

Climate Change

Scoping Plan Implementation

January 29, 2009

California Air Resources Board

Morning Agenda

- Introduction
- Background
- Actions Taken in 2007 and 2008
- Scoping Plan Key Requirements
- Schedule for 2009 - 2010
- Other Activities
- Questions and answers

Afternoon Session

Cap and Trade Process

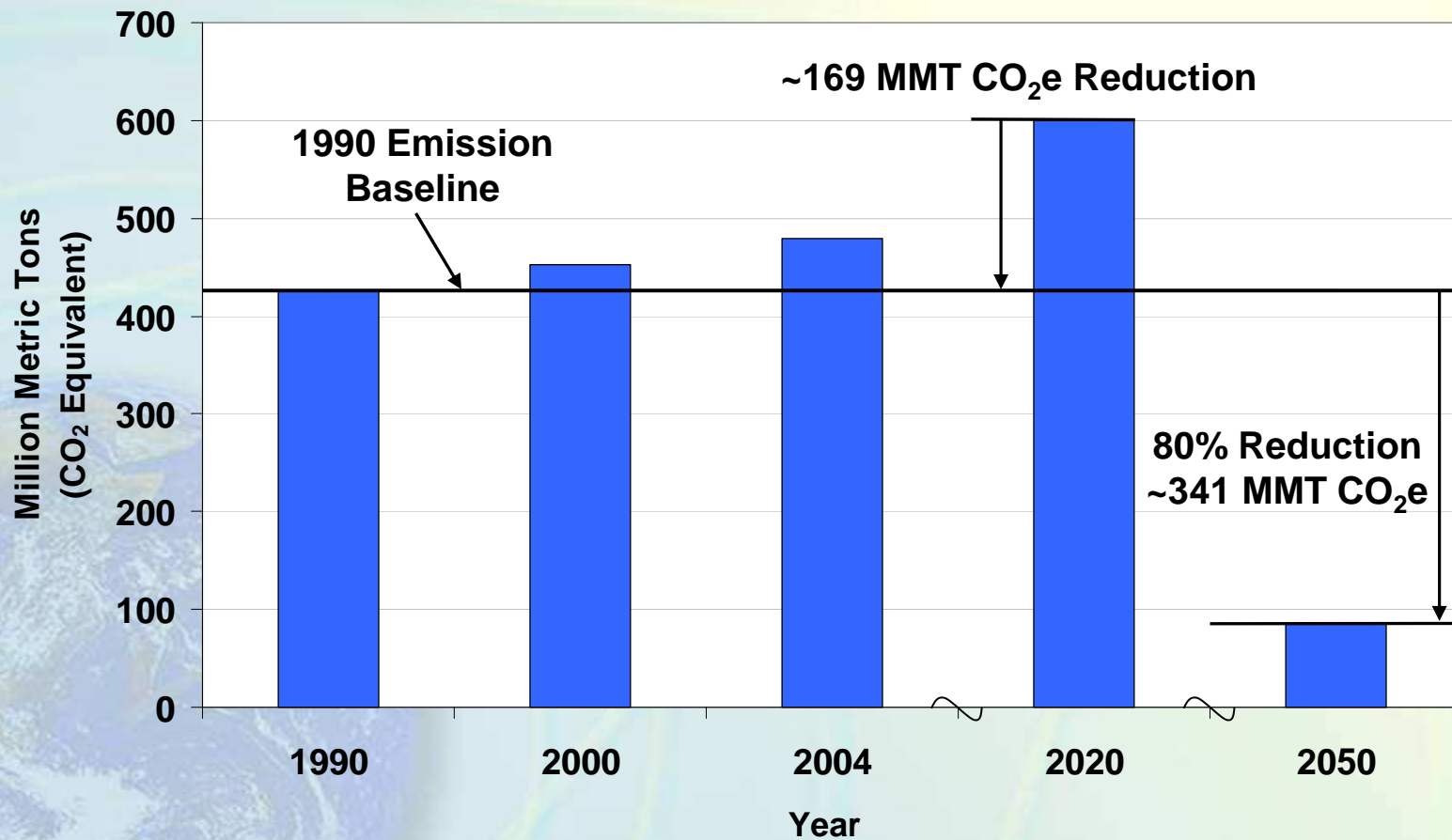
- Starts at 1 p.m.
- Rulemaking overview
- Interaction with WCI
- Rulemaking schedule & public participation process
- Plans for ongoing economic analysis
- Questions and answers

AB 32 and the Scoping Plan

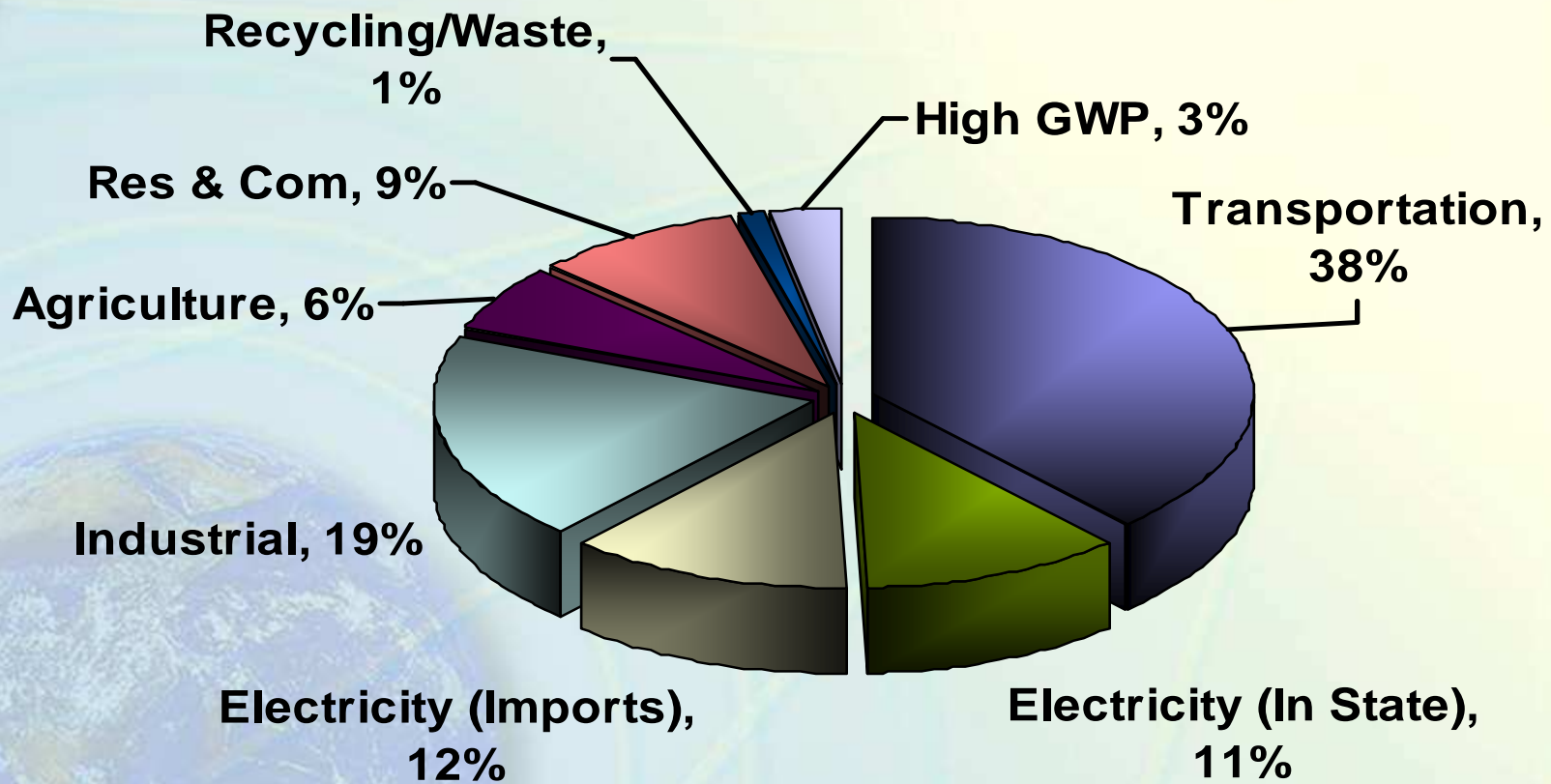
- AB 32 signed by Governor Sept. 27, 2006
- Directed ARB to develop Scoping Plan
- Board Adopted Plan Dec. 11, 2008
- Plan recommends mix of strategies combining market mechanisms, other regulations, voluntary measures, energy efficiency, and fees
- Scoping Plan goals:
 - By 2020 reduce GHGs back to 1990 levels
 - On track to reduce 80% from 1990 level by 2050

Magnitude of the Challenge

ARB Emissions Inventory



2002-2004 GHG Emissions (469 MMTCO₂E)



Adopted To Date

- Pavley AB 1493 automobile rule: Sept. 04
- Ship electrification in ports: Dec. 07
- Port and rail yard cargo trucks: Dec. 07
- High GWP in consumer products: June, 08
- Heavy duty truck efficiency: Dec. 08
- Motor vehicle DIY refrigerant cans: Jan. 09
- SB 375 Regional Targets Advisory Committee: Jan. 09

Implementation of the Plan

- 2009–2010: adopt regulations
- ARB uses a formal structure to elicit public input in the regulatory process
 - Regulatory development will follow public process
 - Extensive stakeholder outreach and involvement
 - Close and ongoing coordination with Cal/EPA, CEC, CPUC, and other state agencies
- Regulations in effect 1/1/2012

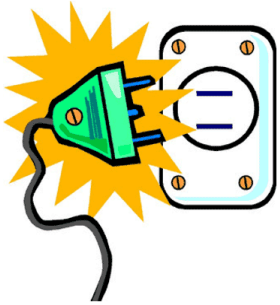
Key Requirements for Plan's Regulations

- Use open public process for new regulations
- Minimize costs/maximize benefits
- Protect low-income communities
- Compliment smog & air toxics programs
- Minimize leakage and administrative burden
- Other requirements for market-based compliance
 - Consider direct, indirect and cumulative emissions including localized impacts

Transform Energy Production and Use

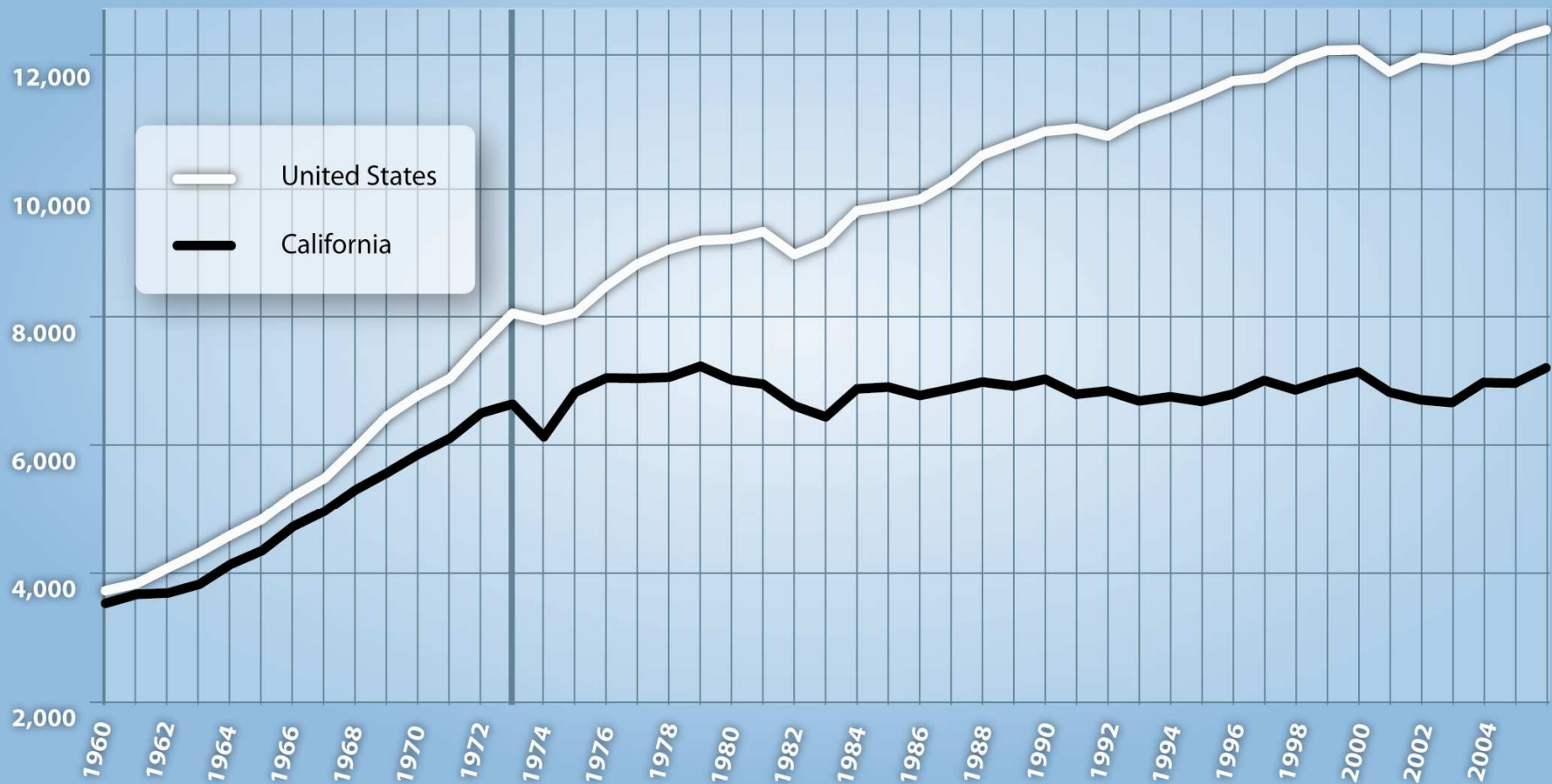
- Cutting energy use saves money while creating fewer GHG emissions
- Plan includes aggressive energy efficiency goals and increases renewable energy
- Meeting the goals in the Scoping Plan will require
 - Expanded utility-based energy efficiency programs
 - More stringent building and appliance standards
 - Green buildings and waste reduction
 - Innovative strategies that go beyond traditional approaches
- Plan relies on expanded efforts by the CEC and CPUC

ELECTRICITY



Per Capita Electricity Use in California and the US

(Per Capita Electricity Sales in Kilowatt Hours)



Upcoming Schedule

- See Handout – Measure Table

ARB Measures Scheduled For February 2009

- Sulfur Hexafluoride reduction in magnesium casting & consumer products
- Reduce semiconductor GHGs
- Research on agricultural nitrous oxide emissions

ARB Measures Scheduled For March 2009

- Automobile tire inflation (24+ million passenger cars in California)

ARB Measures Scheduled For April - May 2009

- April - Increased landfill methane control
- April - Small business & local govt. toolkits
- April - Low carbon fuel standard
- May - Stationary equipment refrigerant tracking, reporting, repair, and deposit
- May - Administrative fee
- May - Reflective auto paints & windows

ARB Measures Scheduled For Sept. – Dec. 2009

- October - Large stationary source efficiency audits
- November - Cargo handling equipment
- December - Sulfur hexafluoride emissions reduction
- December - Mitigation fee on high GWP gases

Other ARB Measures For 2009

- Enforcement of federal ban on GHG release during work on auto air conditioners
- Reduce GHGs from oil & gas extraction

ARB Measures Scheduled for 2010

- March - Transport refrigeration units cold storage prohibition
- July – Foam recovery & destruction
- September - Regional transportation GHG targets
- November - Cap and trade
- December - Residential refrigeration early retirement

Other ARB Measures for 2010

- Vehicle smog test AC leak test – with BAR
- More reductions from mobile source AC
- Pavley 2 – new auto GHG reduction rule
- Reduce emissions from refinery flares

Other ARB Measures for 2010 (cont.)

- Reduce GHG leaks from oil & gas transport
- Goods movement system-wide efficiency improvements
- GHG recovery from decommissioned refrigerated shipping containers
- Remove refinery regulation methane exemption

Measures By Other Agencies

CEC and PUC

- Natural gas & electricity efficiency
- Renewables portfolio standards
- Increased combined heat and power
- Low rolling resistance tire tread
- Million solar roofs
- Water system energy efficiency
- Increase renewable energy production
- Greening existing and new homes and commercial buildings

Measures By Other Agencies

Integrated Waste Management Board

- Commercial recycling - 2010
- Increased efficiency landfill methane capture
- Increased compost markets
- Anaerobic digestion
- Extended producer responsibility

Measures By Other Agencies

SWRCB and DWR

- Water use efficiency – DWR & SWRCB (Spring 2009)
- Public goods water charge – DWR
- Water recycling – SWRCB
- Reuse urban water runoff – SWRCB

Measures By Other Agencies

Board of Forestry and CAL FIRE

- Sustainable Forests Target - BoF
- Opportunities for additional reductions
- CAL FIRE

Measures By Other Agencies DGS and HSRA

- Green new and existing state buildings, environmentally preferred purchasing, greening public schools - DGS
- High speed rail - HSRA

Other Activities

- Tracking progress
- Interagency coordination
- Advisory groups & committees
- Public health
- Enforcement
- Carbon capture and storage
- Green tech/economic development
- Small business

Tracking Progress

- ARB to track Scoping Plan activities with assistance of Climate Action Team
- Insure consistency among State agencies
- Prevent double counting of reductions
- Update Board twice a year

State Agency Coordination

- Climate Action Team re-structured
 - Scoping Plan implementation
 - Adaptation activities
- Continue working with State agencies on cross-agency issues

Local Air District Coordination

- Local districts are partners in air pollution programs
- Joint climate change work plan - Spring 2009
- State climate program will be consistent with and use district permitting and compliance, where practicable and appropriate
- Funding for district implementation and enforcement programs

Local/Regional Government Coordination

- Leadership opportunities at local level
- Encourage local inventories and climate plans
 - Local government inventory protocol done
 - Community inventory protocol: 2009
 - Local government toolkit: April 2009
- SB 375 planning process through metropolitan planning organizations
- SB 375 RTAC Meeting - February 3

Coordination with Other Agencies

Regional and Federal

- Western Climate Initiative (WCI)
 - Cap and trade program
 - Complementary measures
- Federal government
 - Activity under Federal Clean Air Act authority
 - Legislation including cap-and-trade program expected
 - Pavley auto rule waiver approval expected

Coordination with Other Efforts

International

- Governor's Global Climate Summit established international declaration to collaborate on policies and strategies
- GHG accounting and registry workshop in China May 2009
- UN meeting on local and regional GHG actions June 2009
- Collaboration with EU on LCFS

Advisory Groups

- Economic and Technology Advancement Advisory Committee
- Environmental Justice Advisory Committee
- Public Health Working Group
- Experts to advise on allocations and economic modeling

Public Health

- Currently using available information to analyze regulations under development
- Establishing public health working group
- Initiating public process to:
 - Assess potential local and cumulative impacts of regulations, including cap & trade program
 - Discuss methods to identify communities most impacted by air pollution

Enforcement

- ARB Enforcement Division's long history with local air districts helps with development of GHG enforcement program
- Impact on hearing boards and variances, breakdowns and malfunctions
- Review each regulation for specific needs
- Will enforce Mandatory Reporting Rule
- Will also work with other state agencies

Carbon Capture and Storage

- Long-term issue
- In preliminary stages of development
- ARB is coordinating with others to address key issues
- US EPA has issued a Draft Rule on CO₂ injection for sequestration
 - Draft includes monitoring for groundwater safety

Green Technology and Workforce Development

- Monitor and promote statewide efforts
- Promote job growth
- AB 3018 – Green Collar Jobs Council
- Outreach at community meetings
- Integrated approach – community benefits

Small Business

- Climate change program presents opportunities and challenges for small business
- ARB participating with Chambers, economic development organizations, businesses to understand how to help small businesses transition to a low carbon future
- Small Business Tool Kit – April 2009

The Next Chapters

Begin Adopting Measures

Conclude Adoption of Measures

Begin Enforcing Measures

Return to 1990 Emissions

2009

2010

2011

2012

through

2020

*Scoping Plan
Adopted
12/11/08*

Work Toward
2050

For Additional Information

- ARB Climate Change Web Site:
www.arb.ca.gov/cc/cc.htm

(To stay informed, sign up for list serve)

- California Climate Change Portal:
www.climatechange.ca.gov
- ARB Office of Climate Change contact:
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