

PUBLIC WORKSHOP

PROPOSED EXPANDED LIST OF AB 32 EARLY ACTIONS

September 17, 2007

Overview

- **Background**
- **Summary of Items Reviewed / Review Process**
- **Recommendations**
- **Next Steps**
- **Questions, Comments, and Suggestions**

California Climate Impacts (over the past 100 years)



1.3 °F higher temperatures

~7 inch sea level rise

12% decrease in fraction of runoff between April and July

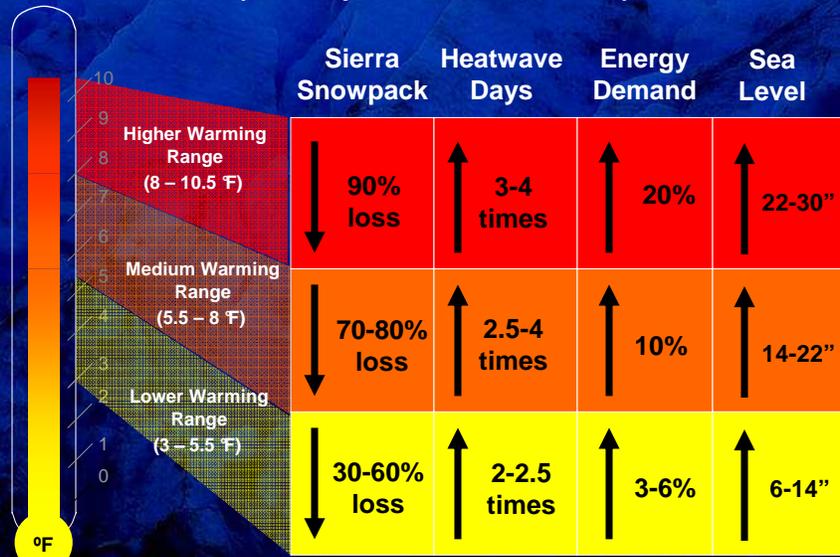
Snowmelt and spring blooms advanced 2 days/decade since 1955

4-fold increase in wildfire frequency (over 34 years)

Cal/EPA-OEHHA, "Environmental Protection Indicators for California" (2002), www.oehha.ca.gov/multimedia/epic/Epicreport.html

Westerling et al., "Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity", *Science* (2006) 3

Projected Climate Impacts on California, 2070-2099 (as compared with 1961-1990)



Our Changing Climate: Assessing the Risks to California (2006), www.climatechange.ca.gov

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Context / Definitions

- **Discrete Early Action**
 - Meets the AB 32 legal definition as identified by the Health and Safety Code Section 38560.5
 - Regulations enforceable by January 1, 2010
 - Must be under the jurisdiction of the ARB
- **Early Action**
 - Underway or to be developed by ARB in the 2007 – 2012 timeframe.
 - May be regulatory or non-regulatory in nature

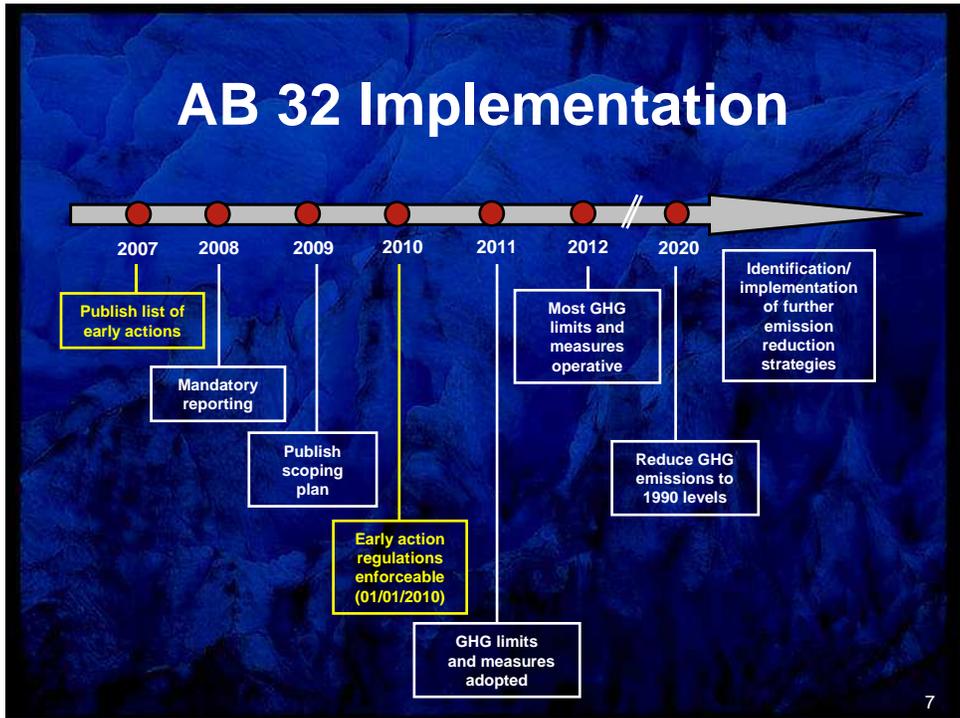
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Background

- **AB 32 directs ARB to develop a list of early actions to reduce GHG emissions**
- **Board approved 37 GHG reduction strategies recommended by staff in June 2007**
 - 3 discrete early actions
 - 24 other early actions
 - 10 existing diesel control measures
- **Board directed ARB staff to further evaluate recommendations from EJAC, CAPCOA, and SCAQMD**
 - Staff to report back to Board within six months
 - Chairman Nichols directed staff to accelerate this review

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AB 32 Implementation



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2007 Early Actions Milestones

- | | |
|-----------|----------------------------------|
| Jan 22 | 1 st public workshop |
| March 5-7 | International symposium |
| April 20 | 1 st ARB staff report |
| April 23 | 2 nd public workshop |
| June 21 | 1 st Board hearing |
| Sept 7 | 2 nd ARB staff report |
| Sept 17 | 3 rd public workshop |
| Oct 25 | 2 nd Board hearing |

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Further Evaluation of 63 Early Action Suggestions

- 34 suggestions from the EJAC
 - 21 measures from first ARB staff report
 - 13 new suggestions
- 6 suggestions from the CAPCOA
- 7 suggestions from the SCAQMD
- 3 suggestions from environmental coalition
- 17 internal suggestions and/or previously approved early actions

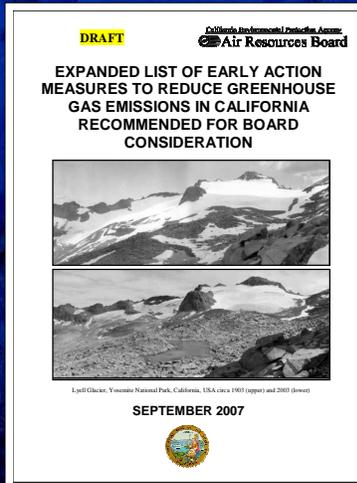
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Review Process

- Staff recommendation for identification of early actions based on analysis of :
 - potential emissions reductions
 - cost information
 - likely technical feasibility
 - additional considerations
- Evaluations were generated by staff for all suggestions
 - More comprehensive analyses still required for many strategies

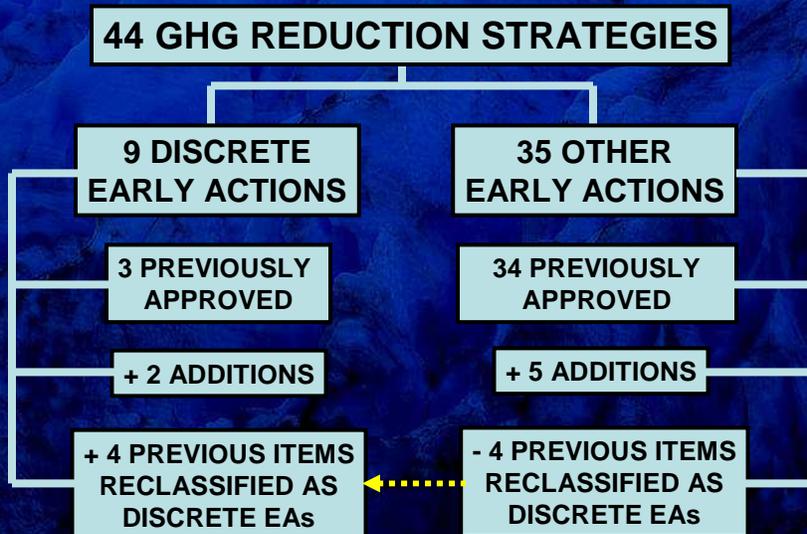
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Second Early Action Staff Report



- Tables 1 and 2 – list of early actions and their disposition
- Appendix A – EJAC, CAPCOA, SCAQMD suggestions
- Appendix B – Evaluation of suggestions received
- Appendix C – Further evaluation of approved early actions

Early Actions Breakdown



Recommendations

- **44 total GHG reduction strategies**
 - **9 discrete early actions**
 - Triple the number of previous list
 - Total emission reduction potential ~16 MMTCO₂E by 2020
 - 2 additional measures
 - 4 existing early actions reclassified
 - **35 other early actions**
 - 5 additional items added to previous list
 - At least ~26 MMTCO₂E reductions by 2020
 - Documented in Tables 1 and 2 of Sept 2007 staff report

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Previously Approved Discrete Early Actions

- **Low Carbon Fuel Standard**
 - Reduction potential ~ 10-20 MMTCO₂E reductions by 2020
- **Restrictions on High GWP Refrigerants**
 - Reduction potential ~1-2 MMTCO₂E reductions by 2020
- **Improved Landfill Methane Capture**
 - Reduction potential ~2-4 MMTCO₂E in 2020

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Additional Discrete Early Action Recommendations

- 2 New Discrete Early Actions
 - Strategy Description
 - Reduction Potential
- 4 Items Reclassified as Discrete Early Actions
 - Strategy Description
 - Reduction Potential

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New Discrete Early Action: High GWP Consumer Products



- Establish standards to reduce emissions from tire inflators, electronics cleaning and dust removal products or other aerosol products
- 0.3 MMTCO₂E in 2020

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New Discrete Early Action: SF₆ in Non-Electric Sector

- Ban the use of Sulfur Hexafluoride from non-essential applications if viable alternatives are available
- TBD MMTCO₂E in 2020



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Reclassified to Discrete Early Action: Green Ports

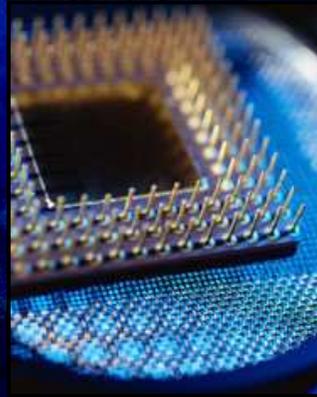
- Require docked ships to shut off their auxiliary engines by plugging into shoreside electric power or other technologies
- 0.5 MMTCO₂E in 2020



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Reclassified to Discrete Early Action: PFCs in Semiconductor Industry

- Establish standards to reduce emissions of perfluorocarbons in the semiconductor industry
- 0.5 MMTCO₂E in 2020



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Reclassified to Discrete Early Action: SmartWay Truck Efficiency

- Require existing trucks and trailers to be retrofitted with devices that reduce aerodynamic drag and rolling resistance
- 1.3 MMTCO₂E in 2020



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Reclassified to Discrete Early Action: Tire Inflation Program



- Require proper tire inflation as part of overall service coupled with outreach program
- 0.2 MMTCO₂E in 2020

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Other Early Actions

- 35 other early actions
 - Includes regulatory and non-regulatory measures
 - Forestry Protocol endorsement
 - Local government guidance and protocols
 - Cool automobile paints
 - Foam recovery and destruction program
 - 5 additional early actions to previous list
 - To be brought before the Board during 2007-2012
- ~26 MMTCO₂E reductions by 2020

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Early Action Implementation

All 44 GHG reduction strategies are commitments that will be developed and implemented via open and transparent public processes.

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Early Action Board Hearings in 2007

- Q4 Forestry Protocol
- Q4 Diesel – Port Trucks
- Q4 Diesel – Vessel Main Engine Fuel Specifications
- Q4 Diesel – Commercial Harbor Craft

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearings in 2008

- Q1 Green Ports**
- Q3 Manure Management**
- Q3 Local Government Protocols**
- Q3 Business Protocols**
- Q3 Cool Communities Program**
- Q4 GHGs in Consumer Products**
- Q4 PFCs in Semiconductor Industry**
- Q4 SmartWay Truck Efficiency**
- Q4 Low Carbon Fuel Standard**

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearings in 2008

- Q4 MVAC HFCs from DIY servicing**
- Q4 Improved Landfill Gas Capture**
- Q4 Gasoline Dispenser Hose Replacement**
- Q4 Portable Outboard Marine Tanks**
- Q4 Off-cycle Driving Condition Standards**
- Q4 Diesel – Private Onroad Trucks**
- Q4 Anti-Idling Enforcement**

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearings in 2009

- Q1 **SF₆ in the Non-Electric Sector**
- Q1 **Tire Inflation Program**
- Q2 **Cool Automobile Paints**
- Q2 **Blended Cements**
- Q4 **HFC Release from MVAC Service / Dismantling**
- Q4 **Diesel – Offroad Equipment (agricultural)**

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearings in 2010

- Q1 **AC Leak Tightness to Smog Check**
- Q4 **Energy Efficiency of CA Cement Facilities**
- Q4 **Nitrogen Land Application Research**
- Q4 **Specifications for Commercial Refrigeration**
- Q4 **Reduction of Oil and Gas Leaks**
- Q4 **Low GWP Gases for MVACs**

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearings in 2011

- Q1 Diesel Vehicle Hybridization
- Q2 Reduction of SF₆ in Electricity Generation
- Q4 **High GWP Refrigerant Tracking, Reporting, and Destruction Program**
- Q4 Foam Recovery / Destruction Program
- Q4 Alternative Suppressants in Fire Protection Systems

NEW DISCRETE EARLY ACTIONS
NEW EARLY ACTIONS

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Early Action Board Hearing in 2012

Q4 Pavley MV Regs, next phase

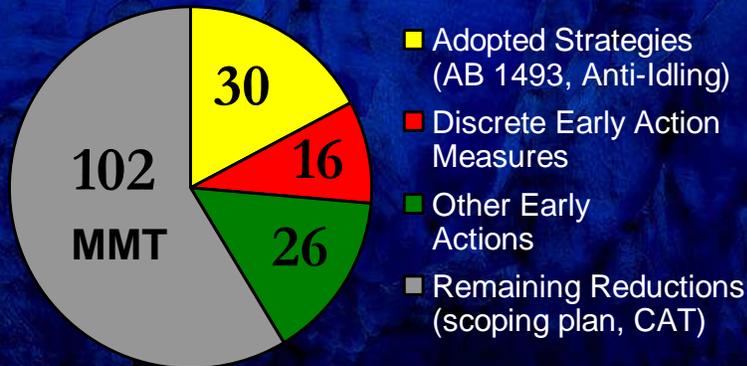
Hearing date for four strategies TBD

Several items addressed by recently adopted regulations

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ARB 2020 Emission Reductions *A Significant Fraction of the 2020 Target*

(AT LEAST 72 of 174* MMTCO₂E)



* Current estimate – process underway to establish revised target.

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Next Steps

- Public comments requested by Sept. 24
- Final staff report released early Oct.
- Board hearing October 25, 2007
- Develop full proposals through open and transparent public processes
- Status reports to Board every 6 months

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References and Feedback

- April staff report
 - http://www.arb.ca.gov/cc/ccea/meetings/042307workshop/early_action_report.pdf
- September staff report
 - http://www.arb.ca.gov/cc/ccea/meetings/091707workshop/ea_ii_report.pdf
 - **Comments on this report or its supporting appendices should be submitted on-line or to Michael Robert at (916) 327-0604, mrobert@arb.ca.gov and Dr. Tao Huai at (916) 324-2981, thuai@arb.ca.gov by September 24th, 2007.**

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Post Your Comments On-line

1. Visit ARB's climate change homepage
2. Click on 'Early Actions'
3. Scroll down to this workshop announcement and click on the link to post comments
4. Submit your comments and attachments
5. On the same form click on 'public comments' and view those posted under the list 'ccea2'

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Visit ARB's Climate Change Homepage

<http://www.arb.ca.gov/cc/cc.htm>

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Early Actions Workshop Announcement

<http://www.arb.ca.gov/cc/ccea/ccea.htm>

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Submit and View Comments

The screenshot shows a Microsoft Internet Explorer browser window displaying the 'Board Comments Submittal Form' at the URL http://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=ccea2&comm_period=N. The form includes a notice about the California Public Records Act, a 'public comment review link', and a 'complete this form to submit your comment to ccea2' instruction. The form fields include Contact Information (First Name, Last Name, Email Address, Confirm Email Address, Phone (Optional), Affiliation (Optional)), and a Subject field. A red arrow points to a 'form continues / submit button' at the bottom right of the form area.

Board Comments Submittal Form

Please note that under the California Public Records Act (Govt. Code Section 6250 et. seq.), your written and oral comments, attachments, and associated contact information (e.g. your address, phone, email, etc.) become part of the **public record** and can be released to the public upon request. Additionally, this information may become available via Google, Yahoo, and any other search engines.

Complete this form to submit your comment to ccea2. (Your session expires in 60 minutes.) [public comment review link](#)

Notice of Solicitation of comments to ARB recommendations regarding potential additions to the list of AB32 early actions to reduce greenhouse gas emissions. [early action comment list name](#)

Contact Information:

First Name:

Last Name:

Email Address:

Confirm Email Address:

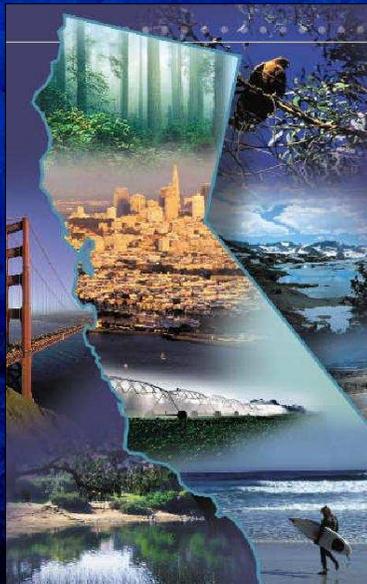
Phone (Optional):

Affiliation (Optional):

Subject:

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PUBLIC COMMENTS