

# Early Action Measures

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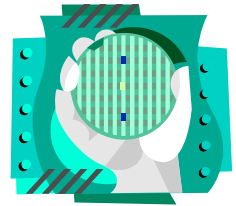
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# Early Action Measures



- The Act requires ARB to identify a list of “discrete early action greenhouse gas reduction measures” by June 30, 2007

- Once on the list, these measures are to be developed into regulatory proposals and made enforceable by January 1, 2010.



- “Additional early action items include a comprehensive framework of regulatory and non-regulatory elements that will result in significant and effective GHG emission reductions.” (CARB EAM website, 2008)



# Final Report

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- 44 Total Early Action Measures
- 9 Measures = Discrete Early Actions
- Potential to deliver GHG emission reductions of at least 42 million metric tons of CO<sub>2</sub> - equivalents (MMTCO<sub>2</sub>E),
- About a quarter of the 2020 emission reductions needed to meet the AB 32 target



# CARB's Reduction Estimates

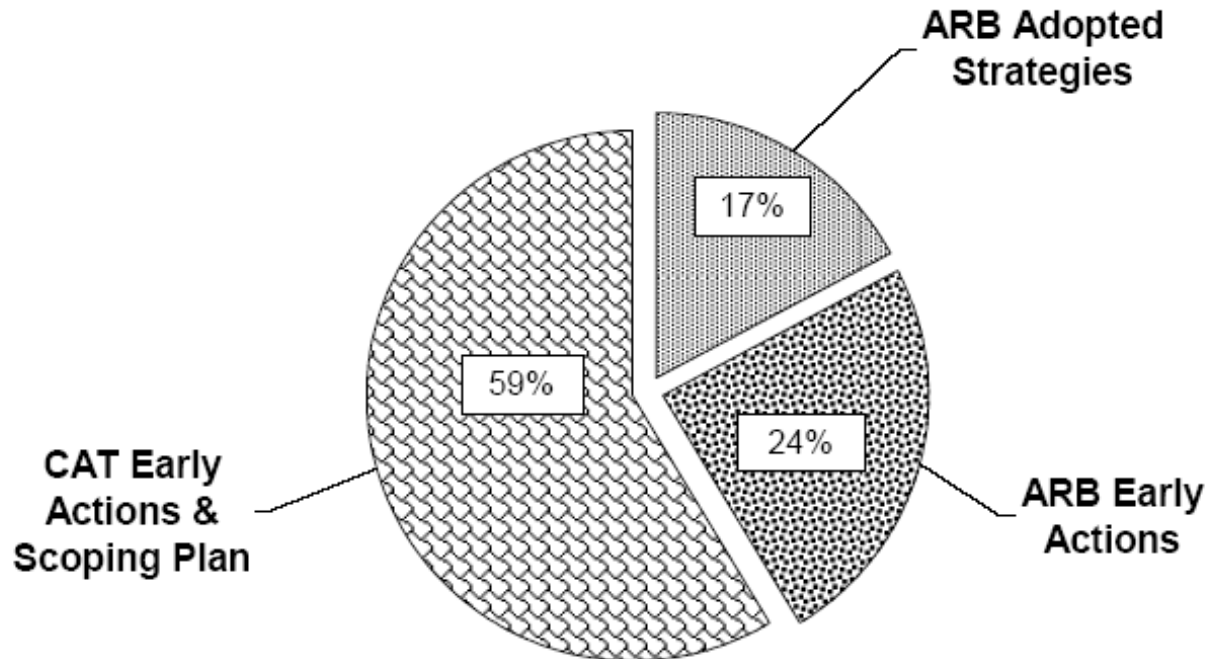


Figure ES-1. 2020 ARB GHG Reduction Estimates by Different Elements of the State's Climate Protection Action Plan.

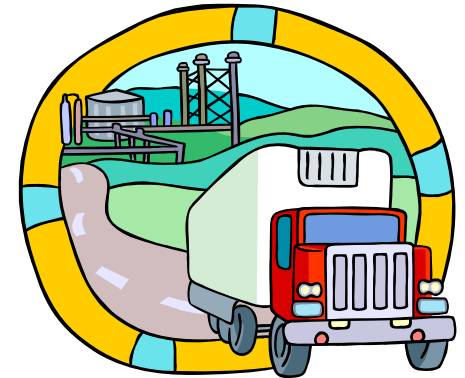
Source: "Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration", CARB, October 2007

CAT = Climate Action Team – Multiple State Agencies

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# Discrete Early Actions

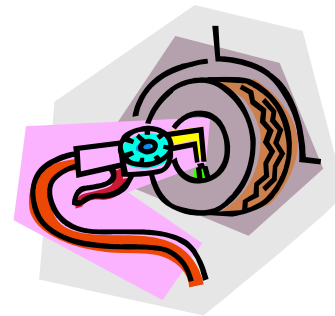
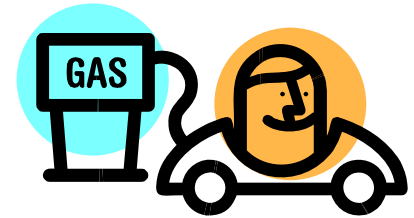
- Green Ports
- Reduction of high GWP GHGs used in consumer products
- Reduction of PFCs from semiconductor industry
- SmartWay truck efficiency



Source: “Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration”, CARB, October 2007

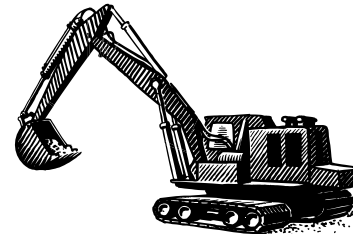
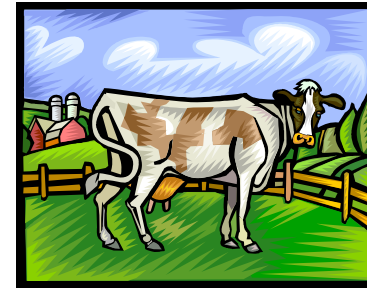
# Discrete Early Actions (cont.)

- Low Carbon Fuel Standard (LCFS)
- Reduction of HFC-134a from DIY MVAC servicing
- Improved landfill gas capture
- SF6 reductions from the non-electric sector
- Tire inflation program



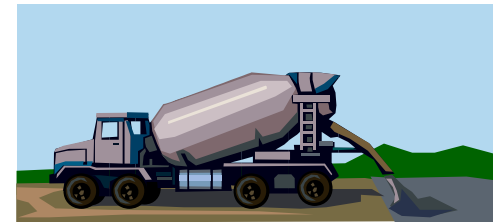
# Other Early Action Measures

- Above ground storage tanks (fuel)
- Diesel – offroad equipment (non-ag)
- Diesel – Port Trucks
- Commercial harbor craft
- Manure management
- Local government GHG reduction guidance/protocols



# Other Early Action Measures (Cont.)

- Cool automobile paints
- Blended cements
- Energy efficiency of cement facilities
- Ban HFC release from MVAC service/dismantling
- Add AC leak tightness test and repair to Smog Check

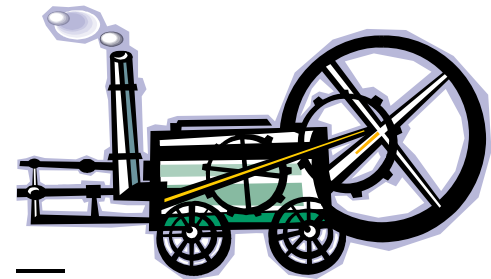




# Other Early Action Measures (Cont.)

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- Electrification of stationary agricultural engines
- Transportation refrigeration – electric standby
- Truck stop electrification with incentives for truckers
- Etc.



# Resources and More Information

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- CARB: <http://www.arb.ca.gov/cc/cc.htm>
- Calif. Climate Action Registry: <http://www.climateregistry.org/>
- CARB/Mobil Sources: <http://www.arb.ca.gov/cc/ccms/ccms.htm>
- IPCC: <http://www.ipcc.ch/>
- PEW Center: <http://www.pewclimate.org/>