CALIFORNIA CLIMATE POLICY MODELING (CCPM) DIALOG

Greenhouse Gas Emissions Modeling

– California 2030

February 23, 2015
Modeling Questions

• How might California’s energy system evolve by 2030 & 2050:
  – Greenhouse Gas (GHG) trajectories?
  – Fuel mix and technology mix?
  – Infrastructure build rate?
  – Air quality?
  – Costs and benefits?

• What assumptions drive these results? What are the key uncertainties?

• What are common insights across models? Where do they diverge?
• Future modeling efforts should focus on the:
  – economic impacts and logistical feasibility of given scenarios,
  – interactive effects between two or more climate policies,
  – role of uncertainty in the state’s long-term energy planning, and
  – identification of pathways that achieve the dual goals of criteria pollutant and GHG emission reduction.

• Modelers need to work with policy makers more closely to represent the details of the policy design
• Data availability and data/model transparency is absolutely essential.
• Identifying ways to make the models and model findings more useful and accessible to policy-makers and stakeholders.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30 am</td>
<td><strong>Introduction and Welcome</strong></td>
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<tr>
<td></td>
<td>Cliff Rechtschaffen, Office of Governor Edmund G. Brown Jr.</td>
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<td>Sonia Yeh, University of California at Davis</td>
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<td>9:00 am</td>
<td><strong>California PATHWAYS Model</strong></td>
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<td>Amber Mahone, Elaine Hart, Jim Williams, Energy and Environmental Economics, Inc.</td>
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<td>Roundtable Discussion</td>
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<td>Jim Bushnell, University of California at Davis</td>
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<td>10:00 am</td>
<td><strong>Berkeley Energy and Resources (BEAR) Model</strong></td>
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<td>David Roland-Holst, University of California at Berkeley</td>
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<td>Roundtable Discussion</td>
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<td>Larry Goulden, Stanford University</td>
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<td>11:00 am</td>
<td><strong>Break</strong></td>
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<td>11:15 am</td>
<td><strong>CA-TIMES Model</strong></td>
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<td>Chris Yang, University of California at Davis</td>
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<td>Roundtable Discussion</td>
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<td>Guido Franco, California Energy Commission</td>
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<td>12:15 pm</td>
<td><strong>Lunch</strong></td>
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<td>Richard Corey, California Air Resources Board</td>
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<td>1:30 pm</td>
<td><strong>California LBNL Greenhouse Gas Analysis of Policies Spreadsheet (CALGAPS)</strong></td>
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<td>Jeff Greenblatt, Lawrence Berkeley National Laboratory</td>
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<td>Roundtable Discussion</td>
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<td>Anthony Eggert, Program Director, ClimateWorks Foundation</td>
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<td>2:30 pm</td>
<td><strong>Panel: Insights from Sectoral / Specialized Models</strong></td>
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<td>Moderator: Mark Rothleder, California Independent System Operator</td>
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<td>Electric Sector: Gregory Brinkman, National Renewable Energy Laboratory</td>
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<td>Transportation Sector: Joshua Cunningham, California Air Resources Board</td>
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<td>Macro-economy: Dan Wei, University of Southern California</td>
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<td>3:30 pm</td>
<td><strong>Break</strong></td>
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<td>3:45 pm</td>
<td><strong>Roundtable Discussion: The Role of Modeling in Selecting State Goals</strong></td>
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<td>Moderator: Anthony Eggert, Program Director, ClimateWorks Foundation</td>
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<td>Dallas Burtraw, Resources for the Future</td>
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<td>Laura Wisland, Union of Concerned Scientists</td>
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<td>4:45</td>
<td><strong>Closing Remarks</strong></td>
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