Hydrogen Council

# Global hydrogen coalition quadruples size in 18 months

## The Hydrogen Council experiences a second major wave of growth as member CEOs prepare to convene at this year's Global Climate Action Summit

**Brussels, 05 September 2018 -** The Hydrogen Council, a global CEO coalition for hydrogen technologies, is excited to welcome an additional 14 members, a second major wave of growth this year. Eight companies join the group at steering member level: Airbus, Air Products, Cummins, EDF, Johnson Matthey, KOGAS, SINOPEC and thyssenkrupp, alongside six new members at supporting level: AFC Energy, Mitsubishi Heavy Industries, Ltd., Re-Fire Technology, Sumitomo Mitsui Banking Corporation, Sumitomo Corporation, and Southern California Gas. In addition, Faurecia upgrades its membership to steering level.

As a result, the Hydrogen Council now brings together an impressive group of 53 leading companies, accounting for 3.8 million jobs and €1.8 trillion in revenue from across 11 different countries. The group has more than quadrupled in size since launching at the World Economic Forum just 18 months ago. This rapid expansion – with influential players entering from across geographies and aspects of the value chain – reflects surging interest in global hydrogen deployment.

The announcement comes ahead of the Council's next annual CEO meeting that will take place during the Global Climate Action Summit (GCAS) in San Francisco, USA next week. The meeting will see C-suite leaders of Council member companies come together for a day of strategic discussions, action planning and engagement with stakeholders, all geared towards delivering on a joint vision of hydrogen averting 6 Gt of CO2 emissions, creating a $2.5 trillion market and providing employment for more than 30 million people by mid-century. The Council has been also invited to present its work as part of the GCAS programme.

*"We are delighted to welcome 14 new CEOs at the Hydrogen Council."* said Benoit Potier, CEO and Chairman of Air Liquide and Co-chair of the Hydrogen Council. "*The level of interest in this initiative has exceeded all expectations and the group's composition – including world leaders in energy, transport, industrial gas and other key areas – shows that global business considers hydrogen a vital part of energy transition efforts. I look forward to a productive meeting in San Francisco."*

Dr. Woong-Chul Yang, Vice Chairman of Hyundai Motor Company and Co-chair of the Hydrogen Council added, *"Over the last 18 months, we have brought together a critical mass of members, laid out a clear path forward to realize a global scale up of hydrogen in our "Hydrogen, Scaling Up" study and fostered new actions with governments around the world. There is more to come - look out for more exciting announcements from the Council as we come together during the Global Climate Action Summit next week."*

## About the Hydrogen Council:

Launched at the World Economic Forum in Davos in early 2017, the Hydrogen Council is a first-of-its-kind global CEO initiative to foster the role of hydrogen technologies in the global energy transition. Current members include 33 leading multinationals – 3M, Airbus, Air Liquide, Air Products, Alstom, Anglo American, Audi, BMW GROUP, China Energy, Cummins, Daimler, EDF, ENGIE, Equinor, Faurecia, General Motors, Great Wall Motor, Honda, Hyundai Motor, Iwatani, Johnson Matthey, JXTG Nippon Oil & Energy Corporation, Kawasaki, KOGAS, Plastic Omnium, Royal Dutch Shell, Sinopec, The Bosch Group, The Linde Group, thyssenkrupp, Total, Toyota and Weichai– as well as 20 dynamic players from across the value chain – AFC Energy, Ballard Power Systems, Faber Industries, First Element Fuel (True Zero), W. L. Gore, Hexagon Composites, Hydrogenics, Marubeni, McPhy, Mitsubishi Corporation, Mitsubishi Heavy Industries Ltd., Mitsui & Co, Nel Hydrogen, Plug Power, Re-Fire Technology, Royal Vopak, Southern California Gas, Sumitomo Mitsui Banking Corporation, Sumitomo Corporation and Toyota Tsusho. The coalition collectively represents total revenues of over €1.8 trillion and close to 3.8 million jobs around the world.[1]

The Hydrogen Council has published two studies to date, *How hydrogen empowers the energy transition (January 2017)* exploring the role of hydrogen in the energy transition, including its potential, recent achievements, and challenges to its deployment and *Hydrogen, scaling up (November 2017)* presenting the first comprehensive vision of the long-term potential of hydrogen and a roadmap for deployment. To find out more: www.hydrogencouncil.com.

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## About our new members:

**Steering members**

**Airbus:** Airbus is a global leader in aeronautics, space and related services. In 2017 it generated revenues of € 59 billion restated for IFRS 15 and employed a workforce of around 129,000. Airbus offers the most comprehensive range of passenger airliners from 100 to more than 600 seats. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as one of the world's leading space companies. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.

**Air Products:** Air Products (NYSE:APD), www.airproducts.com, is a leading international supplier of industrial gases serving energy, environment and emerging markets. As the world leader supplying hydrogen for

[1] Company figures from financial year 2017.

processing cleaner transportation fuels, Air Products is also a hydrogen fuelling pioneer, with involvement in over 250 fuelling projects in more than 20 countries.

**Cummins:** Cummins Inc. designs, manufactures, sells and services diesel and alternative fuel engines from 2.8 to 95 liters, diesel and alternative-fueled electrical generator sets from 2.5 to 3,500 kW, as well as related components and technology. Cummins serves customers through our network of 500 company-owned and independent distributor facilities and approximately 7,500 dealer locations in more than 190 countries and territories.

**EDF:** A key player in energy transition, the EDF Group is an integrated electricity company, active in all areas of the business: generation, transmission, distribution, energy supply and trading, energy services. A global leader in low-carbon energies, the Group has developed a diversified generation mix based on nuclear power, hydropower, new renewable energies and thermal energy. The Group is involved in supplying energy and services to approximately 35.1 million customers, of which 26.5 million in France. The Group generated consolidated sales of €70 billion in 2017.

**Johnson Matthey:** Johnson Matthey is a global leader in science that makes the world cleaner and healthier. With over 200 years of sustained innovation and technological breakthroughs, our solutions improve the performance, function and safety of our customers' products. We have established businesses with many decades of investment in hydrogen technologies in our group. Our biggest market areas are those in which hydrogen will find application as an energy carrier: vehicles, fuels, energy and process industries.

**KOGAS:** As a global energy company, KOGAS is spearheading energy transition to hydrogen based on its extensive experience and technical prowess acquired by supplying natural gas over the last 35 years. Under the goal of enabling nation-wide hydrogen charging services within the next decade, KOGAS is proactively expanding hydrogen infrastructure. Having cemented its position as a top-tier natural gas company successfully throughout the entire value chain from procurement to supply, KOGAS is now aiming to become a leading hydrogen supplier by developing hydrogen technologies and pioneering a hydrogen economy.

**SINOPEC:** Sinopec Corp. is an integrated energy and chemical companies. We run the largest refining business and second largest chemical business. We provide energy solution for mobility through our well-developed sales network comprising of more than 30 thousand service stations.

**thyssenkrupp:** The Industrial Solutions business area of thyssenkrupp is a leading partner for the engineering, construction and service of industrial plants and systems. Based on more than 200 years of experience we supply tailored, turnkey plants and components for customers in the chemical, fertilizer, cement, mining and steel industries. As a system partner to the automotive, aerospace and naval sectors we develop highly specialized solutions to meet the individual requirements of our customers. Around 21,000 employees at over 100 locations form a global network with a technology portfolio that guarantees maximum productivity and cost-efficiency.

**Supporting members**

**AFC Energy:** AFC Energy is a leading provider of clean energy solutions across the hydrogen value chain, leveraging its proprietary alkaline hydrogen fuel cell technology into scalable, stationary or temporary power generation systems. AFC currently operates the world's largest alkaline fuel cell platform at 240kWs; a modular system with the potential for scale up to multi-megawatt capacities. The Company is now working with new and established international partners to integrate upstream, low cost hydrogen generation solutions into its fuel cell to establish a single clean energy platform.

**Mitsubishi Heavy Industries:** Mitsubishi Heavy Industries, Ltd. (MHI), headquartered in Tokyo, is one of the world's leading industrial firms with 80,000 group employees and annual consolidated revenues of around 38 billion U.S. dollars. For more than 130 years, the company has channelled big thinking into innovative and integrated solutions that move the world forward. MHI owns a unique business portfolio covering land, sea, sky

and even space. MHI delivers innovative and integrated solutions across a wide range of industries from commercial aviation and transportation to power plants and gas turbines, and from machinery and infrastructure to integrated defence and space systems.

**Re-Fire Technology:** Re-Fire Technology was incorporated with the vision to commercialize hydrogen and fuel cell applications. Since 2015, we recognize that hydrogen will be a vital energy source to transform our transportation sector in the future, and in the past three years, Re-Fire engineers have focused on building Fuel Cell Engines and components for commercial vehicles. Through the end of August 2018, more than 700 commercial vehicles with Re-Fire fuel cell engines have been delivered to customers, accumulating to more than 2,000,000 kilometres of on-the-road experience accrued.

**Sumitomo Mitsui Banking Corporation:** Sumitomo Mitsui Banking Corporation, SMBC, is one of the Japanese mega-banks, and SMBC group has been actively involved in the field of hydrogen. SMBC invests in “Mirai (meaning future in English) Creation Fund I & II”, in order to invests in companies and projects that use the latest “technologies for a hydrogen-powered society”. SMBC also holds hydrogen-related events to promote Hydrogen use as energy, as well as participates hydrogen-related associations and study-groups in Japan. SMBC has a strong track record in providing project finance for renewable energy projects both in the world, and have received many awards in the past. SMBC also issued two Green Bonds, USD500million in 2015 and EUR500million in 2017, which we used to finance renewable energy projects in the world.

**Sumitomo Corporation:** With its global network and based on trust from companies in various industries and from consumers, Sumitomo Corporation engages in multifaceted business activities by making the most of its Integrated Corporate Strength. These business activities include sales of a variety of products and services, import and export, trilateral trade, and domestic and international business investment.

**Southern California Gas:** SoCalGas believes hydrogen will play an important role in the transition to lower-carbon energy supply. SoCalGas has a partnership with the University of California, Irvine on the country’s first power-to-gas project using renewable hydrogen to fuel the campus. SoCalGas also has partnerships with the U.S. Department of Energy’s National Renewable Energy.