



SUSTAINABLE TRANSPORTATION ENERGY PATHWAYS

An Institute of Transportation Studies Program



STEPS+ Fall 2021 Research Symposium

Day 1 - Wednesday, December 8th

9:00 a.m. to 1:00 p.m. Pacific time (Noon to 4:00 p.m. Eastern time)

9:00 a.m.	Welcome and Introductory Remarks
9:05 a.m.	Session 1. Opening Keynote: Richard Corey , Executive Officer, California Air Resources Board
10:15 a.m.	Session 2. 3 Revolutions Future Mobility Program - When EVs alone are not enough
11:15 a.m.	Session 3. Research Updates from the Plug-In Hybrid & Electric Vehicle Research Center
12:15 p.m.	Session 4. Sustainable Freight - Achieving California's transition targets
1:00 p.m.	Adjourn for Day 1

Day 2 - Thursday, December 9th

9:00 a.m. to 1:00 p.m. Pacific time (Noon to 4:00 p.m. Eastern time)

9:00 a.m.	Greetings and Overview of Day 2
9:05 a.m.	Session 5. Keynote: Hal Harvey , CEO of Energy Innovation
10:00 a.m.	Session 6. Research Updates from the China Center for Energy and Transportation
11:00 a.m.	Session 7. Energy Futures - US transitions and low carbon fuels
Noon	Mary Nichols Outstanding Environmental Policy Paper award presentation - Vishnu Vijayakumar
12:05 p.m.	Session 8. Policy Panel
12:55 p.m.	Closing Remarks, Adjourn
1:30 p.m. to 3:00 p.m.	STEPS+ Advisory Board Meeting (<i>board members and representatives only</i>)

STEPS+ Fall Research Symposium

December 8-9, 2021

Wednesday, December 8th

9:00 a.m.	Welcome and Introductory Remarks Lew Fulton, Director, STEPS+ Program
9:05 a.m.	Session 1. Opening Keynote: Richard Corey , Executive Officer, California Air Resources Board “Achieving Carbon Neutrality & the Transportation Sector” <i>Discussion with the audience</i>
10:00 a.m.	<i>Break</i>
10:15 a.m.	Session 2. 3 Revolutions Future Mobility Program - When EVs alone are not enough Moderator: Giovanni Circella, Director, 3 Revolutions Future Mobility Program <ul style="list-style-type: none">• Summer Iogansen: Heterogeneous Changes in Vehicle Ownership and Travel Behaviors in Response to the COVID-19 Pandemic• Junia Compostella Di Sanguinetto: The Clean Miles Standard (CA SB 1014): Make TNCs a more sustainable industry• Jai Malik: The Growing Popularity of Superapps in Southeast Asia: Case Study of Jakarta, Indonesia Discussant: Ellen Greenberg, FAICP
11:00 a.m.	<i>Break</i>
11:15 a.m.	Session 3. Research Updates from the Plug-In Hybrid & Electric Vehicle Research Center Moderator: Gil Tal, Director, PH&EV Research Center <ul style="list-style-type: none">• Ken Kurani: Consumer thinking about the future and EVs• Kelly Hoogland: More charging infrastructure may not mean more people see it• Debapriya Chakraborty: Total cost of ownership as a Policy Tool
Noon	<i>Break</i>
12:15 p.m.	Session 4. Sustainable Freight - Achieving California’s transition targets Moderator: Marshall Miller, Director, Sustainable Freight Research Program <ul style="list-style-type: none">• Alan Jenn: Systems Analysis of a Full California Hydrogen Economy• Miguel Jaller: Consumption trends and implications for a decarbonized logistics system
1:00 p.m.	Adjourn for Day 1

Thursday, December 9th

9:00 a.m. Greetings and Overview of Day 2

9:05 a.m. **Session 5. Keynote: Hal Harvey**, CEO of Energy Innovation
“Electrify Transportation: The Great Challenges—and Solutions”
Discussion with the audience

9:45 a.m. *Break*

10:00 a.m. **Session 6. Research Updates from the China Center**
Yunshi Wang, Director, China Center for Energy and Transportation
Moderator: Lew Fulton, Director, STEPS+

- Xiuli Zhang: What does our modelling tell us about China’s carbon neutrality pathways?
- Yunshi Wang: Brief introduction of battery swappable HD trucks in China

10:45 a.m. *Break*

11:00 a.m. **Session 7. Energy Futures - US transitions and low carbon fuels**
Moderator: Lew Fulton, Director, Energy Futures Program

- Marshall Miller: US ZEV Transition Scenarios, Fuel Consumption, and Costs
- Colin Murphy: Developing a Scenario Analysis Model to Inform Fuel Policy Design

11:45 a.m. *Break*

Noon **Presentation of the Mary Nichols Outstanding Environmental Policy Paper award** –
Vishnu Vijayakumar, *Energies* [article](#), “Low carbon scenario analysis of a hydrogen-based energy transition for on-road transportation in California”

12:05 p.m. **Session 8. Policy Panel**
Moderator: Dan Sperling, Professor, ITS-Davis Founding Director

Panelists: **Mary Nichols**, former CARB Chair
Cynthia Williams, Global Director, Sustainability, Homologation and Compliance, Ford Motor Company
Yunshi Wang, Director, China Center for Energy and Transportation

12:55 p.m. Closing remarks and adjourn

STEPS+ Advisory Board Meeting (board members and representatives only)

Register here for [Board Meeting Zoom Link](#)

1:30 p.m. Introductions and Present STEPS+ Program Update and 2021 Achievements

- Lew Fulton, STEPS+ Director

2:00 p.m. Discussion of STEPS+ organization, system, plans for 2022

3:00 p.m. Closing remarks and adjourn

Student Posters

Author(s) contact info listed on poster, questions and comments are welcomed

Poster #	Center	Title	Author(s)
1	3RFM	An Investigation of the Factors that Affect the Use of Pooled Ride-hailing Services in California	Junia Compostella, Xiatian Logansen, Jaime Soza-Parra, Mischa Young, Alan Jenn, and Giovanni Circella
2	3RFM	Vehicle Design Strategies to Reduce COVID-19 Transmission in Pooled Transit	Ashley DePew
3	3RFM	Travel and Emission Impact of Connected and Automated Vehicle Deployment in California	Ran Sun, Giovanni Circella, Miguel Jaller, Xiodong Qian, and Farzad Alemi
4	3RFM	Ridehailing Use, Travel Patterns and Multimodal Lifestyle	Xiatian Logansen, Yongsung Lee, Ph.D., Mischa Young, Ph.D., Junia Compostella, Giovanni Circella, Ph.D., and Alan Jenn, Ph.
5	3RFM	What do you purchase online and who you are: Empirical evidence from the 2018 California Survey of Emerging Transportation Trends	Niloufar Yousefi, Kailai Wang, Giovanni Circella
6	BPRC	Growing Bike-Share Demand and Increasing Equity: A Closer Look at the Patterns of the Sacramento Area E-Bike Share	Hossain Mohiuddin, Dillon Fitch, and Susan Handy
7	PH&EV	From Shifting Gears to Charging Modes: The Impact of Driver Inputs on Plug-in Hybrid Electric Vehicle Energy Use & Emissions	Vaishanavi Karanam, Adam Davis, Claire Sugihara, Katrina Sutton, and Gil Tal
8	PH&EV	Couldn't Car Less: A Household-Level EV Adoption Model for California	Trisha Ramadoss, Adam Wilkinson Davis, and Gil Tal
9	PH&EV	The Race to Zero-Emission Freight: Perceptions of Fleet Electrification in Heavy-Duty Trucking	Claire Sugihara, Scott Hardman, and Ken Kurani
10	PH&EV	Investigating the Differences between Urban, Suburban, and Rural Transit Networks for Battery Electric Buses	Peter Benoliel, Alan Jenn, Gil Tal
11	PH&EV	Total Cost of Ownership of Electric and Conventional Vehicles: Analyzing the Effect of Supply-Side Uncertainties	Koral Buch, Debapriya Chakraborty, Gil Tal
12	EF	Lithium-ion battery material circularity	Jessica Dunn, Alissa Kendall and Meg Slattery
13	EF	Creating a Global Hydrogen Economy: International Strategies, Targets, and Policies with a Focus on Japan, Germany, and California	Vishnu Vijayakumar, Mahdi Shams, Lew Fulton, and Dan Sperling
14	EF	How can Lithium Valley support equitable decarbonization?	Margaret Slattery, Alissa Kendall, and Michael Whittaker
15	EEL/EF	Assessing the three Es –environment, economy, and equity –in Climate Action Plans	Mark Lozano, Alissa Kendall, and Gwen Arnold

16	EF/SF	Technology and Fuel Transition Scenarios to Low Greenhouse Gas Futures for Cars and Trucks in the US	Qian Wang, Lew Fulton, and Marshall Miller
17	ARE	Welfare and competition in Mexico's retail gasoline market	Armando Rangel Colina
18	SF	Impacts of Precautionary and Opportunistic Buying Behaviors on Supply Chain Resilience During the COVID-19 Pandemic	Daniel Rivera and Miguel Jaller
19	SF	A Reinforcement Learning Dynamic Zone-based Pricing for Food Delivery	Elham Pourrahmani, Miguel Jaller

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Helpful tips for joining a Zoom Webinar as a participant:

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1. You will need a computer, tablet, or smartphone with speaker or headphones. You will have the opportunity to check your audio immediately upon joining a meeting.
2. The notification will include a link to “**Join via computer**” as well as phone numbers for a conference call option. It will also include the 9-digit (usually) Meeting ID.
3. If you already have Zoom downloaded, please be sure you are running the latest version.

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2. You have an opportunity to test your audio at this point by clicking on “Test Computer Audio.” Once you are satisfied that your audio works, click on “Join audio by computer.”

You may also join a meeting without clicking on the invitation link by going to join.zoom.us on any browser and entering the Meeting ID provided by your committee analyst.

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