Climate Change
Draft Scoping Plan

Economic and Technology Advancement Advisory Committee

July 31, 2008
California Air Resources Board
Today’s Presentation

- Draft Scoping Plan Overview
- Preliminary Recommendation
- Additional Measures Under Consideration
- Scoping Plan Evaluations
- Environmental Justice Advisory Committee Update
Draft Scoping Plan

• By 2020, reduce greenhouse gas (GHG) emissions statewide to 1990 levels

• California’s GHG strategies will also:
  – Protect and improve public health
  – Promote the development of clean energy
  – Foster opportunities for economic growth
  – Provide a model for regional, federal, and international programs
  – Put State on a path to 2050 goal
Draft Scoping Plan Development

- Contributions from Climate Action Team Subgroups
- Input from EJAC, ETAAC, and MAC
- Formal workshops & stakeholder work group meetings
- Public solicitation
- Extensive outreach at meetings, conferences and other events
Status

• Draft Plan released June 26
  – Request comments by August 1
• Appendices to Draft Plan released July 22
  – Request comments by August 11
• Supplemental evaluation release summer 2008
  – Workshop
• Stakeholder meetings (July – September)
• Community meetings (July-August)
• Proposed Scoping Plan release October 3
• Board consideration of Proposed Scoping Plan on November 20
Preliminary Recommendation
Draft Scoping Plan
Recommendations

• Mix of strategies that combine market mechanisms, regulations, voluntary measures, fees, and other programs through both new and existing programs

• Key elements:
  – Energy efficiency programs
  – 33 percent Renewables Portfolio Standard
  – California cap-and-trade program linked to Western Climate Initiative
  – Existing laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard
  – Targeted fees to fund implementation
Structure of the Draft Plan

GHG Emissions (MMTCO₂E)

596
512
400
365

2020 Projected Business as Usual Total GHG emissions
2020 Capped Sector Business as Usual GHGs
Total GHG Reductions from Capped sectors
2020 Capped Sector GHG emissions limit

GHG reductions from recommended measures in capped sectors
Additional GHG Reductions from capped sectors

Capped Sectors:
Transportation
Electricity
Natural Gas
Industry

Total GHG reductions from recommended measures in capped sectors
GHG emissions limit
<table>
<thead>
<tr>
<th>Recommended Reduction Strategies</th>
<th>Sector</th>
<th>2020 Reductions (MMTCO$_2$E)</th>
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</thead>
<tbody>
<tr>
<td>State Government</td>
<td>Various</td>
<td>1-2</td>
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<tr>
<td>California Cap-and-Trade Program Linked to WCI</td>
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<td>California Light-Duty Vehicle GHG Standards</td>
<td>Transportation</td>
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<td>Energy Efficiency</td>
<td>Electricity</td>
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<td>Renewables Portfolio Standard (33% by 2020)</td>
<td>Electricity</td>
<td>21.2</td>
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<td>Low Carbon Fuel Standard</td>
<td>Transportation</td>
<td>16.5</td>
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<tr>
<td>High Global Warming Potential Gas Measures</td>
<td>High GWP</td>
<td>16.2</td>
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<td>Sustainable Forests</td>
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<td>Water Sector Measures</td>
<td>Water</td>
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<td>Vehicle Efficiency Measures</td>
<td>Transportation</td>
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<td>Goods Movement</td>
<td>Transportation</td>
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<td>Heavy/Medium Duty Vehicles</td>
<td>Transportation</td>
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<td>Million Solar Roofs (Existing Program Target)</td>
<td>Electricity</td>
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<td>Local Government Actions and Regional GHG Targets</td>
<td>Land Use/Local Govt</td>
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<td>High Speed Rail</td>
<td>Transportation</td>
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<td>Landfill Methane Control</td>
<td>Recycling &amp; Waste</td>
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<td>Methane Capture at Large Dairies</td>
<td>Agriculture</td>
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<td>Energy Efficiency/Co-Benefit Audits for Large Industrial Sources</td>
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<td>Additional Emissions Reduction from Capped Sectors</td>
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<tr>
<td><strong>Total Reductions</strong></td>
<td></td>
<td><strong>169</strong></td>
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</tbody>
</table>
Other Measures Under Evaluation
Sector-Based Measures

• Transportation
  – Market-based strategies

• Electricity/Energy
  – More aggressive efficiency programs
  – Reduce coal-fired electricity

• Industry
  – Refineries
  – Cement production
  – Glass manufacturing
  – Boilers and stationary engines
Flexible Compliance Mechanisms

• Offsets
  – Rigorous criteria necessary to maintain environmental integrity
  – ARB must adopt methodologies and enforcement regulations
  – Intention to establish an offset limit such that a significant portion of reductions occur within California

• Upstream Carbon Fee
  – Use carbon pricing to achieve reductions
  – Price would be determined through economic models
  – Provides less certainty of meeting 2020 goal
Potential Use of Revenues

- California Carbon Trust
  - Use of revenues for the public good
- Other potential uses:
  - Support AB 32 reduction goal
  - Achieve environmental co-benefits
  - Local government incentives & consumer rebates
  - Climate change adaptation
  - Community benefits
  - Consumer rebates
  - RD&D funding
  - Worker transition assistance
Draft Scoping Plan Evaluations
Potential Economic Impacts
Preliminary Evaluation

• Overall savings from implementation of Draft Scoping Plan expected to exceed costs
  – Many measures increase energy efficiency

• Additional analyses in progress
  – Conducting macro-economic modeling using E-DRAM and BEAR
  – Modeling of economy, energy, emissions interaction using Energy 2020
Environmental/Public Health Analysis

- Examine in the context of ARB’s traditional public health programs
  - Assessment of environmental impact of proposed measures (air, water, land, waste disposal and hazardous waste, biological resources)
  - Public health impacts based on environmental assessment
- Expect statewide reductions in fossil fuel use and improved combustion efficiency
- Preliminary health benefits for 2020
  - Include 340 avoided premature deaths, 57,000 avoided work loss days
  - Total economic valuation of $1.5-2.4 billion
Societal Impacts

• Evaluation required when regulations are adopted
  – Intend to evaluate preliminary recommendation

• Consider factors such as:
  – Energy diversity, mobility, regressivity and job creation

• Will also consider ways to direct public and private investment toward most disadvantaged communities
Evaluation Supplement

• Evaluation supplement will be available in summer 2008
  – Results of economic modeling for several scenarios for achieving AB 32 goals
    • Preliminary recommended measures
    • Use of additional regulation and programs
    • Use of carbon fee
  – Results of environmental/public health analysis
• Workshop will be held on the supplement after its release
• Written comments will also be welcome
Scoping Plan Implementation

• ARB initiating a fee regulation rulemaking this summer to fund AB 32 administrative costs
• Two years to adopt AB 32 measures
  – Regulatory development will follow normal public process
  – Extensive stakeholder outreach and involvement
• Implementation and enforcement critical
• ARB must monitor implementation
• Required to re-visit Scoping Plan in 5 years
For Additional Information:

- ARB Climate Change Web Site
  (To stay informed – sign up for list serve)
  www.arb.ca.gov/cc/cc.htm

- California Climate Change Portal
  www.climatechange.ca.gov

- Comments on the Draft Scoping Plan
  www.arb.ca.gov/cc/scopingplan/spcomment.htm
Environmental Justice Advisory Committee Update