



European gas markets: today and into the future

EPRG Winter Seminar

December 9, 2021

Dr. Mallika Ishwaran

Chief Economist, Shell International

Warning: Uncertainties Ahead

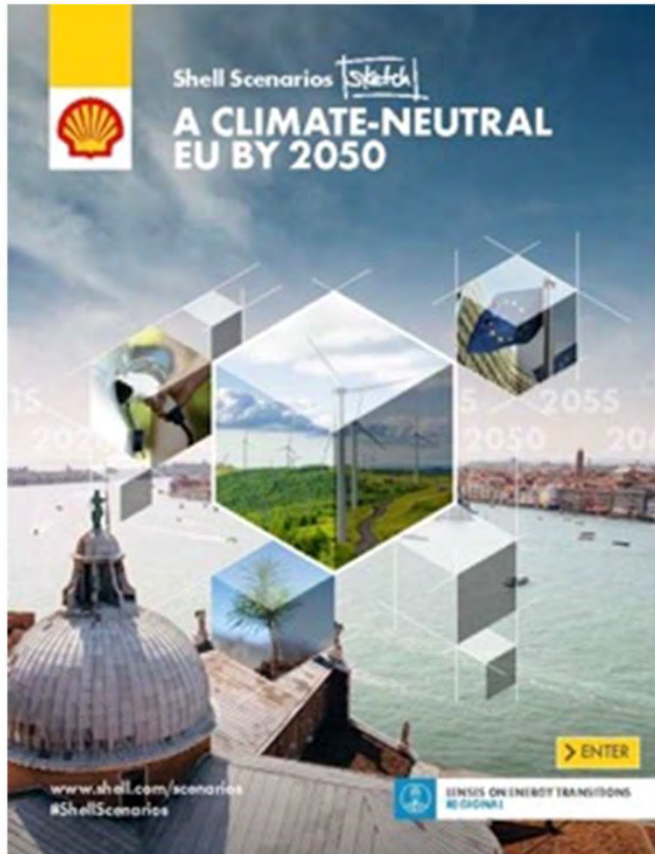
On March 4, 2020, the EU Commission proposed the European Climate Law that would establish a legally binding target of net-zero greenhouse gas emissions by 2050. Shell strongly supports the proposed European Climate Law and its binding target of net-zero greenhouse gas emissions by 2050. We believe meeting this target will be extremely challenging but possible. This report contains an assessment of what we believe may be needed to decarbonise the energy system in order for the EU to meet the proposed target of net-zero greenhouse gas emissions by 2050. This overview is not intended to be proscriptive and there are other pathways for the EU to follow in reaching the target. It is important to note that the suggestions contained in this report are those to be taken by the EU, and not necessarily Shell. While Shell is supportive of the EU target of net-zero greenhouse gas emissions by 2050, our current business plan is not consistent with the proposed EU target. However, as announced on April 16, 2020, Shell aims to be a net-zero emissions energy business by 2050. Accordingly, we expect that over time, our business plan will change as society and our customers move toward meeting the goals of the Paris Agreement. We believe that the proposed European Climate Law is a significant step in this journey.

The companies in which Royal Dutch Shell plc directly and indirectly own 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 terms 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; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) 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, 2019 (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, December 9, 2021. 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. 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.

Pathway to climate neutrality by 2050

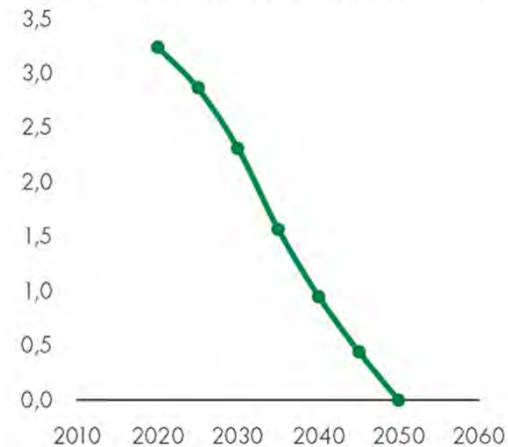


www.shell.com/EUsketch

Copyright of Shell International B.V.

A climate-neutral EU by 2050
EU energy system transformation
+ major reforestation*

Total CO₂ energy emissions + reforestation, Gt/ year



*The need for natural carbon sinks declines over time, the EU reaches climate neutrality without additional natural carbon sinks in the mid-2050s.

Accelerate clean technologies

- Double the use of electricity
- Renewables 75% of energy mix, no coal
- Commercialise new fuels: 10% hydrogen, triple biofuels

Target behavioural incentives

- Improve energy efficiency per unit of GDP by ~45%
- Incentivise low-carbon consumer and business choices
- Progressively raise government-led CO₂ price in the EU to over €200/ tCO₂e

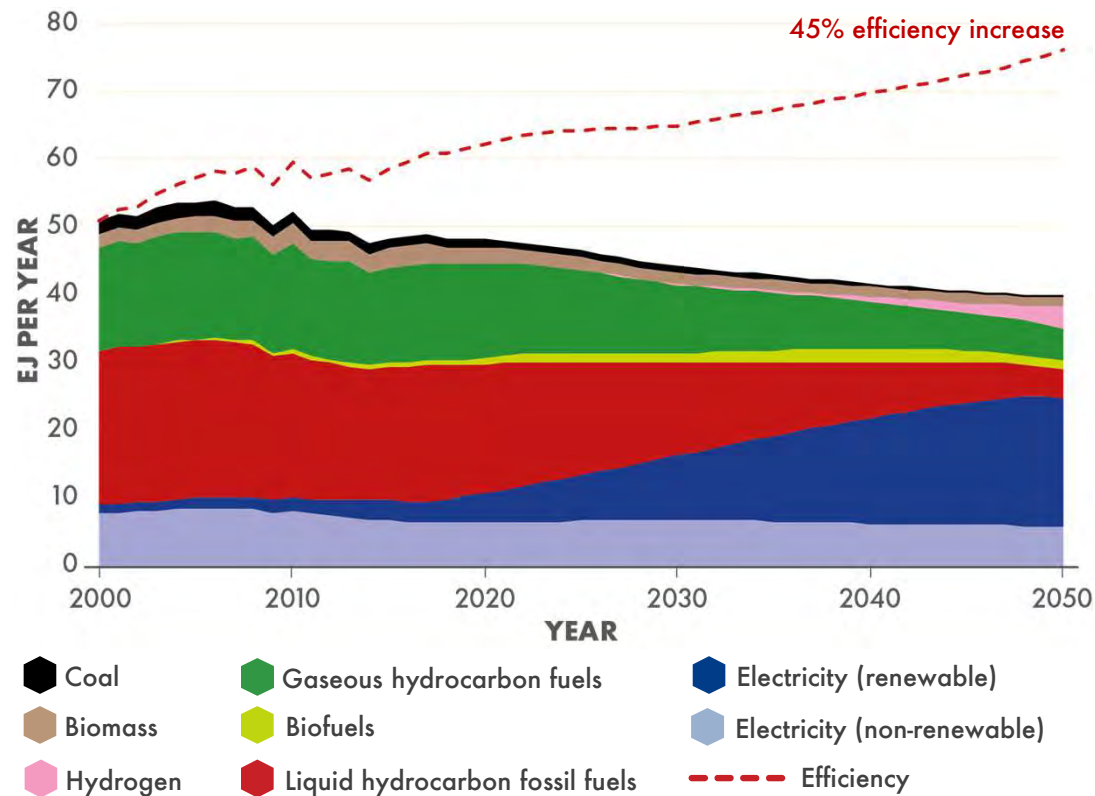
Remove emissions

- Build at least two major CCUS facilities every month (> 1 million tonnes per year each)
- Reforest at least 220,000 km² in the EU to remove the remaining 300 million tonnes of CO₂

RESTRICTED

Deep electrification, but molecules remain important

EU energy system electrons and molecules



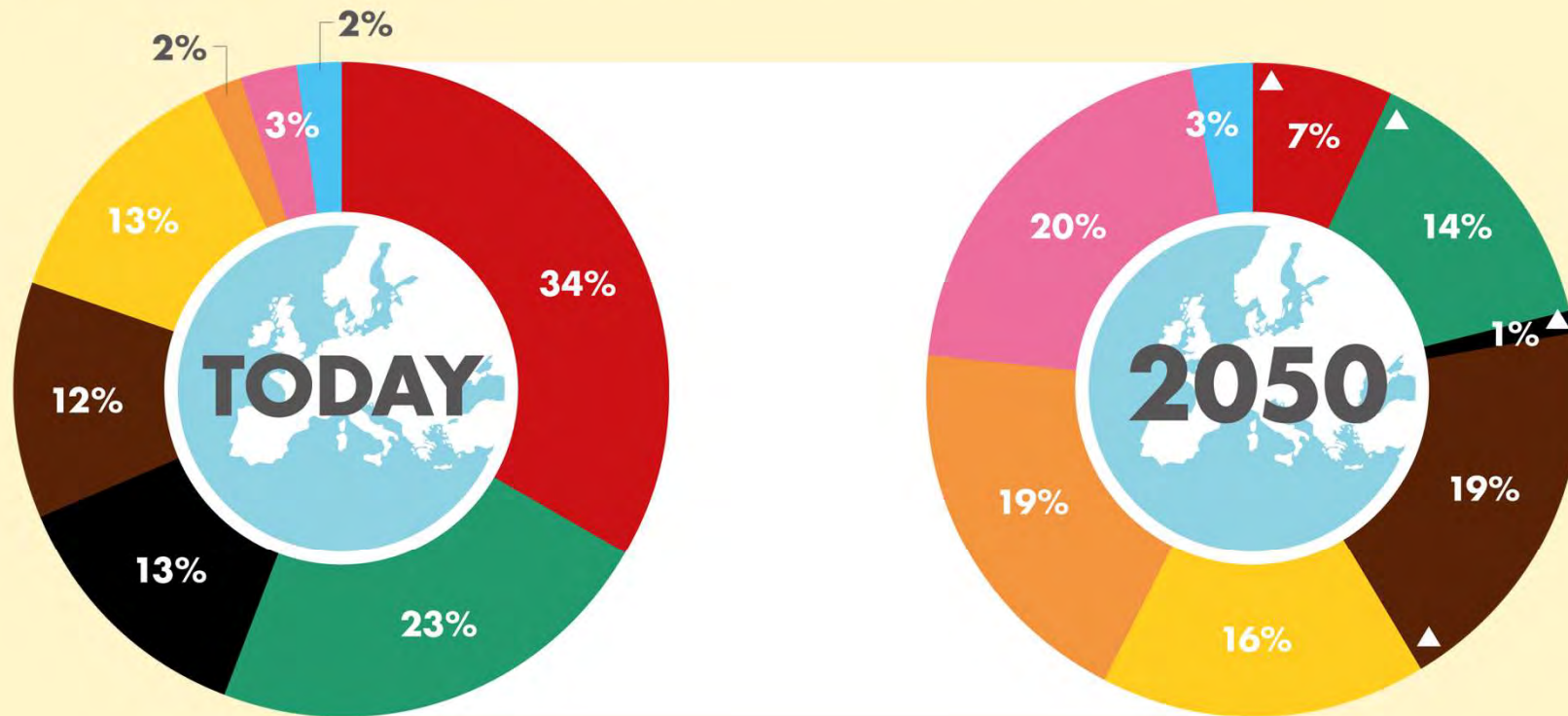
Source: Shell analysis

Copyright of Shell International B.V.

Scenarios Sketch: A climate-neutral EU by 2050



Possible primary energy mix for a climate-neutral EU



Source: Shell analysis

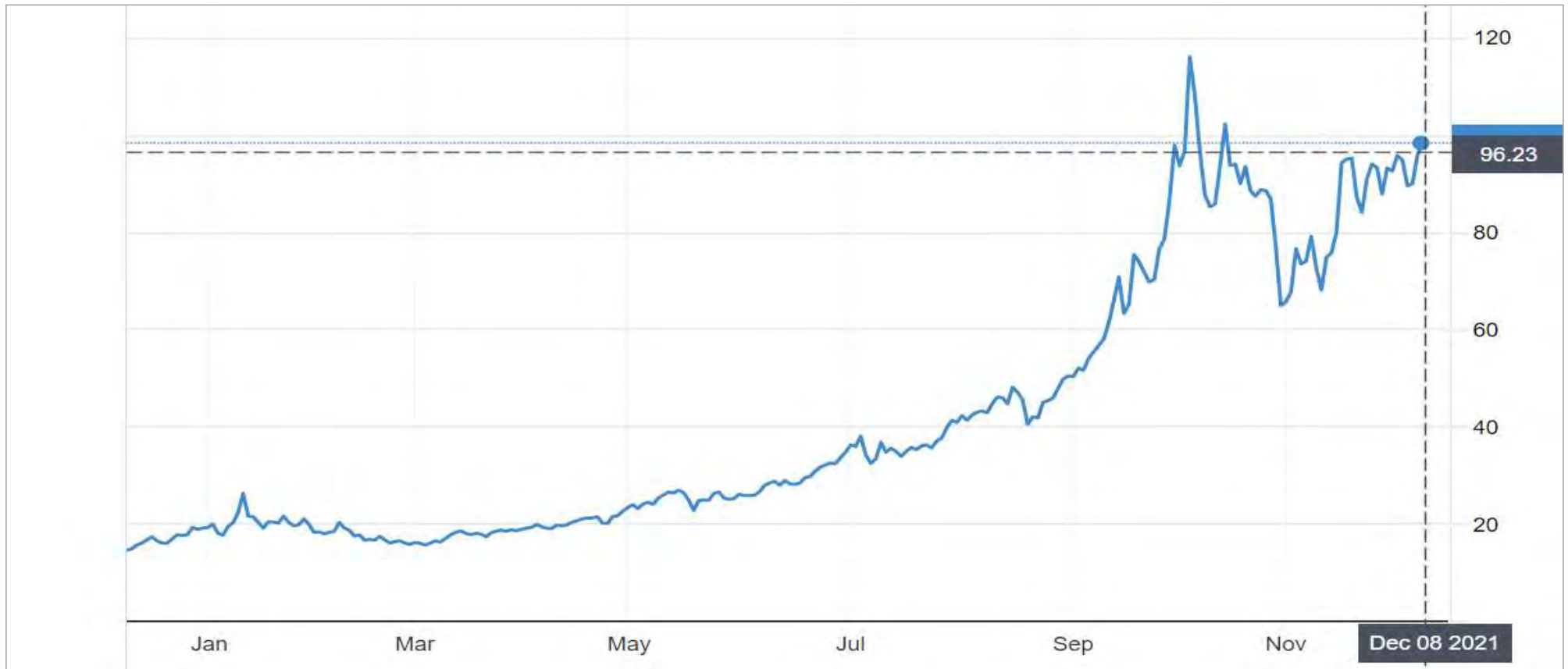
Copyright of Shell International

The sum is more than 100% as a result of rounding.

Scenarios Sketch: A climate-neutral EU by 2050

EU natural gas markets today

Demand, supply, weather, geopolitics contributing to tightness



Important role for natural gas, in the transition and for abated gas in 2050

In the longer-term, this requires:

- ❑ adequate global investment in gas supply
- ❑ diversified EU sources of supply
- ❑ managing knock-on effects on electricity markets
- ❑ building out CCS capacity

