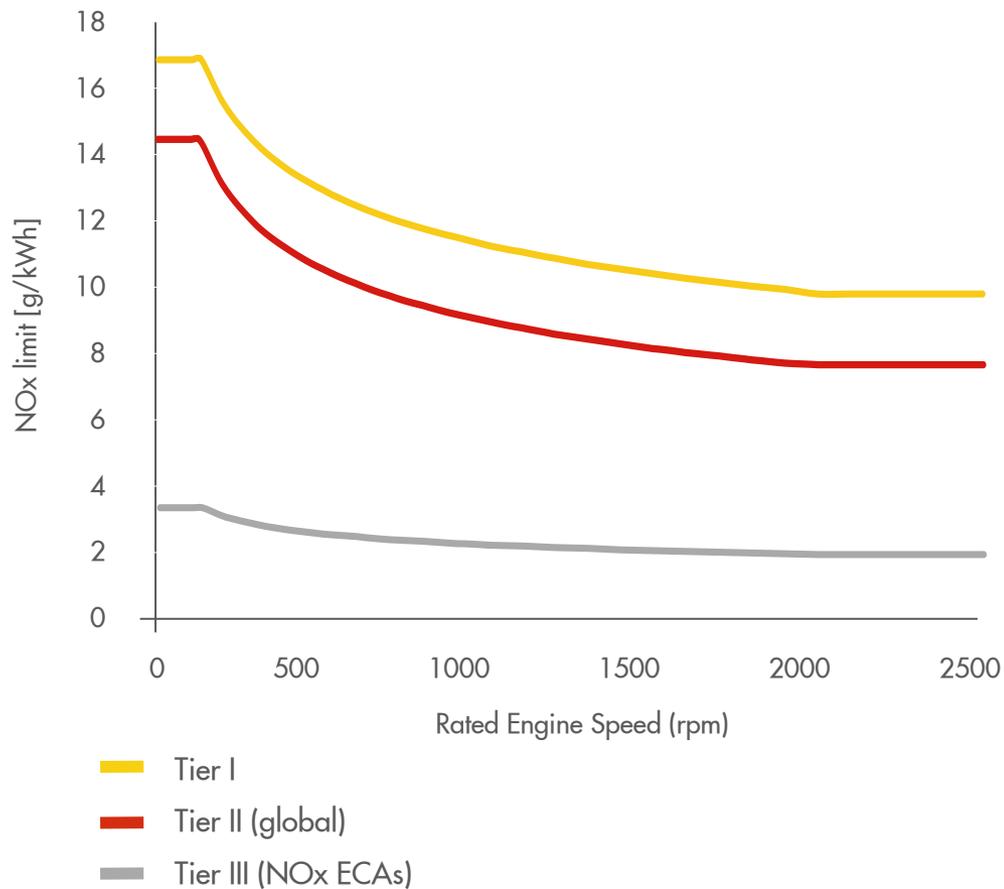
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DRIVERS AND CHALLENGES



EMISSION CONTROL AREAS (ECAS)

MARPOL Annex VI NO_x Emission Limits



TIPPING THE BALANCE

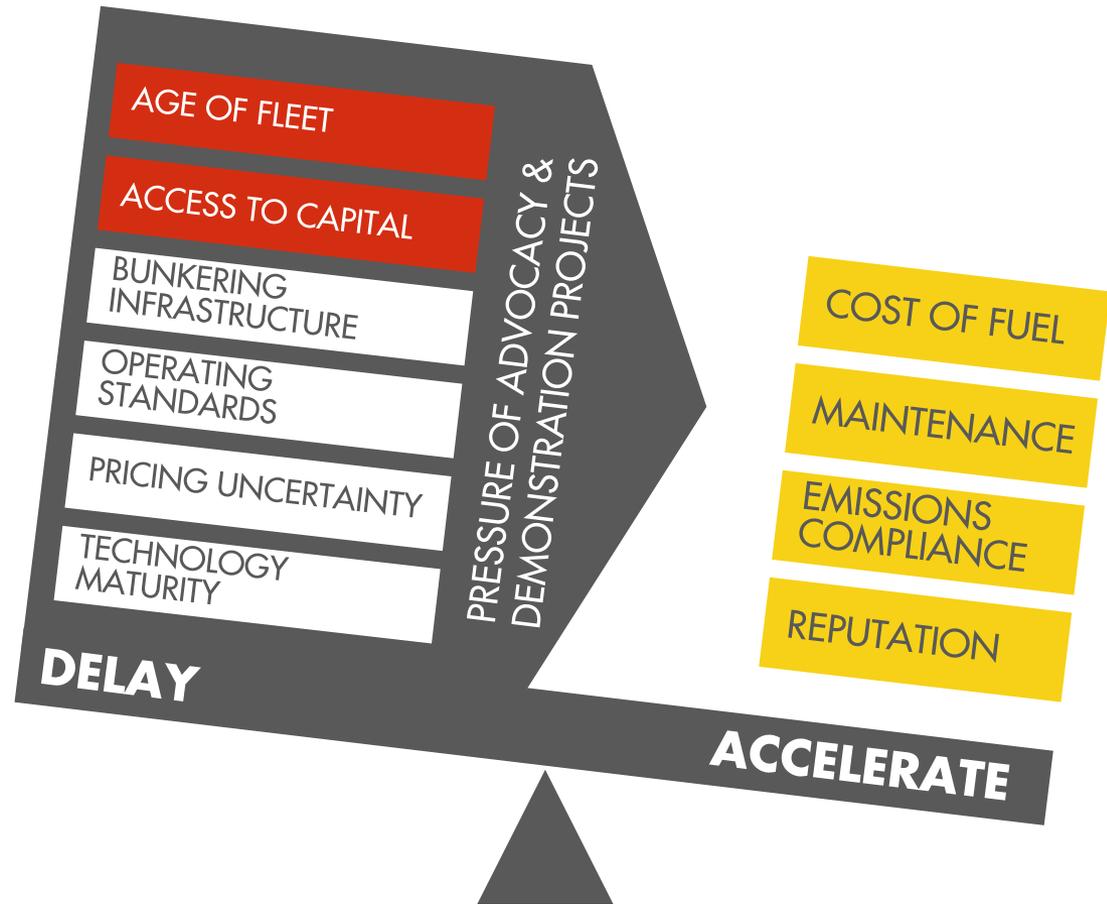
STANDARDS

INFRASTRUCTURE

INNOVATION

PARTNERSHIPS

ECONOMICS



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SHELL'S VALUE PROPOSITION



HISTORY



Source: A History of Royal Dutch Shell, Volume 1
by Joost Jonker & Jan Luiten van Zanden

DOING NOTHING HAS A COST. DOING SOMETHING PROVIDES OPPORTUNITY TO LEAD INDUSTRY AGAIN.

MS Vulcanus, the world's first ocean-going motor ship was built for Royal Dutch/Shell and launched in September 1912. Though suffering from teething troubles, diesel engine ships were destined for a great future, from which the Group stood to benefit handsomely.

Similarly, LNG as a marine transport fuel opens a new market for the Group, increasing the customer base for when the Group LNG production increases in 2020 by 33%.

BENEFITS:

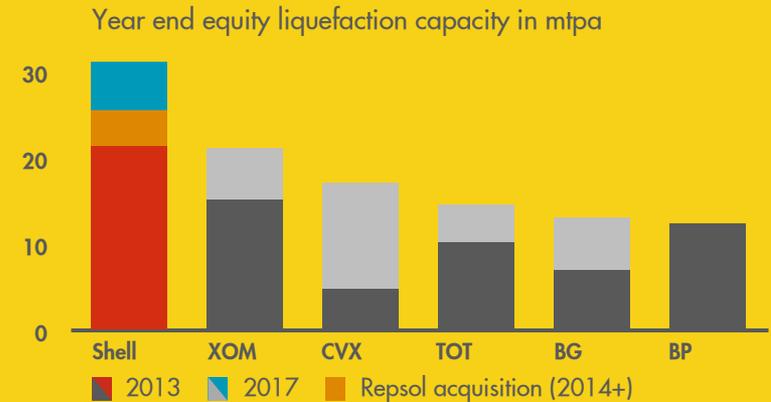
- Pilot LNG fuelled vessels in ECAs to develop understanding of economics for tankers & barges fuelled by LNG – net neutral for Trading. Prepared for longer term changes.
- Build belief in industry for LNG as a marine fuel – safe, reliable, operable.
- Support bunkering infrastructure economics in additional locations by increasing demand.

LNG IS AT THE HEART OF OUR BUSINESS

SHELL GLNG SUPPLY PORTFOLIO



SHELL LNG LEADERSHIP



NEW INNOVATIONS



Floating Liquefaction



Greenstream Barge



Harvey Gulf



LNG bunker vessel

LNG CAN OFFER A COMPELLING VALUE PROPOSITION

Shell
LNG
TOMORROW'S FUEL TODAY



1 Cost competitive fuel



2 Cleaner burning fuel

Can contribute to lower local exhaust emissions and global greenhouse gas emissions



3 Proven and reliable LNG engine technology availability



4 LNG Availability, Safe and reliable supply chain

PRIORITY SEGMENTS



CURRENT

In the short term (by 2015) **Offshore Support Vessels, Service Vessel and Ferries operating in existing Emissions Control Areas.**



2015 – 2020

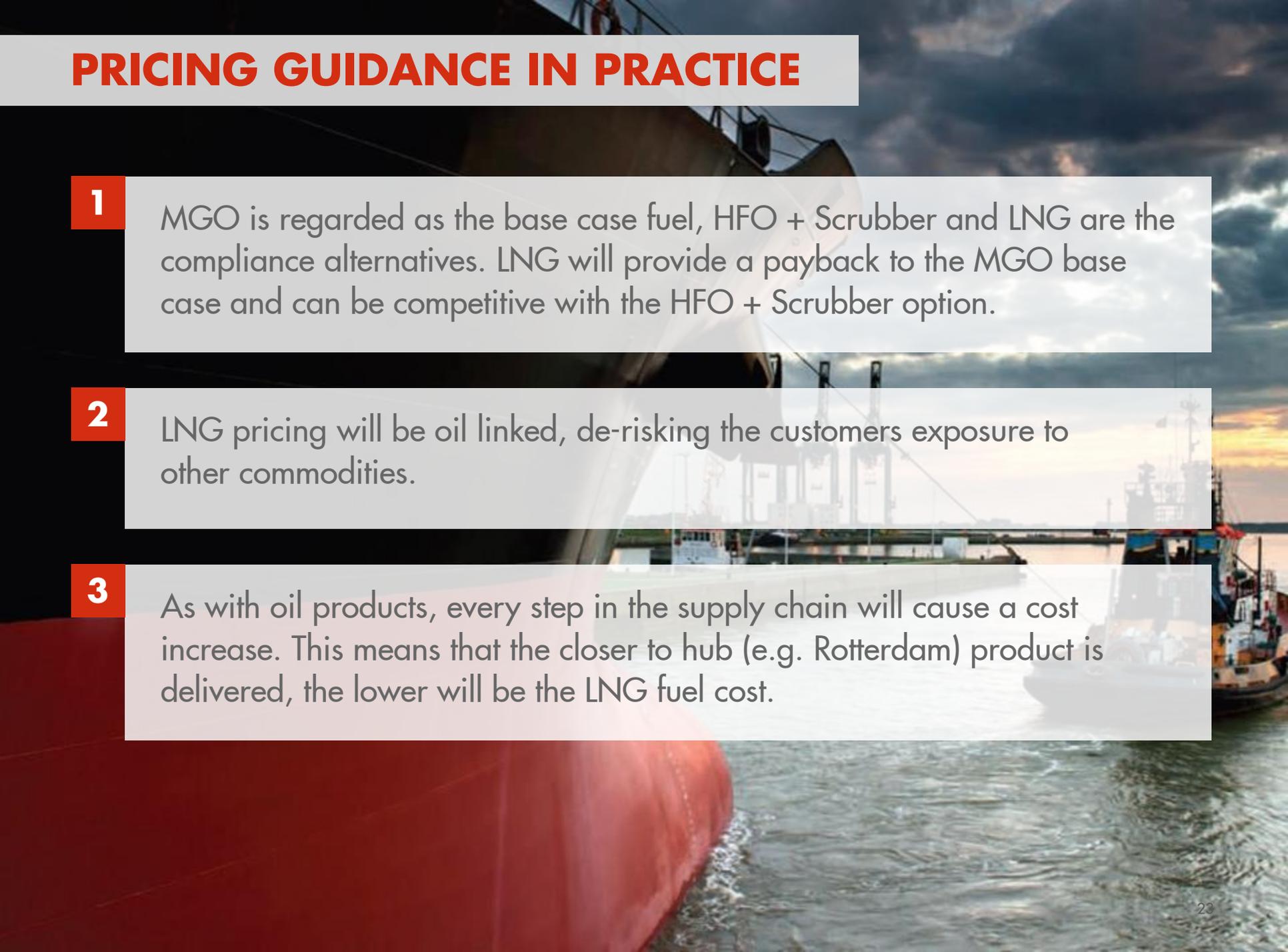
For the medium term **Container Feeder, Coastal Tankers, RoRo and RoPax** on liner trade in and to/from an ECA. Also assess **additional offshore hubs** with advantaged supply.



2020...

Over the longer term (for new-build delivery around 2020) **new deep-sea vessels** when bunkering infrastructure, fuel differentials and charter rates support a case for LNG over alternatives.

PRICING GUIDANCE IN PRACTICE



1

MGO is regarded as the base case fuel, HFO + Scrubber and LNG are the compliance alternatives. LNG will provide a payback to the MGO base case and can be competitive with the HFO + Scrubber option.

2

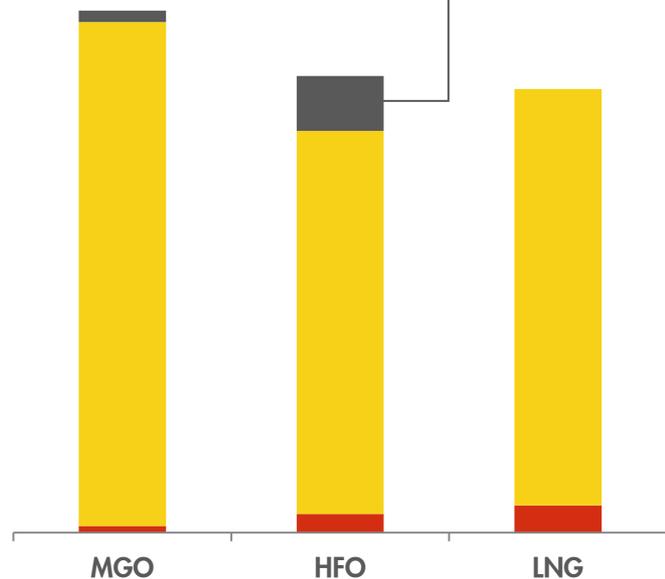
LNG pricing will be oil linked, de-risking the customers exposure to other commodities.

3

As with oil products, every step in the supply chain will cause a cost increase. This means that the closer to hub (e.g. Rotterdam) product is delivered, the lower will be the LNG fuel cost.

COST COMPETITIVENESS

TOTAL ANNUAL COSTS



- Opex Risks
- Fuel Costs
- Capex Annualised

Add Opex cost/risk

Operational	Urea costs for SCR
Waste management	Wash Water Regulations
Maintenance (potential corrosion)	...

INSIGHTS

- 1 Assessment is vessel specific
- 2 Capex (annualized) is small percentage of OPEX
- 3 HFO + Scrubber can have operational burden costs

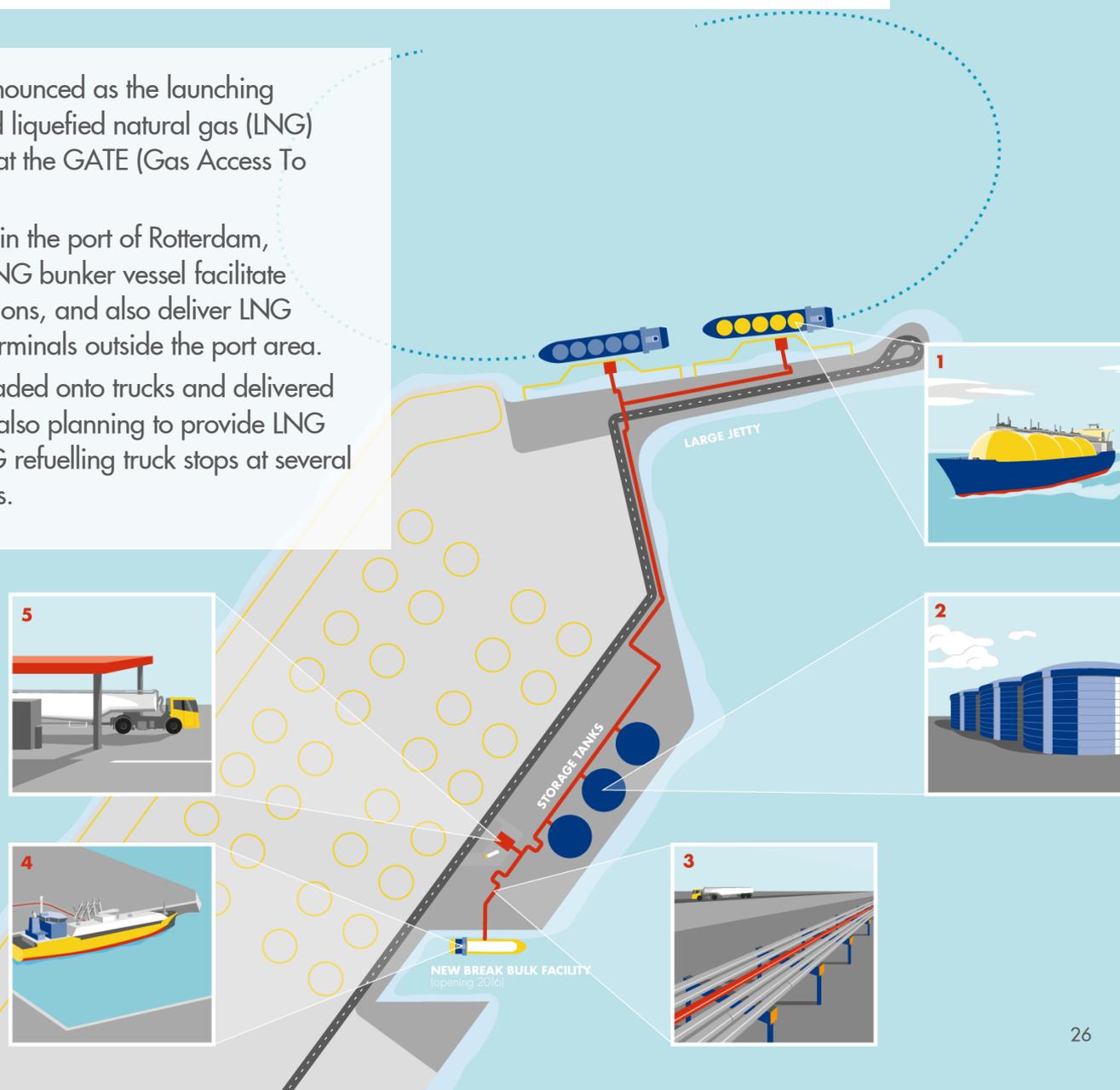
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SHELL INITIATIVES



GATE: LONG-TERM LNG FOR TRANSPORT

- In July 2014, Shell was announced as the launching customer of new, dedicated liquefied natural gas (LNG) for transport infrastructure at the GATE (Gas Access To Europe) terminal.
- To serve marine customers in the port of Rotterdam, Shell intends to charter a LNG bunker vessel facilitate ship to ship transfer operations, and also deliver LNG to secondary distribution terminals outside the port area.
- In addition, LNG will be loaded onto trucks and delivered to road customers. Shell is also planning to provide LNG to an initial network of LNG refuelling truck stops at several locations in the Netherlands.



GASNOR



- July 2012 – Shell finalised acquisition of Gasnor – a market leader in Norway for small-scale LNG
- Shell will capitalise on Gasnor’s experience in LNG sales and marketing
- Target European marine customers ahead of new environment regulations

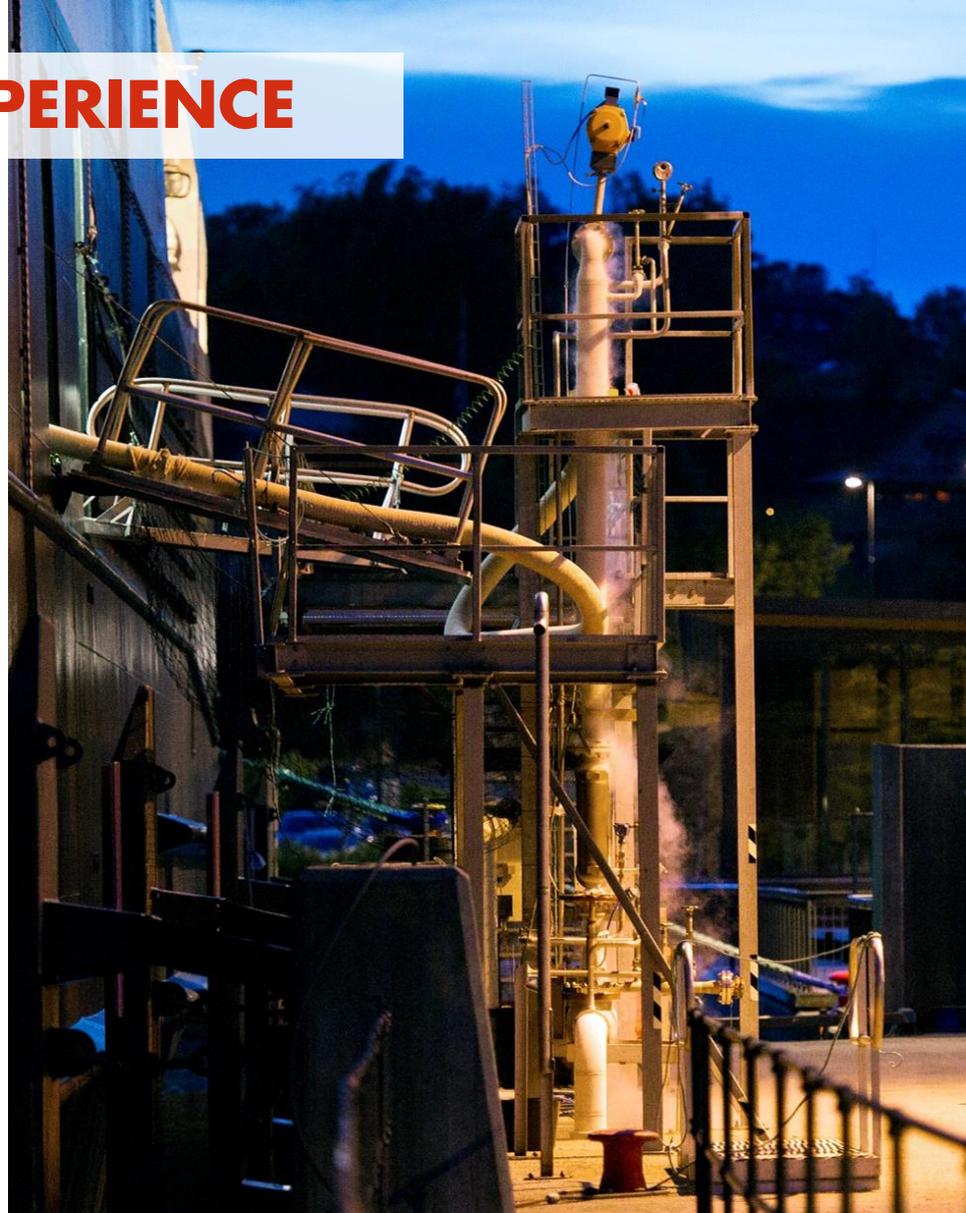
GASNOR BUNKERING EXPERIENCE



BUNKER FROM SEMITRAILER



SHIP TO SHIP BUNKERING



BUNKER FROM TERMINAL

SMALL SCALE LIQUEFACTION IN NORWAY



LNG-SUPPLY TO ALUMINIUM PRODUCTION



CONFIDENTIAL

LNG BUNKER DEPOT



BUNKERING DIRECTLY FROM TRUCK



ARRIVING TO BUNKER LNG



SOME ILLUSTRATION OF EXISTING LNG LOGISTICS



LNG POWERED BARGES ON THE RHINE

ON SEPTEMBER 5, 2012, SHELL ANNOUNCED IT HAS SIGNED A CONTRACT FOR THE CHARTER OF TWO NEW BUILD 100% LNG (LIQUEFIED NATURAL GAS) POWERED BARGES

- These 110 m long barges will operate on the Rhine and will be on charter to Shell from 2013
- First for Shell and for the marine industry
- The first of these vessels was commissioned and filled with LNG on March 3, 2013



Source: Shell



Greenstream, the world's first dedicated-LNG powered barge, has been launched in The Netherlands for transporting liquid products on the Rhine

CONCRETE STEPS TAKEN TO DATE

2012



Gasnor, 100% Shell subsidiary

2013



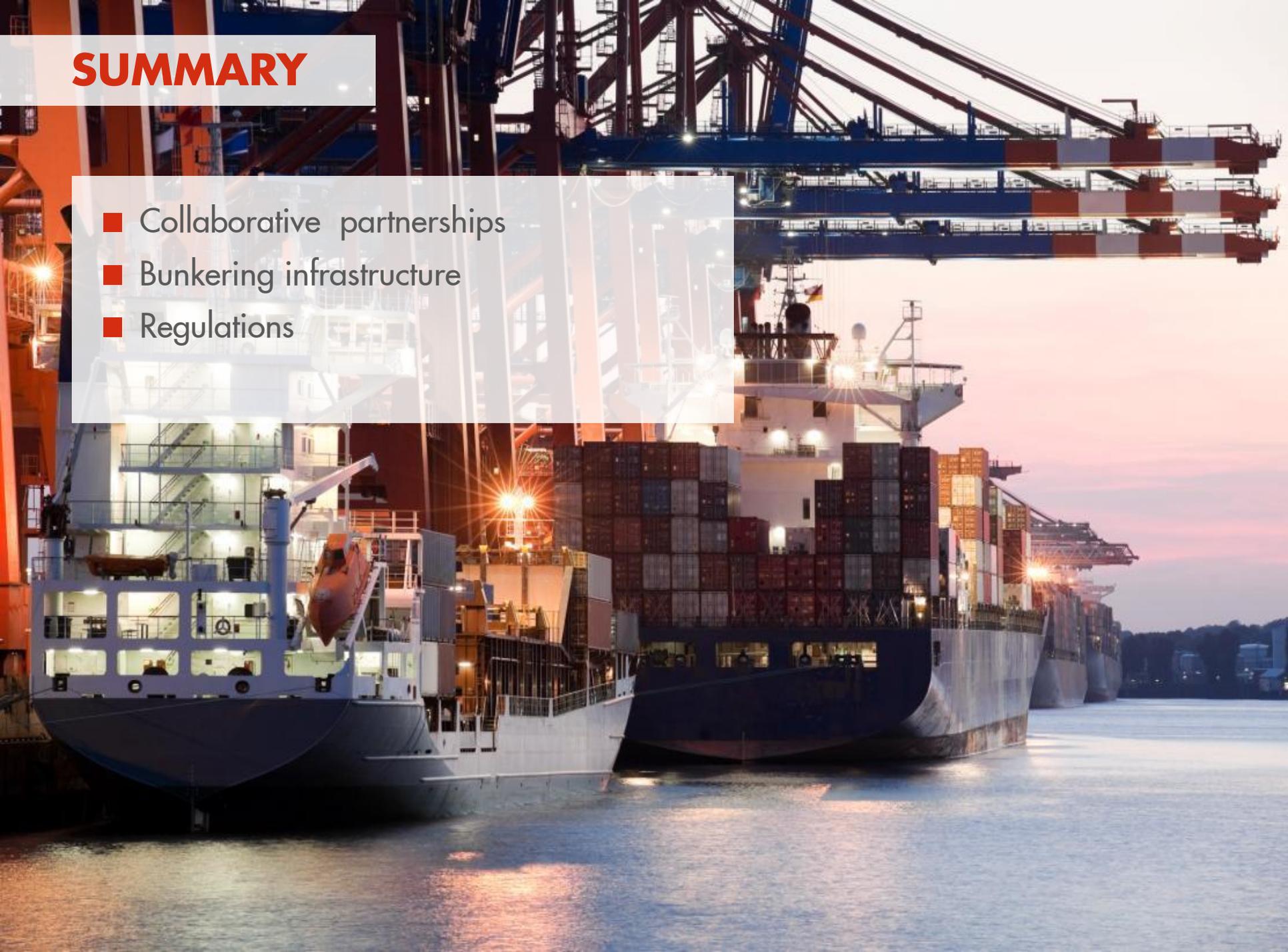
Shell time charters
Greenstream World's 1st 100%
LNG propelled barge

2014



US TA site opened in May
2014 and 2 sites to be opened
in NL end of this year

SUMMARY



- Collaborative partnerships
- Bunkering infrastructure
- Regulations

