

EARLY ACTIONS FOR CLIMATE CHANGE MITIGATION IN CALIFORNIA

June 21, 2007

Summary

- **37 distinct reduction measures**
- **At least 33 MMTCO₂E 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

1st public workshop

March 5-7

International symposium

April 20

ARB draft report released

April 23

2nd public workshop

May 21

Hearing notice issued

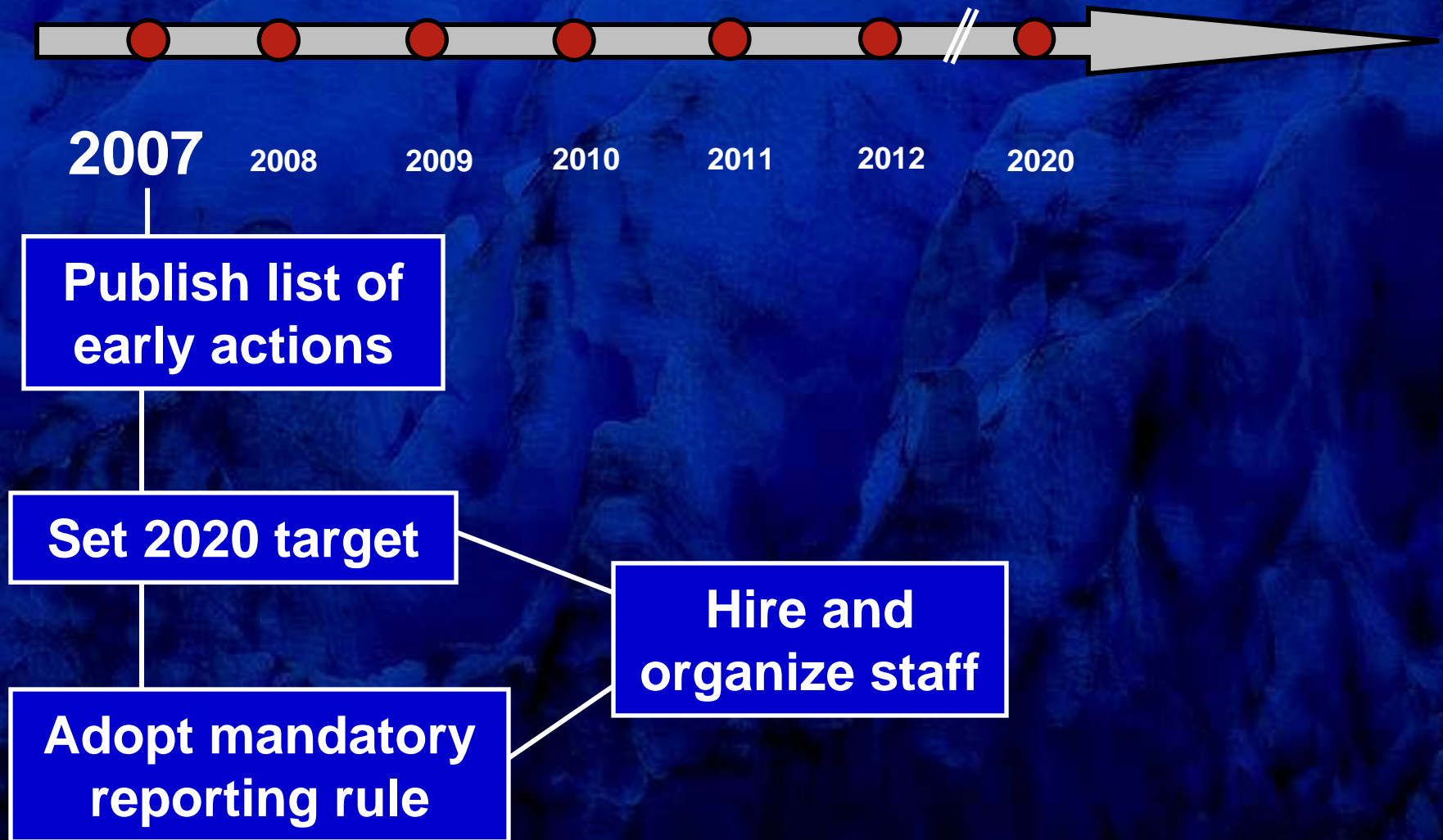
June 4

Public comments posted

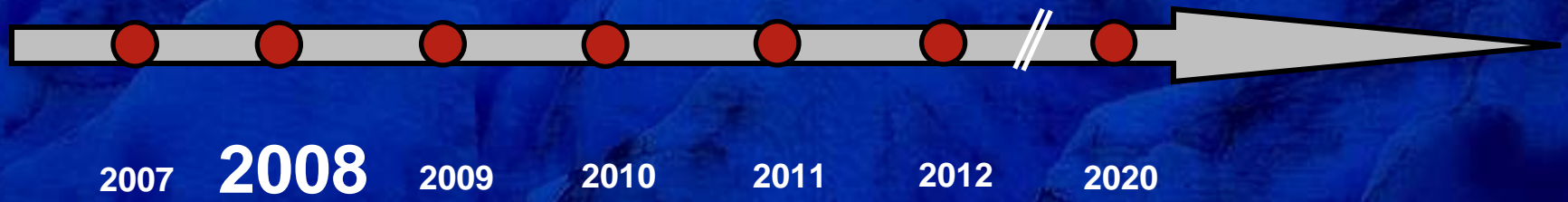
June 21

Board hearing

AB 32 Timetable



AB 32 Timetable



2007 **2008**

2009

2010

2011

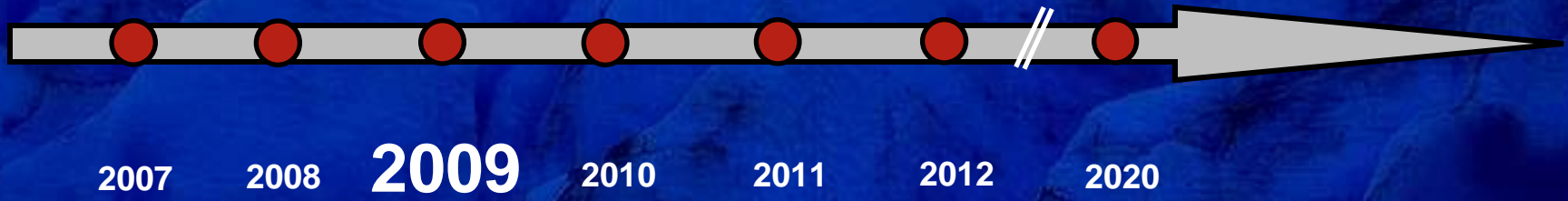
2012

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)**

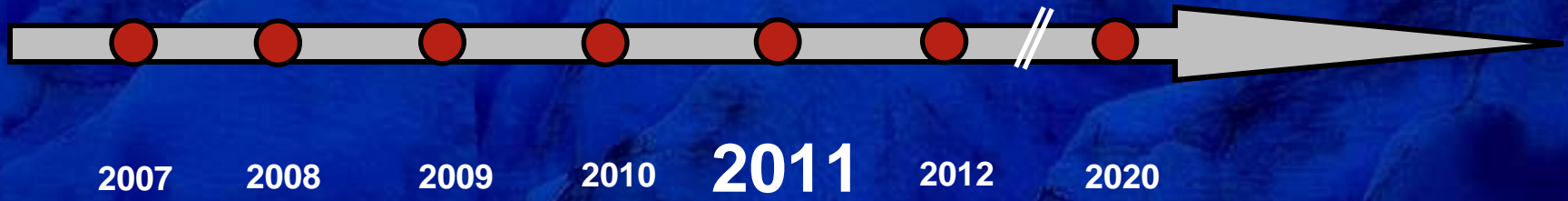
AB 32 Timetable



**Enforce early
action measures**

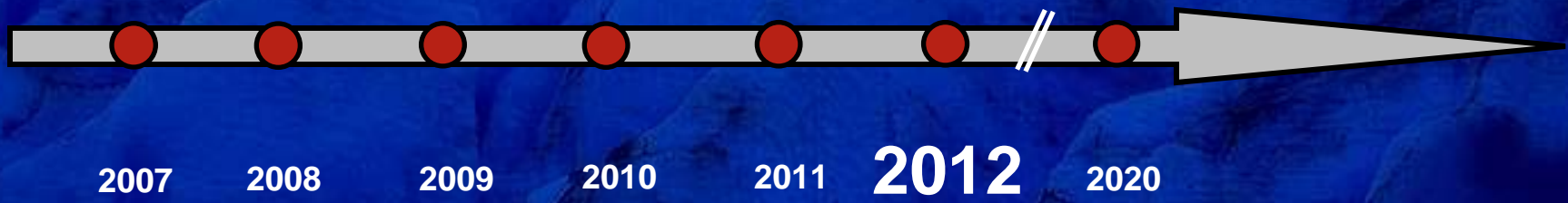
**Continue rulemaking
on other measures**

AB 32 Timetable



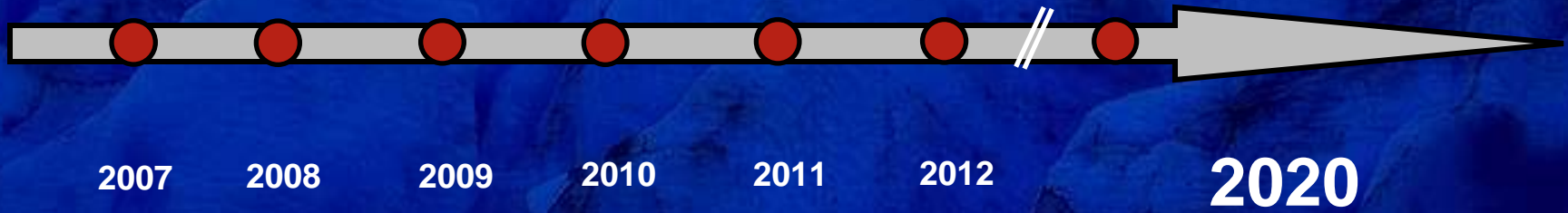
**Complete adoption
of GHG limits
and measures**

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 MMTCO₂E reductions by 2020



Discrete Early Action 1-2 Restrict High GWP Refrigerants

- Prohibit recharging of leaky automotive air conditioning systems
- 1-2 MMTCO₂E 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 MMTCO₂E in 2020**

Group 2 Strategies

Non-Regs & Post 2010 Regs

- 23 measures total
- Organized by Board hearing date
- ~20 MMTCO₂E 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
Dec	Group 1 Early Action Measures
Dec	Comprehensive Scoping Plan

Group 2 Strategies for Board Hearing in 2009

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

Group 2 Strategies for Board Hearing in 2010

Dec	Commercial Refrigeration
Dec	Oil & Gas Vents/Leaks
Dec	HFC Release During MV Service
Dec	Alternate Refrigerants for MVs

All yr **Continue Plan Implementation**

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

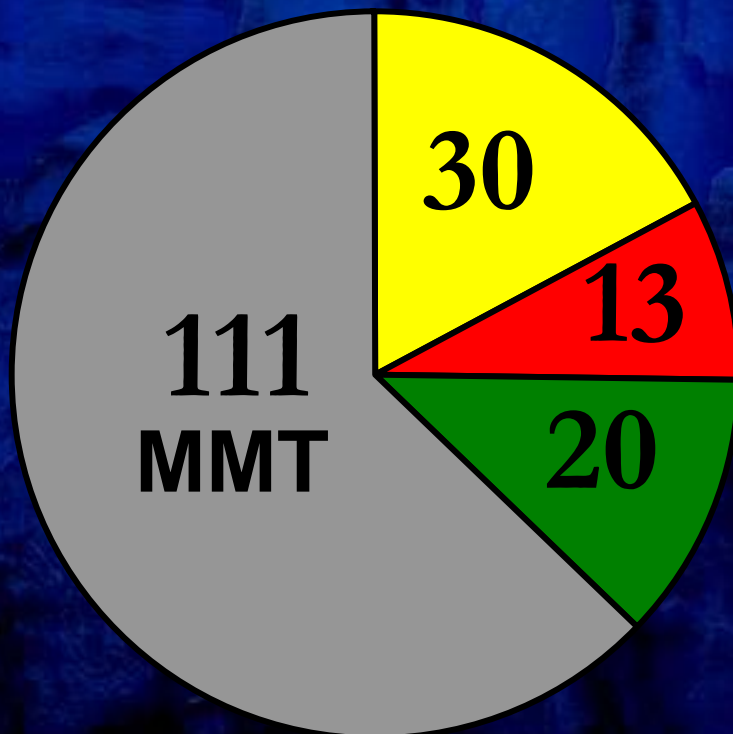
**On-road Trucks
Vessel Main Engines
Portable Outboard Marine Tanks
Gas Dispenser Hose Replacement**

2009

Offroad Mobile (agricultural)

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

(AT LEAST 63 of 174 MMTCO₂E)



- 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**