AB 32: Interim Decision on Greenhouse Gas Regulation in the Electricity and Natural Gas Sectors

California Energy Commission

Business Meeting of March 12, 2008

Karen Griffin
Public Process

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 19, 2007</td>
<td>Symposium on point of regulation designs</td>
</tr>
<tr>
<td>Aug 21, 2007</td>
<td>Joint Commissions en banc on type and point of regulation</td>
</tr>
<tr>
<td>Jun 22, 2007</td>
<td>Workshop on entity-specific baselines and allocation issues</td>
</tr>
<tr>
<td>Jun 30, 2007</td>
<td>Market Advisor Committee sent recommendations to Governor</td>
</tr>
<tr>
<td>Jul &amp; Aug 2007</td>
<td>Comments received on natural gas issues</td>
</tr>
<tr>
<td>Aug 6, 2007</td>
<td>Comments and replies received point of regulation and recommendations of Market Advisory report</td>
</tr>
<tr>
<td>Nov 7, 2007</td>
<td>Workshop on allocation issues</td>
</tr>
<tr>
<td>Dec 3 &amp; 17, 2007</td>
<td>Comments and reply comments due on allocation</td>
</tr>
<tr>
<td>Feb 8, 2008</td>
<td>Interim Opinion issued, received comments and replies</td>
</tr>
<tr>
<td>Mar 11, 2008</td>
<td>Revised Interim Opinion issued</td>
</tr>
</tbody>
</table>

65 stakeholder groups actively participated in the process and many more monitored
Why Recommendations are Needed Now

ARB needs them to start its process

<table>
<thead>
<tr>
<th>Joint Commissions</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
</tr>
</thead>
<tbody>
<tr>
<td>POR &amp; Allocation Policy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modeling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Decision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| ARB                                    |     |     |     |     |     |     |     |     |     |
| Elec/NG Public Review                  |     |     |     |     |     |     |     |     |     |
| Staff Scoping Plan                     |     |     |     |     |     |     |     |     |     |
| Adoption of the Scoping Plan           |     |     |     |     |     |     |     |     |     |

Date:
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov

Legend:
- Green
- Blue
Direct Program Measures

Direct regulatory requirements are foundation

- Minimum mandatory levels of energy efficiency and renewables should be required of all retail providers
  - Minimum is all cost-effective energy efficiency in electricity and natural gas sectors, to be reached by both utility and non-utility programs
  - Put mandatory minimum renewables levels in ARB scoping plan
  - Joint agencies will develop a plan for additional mandatory minimum levels of renewables
Goals of Design

• Achieve real GHG reductions, especially the problems of unspecified system purchases and imports
• Least-cost to Consumers
• Compatibility/expandability to regional or federal GHG approaches
• Accuracy and ease of reporting, tracking, and verifying GHG emission reductions
• Compatible with ongoing reforms to retail and wholesale energy markets, particularly the CAISO’s market redesign
Market Design

• ARB has statutory requirements to analyze market-based approaches prior to including cap-and-trade program in scoping plan
• Recommends inclusion of electricity sector in a multi-sector cap-and-trade program
• Parallel development of regional market
Point of Regulation

- Recommends that the deliverer be the point of regulation for carbon-emitting portion of sector cap
  - Treats in-state and imports equally
  - Consistent with other sectors
  - Rewards early action
- The point of regulation does not prejudge distribution of benefits or allocation design.
Electricity Cap-and-Trade

Recommends a multi-sector cap-and-trade program, including the electricity sector, if ARB finds that AB 32 Market Measures tests can be met.

- Can produce additional emissions reductions beyond regulatory programs at lower cost
- Allows flexibility for obligated entities to seek low-cost options across economy
- Encourages investment in research and innovation for lowering emissions
- Efficiently distributes costs across all obligated entities

Role of cap-and-trade is small in early years
Allocation of Benefits: Principles

- High level principles to focus that assessment
- Some portion of emissions allowances for electricity should be auctioned
- The majority of any revenues should be recycled to electricity consumers for
  - For investments in GHG reducing energy efficiency and renewables
  - For consumer bill relief
- Next few months of proceeding will analyze proper mix of administrative allocation, bill impacts and auctioning, as well as distribution of auction proceeds/revenues
Natural Gas

• Applies to smaller end uses served by local distribution companies and infrastructure
• Mandatory minimum levels of energy efficiency
• Not included in initial cap-and-trade program:
  – Fewer options exist to reduce emissions by resource mix
  – Lower availability of low-carbon alternative sources
  – Energy efficiency is best option for reducing emissions
  – Reporting protocols are still under development
  – Preserves option for upstream regulation of natural gas at point of extraction or gathering
• Likely to recommend inclusion at a later time
Next Steps

• Will present interim opinion at ARB April 17 scenarios workshop on emissions reductions strategies
• Joint agencies will schedule next steps shortly
• Further analysis
  – Assess costs and benefits modeling of program design, allocation options, and flexible compliance
  – Determine impacts on the consumers served by different retail providers
  – Develop recommendations for flexible compliance
  – Develop recommendations for combined heat-and-power treatment