

Liquid Hydrogen Technologies Workshop Agenda

February 22 & 23, 2022

All Times are in Eastern Standard Time (EST)

Day 1 - Liquefaction: Current Status and RD&D Needs

11:00 am Opening remarks

- DOE Hydrogen Program Perspectives (Ned Stetson, U.S. Department of Energy)
- NASA Perspectives (Michael Meyer, National Aeronautics and Space Administration)

11:20 am Current State-of-the-Art of Hydrogen Liquefaction (Oriane Farges, Air Liquide)

11:40 am Experiences and Lessons Learned with Liquid Hydrogen (Raja Amirthalingam, Plug Power)

12:00 pm Innovative Approaches to Improve Scalability and Efficiency

- Amgad Elgowainy (Argonne National Laboratory)
- Jacob Leachman (Washington State University)

12:40 pm *Break*

1:00 pm Liquid Hydrogen in Emerging Large-Scale Markets (Jo Liao, Shell)

1:20 pm Panel Discussion and Q&A with Speakers

1:40 pm Breakout Sessions

- Hydrogen Liquefaction
- Liquid Hydrogen Delivery and Distribution
- Emerging Applications of Liquid Hydrogen

2:20 pm *Break*

2:35 pm Breakout Session Report Out

2:55 pm Day 1 Closing Remarks

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Day 2: Liquid Hydrogen Storage and Handling Infrastructure: Current Status and RD&D Needs

11:00 am Introduction to Day 2

11:05 am Current Status of Technologies Used for Bulk Storage of Liquid Hydrogen

- Andy Jacobson (CB&I Storage Solutions)
- Ian Neeser (Chart Industries)

11:45 am Potential Benefits and Challenges to Liquid Hydrogen for MD/HD vehicles

- Rajesh Ahluwalia (Argonne National Laboratory)
- Gladys Anyenya (Wabtec Corporation)

12:25 pm Current Practices to Transfer and Deliver Liquid Hydrogen

- Ravi Subramanian (Air Products)
- Angela Krenn (NASA-Kennedy Space Center)

1:05 pm Break

1:25 pm Safety Requirements for Liquid Hydrogen Handling and Refueling (Aaron Harris, Hydrogen Safety Panel)

1:45 pm Materials Performance at Cryogenic Temperatures (Joseph Ronevich, Sandia National Laboratories)

2:05 pm Breakout Sessions

- Liquid Hydrogen Handling
- Liquid Hydrogen Storage

2:45 pm Break

3:05 pm Breakout Session Report Out

3:25 pm Workshop Concluding Remarks