

Effect of the Recession on Trucking Emissions



December 9, 2009

California Environmental Protection Agency



Air Resources Board

Benefits from Rule are Substantial

- Significant health benefits
 - About 9,400 fewer premature deaths
- Reduces cancer risk from diesel PM in all communities
- Meets NOx and PM2.5 SIP targets
 - No other measures can achieve same emissions reductions
 - Cannot attain federal standards without rule

Focus of Staff's Evaluation

- Evaluate changes in activity
- Evaluate impact on emissions
- Evaluate impact on SIP
- Solicit stakeholder input



Staff's Findings

- Activity and emissions are below previous estimates
- Emissions still higher than emission levels achieved by rule
- Rule remains critical to meeting 2014 SIP obligations

Staff's Analysis of the Impact of the Recession on Trucking Emissions

Staff's Approach to Projecting Emissions Forward (to 2014)

- Start with original staff report estimates (2008)
- Estimate effect of recession on emissions today (2009)
- Project future emissions under several scenarios

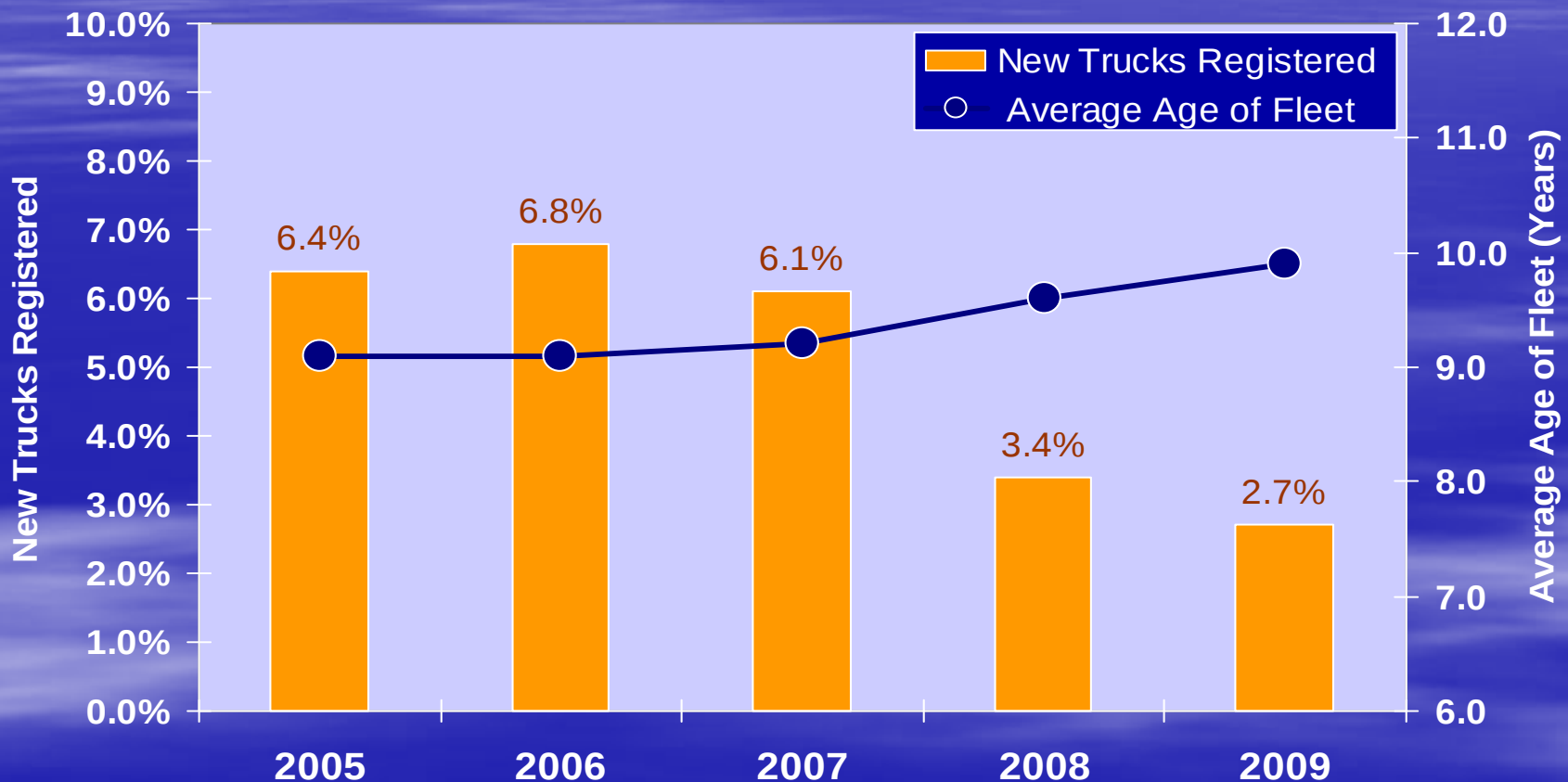
Recession Has Reduced California Trucking Activity

- Overall activity down 10-18% since 2007
 - Many fleets experiencing greater reductions
- National new truck sales at lowest levels in 25 years
 - 64% lower than 2005
- California registered trucks
 - No growth since 2007
 - Getting older due to fewer replacements
 - Fewer clean trucks than staff report projection

Truck Activity is Down

Data Source	Region	Change 2007 to 2009	Latest Data Used
California Fuel Sales	Statewide	-13% to -18%	Aug. 2009
California PeMS Counts	Statewide	-4% or more	Oct. 2009
California WIM Counts	Statewide	-10% or more	Mar. 2009
Port of LA / Long Beach Container Traffic	Los Angeles	-26%	Oct. 2009
Port of Oakland Container Traffic	Bay Area	-17%	Oct. 2009
ATA Tonnage Index	Nationwide	-10%	Sept. 2009
BTS Transportation Services Index	Nationwide	-14%	Sept. 2009

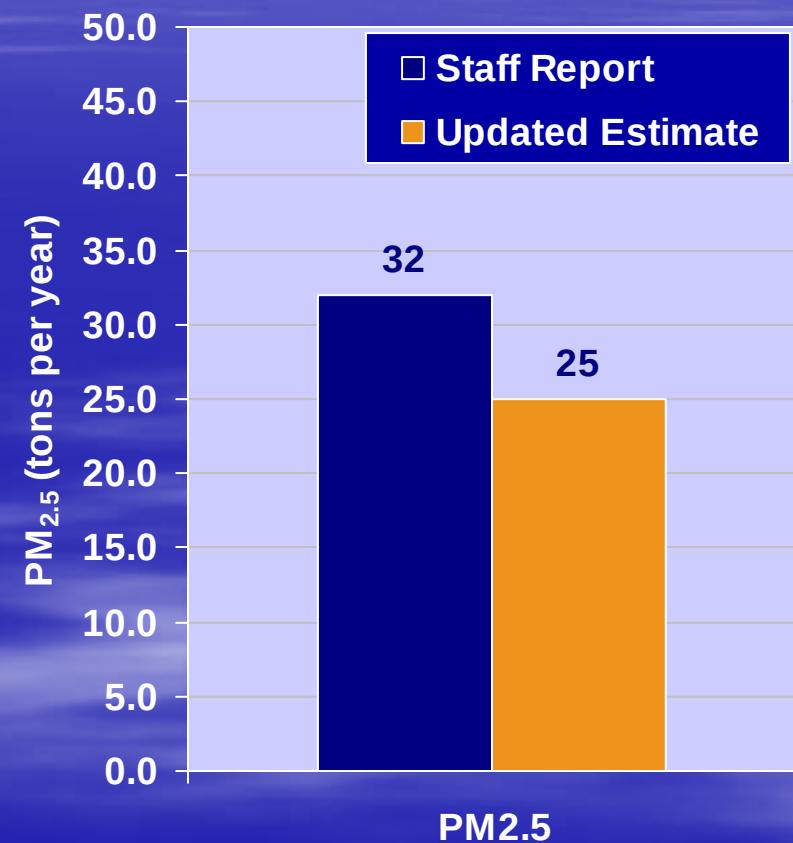
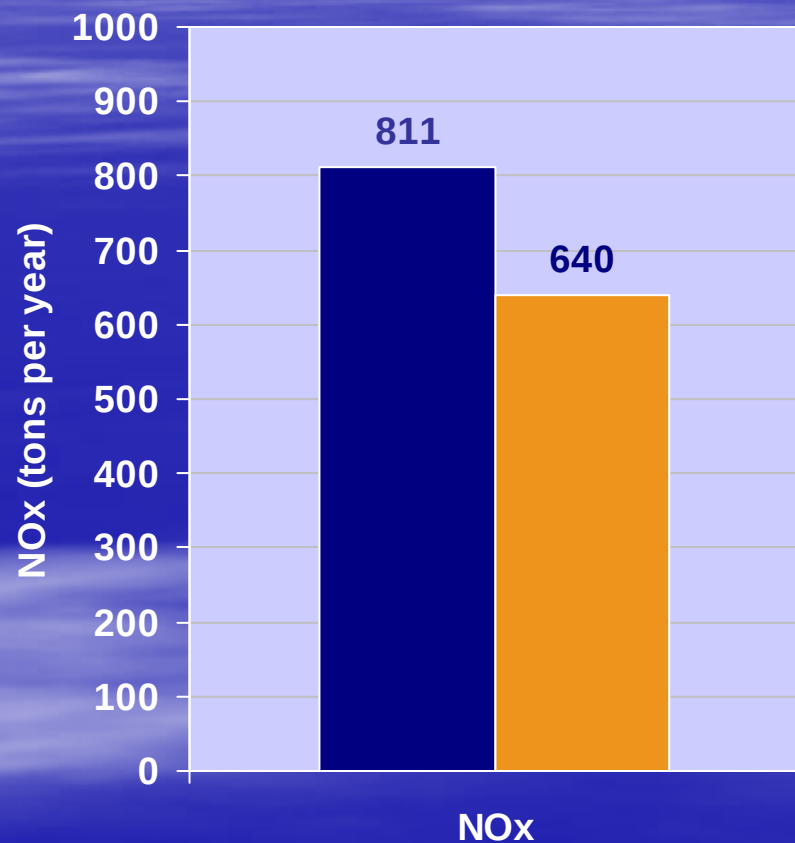
Trucks are Getting Older as Fewer New Vehicles Purchased



Changes in Economic Activities Have Differing Effects

- Factors which reduce emissions
 - Fewer miles traveled
- Factors which increase emissions
 - Fewer new vehicles purchased
 - Fewer new vehicles operating in California

2009 Emissions 20% Lower



Projecting Emissions Forward to 2014

- Evaluated all available forecasts
- Developed two bounding scenarios
 - Faster and Slower growth
 - Estimated CA truck activity and sales for each
- Compared results to:
 - Expected emissions (from staff report)
 - SIP obligations

Multiple Forecasts Used

- California Specific
 - California Department of Finance (to 2011)
 - California Legislative Analyst's Office (to 2015)
 - California Energy Commission (to 2030)
 - UCLA Anderson School (to 2011)
 - Beacon Economics (to 2013)
 - University of the Pacific (to 2014)
- Nationwide
 - Congressional Budget Office (to 2019)
 - Energy Information Agency (to 2030)

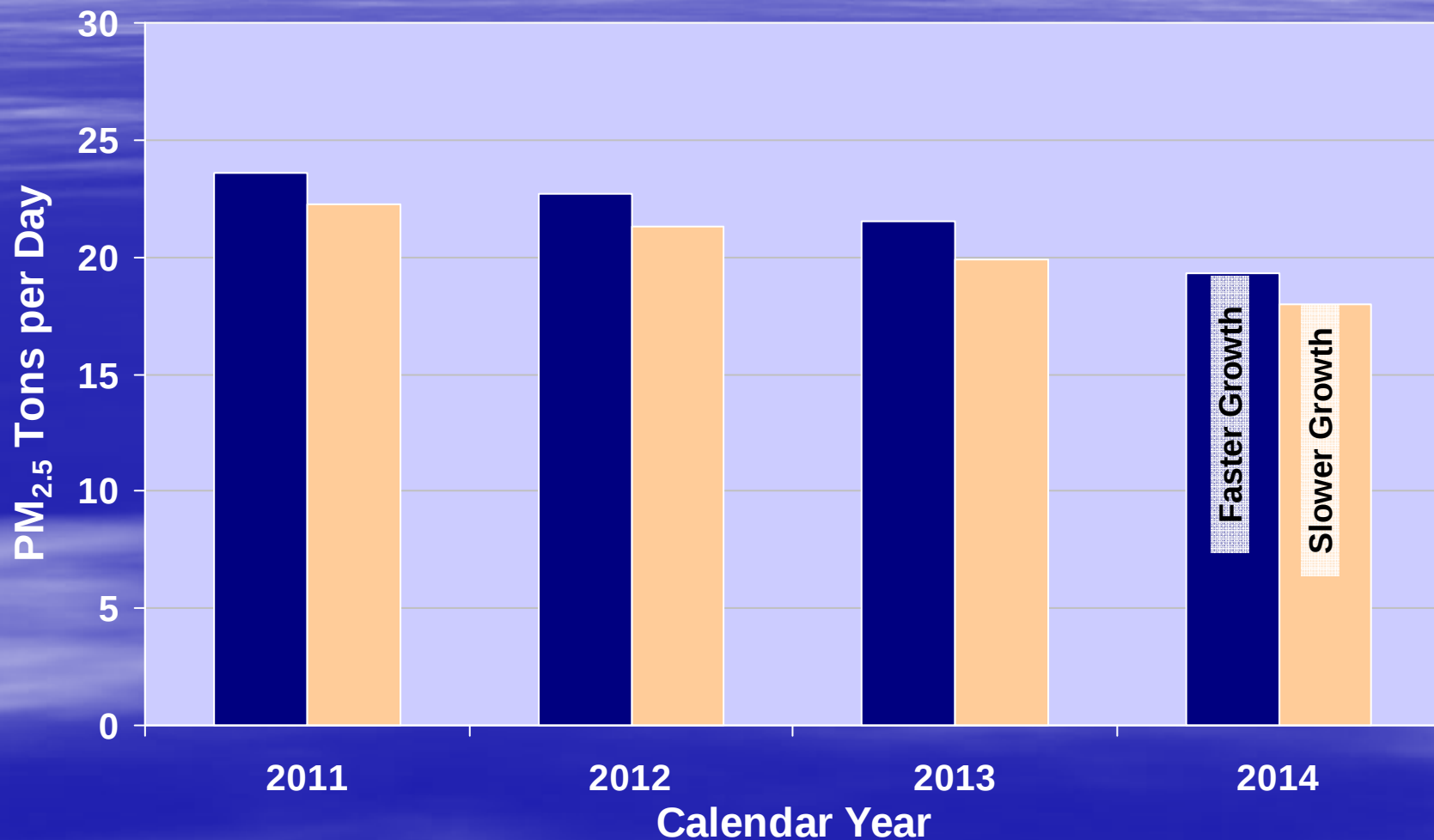
Slower Growth Scenario

- Growth consistent with CA employment forecasts
- CA truck activity recovery begins in 2011
 - Grows at pre-recession average thereafter
- Truck sales recover in 2012
 - Grow modestly through 2014

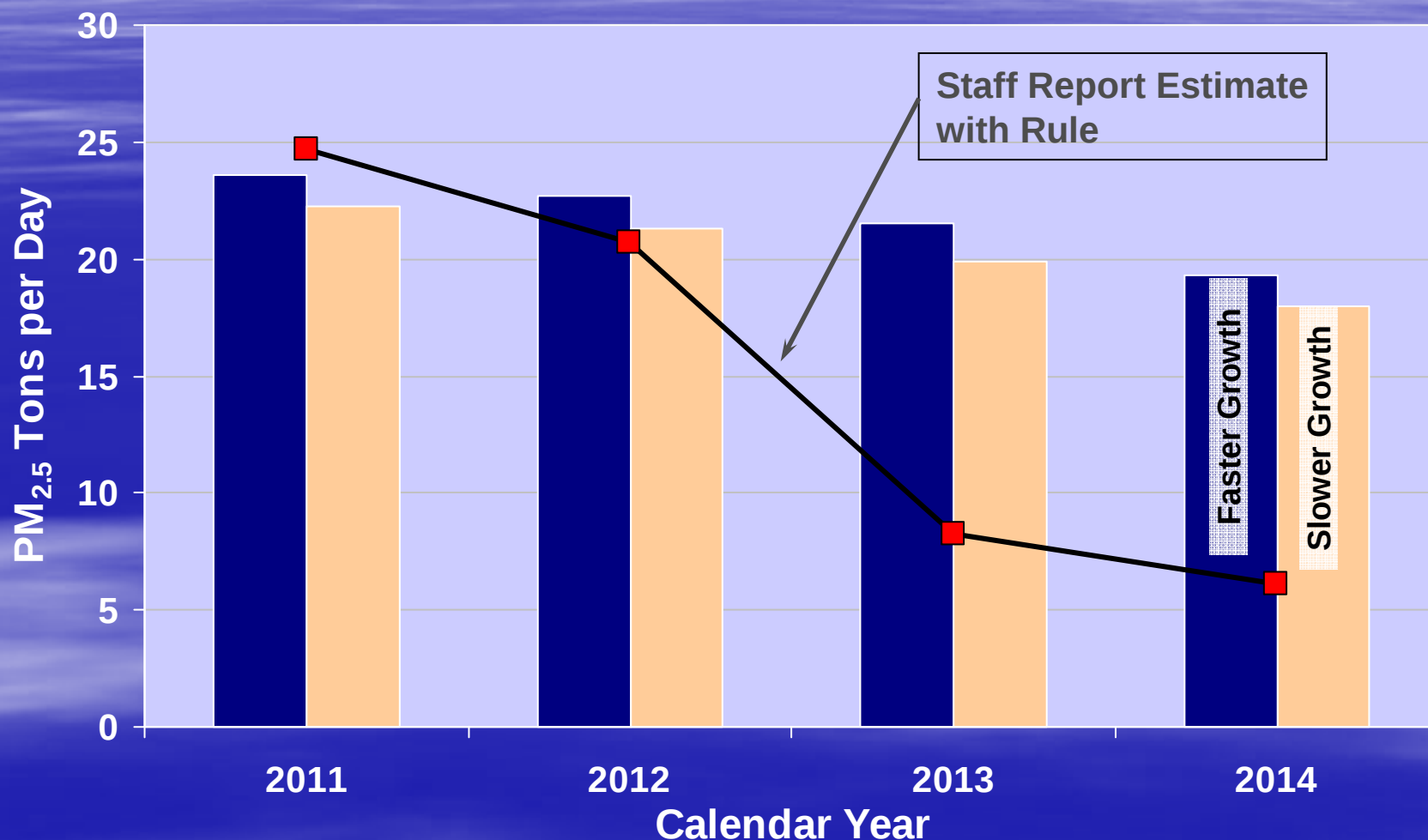
Faster Growth Scenario

- Growth rate reflects two year lag for CA recovery behind CBO forecast
- Eight year recovery period
 - Consistent with recovery from Great Depression
- CA truck activity recovery begins in 2010
 - No return to long-term trend until 2017
- Truck sales rebound in 2010 and 2011
 - Slower sales growth between 2012 and 2014

PM_{2.5} Emissions without Rule (Updated)



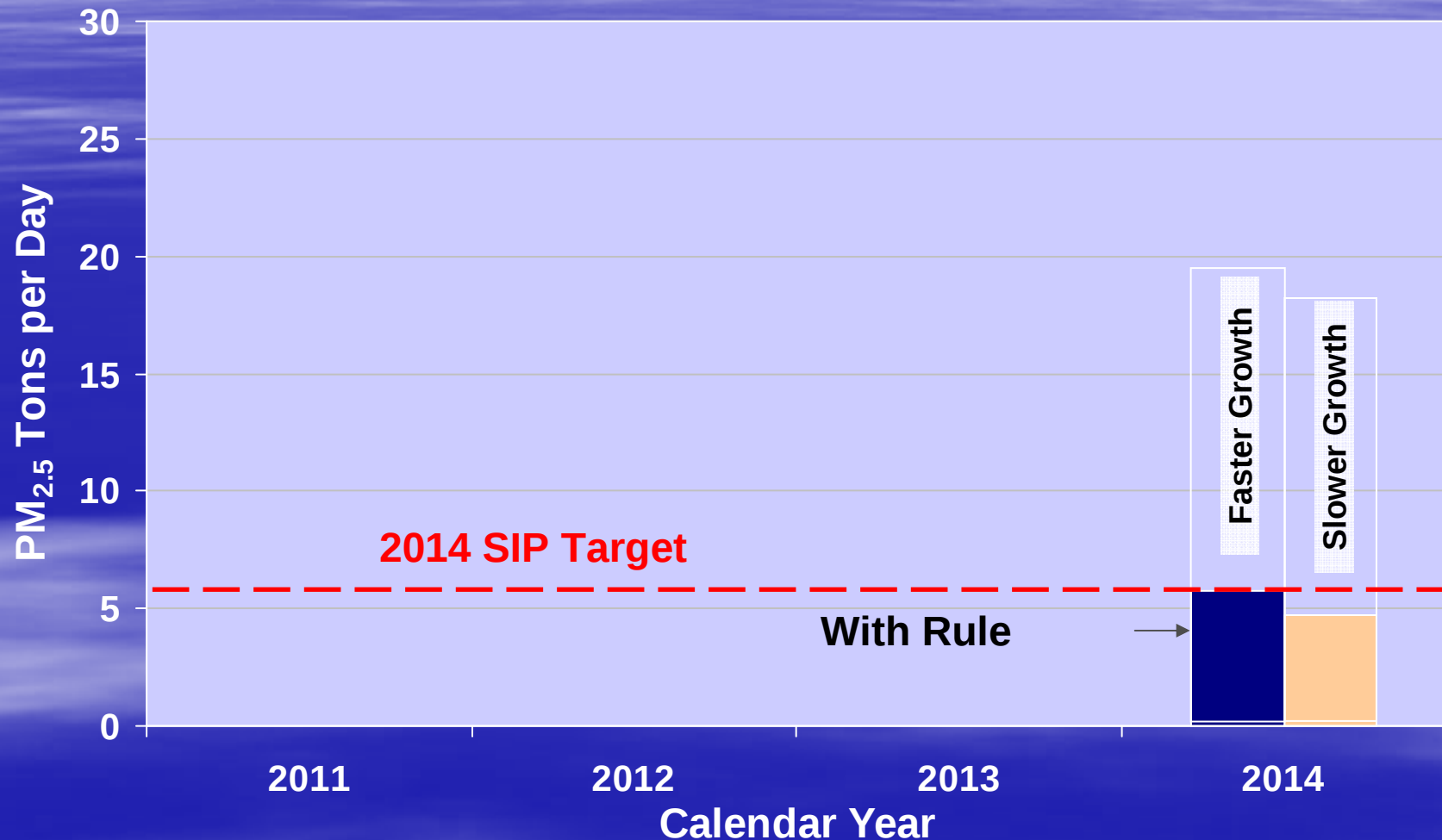
Economy Alone Does not Achieve Expected PM_{2.5} Reductions



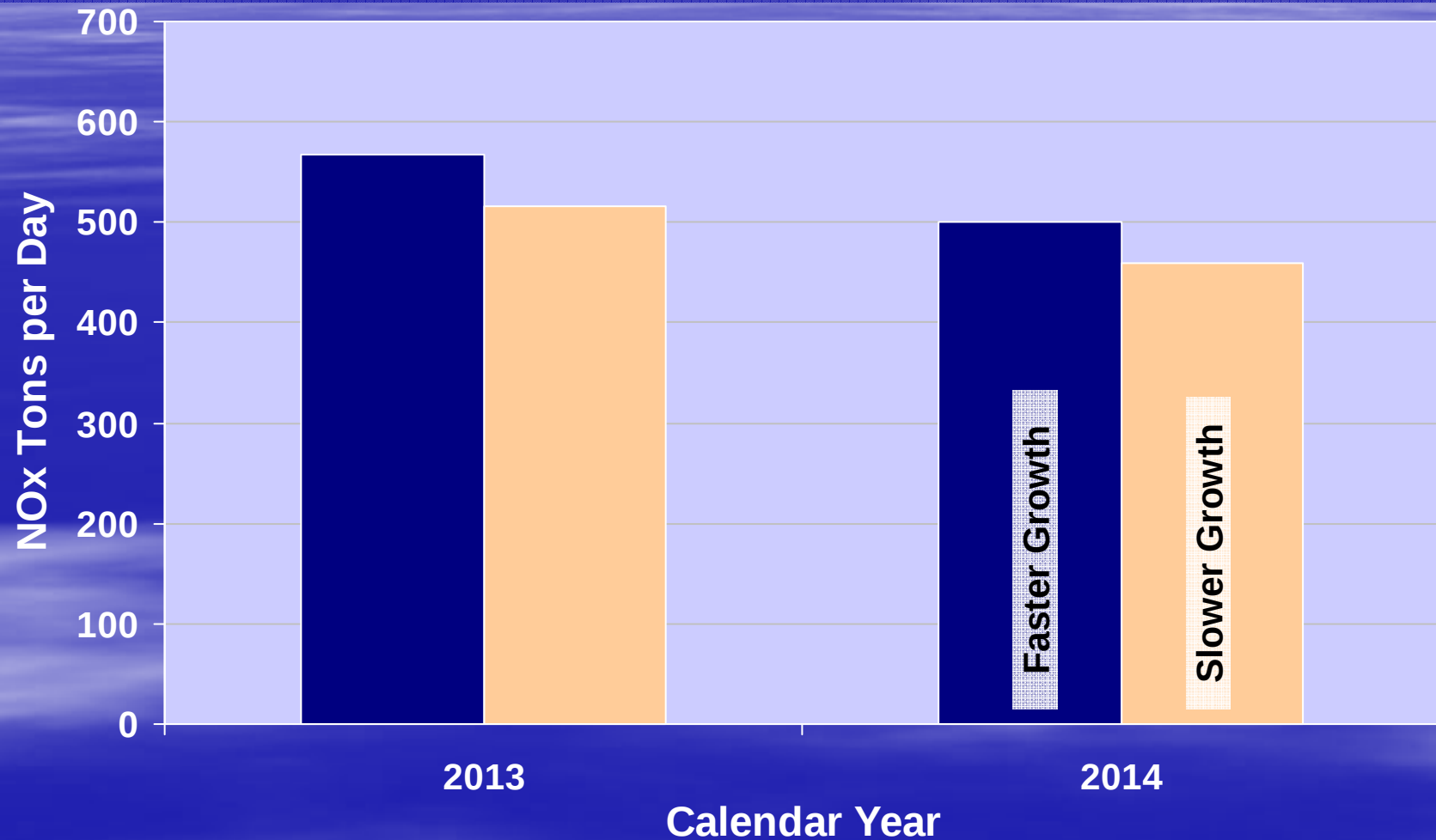
Economy Alone Does Not Meet PM_{2.5} SIP Targets



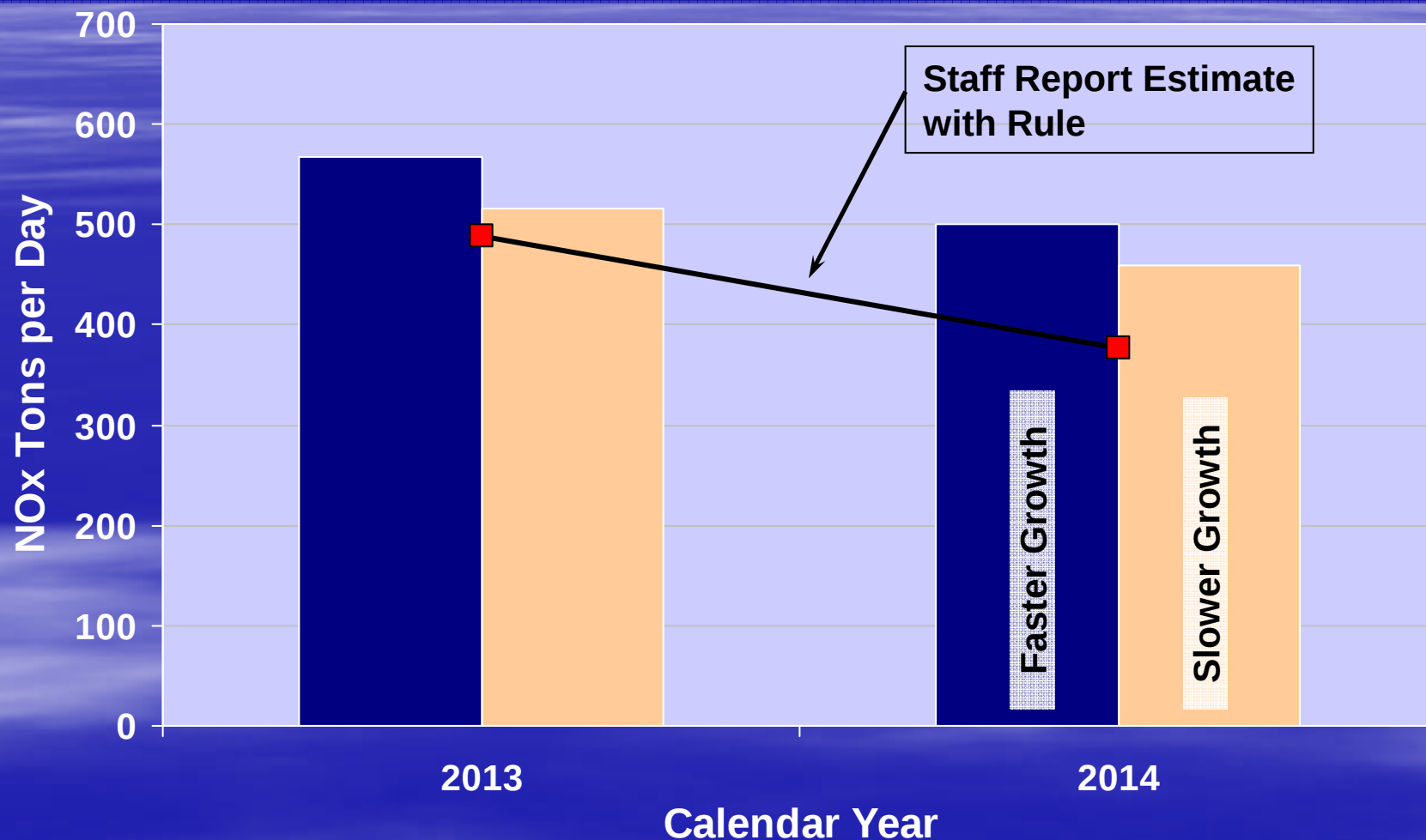
Economy Plus Rule Provides Slightly Greater PM_{2.5} Benefits than Expected



NOx Emissions without Rule (Updated)



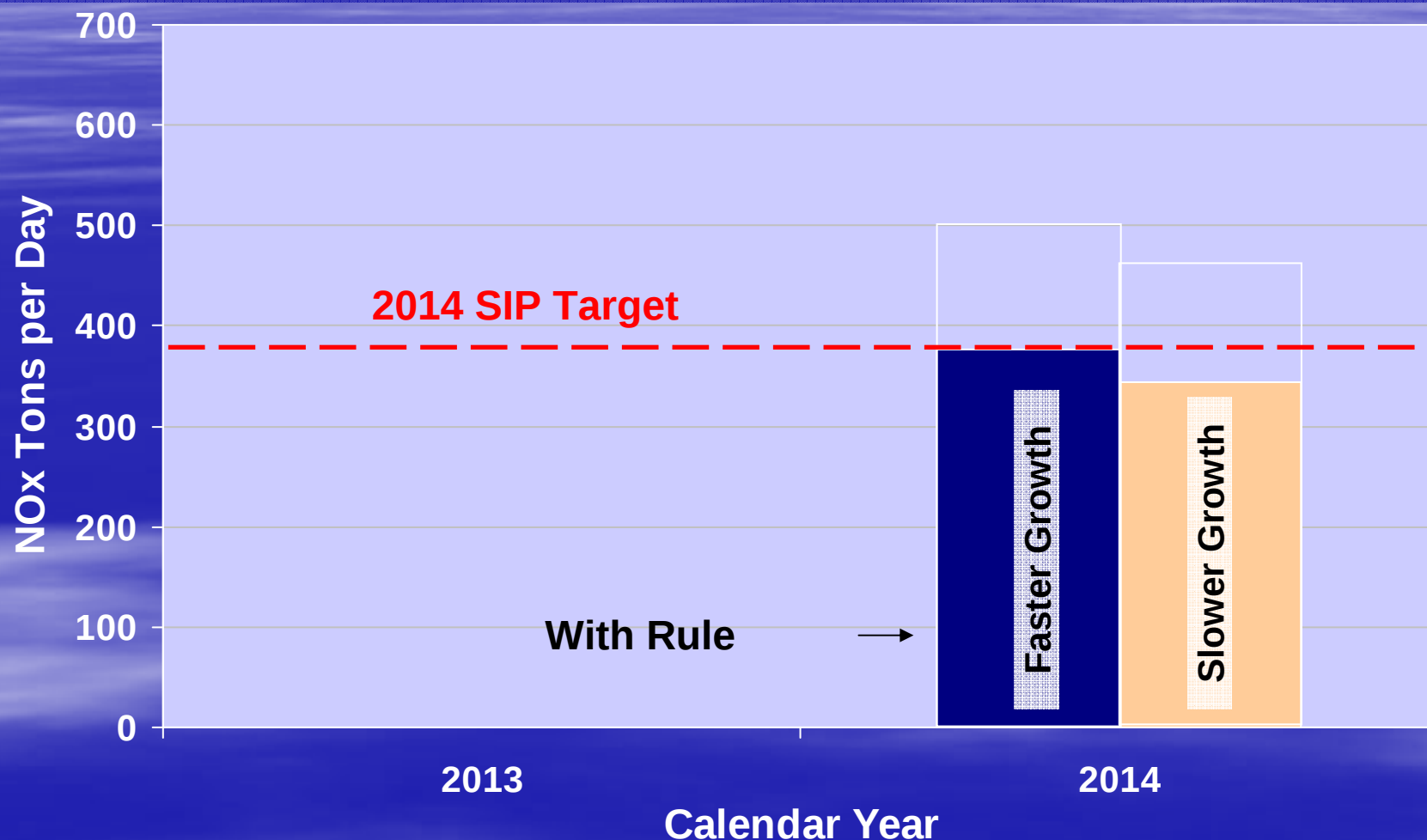
Economy Alone Does not Achieve Needed NOx Reductions



Economy Alone Does Not Meet NOx SIP Targets



Uncertain if Economy Plus Rule Will Provide Greater NOx Benefits



Findings Show Rule Still Needed to Meet SIP Obligations

- Recession alone not effective emission control strategy
- Rule still needed
 - To meet SIP targets
 - To reduce localized health risk
- Any flexibility must be balanced against public health impacts

Stakeholders Concerned About Rule Impacts

- Workshop held December 3, 2009
- Fleet comments focused on:
 - Greater reductions in VMT are occurring
 - Reduced revenues limiting ability to comply
 - Additional compliance time needed
- Health organizations commented:
 - Rule needs to maintain health benefits

Implications of Findings and Stakeholder Input

- Reduced requirements in first few years possible
 - Balanced against public health impacts
- Deferred actions would need to be made up by 2014
 - To meet SIP target
- Several possibilities identified
 - More assessment required
 - More input needed

Possible Options To Reflect State of the Economy

- 2 year deferral for mid-sized fleets
- 2 year deferral for ~10 trucks in any size fleet
- Defer all 1st year requirements
- Earliest date for rule modifications – April 22
 - Workshops
 - New rulemaking procedures effective Jan 2010
 - Public comment period