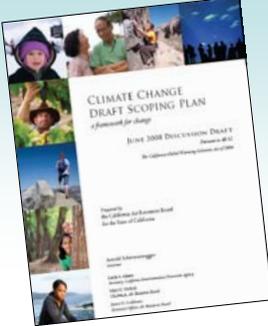




## WESTCARB Annual Business Meeting



### California's Climate Change Draft Scoping Plan: A Framework for Change

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Anchorage, AK  
October 2, 2008



## California Air Resources Board (ARB)

- Created in 1967
- State Legislature gave ARB broad authority to create and enforce air pollution control regulations
- California is allowed to enforce emission standards more stringent than federal standards
- Assembly Bill 32 (California Global Warming Solutions Act) authorizes ARB to establish policies and programs to reduce greenhouse gas emissions

## Governor Schwarzenegger's Climate Change Targets



By 2020, reduce greenhouse gas emissions to 1990 levels (~169 MMT reduction, 30% below business-as-usual)\*

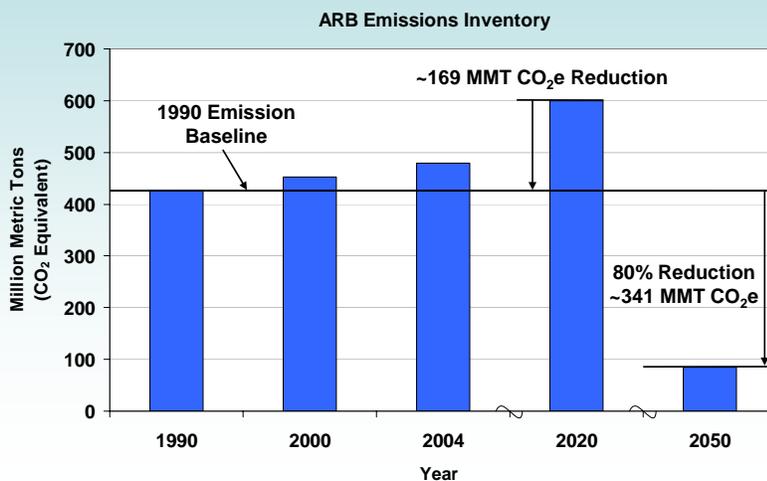
By 2050, reduce to 80% below 1990 levels†

\* AB 32, S-3-05  
† S-3-05

WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP

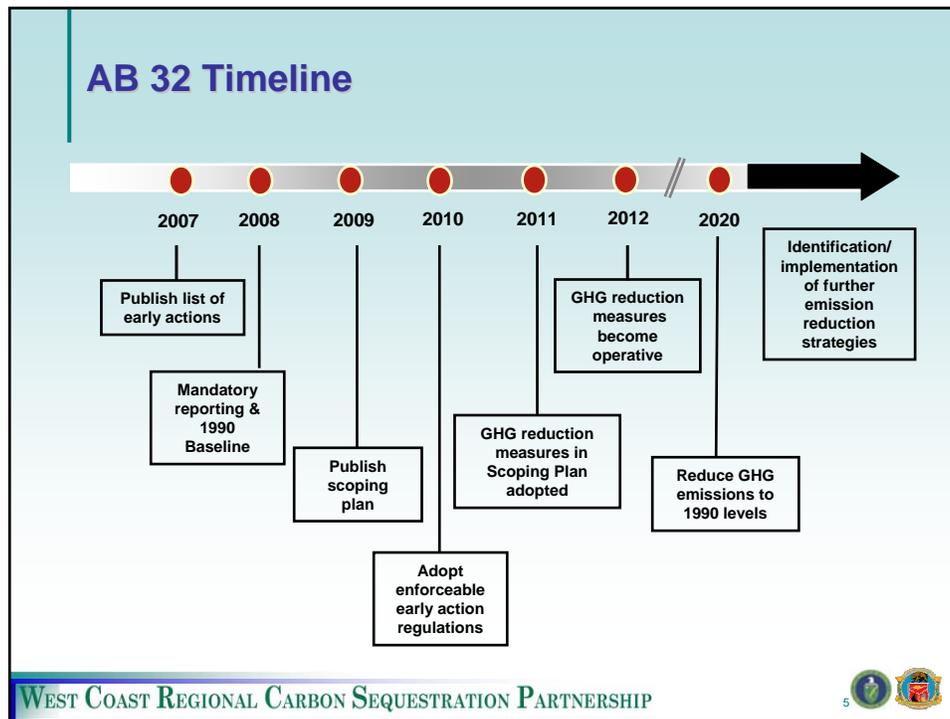


## Magnitude of the Challenge



WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP





- ### Discrete Early Actions
- 2007
    - Green Ports/Electrification
  - 2008
    - High GWP gases in consumer products
    - SmartWays truck efficiency
    - Low Carbon Fuel Standard
    - Perfluorocarbons in semiconductor mftg
  - 2009
    - Landfill gas capture
    - Vehicle owner refrigerant (HFC-134a) servicing
    - SF<sub>6</sub> from non-electric sector
    - Tire inflation program
- WEST COAST REGIONAL CARBON SEQUESTRATION PARTNERSHIP

## Draft Scoping Plan

- The blueprint for how California will reach its emission reduction goals
- A collaborative effort of Climate Action Team subgroups, special committees, stakeholders, and the public (through formal workshops, outreach, and public solicitation)
- California's GHG strategies will...
  - 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



## Preliminary Recommendation

- Mix of strategies that combine market mechanisms, regulations, voluntary measures, and fees
- Key elements:
  - California cap-and-trade program linked to Western Climate Initiative
  - Energy efficiency programs
  - Renewables Portfolio Standard
  - Existing laws and policies



### Preliminary Recommendation

## State Government

- State must set an example
- Reduce “carbon footprint” by 30% from expected 2020 levels
  - State Green Buildings Initiative
  - State motor vehicle fleet clean-up
  - Procurement practices
  - Commute alternatives for state employees
- Evaluate “carbon shadow”
  - Climate change impact of government policies and decisions



### Preliminary Recommendation

## California Cap-and-Trade Linked to Regional Market

- California cap-and-trade program that links with other Western Climate Initiative partner programs to create regional market
- Ensure program meets all applicable AB 32 requirements
- Capped sectors:
  - Electricity
  - Industrial sources
  - Transportation fuels (by 2020)
  - Commercial and residential natural gas (by 2020)



**Preliminary Recommendation**

**California Cap-and-Trade Linked to Regional Market**

- Enforceable cap on GHG emissions from sources beginning in 2012
- Cap declines over time to meet 2020 targets; can be adjusted for 2050 target
- State distributes “allowances” equal to total emissions in the cap
- Limited use of offsets
- Strong enforcement and monitoring
- Must include safeguards for regional and local co-pollutants

**Preliminary Recommendation**

**Transportation**

Cars, Trucks, Goods Movement and Fuel

- Light-duty vehicle greenhouse gas reductions (Pavley I and Pavley II)
- Low Carbon Fuel Standard
- Efficiency measures for cars
- Aerodynamic design improvements for trucks
- Hybridization for urban and short-haul trucks
- Improved efficiency for heavy-duty trucks
- Implement adopted goods movement strategies and improve efficiency
- High-speed rail

**Preliminary Recommendation**

**Energy**

Electricity and Commercial/Residential

- Expand utility-based energy efficiency programs
- More stringent building and appliance standards
- Million Solar Roofs Program
- Achieve 33% RPS by 2020 for all utilities
- Residential solar water heaters
- Encourage combined heat and power

**Preliminary Recommendation**

**Local Government Actions  
and Regional GHG Targets**

- Develop regional targets in collaborative process
  - Comprehensive process
  - Consider other policy goals
  - Incorporate performance indicators
  - Provide state resources
- Encourage local climate action plans and local targets

**Preliminary Recommendation**

**Industrial Sources**

- Require efficiency and co-benefit audit of largest industrial sources
  - Evaluate potential to reduce GHG, criteria pollutants, and air toxics
- Audit results used to identify cost-effective GHG reductions that also reduce criteria or toxic pollutants
  - Co-benefits to nearby residents

**Preliminary Recommendation**

**Measures from Uncapped Sectors**

- High Global Warming Potential Gases
  - More potent greenhouse gases used in refrigerators, air conditioners, fire suppression, and insulating foam
  - Possible approaches:
    - Fees to discourage leakage or disposal
    - Standards to prevent leakage
    - Recovery and proper destruction of high GWP “banks”

**Preliminary Recommendation**

**Measures From Uncapped Sectors**

- Recycling and Waste
  - Reduce landfill methane; increased diversion, recycling and composting
- Forests
  - Preserve forest sequestration
- Water
  - Continue efficiency programs
- Agriculture
  - Encourage investment in digesters; evaluate mandatory program in 2013

**Under Evaluation**

**Sector-Based Measures**

- Transportation
  - Market-based strategies
- Electricity/Energy
  - More aggressive efficiency programs
  - Reduce coal-fired electricity
- Industry
  - Refineries
  - Cement
  - Glass manufacture
  - Boilers and stationary engines

**Under Evaluation**

**Offsets**

- Offsets allow entities outside the capped sector to participate and reduce emissions
  - Examples include carbon sequestration in plants and soils, credits from other programs
- Criteria for offsets inclusion:
  - Reductions are real, additional, measurable, verifiable, do not cause leakage

**Under Evaluation**

**Potential Use of Revenues**

- California Carbon Trust—use of revenues for the public good, for example:
  - Support AB 32 reduction goal
  - Achieve environmental co-benefits
  - Local government incentives and consumer rebates
  - Climate change adaptation
  - Community benefits
  - Consumer rebates
  - RD&D funding
  - Worker transition assistance

### Draft Scoping Plan Evaluations

## Potential Economic Impacts

- Overall savings from implementation of Draft Scoping Plan expected to exceed costs
  - Many measures increase energy efficiency
- Efficiency measures likely to mitigate moderate increases in energy prices
  - e.g., Pavley regulation saves car buyer an average of \$\$/month from fuel economy

### Draft Scoping Plan Evaluations

## Public Health Benefits

### Preliminary Estimates for 2020

Health Endpoint	Estimated Benefit*
Avoided premature deaths	320
Avoided hospitalizations due to respiratory causes	67
Avoided hospitalizations due to cardiovascular causes	120
Avoided asthma-related & other lower respiratory symptoms	8,800
Avoided acute bronchitis	730
Avoided work loss days	53,000
Avoided minor restricted activity days	310,000
<b>*Based on estimates from transportation, electricity, natural gas, and industry sector measures</b>	

## Coordination with Other Efforts

- WCI can result in lower-cost reductions and reduce leakage
  - California high standards can influence other sources and states in the region
- California and regional leadership can pave the way nationally
  - Need to preserve states as laboratories of innovation
- International participation is crucial for global success
  - International Carbon Action Partnership

## Next Steps

- Scoping Plan
  - October 15: Proposed Scoping Plan release with 45-day environmental review
  - November 20: Board consideration of the Proposed Scoping Plan
- 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 listserv)  
[www.arb.ca.gov/cc/cc.htm](http://www.arb.ca.gov/cc/cc.htm)
- California Climate Change Portal  
[www.climatechange.ca.gov](http://www.climatechange.ca.gov)
- Comments on the Draft Scoping Plan  
[www.arb.ca.gov/cc/scopingplan/spcomment.htm](http://www.arb.ca.gov/cc/scopingplan/spcomment.htm)
- General Climate Change Contact: Rich Varenchik  
[rvarench@arb.ca.gov](mailto:rvarench@arb.ca.gov); 626-575-6730

## 2002–2004 GHG Emissions (469 MMTCO<sub>2</sub>E)

