



## Contributing to the Global Energy Transition

Shell's Value Add to Offshore Wind Development in Japan  
Masterclass at the Netherlands embassy in Tokyo

Tokyo, 26 January 2019

Marc van Rooijen, Business Opportunity Manager Japan



## WARNING: Uncertainties ahead

This presentation contains data from Shell's new Sky Scenario. Unlike Shell's previously published Mountains and Oceans exploratory scenarios, the Sky Scenario is targeted through the assumption that society reaches the Paris Agreement's goal of holding global average temperatures to well below 2°C. Unlike Shell's Mountains and Oceans scenarios which unfolded in an open-ended way based upon plausible assumptions and quantifications, the Sky Scenario was specifically designed to reach the Paris Agreement's goal in a technically possible manner. These scenarios are a part of an ongoing process used in Shell for over 40 years to challenge executives' perspectives on the future business environment. They are designed to stretch management to consider even events that may only be remotely possible. Scenarios, therefore, are not intended to be predictions of likely future events or outcomes and investors should not rely on them when making an investment decision with regard to Royal Dutch Shell plc securities.

Additionally, it is important to note that Shell's existing portfolio has been decades in development. While we believe our portfolio is resilient under a wide range of outlooks, including the IEA's 450 scenario (World Energy Outlook 2016), it includes assets across a spectrum of energy intensities including some with above-average intensity. While we seek to enhance our operations' average energy intensity through both the development of new projects and divestments, we have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10-20 years. Although we have no immediate plans to move to a net-zero emissions portfolio, in November of 2017, we announced our ambition to reduce our net carbon footprint in accordance with society's implementation of the Paris Agreement's goal of holding global average temperature to well below 2°C above pre-industrial levels. Accordingly, assuming society aligns itself with the Paris Agreement's goals, we aim to reduce our net carbon footprint, which includes not only our direct and indirect carbon emissions, associated with producing the energy products which we sell, but also our customers' emissions from their use of the energy products that we sell, by around 20% in 2035 and by around 50% in 2050.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal 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 Royal Dutch Shell plc and its 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 entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this presentation refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

This presentation contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) 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 "aim", "ambition", "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. No assurance is provided that future dividend payments will match or exceed previous dividend payments. 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 Form 20-F for the year ended December 31, 2017 (available at [www.shell.com/investor](http://www.shell.com/investor) and [www.sec.gov](http://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, 26 February 2019. 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 the 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](http://www.sec.gov).

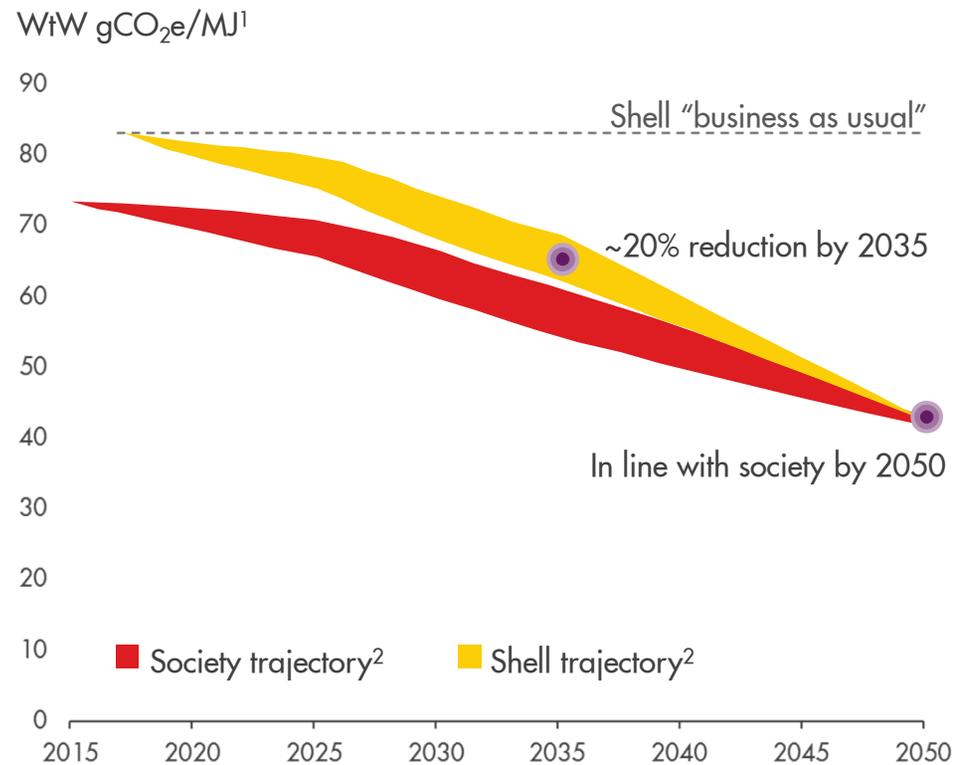


---

## Societal challenges and increased energy consumption

# Shell's ambition to Reduce Net Carbon Footprint<sup>1</sup> by 20% by 2035

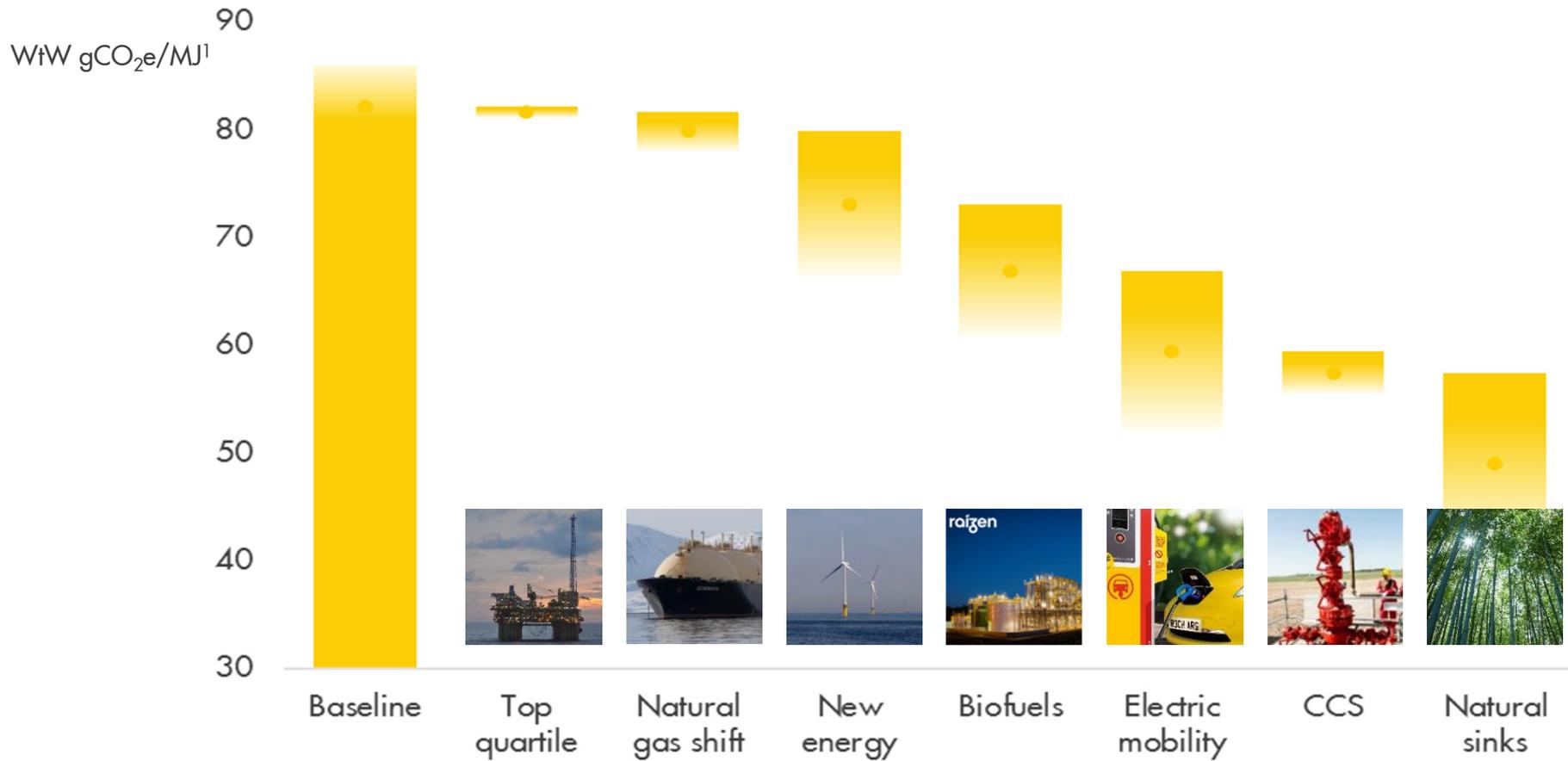
- All energy products
- Across entire supply chain
- Government policy, technology, and consumer choice will drive actual pace and outcomes
- 5-year reviews to ensure in line with societal progress



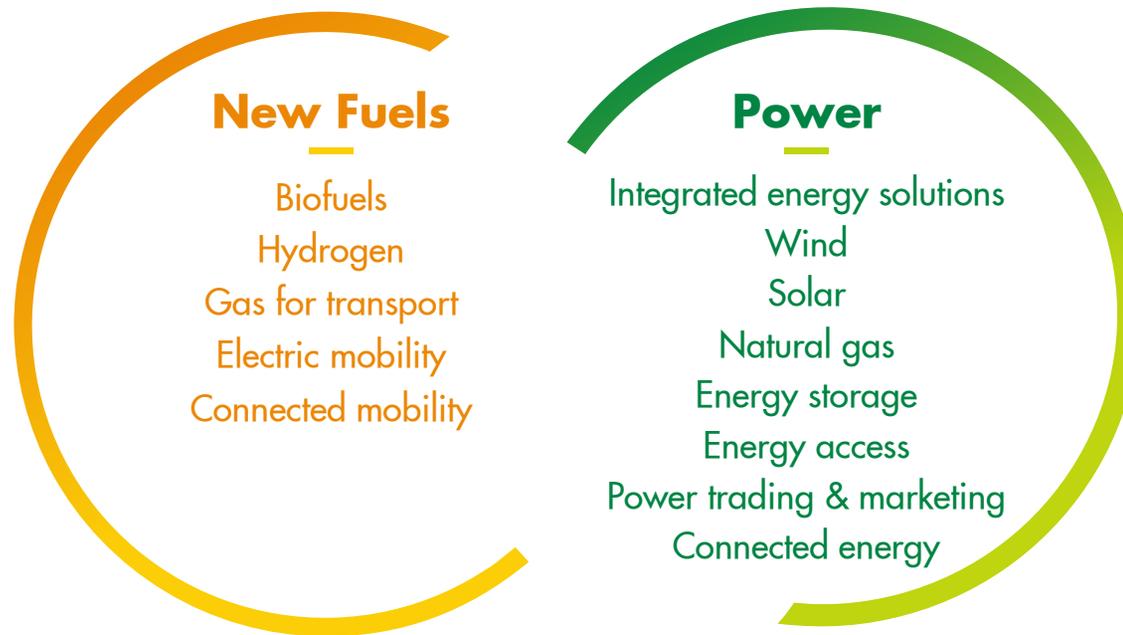
1: Net Carbon Footprint measured on an aggregate "well to wheel" or "well to wire" basis, from production through to consumption, on grams of CO<sub>2</sub> equivalent per megajoule of energy products consumed; chemicals + lubricants products are excluded. Carbon Footprint of the energy system is modelled using Shell methodology aggregating lifecycle emissions of energy products on a fossil-equivalence basis. The methodology will be further reviewed and validated in collaboration with external experts.

2: Potential society trajectory includes analysis from Shell scenarios estimate of Net Zero Emissions by 2070 and IEA Energy Technology Perspectives 2017; Potential illustrative Shell trajectory

# Shell has a mix of options to achieve the 2035 ambition



**In 2016 the business unit New Energies was founded, dedicated to providing more and cleaner energy solutions**



• **Digital ventures** • **Technology ventures** • **City solutions** •



Since 2001 built up experience with 738MW\* of onshore wind

\*Since 2001; 553 wind turbines  
Capacity: 738 MW (Shell Share: 369 MW)

26 February 2019

---

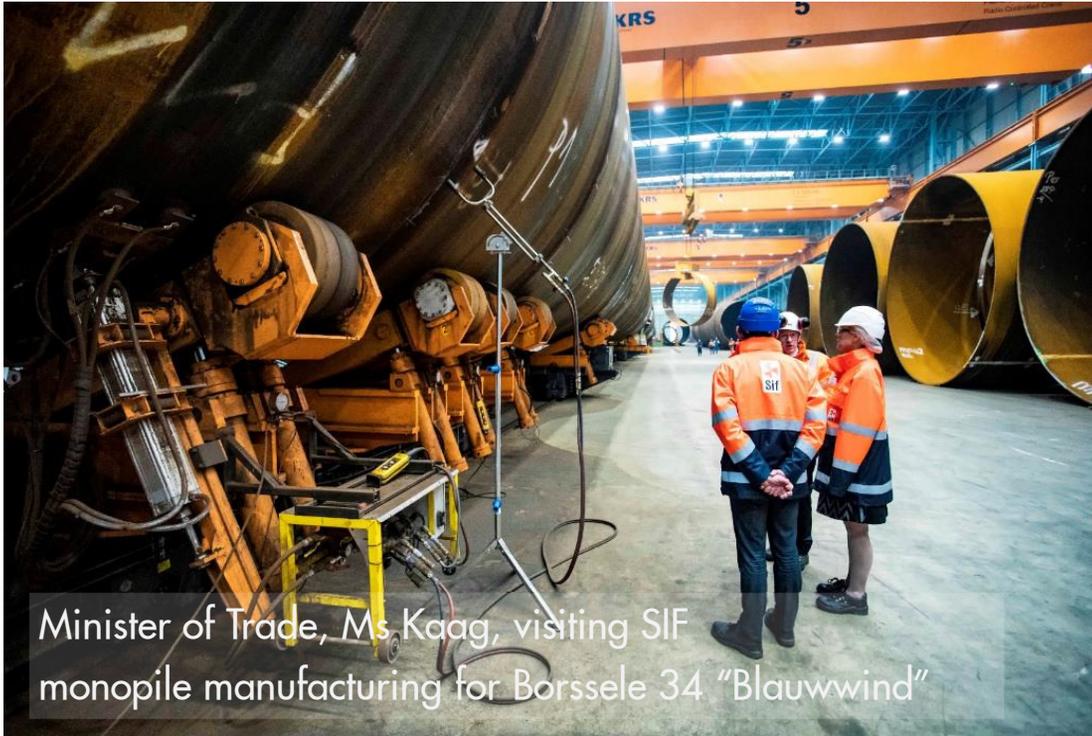
## Offshore experience since 2002: 108MW in North Sea

Built in 2006; 36 wind turbines North Sea Wind Joint Venture with Vattenfall: (Shell Share: 54 MW)

26 February 2019

# Borssele 34 – New development of 730MW underway for COD 2021

JV of Partner's Group (45%), Shell (20%), DGE\* (15%), Eneco (10%), Van Oord (10%)



Build on

- Large Project execution experience
- Technical expertise
- Supply Chain expertise
- Commercial and Finance expertise

Continuously learn and expand

- Operations & Maintenance experience
- Access to portfolio of international offshore wind opportunities

\*DGE: Diamond Generation Group, subsidiary of Mitsubishi Corporation

77 turbines; Shell Share: 145 MW; 365 MW traded by Shell

## Continuous investment in Floating Wind Technology



**Tetraspar** Shell investment in new 'TetraSpar' floating foundation concept

Member of multiple working groups and industry organisations to address challenges and optimise technology



OFFSHORE  
WIND

# A long term partner for the Japanese industry, government and people, nationally and internationally

First operations  
in 1900

45 years of  
LNG supply

Lubricants for  
**Nissan** via  
Showa Shell Sekiyu

Government

Supply Chain & EPC

4% of energy  
supply (LNG)

Liquid H<sub>2</sub>  
imports

Energy  
Trading

Partner in  
Offshore Wind?



# Strong team of wind professionals in Netherlands, US, UK; ready to expand team in Japan

## Skills and capabilities

## Shell presence for offshore wind

Organizational support  
100+ professionals

Project & deal support  
40 professionals

Wind development  
20 professionals



### Project

- Project managers
- Planning, cost and risk engineers

### Technical

- Structural engineers
- Electrical engineers
- Turbine engineer
- Operators
- Yield experts

### Commercial

- Commercial leads
- C&P leads

### Financial

- Economics
- Project Finance
- Tax

### Functional support

- Government Relations
- Legal
- HR
- Social Performance

