

**DOE Hydrogen Program 2023 AMR Preliminary Program-at-a-Glance**

Topic	Monday, June 5	Tuesday, June 6					Wednesday, June 7					Thursday, June 8							
		Hydrogen Production Technologies	Hydrogen Infrastructure Technologies	Fuel Cell Technologies	Systems Development and Integration	Intra-Agency Activities	Hydrogen Production Technologies	Hydrogen Infrastructure Technologies	Fuel Cell Technologies	Systems Development and Integration	Interagency Activities	Intra-Agency Activities	Hydrogen Production Technologies	Fuel Cell Technologies	Systems Development and Integration	Analysis, Codes and Standards	Intra-Agency Activities		
	Room	Regency Ballroom CD	Regency Ballroom F	Regency Ballroom AB	Regency Ballroom E	Washington Room	Regency Ballroom CD	Regency Ballroom F	Regency Ballroom AB	Regency Ballroom E	Washington Room	Conference Theater	Regency Ballroom CD	Regency Ballroom AB	Regency Ballroom E	Regency Ballroom F	Washington Room		
	*All times in Eastern Time	8:00 AM	Continental Breakfast					Continental Breakfast					Continental Breakfast						
1:00 PM	Welcome	9:00 AM	P000	IN000	FC000	SDI000	FE000	P191	TA049	FC337	TA001	IA001 IA002	WPTO001	P183	FC354	TA052	SA-SCS000		
		9:30 AM	P148	ST127	FC160	TA042	FE001	P192	IN001a	FC338	TA043	IA004	SETO001	P179	FC333	TA053	SA174		
	10:00 AM	TA017				FE002	P193	IN001b	FC167	TA018	SETO002		P184	FC336	SDI002	SA178	FE020		
	10:30 AM	Break					Break					Break							
1:35 PM	Panel: National Hydrogen Strategy and Interagency Collaboration  Hydrogen Program Overview	11:00 AM	P197	ST238	FC339	TA045	FE003	P190	IN021	FC344	TA039	IA005 IA006	SETO003	P203	FC330	TA044	SA181	NE003	
		11:30 AM	P198	ST236		TA059	FE004	P176	IN022	FC345	NE002	IA007 IA008	WETO001	P202	FC331	TA062	SA186	NE004	
		12:00 PM	P199	ST237		TA016	FE005	P188	IN026	FC346		IA009 IA010	IEDO001		FC317	TA035	SCS019	NE005	
3:05 PM	Break	12:30 PM	Lunch (provided)					Lunch (provided)					Lunch (provided)						
3:35 PM	Panel: Hydrogen Program Perspectives - From Hydrogen Shot to Hydrogen Hubs  Energy and Environmental Justice Perspectives	1:45 PM	P196	ST240	FC353	TA058	FE006	P204	IN030	FC347	TA028	TA009	ARPAE001			SDI005	SCS028		
		2:15 PM		ST241	FC323	TA057	FE007	P186	IN020	FC348	TA048	IA011 IA012	ARPAE002				SCS010		
		2:45 PM		IN025	FC326	TA056	FE008	P185	H2041	FC349	TA037	IA013	ARPAE003				SCS011		
		3:15 PM	Break					Break					Break						
4:45 PM	Panel: HFTO Subprogram Perspectives Hydrogen Production Hydrogen Infrastructure Fuel Cells Systems Development and Integration Analysis, Codes and Standards	3:45 PM	P200	IN034	FC327	SDI004	FE009	P195	IN016	FC350	SDI001		ARPAE004				SCS001		
		4:15 PM	P201	IN035	FC356	TA065	FE010	P194	IN019	FC351	TA060		ARPAE005				SCS021		
		4:45 PM			FC355	LPO001	FE011	P170	IN040	FC352	TA061		ARPAE006				SCS031		
		5:15 PM																	
5:30 PM	AMR Awards  Closing Remarks	5:30 PM	POSTER SESSION					POSTER SESSION											
6:00 PM	Adjourn	7:00 PM																	

**U.S. Department of Energy (DOE) Hydrogen Program  
2023 Annual Merit Review and Peer Evaluation Meeting (AMR)  
Plenary Agenda**

Monday, June 5, 2023 Times in EDT		
<b>1:00</b>	<b>Welcome and Introduction</b>	<b>Dr. Sunita Satyapal</b> , Director, Hydrogen and Fuel Cell Technologies Office (HFTO) and Hydrogen Program Coordinator, DOE <b>Shawna McQueen</b> , AMR Manager, HFTO
<b>1:10</b>	<b>Opening Remarks and U.S. Hydrogen Priorities</b>	<b>David Turk</b> , Deputy Secretary of Energy, DOE
<b>1:25</b>	<b>Accelerating Innovation—from Science through Deployment</b>	<b>Dr. Geraldine Richmond</b> , Under Secretary for Science and Innovation, DOE <b>Kathleen Hogan</b> , Principal Deputy Under Secretary for Infrastructure, DOE
<b>1:35</b>	<b>Panel Discussion: National Hydrogen Strategy and Interagency Collaboration</b>	Moderator: <b>David Turk</b> , Deputy Secretary, DOE Panelists: <ul style="list-style-type: none"> <li>- <b>Grant Harris</b>, Assistant Secretary of Commerce for Industry and Analysis, International Trade Administration, Department of Commerce</li> <li>- <b>Tristan Brown</b>, Deputy Administrator, Pipeline and Hazardous Materials Safety Administration, Department of Transportation</li> <li>- <b>Betty Hung</b>, Senior Advisor to the Acting Secretary, Department of Labor</li> </ul>
<b>2:20</b>	<b>Hydrogen Program Overview</b>	<b>Dr. Sunita Satyapal</b> , HFTO Director and DOE Hydrogen Program Coordinator
<b>3:05</b>	<b>Break</b>	
<b>3:35</b>	<b>Panel: DOE Hydrogen Program Perspectives – From Hydrogen Shot to Hydrogen Hubs</b>	Moderator: <b>Dr. Eric Miller</b> , Chief Scientist, HFTO, DOE Panelists: Representatives from DOE Hydrogen Program Offices (Devinn Lambert, John Vetrano, Katie Randolph, Mark Ackiewicz, Alison Hahn, Vivien Lecoustre, Hannah Murdoch, Dinesh Mehta, Crystal Farmer)
<b>4:35</b>	<b>Energy and Environmental Justice Perspectives</b>	<b>Sheri Bone</b> , Principal Deputy Director of the Office of Economic Impact and Diversity, DOE
<b>4:45</b>	<b>Panel: HFTO Subprogram Perspectives</b>	Moderator: <b>Dr. Eric Miller</b> , Chief Scientist, HFTO, DOE Panelists: Program Managers from HFTO, DOE (David Peterson, Ned Stetson, Dimitrios Papageorgopoulos, Jesse Adams, Neha Rustagi)
<b>5:30</b>	<b>AMR Awards and Closing Remarks</b>	<b>Dr. Sunita Satyapal</b> , HFTO Director and DOE Hydrogen Program Coordinator <b>Michael Berube</b> , Deputy Assistant Secretary for Sustainable Transportation, Energy Efficiency and Renewable Energy Office, DOE
<b>6:00</b>	<b>Adjourn</b>	

Tuesday, June 6 Oral Presentations					
Time	Hydrogen Production Technologies Regency Ballroom CD	Hydrogen Infrastructure Technologies Regency Ballroom F	Fuel Cell Technologies Regency Ballroom AB	Systems Development and Integration Regency Ballroom E	Intra-Agency Activities Washington Room
8:00 AM	<b>Continental Breakfast</b>				
9:00 AM	P000 Hydrogen Production Technologies Subprogram Overview David Peterson, HFTO	IN000 Hydrogen Infrastructure Technologies Subprogram Overview Ned Stetson, HFTO	FC000 Fuel Cell Technologies Subprogram Overview Dimitrios Papageorgopoulos, HFTO	SDI000 Systems Development & Integration Subprogram Overview Jesse Adams, HFTO	FE000 FECM Hydrogen Activities Overview Eva Rodezno and Evan Frye, FECM
9:30 AM	P148 HydroGEN Overview: A Consortium on Advanced Water Splitting Materials Huyen Dinh, NREL	ST127 HyMARC Overview Mark Allendorf, SNL	FC160 ElectroCat 2.0 (Electrocatalysis Consortium) Deborah Myers, ANL & Piotr Zelenay, LANL	TA042 Next Generation Hydrogen Station Analysis Genevieve Saur, NREL	FE001 Performance Testing of a Moving-Bed Gasifier using Coal, Biomass, and Waste Plastic Blends to Generate White Hydrogen George Booras, EPRI
10:00 AM				TA017 Innovative Advanced Hydrogen Mobile Fueler Spencer Quong, Electricore	FE002 Enabling Entrained-Flow Gasification of Blends of Coal, Biomass and Plastics Kevin Whitty, The University of Utah
10:30 AM	<b>Break</b>				
11:00 AM	P197 Advanced Manufacturing Processes for Gigawatt-Scale Proton Exchange Membrane Water Electrolyzers Andrew Steinbach, 3M	ST238 Low-Cost, High-Strength Hollow Carbon Fiber for Compressed Gas Storage Tanks Matthew Weisenberger, University of Kentucky	FC339 M2FCT: Million Mile Fuel Cell Truck Consortium Rod Borup, LANL & Adam Weber, LBNL	TA045 Waterfront Maritime Hydrogen Demonstration Project Narendra Pal, Hornblower	FE003 Experimental Research of Feedstock Gasification with Neutron Techniques Jim Parks, ORNL
11:30 AM	P198 Enabling Low Cost PEM Electrolysis at Scale Through Optimization of Transport Components and Electrode Interfaces Chris Capuano, Nel Hydrogen	ST236 Low-Cost, High-Performance Carbon Fiber for Compressed Natural Gas Storage Tanks Xiaodong Li, University of Virginia		TA059 MDV TCO and Target Development Ram Vijayagopal, ANL	FE004 Coal Syngas Cleanup for Commercially Viable SOFC Performance Zhien Liu, UNDEERC
12:00 PM	P199 Integrated Membrane Anode Assembly & Scale-Up Adam Paxson, Plug Power	ST237 Carbon Composite Optimization Reducing Tank Cost Chris Wilson, Hexagon R&D		TA016 Fuel Cell Hybrid Electric Delivery Van Jason Hanlin, Center for Transportation and the Environment	FE005 Performance Improvements for Reversible Solid Oxide Fuel Cell Systems Hossein Ghezeli-Ayagh, FuelCell Energy, Inc.
12:30 PM	<b>Lunch (provided)</b>				
1:45 PM	P196 HZNEW Consortium: Hydrogen from Next-Generation of Electrolyzers of Water Bryan Pivovar, NREL & Richard Boardman, INL	ST240 Cost-Optimized Structural Carbon Fiber for Hydrogen Storage Tanks Amit Naskar, ORNL	FC353 Fuel Cell Cost and Performance Analysis Brian James, Strategic Analysis, Inc.	TA058 Freight Emissions Reduction via Medium Duty Battery Electric and Hydrogen Fuel Cell Trucks with Green Hydrogen Production via a New Electrolyzer Design and Electrical Utility Grid Coupling Jacob Lozier, GM	FE006 Additively Manufactured High Temperature Centrifugal Impellers for Low Cost SOFC Anode Recycle Blowers Jose Cordova, Mohawk Innovative
2:15 PM		ST241 First Demonstration of a Commercial Scale LH2 Storage Tank Design for International Trade Applications Kun Zhang, Shell	FC323 Durable Fuel Cell MEA through Immobilization of Catalyst Particle and Membrane Chemical Stabilizer Nagappan Ramaswamy, GM	TA057 High Efficiency Fuel Cell Application for Medium Duty Truck Vocations Stan Bower, Ford Motor Company	FE007 Cummins Reversible-Solid Oxide Fuel Cell System Development Lars Henrichsen, Cummins
2:45 PM		IN025 ANL-H2 Delivery Technologies Analysis Amgad Elgowainy, ANL	FC326 Durable MEAs for Heavy-Duty Fuel Cell Electric Trucks John Slack, Nikola Motor Company	TA056 Ultra-Efficient Long-Haul Hydrogen Fuel Cell Tractor Darek Villeneuve, Daimler Trucks North America	FE008 Reversible Solid SOC Degradation: Characterization, Simulation, and Mitigation Yinkai Lei, NETL
3:15 PM	<b>Break</b>				
3:45 PM	P200 Low-Cost Manufacturing of High Temperature Electrolysis Stacks Scott Swartz, Nextech Materials, Ltd.	IN034 HyBlend: Pipeline CRADA Cost and Emissions Analysis Mark Chung, NREL	FC327 Durable High Power Density Fuel Cell Cathodes for Heavy-Duty Vehicles Shawn Litster, Carnegie Mellon University	SDI004 Hydrogen Coach Bus Fueling Demonstration Micah Casteel, INL	FE009 Designing Internal Surfaces of Porous Electrodes in Solid Oxide Electrolysis Cells for Highly Efficient and Durable Hydrogen Production Xueyan Song, West Virginia University
4:15 PM	P201 Automation of Solid Oxide Electrolyzer Cell (SOEC) & Stack Assembly Todd Striker, Cummins Inc.	IN035 HyBlend: Pipeline CRADA Materials R&D Chris San Marchi, SNL	FC356 FY22 SBIR II: Durable High Efficiency Membrane and Electrode Assemblies for Heavy Duty Fuel Cell Vehicles Gang Wu, University of Buffalo	TA065 Total Cost of Ownership (TCO) Analysis of Hydrogen Fuel Cells in Off Road Heavy-Duty Applications – Preliminary Results Rajesh Ahluwalia, ANL	FE010 Investigation of Flame Structure for Hydrogen Gas Turbine Combustion Robert Lucht, Purdue University
4:45 PM			FC355 LANL Minority Serving Institution Program Tommy Rockward, LANL	LPO001 Building the World's First Clean Hydrogen Hub-ACES Delta Michael Ducker, Mitsubishi Power	FE011 Characterizing U.S. Subsurface Hydrogen Storage Potential in Existing Natural Gas Storage Reservoirs Gregory Lackey, NETL

**Tuesday, June 6 Poster Presentations, 5:30–7:00 p.m.**

<b>Hydrogen Production Technologies</b>		
P148A	HydroGEN: Low Temperature Electrolysis	Shaun Alia, NREL
P148B	HydroGEN: High Temperature Electrolysis	Dong Ding, INL
P148C	HydroGEN: Photoelectrochemical (PEC) Water Splitting	Joel Ager, LBNL
P148D	HydroGEN: Solar Thermochemical Hydrogen (STCH) Water Splitting	Anthony McDaniel, SNL
P148E	HydroGEN: Cross-Cut Modeling	Tadashi Ogitsu, LLNL
P154	Thin-Film, Metal-Supported High-Performance and Durable Proton-Solid Oxide Electrolyzer Cell	Tianli Zhu, Raytheon Technologies Research Center
P175	Intermediate Temperature Proton-Conducting Solid Oxide Electrolysis Cells with Improved Performance and Durability	Xingbo Liu, West Virginia University
P187	Pure Hydrogen Production through Precious-Metal-Free Membrane Electrolysis of Dirty Water	Shannon Boettcher, University of Oregon
P196a	H2NEW LTE: Durability and AST Development	Rangachary Mukundan, LBNL
P196b	H2NEW LTE: Benchmarking and Performance	Deborah Myers, ANL
P196c	H2NEW LTE: Manufacturing, Scale-Up, and Integration	Scott Mauger, NREL
P196d	H2NEW LTE: System and Techno-Economic Analysis -- Hydrogen from Next-Generation Electrolyzers	Alex Badgett, NREL
P196e	H2NEW HTE: Durability and AST Development	Olga Marina, PNNL
P196f	H2NEW HTE: Cell Characterization	David Ginley, NREL
P196g	H2NEW HTE: Multiscale Degradation Modeling	Brandon Wood, LLNL
P196h	H2NEW LTE: Liquid Alkaline Water Electrolysis	Meital Shviro, NREL
P205*	Electron Density Distribution for Cost-Effective and Durable Fuel Cells and Electrolyzers	Sreeprasad Sreenivasan, University of Texas, El Paso
P206	Single-Walled Carbon Nanotubes with Confined Chalcogens as the Catalysts and Electrodes for Oxygen Reduction Reaction in Fuel Cells	Juchen Guo, University of California, Riverside
<b>Hydrogen Infrastructure Technologies</b>		
H2057	Electrolyzer/Bioreactor Integration (EBI)	Kevin Harrison, NREL
IN004	Magnetocaloric Hydrogen Liquefaction	John Barclay, PNNL
IN014*	NDE Techniques for Pressure Vessels (SBIR): Detection of Micron-Scale Flaws through Nonlinear Wave Mixing	Michael Desrosiers, Luna Innovations Inc.
IN015	Optimizing the Heisenberg Vortex Tube for Hydrogen Cooling	Jacob Leachman, Washington State University
IN029	Reducing the Cost of Fatigue Crack Growth Testing for Storage Vessel Steels in Hydrogen Gas	Kevin Nibur, Hy-Performance
IN036	Cost-Effective Pre-Cooling for High-Flow Hydrogen Fueling	Devin Halliday, GTI Energy
IN037	Autonomous Fueling System for Heavy-Duty Fuel Cell Electric Trucks	Renju Zacharia, Nikola Motor Company
IN038	High-Pressure, Low Temperature Composite Nozzles for Long-Term H2 Dispensing	Jennifer Lalli, Nanosonic, Inc
IN039	Analytic Framework for Optimal Sizing of Hydrogen Fueling Stations for Heavy Duty Vehicles at Ports	Todd Wall, PNNL
ST001	System Level Analysis of Hydrogen Storage Options	Rajesh Ahluwalia, ANL

**Tuesday, June 6 Poster Presentations, 5:30–7:00 p.m.**

ST008	Hydrogen Storage System Modeling: Public Access, Maintenance, and Enhancements	Sam Sprik & Kriston Brooks, NREL
ST135	NIST-NREL Overview	Nick Strange, NIST
ST148	Novel Plasticized Melt Spinning Process of PAN Fibers Based on Task-Specific Ionic Liquids	Sheng Dai, ORNL
ST201	HyMARC—SLAC Activities	Nicholas Strange, SLAC
ST202	HyMARC—NREL Activities	Tom Gennett, NREL
ST204	HyMARC—PNNL Activities	Tom Autrey, PNNL
ST207	HyMARC—LLNL Activities	Brandon Wood, LLNL
ST209	HyMARC Seedling: Theory-Guided Design and Discovery of Materials for Reversible Methane and Hydrogen Storage	Omar Farha, Northwestern University
ST210	HyMARC Seedling: Metal-Organic Frameworks Containing Frustrated Lewis Pairs for Hydrogen Storage at Ambient Temperature	Shengqian Ma, University of North Texas
ST211	Hydrogen: Computational Identification, Experimental Demonstration, and System-Level Projection	Adam Matzger, University of Michigan
ST212*	HyMARC Seedling: Methane and Hydrogen Storage with Porous Cage-Based Composite Materials	Eric Bloch, University of Delaware
ST213	HyMARC Seedling: Uniting Theory and Experiment to Deliver Flexible MOFs for Superior Methane (NG) Storage	Brian Space, North Carolina State University
ST214*	HyMARC Seedling: Heteroatom-Modified and Compacted Zeolite-Templated Carbons for Gas Storage	Nicholas Stadie, Montana State University
ST216	HyMARC Seedling: Hydrogen Release from Concentrated Media with Reusable Catalysts	Travis Williams, University of Southern California
ST217	HyMARC Seedling: A Reversible Liquid Hydrogen Carrier System Based on Ammonium Formate and Captured CO <sub>2</sub>	Hongfei Lin, Washington State University
ST218	HyMARC Seedling: High Capacity Step-Shaped Hydrogen Adsorption in Robust, Pore-Gating Zeolitic Imidazolate Frameworks	Michael McGuirk, Colorado School of Mines
ST224	HyMARC—LBNL Activities	Jeffrey Long, LBNL
ST225	HyMARC—LBNL/ALS Activities	David Prendergast, LBNL
ST233	HyMARC—SNL Activities	Mark Allendorf, SNL
ST234	Development of Magnesium Borane Containing Solutions of Furans and Pyrroles as Reversible Liquid Hydrogen Carriers	Craig Jensen, University of Hawaii
ST235	Hydrogen Storage Cost and Performance Analysis	Cassidy Houchins, Strategic Analysis, Inc.
ST242	DME as a Renewable Hydrogen Carrier: Innovative Approach to Renewable Hydrogen Production	Michael Heidlage, LANL
ST243	Fuel Additives for Solid Hydrogen (FLASH) Carriers for Electric Aviation	Noemi Leick, NREL
<b>Intra-Agency Activities: Fossil Energy and Carbon Management</b>		
FE013	Underground Storage of Hydrogen and Hydrogen/Methane Mixtures: Influence of Reservoir Factors and Engineering Choices on Feasibility, Storage Operations, and Risks	Tom Buscheck, LLNL
FE014	Production and Transport of Low-Carbon Hydrogen Using the Natural Gas Resources and Infrastructure	Evan Frye, FECM, and Daniel Haynes, NETL
FE015	Real-Time Sensor Technologies for Hydrogen Transportation and Subsurface Storage	Ruishu Wright, NETL
FE016	Compatibility Assessment of Natural Gas Pipeline Infrastructure Materials with Hydrogen, CO <sub>2</sub> , and Ammonia	Mike Kass, ORNL
FE017*	Technoeconomic Evaluation of SOFC/SOEC-Based Integrated Energy Systems for the Co-Production of Electricity and Hydrogen	Anthony Burgard, NETL

**Tuesday, June 6 Poster Presentations, 5:30–7:00 p.m.**

FE018*	Raman Gas Analyzer for Real-Time Gas Composition Monitoring	Benjamin Chorpene, NETL
FE019*	Hydrogen Safety Review for FECM Applications	Sam Bayham, NETL
<b>Intra-Agency Activities: Office of Science</b>		
BES001	Underpinning Science for Hydrogen Technologies	Chris Fecko, BES
BES002	A Programmable Non-Equilibrium Electrified Ammonia Synthesis for Efficient Hydrogen Storage	Qi Dong and Ji Yang, University of Maryland
BES003	Enabling Reversible Hydrogen Storage and Transfer with Graphene-based Carbon–Boron–Nitrogen Materials	Tom Autrey, PNNL
<b>Education, Workforce Development, and Energy Justice</b>		
HFTO001	Community Benefits Plans and You!	Julie Fornaciari and Michelle Fox, HFTO
HFTO002	Energy and Environmental Justice Policies and Programs	Anne Marie Esposito and Cassandra Osvatics, HFTO
HFTO003	Chesapeake First Robotics Team: The Titans	
IA014	International Partnership for Hydrogen and Fuel Cells in the Economy: Early Career Network	Tomas Green and Christine Watson, HFTO
PRA001	Mitigation and Diagnosis of Pin-Hole Formation in Polymer Electrolyte Membrane Fuel Cells	Audrey Taylor, NREL
PRA002	Advanced Porous-Transport-Layer Interface Design for PEM Electrolyzers	Jason Lee, LBNL
PRA003	Thin-Film Catalyst Fuel Cell Electrodes with Improved Durability	Wipula Liyanage, LANL
SA190	Patent and Technology Portfolios Resulting from HFTO R&D Funding	Lindsay Steele, PNNL

\* Virtual poster only; a PDF will be available for viewing on the meeting website

Wednesday, June 7 Oral Presentations						
Time	Hydrogen Production Technologies Regency Ballroom CD	Hydrogen Infrastructure Technologies Regency Ballroom F	Fuel Cell Technologies Regency Ballroom AB	Systems Development and Integration Regency Ballroom E	Interagency Activities Washington Room	Intra-Agency Activities Conference Theater
8:00 AM	Continental Breakfast					
9:00 AM	P191 Perovskite/Perovskite Tandem Photoelectrodes for Low-Cost Unassisted Photoelectrochemical Water Splitting Yanfa Yan, The University of Toledo	TA049 High Pressure, High Flow Rate Dispenser and Nozzle Assembly for Heavy Duty Vehicles Spencer Quong, Electricore	FC337 Cummins PEM Fuel Cell System for Heavy Duty Applications Jean St-Pierre, Cummins Inc.	TA001 MEA Manufacturing R&D Peter Rupnowski, NREL	IA001 U.S. Department of Energy Hydrogen and Fuel Cell Technologies Office Overview Sunita Satyapal, HFTO IA002 DOE National Clean Hydrogen Strategy and Roadmap Neha Rustagi, HFTO	WPT0001 Water Power Technologies Office: Potential Connections with Hydrogen Generation Bill McShane, WPTO
9:30 AM	P192 Development of Composite Photocatalyst Materials That Are Highly Selective for Solar Hydrogen Production and Their Evaluation in Z-Scheme Reactor Designs Shane Ardo, University of California, Irvine	IN001a H-Mat Overview: Metals Chris San Marchi, SNL	FC338 Domestically Manufactured Fuel Cells for Heavy-Duty Applications Karen Swider Lyons, Plug Power	TA043 SOEC Stack Development and Manufacturing Olga Marina, PNNL	IA004 U.S. Department of Transportation (DOT) Panel Moderator: Benjamin Gould, HFTO Michael Carter, Maritime Administration Melissa Shurland, Federal Railroad Administration Mark Bathrick, Federal Transportation Authority Mary McDaniel, Pipeline and Hazardous Materials Safety Administration Diane Turchetta, Federal Highway Administration	SET0001 Concentrating Solar-Thermal Power Program Overview Matt Bauer, SETO SET0002 Technology for Electrically Enhanced Thermochemical Hydrogen (TEETH) Jim Miller, Arizona State University
10:00 AM	P193 Highly Efficient Solar Water Splitting Using 3D/2D Hydrophobic Perovskites with Corrosion Resistant Barriers Aditya D. Mohite, William Marsh Rice University	IN001b H-Mat Overview: Polymers Kevin Simmons, PNNL	FC167 FY22 SBIR IIC: Multi-Functional Catalyst Support Minette Ocampo, pH Matter, LLC	TA018 High Temperature Electrolysis, Stack, and Systems Testing Micah Casteel, INL		
10:30 AM	Break					
11:00 AM	P190 A Multifunctional Isostructural Bilayer Oxygen Evolution Electrode for Durable Intermediate-Temperature Electrochemical Water Splitting Kevin Huang, University of South Carolina	IN021 Microstructural Engineering and Accelerated Test Method Development to Achieve Low Cost, High Performance Solutions for Hydrogen Storage and Delivery Kip Findley, Colorado School of Mines	FC344 Low-Cost Corrosion-Resistant Coated Aluminum Bipolar Plates by Elevated Temperature Formation and Diffusion Bonding Tianli Zhu & Chris Smith, Raytheon Technologies Research Center	TA039 Solid Oxide Electrolysis System Demonstration Hossein Ghezal-Ayagh, FuelCell Energy, Inc.	IA005 Pathways to Commercial Lifting and Future Analysis Jason Munster, OCEC IA006 EPA's Ports Initiative and the New Clean Ports Program in the Inflation Reduction Act Sarah Froman, EPA	SET0003 Solar Hydrogen From Water Splitting Using Liquid Metal Oxidation/Reduction Cycles Promoted by Electrochemistry Anthony McDaniel, SNL
11:30 AM	P176 Development of Durable Materials for Cost Effective Advanced Water Splitting Utilizing All Ceramic Solid Oxide Electrolyzer Stack Technology Brian Oistad, Saint-Gobain	IN022 Tailoring Carbide Dispersed Steels: A Path to Increased Strength and Hydrogen Tolerance Gregory Thompson, The University of Alabama	FC345 Development and Manufacturing for Precious Metal Free Metal Bipolar Plate Coatings for PEM Fuel Cells Ch Wang, Treadstone Technologies, Inc.	NE002 LWR Integrated Energy Systems Interface Technology Development & Demonstration Dylan Sylvester, Northern States Power Company/Xcel Energy	IA007 Perspective and Case Examples on Development of Hydrogen at Shore. Ben Wilcox, U.S. Navy IA008 U.S. Army Combat Capabilities Development Command Ground Vehicle Systems Center: Hydrogen Fuel Cell Update Kevin Centeck, U.S. Army	WETO001 Integrated Wind-Hydrogen Systems Jian Fu, WETO
12:00 PM	P188 Advanced Coatings to Enhance the Durability of SOEC Stacks Sergio Ibanez, Nexceris, LLC	IN026 Tailoring Composition and Deformation Modes at the Microstructural Level for Next Generation Low-Cost High-Strength Austenitic Stainless Steels Jessica Krogstad, University of Illinois Urbana-Champaign	FC346 Fully Utilized Fuel Cell Manufactured by a Continuous Process Jon Owejan, Plug Power		IA009 H2@Rescue DOE-DOD-FEMA Initiative Nicholas Josefik, U.S. Army IA010 Fuel Cell Systems for the Dismounted Soldier Shailesh Shah, DOD	IED0001 Flexible Natural Gas/Hydrogen CHP System Development & Demonstration Jaswinder Singh, Caterpillar, Inc.
12:30 PM	Lunch (provided)					
1:45 PM	P204 Hydrogen Production Cost and Performance Analysis Brian James, Strategic Analysis, Inc.	IN030 Micro-Mechanically Guided High-Throughput Alloy Design Exploration towards Metastability-Induced H Embrittlement Resistance C. Cem Tasan, Massachusetts Institute of Technology	FC347 Development of Low Cost, Thin Flexible Graphite Bipolar Plates for Heavy Duty Fuel Cell Applications David Chadderon, NeoGraf Solutions, LLC	TA028 Demonstration of Electrolyzer Operation at a Nuclear Plant to Allow for Dynamic Participation in an Organized Electricity Market and In-House Hydrogen Supply Uuganbayar Otgonbaatar, Constellation Energy	TA009 Maritime (Pierside Power) Fuel Cell Generator Project Lennie Kiebanoff, SNL	ARPAE001 Carbon Dioxide-Free Hydrogen and Solid Carbon from Natural Gas via Metal Salt Intermediates Jonah Erlebacher, Johns Hopkins University
2:15 PM	P186 Performance and Durability Investigation of Thin, Low Crossover Proton Exchange Membranes for Water Electrolyzers Andrew Park, The Chemours Company FC, LLC	IN020 Self-Healable Copolymer Composites for Extended Service Hydrogen Dispensing Hoses Marek Urban, Clemson University	FC348 Fuel Cell Bipolar Plate Technology Development for Heavy Duty Applications Siguang Xu, GM	TA048 ARIES / Flatirons Facility - Hydrogen System Capability Buildout Jeffrey Mohr, NREL	IA011 Fuel Cell REAP Awards Chris Cassidy, USDA IA012 NASA Fuel Cell and Hydrogen Research Activities Ian Jakupca, NASA	ARPAE002 Efficient Production of H2/NH3 Fuel Blends for Zero Carbon Combustion Colin Wolden, Colorado School of Mines
2:45 PM	P185 High-Performance AEM LTE with Advanced Membranes, Ionomers and PGM-Free Electrodes Paul Kohl, Georgia Institute of Technology	H2041 H2@Scale CRADA: CA Research Consort. (Ref. Station, Fueling Perf. Test Device, Station Cap Model) Ethan Hecht & Taichi Kuroki, NREL	FC349 Foil Bearing Supported Compressor-Expander Bill Buckley, R&D Dynamics Corporation	TA037 Demonstration and Framework for H2@Scale in Texas and Beyond Rich Myhre, Frontier Energy Inc.	IA013 H2 Biogeochemical Cycle: Implications for Hydrogen Climate Impact Fabien Paulot, NOAA	ARPAE003 A Hybrid Electrochemical and Catalytic Compression System for Direct Generation of High-Pressure Hydrogen at 700 Bar Wei Wang, PNNL
3:15 PM	Break					
3:45 PM	P195 A New Paradigm for Materials Discovery and Development for Lower Temperature and Isothermal Thermochemical Hydrogen Production Jonathan Scheffe, University of Florida	IN016 Free-Piston Expander for Hydrogen Cooling Devin Halliday, GTI Energy	FC350 High Efficiency and Transient Air Systems for Affordable Load-Following Heavy-Duty Truck Fuel Cells Doug Hughes, Eaton Corporation	SDI001 Integrated Modeling, TEA, and Reference Design for Renewable Hydrogen to Green Steel and Ammonia Jennifer King, NREL		ARPAE004 Co-Synthesis of Hydrogen and High-Value Carbon Products from Methane Pyrolysis Matteo Carnello, Stanford University
4:15 PM	P194 New High-Entropy Perovskite Oxides with Increased Reducibility and Stability for Thermochemical Hydrogen Generation Jian Luo, University of California, San Diego	IN019 Ultra-Cryopump for High Demand Transportation Fueling Kyle Gross, RotoFlow	FC351 Durable and Efficient Centrifugal Compressor-Based Filtered Air Management System and Optimized BOP Mike Bunce, Mahle Powertrain, LLC	TA060 Offshore Wind to Hydrogen – Modeling, Analysis, Testing, and International Collaboration Work Genevieve Saur, NREL		ARPAE005 Understanding the Potential for Geologic Hydrogen Resources Geoffrey Ellis, U.S. Geological Survey
4:45 PM	P170 Benchmarking Advanced Water Splitting Technologies: Best Practices in Materials Characterization Olga Marina, PNNL	IN040 The HyRIGHT Project: 700 bar Hydrogen Refueling Interface for Gaseous Heavy-Duty Trucks Will James, SRNL	FC352 Leveraging ICE Air System Technology for Fuel Cell System Cost Reduction Paul Wang, Caterpillar, Inc.	TA061 Optimal Wind Turbine Design for H2 Production Chris Bay, NREL		ARPAE006 Overview of ARPA-E Methane Pyrolysis Program and Possible Future Directions Jack Lewnard, ARPA-E
5:15 PM						

**Wednesday, June 7 Poster Presentations, 5:30–7:00 p.m.**

<b>Fuel Cell Technologies</b>		
FC335	Additive Functionalized Polymers for Extended Heavy Duty Polymer Electrolyte Membrane Lifetimes	Tom Corrigan, The Lubrizol Corporation
FC341	Advanced AEMFCs through Material Innovation	Yu Seung Kim, LANL
FC342	Advanced Ionomers & MEAs for Alkaline Membrane Fuel Cells (AMFCs)	Bryan Pivovar, NREL
FC343*	FY20 SBIR II: Improved Ionomers and Membranes for Fuel Cells	Chris Topping, Tetramer Technologies, LLC
FC361	FY22 SBIR I: Durable Bulk Metallic Glass Catalysts for Medium and Heavy Duty PEM Fuel Cells	Evgenia Pekarskaya, Supercool Metals LLC
FC362	FY22 STTR I: Mobile Fuel Cell Generator	Paul Scott, RockeTruck, Inc.
FC363	Advanced FC Vehicle DC-DC Converter Development	Vivek Sujan, ORNL
<b>Systems Development and Integration</b>		
P207	Megawatt-Scale Low Temperature Electrolyzer Research Capability	Kevin Hartmann, NREL
SDI001a	Integrated Modeling, TEA, and Reference Design for Renewable Hydrogen to Green Steel and Ammonia	Jennifer King, NREL
SDI006	Energy Technology Proving Ground	John Moorehead, INL
TA013	Fuel Cell Bus Evaluations	Matthew Post, NREL
TA030	Demonstration of Integrated Hydrogen Production and consumption for Improved Utility Operations	Paul Brooker, Orlando Utilities Commission
TA051	Low Total Cost of Hydrogen by Exploiting Offshore Wind and PEM Electrolysis Synergies	Judith Lattimer, Giner, Inc.
TA054*	AEM Water Electrolyzer for Hydrogen Production from Offshore Wind	Richard Masel, Alchemr, Inc
TA063	High Efficacy Validation of Hydride Mega Tanks at the ARIES Lab (HEVHY METAL)	Katherine Hurst, NREL
TA064	Hydrogen Production, Grid Integration, and Scaling for the Future	Sam Sprik, NREL
<b>Analysis, Codes and Standards</b>		
H2042	Hydrogen Contaminant Detector	Matthew Post, NREL
SA180	Advanced neTwork analysis of hydrogen fuel cell Automated vehicleS for goods delivery (ATLAS) -- TCO of Autonomous Fuel Cell Fleet Vehicles	Tim Lipman, LBNL
SA187	Heavy-duty Hydrogen Fueling Station Corridors	Mark Chung, NREL
SA188	Sustainability Criteria for Hydrogen Deployments	Mark Chung, NREL
SA189	FY22 SBIR I: Siting Hydrogen for Equity and Energy Justice	Erin Middleton, Carbon Solutions LLC
SA190	Patent and Technology Portfolios Resulting from HFTO R&D Funding	Lindsay Steele, PNNL
SCS005	R&D for Safety, Codes and Standards: Materials and Components Compatibility	Joe Ronevich, SNL
SCS022	Fuel Cell and Hydrogen Energy Association Codes and Standards Support	Karen Quackenbush, Fuel Cell and Hydrogen Energy Association
SCS030	MC Formula Protocol for H35HF Fueling	Taichi Kuroki, NREL
SCS033	Risk Assessments of Design and Refueling for Hydrogen Locomotive and Tender	Brian Ehrhart, SNL
SCS034	Large-Scale Hydrogen Storage - Risk Assessment Seattle City Light and Port of Seattle	Arun Veeramany, PNNL



**Wednesday, June 7 Poster Presentations, 5:30–7:00 p.m.**

SCS035*	Modeling and Risk Assessment of Hydrogen / Natural Gas Blends	Austin Glover, SNL
<b>Intra-Agency Activities: Vehicle Technologies Office</b>		
VTO001*	Accelerating the Development of Hydrogen Internal Combustion Engines -Vehicle Technologies Office/Decarbonization of Off-Road, Rail, Marine, and Aviation (DORMA) Projects	Gurpreet Singh, VTO
<b>Education, Workforce Development, and Energy Justice</b>		
HFTO001	Community Benefits Plans and You!	Julie Fornaciari and Michelle Fox, HFTO
HFTO002	Energy and Environmental Justice Policies and Programs	Anne Marie Esposito and Cassandra Osvatics, HFTO
HFTO003	Chesapeake First Robotics Team: The Titans	
IA014	International Partnership for Hydrogen and Fuel Cells in the Economy: Early Career Network	Tomas Green and Christine Watson, HFTO
PRA001	Mitigation and Diagnosis of Pin-Hole Formation in Polymer Electrolyte Membrane Fuel Cells	Audrey Taylor, NREL
PRA002	Advanced Porous-Transport-Layer Interface Design for PEM Electrolyzers	Jason Lee, LBNL
PRA003	Thin-Film Catalyst Fuel Cell Electrodes with Improved Durability	Wipula Liyanage, LANL

\* Virtual poster only; a PDF will be available for viewing on the meeting website

Thursday, June 8 Oral Presentations					
Time	Hydrogen Production Technologies Regency Ballroom CD	Fuel Cell Technologies Regency Ballroom AB	Systems Development and Integration Regency Ballroom E	Analysis, Codes and Standards Regency Ballroom F	Intra-Agency Activities Washington Room
8:00 AM	<b>Continental Breakfast</b>				
9:00 AM	P183 Extremely Durable Concrete Using Methane Decarbonization Nanofiber Co-Products with Hydrogen Alan Weimer, University of Colorado, Boulder	FC354 L'Innovator Program Emory De Castro, Advent Technologies	TA052 Solid Oxide Electrolysis Cells (SOEC) Integrated with Direct Reduced Iron (DRI) Plants for Producing Green Steel Jack Brouwer, University of California, Irvine	SA-SCS000 Analysis, Codes & Standards Subprogram Overview Neha Rustagi, HFTO	
9:30 AM	P179 BioHydrogen (BioH2) Consortium to Advance Fermentative Hydrogen Production Katherine Chou, NREL	FC333 Advanced Membranes for Heavy Duty Fuel Cell Trucks Andrew Baker, Nikola Motor Company	TA053 Grid-Interactive Steelmaking with Hydrogen (GISH) Ronald Omalley, Missouri University of Science & Technology	SA174 Life Cycle Analysis of Hydrogen Pathways Amgad Elgowainy, ANL	
10:00 AM	P184 Scalable and Highly Efficient Microbial Electrochemical Reactor for Hydrogen Generation from Lignocellulosic Biomass and Waste Hong Liu, Oregon State University	FC336 A Systematic Approach to Developing Durable, Conductive Membranes for Operation at 120C Tom Zawodzinski, University of Tennessee - Knoxville	SDI002 Hydrogen Energy Storage System at Borrego Springs Towards an H2 Enabled 100 Renewable Microgrid Kumaraguru Prabakar, NREL	SA178 Cradle-to-Grave Transportation Analysis Amgad Elgowainy, ANL	FE020 Market-Based Technoeconomic Optimization of Integrated Energy Systems that Co-Produce Hydrogen and Electricity Alexander Dowling, University of Notre Dame
10:30 AM	<b>Break</b>				
11:00 AM	P203 Novel Microbial Electrolysis System for Conversion of Biowastes into Low-Cost Renewable Hydrogen Noah Meeks, Southern Company Services, Inc.	FC330 High Efficiency Reversible Solid Oxide System Hossein Ghezal-Ayagh, FuelCell Energy, Inc.	TA044 System Demonstration for Supplying Clean, Reliable and Affordable Electric Power to Data Centers using Hydrogen Fuel Paul Wang, Caterpillar, Inc.	SA181 Global Change Analysis Model Expansion- Hydrogen Pathways Page Kyle, PNNL	NE003 Integrated Energy Systems: Supporting Transportation and Industry with Nuclear Power Richard Boardman, INL
11:30 AM	P202 Novel Microbial Electrolysis Cell Design for Efficient Hydrogen Generation from Wastewaters Bruce Logan, Pennsylvania State University	FC331 A Novel Stack Approach to Enable High Round Trip Efficiencies in Unitized PEM Regenerative Fuel Cells Katherine Ayers, Nel Hydrogen	TA062 Validation of Interconnection and Interoperability of Grid-Forming Inverters Sourced by Hydrogen Technologies in View of 100% Renewable Microgrids Kumaraguru Prabakar, NREL	SA186 Updates to National Energy Modeling Systems to include Hydrogen Module Michael Schaal, OnLocation	NE004 Preconceptual Design of Thermal and Electrical Power Interfaces for Hydrogen Production Alan Wilson, Sargent and Lundy
12:00 PM		FC317 Stationary Direct Methanol Fuel Cells Using Pure Methanol Xianglin Li, University of Kansas	TA035 Power Electronics for Electrolyzer Applications to Enable Grid Services Robert Hovsopian, NREL	SCS019 Hydrogen Safety Panel, Safety Knowledge Tools, and First Responder Training Resources Nick Barilo, PNNL	NE005 Safety and Hazards Analysis of Hydrogen Production at Nuclear Power Plants Kurt Vedros, INL
12:30 PM	<b>Lunch (provided)</b>				
1:45 PM			SDI005 Hydrogen Systems for PERFORMANCE-based Value Stacking (HYPER-V) Rishabh Jain, NREL	SCS028 Hydrogen Education for a Decarbonized Global Economy (H2EDGE) Eladio Knipping, EPRI	
2:15 PM				SCS010 R&D for Safety, Codes and Standards: Hydrogen Behavior Ethan Hecht, SNL	
2:45 PM				SCS011 Hydrogen Quantitative Risk Assessment Ben Schroeder, SNL	
3:15 PM	<b>Break</b>				
3:45 PM				SCS001 Component Failure R&D Kevin Hartmann, NREL	
4:15 PM				SCS021 NREL Hydrogen Sensor Testing Laboratory William Buttner, NREL	
4:45 PM				SCS031 Assessment of Heavy-Duty Fueling Methods and Components Shaun Onorato, NREL	

## Alphabetical List of Presenters

Presenter Last Name	Presenter First Name	Presenter Organization	Day/Time (EDT)	Unique ID	Session
Adams	Jesse	HFTO	6/6/23 9:00 AM	SDI000	Systems Development and Integration
Ager	Joel	LBNL	6/6/23 5:30 PM	P148C	Poster
Ahluwalia	Rajesh	ANL	6/6/23 4:15 PM	TA065	Systems Development and Integration
Ahluwalia	Rajesh	ANL	6/6/23 5:30 PM	ST001	Poster
Alia	Shaun	NREL	6/6/23 5:30 PM	P148A	Poster
Allendorf	Mark	SNL	6/6/23 9:30 AM	ST127	Hydrogen Infrastructure Technologies
Allendorf	Mark	SNL	6/6/23 5:30 PM	ST233	Poster
Ardo	Shane	University of California, Irvine	6/7/23 9:30 AM	P192	Hydrogen Production Technologies
Autrey	Tom	PNNL	6/6/23 5:30 PM	ST204	Poster
Autrey	Tom	PNNL	6/6/23 5:30 PM	BES003	Poster
Ayers	Katherine	Nel Hydrogen	6/8/23 11:30 AM	FC331	Fuel Cell Technologies
Badgett	Alex	NREL	6/6/23 5:30 PM	P196d	Poster
Baker	Andrew	Nikola Motor Company	6/8/23 9:30 AM	FC333	Fuel Cell Technologies
Barclay	John	PNNL	6/6/23 5:30 PM	IN004	Poster
Barilo	Nick	PNNL	6/8/23 12:00 PM	SCS019	Analysis, Codes and Standards
Bathrick	Mark	DOT	6/7/23 9:30 AM	IA004	Interagency Activities
Bauer	Matt	SETO	6/7/23 9:30 AM	SETO001	Intra-Agency Activities
Bay	Chris	NREL	6/7/23 4:45 PM	TA061	Systems Development and Integration
Bayham	Sam	NETL	N/A	FE019	Virtual Poster
Bloch	Eric	University of Delaware	N/A	ST212	Virtual Poster
Boardman	Richard	INL	6/6/23 1:45 PM	P196	Hydrogen Production Technologies
Boardman	Richard	INL	6/8/23 11:00 AM	NE003	Intra-Agency Activities
Boettcher	Shannon	University of Oregon	6/6/23 5:30 PM	P187	Poster
Booras	George	EPRI	6/6/23 9:30 AM	FE001	Intra-Agency Activities
Borup	Rod	LANL	6/6/23 11:00 AM	FC339	Fuel Cell Technologies
Bower	Stan	Ford Motor Company	6/6/23 2:15 PM	TA057	Systems Development and Integration
Brooker	Paul	Orlando Utilities Commission	6/7/23 5:30 PM	TA030	Poster
Brooks	Kriston	NREL	6/6/23 5:30 PM	ST008	Poster
Browner	Jack	University of California, Irvine	6/8/23 9:00 AM	TA052	Systems Development and Integration
Buckley	Bill	R&D Dynamics Corporation	6/7/23 2:45 PM	FC349	Fuel Cell Technologies
Bunce	Mike	Mahle Powertrain, LLC	6/7/23 4:15 PM	FC351	Fuel Cell Technologies
Burgard	Anthony	NETL	N/A	FE017	Virtual Poster
Buscheck	Tom	LLNL	6/6/23 5:30 PM	FE013	Poster
Buttner	William	NREL	6/8/23 4:15 PM	SCS021	Analysis, Codes and Standards
Capuano	Chris	Nel Hydrogen	6/6/23 11:30 AM	P198	Hydrogen Production Technologies
Cargnello	Matteo	Stanford University	6/7/23 3:45 PM	ARPAE004	Intra-Agency Activities
Carter	Michael	DOT	6/7/23 9:30 AM	IA004	Interagency Activities
Cassidy	Chris	USDA	6/7/23 2:15 PM	IA011	Interagency Activities
Casteel	Micah	INL	6/6/23 3:45 PM	SDI004	Systems Development and Integration
Casteel	Micah	INL	6/7/23 10:00 AM	TA018	Systems Development and Integration
Centeck	Kevin	U.S. Army	6/7/23 11:45 AM	IA008	Interagency Activities
Chadderdon	David	NeoGraf Solutions, LLC	6/7/23 1:45 PM	FC347	Fuel Cell Technologies
Chorpening	Benjamin	NETL	N/A	FE018	Virtual Poster
Chou	Katherine	NREL	6/8/23 9:30 AM	P179	Hydrogen Production Technologies
Chung	Mark	NREL	6/6/23 3:45 PM	IN034	Hydrogen Infrastructure Technologies
Chung	Mark	NREL	6/7/23 5:30 PM	SA187	Poster
Chung	Mark	NREL	6/7/23 5:30 PM	SA188	Poster
Cordova	Jose	Mohawk Innovative	6/6/23 1:45 PM	FE006	Intra-Agency Activities
Corrigan	Tom	The Lubrizol Corporation	6/7/23 5:30 PM	FC335	Poster
Dai	Sheng	ORNL	6/6/23 5:30 PM	ST148	Poster
De Castro	Emory	Advent Technologies	6/8/23 9:00 AM	FC354	Fuel Cell Technologies
Desrosiers	Michael	Luna Innovations Inc.	N/A	IN014	Virtual Poster
Ding	Dong	INL	6/6/23 5:30 PM	P148B	Poster
Dinh	Huyen	NREL	6/6/23 9:30 AM	P148	Hydrogen Production Technologies
Dong	Qi	University of Maryland	6/6/23 5:30 PM	BES002	Poster
Dowling	Alexander	University of Notre Dame	6/8/23 10:00 AM	FE020	Intra-Agency Activities
Ducker	Michael	Mitsubishi Power	6/6/23 4:45 PM	LPO001	Systems Development and Integration
Ehrhart	Brian	SNL	6/7/23 5:30 PM	SCS033	Poster
Elgowainy	Amgad	ANL	6/6/23 2:45 PM	IN025	Hydrogen Infrastructure Technologies
Elgowainy	Amgad	ANL	6/8/23 9:30 AM	SA174	Analysis, Codes and Standards
Elgowainy	Amgad	ANL	6/8/23 10:00 AM	SA178	Analysis, Codes and Standards
Ellis	Geoffrey	U.S. Geological Survey	6/7/23 4:15 PM	ARPAE005	Intra-Agency Activities
Erlebacher	Jonah	Johns Hopkins University	6/7/23 1:45 PM	ARPAE001	Intra-Agency Activities
Esposito	Anne Marie	HFTO	6/6/23 5:30 PM	HFTO002	Poster
Esposito	Anne Marie	HFTO	6/7/23 5:30 PM	HFTO002	Poster
Farha	Omar	Northwestern University	6/6/23 5:30 PM	ST209	Poster
Fecko	Chris	BES	6/6/23 5:30 PM	BES001	Poster
Findley	Kip	Colorado School of Mines	6/7/23 11:00 AM	IN021	Hydrogen Infrastructure Technologies
Fornaciari	Julie	HFTO	6/6/23 5:30 PM	HFTO001	Poster
Fornaciari	Julie	HFTO	6/7/23 5:30 PM	HFTO001	Poster
Fox	Michelle	HFTO	6/6/23 5:30 PM	HFTO001	Poster
Fox	Michelle	HFTO	6/7/23 5:30 PM	HFTO001	Poster
Froman	Sarah	EPA	6/7/23 11:15 AM	IA006	Interagency Activities
Frye	Evan	FECM	6/6/23 9:00 AM	FE000	Intra-Agency Activities

## Alphabetical List of Presenters

Presenter Last Name	Presenter First Name	Presenter Organization	Day/Time (EDT)	Unique ID	Session
Frye	Evan	FECM	6/6/23 5:30 PM	FE014	Poster
Fu	Jian	WETO	6/7/23 11:30 AM	WETO001	Intra-Agency Activities
Gennett	Tom	NREL	6/6/23 5:30 PM	ST202	Poster
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.	6/6/23 12:00 PM	FE005	Intra-Agency Activities
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.	6/7/23 11:00 AM	TA039	Systems Development and Integration
Ghezel-Ayagh	Hossein	FuelCell Energy, Inc.	6/8/23 11:00 AM	FC330	Fuel Cell Technologies
Ginley	David	NREL	6/6/23 5:30 PM	P196f	Poster
Glover	Austin	SNL	N/A	SCS035	Virtual Poster
Gould	Benjamin	HFTO	6/7/23 9:30 AM	IA004	Interagency Activities
Green	Tomas	HFTO	6/6/23 5:30 PM	IA014	Poster
Green	Tomas	HFTO	6/7/23 5:30 PM	IA014	Poster
Gross	Kyle	RotoFlow	6/7/23 4:15 PM	IN019	Hydrogen Infrastructure Technologies
Guo	Juchen	University of California, Riverside	6/6/23 5:30 PM	P206	Poster
Halliday	Devin	GTI Energy	6/6/23 5:30 PM	IN036	Poster
Halliday	Devin	GTI Energy	6/7/23 3:45 PM	IN016	Hydrogen Infrastructure Technologies
Hanlin	Jason	Center for Transportation and the Environm	6/6/23 12:00 PM	TA016	Systems Development and Integration
Harrison	Kevin	NREL	6/6/23 5:30 PM	H2057	Poster
Hartmann	Kevin	NREL	6/6/23 5:30 PM	P207	Poster
Hartmann	Kevin	NREL	6/8/23 3:45 PM	SCS001	Analysis, Codes and Standards
Haynes	Daniel	NETL	6/6/23 5:30 PM	FE014	Poster
Hecht	Ethan	SNL	6/8/23 2:15 PM	SCS010	Analysis, Codes and Standards
Heidlage	Michael	LANL	6/6/23 5:30 PM	ST242	Poster
Henrichsen	Lars	Cummins	6/6/23 2:15 PM	FE007	Intra-Agency Activities
Houchins	Cassidy	Strategic Analysis, Inc.	6/6/23 5:30 PM	ST235	Poster
Hovsopian	Robert	NREL	6/8/23 12:00 PM	TA035	Systems Development and Integration
Huang	Kevin	University of South Carolina	6/7/23 11:00 AM	P190	Hydrogen Production Technologies
Hughes	Doug	Eaton Corporation	6/7/23 3:45 PM	FC350	Fuel Cell Technologies
Hurst	Katherine	NREL	6/7/23 5:30 PM	TA063	Poster
Ibanez	Sergio	Nexceris, LLC	6/7/23 12:00 PM	P188	Hydrogen Production Technologies
Jain	Rishabh	NREL	6/8/23 1:45 PM	SDI005	Systems Development and Integration
Jakupca	Ian	NASA	6/7/23 2:30 PM	IA012	Interagency Activities
James	Brian	Strategic Analysis, Inc.	6/6/23 1:45 PM	FC353	Fuel Cell Technologies
James	Brian	Strategic Analysis, Inc.	6/7/23 1:45 PM	P204	Hydrogen Production Technologies
James	Will	SRNL	6/7/23 4:45 PM	IN040	Hydrogen Infrastructure Technologies
Jensen	Craig	University of Hawaii	6/6/23 5:30 PM	ST234	Poster
Josefik	Nicholas	U.S. Army	6/7/23 12:00 PM	IA009	Interagency Activities
Kass	Mike	ORNL	6/6/23 5:30 PM	FE016	Poster
Kim	Yu Seung	LANL	6/7/23 5:30 PM	FC341	Poster
King	Jennifer	NREL	6/7/23 3:45 PM	SDI001	Systems Development and Integration
King	Jennifer	NREL	6/7/23 5:30 PM	SDI001a	Poster
Klebanoff	Lennie	SNL	6/7/23 1:45 PM	TA009	Interagency Activities
Klein	Ryan	NIST	6/6/23 5:30 PM	ST135	Poster
Knipping	Eladio	EPRI	6/8/23 1:45 PM	SCS028	Analysis, Codes and Standards
Kohl	Paul	Georgia Institute of Technology	6/7/23 2:45 PM	P185	Hydrogen Production Technologies
Krogstad	Jessica	University of Illinois Urbana-Champaign	6/7/23 12:00 PM	IN026	Hydrogen Infrastructure Technologies
Kuroki	Taichi	NREL	6/7/23 5:30 PM	SCS030	Poster
Kyle	Page	PNNL	6/8/23 11:00 AM	SA181	Analysis, Codes and Standards
Lackey	Gregory	NETL	6/6/23 4:45 PM	FE011	Intra-Agency Activities
Lalli	Jennifer	Nanosonic, Inc	6/6/23 5:30 PM	IN038	Poster
Lattimer	Judith	Giner, Inc.	6/7/23 5:30 PM	TA051	Poster
Leachman	Jacob	Washington State University	6/6/23 5:30 PM	IN015	Poster
Lee	Jason	LBNL	6/6/23 5:30 PM	PRA002	Poster
Lee	Jason	LBNL	6/7/23 5:30 PM	PRA002	Poster
Lei	Yinkai	NETL	6/6/23 2:45 PM	FE008	Intra-Agency Activities
Leick	Noemi	NREL	6/6/23 5:30 PM	ST243	Poster
Lewnard	Jack	DOE, ARPA-E	6/7/23 4:45 PM	ARPAE006	Intra-Agency Activities
Li	Xianglin	University of Kansas	6/8/23 12:00 PM	FC317	Fuel Cell Technologies
Li	Xiaodong	University of Virginia	6/6/23 11:30 AM	ST236	Hydrogen Infrastructure Technologies
Lin	Hongfei	Washington State University	6/6/23 5:30 PM	ST217	Poster
Lipman	Tim	LBNL	6/7/23 5:30 PM	SA180	Poster
Litster	Shawn	Carnegie Mellon University	6/6/23 3:45 PM	FC327	Fuel Cell Technologies
Liu	Hong	Oregon State University	6/8/23 10:00 AM	P184	Hydrogen Production Technologies
Liu	Xingbo	West Virginia University	6/6/23 5:30 PM	P175	Poster
Liu	Zhien	UNDEERC	6/6/23 11:30 AM	FE004	Intra-Agency Activities
Liyanage	Wipula	LANL	6/6/23 5:30 PM	PRA003	Poster
Liyanage	Wipula	LANL	6/7/23 5:30 PM	PRA003	Poster
Logan	Bruce	Pennsylvania State University	6/8/23 11:30 AM	P202	Hydrogen Production Technologies
Long	Jeffrey	LBNL	6/6/23 5:30 PM	ST224	Poster
Lozier	Jacob	GM	6/6/23 1:45 PM	TA058	Systems Development and Integration
Lucht	Robert	Purdue University	6/6/23 4:15 PM	FE010	Intra-Agency Activities
Luo	Jian	University of California, San Diego	6/7/23 4:15 PM	P194	Hydrogen Production Technologies
Ma	Shengqian	University of North Texas	6/6/23 5:30 PM	ST210	Poster
Marina	Olga	PNNL	6/6/23 5:30 PM	P196e	Poster
Marina	Olga	PNNL	6/7/23 9:30 AM	TA043	Systems Development and Integration

## Alphabetical List of Presenters

Presenter Last Name	Presenter First Name	Presenter Organization	Day/Time (EDT)	Unique ID	Session
Marina	Olga	PNNL	45084.69792	P170	Hydrogen Production Technologies
Masel	Richard	Alchemr, Inc	N/A	TA054	Virtual Poster
Matzger	Adam	University of Michigan	6/6/23 5:30 PM	ST211	Poster
Mauger	Scott	NREL	6/6/23 5:30 PM	P196c	Poster
McDaniel	Anthony	SNL	6/6/23 5:30 PM	P148D	Poster
McDaniel	Anthony	SNL	6/7/23 11:00 AM	SET0003	Intra-Agency Activities
McDaniel	Mary	DOT	6/7/23 9:30 AM	IA004	Interagency Activities
McGuirk	Michael	Colorado School of Mines	6/6/23 5:30 PM	ST218	Poster
McShane	Bill	WPTO	6/7/23 9:00 AM	WPTO001	Intra-Agency Activities
Meeks	Noah	Southern Company Services, Inc.	6/8/23 11:00 AM	P203	Hydrogen Production Technologies
Middleton	Erin	Carbon Solutions LLC	6/7/23 5:30 PM	SA189	Poster
Miller	Jim	Arizona State University	6/7/23 10:00 AM	SET0002	Intra-Agency Activities
Mohite	Aditya D.	William Marsh Rice University	6/7/23 10:00 AM	P193	Hydrogen Production Technologies
Mohr	Jeffrey	NREL	6/7/23 2:15 PM	TA048	Systems Development and Integration
Moorehead	John	INL	6/7/23 5:30 PM	SDI006	Poster
Mukundan	Rangachary	LBNL	6/6/23 5:30 PM	P196a	Poster
Munster	Jason	OCED	6/7/23 11:00 AM	IA005	Interagency Activities
Myers	Deborah	ANL	6/6/23 9:30 AM	FC160	Fuel Cell Technologies
Myers	Deborah	ANL	6/6/23 5:30 PM	P196b	Poster
Myhre	Rich	Frontier Energy Inc.	6/7/23 2:45 PM	TA037	Systems Development and Integration
Naskar	Amit	ORNL	6/6/23 1:45 PM	ST240	Hydrogen Infrastructure Technologies
Nibur	Kevin	Hy-Performance	6/6/23 5:30 PM	IN029	Poster
Ocampo	Minette	pH Matter, LLC	6/7/23 10:00 AM	FC167	Fuel Cell Technologies
Odom	Sara	Electricore	6/6/23 10:00 AM	TA017	Systems Development and Integration
Ogitsu	Tadashi	LLNL	6/6/23 5:30 PM	P148E	Poster
Omalley	Ronald	Missouri University of Science & Technology	6/8/23 9:30 AM	TA053	Systems Development and Integration
Onorato	Shaun	NREL	6/8/23 4:45 PM	SCS031	Analysis, Codes and Standards
Osvatics	Cassandra	HFTO	6/6/23 5:30 PM	HFTO002	Poster
Osvatics	Cassandra	HFTO	6/7/23 5:30 PM	HFTO002	Poster
Otgonbaatar	Uuganbayar	Constellation Energy	6/7/23 1:45 PM	TA028	Systems Development and Integration
Owejan	Jon	Plug Power	6/7/23 12:00 PM	FC346	Fuel Cell Technologies
Pal	Narendra	Hornblower	6/6/23 11:00 AM	TA045	Systems Development and Integration
Papageorgopoulos	Dimitrios	HFTO	6/6/23 9:00 AM	FC000	Fuel Cell Technologies
Park	Andrew	The Chemours Company FC, LLC	6/7/23 2:15 PM	P186	Hydrogen Production Technologies
Parks	Jim	ORNL	6/6/23 11:00 AM	FE003	Intra-Agency Activities
Paulot	Fabien	NOAA	6/7/23 2:45 PM	IA013	Interagency Activities
Paxson	Adam	Plug Power	6/6/23 12:00 PM	P199	Hydrogen Production Technologies
Pekarskaya	Evgenia	Supercool Metals LLC	6/7/23 5:30 PM	FC361	Poster
Peterson	David	HFTO	6/6/23 9:00 AM	P000	Hydrogen Production Technologies
Pietras	John	Saint-Gobain	6/7/23 11:30 AM	P176	Hydrogen Production Technologies
Pivovar	Bryan	NREL	6/6/23 1:45 PM	P196	Hydrogen Production Technologies
Pivovar	Bryan	NREL	6/7/23 5:30 PM	FC342	Poster
Post	Matthew	NREL	6/7/23 5:30 PM	TA013	Poster
Post	Matthew	NREL	6/7/23 5:30 PM	H2042	Poster
Prabakar	Kumaraguru	NREL	6/8/23 10:00 AM	SDI002	Systems Development and Integration
Prabakar	Kumaraguru	NREL	6/8/23 11:30 AM	TA062	Systems Development and Integration
Prendergast	David	LBNL	6/6/23 5:30 PM	ST225	Poster
Quackenbush	Karen	Fuel Cell and Hydrogen Energy Association	6/7/23 5:30 PM	SCS022	Poster
Quong	Spencer	Electricore	6/7/23 9:00 AM	TA049	Hydrogen Infrastructure Technologies
Ramaswamy	Nagappan	GM	6/6/23 2:15 PM	FC323	Fuel Cell Technologies
Rockward	Tommy	LANL	6/6/23 4:45 PM	FC355	Fuel Cell Technologies
Rodezno	Eva	FECM	6/6/23 9:00 AM	FE000	Intra-Agency Activities
Ronevich	Joe	SNL	6/7/23 5:30 PM	SCS005	Poster
Rupnowski	Peter	NREL	6/7/23 9:00 AM	TA001	Systems Development and Integration
Rustagi	Neha	HFTO	6/7/23 9:15 AM	IA002	Interagency Activities
Rustagi	Neha	HFTO	6/8/23 9:00 AM	SA-SCS000	Analysis, Codes and Standards
San Marchi	Chris	SNL	6/6/23 4:15 PM	IN035	Hydrogen Infrastructure Technologies
San Marchi	Chris	SNL	6/7/23 9:30 AM	IN001a	Hydrogen Infrastructure Technologies
Satyapal	Sunita	HFTO	6/7/23 9:00 AM	IA001	Interagency Activities
Saur	Genevieve	NREL	6/6/23 9:30 AM	TA042	Systems Development and Integration
Saur	Genevieve	NREL	6/7/23 4:15 PM	TA060	Systems Development and Integration
Schaal	Michael	OnLocation	6/8/23 11:30 AM	SA186	Analysis, Codes and Standards
Scheffe	Jonathan	University of Florida	6/7/23 3:45 PM	P195	Hydrogen Production Technologies
Schroeder	Ben	SNL	6/8/23 2:45 PM	SCS011	Analysis, Codes and Standards
Scott	Paul	RockeTruck, Inc.	6/7/23 5:30 PM	FC362	Poster
Shah	Shailesh	DOD	6/7/23 12:15 PM	IA010	Interagency Activities
Shurland	Melissa	DOT	6/7/23 9:30 AM	IA004	Interagency Activities
Shviro	Meital	NREL	6/6/23 5:30 PM	P196h	Poster
Simmons	Kevin	PNNL	6/7/23 10:00 AM	IN001b	Hydrogen Infrastructure Technologies
Singh	Gurpreet	VTO	N/A	VTO001	Virtual Poster
Singh	Jaswinder	Caterpillar, Inc.	6/7/23 12:00 PM	IEDO001	Intra-Agency Activities
Slack	John	Nikola Motor Company	6/6/23 2:45 PM	FC326	Fuel Cell Technologies
Smith	Chris	Raytheon Technologies Research Center	6/7/23 11:00 AM	FC344	Fuel Cell Technologies
Song	Xueyan	West Virginia University	6/6/23 3:45 PM	FE009	Intra-Agency Activities

## Alphabetical List of Presenters

Presenter Last Name	Presenter First Name	Presenter Organization	Day/Time (EDT)	Unique ID	Session
Space	Brian	North Carolina State University	6/6/23 5:30 PM	ST213	Poster
Sprik	Sam	NREL	6/6/23 5:30 PM	ST008	Poster
Sprik	Sam	NREL	6/7/23 2:45 PM	H2041	Hydrogen Infrastructure Technologies
Sprik	Sam	NREL	6/7/23 5:30 PM	TA064	Poster
Sreenivasan	Sreepasad	University of Texas, El Paso	N/A	P205	Virtual Poster
Stadie	Nicholas	Montana State University	N/A	ST214	Virtual Poster
Steele	Lindsay	PNNL	6/6/23 5:30 PM	SA190	Poster
Steele	Lindsay	PNNL	6/7/23 5:30 PM	SA190	Poster
Steinbach	Andrew	3M	6/6/23 11:00 AM	P197	Hydrogen Production Technologies
Stetson	Ned	HFTO	6/6/23 9:00 AM	IN000	Hydrogen Infrastructure Technologies
St-Pierre	Jean	Cummins Inc.	6/7/23 9:00 AM	FC337	Fuel Cell Technologies
Strange	Nicholas	SLAC	6/6/23 5:30 PM	ST201	Poster
Striker	Todd	Cummins Inc.	6/6/23 4:15 PM	P201	Hydrogen Production Technologies
Sujan	Vivek	ORNL	6/7/23 5:30 PM	FC363	Poster
Swartz	Scott	Nextech Materials, Ltd.	6/6/23 3:45 PM	P200	Hydrogen Production Technologies
Swider Lyons	Karen	Plug Power	6/7/23 9:30 AM	FC338	Fuel Cell Technologies
Sylvester	Dylan	Northern States Power Company/Xcel Energy	6/7/23 11:30 AM	NE002	Systems Development and Integration
Tasan	C. Cem	Massachusetts Institute of Technology	6/7/23 1:45 PM	IN030	Hydrogen Infrastructure Technologies
Taylor	Audrey	NREL	6/6/23 5:30 PM	PRA001	Poster
Taylor	Audrey	NREL	6/7/23 5:30 PM	PRA001	Poster
Thompson	Gregory	The University of Alabama	6/7/23 11:30 AM	IN022	Hydrogen Infrastructure Technologies
Topping	Chris	Tetramer Technologies, LLC	N/A	FC343	Virtual Poster
Turchetta	Diane	U.S. Department of Transportation	6/7/23 9:30 AM	IA004	Interagency Activities
Urban	Marek	Clemson University	6/7/23 2:15 PM	IN020	Hydrogen Infrastructure Technologies
Vedros	Kurt	INL	6/8/23 12:00 PM	NE005	Intra-Agency Activities
Veeramany	Arun	PNNL	6/7/23 5:30 PM	SCS034	Poster
Vijayagopal	Ram	ANL	6/6/23 11:30 AM	TA059	Systems Development and Integration
Villeneuve	Darek	Daimler Trucks North America	6/6/23 2:45 PM	TA056	Systems Development and Integration
Wall	Todd	PNNL	6/6/23 5:30 PM	IN039	Poster
Wang	CH	Treadstone Technologies, Inc.	6/7/23 11:30 AM	FC345	Fuel Cell Technologies
Wang	Paul	Caterpillar, Inc.	6/7/23 4:45 PM	FC352	Fuel Cell Technologies
Wang	Paul	Caterpillar, Inc.	6/8/23 11:00 AM	TA044	Systems Development and Integration
Wang	Wei	PNNL	6/7/23 2:45 PM	ARPAE003	Intra-Agency Activities
Watson	Christine	HFTO	6/6/23 5:30 PM	IA014	Poster
Watson	Christine	HFTO	6/7/23 5:30 PM	IA014	Poster
Weber	Adam	LBNL	6/6/23 11:00 AM	FC339	Fuel Cell Technologies
Weimer	Alan	University of Colorado, Boulder	6/8/23 9:00 AM	P183	Hydrogen Production Technologies
Weisenberger	Matthew	University of Kentucky	6/6/23 11:00 AM	ST238	Hydrogen Infrastructure Technologies
Whitty	Kevin	The University of Utah	6/6/23 10:00 AM	FE002	Intra-Agency Activities
Wilcox	Ben	U.S. Navy	6/7/23 11:30 AM	IA007	Interagency Activities
Williams	Travis	University of Southern California	6/6/23 5:30 PM	ST216	Poster
Wilson	Alan	Sargent and Lundy	6/8/23 11:30 AM	NE004	Intra-Agency Activities
Wilson	Chris	Hexagon R&D	6/6/23 12:00 PM	ST237	Hydrogen Infrastructure Technologies
Wolden	Colin	Colorado School of Mines	6/7/23 2:15 PM	ARPAE002	Intra-Agency Activities
Wood	Brandon	LLNL	6/6/23 5:30 PM	P196g	Poster
Wood	Brandon	LLNL	6/6/23 5:30 PM	ST207	Poster
Wright	Ruishu	NETL	6/6/23 5:30 PM	FE015	Poster
Wu	Gang	University of Buffalo	6/6/23 4:15 PM	FC356	Fuel Cell Technologies
Xu	Siguang	GM	6/7/23 2:15 PM	FC348	Fuel Cell Technologies
Yan	Yanfa	The University of Toledo	6/7/23 9:00 AM	P191	Hydrogen Production Technologies
Yang	Ji	University of Maryland	6/6/23 5:30 PM	BES002	Poster
Zacharia	Renju	Nikola Motor Company	6/6/23 5:30 PM	IN037	Poster
Zawodzinski	Tom	University of Tennessee - Knoxville	6/8/23 10:00 AM	FC336	Fuel Cell Technologies
Zelenay	Piotr	LANL	6/6/23 9:30 AM	FC160	Fuel Cell Technologies
Zhang	Kun	Shell	6/6/23 2:15 PM	ST241	Hydrogen Infrastructure Technologies
Zhu	Tianli	Raytheon Technologies Research Center	6/6/23 5:30 PM	P154	Poster
Zhu	Tianli	Raytheon Technologies Research Center	6/7/23 11:00 AM	FC344	Fuel Cell Technologies