Proposed Amendments to the Regulation for In-Use Off-Road Diesel Fueled Fleets

July 23, 2009
San Diego, CA

California Environmental Protection Agency

Air Resources Board

Outline

- February's budget bill (AB 8 2X)
  - Proposed Amendments
- Other Proposed Amendments
  - New Incentives
  - Clarifications
- Overall Effect on Emissions
- Recommendation

Assembly Bill 8 2X (February Budget Bill)

Regulation Background

- Idling limits and ban on adding Tier 0
- Reporting deadlines:
  - April 1-August 1, 2009, depending on fleet size
- Starting March 1, 2010, large fleets must annually:
  - Meet NOx fleet average target, or
  - Turn over 8% to 10% of fleet horsepower,
    and
  - Meet PM fleet average target, or
  - Retrofit 20% of fleet horsepower

NOx BACT: Replace, repower, retire, verified NOx retrofits, designate low use

PM BACT: All verified retrofits, and Tier 0 retirements

Assembly Bill 8 2X

- In February, 2009, the legislature passed AB 8 2X
  - Approved by the Governor on Feb. 20, 2009
- Directs ARB to amend regulation:
  - Delay a portion of 2011-2012 requirements
  - More retirement credits
  - New reduced activity credits

Goals in Implementing AB 8 2X

- Meet intent
- Not penalize fleets
- Minimize potential emission disbenefits

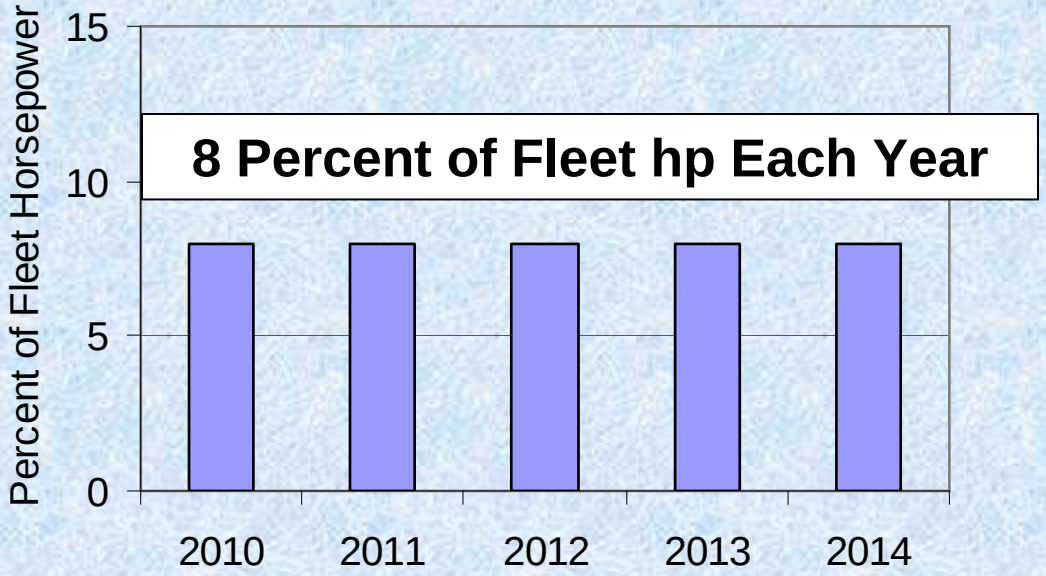
BACT Schedule Changes

BACT Schedule Changes

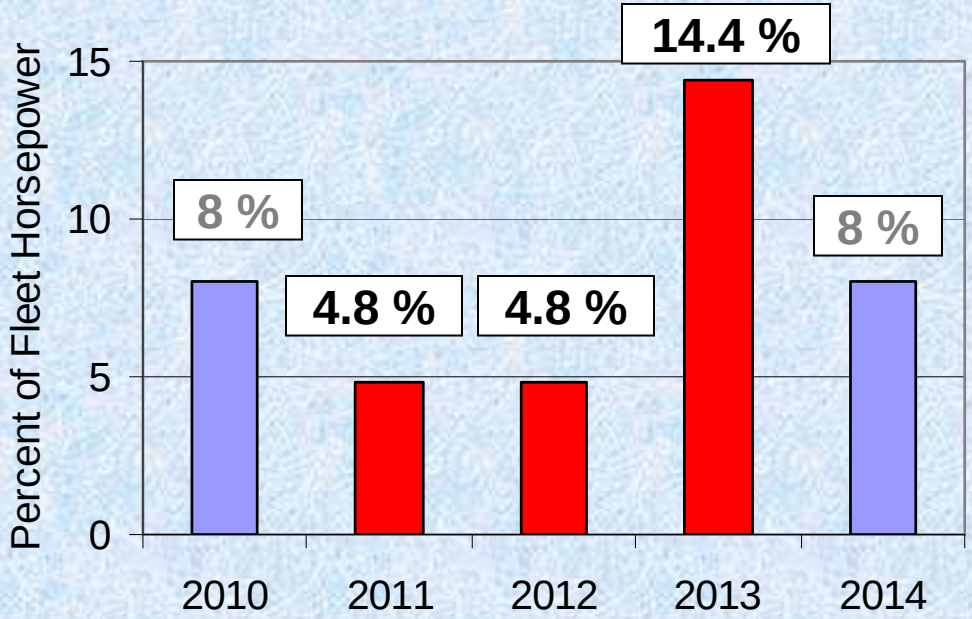
- Reduces requirements in 2011 and 2012
- Increases 2013 requirements to compensate

Proposed BACT Changes: Turnover

Current Turnover Requirements

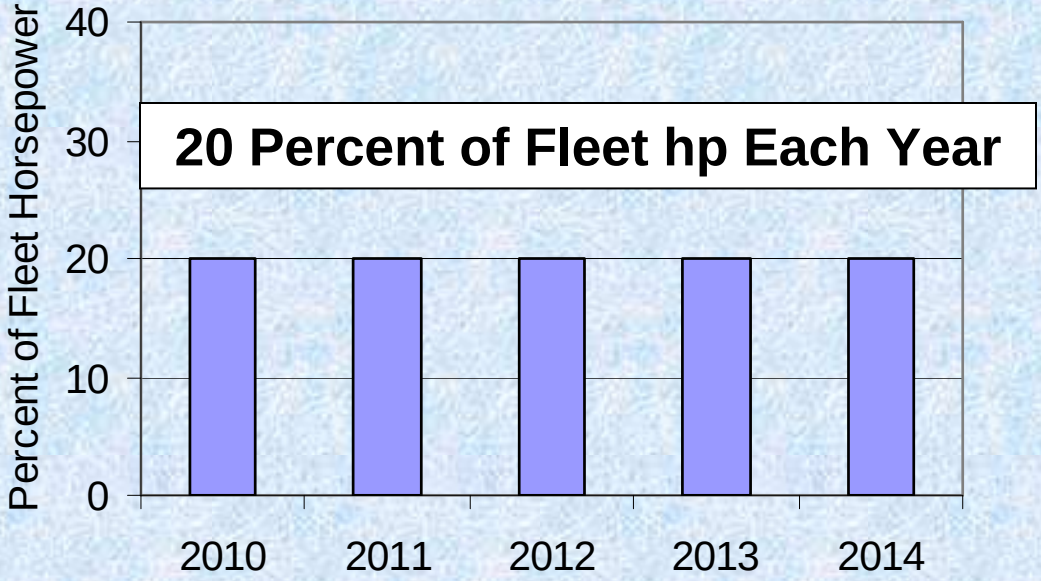


Proposed Turnover Requirements

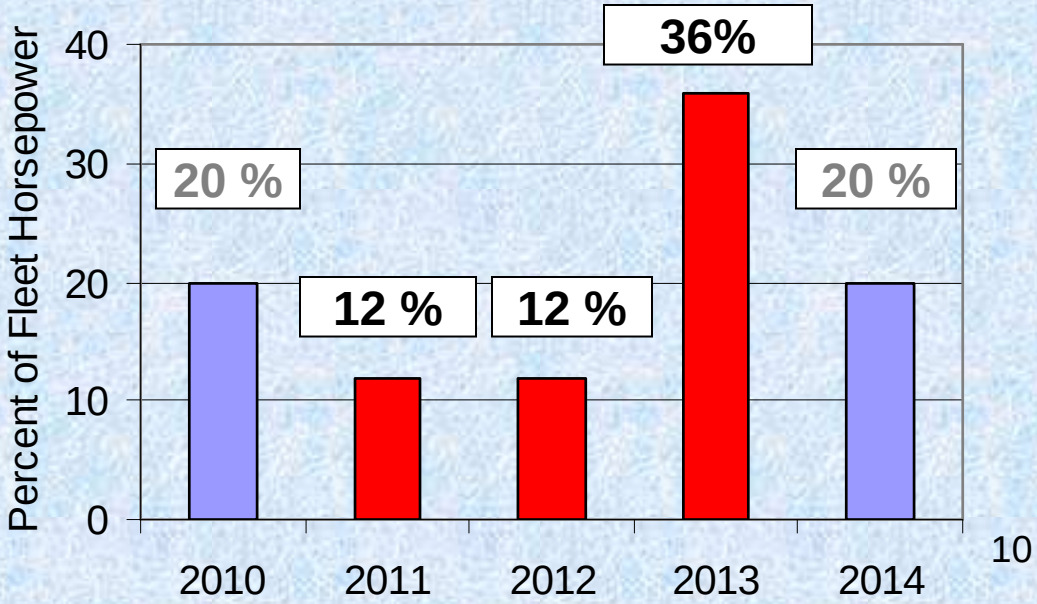


BACT Schedule Changes: Retrofits

Current Retrofit Requirements



Proposed Retrofit Requirements



BACT Changes: Exemptions

- Fleets meeting current requirements not penalized
- Example:
  - A fleet meets the fleet averages in 2012
  - Would not have increased BACT requirements in 2013

Credits for Retirement and Reduced Activity

Credit for Retiring Vehicles

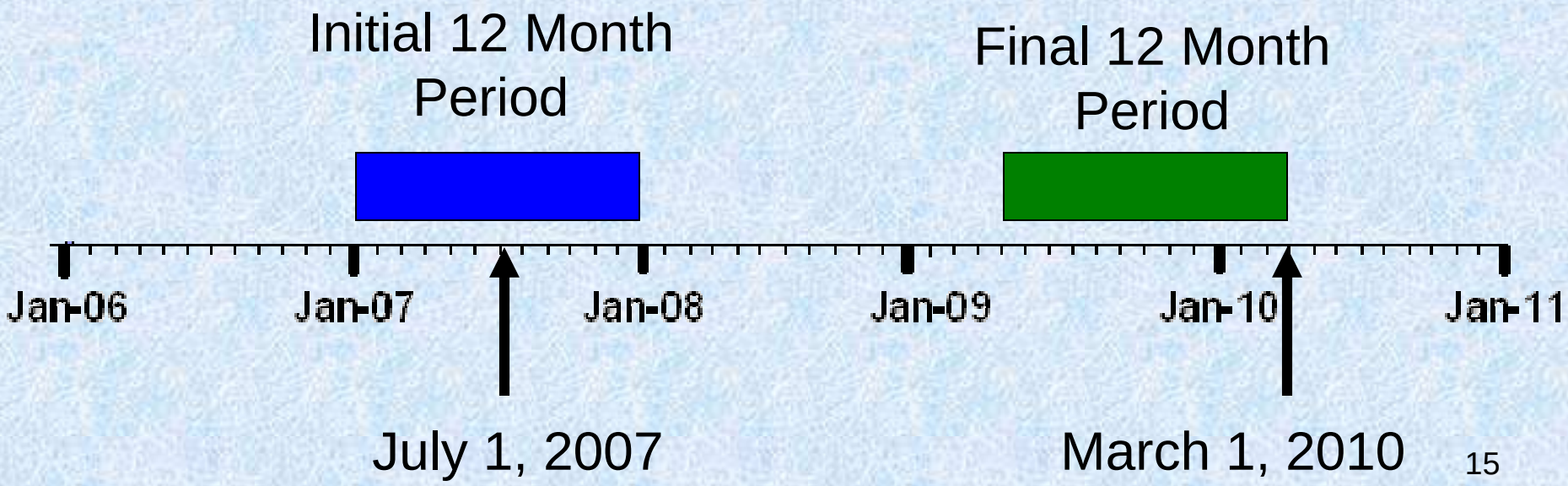
- PM and NOx credit for vehicle retirements that reduce total fleet horsepower
  - Between March 1, 2006 and March 1, 2010
  - Difference in total horsepower on those dates
  - Credit does not expire
  - Retirement of any tier vehicle counts

Credit for Reduced Activity

- PM and NOx credit for reduction in fleet activity
  - Between July 1, 2007 and March 1, 2010
  - Credit expires if not used by 2011
  - Activity determined over 12 month period

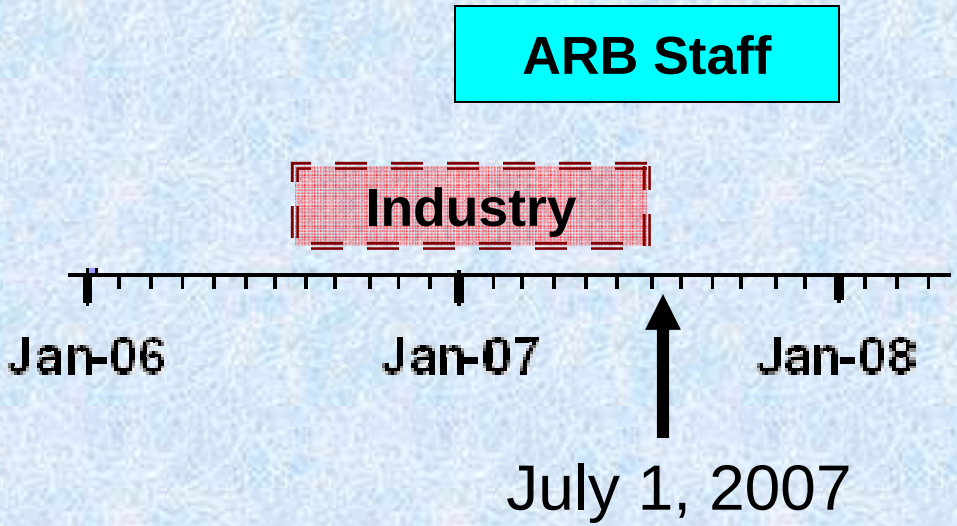
Reduced Activity Timeline

- Initial 12 month period, centered on July 1, 2007
- Final activity period ends March 1, 2010
  - Allows fleets to determine credit before initial compliance date



Issues Raised on Activity Timeline

- Industry requested use of the 12 months preceding July 1, 2007
- Staff did not propose this because:
  - Not consistent with legislation
  - Could overestimate the reduction in activity



Records Demonstrating Reduced Activity

- Full credit for:
  - Hour meter records
  - Operator logs for each vehicle
  - Vehicle maintenance records with hours
- Up to 20% credit for:
  - Records of fleet employment, revenue, cost of construction put in place
  - Overall diesel fuel use for the fleet
  - Limited because these records do not directly demonstrate a reduction in vehicle activity

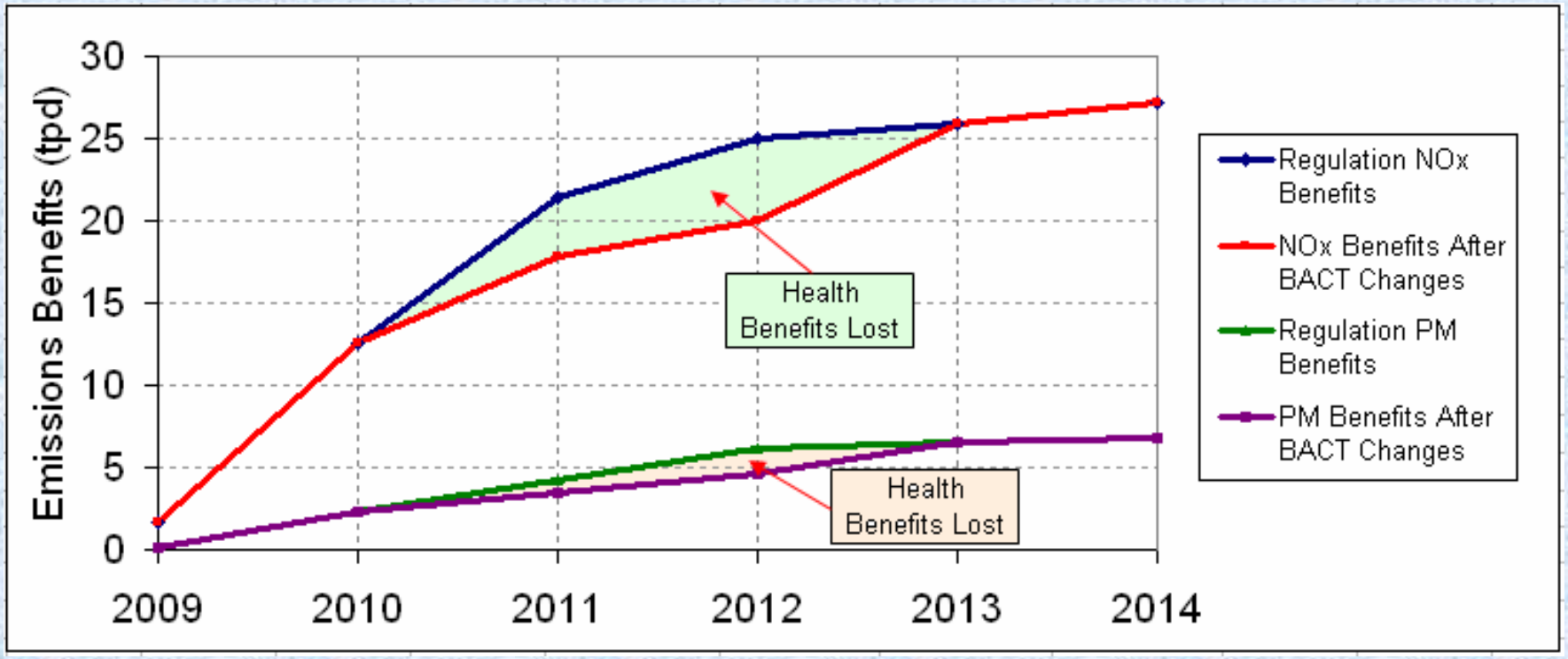
Combination of Credits

- Retiring fleet hp could also result in reduction in activity
- To avoid double counting:
  - Fleets demonstrating reduction in activity in the portion of the fleet that was <u>not</u> retired
    - Receive credit for retirement
    - Receive credit for reduced activity
  - Fleets without vehicle records must subtract retirement credits from their activity credit

Emissions Impact of Legislation

BACT Schedule Changes (2011 to 2012 Delay)

Effect on Emissions



Compared to emissions benefits estimated in the regulation staff report.

Effect of New Credits on Emissions

- More credits means fewer actions required
- Increases emissions compared to current requirements
- Total impact will depend upon:
  - Extent of reduction in activity and fleet size
  - Extent of changes in turnover practices
  - Timing and extent of economic recovery

On-Going Emissions Work

- In January 2009, Board asked for report in fall of 2009
  - In February, AB 8 2X adopted
  - New credits mean relief for hard-hit fleets
  - New data on activity and retirement will be forthcoming
- Two competing effects
  - AB 8 2X amendments will increase emissions, as <u>fleets perform less clean-up</u>
  - Recession likely temporarily reducing emissions
- Staff proposes to update Board mid-2010

New Incentives

New Retrofit Incentives

Early retrofits:

1. Double credit towards NOx requirements for NOx retrofits
2. Extend double credit for PM retrofits in medium/small fleets to March 1, 2012
3. Lifetime turnover exemption for vehicles retrofit
   - Limited to 15% of a fleet's total horsepower

New Repower Incentive

Early repowers:

- Turnover credit for repowers done before turnover required

Emission Benefits from New Voluntary Incentive Provisions

- Dependent on use
- No long term emissions disbenefit expected

Additional Actions	800 Retrofits (400 with 40% NOx reduction) 500 Repowers	
Emissions Benefits In 2010 and 2011	PM (tpd)	NOx (tpd)
	0.2	1.9

Clarifications and Minor Changes

Clarifications and Minor Changes

1. Manufacturer delay provisions also apply to installer delays
2. Community college training programs included as Non-Profit Training Centers
3. Clarification of unsafe retrofit installation exemption
4. Public agency fire prevention activities classified as forest operations
5. Requirement to report selling a vehicle

Overall Emission Impact of Staff Proposal

Overall Emission Summary of Staff's Proposal

- Legislation
  - BACT revision
    - Loss in overall health benefits
  - New credit provisions
    - Loss in emission benefits
    - Mitigated by recession
- New incentive provisions
  - Benefits dependent on use
- Overall loss in emission benefits

Staff Recommendations

- Board adopt the proposed changes to the off-road regulation
- Direct staff to return in mid-2010 with update