

# **PLANNING AND ENVIRONMENT GROUP**

## **Alternative Transportation Fuels and Technologies (ADC80) Triennial Strategic Plan (TSP)**

**Date Range: 2013 – 2015**

**Submitted by:**

**Timothy Lipman, PhD - Chairman**

**December 2016**

**Committee Name and Number: Alternative Transportation Fuels and Technologies (ADC80)**

**Committee Chairperson:** Timothy E. Lipman  
Co-Director  
Transportation Sustainability Research Center  
Institute of Transportation Studies  
University of California - Berkeley

**TSP Three-Year Period:** 2013 - 2015

**Date Prepared:** December, 2016

**1. Committee Scope:** To consider institutional, behavioral, environmental, economic, technological and policy implications associated with the introduction and potential extended use of alternative transportation fuels and enabling technologies, and promote policy analysis, evaluation and planning to address those implications.

**A. When did your committee last consider the scope?** The Committee last considered its scope in 2015.

**B. Does the current scope statement accurately reflect your committee's activities? Yes. Should the scope be modified?** This will be considered as it is reviewed by the entire Committee in 2017-18 as part of the preparation of the 2016-18 TSP.

**C. What changes are proposed and why are these changes necessary?** None at this time. The Committee generally revisits its scope, goals and implementation strategy every four years.

**2. Committee Strategic Planning**

**A. Has your committee conducted strategic planning sessions? If so, please attach results.**

The Committee periodically reviews its Strategic Plan, with the latest review occurring in 2016. The current "Outlook Statement" plan overview is as follows.

ADC80 Committee Outlook Statement

Over the next one to three years our Committee will be focused on alternative

fuels for transportation and its relationship to energy security, energy efficiency, and climate change. Climate change and energy security have been identified as key issues by the Executive Committee. In this strategic plan, we are emphasizing the mitigation aspects of climate change through judicious support of low- to zero-carbon alternative fuels. We also are concerned about system effects, unintended consequences, and lifecycle impacts of any fuels, technologies, or policies aimed at mitigating carbon emissions or enhancing energy security. We will also be focused on the development of new passenger and freight transportation technologies, with particular attention on the development, use, and barriers associated with the market penetration of electric vehicles – namely plug-in hybrid electric vehicles, battery electric vehicles, and hydrogen fuel cell electric vehicles for ground transportation. Aviation GHG emissions are an increasing concern with alternative liquid fuels and alternative designs to improve fuel consumption the primary options for reducing emissions.

We have entered a transitional era where demographics, mobility needs, climate change and other environmental concerns, energy costs, and funding availability are influencing fuels and technology options and directions. The Alternative Transportation Fuels and Technologies Committee’s scope includes the impact of energy costs, including full social costs, which directly impacts the relative competitiveness of newer versus more conventional options (i.e., increased gasoline prices make alternative fuels more financially attractive). Climate change is directly related to our energy choices, albeit in complex ways that are not yet fully understood. Providing research and analysis on new transportation alternative fuels (electricity, natural gas, biomass and hydrogen), their pros and cons, opportunities and challenges for deploying these new alternative fuels, and options for generating revenue from them are planned to provide continuing valuable contributions to the transportation community.

#### ADC80 Committee Factors Affecting Planning and Outlook

Transportation energy use is transitioning from gasoline and diesel to multiple energy sources, including electricity, natural gas, biomass, and hydrogen. This transition and the technological transformation occurring with vehicles require the transportation sector to better understand the rules, regulations and policies of these new transportation fuels. Technological advancements are likely to change the relationship of vehicle owners with the source of fuel they utilize (e.g., grid interoperable vehicles), creating important research questions around those dynamics.

Over the next several years our committee will continue to focus on transportation alternative fuels and their relationship to energy security, energy efficiency, and climate change. However, we expect that the climate change discussion will shift in complex ways. Although our committee will remain

focused on mitigation through judicious selection and use of alternative fuels, we believe that adaptation to climate change also raises key considerations of importance. These are especially related to impacts on fuel supplies and fuel distribution systems (e.g., supply reserves of biofuels for draught years, contingencies for variation in solar and wind output for electricity production, effects of major storms, etc.) and also are key areas deserving of further research. The outcome of the latest IPCC reports on climate change and the work of the National Academy of Sciences will provide additional insights into research needs in the medium 4-7 year timeframe. We also expect various geopolitical shifts in this timeframe that may affect petroleum availability and price, as well as the further development of non-conventional petroleum resources and alternative fuels.

Our committee stands ready to tackle new alternative fuels with a focus on energy and climate change; lifecycle analysis; system effects and unintended consequences; consumer acceptance; and economic/market barriers. Similarly, we expect that advancements in vehicle technologies (passenger and freight) and infrastructure needed to enable alternative fuel use will necessitate additional research of interest to our committee.

Within the next 4-7 year timeframe we anticipate significant changes in alternative fuel adoption. Several countries are calling for a strong movement to all-electric vehicles in this timeframe. Also, several places around the world are building out needed infrastructure to provide coverage for an anticipated early series production runs of hydrogen fuel cell electric vehicles. Germany, California, Japan, and Korea are gearing up to install hundreds of fueling stations in anticipation of hundreds of thousands of hydrogen-fueled vehicles globally in the 2020 timeframe by every major automotive OEM.

International vehicle ownership and usage trends and the impact of global oil markets as well as energy/climate outcomes are key areas of interest to the committee. International experience with policies to promote alternative fuels, and air quality as a driver of transportation policy in developing regions, are key policy areas of focus. How the issue of climate change continues to play out (and how adaptation decisions will affect mitigation efforts) is a key driver. The impact of increasing domestic (and regionally secure) supplies of energy in the United States, in the context of growing dependence in other regions, needs to be better understood as we move toward a sustainable low GHG transportation system worldwide.

Technological developments in energy generation and distribution are likely to outpace the transportation sector's ability to adapt. Presently the users of about 500,000 plug-in capable electric vehicles on the road in the U.S. are not paying highway user taxes associated with their electricity use at either the state or federal level, unlike users of gasoline and diesel fuel. Meanwhile,

efforts to produce autonomous drive vehicles have strong synergies with electric drive, creating a vast landscape of potential future technological developments. Monitoring the growth and developing connections with new transportation energy providers (e.g. electric and natural gas utilities) to establish new mechanisms to generate revenue and to share our understanding of travel behavior (e.g., where and when are people and shared-use fleets likely to charge?) would be a beneficial addition to the committee's efforts.

Additional strategic planning efforts have occurred especially in the context of the joint Mid-Year meetings with ADC70, most recently at Asilomar in August 2015. The outcomes are documented on the committee websites in the form of meeting notes.

**B. If you have not done strategic planning, what are your committee's strategic directions for the future?**

Along with the above, to continue to issue "Calls for Papers" that reflect the latest important issues for the committee, to hold mid-year meetings at least every two years, and to continue to publicize and promote TRB research activities.

**3. Critical and Cross-Cutting Issues**

Identify committee's activities that helped address any critical and cross-cutting issues identified by (a) the committee, (b) the TRB Executive Committee (<http://onlinepubs.trb.org/Onlinepubs/general/CriticalIssues06.pdf>), (c) the Technical Activities Council (<http://onlinepubs.trb.org/Onlinepubs/dva/DivAGuide.pdf>, p. 58), and (d) the Planning and Environment Group that fall under the scope of the committee.

**A. What are the key long term and emerging issues that your committee is tracking?**

The Committee is actively working to re-identify long term and emerging issue for alternative fuel use in transportation. Cross-cutting issues addressed in the 2013 to 2015 timeframe including those related to "balancing environmental and transportation goals," "transportation and energy options for the long term," and interactions with vehicle fuel use and vehicle safety.

**B. What plans do you have to address cross-cutting issues with other committees?**

The Committee is working to address cross-cutting issues with other section committees, especially including ADC70 and ADC20. These include interactions between alternative fuel use and larger energy questions (ADC70) and air quality impacts (ADC20). Examples include various co-sponsored workshops and sessions with ADC70, ADC20 and other committees such as ADD40. The Committee expects to

continue these activities by leading and supporting cross-cutting session concepts.

#### **4 Committee Activity Plans**

##### **A. What activities are planned next year to achieve your goals?**

The following activities are planned for 2016-2017:

- Call for Papers representing a diversity of Alt. Fuels and Techs. and applications
- Mid-Year Meeting at Asilomar 2017 (joint with ADC70)
- Mid-Year Meeting planning with ADC20 (TBA)
- Generation of Research Needs Statements
- Webinars (1-3) that highlight e.g. the latest vehicle incentive programs, hydrogen station developments, etc.

##### **B. What activities are envisioned in future years?**

- Call for Papers representing a diversity of Alt. Fuels and Techs. and applications
- Mid-Year Meeting at Asilomar 2017 (joint with ADC70)
- Mid-Year Meeting planning with ADC20 (TBA)
- Generation of Research Needs Statements
- Webinars (1-3) that highlight eg. the latest vehicle incentive programs, hydrogen station developments, etc.

#### **5 Committee Organization and Membership**

##### **A. Describe the membership gender and racial diversity.**

As shown in the information below, the Committee has a full complement of 25 regular members (including the Committee Chair), including three young members, two international members, and two state DOT members. There are also two *Emeritus* members. Twenty-one members are male and four are female.

The Committee fully supports diversity and the membership racial diversity figures are shown below. Membership rotation was last held in 2014.

**TRB ADC80 Diversity Report**

Demographic Committee Profile as of 8/30/2016

*This report does not include Emeritus Members.*

**Total Members: 25**

**International: 2**

**State DOT: 2**

**Young: 3**

**A. Describe the membership gender and racial diversity.**

White	14
Black	0
Hispanic	1
Asian or Pacific Islander	4
American Indian	0
Unknown	6
Female	4
Male	21

**B. How is membership distributed geographically?**

North West US	1
South West US	8
Central US	2
North East US	7
South East US	4
International	2

**C. How is membership distributed across professional affiliation?**

State	2
Federal Government	6
Local	0
Education	6
Private Sector	5
Nonprofit/Other	4

**B. How is membership distributed geographically? (26 total including Emeritus)**

- Eastern 11
  - SE 4
  - NE 7
- Central 3
- Western 10
  - SW 9
  - NW 1
- International 2

The United States membership is drawn from 11 states and the District of Columbia.

**C. How is membership distributed across professional affiliation?**

State Government   2   Federal Government   6  

Academia   6   Private Sector  11  

Local/Regional Government   0  

Of the Committee members, two (2) work for state government, six (6) for the federal government, six (6) for academia, and eleven (11) in the private sector. The following professional affiliations constitute Committee membership:

- University of California, Davis
- University of California, Berkeley
- University of Toronto
- Carnegie Mellon University
- University of Virginia
- Booz Allen Hamilton, Inc.
- ICF International
- Center for Sustainable Energy
- Zero Carbon Energy Solutions
- Good Company
- U.S. Environmental Protection Agency
- Oak Ridge National Laboratory
- U.S. Department of Energy
- Federal Aviation Administration (FAA)
- Argonne National Laboratory
- Bosch Electrical Drives

- Metron Aviation
- Samsung
- Toyota Motor North America, Inc.
- Connecticut Department of Transportation
- Iowa Department of Transportation

**D. How many “friends” are associated with the committee?**

The Committee currently has about 175 “Friends” along with the 25 members, for about 200 formally interested individuals. These are used for contacts on the Committee’s electronic newsletter mail listing. A significant number of Friends (approximately 40 per year) actively participate in committee meetings, including the Business Meetings and Mid-Year meetings.

**E. List subcommittees and their chairs.**

Secretary – Dr. Philip Sheehy, ICF International  
 Publications – Dr. Donna Chen, UT Austin; Dr. William Chernicoff, Toyota; Dr. Brett Williams, Center for Sustainable Energy;  
 Communications Coordinator– Dr. Rachael Nealer, U.S. DOE  
 Research Coordinator - Dr. Dawn Manley, Samsung

**6. Interaction with Other TRB Committees, Organizations, and Customers**

**A. List other TRB committees with which your committee maintains a formal liaison representation.**

The Committee maintains an active liaison relationship with several other TRB committees, Subcommittees and Task Forces listed below. The Liaison Subcommittee coordinates liaison activities.

- ADC20 – Transportation and Air Quality
- ADC30 – Ecology in Transportation
- ADC40 – Transportation-Related Noise and Vibration
- ADC50 – Historic and Archeological Preservation in Transportation
- ADC60 – Waste Management and Resource Efficiency in Transportation
- ADC70 – Transportation Energy
- ADD40 – Transportation and Sustainability
- ATO40 – Transportation of Hazardous Materials
- ADC80(1) – Aviation Alt. Fuels Subcommittee
- A0020T – Special Task Force on Climate Change & Energy -- Joint Subcommittee ADC70/80
- ADC70(1) – International Subcommittee on Alternative Fuels

**B. List outside organizations with which your committee maintains ongoing liaison representation.**

- Society of Automotive Engineers (SAE)
- California Plug-In Electric Vehicle Collaborative (CPEVC)
- California Fuel Cell Partnership (CAFCP)
- Electric Power Research Institute (EPRI)
- California Hydrogen Business Council
- Fuel Cell and Hydrogen Energy Association (FCHEA)
- International Partnership for a Hydrogen and Fuel Cell Economy (IPHE)

**C. List shared activities during the past year (examples should include work on cross-cutting issues, information exchange, research, etc.)**

Examples of co-sponsored and cross-cutting workshops or sessions at the 2013-15 Annual Meetings include:

Sunday, January 11, 2015, 1:30pm- 4:30pm, Convention Center, 146A

[Clean Truck Corridors: Understanding the Barriers and Opportunities](#)

[Philip M. Sheehy](#), ICF International, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation and Air Quality; Committee on Ports and Channels; Committee on Intermodal Freight Transport*

Wednesday, January 14, 2015, 4:30pm- 6:00pm, Convention Center, 140A

[Evaluating Environment and Energy Benefits: When Does Greenhouse Gas Reduction Make Sense Anyway?](#)

[Jean-Daniel Maurice Saphores](#), University of California, Irvine, presiding

Tuesday, January 13, 2015, 7:30pm- 9:30pm, Convention Center, 156

[Energy Use and Greenhouse Gas Emissions from Non-Automotive Transport Modes](#)

[Paul N. Leiby](#), Oak Ridge National Laboratory, presiding

Thursday, January 15, 2015, 8:00am-12:00pm, Convention Center, 102B

[Tools for Evaluating Greenhouse Gas Reduction Strategies](#)

[Robert Chamberlin](#), RSG, presiding

Wednesday, January 14, 2015, 8:00am- 9:45am, Convention Center, 156

[Best Practices for Deploying Corridor-Based Alternative Fuel Infrastructure](#)

[Diane Turchetta](#), U.S. Department of Transportation; [Marcy Rood Werpy](#), Argonne National Laboratory, presiding

Wednesday, January 15, 2014, 10:15am-12:00pm, Hilton, Columbia Hall 5

[Climate Change Mitigation and Global Transportation: How Far Can Technologies and Policies Take Us?](#)

[Valerie J. Karplus](#), Massachusetts Institute of Technology, presiding

Monday, January 14, 2013, 7:30pm- 9:30pm, Hilton, Columbia Hall 9 & 10

[Climate Change Joint Subcommittee of ADC70, ADC80, ADD40](#)  
[Lewison Lee Lem](#), Jack Faucett Associates, Inc., presiding

Monday, January 14, 2013, 1:30pm- 3:15pm, Hilton, Lincoln West  
[Powering the Future: Implementing the Vision of Clean Transportation and Energy Technologies](#)  
[Barry R. Wallerstein](#), South Coast Air Quality Management District, presiding

Wednesday, January 16, 2013, 10:15am-12:00pm, Hilton, Georgetown East  
[Evaluating Strategies for Reducing Mobility-Related Greenhouse Gas Emissions: Lessons from International Experience](#)  
[Valerie J. Karplus](#), Massachusetts Institute of Technology, presiding

Sunday, January 13, 2013, 9:00am-12:00pm, Hilton, Lincoln West  
[Effective Practices to Develop Environmental Research Needs Statements and Funding Opportunities](#)  
[Robert O'Loughlin](#), Federal Highway Administration, presiding

A 2015 Mid-Year Meeting was held August 19, 2015 at the Asilomar Conference Center in Pacific Grove, California in the context of a larger conference called "Transportation and Energy Policy in a Volatile World." The larger meeting was hosted by the Institute of Transportation Studies – UC Davis with sponsorship from U.S. DOE and California and regional agencies. The Mid-Year Meeting that was joint between the ADC70 and ADC80 committees was held for purposes of strategic planning. Approximately 25 participants attended the side meeting. A next mid-year meeting is planned for August 22-25, 2017 also at Asilomar.

## **7. Business Meeting Attendance (information from the most recent meeting)**

Attendance at the 2015 Annual Business Meeting included 18 Members and 39 Friends of the Committee, for a total of 57 participants.

## **8. Technology Transfer Activities for Colleagues and Customers**

### **A. Is the committee planning to publish documents within the next two years? (proceedings, circulars, etc.)**

**Please list and give anticipated dates**

Only the summary version of meeting notes from both the formal Committee meeting and the Mid-Year meetings. These are typically published to the Committee website about 60-90 days after each event.

**B. Workshops proposed (excluding the TRB Annual Meeting)**

None at this time.

**C. Conferences proposed**

None except active participation at the upcoming Asilomar 2017 meeting including an ADC70/80 Mid-Year meeting.

**D. Other activities (web pages, newsletters, updating of millennium paper, etc.)**

The Committee has its own website tied to the TRB website and maintained through the Committee Communications Coordinator with the aid of the Chair and Secretary.

ADC80 Website:

<https://sites.google.com/site/trbaltfuelscommitteeadc80/home>

**9. Research Needs and Problem Statements (Of particular interest are problem statements for TRB Cooperative Research Programs, but please list related activities your committee is involved with as well.)**

**A. How do you determine and select research needs and problem statements? (workshops, call for ideas, etc.)**

The Committee has a relatively informal process led by the CRC to: 1) identify areas of needed research each year, 2) develop research problem statements, 3) screen and prioritize those statements, and 4) advance and champion those priority research needs to prospective research project sponsors for consideration and funding.

**10. General Remarks and Comments Offered by the Committee**

**A. Should your committee continue in its present form with its present title? Yes.**

The Committee continues to be very active with a highly-engaged membership and large group of Committee Friends. Various workshops and cross-cutting session ideas have been supported by other committees both within and outside the Section.

**If no, please explain.** Not applicable.

**B. Should it be merged with one or more other committees? No.**

**If yes, please explain.** Not applicable.

**C. Any other comments considered appropriate by the committee.**

The Committee continues to collaborate with several other TRB committees, subcommittees, and task forces and wishes to strengthen and expand these connections. In addition to major Federal agencies, the Committee is also closely linked to outside organizations such as SAE, IEEE, EPRI, FCHEA, CAFCP, CPEVC, the California Hydrogen Business Council, and various NGOs such as UCS, EDF, and NRDC.

The Committee will continue efforts to identify young members and make a concerted effort to involve committee members and friends of the committee in the Committee's work and to measure and assess member and friend involvement. Alternative means of conducting committee business, such as through LinkedIn networking, holding a portion of the business meetings via teleconference and expanding the utilization of the subcommittee structure to accomplish the Committee's goal are expected to have positive results moving forward. Members and friends are enthusiastic and look forward to identifying and participating in future Committee opportunities.

## 4. ANNUAL MEETING SESSIONS SESSION LISTING

### ADC80 – Alternative Transportation Fuels and Technologies

#### 2015 Annual Meeting

ADC80 - Alternative Transportation Fuels and Technologies

2 Paper/Conference Sessions

1 Poster Session

1 Workshop

2 Published Meetings

7 Cosponsored Sessions/Meetings

Paper or Conference Session (S)s

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**265** (CGS15-042)

Monday, January 12, 2015, 10:15am-12:00pm, Convention Center, 140A

[Plug-in Electric Vehicle Infrastructure and Driver Behavior: Issues and Solutions for Continued Market Growth](#)

[Timothy Lipman](#), University of California, Berkeley, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation Energy*

[Implications of Modeling Range and Infrastructure Barriers to Adoption of Battery Electric Vehicles](#)

(15-1584)

[Garrett Ehud Barter](#), Sandia National Laboratories

[Mike Tamor](#), Ford Motor Company

[Dawn Manley](#), Sandia National Laboratories

[Todd H. West](#), Sandia National Laboratories

[Regional Effects Of Ambient Temperature On Electric Vehicle Efficiency, Range, And Emissions In The US](#) (15-4097)

[Tugce Yuksel](#), Carnegie Mellon University

[Jeremy J. Michalek](#), Carnegie Mellon University

[Is Awareness Of Public Charging Associated With Consumer Interest In Plug-in Electric Vehicles?](#) (15-4364)

[Amy Lynne Miele](#), Simon Fraser University, Canada

[Harry Joseph Bailey](#), Simon Fraser University, Canada

[Jonn Aksen](#), Simon Fraser University, Canada

[Charging Infrastructure Use Profiles and Installation Costs for 17,000 Units](#) (P15-7103)

[John Smart](#), Idaho National Laboratory

[test](#) (P15-7242)

**607** (CGS15-043)

Tuesday, January 13, 2015, 1:30pm- 3:15pm, Convention Center, 140B  
[Cellulosic Biofuels for Transportation: Growth Through Linking Feedstocks, Supply Chains and Policies](#)  
[Robert E. Larson](#), U.S. Environmental Protection Agency, presiding  
*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation Energy*

**[Multistage Optimization of Sustainable Supply Chain of Biofuels](#)** (15-1682)

[Yongxi Huang](#), Clemson University

[Fei Xie](#), Clemson University

**[Woody Biomass Supply, Economics, and Biofuel Policy: Maine and Northeastern Forests](#)** (15-4578)

[Jonathan Rubin](#), University of Maine

[Binod Neupane](#), University of Maine

[Stephanie Whalley](#), University of Maine

[Sharon Klein](#), University of Maine

**[Cellulosic Biofuel Supply Chains and its Greenhouse Gas Emissions Impact: A Case Study in West Tennessee](#)** (15-5344)

[Tun-Hsiang Edward Yu](#), University of Tennessee, Knoxville

[Burton C. English](#), University of Tennessee, Knoxville

[Lixia He](#), University of Tennessee, Knoxville

[James A. Larson](#), University of Tennessee, Knoxville

[James A Calcagno](#), University of Tennessee, Knoxville

[Joshua S. Fu](#), University of Tennessee, Knoxville

[Bradly Wilson](#), University of Tennessee, Knoxville

**[Opportunities and Challenges for Expanding Cellulosic Biofuels](#)** (P15-7143)

[Valerie Reed](#), U.S. Department of Energy

Poster Session (P)s

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**587** (CGP15-008)

Tuesday, January 13, 2015, 10:45am-12:30pm, Convention Center, Hall E  
[Current Issues in Alternative Transportation Fuels and Technologies](#)  
[Timothy Lipman](#), University of California, Berkeley, presiding  
*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

**[Charging for Charging at Work: Increasing the Availability of Charging Through Pricing](#)** (15-6025)

[Michael Anselm Nicholas](#), University of California, Davis

[Gil Tal](#), University of California, Davis

**[Electric Vehicle Fast Charger Planning for Metropolitan Planning Organizations: Adapting to Changing Markets and Vehicle Technology](#)** (15-5942)

[Wei Ji](#), University of California, Davis

[Michael Anselm Nicholas](#), University of California, Davis

[Gil Tal](#), University of California, Davis

**[Electric Vehicle Miles Traveled from Plug-in Hybrid Electric Vehicles Used in Fleet Applications: Results from Demonstration Project](#)** (15-5903)

[Jamie Davies](#), University of California, Davis

**[Evaluating Carbon Tax Incidence, Market Effects, and Efficiency Within Transportation Fuel Sector](#)** (15-5533)

[Maxwell Leonard Brown](#), Oak Ridge National Laboratory

[Jonathan Rubin](#), University of Maine

[Paul N. Leiby](#), Oak Ridge National Laboratory

**Modeling Joint Charging and Parking Choices of Electric Vehicle Drivers: Decentralized Control**

**Approach for Charging Service Providers** (15-5329)

[Charilaos Latinopoulos](#), Imperial College London, United Kingdom

[Aruna Sivakumar](#), Imperial College London, United Kingdom

[John W. Polak](#), Imperial College London, United Kingdom

**Impact of Combined Torrefaction and Pelletization Process on Forestry Biomass Supply in California**

(15-5220)

[Yuanzhe Li](#), University of California, Davis

[Peter Tittmann](#), University of California, Berkeley

[Nathan Parker](#), University of California, Davis

[Bryan Jenkins](#), University of California, Davis

**Patent and Latent Predictors of Electric Vehicle Charging Behavior** (15-5196)

[Nicolo Daina](#), Imperial College London, United Kingdom

[John W. Polak](#), Imperial College London, United Kingdom

[Aruna Sivakumar](#), Imperial College London, United Kingdom

**Consumer Heterogeneity in Potential Early Mainstream Market for Plug-in Electric Vehicles** (15-4891)

[Jon Axsen](#), Simon Fraser University, Canada

[Harry Joseph Bailey](#), Simon Fraser University, Canada

[Marisol Andrea Castro](#), University of Texas, Austin

**Socially Optimal All-Electric Driving Range of Plug-in Hybrid Electric Vehicles** (15-4714)

[Eleftheria Kontou](#), University of Florida

[Yafeng Yin](#), University of Florida

[Zhenhong Lin](#), Oak Ridge National Laboratory

**Optimal Design of Electric Vehicle Charging Infrastructure Network: Case Study of South Carolina** (15-

4453)

[Shengyin Li](#), Clemson University

[Yongxi Huang](#), Clemson University

**Equitable Transnational Infrastructure Planning for Natural Gas Trucking in European Union** (15-4314)

[Michael Kuby](#), Arizona State University

[Ismail Capar](#), Texas A&M University

[Jong-Geun Kim](#), Seoul National University, South Korea

**Future of Automotive Lithium-Ion Battery Recycling: Charting a Sustainable Course** (15-4280)

[Linda Gaines](#), Argonne National Laboratory

[Jarod Cory Kelly](#), Argonne National Laboratory

**Technoeconomic Analysis and Optimization of Lithium-Ion Batteries for Light-Duty Passenger Vehicle**

**Electrification** (15-4076)

[Apurba Sakti](#), Massachusetts Institute of Technology

[Jeremy J. Michalek](#), Carnegie Mellon University

[Erica R. H. Fuchs](#), Carnegie Mellon University

[Jay Whitacre](#), Carnegie Mellon University

**Modeling Intrahousehold Interactions for Use of Battery Electric Vehicles** (15-4052)

[Jee Eun Kang](#), State University of New York, Buffalo

**Charging Demand-Based Electric Vehicles' Quick Charging Station Layout Planning** (15-4012)

[Enjian Yao](#), Beijing Jiaotong University, China

[Qirong Yang](#), Beijing Jiaotong University, China

[Yang Yang](#), Beijing Jiaotong University, China

[Yongsheng Zhang](#), Beijing Jiaotong University, China  
**[Sequential Buildup of Liquefied Natural Gas Refueling Infrastructure System for Heavy-Duty Freight Trucks](#)** (15-3782)

[Allen Lee](#), University of California, Davis  
[Yueyue Fan](#), University of California, Davis  
[Nathan Parker](#), University of California, Davis  
[Amy Jaffe](#), University of California, Davis

**[Compressed Natural Gas Fleets in Southern California: Variations in Vehicles and Route Types](#)** (15-3584)

[Scott Kelley](#), Arizona State University  
[Michael Kuby](#), Arizona State University

**[Potential to Electrify Miles with Different Plug-in Vehicle Innovation Paths](#)** (15-3263)

[Danilo J. Santini](#), Argonne National Laboratory  
[Yan Zhou](#), Argonne National Laboratory

**[Exploring Fuel-Saving Potential of Long-Haul Truck Hybridization](#)** (15-3136)

[Zhiming Gao](#), Oak Ridge National Laboratory  
[Tim LaClair](#), Oak Ridge National Laboratory  
[David E. Smith](#), Oak Ridge National Laboratory  
[C. Stuart Daw](#), Oak Ridge National Laboratory

**[Choosing an Electric Vehicle as a Travel Mode: Travel Diary Case Study in Belgian Living Lab Context](#)** (15-2668)

[Sylvia Heyvaert](#), Free University of Brussels, Belgium  
[Lieselot Vanhaverbeke](#), Free University of Brussels, Belgium  
[Luk Knapen](#), Hasselt University, Belgium  
[Katrien Declercq](#), Hasselt University, Belgium  
[Thierry Coosemans](#), Free University of Brussels, Belgium  
[Joeri Van Mierlo](#), Free University of Brussels, Belgium

**[Charge Timing Choice Behavior of Electric Vehicle Users](#)** (15-2438)

[Xiaohui Sun](#), Nagoya University, Japan  
[Toshiyuki Yamamoto](#), Nagoya University, Japan  
[Takayuki Morikawa](#), Nagoya University, Japan

**[Energy-Optimal Speed Control for Plug-in Electric Vehicles on Signalized Arterials](#)** (15-2199)

[Xinkai Wu](#), California State Polytechnic University, Pomona  
[Xiaozheng He](#), Purdue University  
[Guizhen Yu](#), Beihang University, China  
[Arek Harmandayan](#), California State Polytechnic University, Pomona

**[Quantifying the Uncertainty of Plug-in Electric Vehicle Market Penetration](#)** (15-1622)

[Changzheng Liu](#), Oak Ridge National Laboratory  
[Zhenhong Lin](#), Oak Ridge National Laboratory

**[Electrification of Roads: Infrastructural Aspect](#)** (15-0775)

[Feng Chen](#), KTH Royal Institute of Technology, Sweden  
[Bjorn Birgisson](#), KTH Royal Institute of Technology, Sweden  
[Niki Kringos](#), KTH Royal Institute of Technology, Sweden

**[Zero-emission Vehicles and Retail Innovation in the U.S. Automotive Sector: The Consumer Purchase Experience and Dealer Engagement](#)** (15-0753)

[Eric C. Cahill](#), University of California, Davis  
[Jamie Davies](#), University of California, Davis  
[Thomas Turrentine](#), University of California, Davis  
[Daniel Sperling](#), University of California, Davis

**Patents and Biofuels: Using Natural Language Processing to Assess Biofuel Innovations** (15-0208)

Jeff Kessler, University of California, Davis

Daniel Sperling, University of California, Davis

**Anticipating Plug-in Electric Vehicle Buyers' Acceptance of Utility-Controlled Charging** (15-0138)

Harry Joseph Bailey, Simon Fraser University, Canada

Jonn Axsen, Simon Fraser University, Canada

Workshop (W)s

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**160** (CGW15-005)

Sunday, January 11, 2015, 1:30pm- 4:30pm, Convention Center, 146A

**Clean Truck Corridors: Understanding the Barriers and Opportunities**

Philip M. Sheehy, ICF International, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation and Air Quality; Committee on Ports and Channels; Committee on Intermodal Freight Transport*

This workshop focuses on the opportunities for, and the barriers to, clean truck corridors in a period of unprecedented numbers of clean truck strategies available to motor carriers, transportation agencies, and the owners and operators of major freight terminals. Clean truck corridors are explored from a variety of perspectives from multiple jurisdictions, including regional planning agencies, motor carriers, and infrastructure providers.

**Framing the Challenge of Clean Truck Corridors** (P15-6445)

Philip M. Sheehy, ICF International

**Zero Emissions Goods Movement: Progress, Lessons Learned, and Outlook** (P15-6446)

Matt Miyasato, South Coast Air Quality Management District

**Incorporating Sustainable Freight Practices into Corridor Planning** (P15-6447)

Michael Tunnell, American Transportation Research Institute

**Building a National Network of Natural Gas Infrastructure** (P15-6448)

Todd Campbell, Clean Energy

**Lessons Learned: Voluntary Truck Replacement in the Mid-Atlantic Region** (P15-7166)

Susan Wierman, Mid-Atlantic Regional Air Management Association

Published Meeting - Committee (M)s

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CGM15-013

Monday, January 12, 2015, 3:45pm- 5:30pm, Marriott Marquis, Independence E (M4)

**Alternative Transportation Fuels and Technologies Committee**

Timothy Lipman, University of California, Berkeley, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

CGM15-041

Tuesday, January 13, 2015, 8:00am- 9:45am, Marriott Marquis, Independence B (M4)

**Alternative Aviation Fuels Joint Subcommittee of ADC80, AV030**

Bruno Miller, Metron Aviation, Inc., presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Environmental Impacts of Aviation*

ADC80 Cosponsored Sessions (only editable by the primary committee sponsor)

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**CGM15-014**

Monday, January 12, 2015, 8:00am- 9:45am, Marriott Marquis, Shaw (M3)

[Climate Change Joint Subcommittee of ADC70, ADC80, ADD40](#)

[Adam Millard-Ball](#), University of California, Santa Cruz; [Richard W. Baldauf](#), U.S. Environmental Protection Agency, presiding

**[Addressing Transportation Agency Challenges in Improving Climate Resilience: Two Tools from FHWA](#)**  
(15-1119)

[Cassandra Snow](#), ICF International

[Beth Rodehorst](#), ICF International

[Rawlings Miller](#), ICF International

[Robert C. Hyman](#), Federal Highway Administration

[Robert Kafalenos](#), Federal Highway Administration

[Brian L. Beucler](#), Federal Highway Administration

[Anne Choate](#), ICF International

**CGS15-023**

Wednesday, January 14, 2015, 4:30pm- 6:00pm, Convention Center, 140A

[Evaluating Environment and Energy Benefits: When Does Greenhouse Gas Reduction Make Sense Anyway?](#)

[Jean-Daniel Maurice Saphores](#), University of California, Irvine, presiding

**[Analyzing Impacts of Global Transport CO2 Emissions Using Multisectoral Tool](#)** (P15-6400)

[Erin Cooper](#), EMBARQ/World Resources Institute

[Benoit Lefevre](#), EMBARQ/World Resources Institute

[Julien Pestiaux](#), Cornell University

**[Envisioning an Emission Diet: Application of Travel Demand Mechanisms to Facilitate Policy Decision Making](#)** (P15-6401)

[Timothy F. Welch](#), Georgia Institute of Technology

[Sabyasachee Mishra](#), University of Memphis

**[Understanding Co-benefits of Strategies to Reduce Greenhouse Gases: Overview of FHWA and AASHTO Activities](#)** (P15-6402)

[Shari M. Schaftlein](#), Federal Highway Administration

[Michael Culp](#), Federal Highway Administration

[Stefan M. Natzke](#), Federal Highway Administration

[Mark Anthony Ferroni](#), Federal Highway Administration

[Gary Jensen](#), Federal Highway Administration

[Jennifer Brickett](#), American Association of State Highway and Transportation Officials

**[Co-benefits of Carbon Mitigation in the Transportation Sector from Fine Particles, Black Carbon,](#)**

**Methane, and Hydrofluorocarbons** (P15-6403)

Drew K. Kodjak, International Council on Clean Transportation

Ray Minjares, International Council on Clean Transportation

**Analysis of Cost-effectiveness of Clean Trucks Program in Southern California** (P15-6404)

Jean-Daniel Maurice Saphores, University of California, Irvine

Tammie Kuo, University of California, Irvine

**CGS15-033**

Wednesday, January 14, 2015, 10:15am-12:00pm, Convention Center, 156

**Vehicle Emission Reduction Strategies: Electric Vehicle Adoption and Taxation**

Yan Liu, University of Maryland, College Park, presiding

**Air Quality Impacts of Electric Vehicle Adoption in Texas** (15-1813)

Brice Gregory Nichols, Puget Sound Regional Council

Kara Kockelman, University of Texas, Austin

Matthew Reiter, University of Texas, Austin

**Emission and Cost Implications of Controlled Electric Vehicle Charging** (15-5431)

Allison Elizabeth Weis, Carnegie Mellon University

Roger Lueken, Carnegie Mellon University

Paulina Jaramillo, Carnegie Mellon University

Jeremy J. Michalek, Carnegie Mellon University

**Emergence of Electric-Powered Two-Wheelers on Asian Roads: Curse or Blessing from a Sustainable Transport Perspective?** (15-5461)

Juan Miguel Velasquez, EMBARQ/World Resources Institute

Katrin Julia Eisenbeiss, Consultant, GIZ

**Model System to Evaluate Impacts of Vehicle Purchase Tax and Fuel Tax on Household Greenhouse Gas Emissions** (15-1894)

Yan Liu, University of Maryland, College Park

Cinzia Cirillo, University of Maryland, College Park

**CGS15-039**

Tuesday, January 13, 2015, 3:45pm- 5:30pm, Convention Center, 140A

**Advanced Vehicle Technologies and Energy Use: Uncertainty and Individual Differences**

Donald Warren MacKenzie, University of Washington, presiding

**The Energy Implications of Partial Vehicle Automation** (15-3662)

Yeganeh Mashayekh Hayeri, University of Pennsylvania

Jeremy J. Michalek, Carnegie Mellon University

Chris T. Hendrickson, Carnegie Mellon University

Constantine Samaras, Carnegie Mellon University

**Generating Fuel Economy Information to Support Cost-effective Vehicle Choices: Comparing Standard and Customized Driving Cycles** (15-4548)

Xin Wang, University of Tennessee, Knoxville

Jun Liu, University of Tennessee, Knoxville

[Asad J. Khattak](#), University of Tennessee, Knoxville

**[Lifetime Costs, Life Cycle Emissions, and Consumer Choice for Conventional, Hybrid, and Electric Vehicles.](#)** (15-5314)

[Michael Buchdahl Roth](#), Carnegie Mellon University

**[I am not an environmental wacko! Getting from early plug-in vehicle owners to potential later buyers](#)** (15-5047)

[Kenneth S. Kurani](#), University of California, Davis

[Nicolette Caperello](#), University of California, Davis

[Jennifer TyreeHageman](#), University of California, Davis

[Jamie Davies](#), University of California, Davis

#### **CGS15-040**

Tuesday, January 13, 2015, 7:30pm- 9:30pm, Convention Center, 156

**[Energy Use and Greenhouse Gas Emissions from Non-Automotive Transport Modes](#)**

[Paul N. Leiby](#), Oak Ridge National Laboratory, presiding

**[Greenhouse Gas Impact of Ridership on Sheppard Subway Line, Toronto, Canada](#)** (15-3407)

[Shoshanna Saxe](#), Cambridge University

[Heather Cruickshank](#), Cambridge University

[Eric J. Miller](#), University of Toronto, Canada

**[Urban Form and Life-Cycle Energy Consumption: Case Studies at the City Scale](#)** (15-1587)

[Brice Gregory Nichols](#), Puget Sound Regional Council

[Kara Kockelman](#), University of Texas, Austin

**[A Global High Shift Scenario: Impacts and Potential for More Public Transport, Walking, and Cycling with Lower Car Use](#)** (15-1370)

[Lewis M. Fulton](#), University of California, Davis

[Michael A Replogle](#), Institute for Transportation and Development Policy, China

[Rosaria Berliner](#), University of California, Davis

**[Effect of Transit Investments for Greenhouse Gas and Energy Reduction](#)** (P15-7102)

[Gwo-Wei Torng](#), Federal Transit Administration

#### **CGW15-009**

Thursday, January 15, 2015, 8:00am-12:00pm, Convention Center, 102B

**[Tools for Evaluating Greenhouse Gas Reduction Strategies](#)**

[Robert Chamberlin](#), RSG, presiding

With growing interest in tools for evaluating transportation-based greenhouse gas (GHG) emissions, such emissions are becoming part of the MPO and DOT planning process at multiple levels—from corridor planning and transportation improvement plans to statewide climate action plans. In response, several software tools have been developed to meet the needs of these plans. This workshop illustrates the capacity of these tools to broaden and simplify analysis.

**[Introduction/Keynote Address](#)** (P15-7173)

[David Lloyd Greene](#), University of Tennessee, Knoxville

**[Climate Initiatives Program: Meeting the Bay Area's GHG Emission Reduction Goals](#)** (P15-5862)

[David Vautin](#), Metropolitan Transportation Commission

[Brenda Dix](#), ICF International

**[Validating and Calibrating EERPAT to Study Statewide and Regional GHG Reduction Measures](#)** (P15-5863)

[Hejun Kang](#), Baltimore Metropolitan Council

**[EPA's Travel Efficiency Assessment Method: Using MOVES to Estimate Greenhouse Gas Reductions](#)** (P15-7093)

[Laura Berry](#), U.S. Environmental Protection Agency

**[GHG Reduction Strategies for Washington State - Pilot Study of FHWA's EERPAT Tool](#)** (P15-5864)

[Natarajan Janarthanan](#), Washington Department of Transportation

**[Using the EERPAT Model to Inform Climate Policy](#)** (P15-5865)

[Amy Bell](#), Vermont Agency of Transportation

**[Discussion of EERPAT Pilot and Relation to Maryland's Climate Action Plan](#)** (P15-7139)

[Howard Simons](#), Maryland Department of Transportation

**[The Infrastructure Carbon Estimator](#)** (P15-5869)

[John Davies](#), FHWA

**[Using GREET for Insights on Life-Cycle GHG Reductions](#)** (P15-5870)

[Michael Q. Wang](#), Argonne National Laboratory

**[Estimating Life-Cycle Emissions from Transportation Construction Projects: New Jersey's GASCAP Model](#)** (P15-5872)

[Robert B. Noland](#), Rutgers University

**[Wrap-Up - Synthesis of Workshop](#)** (P15-5874)

[Robert B. Noland](#), Rutgers University

**JWS15-001**

Wednesday, January 14, 2015, 8:00am- 9:45am, Convention Center, 156

**[Best Practices for Deploying Corridor-Based Alternative Fuel Infrastructure](#)**

[Diane Turchetta](#), U.S. Department of Transportation; [Marcy Rood Werpj](#), Argonne National Laboratory, presiding

This joint panel session by the U.S. DOT and U.S. DOE considers the work of DOE's Clean Cities, which relies on local coalitions of fleets, fuel providers, equipment, engine and vehicle manufacturers, and government stakeholders such as state DOTs to reduce the nation's dependence on petroleum. One approach for greater market acceptance used by both DOE and DOT is to build corridors for light-, medium-, and heavy-duty vehicles using alternative fuels or having advanced vehicle power trains.

**[Introduction to Clean Cities and Clean Corridors](#)** (P15-5139)

[Michael Scarpino](#), Volpe National Transportation Systems Center

[Andrew Burnham](#), Argonne National Laboratory

**[Lessons Learned from Electric Highway Initiative on I-5 in Washington State](#)** (P15-5140)

[Tonia Buell](#), Washington State Department of Transportation

**[Alternative Fuels on the Pennsylvania Turnpike](#)** (P15-5141)

[Jack Christensen](#), Pennsylvania Turnpike Commission

**[Metrics & Lessons from Building the Planet's Longest Biofuels Corridor – All 1,786 Miles of I-75](#)** (P15-5142)

[Jonathan G. Overly](#), University of Tennessee, Knoxville

**[Coasting on the California Hydrogen Highway](#)** (P15-5143)

[Bill Elrick](#), California Fuel Cell Partnership

## 2014 Annual Meeting

ADC80 - Alternative Transportation Fuels and Technologies

3 Paper/Conference Sessions

1 Poster Session

2 Published Meetings

6 Cosponsored Sessions/Meetings

Paper or Conference Session (S)s

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**725** (CGS14-033)

Tuesday, January 14, 2014, 7:30pm- 9:30pm, Hilton, Columbia Hall 6

[Natural Gas Vehicles and Fueling Infrastructure: No Longer on the Horizon](#)

[Marianne Millar Mintz](#), Argonne National Laboratory, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

[Recent Trends in Natural Gas Vehicles and Fueling Infrastructure](#) (P14-6522)

[Marianne Millar Mintz](#), Argonne National Laboratory

[Parametric Study of Light-Duty Natural Gas Vehicle Competitiveness in the United States Through 2050](#) (14-3271)

[Meghan B. Peterson](#), Sandia National Laboratories

[Garrett E. Barter](#), Sandia National Laboratories

[Todd H. West](#), Sandia National Laboratories

[Dawn Manley](#), Sandia National Laboratories

[Under What Price Conditions Do CNG-Powered Passenger Vehicles Make Economic Sense?](#) (14-2124)

[Ryan Barnes](#), Utah State University

[Ryan Bosworth](#), Utah State University

[Kevin Heaslip](#), Virginia Polytechnic Institute and State University

[Ali Soltani-Sobh](#), Utah State University

[Charles E. Prestrud](#), Washington State Department of Transportation

[Retail Considerations in the Installation of Natural Gas Fueling Infrastructure](#) (P14-6523)

[John Eichberger](#), National Association of Convenience Stores

**831** (CGS14-034)

Wednesday, January 15, 2014, 2:30pm- 4:00pm, Hilton, Jefferson West

[Electric Vehicle Implementation: What Works and What Doesn't](#)

[Timothy Lipman](#), University of California, Berkeley, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation Energy*

[Charging Behavior Impacts on Electric Vehicle Miles Traveled: Who is Not Plugging in?](#) (14-3556)

[Gil Tal](#), University of California, Davis

[Michael Anselm Nicholas](#), University of California, Davis

[Jamie Davies](#), University of California, Davis

[Justin Woodjack](#), University of California, Davis

**Consumer Preferences for Hybrid and Electric Vehicles in China and the United States: Implications for Policy and Environment** (14-3084)

[John Paul Helveston](#), Carnegie Mellon University

[Yimin Liu](#), Ford Research and Advanced Engineering

[Elea McDonnell Feit](#), University of Pennsylvania

[Erica R. H. Fuchs](#), Carnegie Mellon University

[Erica Klampfl](#), Ford Research and Advanced Engineering

[Jeremy J. Michalek](#), Carnegie Mellon University

**From the Top of the Organization to the Bottom Line: Understanding the Fleet Market for Plug-in Electric Vehicles** (14-5046)

[Kevin Abolt Nesbitt](#), University of California, Davis

[Jamie Davies](#), University of California, Davis

**550** (CGS14-043)

Tuesday, January 14, 2014, 10:15am-12:00pm, Hilton, Lincoln East

**Cleaner Ways to Move Goods and People – Options for Alternative Fuel Trucks and Locomotives**

[Lisha B. Smith](#), South Coast Air Quality Management District, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

**Trucks Powered By Natural Gas, Electricity, Fuel Cells and Other Low Emission Technologies - SCAQMD Perspective** (P14-6617)

[Matt Miyasato](#), South Coast Air Quality Management District

**Trucks Powered By Natural Gas, Electricity, Fuel Cells and Other Low Emission Technologies - Cummins Inc. Perspective** (P14-7205)

[Mostafa M. Kamel](#), Cummins Inc.

**Trucks Powered By Natural Gas, Electricity, Fuel Cells and Other Low Emission Technologies - Capstone Turbine Corporation Perspective** (P14-7206)

[Steve Gillette](#), Capstone Turbine Corporation

**Trucks Powered By Natural Gas, Electricity, Fuel Cells and Other Low Emission Technologies - US Hybrid Corporation Perspective** (P14-7207)

[Abas Goodarzi](#), US Hybrid Corporation

**Trucks Powered By Natural Gas, Electricity, Fuel Cells and Other Low Emission Technologies - Department of Energy Perspective** (P14-7208)

[Patrick B. Davis](#), Department of Energy

**Freight and Passenger Locomotives – Going Beyond Tier IV Emission Standards - SCAQMD Perspective** (P14-6618)

[Henry Hogo](#), South Coast Air Quality Management District

**Freight and Passenger Locomotives – Going Beyond Tier IV Emission Standards - Transpower Perspective** (P14-7209)

[Michael Simon](#), Transpower

**Freight and Passenger Locomotives – Going Beyond Tier IV Emission Standards - Siemens Industry Inc. Perspective** (P14-7210)

[Dave Ward](#), Siemens Industry Inc.

**Freight and Passenger Locomotives – Going Beyond Tier IV Emission Standards - Federal Railroad Administration Perspective** (P14-7211)

[Melissa Shurland](#), Federal Railroad Administration

**Freight and Passenger Locomotives – Going Beyond Tier IV Emission Standards - Electro-Motive Diesel Perspective** (P14-7247)

[Marti Lenz](#), Electro-Motive Diesel, Inc.

**South Coast Air Quality Management District Video Presentation** (P14-7212)

[Philip Crabbe](#), South Coast Air Quality Management District

Poster Session (P)s

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**522** (CGP14-009)

Tuesday, January 14, 2014, 8:30am-10:15am, Hilton, International Center

[Alternative Transportation Fuels and Technologies](#)

[Robert E. Larson](#), U.S. Environmental Protection Agency, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

**User Equilibrium-Based Location Model of Rapid Charging Stations for Electric Vehicles with Batteries That Have Different States of Charge** (14-3809)

[Yong-Gwan Lee](#), Seoul National University, South Korea

[Hyo-Seung Kim](#), Seoul National University, South Korea

[Seung-Young Kho](#), Seoul National University, South Korea

[Chungwon Lee](#), Seoul National University, South Korea

**Influence of Driving Patterns on Life-Cycle Cost and Emissions of Hybrid and Plug-in Electric Vehicle Power Trains** (14-4269)

[Orkun Karabasoglu](#), Carnegie Mellon University

[Jeremy J. Michalek](#), Carnegie Mellon University

**Transportation Inefficiencies, Economic Distortion, and Emissions Implications Under an Oligopoly Cellulosic Biofuel Supply Chain** (14-2070)

[Yongxi Huang](#), Clemson University

[Yihsu Chen](#), University of California, Merced

**Measuring the Inconvenience of Operating an Alternative Fuel Vehicle** (14-2239)

[Jee Eun Kang](#), State University of New York, Buffalo

[Will Recker](#), University of California, Irvine

**Cost-Benefit Analysis of Vehicle-to-Grid-Capable Electric School Bus Compared with Traditional Diesel School Bus** (14-2155)

[Lance Noel](#), University of Delaware

[Regina McCormack](#), University of Delaware

**Can Drivers of Plug-in Electric Vehicles Be Prompted to Charge Off-peak?** (14-1293)

[Kenneth S. Kurani](#), University of California, Davis

[Jennifer TyreeHageman](#), University of California, Davis

[Nicolette Caperello](#), University of California, Davis

**Assessment of Level 1 and Level 2 Electric Vehicle Charging Efficiency** (14-3330)

[Justine Sears](#), Vermont Energy Investment Corporation

[Evan Forward](#), Vermont Energy Investment Corporation

[Eric Mallia](#), FleetCarma, Canada

[David Roberts](#), Vermont Energy Investment Corporation

[Karen Glitman](#), Vermont Energy Investment Corporation

**Stochastic Modeling of Battery Electric Vehicle Driver Behavior: Impact of Charging Infrastructure Deployment on the Feasibility of Battery Electric Vehicles** (14-5107)

[Jing Dong](#), Iowa State University  
[Zhenhong Lin](#), Oak Ridge National Laboratory

**Hybrid Choice Modeling of Alternative-Fuel Vehicles in Colombian Cities Including Second-Order Structural Equations** (14-4545)

[Jose Soto](#), Universidad del Norte, Colombia  
[Victor Manuel Cantillo](#), Universidad del Norte, Colombia  
[Julian Arellana](#), Universidad del Norte, Colombia

**Fuel Economy Benefit of Hybrid-Electric Light-Duty Vehicle Across Real-World Operating Modes** (14-4583)

[Karen M. Sentoff](#), University of Vermont  
[Britt A. Holmen](#), University of Vermont

**Beyond Early Adopters of Plug-in Electric Vehicles: Evidence from Fleet and Household Users in Indianapolis** (14-3290)

[Bradley W. Lane](#), University of Kansas  
[Colin P. Sherman](#), University of Texas, El Paso  
[Jon Sperl](#), Indiana University  
[Rachel M. Krause](#), University of Kansas  
[Sanya Carley](#), Indiana University  
[John D. Graham](#), Indiana University

**Pricing Workplace Charging: Financial Viability and Fueling Costs** (14-1137)

[Brett Williams](#), Center for Sustainable Energy  
[JR DeShazo](#), UCLA Luskin Center for Innovation

**Modeling the Impact of High-Occupancy-Vehicle Lane Access on the Plug-in Electric Vehicle Market** (14-4495)

[Zhenhong Lin](#), Oak Ridge National Laboratory  
[Jonathan Ford](#), SRA International, Inc

**Global Control Optimization of Electric Vehicles with Supercapacitor-Battery Systems over a Set of Real-World Speed and Elevation Profiles via Dynamic Programming** (14-5196)

[Orkun Karabasoglu](#), Massachusetts Institute of Technology  
[Paul Kimball](#), Boeing Company  
[Alex Styler](#), Carnegie Mellon University  
[Illah Nourbakhsh](#), Carnegie Mellon University  
[Jeremy J. Michalek](#), Carnegie Mellon University

**Pilot Study to Assess Consumer Preference and Induced Demand for Hybrid Vehicles Using Structural Equation Model** (14-2053)

[Erdong Chen](#), Purdue University  
[Kumares C. Sinha](#), Purdue University

**Optimization Model for Efficient Allocation of Electric Vehicle Charging Stations: Application to Dense Urban Network** (14-3526)

[Fouad Baouche](#), French Institute of Science and Technology for Transport, Development and Networks

[Romain Billot](#), French Institute of Science and Technology for Transport, Development and Networks  
[Rochdi Trigui](#), French Institute of Science and Technology for Transport, Development and Networks  
[Nour-Eddin El Faouzi](#), French Institute of Science and Technology for Transport, Development and Networks

**Hybrid Buses in Europe: Expectations and Experience Presented in Hybrid User Forum** (14-1427)

[Michael Glotz-Richter](#), Hybrid User Forum

**Optimal Biofuel Supply Chain Design Under Consumption Mandates with Renewable Identification Numbers** (14-0272)

[Xiaolei Wang](#), Hong Kong University of Science and Technology

[Yanfeng Ouyang](#), University of Illinois, Urbana-Champaign

[Hai Yang](#), Hong Kong University of Science and Technology

[Yun Bai](#), University of Illinois, Urbana-Champaign

**[DYNAMIC CONSUMER HETEROGENEITY MODEL FOR ELECTRIC VEHICLE ADOPTION](#)** (14-1579)

[Marija Bockarjova](#), Vrije Universiteit Amsterdam, Netherlands

**[Optimizing the Use of Electric Vehicles in a Regional Car-Rental Fleet](#)** (14-1420)

[Gonçalo Homem de Almeida Correia](#), Delft University of Technology

[Raquel Santos](#), University of Coimbra, Portugal

**[Estimating Energy Consumption on the Basis of Microscopic Driving Parameters for Electric Vehicles](#)**  
(14-1426)

[Enjian Yao](#), Beijing Jiaotong University

[Meiying Wang](#), Beijing Institute of Technology, China

[Yuanyuan Song](#), Beijing Jiaotong University, China

[Yongsheng Zhang](#), Beijing Jiaotong University, China

**[Daytime Charging: What Is the Hierarchy of Opportunities and Customer Needs? Case Study Based on Atlanta Commute Data](#)** (14-5337)

[Danilo J. Santini](#), Argonne National Laboratory

[Yan Zhou](#), Argonne National Laboratory

[Vetri Venthan Elango](#), Georgia Institute of Technology

[Yanzhi Xu](#), Georgia Institute of Technology

[Randall Guensler](#), Georgia Institute of Technology

**[Hybrid Choice Modeling Allowing for Reference-Dependent Preferences: Estimation and Validation for the Case of Alternative-Fuel Vehicles](#)** (14-0705)

[Stefan Mabit](#), DTU Transport, Denmark

[Elisabetta Cherchi](#), Technical University of Denmark

[Anders Fjendbo Jensen](#), Technical University of Denmark

[Jørgen Jordal-Jørgensen](#), COWI A/S, Denmark

**[Exploring Contributing Factors of Fuel Economy of Hybrid-Electric Versus Conventional Gasoline Vehicles in Real-World Conditions: Case Study in Cold Cities in Urban Quebec](#)** (14-2206)

[Seyed Amir Hossein Zahabi](#), McGill University, Canada

[Luis Fernando Miranda-Moreno](#), McGill University, Canada

[Philippe Barla](#), University of Laval, Canada

[Benoit Vincent](#), Performance Innovation Transport, Canada

**[Comparative Life-Cycle Cost of Electric Vehicle Battery Exchange Versus Fast Charging Stations](#)** (14-4542)

[Elizabeth Traut](#), Carnegie Mellon University

[Chris T. Hendrickson](#), Carnegie Mellon University

[Jeremy J. Michalek](#), Carnegie Mellon University

**[Planning Plug-in Electric Vehicle Charging Infrastructure in City Centers](#)** (14-3831)

[Mehrnaz Ghamami](#), Northwestern University

[Yu Nie](#), Northwestern University

[Ali Zockaie Kheiraie](#), Northwestern University

**[Dynamic Planning of Facility Locations with Benefits from Co-location of Multitype Facilities](#)** (14-0269)

[Weijun Xie](#), Georgia Institute of Technology

[Yanfeng Ouyang](#), University of Illinois, Urbana-Champaign

**[Evaluating Location Alternatives for Electric Vehicle Recharging Infrastructure Using a Distance-Constrained Equilibrium Assignment Model](#)** (14-1840)

[Nan Chen](#), University of New South Wales

[Lauren Gardner](#), University of New South Wales, Australia

[Melissa Duell](#), University of New South Wales, Australia

[S. Travis Waller](#), University of New South Wales, Australia

**Norwegian Electric Vehicle Market: Technological Innovation Systems Analysis** (14-2874)

[Sydney Alison Vergis](#), University of California, Davis

Published Meeting - Committee (M)s

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CGM14-013

Tuesday, January 14, 2014, 3:45pm- 5:30pm, Hilton, Columbia Hall 11 & 12

[Alternative Transportation Fuels and Technologies Committee](#)

[Robert E. Larson](#), U.S. Environmental Protection Agency; [Shannon Baxter-Clemmons](#), South Carolina Hydrogen and Fuel Cell Alliance, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

CGM14-041

Wednesday, January 15, 2014, 8:00am- 9:45am, Hilton, Oak Lawn

[Alternative Aviation Fuels Joint Subcommittee of ADC80, AV030](#)

[Bruno Miller](#), Metron Aviation, Inc., presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Environmental Impacts of Aviation*

**Alternative Fuels as a Means to Reduce PM2.5 at Airports** (14-3606)

[Hazel Peace](#), Ricardo-AEA

[Mary E Johnson](#), Purdue University

[Michael Ratte](#), KB Environmental Sciences, Inc.

**Alternative Jet Fuels Efforts at the Federal Aviation Administration** (P14-6829)

[Nathan L. Brown](#), Federal Aviation Administration

ADC80 Cosponsored Sessions (only editable by the primary committee sponsor)

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**CGM14-014**

Monday, January 13, 2014, 7:30pm- 9:30pm, Hilton, Cabinet

[Climate Change Joint Subcommittee of ADC70, ADC80, ADD40](#)

[Lewison Lee Lem](#), Jack Faucett Associates, Inc., presiding

**Oregon Statewide Transportation Strategy: 2050 Vision for Greenhouse Gas Emission Reduction** (14-4883)

[Amanda Joy Pietz](#), Oregon Department of Transportation

[Brian J. Gregor](#), Oregon Systems Analytics LLC

**CGS14-004**

Monday, January 13, 2014, 10:15am-12:00pm, Shoreham, Congressional  
[Alternative Jet Fuels: Challenges and Opportunities](#)  
[Bruno Miller](#), Metron Aviation, Inc., presiding

[Update on Recent Progress Toward Commercialization](#) (P14-6500)

[Steve J. Csonka](#), Commercial Aviation Alternative Fuels Initiative

[Commercializing Alternative Jet Fuels: Challenges and Opportunities](#) (P14-6501)

[Damian Blazy](#), Oliver Wyman

[Development of Alternative Jet Fuels in Latin America and the Caribbean](#) (P14-6513)

[Arnaldo Vieira de Carvalho](#), Inter-American Development Bank

[Leveraging Interdisciplinary Feedback to Accelerate Alternative Jet Fuel Deployment](#) (P14-6516)

[Richard Simmons](#), Purdue University

**CGS14-029**

Wednesday, January 15, 2014, 10:15am-12:00pm, Hilton, Columbia Hall 5

[Climate Change Mitigation and Global Transportation: How Far Can Technologies and Policies Take Us?](#)

[Valerie J. Karplus](#), Massachusetts Institute of Technology, presiding

[Daily Travel and Carbon Dioxide Emissions from Passenger Transport: Comparison of Germany and the United States](#) (14-1043)

[Ralph Buehler](#), Virginia Polytechnic Institute and State University

[Global Transportation Demand in the New Shared Socioeconomic Pathways](#) (14-2857)

[Gouri Shankar Mishra](#), University of California, Davis

[Page Kyle](#), Pacific Northwest National Laboratory

[Jacob Teter](#), University of California, Davis

[Geoffrey Michael Morrison](#), University of California, Davis

[Son H. Kim](#), Pacific Northwest National Laboratory

[Sonia Yeh](#), University of California, Davis

[Transport Impacts of Energy-Environment Policy: Case of Compressed Natural Gas Conversion of Vehicles in Dhaka, Bangladesh](#) (14-0428)

[Zia Wadud](#), University of Leeds, United Kingdom

[Fuel Consumption and Technological Progress in Chinese Automobile Sector](#) (14-4708)

[Yang Yu](#), Stanford University

[Yang Shu](#), Huazhong University of Science and Technology, China

[Yueming Qiu](#), Arizona State University

**CGS14-030**

Monday, January 13, 2014, 1:30pm- 3:15pm, Hilton, International East

[Fuel Mandates and Policies: Where Are We?](#)

[Robert E. Larson](#), U.S. Environmental Protection Agency, presiding

[California Low Carbon Fuel Standard: Progress and Outcomes](#) (P14-6368)

[Daniel Sperling](#), University of California, Davis

**Integrating Multimodal Transport in Cellulosic Biofuel Supply Chain Design Under Feedstock Seasonality** (14-1332)

[Fei Xie](#), Clemson University

[Yongxi Huang](#), Clemson University

[Sandra Duni Eksioglu](#), Mississippi State University

**Regional Credit Trading: Economic and Greenhouse Gas Impacts of a National Low Carbon Fuel Standard** (14-2792)

[Jonathan Rubin](#), University of Maine

[Paul N. Leiby](#), Oak Ridge National Laboratory

[Maxwell Leonard Brown](#), Oak Ridge National Laboratory

**European Fuel Quality Directive** (P14-6337)

[Peter Whitman](#), U.S. Department of Energy

**CGS14-037**

Wednesday, January 15, 2014, 4:30pm- 6:00pm, Hilton, Jefferson West

[Energy Security and Transportation Energy](#)

[Paul N. Leiby](#), Oak Ridge National Laboratory, presiding

**Why Clean Transportation Alternatives Are Still Needed to Promote Worldwide Economic Growth** (P14-6343)

[Carmine Difulio](#), U.S. Department of Energy

**Emerging Trends in North American Energy Supply and the Transition to Secure Transportation Energy** (P14-6344)

[David Lloyd Greene](#), University of Tennessee, Knoxville

**Energy Security Implications of Electric Vehicles** (P14-6341)

[Michael Shelby](#), U.S. Environmental Protection Agency

[Edmund Coe](#), U.S. Environmental Protection Agency

[Paul N. Leiby](#), Oak Ridge National Laboratory

**Implications of North American Oil and Gas Boom on Geopolitics and Energy Security** (P14-6342)

[Amy Myers Jaffe](#), University of California, Davis

**JWW14-007**

Sunday, January 12, 2014, 1:30pm- 4:30pm, Hilton, Gunston

[Current Developments and Impacts of Natural Gas in Transportation](#)

[Marianne Millar Mintz](#), Argonne National Laboratory, presiding

This workshop is designed to update practitioners and researchers on issues associated with the rapid development of natural gas resources. The focus is on environmental impacts, especially from methane leakage in production and the fuel supply chain, and associated greenhouse gas emissions.

**Greenhouse Gas Emissions of Natural Gas: Overview of Recent Activities** (P14-6350)

[Gilbert R. Jersey](#), Consultant

**Natural Gas in Transportation: Resources, Opportunities, and Challenges** (P14-6351)

[Tahmid Mizan](#), ExxonMobil Corporation

**Heavy-Duty Vehicles on the Move Toward Natural Gas: Will the Climate Benefit?** (P14-6352)

Ramon Alvarez, Environmental Defense Fund

**Methane Emissions in Natural Gas Production and Implications for Life-Cycle Greenhouse Gas Emissions Along the Natural Gas Supply Chain** (P14-6353)

David Allen, University of Texas, Austin

**Natural Gas for Heavy-Duty Engines** (P14-6355)

Nadine Haupt, Navistar

**Well-to-Wheels Energy and Greenhouse Gas Emissions of Using Natural Gas for Compressed Natural Gas, Electricity, and Hydrogen** (P14-6356)

Michael Q. Wang, Argonne National Laboratory

**Atmospheric Measurement of Regional Methan Emissions** (P14-7201)

Kenneth J. Davis, Pennsylvania State University

## 2013 Annual Meeting

### ADC80 - Alternative Transportation Fuels and Technologies

- 2 Paper/Conference Sessions
- 1 Published Meeting
- 8 Cosponsored Sessions/Meetings

Paper or Conference Session (S)s

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**817** (CGS13-039)

Wednesday, January 16, 2013, 4:30pm- 6:00pm, Hilton, Lincoln East

[Hydrogen for Transportation: Progress in Technology, Policy, and Markets](#)

[Shannon Baxter-Clemmons](#), South Carolina Hydrogen and Fuel Cell Alliance, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies; Committee on Transportation Energy*

[U.S. Department of Energy Program on Hydrogen Fuel and Fuel Cell Vehicles](#) (P13-6506)

[Sunita Satyapal](#), U.S. Department of Energy

[Challenges and Opportunities in Building a Hydrogen Fueling Network](#) (P13-6508)

[Shannon Baxter-Clemmons](#), South Carolina Hydrogen and Fuel Cell Alliance

[A California Roadmap: Lessons Learned and the Path to Commercialization](#) (P13-6509)

[Bill Elrick](#), California Fuel Cell Partnership

[Deployment of Hydrogen Fuel Cell Vehicles](#) (P13-6510)

[Marianne Millar Mintz](#), Argonne National Laboratory

**395** (CGS13-042)

Monday, January 14, 2013, 3:45pm- 5:30pm, Hilton, Jefferson West

[Value of Green and Other Consumer Attributes to Market Penetration of Alternative Fuel Vehicles](#)

[David M. Chien](#), Federal Aviation Administration, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

[Hybrid, Plug-in Hybrid, or Electric: What Do Car Buyers Want?](#) (13-3028)

[Jonn Axsen](#), Simon Fraser University, Canada

[Kenneth S. Kurani](#), University of California, Davis

[Do Plug-in Vehicle Buyers Want Green Electricity? Survey of U.S. New-Car Buyers](#) (13-2301)

[Jonn Axsen](#), Simon Fraser University, Canada

[Kenneth S. Kurani](#), University of California, Davis

[Community and Social Media Use Among Early PEV Drivers](#) (P13-6533)

[Jennifer L. Tyree-Hageman](#), University of California, Davis

[Who Is Buying PEVs in California and How Are They Being Used?](#) (P13-6534)

[Gil Tal](#), University of California, Davis

[Going Green: Benefit-Cost Analysis for Potential Electric Vehicle Owners](#) (P13-6535)

[Kara Kockelman](#), University of Texas, Austin

Published Meeting - Committee (M)s

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CGM13-013

Monday, January 14, 2013, 10:15am-12:00pm, Hilton, Fairchild

[Alternative Transportation Fuels and Technologies Committee](#)

[Robert E. Larson](#), U.S. Environmental Protection Agency; [Shannon Baxter-Clemmons](#), South Carolina

Hydrogen and Fuel Cell Alliance, presiding

*Sponsored by Committee on Alternative Transportation Fuels and Technologies*

ADC80 Cosponsored Sessions (only editable by the primary committee sponsor)

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**APS13-004**

Thursday, January 17, 2013, 8:00am- 9:45am, Hilton, Lincoln West

[Is Natural Gas an Outpost or a Detour on the Road to Clean Energy? Part 1: Life-Cycle Emissions of Natural Gas Vehicles-- Advantages, Disadvantages, and Uncertainties \(Part 2, Session 843\)](#)

[Gilbert R. Jersey](#), Consultant, presiding

*Sponsored by Task Force on Climate Change and Energy; Committee on Transportation Energy;*

*Committee on Alternative Transportation Fuels and Technologies*

A skeletal local refueling infrastructure is appearing and an increasing array of engines is becoming available, primarily for medium and heavy trucks. Although prices are dropping, natural gas storage and conditioning are inherently more costly than the pumps and tanks used to store and dispense petroleum. Over-the-road vehicles also require a nationwide refueling network that will take years to complete. Speakers will discuss vehicle and infrastructure deployment and their implications.

[Characterizing Pivotal Sources of Methane Emissions from Natural Gas Production](#) (P13-5689)

[Karin Ritter](#), American Petroleum Institute

[Methane Leakage in Natural Gas Production and Distribution](#) (P13-5690)

[Ramon Alvarez](#), Environmental Defense Fund

[EPA Greenhouse Gas Reporting Program](#) (P13-5691)

[Mark DeFigueriedo](#), U.S. Environmental Protection Agency

[Best Practices to Avoid Liquified Natural Gas Fueling Station Venting Losses](#) (P13-5693)

[Charles A. Powars](#), St. Croix Research

[James Wegrzyn](#), Brookhaven National Laboratory

**APS13-007**

Thursday, January 17, 2013, 10:15am-12:00pm, Hilton, Lincoln West

[Is Natural Gas an Outpost or a Detour on the Road to Clean Energy? Part 2: Refueling Infrastructure-- Achilles Heel or Bump on the Road? \(Part 1, Session 830\)](#)

[Marianne Millar Mintz](#), Argonne National Laboratory, presiding

*Sponsored by Task Force on Climate Change and Energy; Committee on Transportation Energy;*

*Committee on Alternative Transportation Fuels and Technologies*

A skeletal local refueling infrastructure is appearing and an increasing array of engines is becoming available, primarily for medium and heavy trucks. Although prices are dropping, natural gas storage and conditioning are inherently more costly than the pumps and tanks used to store and dispense petroleum. Over-the-road vehicles also require a nationwide refueling network that will take years to complete. Speakers will discuss vehicle and infrastructure deployment and their implications.

[Energy Information Administration Forecast of U.S. Natural Gas Production and Use in Transportation](#)

(P13-5694)

[John Staub](#), Energy Information Administration

**The Future of Natural Gas as a Transportation Fuel** (P13-5695)

[Michael Gallagher](#), Westport Innovations

**Natural Gas Vehicles and Fueling Infrastructure** (P13-5697)

[Richard R. Kolodziej](#), NGV America

**Natural Gas and the Road to Clean Energy** (P13-6869)

[Marianne Millar Mintz](#), Argonne National Laboratory

**CGM13-014**

Monday, January 14, 2013, 7:30pm- 9:30pm, Hilton, Columbia Hall 9 & 10

**Climate Change Joint Subcommittee of ADC70, ADC80, ADD40**

[Lewison Lee Lem](#), Jack Faucett Associates, Inc., presiding

**Urban Transportation Greenhouse Gas Emissions and Their Link with Urban Form, Transit Accessibility and Emerging Green Technologies: Montreal, Quebec, Canada, Case Study** (13-1394)

[Seyed Amir Hossein Zahabi](#), McGill University, Canada

[Luis Fernando Miranda-Moreno](#), McGill University, Canada

[Zachary Rupert Patterson](#), Concordia University, Canada

[Philippe Barla](#), University of Laval, Canada

**Is Smart Growth Associated with Reductions in Carbon Dioxide Emissions?** (13-2350)

[Xin Wang](#), University of Tennessee, Knoxville

[Asad J. Khattak](#), University of Tennessee, Knoxville

[Yichi Zhang](#), Old Dominion University, Norfolk

**An Analytical Framework for Forecasting and Evaluating the Emissions Impacts of Transit Oriented Development Strategies** (13-3477)

[Chun-Hung Peter Chen](#), Santa Clara Valley Transportation Authority

[George A. Naylor](#), Santa Clara Valley Transportation Authority

**CGP13-003**

Tuesday, January 15, 2013, 8:30am-10:15am, Hilton, International Center

**Current Issues in Transportation Energy, Alternative Fuels, and Climate Change**

[Eduardo Maeyama](#), Parsons Brinckerhoff, presiding

**Projecting Carbon Dioxide Emissions from Japanese Passenger Cars up to 2020: Using Index Decomposition Techniques** (13-0286)

[Yoshinori Mishina](#), Open University of Japan

[Yasunori Muromachi](#), Tokyo Institute of Technology, Japan

**Greenhouse Gas Mitigation Strategies in Road Freight Transport in Mexico** (13-0992)

[Cynthia Menendez](#), CTS EMBARQ Mexico

[Adriana de Almeida Lobo](#), CTS EMBARQ Mexico

[Hilda Martinez](#), CTS EMBARQ Mexico

[Lia Ferreira](#), CTS EMBARQ Mexico

[Laurent Dartois](#), CTS EMBARQ Mexico

**Quick Estimation Method for Greenhouse Gas Emissions at Intersections** (13-1428)

[David Stanek](#), Fehr & Peers

[Chris Breiland](#), Fehr & Peers

**Study of Effect on GHG Emissions by Addition of Transit Mode in Existing Road Network and Optimal**

**Emission Pricing Models for Reducing Carbon Footprint** (13-1579)

[Sushant Sharma](#), Texas A&M Transportation Institute

[Sabyasachee Mishra](#), University of Memphis

**Climate Change Effects on Transportation Infrastructure: Scenario-Based Risk Analysis Using Geographic Information Systems** (13-1832)

[Yao-Jan Wu](#), University of Arizona

[Md. Tanveer Hayat](#), University of Virginia

[Andres Clarens](#), University of Virginia

[Brian Lee Smith](#), University of Virginia

**Presentation of Carbon Dioxide Emission Information for Smartphone Applications** (13-2030)

[William Brazil](#), Trinity College Dublin, Ireland

[Brian Caulfield](#), Trinity College Dublin, Ireland

[Nadine Rieser-Schüssler](#), Swiss Federal Institute of Technology, Zurich

**Microscopic Simulation of Transit Bus Emissions Under Transit Signal Priority and Alternative Technology** (13-2676)

[Ahsan Alam](#), McGill University, Canada

[Marianne Hatzopoulou](#), McGill University, Canada

**Influencing Sustainable Travel Intention Through Contextualized Presentation Format** (13-2872)

[E. Owen D. Waygood](#), Laval University, Canada

[Erel Avineri](#), Tel Aviv Academic College of Engineering, Israel

**Emission Saving Potential of Accelerated Vehicle Retirement Programs: Case Study of California Heavy-Duty Trucking** (13-2981)

[Michael Taptich](#), University of California, Berkeley

[Mikhail V. Chester](#), Arizona State University

[Arpad Horvath](#), University of California, Berkeley

**Clean Development Mechanism and Sustainability in the Transportation Sector** (13-3195)

[Omid M. Rouhani](#), Cornell University

**Annual Transportation Energy Consumption and Greenhouse Gas Emissions by Individuals in Finland as a Function of Lifestyle** (13-3594)

[Reko Möttönen](#), Aalto University, Finland

[Eric Christian Bruun](#), Aalto University, Finland

**Creating Per Capita Transportation CO2 Indicator for European Cities Through Geographic Information System** (13-3906)

[E. Owen D. Waygood](#), Laval University, Canada

[Tim Chatterton](#), University of the West of England, United Kingdom

[Erel Avineri](#), Tel Aviv Academic College of Engineering, Israel

**Comparison Between Long-Term Effects of Road Development and Railway Development for Low-Carbon Urban Transport System in Bangkok, Thailand** (13-4101)

[Kazuki Nakamura](#), Nagoya University, Japan

[Yoshitsugu Hayashi](#), Nagoya University, Japan

[Hirokazu Kato](#), Nagoya University, Japan

**U.S. Freight Emissions Segmented by BCO Industry** (13-4191)

[Larry O'Rourke](#), ICF International

[Kelsey Wilson Read](#), ICF International

[Eliza Johnston](#), ICF International

**Generalized Methodology for Establishing CO2 Off-Cycle Credits as Part of Light-Duty Vehicle Greenhouse Gas Emission Standards** (13-4362)

[Matthew J. Barth](#), University of California, Riverside  
[Kanok Boriboonsomsin](#), University of California, Riverside  
[Michael Todd](#), University of California, Riverside  
[Tetsuhiro Ishizaka](#), Nihon University, Japan  
[Nigel Williams](#), University of California, Riverside

**Assessing Public Transportation Agencies' Climate Change Adaptation Activities and Needs** (13-4525)

[John H. MacArthur](#), Portland State University

**Measure for Measure: Using Energy Utility Model for Standardized Evaluation of Transportation Efficiency Measures** (13-0214)

[Justine Sears](#), Vermont Energy Investment Corporation  
[Karen Glitman](#), Vermont Energy Investment Corporation  
[Greg Fanslow](#), Vermont Energy Investment Corporation

**Accounting for Timing and Investment Constraints in Vehicle Deployment Analyses** (13-0283)

[Steven Edward Plotkin](#), Argonne National Laboratory  
[Thomas S Stephens](#), Argonne National Laboratory  
[Walter S. McManus](#), Oakland University

**Actors' Positions and Inclinations Toward Electromobility System in France** (13-0681)

[Shadi Sadeghian](#), Ecole des Ponts ParisTech, France  
[Fabien M. Leurent](#), Universite Paris-Est, France  
[Mariane Thébert](#), Universite Paris-Est, France  
[Patricia Sajous](#), University of Le Havre, France

**Data Collection and Analysis in a Pan-European Electric Vehicle Fleet** (13-1021)

[Paul McDonald](#), Trinity College Dublin, Ireland  
[John Patrick Brady](#), Trinity College Dublin, Ireland  
[Margaret O'Mahony](#), Trinity College Dublin, Ireland  
[Manel Sanmarti](#), Institut de Recerca en Energia de Catalunya, Spain  
[Mark Daly](#), ESB Ireland  
[Senan McGrath](#), ESB Ireland  
[Norbert Vierheilig](#), Siemens AG, Germany

**Reconsidering the Choice Between Gasoline- and Diesel-Powered Cars: Modeling Demand and Automakers' Reaction** (13-1051)

[Vincent Breteau](#), Universite Paris-Est, France  
[Simon Weber](#), Sciences Po, France

**Mixture Amount Stated Adaptation Experiment of Activity-Travel Behavior Dynamics in Adaptive Response to Energy Conservation Strategies** (13-1486)

[Dujuan Yang](#), Eindhoven University of Technology, Netherlands  
[Harry J. P. Timmermans](#), Eindhoven University of Technology, Netherlands  
[Aloys Borgers](#), Eindhoven University of Technology, Netherlands

**Economics Behind Electric Vehicles: Analysis from the Private User's Perspective in France** (13-2019)

[Elisabeth Windisch](#), Universite Paris-Est, France

**Public Transportation and Land Use Multiplier: Greenhouse Gas Reduction Potential and Associated Costs in Los Angeles, California, Metropolitan Region** (13-2088)

[Lewison Lee Lem](#), Jack Faucett Associates, Inc.  
[Emily Kate McNeil Moylan](#), University of New South Wales, Australia  
[Rami Barakat Chami](#), Jack Faucett Associates, Inc.

**Analysis of Household Vehicle Usage and Ownership Under Different Taxation Policies** (13-2478)

[Masashi Kuwano](#), Kobe University, Japan

[Akimasa Fujiwara](#), Hiroshima University, Japan

[Junyi Zhang](#), Hiroshima University, Japan

[Makoto Tsukai](#), Hiroshima University, Japan

**Spatially Disaggregated Domestic Road Transport Energy Demand in Great Britain** (13-3588)

[Chao Wang](#), Loughborough University, United Kingdom

[Steven Firth](#), Loughborough University, United Kingdom

[Simon Taylor](#), Loughborough University, United Kingdom

[Mohammed A. Quddus](#), Loughborough University, United Kingdom

**Impacts of Energy Developments on Highway Systems** (13-3650)

[Cesar Quiroga](#), Texas A&M Transportation Institute

[Emmanuel G. Fernando](#), Texas A&M Transportation Institute

[Jeong Ho Oh](#), Korea National University of Transportation

**Framework to Evaluate Policy for Promotion of Electric Vehicles** (13-4139)

[Lara Edwards](#), University of New South Wales, Australia

[Jonathon Kemp](#), University of New South Wales, Australia

[Nuwyy Ly](#), University of New South Wales, Australia

[Tran Maria](#), University of New South Wales, Australia

[Vinayak V. Dixit](#), University of New South Wales, Australia

**Road Transport Fuel Consumption Trends in the United Kingdom: Empirical Analysis of Diesel Demand** (13-4313)

[Ahmad Razi Ramli](#), Imperial College London, United Kingdom

[Daniel J. Graham](#), Imperial College London, United Kingdom

**Potential Reductions in Emissions and Petroleum Use in Transportation: Perspectives from the Transportation Energy Futures Project** (13-4427)

[Laura Vimmerstedt](#), National Renewable Energy Laboratory

[Austin Brown](#), National Renewable Energy Laboratory

[Garvin Heath](#), National Renewable Energy Laboratory

[Trieu Mai](#), National Renewable Energy Laboratory

[Marc Melaina](#), National Renewable Energy Laboratory

[Emily Newes](#), National Renewable Energy Laboratory

[Mark Ruth](#), National Renewable Energy Laboratory

[Travis Simpkins](#), National Renewable Energy Laboratory

[Ethan Warner](#), National Renewable Energy Laboratory

[Kenneth M. Bertram](#), Argonne National Laboratory

[Deena Patel](#), Argonne National Laboratory

[Steven Edward Plotkin](#), Argonne National Laboratory

[Thomas S Stephens](#), Argonne National Laboratory

[Anant D. Vyas](#), Argonne National Laboratory

**Close Look at Hybrid Vehicle Loyalty and Ownership** (13-4667)

[Ho-Ling Hwang](#), Oak Ridge National Laboratory

[Shih-Miao Chin](#), Oak Ridge National Laboratory

[Daniel W. Wilson](#), Oak Ridge National Laboratory

[Francisco Moraes Oliveira Neto](#), Oak Ridge National Laboratory

[Robert Taylor](#), Oak Ridge National Laboratory

**Demand for Electric Vehicle Charging Stations** (13-0265)

[Bruce Brown](#), PRR

[Sandra Pinto de Bader](#), Seattle Office of Sustainability and Environment

[Leona Dondi](#), PRR

**Charging Choices and Fuel Displacement in a Large-Scale Demonstration of Plug-In Hybrid Electric**

**Vehicle** (13-0533)

[Stephen Zoepf](#), Massachusetts Institute of Technology

[Donald Warren MacKenzie](#), University of Washington

[David Keith](#), Massachusetts Institute of Technology

[William P. Chericoff](#), Toyota Motor North America Inc

**Hydrogen Fuels: Exploring Consumer Preferences Toward Alternative Hydrogen Production Methods**

(13-0666)

[Eric Molin](#), Delft University of Technology, Netherlands

[Olga Di Ruggiero](#), Delft University of Technology, Netherlands

**Biodiesel from Lagoon Microalgae: Acceptable Alternative Fuel for the Transportation Crunch?** (13-

0767)

[Margarida Cabrita Coelho](#), University of Aveiro, Portugal

[Smritikana Dutta](#), University of Aveiro, Portugal

[Fernando Neto](#), University of Aveiro, Portugal

**Sustainable Biofuel Supply Chain Planning and Management Under Uncertainty** (13-1083)

[Fei Xie](#), Clemson University

[Yongxi Huang](#), Clemson University

**Catching the PHEVer: Simulating Electric Vehicle Diffusion with Agent-Based Mixed Logit Model of Vehicle Choice** (13-1099)

[Maxwell Leonard Brown](#), Oak Ridge National Laboratory

**Valuation of Plug-in Vehicle Life-Cycle Air Emissions and Oil Displacement Benefits** (13-1224)

[Jeremy J. Michalek](#), Carnegie Mellon University

[Mikhail V. Chester](#), Arizona State University

[Paulina Jaramillo](#), Carnegie Mellon University

[Constantine Samaras](#), Carnegie Mellon University

[Ching-Shin Shiau](#), Carnegie Mellon University

[Lester B. Lave](#), Carnegie Mellon University

**Locating Electric Vehicle Charging Stations: Parking-Based Assignment Method for Seattle, Washington** (13-1254)

[T. Donna Chen](#), University of Texas, Austin

[Mobashwir Khan](#), Cambridge Systematics

[Kara Kockelman](#), University of Texas, Austin

**Economics of Electrifying North American Railways** (13-1262)

[Gordon Richard Lovegrove](#), University of British Columbia, Canada

[Ellen S Morrison](#), University of British Columbia, Canada

**Life-Cycle Assessment of Diesel-Electric Hybrid Trucks and Conventional Diesel Trucks for Curbside Deliveries** (13-1374)

[Chris Bachmann](#), University of Toronto, Canada

[Franco Chingcuanco](#), Massachusetts Institute of Technology

[Heather MacLean](#), University of Toronto, Canada

[Matthew J. Roorda](#), University of Toronto, Canada

**Assessing Impact of Bus Technology on Greenhouse Gas Emissions Along a Major Corridor: Comparing Instantaneous Speed Emission Model with Average-Speed Model** (13-1390)

[Sabrina Chan](#), McGill University, Canada

[Luis Fernando Miranda-Moreno](#), McGill University, Canada

[Ahsan Alam](#), McGill University, Canada

[Marianne Hatzopoulou](#), McGill University, Canada

**Investigating the Neighborhood Effect on Hybrid Vehicle Adoption** (13-2017)

[Xiaoyu Zhu](#), University of Arizona

[Chao Liu](#), University of Maryland, College Park  
**[Greenhouse Gas Emissions from Current and Near-Term Bus Technologies in London](#)** (13-2031)  
[Uven Chong](#), University of Cambridge, United Kingdom  
[Adam Boies](#), University of Cambridge, United Kingdom  
[Steven Barrett](#), Massachusetts Institute of Technology  
**[Travel Behavior and Electric Mobility in Germany: Is the Problem the Driving Range, Costs, or Both?](#)**  
(13-2114)  
[Robert Koelbl](#), Austrian Institute of Technology  
[Dietmar Bauer](#), Austrian Institute of Technology  
[Christian Rudloff](#), Austrian Institute of Technology  
**[Cost-Effectiveness of Plug-in Hybrid Electric Vehicle Battery Capacity and Charging Infrastructure Investment for Reducing U.S. Gasoline Consumption](#)** (13-2120)  
[Scott B. Peterson](#), Carnegie Mellon University  
[Jeremy J. Michalek](#), Carnegie Mellon University  
**[Effects of Temperature and Thermal Management on Battery Life in Plug-in Hybrid Electric Vehicles](#)**  
(13-2220)  
[Tugce Yuksel](#), Carnegie Mellon University  
[Jeremy J. Michalek](#), Carnegie Mellon University  
**[Development and Evaluation of Intelligent Energy Management Strategy for Plug-in Hybrid Electric Vehicle](#)** (13-2457)  
[Guoyuan Wu](#), University of California, Riverside  
[Kanok Boriboonsomsin](#), University of California, Riverside  
[Matthew J. Barth](#), University of California, Riverside  
**[Do You Mind If I Plug in My Car? How Etiquette Shapes Plug-in Vehicle Drivers' Vehicle Charging Behavior](#)** (13-2816)  
[Nicolette Caperello](#), University of California, Davis  
[Kenneth S. Kurani](#), University of California, Davis  
[Jennifer L. Tyree-Hageman](#), University of California, Davis  
**[Commercial Building Trigeneration Systems for Refueling Hydrogen Vehicles, Providing Local Grid Support, and Enhancing Sustainability](#)** (13-3134)  
[Xuping Li](#), University of California, Davis  
[Joan M. Ogden](#), University of California, Davis  
[Christopher Yang](#), University of California, Davis  
**[Life-Cycle Cost Analysis of Hybrid Bus Deployment on Transit Lines](#)** (13-4071)  
[Bekir Bartin](#), Rutgers University  
**[Accommodating Electric Vehicle Charging in California's Power Sector: Regional Impacts on Greenhouse Gas Emissions](#)** (13-4120)  
[Julia M Sohlen](#), BMW  
[Yueyue Fan](#), University of California, Davis  
[Joan M. Ogden](#), University of California, Davis  
[Christopher Yang](#), University of California, Davis  
**[Life-cycle Evaluation of Urban Commercial Electric Vehicles and Their Potential Emission Reduction Impacts](#)** (13-4482)  
[Brian Davis](#), Lancaster Engineering  
[Miguel Figliozzi](#), Portland State University  
**[Estimating On-Road Fuel Economy of PHEVs from Test and Aggregated Data](#)** (13-4755)  
[Thomas S Stephens](#), Argonne National Laboratory  
[Yan Zhou](#), Argonne National Laboratory  
[Amgad Elgowainy](#), Argonne National Laboratory

[Michael Duoba](#), Argonne National Laboratory  
[Anant D. Vyas](#), Argonne National Laboratory  
[Aymeric Rousseau](#), Argonne National Laboratory

**U.S. Residential Charging Potential for Plug-In Vehicles** (13-4801)

[TsuWei Cherng](#), Carnegie Mellon University  
[Chris T. Hendrickson](#), Carnegie Mellon University  
[Jeremy J. Michalek](#), Carnegie Mellon University  
[Elizabeth Traut](#), Carnegie Mellon University

**Development of Integrated Vehicle and Traffic Simulator for Evaluation of Routing Strategies of Plug-in Hybrid Electric Vehicles** (13-4909)

[Parth Bhavsar](#), Rowan University  
[Yiming He](#), Clemson University  
[Mashrur A. Chowdhury](#), Clemson University

**Plug-in Electric Cars for Work Travel: Evaluation of Four Electric Powertrains** (13-4925)

[Danilo J. Santini](#), Argonne National Laboratory  
[Yan Zhou](#), Argonne National Laboratory  
[Namdoo Kim](#), Argonne National Laboratory  
[Kevin Gallagher](#), Argonne National Laboratory  
[Anant D. Vyas](#), Argonne National Laboratory

**Electric Vehicle Shortest-Walk Problem** (13-4934)

[Jonathan David Adler](#), Arizona State University  
[Pitu B. Mirchandani](#), Arizona State University  
[Guoliang Xue](#), Arizona State University  
[Minjun Xia](#), Arizona State University

**Charging Infrastructure Planning for Promoting All-Electric Vehicle Market: Activity-Based Assessment Using Multiday Travel Data** (13-5176)

[Jing Dong](#), Iowa State University  
[Changzheng Liu](#), Oak Ridge National Laboratory  
[Zhenhong Lin](#), Oak Ridge National Laboratory

**New Approach to Modeling Large-Scale Transitions to Alternative Fuels and Vehicles** (13-5210)

[Joel Bremson](#), University of California, Davis  
[Alan Meier](#), Lawrence Berkeley National Laboratory  
[C.-Y. Cynthia Lin](#), University of California, Davis  
[Joan M. Ogden](#), University of California, Davis

**How Much on Electric? Looking at PHEV Users' eVMT and How It Might Change--Possible influence of CD Range, Charging Infrastructure, Vehicle Design and Self-selection** (13-5261)

[Jamie Davies](#), University of California, Davis

**California Statewide Charging Survey: What Do Drivers Want?** (13-5285)

[Michael Anselm Nicholas](#), University of California, Davis  
[Gil Tal](#), University of California, Davis  
[Justin Woodjack](#), University of California, Davis

**Systems Approach to Innovation Success: Steps in Adopting E-vehicles in City Logistics** (13-2773)

[Athena Roumboutsos](#), University of the Aegean, Greece  
[Thierry Vanelslander](#), University of Antwerp, Belgium  
[Seraphim Kapros](#), University of the Aegean, Greece

**Multiobjective Traffic Network Design Accounting for Plug-in Electric Vehicle Energy Consumption** (13-5203)

[Melissa Duell](#), University of New South Wales, Australia  
[Lauren Gardner](#), University of New South Wales, Australia

[S. Travis Waller](#), University of New South Wales, Australia

**CGS13-023**

Monday, January 14, 2013, 1:30pm- 3:15pm, Hilton, Lincoln West

[Powering the Future: Implementing the Vision of Clean Transportation and Energy Technologies](#)

[Barry R. Wallerstein](#), South Coast Air Quality Management District, presiding

[Overview, Part 1: Policy Drivers, Coordinated Air Quality and Climate Strategies, and Zero and Near-Zero Emission Transportation Technology Developments](#) (P13-6579)

[Peter Greenwald](#), South Coast Air Quality Management District

[Overview, Part 2: Policy Drivers, Coordinated Air Quality and Climate Strategies, and Zero and Near-Zero Emission Transportation Technology Developments](#) (P13-7157)

[Matt Miyasato](#), South Coast Air Quality Management District

[Building the Future, Part 1: How Cutting Edge Transportation Technologies are Helping Create a Clean Freight Network](#) (P13-6580)

[Victor La Rosa](#), Total Transportation Services, Inc.

[Building the Future, Part 2: How Cutting Edge Transportation Technologies are Helping Create a Clean Freight Network](#) (P13-7158)

[Peter Torrellas](#), Innovative Scheduling

[Building the Future, Part 3: How Cutting Edge Transportation Technologies are Helping Create a Clean Freight Network](#) (P13-7159)

[Frank L. Quon](#), Los Angeles County Metropolitan Transportation Authority

[Building the Future, Part 4: How Cutting Edge Transportation Technologies are Helping Create a Clean Freight Network](#) (P13-7160)

[Tim Brown](#), University of California, Irvine

[Building the Future, Part 5: How Cutting Edge Transportation Technologies are Helping Create a Clean Freight Network](#) (P13-7161)

[Michael G. Britt](#), UPS

**CGS13-024**

Wednesday, January 16, 2013, 10:15am-12:00pm, Hilton, Georgetown East

[Evaluating Strategies for Reducing Mobility-Related Greenhouse Gas Emissions: Lessons from International Experience](#)

[Valerie J. Karplus](#), Massachusetts Institute of Technology, presiding

[Management of Urban Mobility to Control Climate Change in Cities in Spain](#) (13-1470)

[Natalia Sobrino](#), Universidad Politécnic de Madrid, Spain

[Andres Monzon](#), Universidad Polytechnica de Madrid, Spain

[Spatial Analysis of Demand for Hybrid Electric Vehicles and Its Potential Impact on Greenhouse Gases in Montreal and Quebec City, Canada](#) (13-0889)

[Sabrina Chan](#), McGill University, Canada

[Luis Fernando Miranda-Moreno](#), McGill University, Canada

[Zachary Rupert Patterson](#), Concordia University, Canada

[Philippe Barla](#), University of Laval, Canada

**Standardized Emission Calculations Along Supply Chains as Basis for Smart Global Transport Solutions in a “Reality of Less”: Is an Approach Within Reach?** (13-3596)

[Verena Charlotte Ehrler](#), German Aerospace Center  
[Igor Y. Davydenko](#), TNO, Netherlands  
[Diederik de Ree](#), TNO, Netherlands  
[Jaurieke Ton](#), TNO, Netherlands  
[Heidi Auvinen](#), VTT Technical Research Centre, Finland  
[Alan Lewis](#), Transport & Travel Research Ltd., United Kingdom  
[Saskia Seidel](#), German Aerospace Center  
[Andreas Lischke](#), German Aerospace Center  
[Hedi Maurer](#), University of Leeds, United Kingdom

**Factors Influencing Demand in the Emerging Market for Low-Emission Vehicles** (13-4319)

[Craig Morton](#), University of Aberdeen, United Kingdom  
[Jillian Anable](#), University of Aberdeen, United Kingdom  
[John D. Nelson](#), University of Aberdeen, United Kingdom

**CGS13-031**

Tuesday, January 15, 2013, 1:30pm- 3:15pm, Hilton, Columbia Hall 6

**Real-World Effects of Policy on Driver Choices: Implications for Energy Use and Emissions**

[Paul N. Leiby](#), Oak Ridge National Laboratory, presiding

**Medium-Term Effects of London’s Low-Emission Zone** (13-4534)

[Richard B. Ellison](#), University of Sydney, Australia  
[Stephen P. Greaves](#), University of Sydney, Australia  
[David A. Hensher](#), University of Sydney, Australia

**Analysis of Heterogeneous Speeding Behavior and Gasoline Prices with Hourly Washington State Data**

(13-3671)

[Kari Edison Watkins](#), Georgia Institute of Technology  
[Hendrik Wolff](#), University of Washington

**Participation and Incentive Choice of Participants in an Early Vehicle Retirement Program in Québec, Canada** (13-0736)

[Ugo Lachapelle](#), Université du Québec à Montréal, Canada

**Marketing Around Fuel Economy Regulation of Passenger Vehicles and Light-Duty Trucks** (13-3252)

[John Stuart Ridout](#), Washington, D.C.  
[Anne E. Dunning](#), University of Kansas

**CGW13-004**

Sunday, January 13, 2013, 9:00am-12:00pm, Hilton, Lincoln West

**Effective Practices to Develop Environmental Research Needs Statements and Funding Opportunities**

[Robert O’Loughlin](#), Federal Highway Administration, presiding

This workshop focuses on writing effective environmental and energy research needs statements and details the funding opportunities available for such research. Participants will hear from experts who have successfully developed effective research needs statements leading to funded and implemented

research projects. The workshop also will highlight the available research funding programs and provide tips on success in applying for research funds.

**Writing Effective Research Statements** (P13-5104)

Sue Sillick, Montana Department of Transportation

**Research Funding Opportunities** (P13-5105)

Shari M. Schaftlein, Federal Highway Administration

Nanda N. Srinivasan, Energy Information Administration

**Advancing Research: How It Works and How to Make It Happen** (P13-5106)

Kate Kurgan, American Association of State Highway and Transportation Officials

**Facilitated Development of Research Problem Statements** (P13-5107)

Carissa Schively Slotterback, University of Minnesota

**Facilitated Committee Collaboration on Partnership Opportunities** (P13-5108)

Carissa Schively Slotterback, University of Minnesota

**Wrap-up and Next Steps** (P13-5109)

Robert O'Loughlin, Federal Highway Administration