



2024 U.S. DRIVE & 21st Century Truck All Technical Team Meeting

Michigan State University Management Education Center – 811 West Square Lake Road, Troy, MI 48098

Objectives:

- Exchange information and identify opportunities for new collaboration across tech teams to overcome critical barriers and advance research objectives in key areas of the Partnership portfolios

Agenda:

DAY 1: Monday, October 21

11:30 AM – 12:30 PM **Registration (Lobby) and Light Networking Lunch (Dining Room)**

12:30 PM – 12:40 PM **Welcome and Opening**

- Steve Przesmitzki, Executive Director, USCAR

12:40 PM – 1:00 PM **U.S. DRIVE and 21CTP Partnership Update**

- Don Hillebrand, U.S. DRIVE Director Emeritus, Argonne National Laboratory
- Michael Laughlin, 21st Century Truck Partnership, U.S. DOE

1:00 PM – 2:40 PM **Federal Research Priorities**

- U.S. Department of Energy Vehicle Technologies Office (VTO) – Austin Brown, Director
- U.S. Department of Energy Hydrogen and Fuel Cell Technologies Office, (HFTO) – Sunita Satyapal, Director
- Joint Office of Energy and Transportation (JOET) – Rachael Nealer, Deputy Director
- U.S. Department of Energy Office of Manufacturing and Energy Supply Chains (MESCC) – Stephanie Jennings, Supply Chain Deployment Manager
- U.S. Department of Energy Advanced Materials and Manufacturing Technologies Office (AMMTO) – Christopher Saldaña, Director
- Panel/Q&A – Facilitator: Don Hillebrand, U.S. DRIVE Director Emeritus, Argonne National Laboratory

2:40 PM – 3:00 PM **Networking Break (Lobby)**

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3:00 PM – 4:30 PM **Vision of the Future of Transportation: Innovations and Disruption**

- Automotive: Cynthia Flanigan, Ford
- Energy: Robert Crane, ExxonMobil
- Utility: Adriane Jaynes, AEP
- 21CTP: John Pendray, Cummins
- Panel/Q&A – Facilitator: Paul Krajewski, General Motors

4:30 PM – 5:00 PM **Wrap-up, Overview of Next Day, and Adjourn**

- Steve Przesmitzki, Executive Director, USCAR

5:00 PM – 7:00 PM **Networking Reception (Dining Room)**

**note: cash-only bar, no credit cards*

DAY 2: Tuesday, October 22

7:30 AM – 8:00 AM **Continental Breakfast (Lobby)**

8:00 AM – 10:00 AM **Breakout Sessions***

- *Designated Amphitheatres and Classrooms*

10:00 AM – 10:30 AM **Networking Break (Lobby)**

10:30 AM – 12:00 PM **Breakout Sessions Continued***

- *Designated Amphitheatres and Classrooms*

***Breakout Sessions:** Sessions are concurrent.

Session Topics:

- **Grid Integration Joint Tech Team (GITT) (Room 101)** *Co-chairs: Lee Slezak, U.S. DOE and Orgun Guralp, General Motors*
 - Managed EV Charging
- **Net Zero Liquid Fuels Joint Tech Team (Room 104)** *Co-chairs: Ian Sutherland, General Motors and Jim Anderson, Ford Motor Company*
- **Materials Tech Team (Room 106)** *Co-chairs: Jerry Gibbs, U.S. DOE and Janet Robincheck, General Motors*
 - Sustainability:
 - Roadmap Presentation focusing on Sustainability
 - Discussion on targets
 - Discuss data gaps
- **Battery Tech Team (Room 103)** *Co-chairs: Simon Thompson, U.S. DOE and Kent Snyder, Ford Motor Company*
 - Supply Chain and Recycle Readiness
 - Current challenges and potential avenues to address supply chain gaps
 - Battery recycling research and development
 - Investigating expedited qualification of battery materials based on cell performance

- **Hydrogen Tech Team (Room 105)** *Co-chairs: Mark Richards, U.S. DOE and Ned Stetson, U.S. DOE*
 - Operation of the joint tech team so that it is beneficial to all participants, such as industry co-chairs, frequency of meetings, inclusion of “associate members,” etc.
 - Associate members to invite to join that could provide valuable input, e.g., FirstElement Fuel
 - Two-way activities – what would make it beneficial to all members and get all members to actively participate
 - Duty cycle discussion – prioritizing duty cycles to focus on for targets and performance
 - Target setting (e.g., flow rates, fuel costs, onboard tank performance and costs) and difference between MD and HD
 - Testing needs (tanks, infrastructure components, fueling protocols), including need for 3rd party testing facilities
 - Information collection on testing needs – how to get the input needed
 - C&S needs and development
 - Fueling – J2601/5
 - Other SAE H2 FCEV standard development committees could use further help
- **Fuel Cells Tech Team (Room 107)** *Chair: Greg Kleen, U.S. DOE*
- **Integrated Systems Analysis Tech Team and Vehicle Mobility Vehicle & Mobility Systems Analysis Tech Team (VMSATT) (Room 102)** *Co-chairs: Melissa Rossi, U.S. DOE (VMSATT) and Norm Bucknor, GM (VMSATT); Raphael Isaac, U.S. DOE and Ian Sutherland, General Motors (ISATT)*
 - ISATT: Life Cycle Analysis Discussion
 - Cradle to Grave of light-, medium-, and heavy-duty vehicles
 - Cost drivers for hydrogen fueling and battery charging in MDHD
 - VMSATT: Scenarios and Transportation Standards Scenarios (TSS)

12:00 PM – 12:55 PM Light Networking Lunch (Dining Room) and Session Report Outs

- *Session Report Outs Begin 12:10 pm*
 - *Fuel Cells*
 - *Hydrogen*
 - *Net Zero Carbon Fuels: Liquid Fuels*
 - *Vehicle & Mobility Systems Analysis: Transportation Standards Scenarios*
 - *Integrated Systems Analysis Tech Team: Life Cycle Analysis*
 - *Materials: Sustainability*
 - *Battery: Supply Chain and Recycle Readiness*
 - *Grid Integration: Managed EV Charging*

12:55 PM – 1:00 PM Adjourn / Next Steps

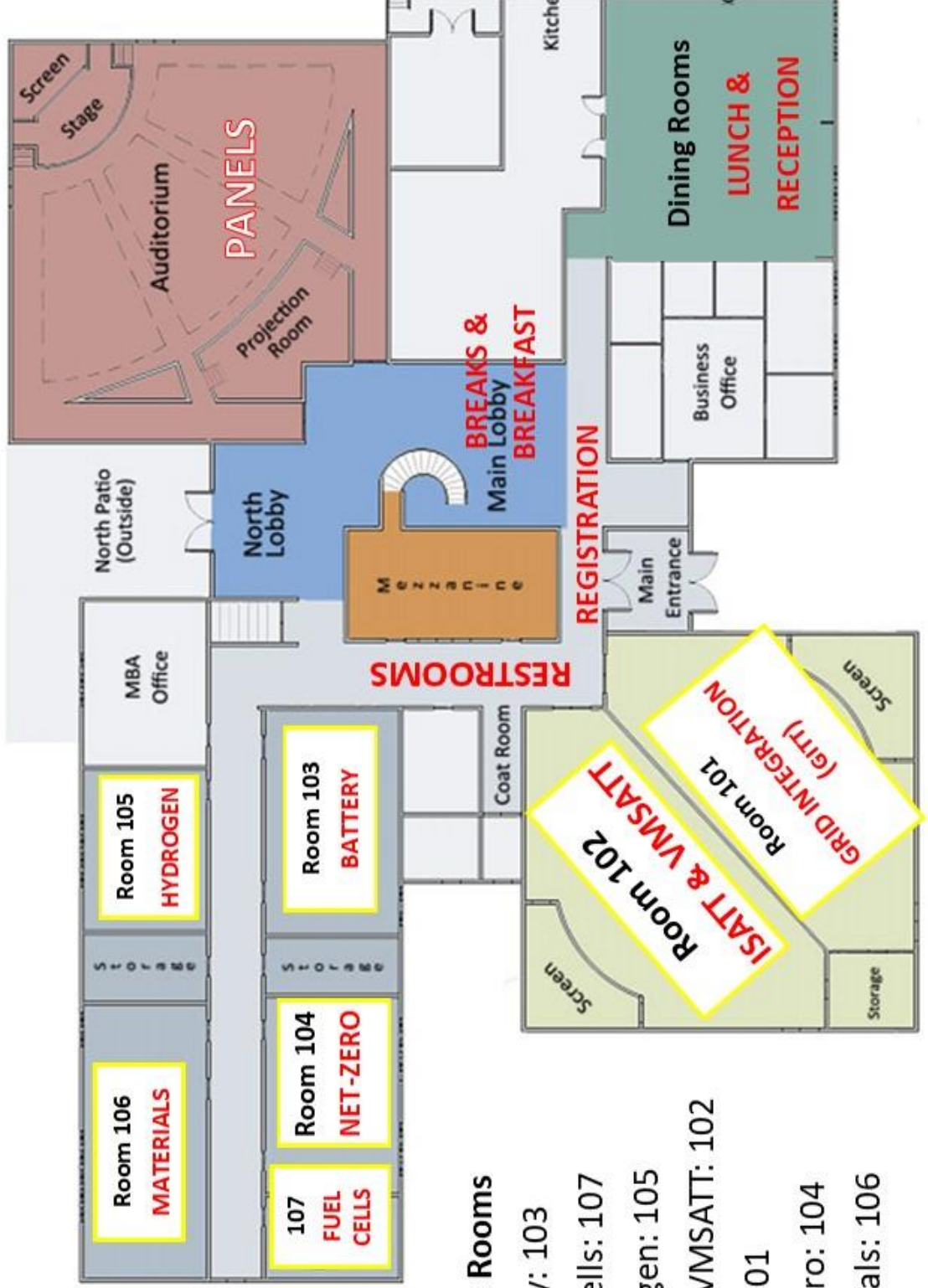
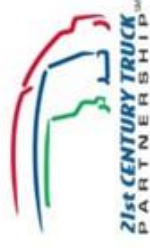
- Don Hillebrand, U.S. DRIVE Director Emeritus, Argonne National Laboratory
- Michael Laughlin, 21 Century Truck, U.S. DOE

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2024 All Tech Team Map



Breakout Rooms

- Battery: 103
- Fuel Cells: 107
- Hydrogen: 105
- ISATT/VMSATT: 102
- GITT: 101
- Net-Zero: 104
- Materials: 106