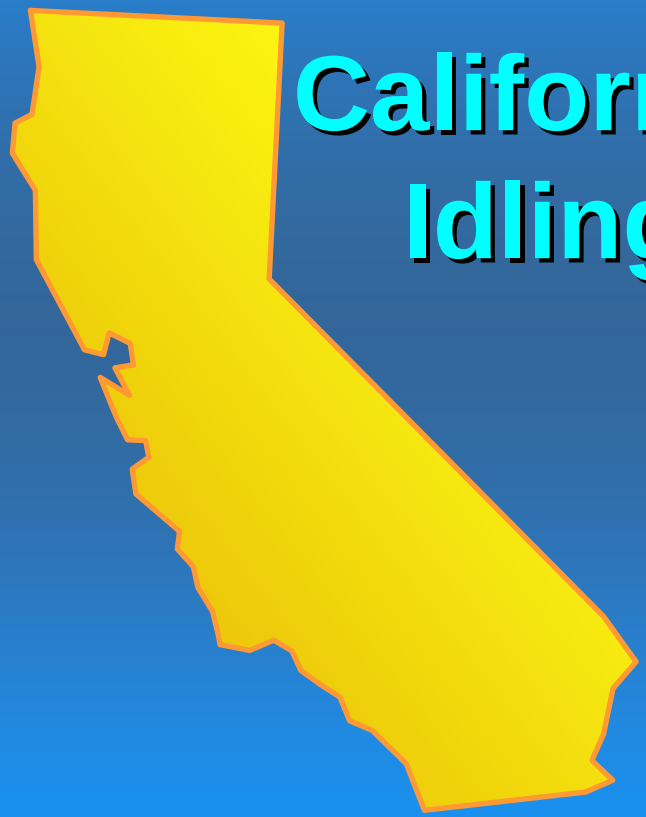
National Idling Reduction Planning Conference



California Air Resources Board Idling Reduction Programs

Stephan Lemieux
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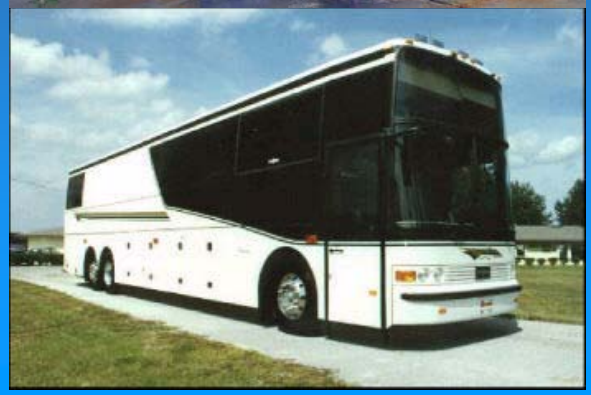
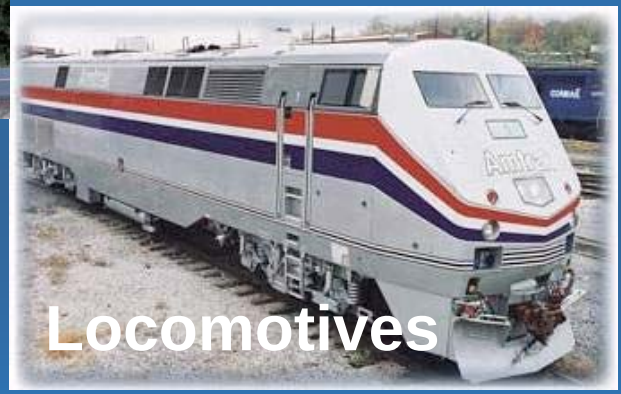
May 17-19, 2004
Albany, New York

California Environmental Protection Agency
Air Resources Board

Significant Idling Emissions





Why Reduce Idling?

- HDV Idling emissions are significant

  2010 Statewide Inventory from HDVs (GVWR > 14K lbs)[1]:

  – NOx ≅ 35 tpd (~9% of total NOx exhaust)

- Oceangoing Vessels: San Pedro Bay Ports (CY2000)[2]

  NOx hotelling emissions

  – Main propulsion engine = 0.7 tpd
  – Auxiliary engine = 11.0 tpd
  – Auxiliary boiler = 1.0 tpd

- Locomotives

  2004 Statewide includes linehual, passenger, and yards:

  – NOx Idle = 19 tpd Total = 174 tpd
  – PM Idle = 0.83 tpd Total = 5.13 tpd

[1]California registered only and does not include school buses, transit buses or motorhomes.

[2]Environ. "Cold Ironing Effectiveness Study, Volume 1", March 30, 2004.

Why Reduce Idling?

- Availability of alternative technologies
- Reduced exposure to diesel PM and other toxics
- Reduced NOx emissions - a precursor to ozone
- Cost effective and comparable to other mobile source measures
- Important to achieving air quality goals (SIP)
- Environmental justice

CA Idling Reduction Programs

- Regulatory programs
  - Limit School Bus Idling and Idling at Schools
    - adopted 12/2002, effective 7/2003
  - Limit Commercial Diesel-Fueled Motor Vehicle Idling
    - scheduled for hearing: July 2004
    - effective upon adoption
  - Idling Requirements for New HDDVs
    - Electronic idle controls
    - Optional HDDV idling emission standards
    - Schedule: to be determined

CA Idling Reduction Programs

- Other programs
  - Commercial marine
  - Locomotives
  - Off-road construction equipment
  - Carl Moyer Program

Limit School Bus Idling and Idling at Schools

- School buses:
  - at or near schools: no unnecessary idling
  - other locations: must not idle more than 5 consecutive minutes
- Transit buses/commercial vehicles:
  - at schools: no unnecessary idling
  - near schools: must not idle more than 5 consecutive minutes
- Exemptions: Passenger vehicles, electric vehicles; idling in traffic, vehicle repair or testing, PTO, safety, etc.
- Violations: civil ($100) and criminal penalties as allowed by law
- Effective July 16, 2003

Limit Diesel-Fueled Commercial Motor Vehicle Idling

- Statewide limit on idling
  - next workshop: May 21, 2004
  - scheduled for hearing: July 2004
- Applicability:
  - commercial diesel vehicles, GVWR > 10,000 lbs
  - out-of-state vehicles when operating in California
- Limits idling to 5 minutes or less at any location
- Buses (except school buses)
  - limits idling to 5 minutes when there are no passengers on board
  - may idle up to 10 minutes prior to passenger boarding
  - no idling restrictions when passengers are on board

Limit Diesel-Fueled Commercial Motor Vehicle Idling

- Sleepers
  - Pre 2009 CY: may idle only when sleeper is used for sleeping/resting
  - 2009+ CY: 5 min idle restrictions become effective at all times
  - options: alternatives are available. future performance/ emission requirements may be needed
- Within 100 ft of any residential zone
  - all idling restrictions apply, no queuing, and no exemption for sleepers
- Exemptions for safety and operational concerns
- Effective upon adoption

Idling Requirements for New HDDVs

- Electronic idle controls
  - idle shutdown system
  - automatic stop/start system
- Optional HDDE idling emission standards
- Optional diesel APU emission standards
- Status:
  - currently under evaluation
  - board hearing: 2005

Commercial Marine

- Operational controls: speed controls, idle time limits, etc.
- Cold ironing/Shore power: using electric power rather than on-board diesel generator while at rest on port (hotelling)
  - issues: infrastructure cost, vessel retrofit cost, standardization of equipment, harmonized requirements - interstate and international, etc.
- Significant emission reductions at ports and nearby communities

Locomotives

- Potential strategies
  - idle time restrictions
  - retrofit with automatic idle limit devices
- Evaluations in the next 2 years
- ARB currently working on a program to reduce locomotive emissions in the San Joaquin Valley and Statewide. The program may include reduced locomotive idle time.

Off-Road Construction Equipment

- Long term SIP strategy
- May require
  - statewide idling restrictions
  - electronic idle controls
- Evaluations in the next 2 years

Carl Moyer Program

- Incentive program that funds the incremental cost of cleaner than required engines and equipment
- Funds installation cost for APU (trucks and locomotives) and idle limit device (locomotives only)
- Maximum of $1,600 for a diesel APU
- Maximum of $3,100 for alternative fuel or fuel cell APU, or idle limit device

Carl Moyer Program

- ARB also supports the deployment of truck stop electrification infrastructure in California
  - $2 million one-time grant
  - compensates for using IdleAire's technology at four truck stop sites with a total of 200 parking spaces in the San Joaquin Valley.
- Cold-Ironing may also be considered for funding
  - evaluated on a case by case basis

Questions?

- **School bus idling** - Beverly Werner (bwerner@arb.ca.gov)
  http://www.arb.ca.gov/toxics/sbidling/sbidling.htm
- **HDV idling** - John Gruszecki (jgruszec@arb.ca.gov)
  http://www.arb.ca.gov/toxics/idling/idling.htm
- **HDV idling** - **New HDVs** - Daniel Hawelti (dhawelti@arb.ca.gov)
  http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- **Locomotives, Off-road diesel** -
  Jackie Lourenco (jlourenc@arb.ca.gov)
- **Commercial marine** - Peggy Taricco (ptaricco@arb.ca.gov)
- **Carl Moyer Program** - Lucina Negrete (lnegrete@arb.ca.gov)
  http://www.arb.ca.gov/msprog/moyer/moyer.htm