CEC Statewide PEV Readiness Workshop
Required Reading

- **Background Materials for Morning Session**
  - ZEV Action Plan: The Governor's Office of Planning and Research has convened an interagency working group to develop a plan to achieve Governor Brown's Executive Order on Zero Emission Vehicles. This plan is currently in draft format.
  - Summary of NRG Settlement: On April 27, 2012, the CPUC filed with the Federal Energy Regulatory Commission (FERC) a settlement agreement that will bring to California a statewide network of charging stations for electric vehicles, including at least 200 public fast-charging stations and the infrastructure for 10,000 plug-in units at 1,000 diverse locations across the state.

- **Materials for Break-Out Session**
  - **Sessions #1 – 3: Background Materials for Supporting Regional Plans, Statewide Inter-regional and Cost-effective Coverage**
    - Final Report to the U.S. Department of Energy from South Coast Air Quality Management District: This report summarizes the California PEV Readiness Project, the objective of which was to create a unified statewide approach to planning and implementation of critical PEV charging infrastructure activities in order to support and expand the market for PEVs in California.
    - Regional Readiness Plans: As part of the PEV Readiness Project, six regional PEV infrastructure development plans, referred to as "Regional Readiness Plans," were developed for the six regions encompassing the state's major metropolitan areas, and including most of the state's population.
  - **Session #4: Interoperability (Open Access)**
    - ChargePoint Network: Affiliated with Coulomb, all ChargePoint EV charging stations are connected through the ChargePoint Network, the largest network of independently owned charging stations in the world.

Please see below for optional background reading material

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  - ZEV Action Plan: The Governor's Office of Planning and Research has convened an interagency working group to develop a plan to achieve Governor Brown's Executive Order on Zero Emission Vehicles. This plan is currently in draft format.
  - California Plug-In Electric Vehicle Collaborative: PEVC, a multi-stakeholder public-private partnership, is working together to ensure a strong and enduring transition to a plug-in electric vehicle market in California.
  - California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program: The Alternative and Renewable Fuel and Vehicle Technology Program (also known as AB 118) provides financial incentives for businesses, vehicle and technology manufacturers, workforce training partners, fleet owners, consumers and academic institutions to develop and deploy alternative and renewable fuels and advanced transportation technologies.
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  - UC Berkeley Transportation Sustainability Research Center PEV Research: TSRC engages in education and outreach to promote its core values of sustainability and equity, to ensure that we are able to meet the transportation needs of the present without compromising future generations.

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    - Regional Readiness Plans: As part of the PEV Readiness Project, six regional PEV infrastructure development plans, referred to as "Regional Readiness Plans," were developed for the six regions encompassing the state's major metropolitan areas, and including most of the state's population. These regions are:
      - Bay Area
      - Central Coast
      - Los Angeles
      - Sacramento

        - San Diego
        - San Joaquin Valley
    - Plug-in Electric Vehicle Collaborative Community PEV Readiness Toolkit: This toolkit highlights actions a community can take to get ready for the PEVs that are arriving in communities across California. Each easy-to-reference section includes a basic description of the needed action, its purpose, and examples from California communities and stakeholders.
    - Ready, Set, Charge, California!: Provides public agencies throughout California with guidance on how to advance community EV readiness. This guide provides standardized policies, ordinances and best-practices, providing a consistent framework for deployment of EVs and EV infrastructure including information on signage, ADA compliance, permitting and other key matters.
    - Washington Electric Vehicle Infrastructure Deployment Guidelines for Local Government: Includes local governments model ordinances, model development regulations, and guidance for siting and installing electric vehicle infrastructure, in particular battery charging stations, and for appropriate handling, recycling, and storage of electric vehicle batteries and equipment.
    - Oregon Electric Vehicle Infrastructure Deployment Guidelines: Oregon's Electric Vehicle Infrastructure Deployment Guidelines provide the necessary background information for understanding EV requirements and the related codes, laws and standards, and are the foundation upon which the EV Micro-Climate© program builds in order to provide the optimum infrastructure to support and encourage the adoption of electric vehicles, wherever it is directed.

  - **Session #4: Interoperability (Open Access)**
    - ChargePoint Network: Affiliated with Coulomb, all ChargePoint EV charging stations are connected through the ChargePoint Network, the largest network of independently owned charging stations in the world.
    - eVgo Network: eVgo is a wholly-owned subsidiary of NRG Energy, Inc, and offers in-home, at-work, and on-the-go ("Freedom Station") charging in monthly packages.
    - Blink Network: Blink is an EV charging infrastructure and product line owned by ECOtality, Inc. Blink refers to the branded EV charging stations, software, and online service components that make up the rich charging infrastructure known as the Blink Network.

- **General PEV Resources**
  - California Air Resources Board's Advanced Clean Cars Program: In January 2012, the Air Resources Board approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot and global

warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars.

- California Department of General Services Executive Order B-16-12 Implementation Plan: The Office of Fleet and Asset Management (OFAM) provides alternative fuel vehicle (AFV) solutions for service-wide state travelers and to green the state fleet.
- California Air Resources Board's "Drive Clean" Plug-In Electric Vehicle Resource Center: DriveClean.ca.gov is developed as a resource for car buyers to find clean and efficient vehicles. DriveClean.ca.gov provides information and resources to learn about clean advanced vehicle technologies and fuels, and offers a variety of useful search and comparison tools to help car buyers find the cleanest vehicle that suits their lifestyle.
- Clean Vehicle Rebate Project: The Clean Vehicle Rebate Project is funded by the California Air Resources Board and administered statewide by the California Center for Sustainable Energy. A total of $45.2 million has been appropriated for FY 2009-2013 to promote the production and use of zero-emission vehicles, including electric, plug-in hybrid electric, and fuel cell vehicles.
- Plug-in Electric Vehicle Collaborative Community PEV Readiness Toolkit: This toolkit highlights actions a community can take to get ready for the plug-in electric vehicles (PEVs) that are arriving in communities across California. Each easy-to-reference section includes a basic description of the needed action, its purpose, and examples from California communities and stakeholders.
- "Streamlining the Permitting and Inspection Process for Plug-in Electric Vehicle Home Charger Installations" Report: This paper characterizes key aspects of the installation process as they relate to permitting and inspection considerations and highlights common challenges and questions that arise.
- "Accessibility and Signage for Plug-In Electric Vehicle Charging Infrastructure" Report: This report provides a clear delineation of the service provided by charging infrastructure and is intended to ensure that charging is accessible and complies with federal and state requirements.
- "Maps and Apps, Today's Mapping and Location-Based Services for Plug-In Electric Vehicle Charging Infrastructure" Report: This report describes the current status of PEV infrastructure mapping and navigation services and outlines what will be needed to meet the future challenges that come with this relatively new, yet rapidly growing industry.
- PEV Communication Guides: A series of eight guides with timely, topical graphs and relevant communication points on various California-specific PEV topics, including:
    - How do PEVs Benefit California?
    - What Are the Benefits of Driving a PEV? What Cars Are Available?
    - PEV Charging: Where and When?
    - Fuel Costs: PEVs vs. Gasoline Cars?
    - How Do Communities Become PEV Ready?
    - Workplace Charging: Why and How?
    - PEV Batteries: Safety, Recycling and Re-Use?

- Next 10 and Collaborative Economics (2011), "Powering Innovation: California is Leading the Shift to Electric Vehicles from R&D to Early Adoption": This December 2011 report from Next 10 and Collaborative Economics tracks key indicators to assess opportunities and obstacles for California in the EV sector and finds California captures 69 percent of global EV investment in 2011, ranks first in nation in EV patents, and EV jobs increase during downturn.
- West Coast Electric Highway: The "West Coast Electric Highway" is an extensive network of electric vehicle (EV) DC fast charging stations located every 25 to 50 miles along Interstate 5 and other major roadways.
- PEV Planning and Single Family Residential Charging: Planners should view residential charging, particularly in single-family homes, as critical to PEV adoption in the near term
- Planning for Workplace Charging: Workplaces present a significant, and largely untapped, opportunity for PEV charging. After residences, they are the single most important environment for electric refueling.
- Pricing Policies for PEV Infrastructure: Good pricing policies provide PEV drivers with fair, efficient access to a variety of charging levels. They also help charging site hosts or operators cover costs.
- Evaluating Land Use Opportunities and Existing Charge Stations: Variation in these parking resources will shape local PEV readiness efforts, by defining both the opportunities and the limits on where, how much and when PEV charging can occur locally.
- Challenges to Charging Electric Vehicles in Multifamily Homes: An insufficient number of parking spaces, constrained electrical capacity, expensive installation costs, and multiple EV charging station users are examples of some of the issues facing multifamily residential buildings.
- Financial Viability Of Non-Residential Electric Vehicle Charging Stations:, The purpose of this report is to assess the financial viability of non-residential electric vehicle charging stations in the Los Angeles metro area.
- Increasing Electric Vehicle Charging Access in Multi-Unit Dwellings in Los Angeles:, Aims to identify barriers, evaluate existing policies supporting home EV charging installations, and recommend policy options to address challenges to charging in multi-unit dwellings in the City of Los Angeles
- Planning for Multi-unit Dwellings: Multi-unit dwellings (MUDs), which include apartment and condominium buildings, make up a significant percentage of the housing stock in many Southern California cities. As such, they represent a large potential source of PEV adoption in the future.
- Statewide Fast Charging Stations: A simulation of some of the challenges that face fast charging stations in the state.
- California Statewide Charging Survey: What do Drivers Want?: Presents the results of a survey of plug-in vehicle owners asking about the current use of charging infrastructures and needed chargers.
- Who is Buying Electric Cars in California?: For years researchers have been trying to predict who is going to purchase electric vehicles. This study explores the characteristics of 1,200 households who purchased a plug-in vehicle in California during 2011-2012.

- California Plug-in Electric Vehicle Collaborative: This plan aspires to facilitate PEV market growth so that, by the end of the decade, hundreds of thousands of PEVs are sold annually in California and the market contributes significantly to California's ongoing economic, energy, and environmental policy objectives.

- **Research Papers (for reference only; journal subscription required)**
  - DC Fast as the Only Public Charging Option? Scenario Testing from GPS-tracked Vehicles: Electric vehicle travel and DC fast charging was simulated using travel information from 48 households in the Sacramento Area using gasoline capable vehicles.
  - Consumer Perception and Use of Driving Distance of Electric Vehicles: Popular media and even researchers commonly assume that ownership of a battery electric vehicle provides consumers less performance and mobility than consumers expect.
  - L. Zhang, T. Brown, G.S. Samuelsen, "*Fuel reduction and electricity consumption impact of different charging scenarios for PHEVs,*" Journal of Power Sources, 2011, Volume 196, Issue 15, Pages 6559-6566.
  - K.H. Jansen, T. Brown, G.S. Samuelsen, "*Emissions Impacts of Plug-in Hybrid Electric Vehicle Deployment on the U.S. Western Grid,*" Journal of Power Sources, 2010, Volume 195, Issue 16, Pages 5409-5416.
  - Ghazal Razeghi, Tim Brown, G. Scott Samuelsen, "*The Impact of Plug-In Vehicles on Greenhouse Gas and Criteria Pollutants Emissions in an Urban Air Shed Using a Spatially and Temporally Resolved Dispatch Model*," Journal of Power Sources, 2011, Volume 196, Issue 23, Pages 10387-10394.

PLEASE NOTE: IF YOU WOULD LIKE TO RECOMMEND ADDITIONAL MATERIALS PLEASE LET THE CEC KNOW.