

DOCKETED

Docket Number:	20-IEPR-02
Project Title:	Transportation
TN #:	233697
Document Title:	Presentation - Shell Hydrogen
Description:	Presentation Wayne Leighty, Shell
Filer:	Raquel Kravitz
Organization:	Shell International B.V.
Submitter Role:	Public
Submission Date:	7/1/2020 10:18:12 AM
Docketed Date:	7/1/2020

Powered by
Hydrogen



Shell Hydrogen

California Energy Commission, Integrated Energy Policy Report, Commissioner Workshop, H2 & FCEV Session, 2 July 2020

Wayne Leighty

Business Development Manager, North America

Cautionary Note

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 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, 2 July 2020. 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.

New Fuels



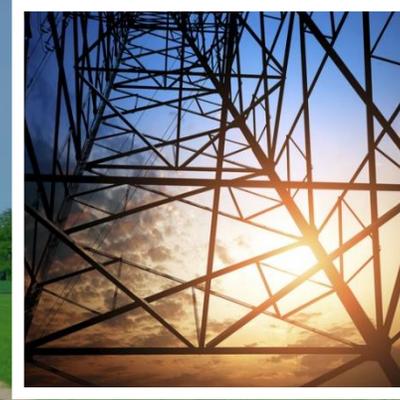
Biofuels

Conventional &
advanced biofuels
Biogas



Hydrogen

Active in
hydrogen electric



Electric Mobility

Active in EVs charging
infrastructure and
technology



Gas for transport

Offering gas to liquids
(GTL) and liquefied
natural gas (LNG)

HYDROGEN AS A TRANSPORT FUEL

HOW IS HYDROGEN PRODUCED?

Hydrogen can be produced by

Natural gas reforming

Methane can be converted into hydrogen.



**Methane
from biogas**

Gasification

Hydrogen can also be made from organic materials like agricultural waste



Electrolysis

Splitting water with electricity releases hydrogen and oxygen.



**Electricity from
renewable
sources**

SHELL HYDROGEN REFUELING STATION DOUBLES PERFORMANCE AT HALF THE COST



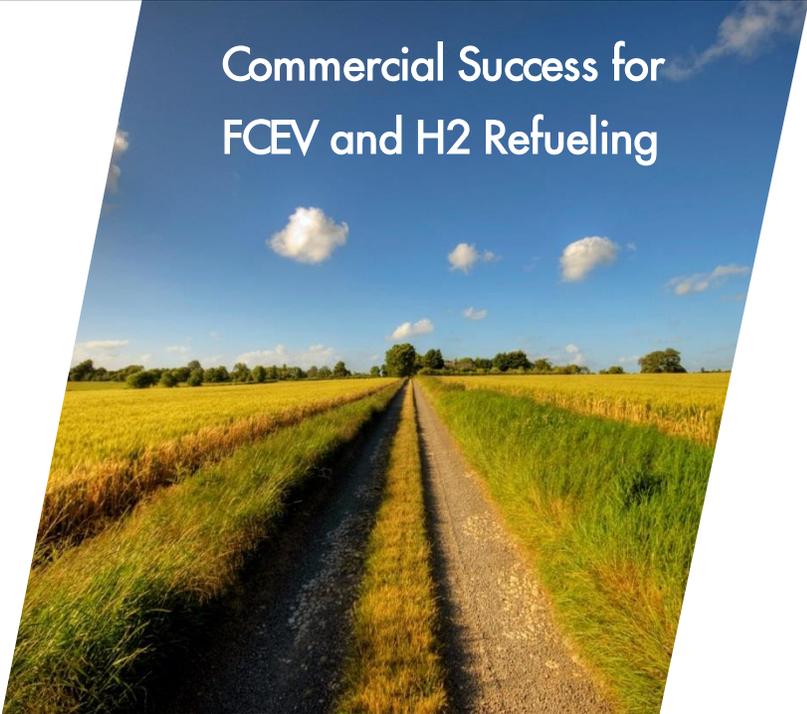
Hydrogen Fueling Station Development Program

Improving customer's cost and refueling experience

- A multi-year program of development gives certainty to the customer on the growing network and enables efficient execution
- New hydrogen dispenser improves the customer's refueling experience
- Fueling and reliability approaching gasoline performance in back-to-back fills
- Easy expansion to double capacity to future-proof for demand growth

Shared Objective / Shared Challenge

Pivot from demonstration to commercialization is needed, and possible



Commercial Success for
FCEV and H2 Refueling



Slow Launch without
Scale is not viable

Objective: scale increase for hydrogen fuel cell electric vehicle market adoption and hydrogen fuel cost reduction, to achieve end of government offset

