Policy Forum Series
Zero Emission Vehicles: Beyond the Mandate


June 27, 2012
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<th>Sessio\n   n</th>
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<tr>
<td>I</td>
<td>ZEV 101: Overview of ZEV technologies, energy and environmental motivations, current policies, remaining barriers</td>
<td>May 21, 2012 11:30a-1:00p</td>
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<td>II</td>
<td>Here Come the Cars: Technology status and challenges, the consumer perspective, how many and how fast?</td>
<td>June 6, 2012 11:30a-1:00p</td>
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<td>III</td>
<td>Charging Ahead: Electric vehicle infrastructure – what is needed, when, and where?</td>
<td>June 13, 2012 11:30a-1:00p</td>
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<td>IV</td>
<td>Hydrogen: Fuel cell vehicle infrastructure – what is needed, when, and where?</td>
<td>June 27, 2012 11:00a-12:30p</td>
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Key takeaways from session 1-3

• Zero emission vehicles including plug-in hybrid, battery electric, and hydrogen fuel cell electric vehicles have the potential to meet state policy goals for air quality, climate, and energy security;

• Significant challenges remain for these vehicle technologies to achieve commercial success and ongoing research provides insights about key challenges and solutions;

• Highest chance of success requires a “portfolio approach” including sustained policies and strategies that support private investment across multiple cost-effective and customer focused solutions
Key takeaways from session 1-3

- Vehicle customers are still largely unaware of the attributes of ZEVs and how they might or might not meet their mobility needs.
- Infrastructure cost and availability is a key consideration for the adoption and use of ZEVs. The best strategies to provide infrastructure requires a detailed knowledge of driving and fueling behavior.
Session 4 Goals

To provide a better understanding of:

• How hydrogen vehicles relate to state goals
• Current government policies and activities as they relate to hydrogen infrastructure
• What the latest research says about:
  – How much will hydrogen cost?
  – How many stations are needed?
  – Where should they be placed?
  – Is there a business case for infrastructure?

When?
Speakers

- **Catherine Dunwoody**, Executive Director of the California Fuel Cell Partnership (CaFCP)
- **Joan Ogden**, Co-Director of the Sustainable Transportation Energy Pathways (STEPS) Program at the Institute of Transportation Studies (ITS-Davis)
- **Analisa Bevan**, Chief of the Sustainable Transportation Technology Branch at the California Air Resources Board
- **Jim McKinney**, Manager of the Emerging Fuels and Technologies Office of the California Energy Commission
Back-up
One possible future

Figure: 2050 Scenario from California Air Resources Board
Life-Cycle Emissions

Source: USDOE, 2011
Total Cost of Ownership

Source: USDOE, 2011