

# EARLY ACTIONS FOR CLIMATE CHANGE MITIGATION IN CALIFORNIA

June 21, 2007

# Summary

- **37 distinct reduction measures**
- **At least 33 MMTCO<sub>2</sub>E reductions**
- **~20% of 2020 reduction target**
- **Recommending Board approval of staff proposal**

# Early Action Provisions

- **By June 30, 2007 ARB shall publish a list of discrete early action GHG reduction measures and make them enforceable by January 1, 2010.**
- **Must be feasible, cost-effective, and not result in any backsliding or disproportionate impacts.**

# 2007 Early Action Milestones

**Jan 22**

**1<sup>st</sup> public workshop**

**March 5-7**

**International symposium**

**April 20**

**ARB draft report released**

**April 23**

**2<sup>nd</sup> public workshop**

**May 21**

**Hearing notice issued**

**June 4**

**Public comments posted**

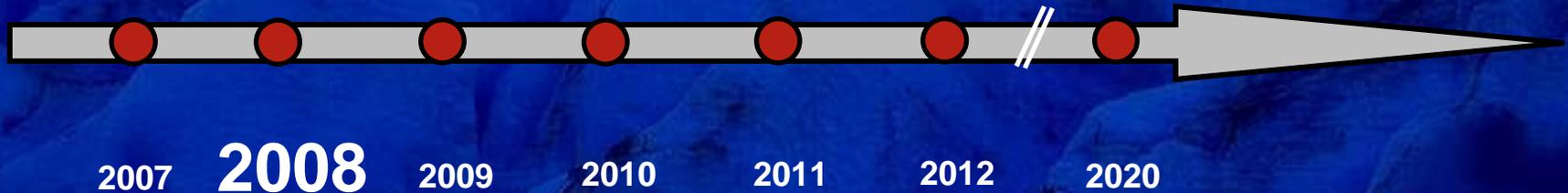
**June 21**

**Board hearing**

# AB 32 Timetable



# AB 32 Timetable



2007

**2008**

2009

2010

2011

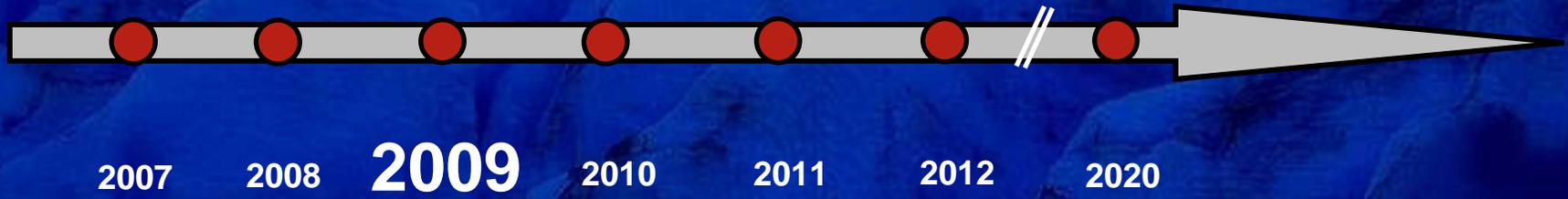
2012

2020

**Adopt rules to  
implement early  
action measures**

**Adopt comprehensive  
scoping plan**

# AB 32 Timetable



2007

2008

2009

2010

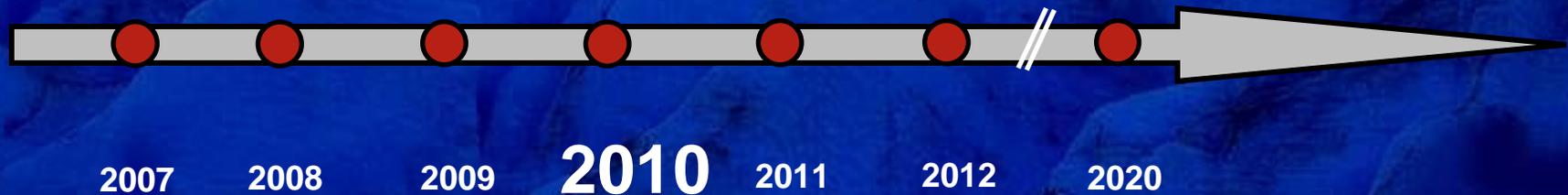
2011

2012

2020

**Start implementing  
scoping plan (rules  
& market measures)**

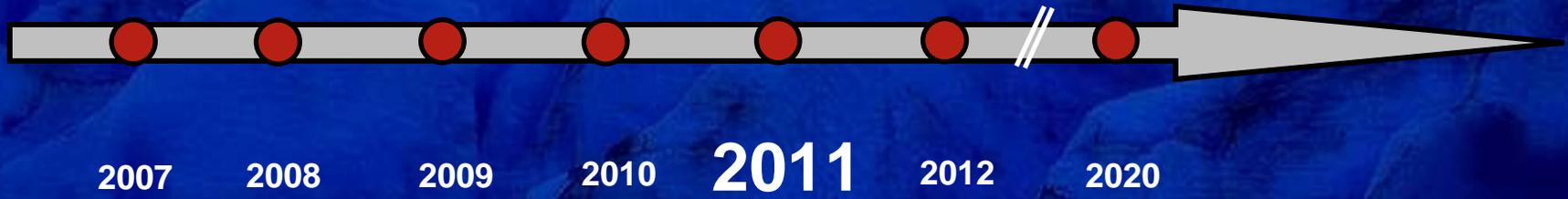
# AB 32 Timetable



**Enforce early  
action measures**

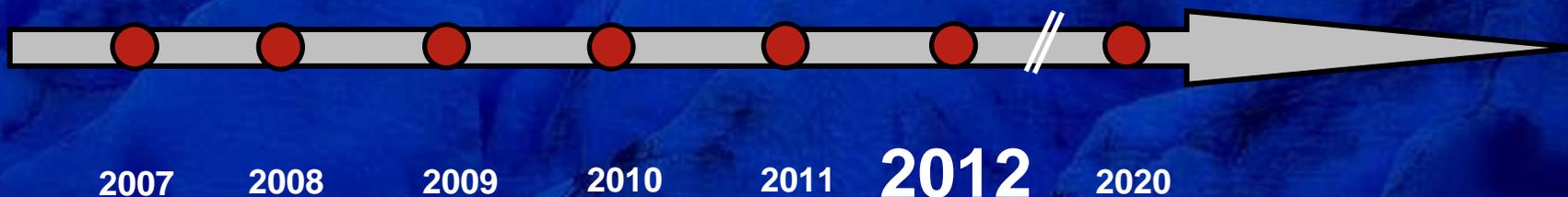
**Continue rulemaking  
on other measures**

# AB 32 Timetable



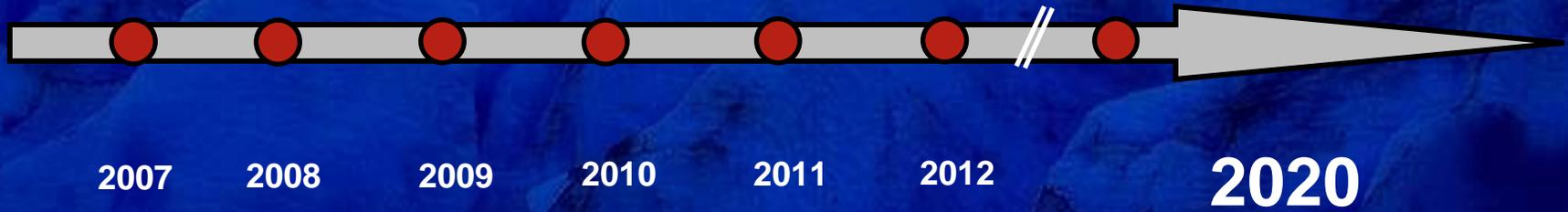
**Complete adoption  
of GHG limits  
and measures**

# AB 32 Timetable



All GHG limits  
and measures  
operative

# AB 32 Timetable



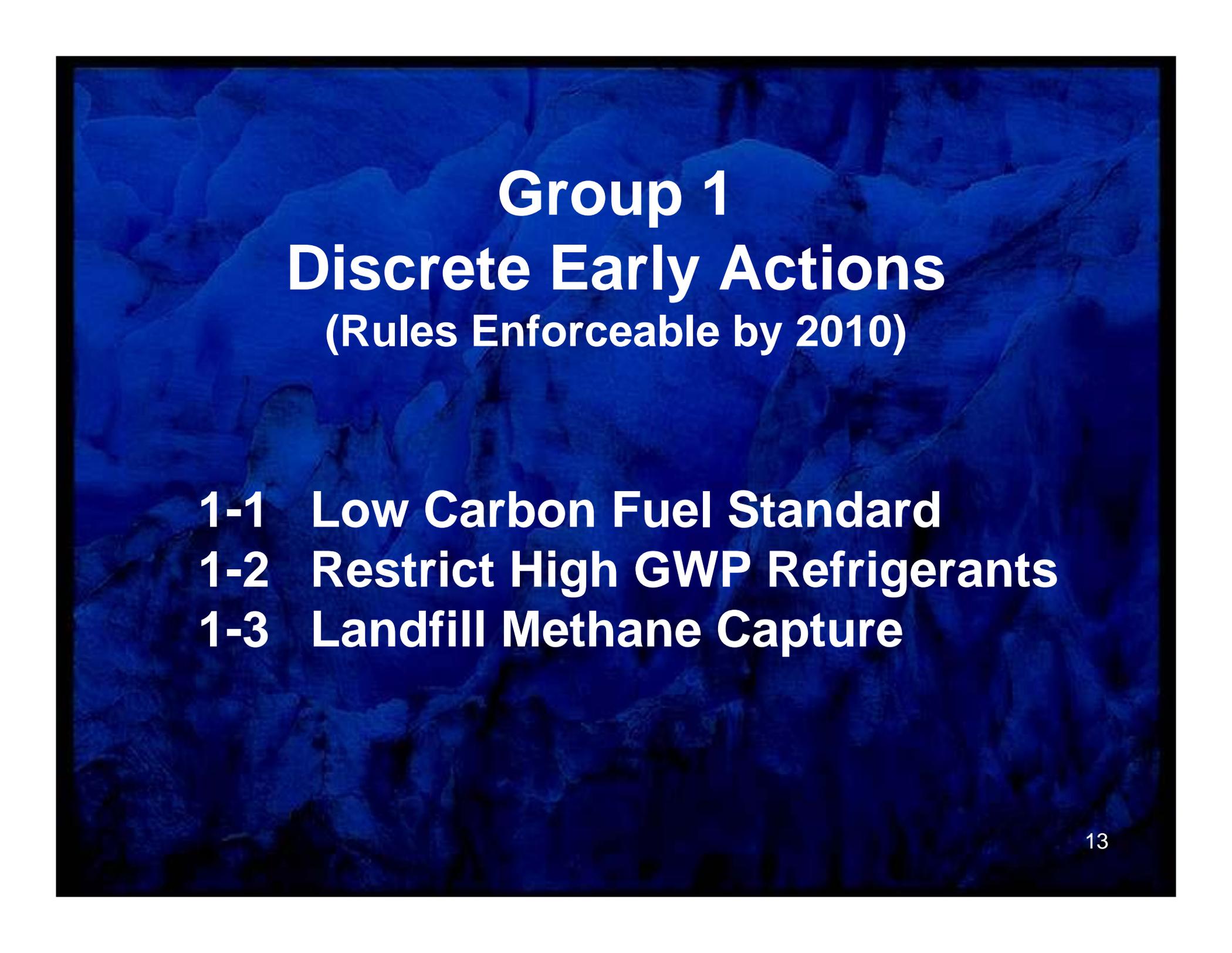
**Reduce GHG  
emissions to  
1990 levels**

**Post 2020 – identify and implement additional  
strategies to achieve Governor’s 2050 target**

# Selection of Early Action Measures

- Examined >100 possibilities
- Not ARB jurisdiction
- Reg and doable by 2010
- Post-2010 regs + non-regs
- Diesel & ozone controls

To CAT  
Group 1  
Group 2  
Group 3

The background of the slide is a dark blue, textured surface that resembles crumpled paper or a similar material. The texture is uneven, with various shades of blue and some darker spots, creating a sense of depth and movement. The overall color is a rich, dark blue.

# **Group 1**

## **Discrete Early Actions**

**(Rules Enforceable by 2010)**

- 1-1 Low Carbon Fuel Standard**
- 1-2 Restrict High GWP Refrigerants**
- 1-3 Landfill Methane Capture**

# Discrete Early Action 1-1 Low Carbon Fuel Standard

- Established by Exec Order S-01-07
- Require fuel providers to ensure that fuels sold in CA meet a declining standard for GHG emissions
- 10-20 MMTCO<sub>2</sub>E reductions by 2020



# Discrete Early Action 1-2

## Restrict High GWP Refrigerants

- Prohibit recharging of leaky automotive air conditioning systems
- 1-2 MMTCO<sub>2</sub>E reductions by 2020



## **Strategy 1-2 (cont.) Alternative Proposals**

- **Can deposit & recycling program**
- **Self-sealing cans to prevent leakage**
- **Expansion of Smog Check program**
  
- **Staff recommends: keep on early action list, leave final form of rule open pending further evaluation**

# Discrete Early Action 1-3 Landfill Methane Capture



- **Statewide standards for municipal landfills**
- **Improve efficiency and emissions control**
- **Staff collaborating with CIWMB and APCDs**
- **2-4 MMTCO<sub>2</sub>E in 2020**

# Group 2 Strategies

## Non-Regs & Post 2010 Regs

- 23 measures total
- Organized by Board hearing date
- ~20 MMTCO<sub>2</sub>E reductions by 2020

## Group 2 Strategies for Board Hearing in 2008

July	Local Government Protocol
July	Forestry Protocol
July	Small Business Protocol
July	Cool Communities Protocol
July	Methane Digester Protocol
Dec	Smart Way Truck Efficiency
Dec	Port Electrification
<b>Dec</b>	<b>Group 1 Early Action Measures</b>
<b>Dec</b>	<b>Comprehensive Scoping Plan</b>

# Group 2 Strategies for Board Hearing in 2009

<b>March</b>	<b>Cool Paints for Automobiles</b>
<b>July</b>	<b>PFC Controls for Semiconductors</b>
<b>July</b>	<b>MDV Exhaust Standards</b>
<b>Dec</b>	<b>Tire Inflation Program</b>
<b>All yr</b>	<b>Begin Plan Implementation</b>

# Group 2 Strategies for Board Hearing in 2010

<b>Dec</b>	<b>Commercial Refrigeration</b>
<b>Dec</b>	<b>Oil &amp; Gas Vents/Leaks</b>
<b>Dec</b>	<b>HFC Release During MV Service</b>
<b>Dec</b>	<b>Alternate Refrigerants for MVs</b>

<b>All yr</b>	<b>Continue Plan Implementation</b>
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# Group 2 Strategies for Board Hearing in 2011

**Dec  
Dec**

**Foam HFC Emissions  
Alt Fire Suppression Chemicals**

**All yr**

**Complete Plan Implementation**

# Group 2 Strategies for Board Hearing in 2012

**Dec**

**Pavley MV Regs, next phase**

**Jan 1**

**All Major GHG Rules and  
Market Measures Operative**

# **Group 2 Strategies for which a Hearing Date is Yet to be Set**

**Stationary Agricultural Engines  
Sulfur Hexafluoride Use  
Update TRU Regulation  
Truck Stop Electrification  
Smog Check Leak Test/Repair**

# **Group 3 Strategies Diesel and Ozone Controls (11)**

**2007**

**Off-road Mobile Sources  
Port Trucks  
Vessel Speed Reduction  
Off-Cycle Driving Conditions  
Commercial Harbor Craft  
Above Ground Gas Tanks**

**2008**

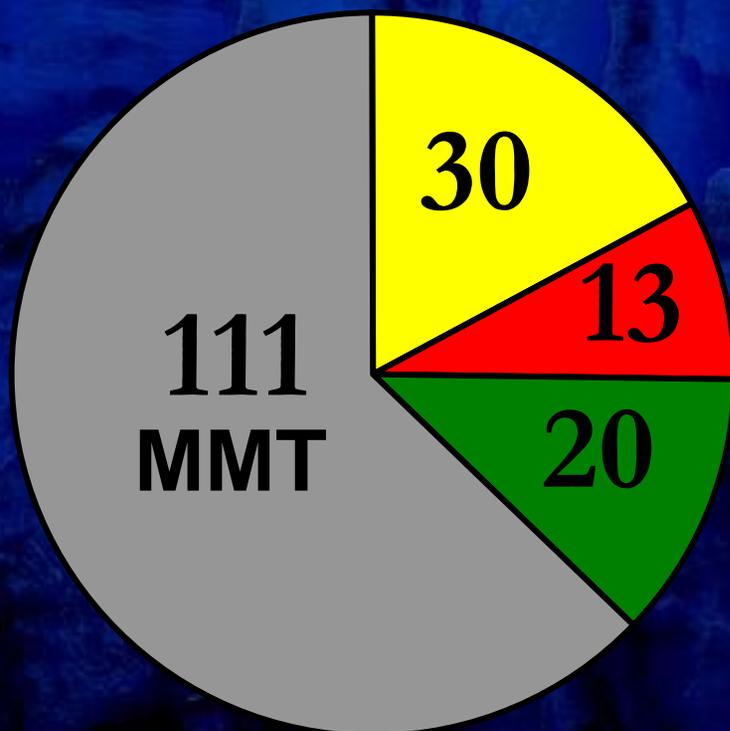
**On-road Trucks  
Vessel Main Engines  
Portable Outboard Marine Tanks  
Gas Dispenser Hose Replacement**

**2009**

**Offroad Mobile (agricultural)**

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

(AT LEAST 63 of 174 MMTCO<sub>2</sub>E)



- Adopted Strategies (AB 1493, SIP)
- Group 1 Strategies (3 discrete early actions)
- Group 2 Strategies (23 add'l early actions)
- Remaining Reductions (scoping plan, CAT)

# Issue #1

## ARB Should Do Much More

- **EJ Committee proposed 34 measures**
- **Environmental groups seeking 3 more**
- **Press, legislature say “it’s not enough”**

# **Issue #2**

## **Cost-Effectiveness Not Defined**

- **Not okay to presume cost-effectiveness**
- **Should cap potential expenditures**

# Issue #3

## Proposed Rules not Cost-Effective

- HFC can rule too costly
- Low carbon fuel standard too costly

# Issue #4

## Environmental Justice

- **Proposed HFC can rule regressive**
- **Proposed LCFS not sustainable**

# Staff Recommendation

- **Approve early action measures (Groups 1, 2 and 3)**
- **Direct staff to develop regulations by applicable deadlines (per statute and as self imposed)**

# Next Steps

- **Workshops on individual rulemakings**
- **Completion of non-regulatory protocols**
- **Status reports to Board every 6 months**