

NEW JERSEY CLEAN CITIES
COALITION PRESENTS:

# REW JERSEY GREEN HYDROGEN FORUM 2021

Tuesday June 29, 2021 1:00pm - 4:00pm

This virtual forum will raise awareness of sustainably-produced green hydrogen and the environmental, energy and economic impacts of its production, distribution and use in New Jersey. Hear from government representatives, stationary and mobile hydrogen stakeholders, service providers and end users to identify opportunities and get insights into the latest technology and policy developments to drive New Jersey's clean energy economy forward. Additional event supporters include:











# PROGRAM OVERVIEW

The NJ Clean Cities Coalition is launching an effort, in collaboration with the NJ Fuel Cell Coalition, the National Clean Cities Program and the National Renewable Energy Lab to facilitate the advancement of green hydrogen production, distribution and use within New Jersey.

To kick off the effort, a virtual Green Hydrogen Forum will be held on June 29, 2021 to showcase the work being done. The Forum will focus on raising awareness of the environmental, economic and energy potential brought by recent advances in green hydrogen technologies; and understanding market needs to improve its production, distribution and use for both stationary and mobile applications.

With ongoing advances in technology, green hydrogen could significantly reduce, and in many cases, eliminate emissions by using increasingly abundant renewable energy sources such as wind, solar or hydro to power the electrolysis of water.

The output from the Green Hydrogen Forum will also inform potential users/producers, as well as Federal and State regulatory, policy and economic development agencies. Speakers will include experts in hydrogen production, distribution, and use; State government officials; and other stakeholders. Topics will address hydrogen basics, green hydrogen production systems, distribution issues, market development, and regulatory & economic development issues.

As an organization dedicated to the advancement of alternative fuels, the NJ Clean Cities Coalition hopes that the Green Hydrogen Forum will help stimulate the discussion of green hydrogen and lead to the development and deployment of pilot projects in New Jersey. Please join us on the Forum and beyond as we help New Jersey achieve its clean energy and economic development goals.



# **AGENDA**

#### Welcome & Opening Remarks

Chuck Feinberg, Executive Director, New Jersey Clean Cities Coalition & Partner, Greener by Design

#### **The Big Picture**

Moderated by JoAnn Milliken, Director, New Jersey Fuel Cell Coalition & Member, New Jersey Hydrogen Task Force

- Pete Devlin Program Manager, Hydrogen & Fuel Cell Technologies Office, United States Department of Energy
- Genevieve Saur, Senior Engineer, Transportation
   Hydrogen Systems Center, National Renewable
   Energy Laboratory

#### **Green Hydrogen Production & Distribution**

Moderated by Barry Carr, Executive Director of Clean Cities of Central New York & Board Member, NJ Clean Cities

- Doug Copeland, Development Manager, Atlantic Shores Offshore Wind
- Kyle Nolan, Vice President of Innovation & Business Improvement, South Jersey Industries
- Roy Bant, Hydrogen Key Account Manager, Chart Industries

#### Green Hydrogen Use in NJ & Beyond

Moderated by Brian Keelen, Principal, Air & Gas Technologies & Board Member, NJ Clean Cities

- Charlie Myers, President, MA Hydrogen Coalition
- Bill Zobel, Executive Director, California Hydrogen Business Council
- Mike Strizki, Executive Director, NJ Hydrogen House Project



#### Chuck Feinberg - Chairman, NJ Clean Cities Coalition; Principal, Greener by Design, LLC



Chuck Feinberg has a broad professional, technical and business background. He is the Executive Vice President and a Partner in the environmental and clean energy sustainability consulting firm, Greener by Design, LLC. He also Chairs the Board of Trustees and is the US Department of Energy's designated Coordinator of the nonprofit NJ Clean Cities Coalition, NJ's only statewide entity focused exclusively on promotion of public/private partnerships to advance alternative fuels and advanced vehicles, fuel blends, fuel economy, plug-in vehicles, and idle reduction initiatives. He has led successful proposal efforts, and managed large grant

projects and contracts from the US DOE, USEPA, NJDEP and NYSERDA dealing with a variety of alternative transportation fuels and related infrastructure, as well as other clean energy and microgrid projects. He also provides a variety of services to other public and private consulting clients. Chuck was recently unanimously elected to the Advisory Board of Empire Clean Cities. He served as Chair (appointed by the President of the NJ Board of Public Utilities) of a NJ State Energy Master Plan advisory workgroup on Alternative Fuels and Vehicles, and he Chaired the NJ Clean Energy Innovation Council's committee on Alternative Transportation Fuels. He also served on the Board of Trustees of the national nonprofit Transportation Energy Partners, and he Co-Chaired the Sustainable Jersey Green Fleet Task Force.

#### JoAnn Milliken - Director, NJ Fuel Cell Coalition and Member, NJ Hydrogen Task Force



JoAnn Milliken is a Senior Energy Consultant with 34 years of Federal program management experience, more than 20 of those with the US Department of Energy, where she worked to advance the state of the art in energy efficiency and renewable energy technologies, practices and policy. Dr. Milliken is a recognized expert in hydrogen and fuel cell systems, and has experience in leading programs in energy efficient buildings, and solar, wind, and geothermal energy. She has a B.A. degree in chemistry from LaSalle University and a Ph.D. in chemistry from the University of Pennsylvania. Dr. Milliken retired from DOE in 2016 and organized the New Jersey Fuel Cell

Coalition to promote adoption of hydrogen and fuel cell technologies. From 2018-2021, she served on a National Academies of Science (NAS) study committee examining light-duty vehicle technologies for the 2025-2035 timeframe. In 2021, JoAnn was appointed to the New Jersey Fuel Cell Task Force to advise on programs and policies for increasing deployment of hydrogen and fuel cell systems to help meet the State's clean energy goals.



<u>Pete Devlin - Program Manager, Hydrogen & Fuel Cell Technologies Office, United States</u>
<u>Department of Energy</u>



As Technology Development and Intergovernmental Coordination Manager for DOE FCTO, Pete works on hydrogen and fuel cell technology research and provides support to government agencies in their technology development and deployment activities. Pete is specifically responsible for managing DOE research and demonstration projects for hydrogen and fuel cell technologies for transportation and stationary applications. Prior to his current work, Pete was responsible for advanced technology development for fuel cell vehicles, hydrogen production R & D, and advanced combustion

engine and fuels also at DOE. Pete spent the first 12 years of his career in private industry developing advanced propulsion and power generation systems from alternative fuel sources. Trained and educated as an industrial engineer, Pete received a Bachelors of Science from Virginia Polytechnic Institute in 1979.

# <u>Genevieve Saur - Senior Engineer, Transportation & Hydrogen Systems Center, National Renewable Energy Laboratory</u>



Genevieve Saur works on a range of hydrogen and fuel cell research, mainly focused on the U.S. Department of Energy's Hydrogen Fuel Cell Technologies Office portfolio of research projects. This includes more than 10 years of work on technology validation and demonstration evaluation as part of the National Fuel Cell Technology Evaluation Center. She has also studied fuel cell integration with buildings, including advanced, predictive buildings controls for more efficient power management and integration with next-generation grid services, as well as the use of fuel cells in data centers to provide clean, reliable combined heat and power.

#### <u>Doug Copeland</u> - Development Manager, Atlantic Shores Offshore Wind



Doug is leading offshore wind development in the mid-Atlantic including interconnection strategy, port strategy, land strategy, fishing outreach, external affairs, and preparation. He has experience in offshore wind development, utility solar scale, energy storage development, and onshore wind.



# **Barry Carr** - Executive Director of Clean Communities of Central New York and Board Member, NJ Clean Cities



Barry Carr has spent his career in the advanced transportation world, working with major utilities and fleets to develop alternative fuel infrastructure, including natural gas, renewable natural gas, hydrogen, and DC Fast Charging systems. For the last 15 years, Barry has volunteered as the Coordinator for Clean Communities of CNY (CC of CNY), the US DOE's Clean Cities Coalition hosted by Syracuse University. Barry currently serves on both the Federal and State Government Advocacy Committees for NGV America and is the co-chair of the Northeast Gas Association. He received a

lifetime achievement award from NGV America in 2015. In 2017 he was awarded the Benjamin Watson Service award and a Hall of Fame Award by the US DOE's Clean Cities program. Barry is part of a multi-state group that recently was awarded a Federal Grant to develop EV, natural gas, and hydrogen infrastructure along the I-80 Corridor from Iowa to New York; teaming with six Clean Cities Coalitions, a truck stop company (Loves), five State Departments of Transportation, and Argonne National Laboratory.

#### Kyle Nolan - Vice President of Innovation & Business Improvement, South Jersey Industries



Kyle is an experienced leader specializing in high priority strategic initiatives encompassing the financial and operational goals of an organization. Previously having led SJI's financial and strategic planning team, Kyle has led the formation of the Innovation and Business Improvement department which champions the company's efforts towards achieving operational excellence and drives the execution of core strategic goals. Kyle and his team are currently focused on SJI's enterprise-wide innovation program and exploring new ways of operation and growth for their natural gas utilities including Renewable Natural Gas and Hydrogen.

#### Roy Bant - Hydrogen Key Account Manager, Chart Industries



Roy has enjoyed a very diversified career in the industrial gas industry, propane industry, and more recently Business Development and Sales in Hydrogen Energy. He has experience in Mechanical Engineering Projects, Large Scale Project Management, and Bulk Sales Management. Currently, he is a Hydrogen Sales and Key Account Manager for Chart Industries. Chart Industries utilizes a partnered approach to Customers and future customers in the hydrogen energy space.



#### Brian Keelen - Principal, Air & Gas Technologies and Board Member, NJ Clean Cities



As Co-Founder of Air & Gas Technologies in 1995, we have focused the company's direction towards supporting the 1992 Clean Air Act through active participation in several regional clean cities coalitions throughout the North East. We have built over 150 CNG stations for private, public and municipal fleets including the very first public CNG station in New Jersey for Shell Oil, dairy farms in California and Wisconsin as well as a landfill methane extraction & compression project in St. Landry Parish, Louisiana. The backbone of our whole business experience is compression.

#### Charlie Myers - President, MA Hydrogen Coalition



Charlie is an innovative and highly visible leader with measurable successes increasing shareholder value leading projects, market campaigns and personnel in the renewable energy industry. He is quick to identify the key issues then develop and implement strategies that grew and strengthened the business. Charlie is a recognized creator of collaborative teams and industry relationships resulting in the expansion of markets and businesses.

#### Bill Zobel - Executive Director, California Hydrogen Business Council



Bill is a forward-thinking and driven Sustainability Executive with thirty years of experience driving business growth in the alternative fuels space. He is a strong leader and integrator combining industry network, government and regulatory expertise, and strategic mindset to meet business objectives.

#### Mike Strizki - Executive Director, NJ Hydrogen House Project



Mike Strizki served as Project Engineer for over 16 years with the Office of Research and Technology in the New Jersey Department of Transportation where he developed renewable energy technologies. The most noted of his projects was the first use of fuel cells in the DOT's Variable Message Signs. Other high visibility projects included the Project Power Commute and two fuel cell vehicles. Now, Mike is relaunching his non-profit organization under a new name, the Hydrogen House Project. Strizki envisions the organization becoming a beacon for renewable energy worldwide, conducting research and development projects with the latest in solar, hydrogen, fuel cell and other clean energy technologies