

## Hydrogen and Fuel Cell Technical Advisory Committee (HTAC) Membership Biographies

### Henry P. Aszklar Jr.

Senior Energy Advisor



Henry Aszklar is a senior energy advisor working with renewable energy companies, private equity funds, and multinational technology and service providers. Mr. Aszklar is a highly accomplished executive with more than 35 years of experience. From 2015 to 2017, he served as Chief Executive Officer of Globeleq, the leading independent power producer in Africa with 1,300 MW of generation and 400 employees operating in five countries. Mr. Aszklar also served as a Vice President of AES Corporation, a publicly listed multinational utility holding company, as well as a Managing Director of a large New York-based private equity fund. His career includes service with the U.S. government, working in market oversight while at the Federal Energy Regulatory Commission, and as a commissioned naval officer onboard the USS Bainbridge (CGN 25) and USS Eisenhower (CVN 69). He was a qualified nuclear engineer while on active duty with the U.S. Navy. He earned a B.S. in Aerospace Engineering from the United States Naval Academy and M.S. in Finance and Technology Innovation from the MIT Sloan School of Management.

### Dr. Inês Azevedo

Professor, Department of Engineering and Public Policy  
Carnegie Mellon University



Inês Azevedo is a Professor in the Department of Engineering and Public Policy at Carnegie Mellon University. She is also a principal investigator and co-director for the Climate and Energy Decision Making Center at Carnegie Mellon. Dr. Azevedo's research interests lie at the intersection of behavioral and decision making, and environmental, technical, and economic issues, such as how to address the challenge of climate change and move toward a more sustainable energy system. She addresses complex problems in which traditional engineering plays an important role but cannot provide a complete answer. She has participated in several reports from the National Research Council from the National Academy of Sciences. She has published more than 200 peer-reviewed papers, presentations, and articles on energy issues, and was selected by the World Economic Forum (WEF) as one of the "40 Young Scientists Under 40" in 2014. In 2017 she received a Clean Energy Education and Empowerment (C3E) Award for her outstanding leadership and accomplishments in clean energy research.

## **Marie A. Ffolkes**

President, Industrial Gases–Americas  
Air Products and Chemicals, Inc.



Marie Ffolkes has served as the President of Industrial Gases for Americas at Air Products and Chemicals, Inc. since May 2015 and is responsible for leading the strategy implementation and profitability of Air Products' industrial gases operation in North and South America. Ms. Ffolkes has over 20 years of manufacturing experience and has held senior executive positions with increasing responsibilities at several companies. Prior to joining Air Products, Ms. Ffolkes held the position of global vice president and general manager of the Global Elastomer & Ride Performance Group of Tenneco, Inc. She also has held leadership positions at Johnson Controls, Inc. (including Vice President and General Manager, South America, based in São Paulo, Brazil) and General Electric Company. Ms. Ffolkes serves on Masco Corporation's Board of Directors as a member of the Audit and Organization & Compensation Committees and is a member of the National Association of Manufacturers Board of Directors. She earned a B.S. degree from Brooklyn College and an MBA in finance from Columbia University School of Business in New York. She is also a graduate of General Electric's Financial Management Program.

## **Charles E. Freese V** **(HTAC Chairman)**

Executive Director, Global Fuel Cell Business  
General Motors Company



As Executive Director of General Motors' Global Fuel Cell Business, Mr. Charles Freese leads GM's world-wide fuel cell development organization, with sites in Michigan, New York, California, Washington, D.C., Hawaii, and Germany. In this role, he oversees the research, development, application engineering, laboratories, manufacturing, demonstration programs, and strategic initiatives of GM's fuel cell programs. He also manages GM's collaboration with Honda, which was established in 2013 to collaborate on hydrogen fuel cell automotive products. Charlie has more than 28 years of experience in propulsion systems and automotive, military, and aerospace businesses. He began his career at Detroit Diesel Corporation in 1989, where he held multiple positions in the Advanced Engineering, Product Engineering, and Sales organizations. He moved to Ford Motor Company in 2001 as the Chief Engineer for Diesel Engines, and in 2003 he joined General Motors as the Executive Director for Global Diesel Engineering. He assumed responsibility for GM's Global Fuel Cell Activities in 2008 and is currently responsible for more than 400 engineers and researchers. This team reduced fuel cell system costs by orders of magnitude, operated the world's largest fleet of fuel cell vehicles, and developed commercially viable fuel cell designs with benchmark mass, size, and performance. He holds an M.S. in Engineering Management and an M.S. in Mechanical Engineering from the University of Michigan.

## Robert Hebner

Professor and Director of the Center for Electromechanics  
University of Texas



Dr. Robert Hebner is a Research Professor and the Director of the Center for Electromechanics at the University of Texas at Austin. The Center develops advanced power and energy technologies and teams with companies to move the technologies into the market. Relevant projects include the only hydrogen fueling station in Texas; developing vehicles powered by battery and fuel cell combinations; researching conformable hydrogen tanks; and modeling hybrid system performance. Before joining the University of Texas, he worked for the National Institute of Standards and Technology. In previous positions, he worked in the Office of Management and Budget, the Defense Advanced Research Projects Agency, and Sandia National Laboratories. He has served on several government review teams to assess the management of technical programs. His professional activities include serving as the technical vice president of the Institute of Electrical and Electronics Engineers and three years on that organization's Board of Directors. He also served as the Board chair for the Center for Transportation and the Environment. Dr. Hebner has authored or coauthored more than 150 technical papers and reports and is a fellow of the Institute of Electrical and Electronics Engineers. He earned his Ph.D. in Physics from the Missouri University of Science and Technology.

## Nick Irvin

Research and Development Director, Advanced Energy Systems,  
Cross Cutting Technology, and Strategy  
Southern Company



Nick Irvin is the Research and Development (R&D) Director for Advanced Energy Systems, Cross Cutting Technology, and Strategy at Southern Company. In this capacity, he is responsible for the evaluation, development, and demonstration of innovative technologies to support Southern Company's operations in the areas of advanced nuclear technology, hydrogen and alternative energy carriers, technology scouting, and R&D strategy. Previously, Mr. Irvin served as a Research Engineer, leading efforts in all areas of environmental control technologies including mercury, acid gas, carbon dioxide, particulate matter, water treatment, and carbon sequestration. He delivered many strategic projects that became focal points for the industry's effort to better understand different environmental control technologies. Mr. Irvin has represented Southern in many external alliances. He served as Chairman of the Utility Air Regulatory Group's Control Technology Committee and is a representative to the Policy Committee of the Generation IV Nuclear International Forum on behalf of the U.S. nuclear industry. A recipient of three Technology Transfer Awards from Electric Power Research Institute, Mr. Irvin has demonstrated the ability to lead change through technology innovation throughout his career. Mr. Irvin earned a B.S. in Chemical Engineering from the University of Alabama and an M.S. in Chemical Engineering from Auburn University.

## Harol Koyama

Chief Executive Officer  
H2 PowerTech



Mr. Harol (Hal) Koyama became CEO of H2 PowerTech LLC as that company emerged from IdaTech, following a partial acquisition of IdaTech's assets by Ballard in 2013. Mr. Koyama was also President and CEO of IdaTech before this acquisition, and prior to that, he served at IdaTech as Senior Vice President of Marketing and Sales. While at IdaTech, and in his current role at H2 PowerTech, Mr. Koyama has focused on developing hydrogen production and fuel cell power generation products capable of competing with traditional power generation systems, such as diesel generators, for grid-connected backup power and off-grid primary power applications. Prior to joining IdaTech, Mr. Koyama was Senior Vice President of Sales and Marketing at Capstone Turbine Corporation, a leading microturbine manufacturer, where he streamlined sales and marketing and accelerated market development efforts worldwide. Prior to his work at Capstone, Mr. Koyama was Vice President of Business Development for International Fuel Cells (a subsidiary of United Technologies). Mr. Koyama also has more than five years of experience as a management consultant with McKinsey & Company, focusing on energy and operations issues.

## Paul Leggett

Managing Director  
Mithril Capital Management LLC



Paul Leggett is a Managing Director at Mithril Capital Management focused on technology, macroeconomics and finance. Prior to Mithril, Paul helped lead Morgan Stanley's Clean Energy investment banking business with additional interests in energy policy, energy security and technology innovation. He also worked in Morgan Stanley's Global Sustainable Finance and Mergers & Acquisitions groups. Paul began his career in Natural Resources at Lehman Brothers. Paul is a member of the Sierra Club Clean Technology Leadership Council as well as a former Corporate Leader and current Term Member of the Council on Foreign Relations.

## **Anthony Leo**

Vice President, Applications and Advanced Technology Development  
FuelCell Energy



Anthony (Tony) Leo has played key leadership roles in research, development, and commercialization of stationary fuel cell power plants for more than 30 years and is actively involved in expanding the markets for the megawatt-class clean distributed power generation solutions of FuelCell Energy (FCE). Mr. Leo is currently responsible for applications and advanced technology development at FCE, which is focused on FCE's next-generation products and applications. This includes solid oxide fuel cells, fuel cells used for hydrogen-based energy storage, fuel cells used for carbon dioxide capture, and fuel cells used for hydrogen production, a technology that is now commercially available as the SureSource Hydrogen system. Mr. Leo joined FCE in 1978 and has held numerous positions in the company including managing advanced research and development of rechargeable batteries and fuel cells and managing the first large-scale demonstration stationary fuel cell project. Mr. Leo has authored numerous papers, contributed to technical books, holds several U.S. patents, and has served as Chairman of the American Society of Mechanical Engineers PTC-50 Fuel Cell Performance Test Code Committee. Mr. Leo holds a B.S. in Chemical Engineering from the Rensselaer Polytechnic Institute.

## **Morry Markowitz**

President and Executive Director  
Fuel Cell and Hydrogen Energy Association (FCHEA)



Morry Markowitz leads the Fuel Cell and Hydrogen Energy Association's advocacy programs on Capitol Hill, the Department of Energy, the Department of Defense, and other government agencies, as well as outreach programs to target markets and users of fuel cells and hydrogen energy. Mr. Markowitz has extensive expertise in the energy field, in addition to sixteen years of association management. Prior to joining FCHEA, he served for nine years as the group director of external affairs at the Edison Electric Institute (EEI). Before his work at EEI, Mr. Markowitz was the Vice President of Public Affairs at the Association of International Automobile Manufacturers. Mr. Markowitz brings years of government relations, energy policy, and communications experience to FCHEA. He has worked on Capitol Hill and in the executive branch of government. Mr. Markowitz received a J.D. from the George Mason School of Law.

## **Andrew Marsh**

President and Chief Executive Officer  
Plug Power



Andrew (Andy) Marsh joined Plug Power as President and CEO in April 2008. Under his leadership, Plug Power has led innovation, bringing the hydrogen fuel cell market from concept to commercialization. Early on, Mr. Marsh identified material handling as the first commercially viable market targeted by Plug Power. Today, the firm's fuel cell solutions are being used by major companies such as Amazon, Walmart, and Carrefour to power industrial electric vehicles. Mr. Marsh plans and directs all aspects of the organization's policies and objectives. He continues to spearhead hydrogen fuel cell innovations, and his ability to drive revenue growth of almost 300 percent has landed Plug Power on Deloitte's Technology Fast 500™ list in 2015 and 2016. Mr. Marsh also represents Plug Power in its role as a supporting member of the Hydrogen Council, a global initiative of 18 leading energy, transport and industry companies with a united vision and long-term ambition for hydrogen to foster the energy transition. Previously, Mr. Marsh was a co-founder of Valere Power, where he served as CEO and Board Member from 2001-2007. He holds an M.S. in Electrical Engineering from Duke University and an MBA from Southern Methodist University.

## **Robert Mount**

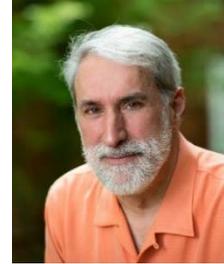
President and Chief Executive Officer  
Power Innovations International, Inc.



Robert Mount, Founder, President, and CEO of Power Innovations International, Inc., has 35 years of entrepreneurial, results-oriented leadership with a strong track record as an originator, facilitator, and builder of world-class technology in the power industry. He applies his background in electrical engineering, marketing, and sales to identify emerging market opportunities and execute plans for strategic implementation of ideas and programs. Power Innovations was founded in 1997 with a focus on power independence. Power Innovations' power products provide clean power and management for customers' sensitive electronic equipment and mobile power. The company's technologies and power integration capabilities span military, emergency, and critical operations, including data centers, emergency response systems, mobile command operations, and back-up power. Its customers include Disney, Bay Area Rapid Transit, national defense contractors, and military and first responder organizations in locations around the world. Under Mr. Mount's leadership, Power Innovations is working to develop new hydrogen fuel cell power generation platforms. It has developed a modular, scalable fuel cell system based on proven automotive hydrogen fuel cell technology from its partners at Daimler. Mr. Mount studied Mechanical and Aerospace Engineering at Drexel University and Electrical Engineering at Brigham Young University.

## Daniel G. Nocera

Patterson Rockwood Professor of Energy  
Harvard University



Dr. Daniel Nocera is the Patterson Rockwood Professor of Energy at Harvard University. His group has pioneered studies of the basic mechanisms of energy conversion in biology and chemistry with a focus on multi-electron transformations and the coupling of protons to electron transfer (i.e., proton-coupled electron transfer). His group accomplished a solar fuels process that captures many of the elements of photosynthesis; he translated this science to produce the artificial leaf, which was named by Time magazine as Innovation of the Year for 2011. He has also demonstrated a path to liquid fuels using a bio-engineered bacterium to efficiently convert carbon dioxide, along with hydrogen produced from the artificial leaf, into biomass and fusel alcohols. In 2008, he founded Sun Catalytic to further develop and commercialize these and other technologies; in August 2014, Lockheed Martin purchased the assets of Sun Catalytix, and now Sun Catalytix technology is being fast-tracked to commercialization under the new venture, Lockheed Martin Advanced Energy Storage, LLC. Dr. Nocera began his career at Michigan State University, where he was a University Distinguished Professor and then was on the faculty of MIT where he was the Henry Dreyfus Professor of Energy. He earned his B.S. degree at Rutgers University and his Ph.D. at Caltech.

## Frank Novachek

Director of Corporate Planning  
Xcel Energy



Mr. Frank Novachek is the Manager of Planning and Technology Assessment for Xcel Energy, where he has worked for more than 35 years. In this capacity, he coordinates research and information sharing with corporate R&D, assesses new technology and business opportunities, and evaluates related pilot/demonstration projects. Prior to this role, Mr. Novachek held a variety of positions, including Chief Internal Auditor and Director of Product Development. Mr. Novachek began his career at Xcel Energy working at the Fort St. Vrain Nuclear Generating Station, which is the only commercial advanced high-temperature gas-cooled nuclear reactor in the United States. Mr. Novachek was also the integration manager for the two multi-billion-dollar mergers that created New Century Energies in the mid-1990s and, ultimately, Xcel Energy in 2000. He also serves as Chair of EPRI's Energy Storage and Distributed Generation Program Advisory Council and is Vice Chair of the U.S. Department of Energy's Hydrogen and Fuel Cell Technical Advisory Committee. He earned his B.S. in Physics from Colorado State University and his MBA from the University of Colorado Denver.

## **Joseph Powell** **(HTAC Vice Chair)**

Chief Scientist  
Shell Global Solutions



Dr. Joseph Powell has been Shell's Chief Scientist Chemical Engineering since 2006. Dr. Powell joined the Chemical Development Department at Shell's Technology Center Houston in 1988 and has led major R&D programs in process chemicals, biofuels, enhanced oil recovery, and related energy topics. He is currently a Fellow of the American Institute of Chemical Engineers (AIChE). Dr. Powell has been granted more than 70 patents with an estimated 50 applications pending and has received several industry awards, including the A. D. Little Award for Chemical Engineering Innovation (AIChE 1998), U. Wisconsin College of Engineering Distinguished Achievement Award (2009), and AIChE Process Development Division Service Award (2012). He is co-editor and chapter author for the book *Sustainable Development in the Process Industries: Cases and Impact*, John Wiley & Sons, New York (2010), and has served AIChE in various roles. He currently serves on the U.S. National Academy Board on Chemical Sciences and Technology and the editorial committee of *Annual Review of Chemical and Biological Engineering* and was elected to the Board of Directors of AIChE (2016). Dr. Powell obtained his Bachelor of Science in Chemical Engineering from the University of Virginia in 1978, and a Ph.D. in Chemical Engineering from the University of Wisconsin-Madison in 1984.

## **Major General Paul D. Rogers**

The Adjutant General of the Michigan National Guard and  
Director of Military and Veterans Affairs



In January 2019, Major General Paul Rogers assumed the duties of Adjutant General of the Michigan National Guard and Director of Military and Veterans Affairs for the state of Michigan. As the Commander of the Michigan Air and Army National Guard he oversees 11,200 airmen and soldiers. He also provides guidance to the Michigan Military and Veterans Affairs Agency, which has more than 350 employees and two full time veterans' hospitals. Previously, he served in the U.S. Army Senior Executive Service as the Director of the Tank Automotive Research, Development and Engineering Center (TARDEC) where he was responsible for providing executive management to deliver advanced technology solutions for all Department of Defense ground systems and combat support equipment. As the TARDEC Director, Dr. Rogers managed a workforce of more than 1,700 engineers, scientists, researchers, and support staff and set strategic direction for a full range of investments that affect more than 270 Army systems. Dr. Rogers holds a Ph.D. in Mechanical Engineering-Engineering Mechanics from Michigan Technological University (MTU), a Master of Strategic Studies from the U.S. Army War College, an M.S. in Mechanical Engineering from the University of Michigan, and a B.S. in Mechanical Engineering from MTU.

## Jennifer Rumsey

Vice President and Chief Technical Officer  
Cummins Inc., Indiana



Jennifer Rumsey is Vice President and Chief Technical Officer at Cummins Inc. In this role she leads the global technical organization of approximately 11,000 employees responsible for research and engineering across Cummins. Cummins offers a comprehensive portfolio of innovative products, including engines, power generation components, and digital solutions, to fit unique customer needs. As a member of the Cummins Leadership Team, Ms. Rumsey helps set the strategy for the company, which includes a commitment to leading in critical technologies and providing a broad portfolio of solutions in diverse industries, including commercial on-highway, agriculture, mining, construction, marine, and rail. Ms. Rumsey's early career focused on control systems and system engineering, initially at a fuel processing and fuel cell start-up company in Cambridge, Massachusetts. In 2000 she moved to Cummins and has worked in a variety of engineering roles across Cummins and product life cycle areas including advanced technology development, new product development, current product engineering, and product quality control. Ms. Rumsey is a member of the Society of Women Engineers, Society of Automotive Engineers, and Women in Trucking Association. She holds a Bachelor of Science in Mechanical Engineering from Purdue University and a Master of Science in Mechanical Engineering from Massachusetts Institute of Technology.

## Janea Scott

Commissioner  
California Energy Commission



Ms. Janea Scott is one of five Commissioners on the California Energy Commission, which is the state's primary energy policy and planning agency. She was appointed by Governor Jerry Brown in February 2013 and reappointed in 2016 and is the lead Commissioner on transportation-related issues. Ms. Scott serves as the Chair of the Western Interconnection Regional Advisory Body and is on the public policy board of Veloz, a nonprofit founded by public and private sector industry veterans to advance the electric car movement. She is also a member of the California Fuel Cell Partnership. Prior to her appointment, Ms. Scott worked at the Department of the Interior in the Office of the Secretary as the Deputy Counselor for Renewable Energy and as the Special Assistant to the Counselor to the Secretary. Before joining the Interior team in April of 2009, Ms. Scott worked on clean air issues as a senior attorney at the Environmental Defense Fund - a non-profit organization that partners with businesses, governments, and communities to find practical environmental solutions. Ms. Scott earned her J.D. from the University of Colorado Boulder Law School and her M.S. and B.S. in Earth Systems from Stanford University.

## Levi Thompson

Elizabeth Inez Kelley Professor of Chemical Engineering and Dean,  
College of Engineering  
University of Delaware



In late 2018, Dr. Levi Thompson took over as Dean of the College of Engineering and Elizabeth Inez Kelley Professor of Chemical Engineering at the University of Delaware. His research focuses on the design, synthesis, and characterization of chemicals and nanostructured materials for catalytic and energy storage applications, particularly the development of structure-function relationships that enable the design of highly efficient materials. Dr. Thompson was previously the Richard E. Balzhiser Professor of Chemical Engineering at the University of Michigan (UM), where he also served as associate dean for undergraduate education in UM's College of Engineering. He also served as Director of the Hydrogen Energy Technology Laboratory, a multi-user research facility supporting UM's hydrogen research. He is recipient of many awards including a Union Carbide Innovation Recognition Award, Dow Chemical Good Teaching Award, and Engineering Society of Detroit Gold Award. He is co-founder of T/J Technologies, a developer of nanomaterials for advanced batteries that was acquired by A123 Systems in 2006. He also founded Inmatech to commercialize catalytic materials and processes discovered and developed in his laboratories. Dr. Thompson presently serves on the National Academy's Chemical Sciences Roundtable, External Advisory Committee for the Center of Advanced Materials for Purification of Water with Systems, and American Institute of Chemical Engineers Board of Directors. Dr. Thompson obtained his B.S. in Chemical Engineering from the University of Delaware, and his M.S. in Chemical Engineering and Nuclear Engineering and Ph.D. in Chemical Engineering from UM.