Panel Sessions Planned

Panel Topic: **Hydrogen Fuel Cell Technology and Market Trends**

- **Panel Date/Time**: Tuesday, August 17, from 9:20 am – 10:50 am EDT (UTC-4)

Panel Session Description: This panel discussion will focus on the following topics:

- Key hydrogen technology trends in the coming 15 years
- Overview of key market trends: GER / EU, USA / CA, CN, JP
- Role of fuel cell application in mobility
- Importance of regulatory frameworks in key markets

Panel Moderator: Dr. Tobias Christoph Brunner, Hynergy GmbH

Expert Panelists:

- China / Canada: **Dr. Guoyan Hou**, CTO Weichai-Ballard Hy-Energy Technologies Com., Ltd.; Technical Director of Ballard China
- USA: **Dr. Sunita Satyapal**, Director of US DOE EERE's Hydrogen and Fuel Cell Technologies Office
- Europe: **Jorgo Chatzimarkakis**, President Hydrogen Europe
- China: **Ju Wang**, Deputy Secretary General Chinese SAE
- Japan: **Katsuhiko Hirose**, CEO & Chief consultant HyWealth and visiting professor Kyushu University (formerly Toyota)

Biography of Panelists:

Dr. Brunner is a Managing Director and Co-owner of Hynergy GmbH, a Hydrogen Energy and Mobility Engineering company in Germany, as well as of Cryomotive GmbH, a startup company to develop cryogenic hydrogen storage and refueling technology for long-haul commercial vehicles. From 2016 to 2020 he also served Great Wall Motors as their VP Fuel Cell R&D. In 2019 Dr. Brunner was appointed Strategic Council of FTXT Future Energy, the new Hydrogen Fuel Cell Company of the Great Wall Group. Before co-founding Hynergy GmbH in 2015, Dr. Brunner has been serving BMW Group in various roles for more than 10 years, most recently as head of BMW's Technology Project Hydrogen Fuel Cell. Under Dr. Brunner's supervision several fuel cell electric vehicle prototypes and test fleets as well as novel cryogenic storage and refueling technologies have been developed and demonstrated.

Dr. Sunita Satyapal
Director
Hydrogen and Fuel Cell Technologies Office
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

Dr. Sunita Satyapal is the Director for the U.S. Department of Energy's Hydrogen and Fuel Cell Technologies Office within the Office of

Energy Efficiency and Renewable Energy and is responsible for $150 million per year in hydrogen and fuel cell R&D. She has two and a half decades of experience across industry, academia and government, including at United Technologies managing research and business development, and as a visiting professor. She has served as the Chair – is currently the co-Chair – of the International Partnership for Hydrogen and Fuel Cells in the Economy, a partnership among over 20 countries to accelerate progress in hydrogen. She received her Ph.D. from Columbia University and did postdoctoral work in Applied and Engineering Physics at Cornell University.

She has numerous publications, including in Scientific American, 10 patents, and a number of recognitions including a Presidential Rank Award.

Jorgo Chatzimarkakis is Secretary General of Hydrogen Europe since 2016. Before he was Representative of Infineon Technologies in Brussels and Member of the European Parliament (2004 – 2014) inter alia in the ITRE Committee (Industry, Technology, Research and Energy) where he could contribute to lay the cornerstone for the first and the second Joint Undertaking on hydrogen and fuel cells. In 2007 he was elected “MEP of the year” by his colleagues of the European Parliament in the category “Research and Innovation”. In 2015 he was appointed ambassador at large for Greece. Mr Chatzimarkakis was born in Duisburg, Germany. He holds German and Greek nationality, a degree in political science from the University of Bonn.

Ju WANG
Deputy Secretary General
China Society of Automotive Engineers

Ju WANG has been Deputy Secretary General of China Society of Automotive Engineers. Ju has a good knowledge on Fuel Cell Vehicle technology development, incentive policy, business models and on developing strong shareholders and stakeholder relationships in China. Having begun her career after her BE (Metallurgical Engineering) in 1992, she was as a trainee engineer in the Anshan Steel Group, the largest iron and steel-making plant in China. Then she worked as a Project Manager in Center of High-tech Development, Ministry of Science and Technology after her graduate degree in 1997. Since she was awarded Master of Management by McGill University in 2002, she has been active in the field of FCV. She has gained expertise based on her hydrogen and FCV demonstration experience during past 13 years. She was project manager of Global Environment Facility/UNDP Demonstration for FCB commercialization in China project from 2003 to March 2017, which was implemented in three phases. The project was the first project to promote FCB and FCV demonstration and application in China, especially project had a good visibility in 2008 Olympic Games Beijing and Shanghai World Expo 2010. She contributed a lot to improvement of local FCV technology, business model research, incentive policy and standards and regulation development etc. Ju has also been

holding the positions of Chief Technical Advisor for Hydrogen Economy Demonstration in China as a technical consultant.

Dr. Guoyan Hou is the Technical Director of Ballard China, and CTO of Weichai Ballard Hy-Energy Technologies Com., Ltd., in charge of research, development and manufacturing for fuel cell stacks and modules for heavy duty applications. Before this role, Dr. Guoyan Hou worked as technical director of R&D at SPICHE (The hydrogen company of State Power Investment Cooperation Ltd.), was also the key member of XEV at GWM (the fuel cell section of GWM). Dr. Guoyan Hou had led the effort of planning and implementation of the Hydrogen Test Center in Baoding, China, which has been qualified as a certification organization recently. She is also an active member of Chinese Fuel cell and hydrogen codes and standards development activities. Before working in China, Dr. Guoyan Hou worked at Ballard Power Systems Inc. and AFCC in Vancouver, Canada. Dr. Guoyan Hou received her Ph.D. in Chemical Engineering from Illinois Institute of Technology, the center for electrochemistry excellence, Chicago, IL, U.S.A.

Dr. Prof. Katsuhiko Hirose
CEO & Chief consultant HyWealth Co. and WPI Visiting Professor
International Institute for Carbon Neutral Energy Research (I2CNER)
Kyushu University
Dr. Hirose obtained his MSc degree in Applied Physics, Nagoya University, and PhD degree in Mechanical Science, Kyushu University. Then he worked in Toyota various roles:

1981~ 2019 Toyota Motor Corporation Japan and Belgium (Toyota Motor Europe)

- Advanced engine control, advanced engine development.
- Manager for First hybrid System Prius responsible for fuel economy and emissions.
- Project General Manager, Planner for Hybrid World Deployment
- Project General Manager, Fuel Cell System and Advanced hydrogen storage system development
- Project General Manager, Hydrogen Energy, and Infrastructure development
- 2015-19 Professional Partner, Toyota Motor Corporation

2015-present WPI professor for I2Cner Kyushu University
2017-19 IPCC Lead Author for GHG Guideline refinement
2019 Sep Graduated from Toyota
2019-Oct-present, CEO &Chief Consultant HyWealth CO.

As an engineer always working front line of Toyota engineering for advanced Engine, Hybrid System and Fuel Cell Vehicle. At the same time, working as a planner to develop world strategy of hybrid and fuel vehicle deployment. It is well known as a leader to develop first Hybrid Vehicle Prius for emission and fuel economy. He is also working to initiate several government industries infrastructure program such as German and UK H2Mobility. From 2017, he works for building the world Hydrogen Consortium “Hydrogen Council” as a founding member secretary

and as a co-chairman to create several key reports. After graduating Toyota in 2019 he is active as an independent consultant for Hydrogen Energy System and Advanced Mobility. He appears to promote hydrogen in many conferences all over the world. He is currently a member of scientific council of Engie SV, advising several companies including Toyota Motor and Mitsui & CO. Ltd. He is also working as a visiting professor to develop methodologies to implementing environmental technologies into the society in I2CNER Kyushu University.