



GAS – BACKBONE OF THE ENERGY SYSTEM

TANYA MORRISON, CLIMATE CHANGE GR MANAGER

IGU & PGNIG at COP19, Warsaw November 2013

CAUTIONARY NOTE

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 over which Royal Dutch Shell plc either directly or indirectly has control. Companies over which Shell has joint control are generally referred to "joint ventures" and companies over which Shell has significant influence but neither control nor joint control are referred to as "associates". In this presentation, joint ventures and associates may also be 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", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" 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 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 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 risk factors that may affect future results are contained in Royal Dutch Shell's 20-F for the year ended December 31, 2012 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward looking statements contained in this presentation and should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, 5 June 2013. Neither Royal Dutch Shell plc 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.

We may have used certain terms, such as resources, in this presentation that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our 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 these forms from the SEC by calling 1-800-SEC-0330.

THE NEW ENERGY FUTURE BY 2050

RISING ENERGY DEMAND, SUPPLY PRESSURE, CLIMATE CHANGE



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 of today's to
avoid serious
climate change

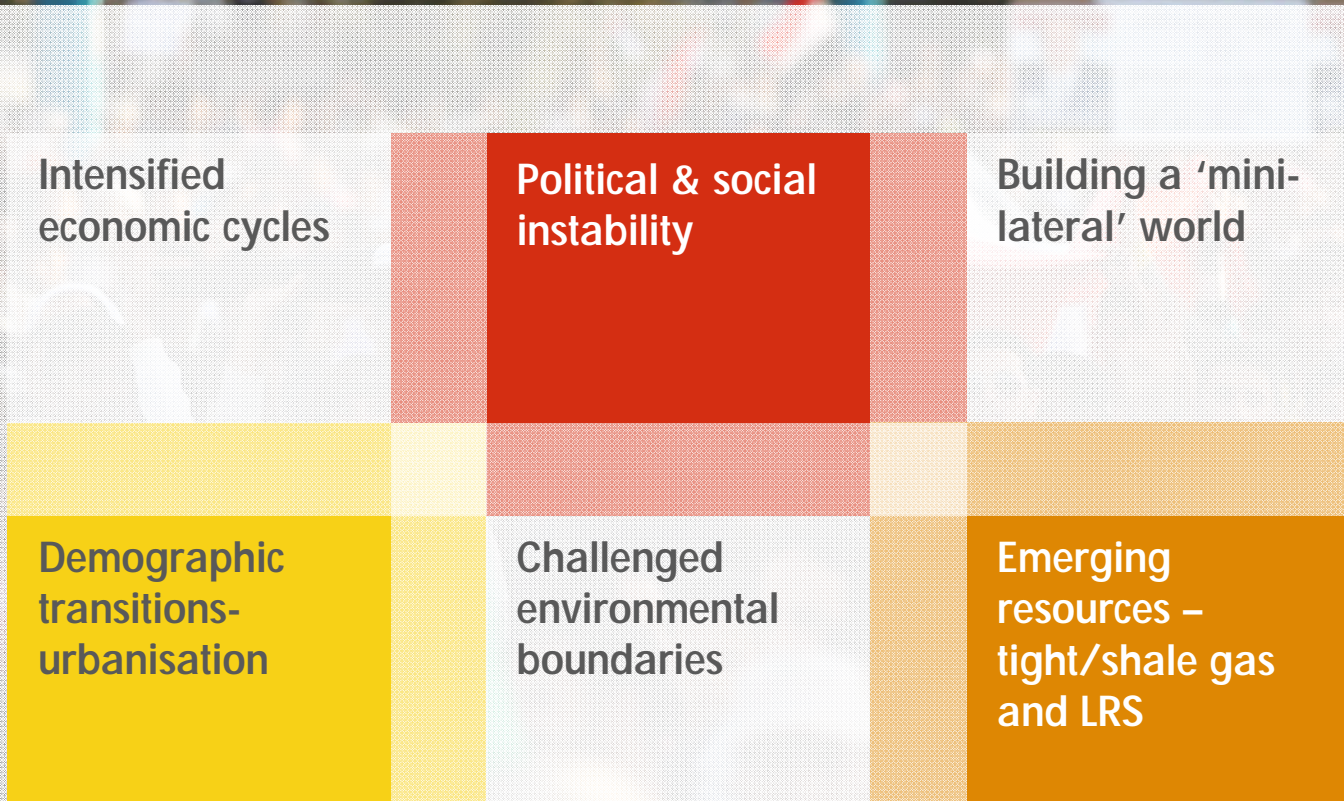


Twice as efficient,
using **half** the
energy to produce
each dollar of
wealth



3 times more
energy from
renewable sources

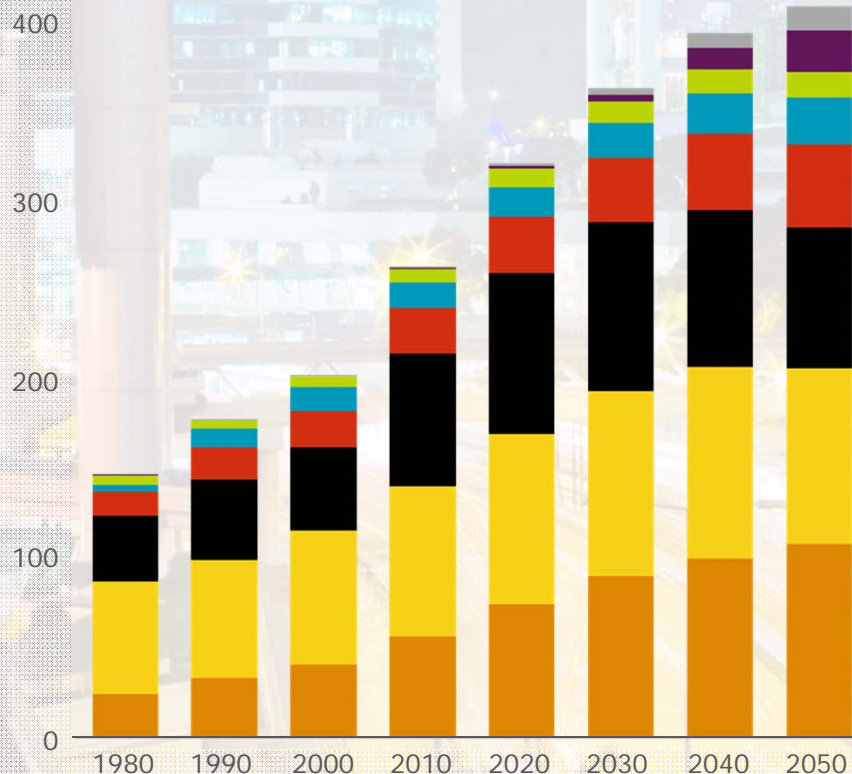
ENTERING AN ERA OF VOLATILITY & TRANSITIONS



GLOBAL ENERGY OUTLOOK

DEMAND GROWTH

Energy demand outlook in million boe/d



Shell activities

- Oil
- Natural gas
- Biomass
- Wind
- Solar
- Other renewables
- Nuclear
- Coal

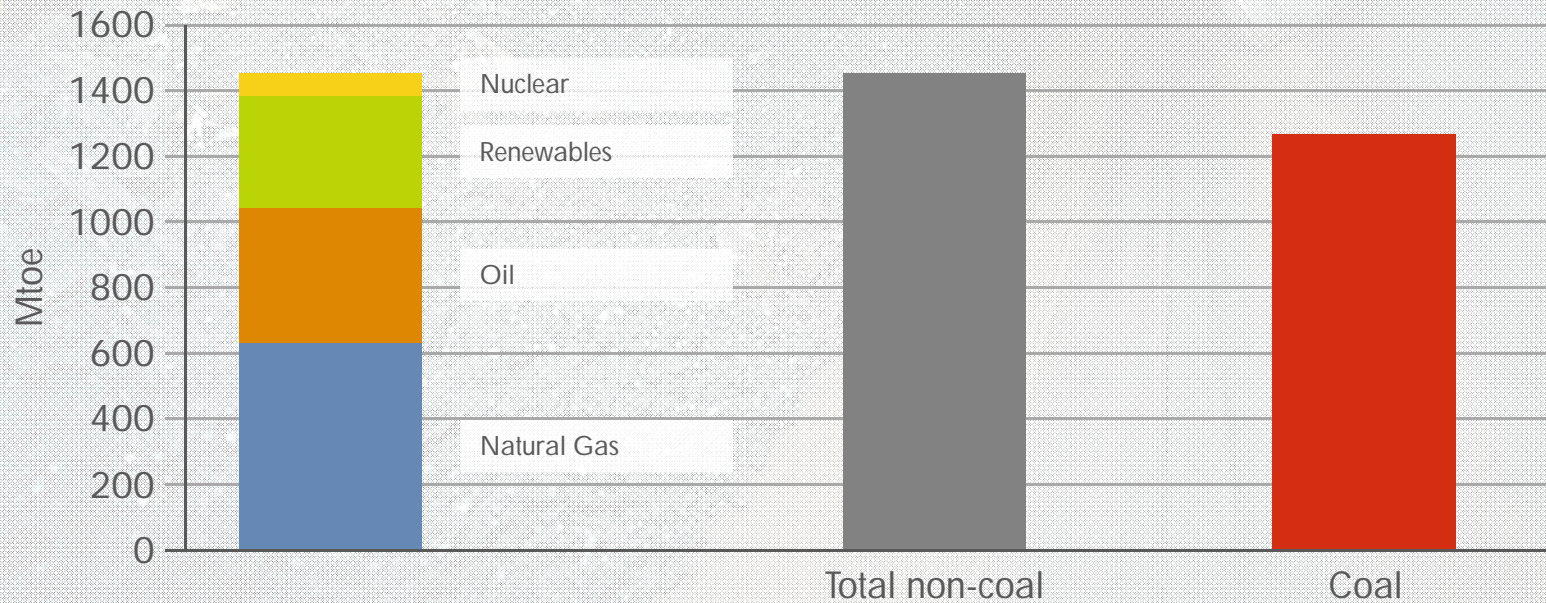
■ Energy demand +60% 2010 – 2050

■ Gas demand doubling 2010-2050

Source: IEA's World Energy Outlook 2012

COAL IN FIRST DECADE OF THE 21ST CENTURY

GROWTH IN GLOBAL ENERGY DEMAND, 2000-2010



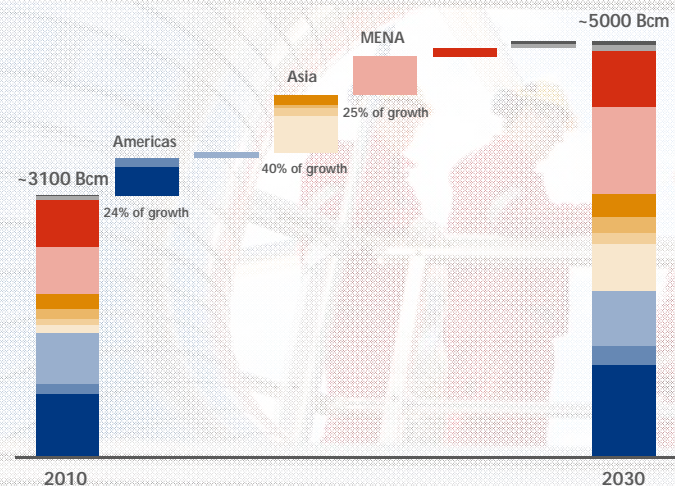
Coal accounted for nearly half of the increase in global energy use over the past decade, with the bulk of the growth coming from the power sector in emerging economies

Source: World Energy Outlook, 2011

GAS DEMAND AND SUPPLY GROWTH

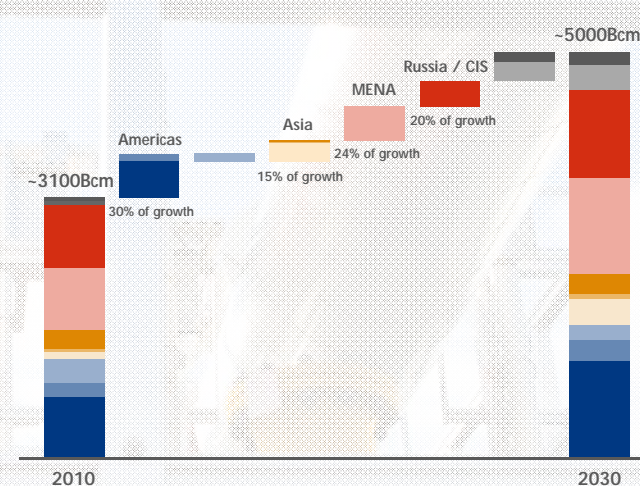
NATURAL GAS DEMAND

2012 View



NATURAL GAS SUPPLY

2012 View

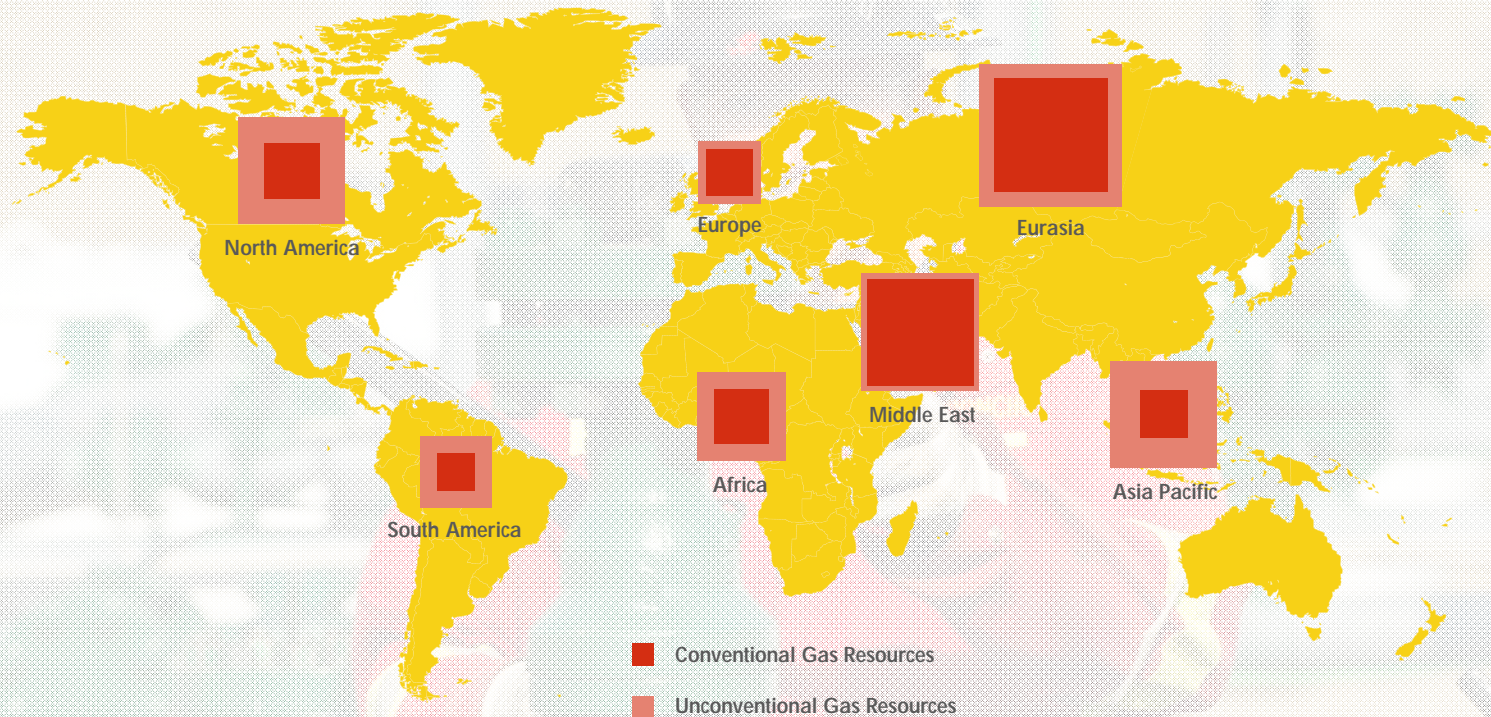


- Gas demand will grow at ~2% pa in coming 20 years; ~40% of the demand growth from Asia
- Supply will grow with demand; >70% will come from Russia, CIS, MENA and Americas

Source: Shell Analysis

TIGHT GAS REVOLUTION

GLOBAL POTENTIAL



More than 250 years of supplies at current production rates

Source: IEA World Energy Outlook, WoodMackenzie, Shell Interpretation

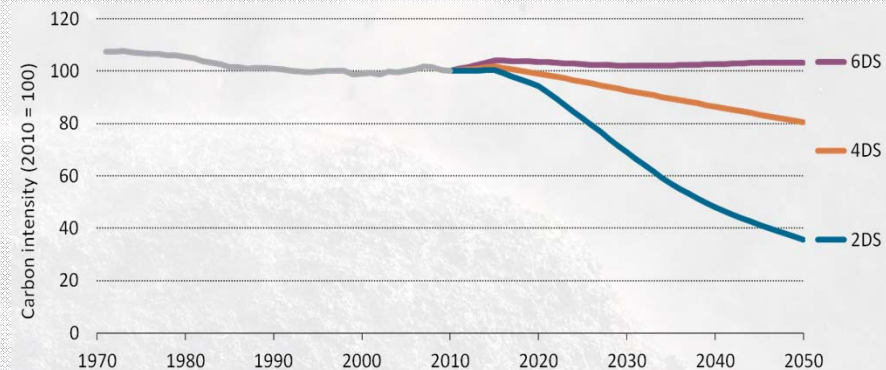
"...AS DIRTY AS 23 YEARS AGO"

IEA Executive Director
Maria van der Hoeven

"The world is not on track to realise the benefits of a low-carbon energy system."

"The average unit of energy produced today is basically as dirty as it was 23 years ago."

"The key reason is that coal continues to dominate growth in power generation."



Global energy supply is as carbon intensive today as it was in 1990.

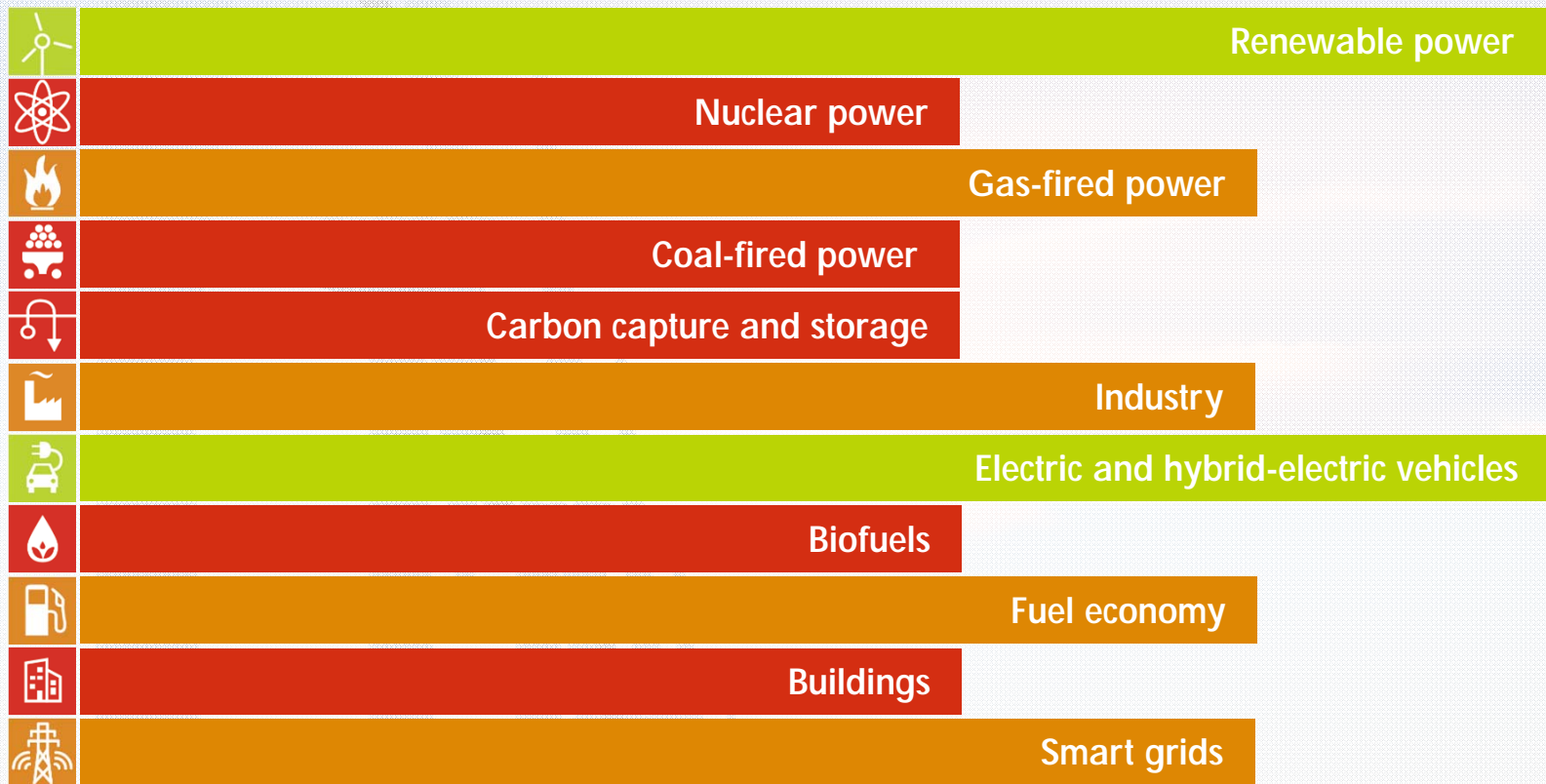
46%

Increase in global energy demand 1990-2010

44%

Increase in energy-related CO₂ emissions 1990-2010

DEVELOPMENTS ACROSS THE ENERGY SYSTEM



Source: IEA report 'Tracking Clean Energy Progress', April 2013

THE EUROPEAN ENERGY PARADOX

Need for aligned long-term view and plan

- Coal grows at expense of natural gas
- CO2 Trading System undermined by overlapping regulations, should remain central to 2030 framework
- Stuck in discussions on shale gas exploration
- CCS must be part of 2030 framework

Clean & Green

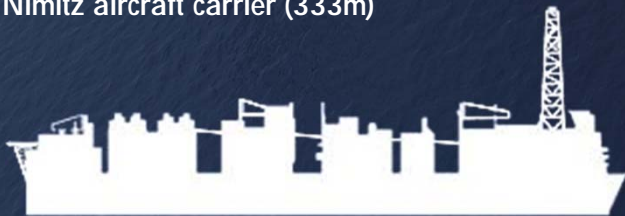
- Natural gas + renewables + energy efficiency
- Early abatement CO2 emissions
- Uses flexibility of gas
- Easy to transport and store
- Additional low carbon options
- Less expensive route

FLNG, THE WORLD'S LARGEST FLOATING OFFSHORE FACILITY

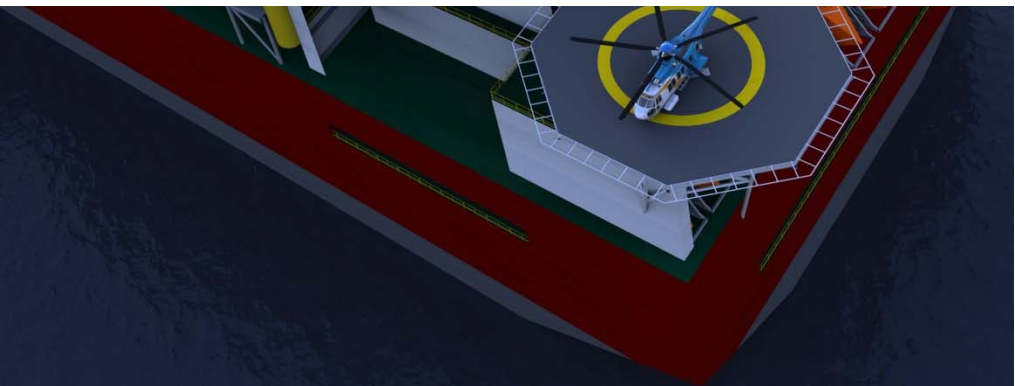
- Length: 488 m
- Width: 74 m
- Weight: 600,000 tonnes; six times heavier than a fully-loaded aircraft carrier



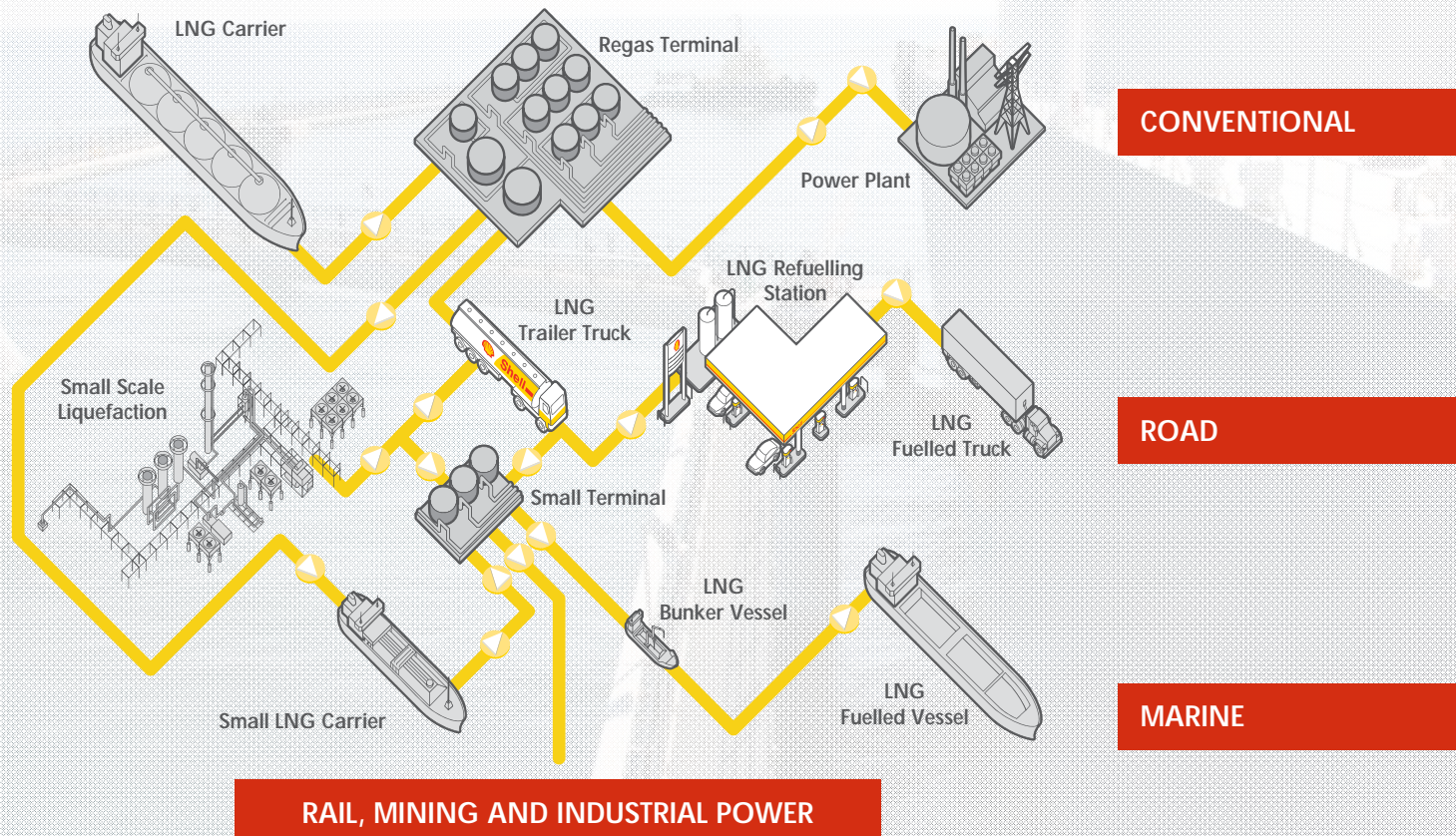
Nimitz aircraft carrier (333m)



Shell Prelude Floating LNG Facility



LNG IN TRANSPORT



DELIVERING BENEFITS

- Proven technology
- Lower fuel costs
- Cleaner burning
- Fuel access to remote locations



POWER TO GAS

- From electrons to molecules
- Increasing production solar PV and wind
- Large-scale storage has its limitations
- Convert surplus PV and wind into hydrogen
- Use of hydrogen in transport (combined with fuel cell) and gas grid blending (Ameland pilot)

Source waterstof gebruik: Waterstof in aardgas, pilot op Ameland

BIOGAS

- Green gas is biogas upgraded to natural gas
- Agricultural waste and production
- Certification by Vertogas Groningen
- Blending in natural gas grid

Source: Nederland krijgt Nieuwe Energie

CO₂ CAPTURE AND STORAGE

- Carbon Capture & Storage (CCS): final storage
- Alternative CO₂ use such as in greenhouses
- Low CO₂ price is bottleneck
- Important for CO₂ neutral power generation
- Electric cars potential CO₂ neutral
- CCS plays important role in new Shell scenario 'Mountains'

Source: New Lens Scenarios, 2013

CCS LIFT EXHIBIT



- Palace of Culture and Science
- Open 10.00 to 18.00
- Until Friday 22 November

IN CONCLUSION

- We are up against two races; poverty and climate change
- The European energy paradox needs urgent action
- Gas and gas infrastructure are the backbone of the transformation of the energy system

