Workshop Overview

- Scoping Plan overview
- Policy criteria and evaluation plan
- Economic modeling status report
Overview of the Scoping Plan Process
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>Nov 30, 2007</td>
<td>Scoping Plan Kick-Off Workshop</td>
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<tr>
<td>Dec 14, 2007</td>
<td>Sector Summary Workshop</td>
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<td>Jan 16, 2008</td>
<td>Mechanisms Workshop</td>
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<td>May 19, 2008</td>
<td>Policy Scenarios Workshop</td>
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<tr>
<td>June 26, 2008</td>
<td>Draft Scoping Plan released</td>
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<td>Summer 2008</td>
<td>Workshops on draft Scoping Plan</td>
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<td>July 8: Diamond Bar</td>
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<td>July 14: Fresno</td>
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<td>July 17: Sacramento</td>
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<td>August: TBD</td>
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<td>October 2008</td>
<td>Staff Final Scoping Plan released</td>
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<tr>
<td>November 20-21, 2008</td>
<td>Board Hearing on Scoping Plan</td>
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Plan Objectives

• Achieve the GHG emission target for 2020 and place California on the path to long-term reductions
• Maximize economic benefits and minimize economic harm
• Maximize societal benefits, including environmental and public health co-benefits
• Provide leadership and influence other governments
• Assure that emissions reductions required of each sector are equitable
ARB has followed two parallel paths in developing the options that will be presented in the Scoping Plan:
- Identify specific emission reduction measures
- Develop major program design options
ARB has worked closely with other agencies in the Climate Action Team.

Teams have identified a wide range of possible options for emission reductions, including:

- Strengthening existing programs
- New regulatory measures
- Voluntary programs and incentives
Measure Development

• The Scoping Plan will focus on measures that provide a path to meeting the 2020 target
  – Put on path toward 2050
• Core measures based on evaluation of the range of options
  – “Must do” measures
• Other emission reduction opportunities that could be used in a regulatory approach
• ARB will continue to work with the CAT teams to further develop options
Program Development

- Looking at many policy tools including:
  - Traditional regulations
  - Cap and trade
  - Fees and incentives
  - Voluntary actions
  - Offsets
- Scoping Plan will likely include a mix of tools
Comparison of Policy Tools

• Traditional regulations
  – Well understood
  – History of successful use by ARB
  – Would require numerous regulatory proceedings

• Cap and trade
  – Cap offers certainty on emission reductions
  – Trading offers flexibility and may reduce direct costs
  – Regional/federal/international cap and trade programs
  – Significant work needed to create effective market

• Carbon fee
  – Uncertainty about level of emission reductions
  – Would require greater analysis to determine the appropriate fee level
Voluntary Actions

• ARB encourages early voluntary reductions
  – Board adopted policy in February 2008
  – ARB working with local districts and CCAR on quantification
• Voluntary reductions may play a role in the AB 32 program going forward
  – Offsets could provide flexibility in regulatory or cap and trade programs
• Strong regulatory foundation
  – Early Action Measures
  – “Core” measures
• Staff recommendations on key elements of overall approach
• Preliminary evaluations
• Draft Plan will recommend core measures, including:
  – Tailpipe emission regulations
  – Low carbon fuel standard
  – Reducing vehicle miles traveled
  – Increased energy efficiency
  – Renewable resource development
  – High global warming potential measures
• Three approaches for achieving additional emission reductions:
  – Additional regulatory measures
  – Cap and trade program
  – Carbon fees
Draft Scoping Plan: Evaluation Status

• Delays in economic modeling
  – More detail on status this afternoon
• Non-economic analysis in progress
• Evaluation will continue through the summer to support the October Scoping Plan
• Evaluation supplement released Summer ‘08
  – Workshop on the supplemental evaluations
Questions?

Comments?

If you’re watching the webcast, you can email questions or comments to:
ccplan@arb.ca.gov
Policy Criteria
&
Evaluation Plan
The Scoping Plan published in October will recommend a single preferred approach

- Will include core measures (could be revised from the proposed core in June draft)
- Likely to include some combination of regulatory and market approaches to get the additional reductions needed to meet the 2020 target
Criteria for Crafting a Preferred Approach

• Meet the key Scoping Plan objectives
  – Achieve the target for 2020
  – Maximize economic benefits and minimize economic harm
  – Maximize societal benefits, including environmental and public health co-benefits
  – Assure that emissions reductions required of each sector are equitable
  – Provide leadership and influence other governments
Additional Criteria

• Consider additional factors, such as:
  – Administrative simplicity
  – Ability to enforce reductions
  – Durability and flexibility in program implementation
Integrating with Regional Programs

- California actively participating in Western Climate Initiative
- Climate change program must comply with AB 32 requirements
  - Must pass all statutory “tests”
- Regional program could help address leakage concerns and encourage action by other governments
Possible Use of Market Mechanisms

- ARB allowed to employ market-based compliance mechanisms
- Regulations must ensure:
  - Reductions are real, permanent, quantifiable, verifiable, and enforceable
  - Reductions are in addition to any reduction that is required or would otherwise occur
  - Reduction is equivalent to direct emission reduction in timing and amount
Required Steps Prior to Inclusion of Market Mechanisms in Regulations

• Prior to inclusion of market-based approaches in regulations implementing AB 32, the Board must
  – Consider potential for cumulative and localized impacts
  – Prevent increase in criteria or toxic emissions
  – Maximize additional environmental and economic benefits
Cost Effectiveness

• AB 32 calls for the maximum technologically feasible and cost-effective greenhouse gas emission reductions
• ARB will evaluate the cost of reductions using the best methods and information available
• Cost effectiveness of GHG emission reductions will not be the only criterion for deciding what to include in the program
• Will also consider other factors such as:
  – Broader societal benefits
  – Complementary policy goals such as fuel diversity
  – Sector equity
ARB is evaluating the environmental, public health, and societal benefit implications of different policy options. The approach includes analysis of:

- Individual measures
- Emissions by sectors
- Flexible compliance mechanisms
- Societal benefits
- Energy diversity
- Impacts to low income communities
• Analysis will provide the Board with a policy perspective and understanding of potential impacts, including:
  – Co-benefits including increases or decreases in emissions of criteria and toxic air pollutants
  – Range of potential CEQA impacts
• Where feasible, this analysis will include quantitative estimates of potential impacts.
Sector Analyses

- More detailed impacts analysis for some sectors because of potential localized impacts
  - Refining
  - LCFS (including indirect land use issues)
  - Electricity
- ARB is coordinating with the CEC on the evaluation of the electricity sector
Flexible Compliance Mechanisms

• Staff will evaluate the potential for reduced co-benefits from facilities that use flexibility options or offsets rather than instituting measures to achieve GHG reductions onsite.

• Sector analysis will address the potential for foregone emission reductions when flexible compliance mechanisms are implemented.

• Evaluation will consider the distribution of costs and benefits.
• Qualitative analysis of the public health impacts of various policy approaches
• Use available data to perform a statewide or regional level evaluation consistent with past measures (e.g. diesel risk reduction measures)
Energy Diversity

- Use energy models to evaluate the impact of various policy alternatives on energy diversity and statewide air pollution co-benefits.
- Estimate the total statewide reduction in fuel consumption resulting from the proposed measures to estimate statewide air pollution co-benefits.
Impacts to Low-Income Communities

- Use E-DRAM to assess the impact of the policy alternatives on Californians by income level
- E-DRAM will help staff to evaluate the potential for disproportionate economic impact to low-income communities
Design Choices

• These evaluations and criteria …
  – are critical for choosing among approaches
  – will inform the design choices that ARB will make in developing the details of the approaches
• Preliminary report of these analyses to be included in the Draft Plan
• Will continue to refine the analyses over the summer
• Evaluation supplement will include updates on these analyses
• ARB will complete further evaluations as part of the regulatory development process
Questions?

Comments?

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