

Hydrogen Council

Welcome Address – 22nd September 2017

*Oliver Bishop,
General Manager Hydrogen, Shell*



Hydrogen Council

KEY INFORMATION

- A global CEO-level initiative of energy, transport and industry multinationals
- United vision and long-term ambition for hydrogen to foster the energy transition
- Launched at 2017 World Economic Forum in Davos



From left : Professor Dr Aldo Belloni, CEO the Linde Group; Woongchul Yang, Vice-Chairman Hyundai; Mark Cutifani, CEO Anglo American; Seiji Kuraishi, Executive Vice President, Executive Officer and Representative Director Honda; Yoshinori Kanehara, CEO Kawasaki Heavy Industries; Klaus Fröhlich, Member of the Board of Management of BMW GROUP, Development; Takeshi Uchiyamada, Chairman Toyota; Benoit Potier, CEO Air Liquide; Ben van Beurden, CEO Shell; Jochen Hermann, Vice President, Mercedes-Benz, Daimler; Didier Holleaux, Executive Vice President Engie; Thierry Best, COO Alstom; Patrick Pouyanné, Chairman of the Board and Chief Executive Officer Total



Hydrogen Council

JOINT VISION: HOW HYDROGEN EMPOWERS THE ENERGY TRANSITION

3 Key policy recommendations:

- 1. Provide long-term and stable policy frameworks** to guide the energy transition in all sectors (energy, transport, industry, and residential). We will bring in our expertise on the feasibility of decarbonization solutions in each sector.
- 2. Develop coordination and incentive policies** to encourage early deployment of hydrogen solutions and sufficient private-sector investments. These policies should complement sector policies and provide tools to capture the benefits of hydrogen.
- 3. Facilitate harmonization of industry standards** across regions and sectors to enable hydrogen technologies and take advantage of scale effects and decrease costs.

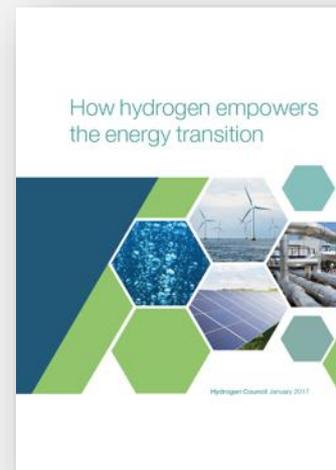
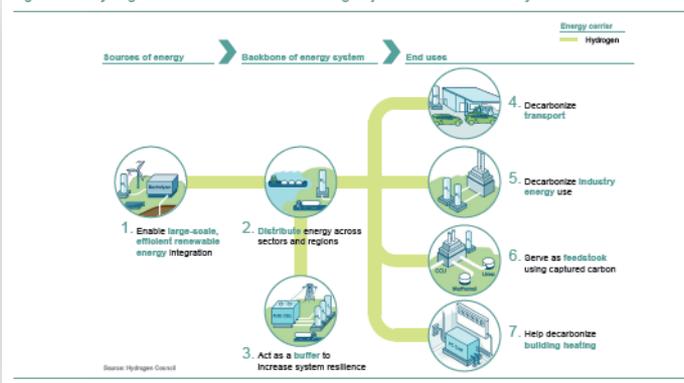


Figure 2: Hydrogen has seven roles in decarbonizing major sectors of the economy



Hydrogen Council

2017 PRIORITIES & KEY EVENTS

In 2017 the Hydrogen Council has set up a high-level trilogue between the industry, policy makers & investors to deliver on its vision for hydrogen.



Investor Event in New York City, USA

18 September 2017

The Council hosted a high-profile event with investors on the occasion of the New York Climate Week and in conjunction with the Sustainable Investment Forum. The event gathered leaders from business and government to demonstrate how continued investment in innovation, technology and clean energy will drive profitability and lead towards a net-zero emissions global economy.



CEO & Ministers Events in Bonn, Germany

13 November 2017

CEO members of the Council will gather for their 2nd annual meeting and a meeting with international policy makers on the occasion of COP 23, which is expected to draw nearly 50,000 participants from government, intergovernmental organisations, UN agencies, NGOs and civil society, including some 30,000 official delegates.

Hydrogen Council

Investor Event in New York City, USA – 18 Sep 2017

Purpose

- Inform how hydrogen empowers the energy transition
- Why these technologies are now market-ready
- Discuss existing business cases and investment opportunities
- Discuss the strategies and tools required for scale deployment

High profile event

- 160 investors, industry experts and policy stakeholders.
- Keynotes from Benoît Potier, Co-Chair of Hydrogen Council, Chairman and CEO, Air Liquide. Sue Reid, VP Climate & Energy, Ceres, and Patrick Pouyanné, Chairman and CEO of Total
- Panel discussions from experts

Some of the main points presented:

- Major technology progress has been achieved in the last 10 years with costs reduced by a factor of 20 over the period.
- Commercial products are now being marketed across sectors and along the full hydrogen value chain, including hydrogen production, hydrogen stations, forklifts, cars, buses, heating & power systems, etc.
- Manufacturing capacities across the world are growing leading to further cost reduction
- There are few technical bottlenecks to reach scale, but there is a need to anticipate investments. This includes ramping up the total number of hydrogen stations worldwide from 300 to 3000 in next 5-7 years
- Investments are required along full value chain, from product development, manufacturing lines to hydrogen infrastructure

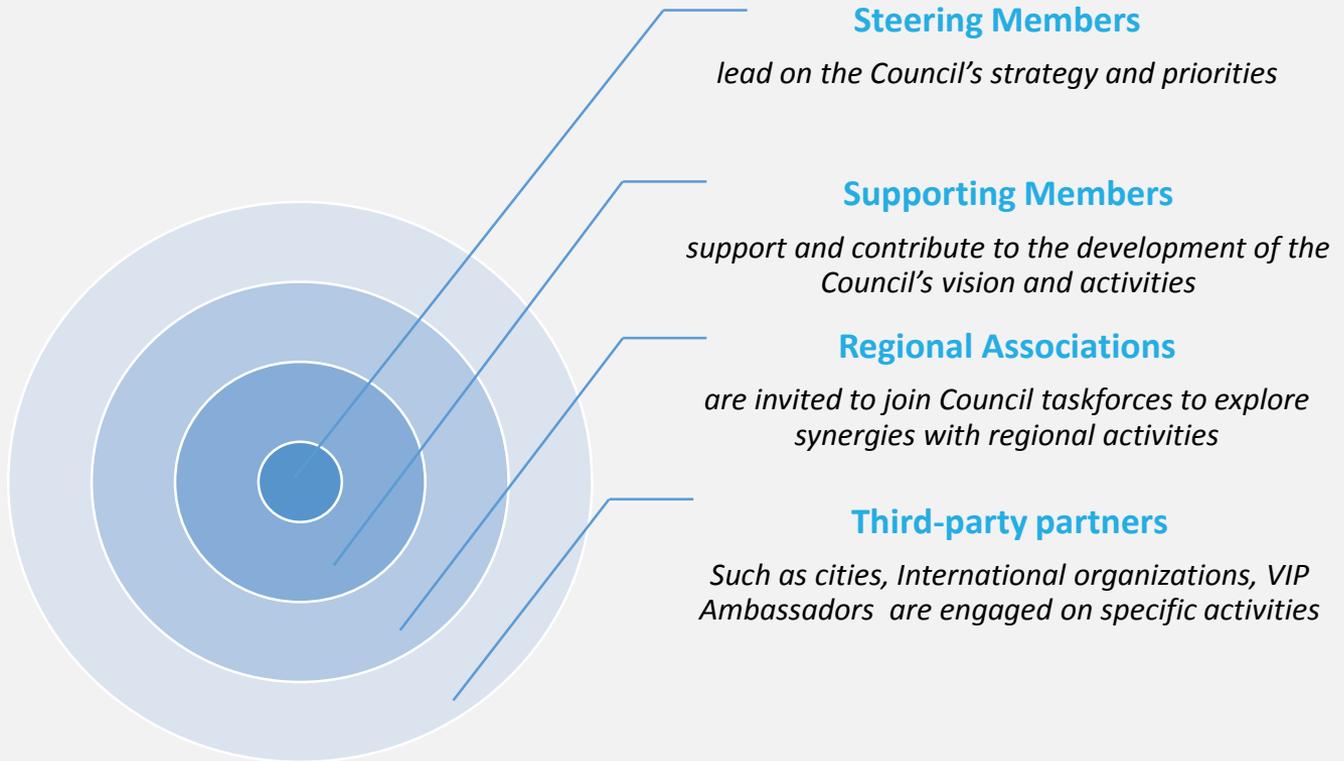
CLIMATE
WEEK
NYC



Hydrogen Council

HOW THE COUNCIL WORKS

The Council is made up of four levels of collaboration, with all members and partners **working together to foster the high-level support for hydrogen technology** and ultimately the Council's aim to see hydrogen take its place in the energy transition



Hydrogen Council

Please get in touch!

secretariat@hydrogencouncil.com

+32 (0)2 289 04 99

@HydrogenCouncil

www.hydrogencouncil.com