

## **FY 2016 Hydrogen and Fuel Cell Technical Advisory Committee (HTAC) Membership Biographies**

### **Kathy Ayers**

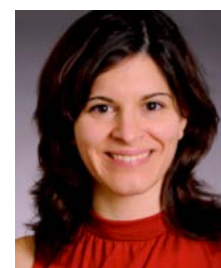
Vice President of Research & Development  
Proton OnSite



Dr. Katherine Ayers joined Proton OnSite in 2007 and is currently Vice President of Research and Development. Her technical expertise spans multiple electrochemical devices including batteries, fuel cells/electrolyzers, and solar cells. She has responsibility for Proton's R&D strategy in membrane-based electrochemical devices, and maintaining and executing Proton's multi-year technology roadmap. She is currently a member of the Scientific Advisory Board at the Joint Center for Artificial Photosynthesis (JCAP), established in 2010 as a U.S. Department of Energy Energy Innovation Hub with lead member institutions Caltech and Lawrence Berkeley National Laboratory. Prior to joining Proton, Dr. Ayers spent 10 years at Energizer Battery Company, with responsibility for strategic materials direction, diagnosis of polarization losses and low battery service, and fundamental insight on other production issues. She received her B.S. degree in Chemistry/Chemical Physics at U.C. San Diego and was awarded the prestigious Barry M. Goldwater Scholarship in 1991. She also received the Urey Award as the top chemistry graduate in 1993. She attended Caltech on an NSF Graduate Fellowship (1993-1996) and earned her Ph.D. in chemistry under the direction of Professor Nathan Lewis in 1997.

### **Inês Azevedo**

Co-Director of the Climate and Energy Decision Making Center  
Carnegie Mellon University



Dr. Inês Azevedo is Associate Professor in the Department of Engineering and Public Policy at Carnegie Mellon University. She is co-PI and the co-Director for the Climate and Energy Decision Making Center. Her research interests lie at the intersection of behavioral and decision making, environmental, technical, and economic issues, such as how to address the challenge of climate change and move towards a more sustainable energy system. Dr. Azevedo 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 as one of the "40 Young Scientists Under 40" in 2014.

## **Kathryn Clay**

Vice President for Policy Strategy  
American Gas Association



As Vice President for Policy Strategy at the American Gas Association, Kathryn Clay drives thought-leadership on natural gas utility demand growth and engages in stakeholder outreach to achieve the industry's policy and growth objectives. Previously, she managed the joint industry Drive Natural Gas Initiative to advance the policy and regulatory environment for natural gas vehicles. She has served as Executive Director of the American Gas Foundation since 2011. Previously, Dr. Clay was the Vice President of Research and Technology Policy for the Alliance of Automobile Manufacturers and a member of the professional staff of the Senate Energy and Natural Resources Committee, where she worked to develop the Energy Independence and Security Act of 2007 and the Energy Policy Act of 2005. She has also served in positions with the staff of the Energy Subcommittee of the U.S. House of Representatives Committee on Science, at the Massachusetts Division of Energy Resources, and as a research fellow in the Alternate Fuels Vehicle Division of Ford Motor Company.

## **Catherine Dunwoody**

Chief, Fuel Cell Program  
California Air Resources Board



Prior to her 2014 appointment as the Chief of the Fuel Cell Program at the California Air Resources Board, Ms. Catherine Dunwoody was the Executive Director of the California Fuel Cell Partnership (CaFCP), since 1999 when it was announced as a fuel cell vehicle demonstration program. Today the CaFCP is globally recognized as a leader in promoting hydrogen fuel cell vehicle commercialization. Catherine led the CaFCP's team of industry and government members in their collaborative planning, technical, and outreach activities. Ms. Dunwoody started her career at the California Air Resources Board in the mid-1980s as a laboratory chemist, then managing teams responsible for stationary source testing and implementing clean vehicle regulations. In 2011, Automotive News named Catherine as one of the "Electrifying 100" most influential players in the move to electric drive vehicles.

## **Anthony Eggert**

Program Director  
ClimateWorks



Anthony Eggert is a Program Director at ClimateWorks, which supports policies for cleaner and more efficient vehicle and fuel technologies; increased availability and accessibility of transit, biking, and walking; and public support for a transition away from oil and toward low-carbon alternatives. Prior to ClimateWorks, Mr. Eggert served as the founding director of the UC Davis Policy Institute for Energy, Environment and the Economy, dedicated to leveraging university expertise to inform better policy. Anthony's public sector experience includes serving as an appointee of both Governors Jerry Brown and Arnold Schwarzenegger to help implement California's landmark clean energy and climate policies. Mr. Eggert started his career as an automotive engineer and program manager at Ford Motor Company working on regulatory compliance and advanced vehicle technology development. Mr. Eggert received his Bachelor of Science in Mechanical Engineering from University of Wisconsin-Madison and holds a Master's Degree in Transportation Technology and Policy from University of California, Davis.

## **Charles E. Freese V.**

Executive Director, Global Fuel Cell Activities  
General Motors Company



As Executive Director of General Motors' Fuel Cell Activities, Mr. Charles Freese leads GM's worldwide fuel cell development organization, with sites in Michigan, New York, California, Washington, D.C., Hawaii, and Germany. He began his career at Detroit Diesel Corporation in 1989, where he held multiple positions in the Advanced Engineering, Product Engineering, and Sales organizations. In 2001, Mr. Freese became Chief Engineer—Diesel Engines for Ford Motor Company. In 2003, Mr. Freese moved to General Motors Corporation, as Executive Director for Global Diesel Engineering. In 2008, he assumed responsibility for GM's Global Fuel Cell Activities, as Executive Director. Mr. Freese 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.

## **Anne Gobin**

Chief, Bureau of Air Management  
Connecticut Department of Energy & Environmental Protection



Anne Gobin has worked in environmental programs for the State of Connecticut since 1985, and has been the Chief of the Bureau of Air Management since 2003. She leads a staff of more than 100 air quality professionals dedicated to improving Connecticut's air quality. The state's air pollution challenge is driven significantly by emissions from the transportation sector, so strategies and solutions require national and regional action to be effective. Ms. Gobin is focused on implementing the 8-state Zero Emission Vehicle Program Memorandum of Understanding that calls for putting 3.3 million zero emission vehicles on the road by 2025. To achieve this goal she collaborates with industry, academic, and research institutions to explore and advance battery electric and hydrogen fuel cell vehicle deployment in Connecticut. Hydrogen fuel cells are of particular interest as a potential economic development opportunity in Connecticut. Ms. Gobin is a member of the National Association of Clean Air Agencies Board of Directors, the Connecticut state air pollution official designee to the Ozone Transport Commission, and a member of the Northeast States for Coordinated Air Use Management's Board of Directors.

## **Maurice Kaya**

Consultant and Project Director  
Pacific International Center for High Technology Research



Mr. Maurice Kaya serves as Project Director for the Pacific International Center for High Technology Research. He currently directs the Energy Excelsator, a clean technology business accelerator that invests in promising business startups in the Hawaii market, the world's premier test-bed for advanced energy technologies. Mr. Kaya previously served as Chief Technology Officer for the Hawaii Department of Business, Economic Development and Tourism. In this position, Mr. Kaya was the principal advisor on clean energy to the governor of Hawaii. Mr. Kaya currently serves as a board member of Energy Industries, a leading clean energy project integrator in the United States. Mr. Kaya has been recognized with numerous honors, including awards from the Governor of Hawaii, the Hawaii Legislature, the U.S. Secretary of Energy, the Blue Planet Foundation, and the Hawaii Institute of Public Affairs.

## Drew Kodjak

Executive Director  
International Council on Clean Transportation (ICCT)



Drew Kodjak is Executive Director of the International Council on Clean Transportation (ICCT), an independent research organization dedicated to supporting government policy to improve the environmental performance and energy efficiency of vehicles and fuels worldwide. Mr. Kodjak is the co-chair of the US Mobile Source Technical Review Subcommittee, the co-chair of the Transportation Research Board's International Subcommittee, a member of the Advisory Board to the Global Fuel Economy Initiative, and represents the ICCT on the Climate and Clean Air Coalition. Prior to joining the ICCT in 2005, Mr. Kodjak served as program director for the D.C.-based National Commission on Energy Policy, a bipartisan 16-member commission of energy experts that released a highly influential report, *Ending the Energy Stalemate*, in December 2004. Earlier, Mr. Kodjak spent several years as an attorney-advisor to the U.S. Environmental Protection Agency's Office of Transportation and Air Quality in Ann Arbor, Michigan. During his tenure with the EPA, Mr. Kodjak was awarded the Gold Medal for his work on the heavy-duty diesel rule. Mr. Kodjak is a graduate of New York University and Boston University Law School where he graduated with honors in 1991.

## Harol Koyama

CEO  
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



Mr. Paul Leggett is a Managing Director at Mithril Capital Management, focused on technology, macroeconomics, and finance. Prior to Mithril, Mr. Leggett 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. Mr. Leggett began his career in Natural Resources at Lehman Brothers. He 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.

## Timothy Lipman

Co-Director, Transportation Sustainability Research Center  
Research Affiliate, Lawrence Berkeley National Laboratory  
Director, U.S. DOE Pacific Region Clean Energy Application Center  
University of California – Berkeley



Dr. Timothy E. Lipman is a clean-energy technology researcher and lecturer with the University of California – Berkeley. He currently serves as Co-Director of the UC Berkeley Transportation Sustainability Research Center, part of the Institute of Transportation Studies. Dr. Lipman also serves as a Research Affiliate with the Lawrence Berkeley National Laboratory and as a Lecturer in the Department of Civil and Environmental Engineering. Dr. Lipman's research focuses on technical, market, and policy assessments, as well as on real-world testing and validation of electric vehicle, hydrogen, fuel cell, combined heat and power, and other clean energy technologies. He oversees a test fleet of hydrogen fuel cell and plug-in electric vehicles, as well as the operation of the first 700-bar hydrogen fueling station to become operational in Northern California, situated at the UC Berkeley Global Campus in Richmond. Dr. Lipman is also Chair of the Alternative Transportation Fuels and Technologies Committee of the National Academies' Transportation Research Board. He serves on the Editorial Board for the *International Journal of Sustainable Engineering* and was Section Editor for the "Hydrogen Production Science and Technology" section of the new *Springer Encyclopedia of Sustainability Science and Technology*.

## **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.

## **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. 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 Electric Power Research Institute'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.

## Joan M. Ogden

Director  
Sustainable Transportation Pathways Program  
Institute of Transportation Studies  
University of California, Davis



Dr. Joan Ogden is Professor of Environmental Science and Policy at the University of California, Davis and Director of the Sustainable Transportation Energy Pathways (STEPs) Program at the university's Institute of Transportation Studies (ITS-Davis). Dr. Ogden was a research scientist at Princeton University's Center for Energy and Environmental Studies, Princeton Environmental Institute, from 1985–2003. She joined the faculty of UC Davis in September 2003. She participated in the development of Department of Energy's (DOE's) Hydrogen Vision and Hydrogen Roadmap in 2001–2002, and she headed the systems integration team for the National Hydrogen Roadmap. Dr. Ogden worked on the DOE Hydrogen Analysis (H2A) project with a group of hydrogen analysts convened by DOE to develop a consistent framework for analyzing hydrogen systems, and she received R&D Excellence Awards from DOE for this work. In 2004, Dr. Ogden served on the Blueprint Advisory Panel for the California Hydrogen Highway Network. In 2007–2008, she served on a National Academies panel that assessed research needs for hydrogen and fuel cell technologies, and in 2009–2010 she served on a National Academies panel assessing these needs for plug-in hybrid electric vehicles. She was a lead author on a recent Intergovernmental Panel on Climate Change report on Renewable Energy.

## Margo Oge

Former Director, Office of Transportation and Air Quality  
United States Environmental Protection Agency



Ms. Margo Oge served the U.S. Environmental Protection Agency (EPA) for more than 30 years from 1980 to September 2012. During her recent 18-year tenure as Director of the EPA's Office of Transportation and Air Quality, Ms. Oge was the chief architect of the most important achievements in the history of air pollution control in the U.S. transportation sector. These included programs that reduced emissions from automobiles, and gasoline and diesel fueled trucks, buses, and off-road vehicles (including locomotives and marine vessels) by up to 99 percent. Most recently, Ms. Oge led the EPA's development of the first-ever national greenhouse gas emission standards for cars and heavy-duty trucks, helped establish the Renewable Fuels Standard, and was instrumental in establishing the United Nations process on global harmonization of transportation emissions standards worldwide. She is currently a member of the National Academies of Science Board on Energy and Environment and is the Vice Chairman of the Board for Delta Wing Technologies.



## Joseph Powell

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.

## Adele Ratcliff

Director, Manufacturing Technology  
Office of the Deputy Assistant Secretary of Defense (ODASD)



Ms. Adele Ratcliff is the Director of the Department of Defense (DOD) Manufacturing Technology (ManTech) Program, which is overseen by the Office of the Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy. During her tenure in the Office of the Secretary of Defense, she has focused on building strong interagency partnerships to address broad transition of manufacturing issues such as manufacturing readiness and the Advanced Manufacturing Enterprise. Currently, Ms. Ratcliff leads the effort in establishing the DOD-led national Institutes for Manufacturing Innovation (IMIs) outlined in the President's 2013 State of the Union address. These currently include America Makes, Lightweight Innovations for Tomorrow, the Digital Manufacturing and Design Innovation Institute, the Integrated Photonics IMI, and Flexible Hybrid Electronics Manufacturing Institute. Ms. Ratcliff has a long acquisition career, including Program Manager for the congressionally mandated Defense Acquisition Challenge Program, Deputy Program Manager for the Foreign Comparative Test Program, and more than 11 years in Air Force Test and Evaluation at Eglin Air Force Base in Florida. She received the SECDEF Award for Excellence for her support of the Pilot Institute for Additive Manufacturing in March 2013. She is a proud alumna of the Mississippi State University Bulldogs, earning a Bachelor of Science in Mechanical Engineering and a Master of Science in Strategic Art from the U.S. Army War College (in-residence). She also graduated from the DOD's Defense Senior Leadership Development Program.

## Janea Scott

Commissioner  
California Energy Commission



Ms. Janea Scott was appointed by Governor Jerry Brown in February 2013. She fills the Public Member position on the five-member California Energy Commission. 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. In that role, Ms. Scott worked on facilitating and implementing Secretary Ken Salazar's priorities for the Department, including establishing an enduring program for renewable energy on our nation's public lands. 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 nonprofit organization that partners with businesses, governments, and communities to find practical environmental solutions.

## Levi Thompson

Professor of Chemical Engineering  
University of Michigan



Dr. Levi Thompson is the Richard E. Balzhiser Professor of Chemical Engineering and Professor of Mechanical Engineering at the University of Michigan. He is also Director of the Hydrogen Energy Technology Laboratory, a multi-user research facility supporting hydrogen research at the University of Michigan. Professor Thompson is recipient of awards including a 2006 Michiganiaan of the Year Award for his research, entrepreneurship, and teaching, National Science Foundation Presidential Young Investigator Award, McBride Distinguished Lectureship, 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. Professor Thompson was Consulting Editor for the *AICHE Journal*, and presently serves on the Department of Energy's Hydrogen Technology Advisory Committee, 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 (AIChE) Board of Directors. From 2001 to 2005, he served as Associate Dean for Undergraduate Education in the College of Engineering at the University of Michigan.