

STEPS+ Project Portfolio for 2022

The following outlines our list of priority projects by research center for STEPS+ for 2022.



Sustainable Freight Research Center

1. **Spatial modeling of transportation systems in California (in cooperation with Energy Futures)**
Lead Researchers: Alan Jenn and Tri Dev Acharya
2. **Continued update of CA and US Transportation Transition Model**
Lead Researcher: Marshall Miller
3. **ZEV Truck data/tracking (CEC)**
Lead Researcher: Marshall Miller and Andrew Burke
4. **Assessment of barriers to ZEV market penetration**
Lead Researcher: Andrew Burke
5. **Hydrogen and electricity infrastructure scalability**
Lead Researcher: Guihua Wang, Marshall Miller, Lew Fulton
6. **Hydrogen freight refueling analysis**
Lead Researchers: Lew Fulton and Andrew Burke
7. **Quantifying environmental impacts of truck traffic**
Lead Researcher: Miguel Jaller
8. **Incorporating lessons learned from COVID into e-commerce**
Lead Researcher: Miguel Jaller



Energy Futures Research Program

1. **Spatial Modeling of Transportation Systems in California** (in cooperation with Sustainable Freight)
Lead Researchers: Alan Jenn, Tri Dev Acharya
2. **Hydrogen vs. Electric Fleet Vehicle Infrastructure Scalability, Costs, and Complexity**
Lead Researchers: Guihua Wang, Marshall Miller, Lew Fulton
3. **Electric Power Sector Modeling (and/or Analysis of Refueling Infrastructure Cost)**
Lead Researcher: Alan Jenn

4. **EV and FCEV Modeling and Scenarios at California and US levels**
Lead Researchers: EF team
5. **LCFS Modeling & Fuels Analysis**
Lead Researchers: Colin Murphy and Julie Witcover
6. **Low Carbon Fuel Standard Status Tracking**
Lead Researcher: Julie Witcover
7. **LCFS and EVs**
Lead Researcher: Julie Witcover
8. **Fats, Oils & Greases (FOG) Supply for Biofuel – Scoping Analysis**
Lead Researchers: Colin Murphy, Julie Witcover



PH&EV Research Center

1. **Further investigations of the role of public EV charging infrastructure on EV market growth**
Lead Researcher: Ken Kurani
2. **What motivates buyers to pay more for an electric vehicle?**
Lead Researcher: Scott Hardman
3. **Is there an alternative to overnight charging at home?**
Lead Researcher: Adam Davis
4. **Exploring the used PEV market in California**
Lead Researcher: Debapriya Chakraborty
5. **Business case for charging infrastructure**
Lead Researcher: Alan Jenn

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CHINA CENTER FOR ENERGY AND TRANSPORTATION

China Center for Energy and Transportation

1. **China's transportation carbon neutrality pathway**
Lead Researchers: Xiuli Zhang, Lewis Fulton, Yunshi Wang, and Yan Xing
2. **U.S. – China High-Level Dialogue and Background Research: US/CA-China cooperation opportunities and challenges**
Lead Researchers: Yunshi Wang and Xiuli Zhang

3. **Network Design, Operations, and Partnerships to Integrate Microtransit into Fixed-route Public Transit**
Lead Researcher: Yan Xing
4. **Opportunities and pathways to HDV electrification in China**
Lead Researchers: Yan Xing and Yunshi Wang
5. **Decoding OEM upfront investment for battery production and EV production in the context of transportation transition towards 2030 and 2050 in the US**
Lead Researchers: Hong Yang and Lewis Fulton



3 Revolutions Future Mobility Program

1. **Hybrid Forms of Work and Their Impacts on Post-pandemic Travel Patterns**
Lead Researcher: Giovanni Circella
2. **The impacts of the COVID-19 pandemic on vehicle ownership**
Lead Researcher: Giovanni Circella
3. **Using Passively Collected and Survey Data to Explore Scenarios for the “New-normal” of Mobility**
Lead Researchers: Giovanni Circella, Ran Sun
4. **Impacts of Shared E-scooters on Mode Choices and Mode Shares**
Lead Researchers: Dillon Fitch, Giovanni Circella
5. **Impacts of Shared Bikes and E-scooters on Daily Mobility Patterns**
Lead Researcher: Dillon Fitch
6. **Which Modes Do Shared E-scooters Displace? Do Shared E-scooters Provide First/Last Mile Connection for Transit Users?**
Lead Researchers: Dillon Fitch, Giovanni Circella
7. **Ground Access to California Airports**
Lead Researchers: Giovanni Circella, Junia Compostella
8. **The Potential of Road Pricing to Manage Congestions in LA**
Lead Researchers: Giovanni Circella, Alimurtaza Kothawala
9. **How Disability Influences Choices and Desires for Travel and Residential Location**
Lead Researcher: Prashanth Venkataram
10. **Lessons Learned from Partnerships Between Transit Agencies and Ridehailing Companies**
Lead Researcher: Susie Pike
11. **Transportation, Societal, and Environmental Impacts of TNC in California**
Lead Researchers: Junia Compostella, Giovanni Circella

12. **What Policies Can Help Preserve VMT Declines from the COVID-19 Pandemic?**
Lead Researcher: Susan Handy
13. **New Mobility Solutions in Disadvantaged Communities of the Central Valley**
Lead Researcher: Caroline Rodier
14. **Modeling Scenarios of Long-term Impacts of COVID on Transportation with a Focus on Vulnerable Communities**
Lead Researcher: Giovanni Circella
15. **Impacts of High-speed Rail Development in Central California**
Lead Researchers: Anastasia Loukaitou-Sideris and Giovanni Circella