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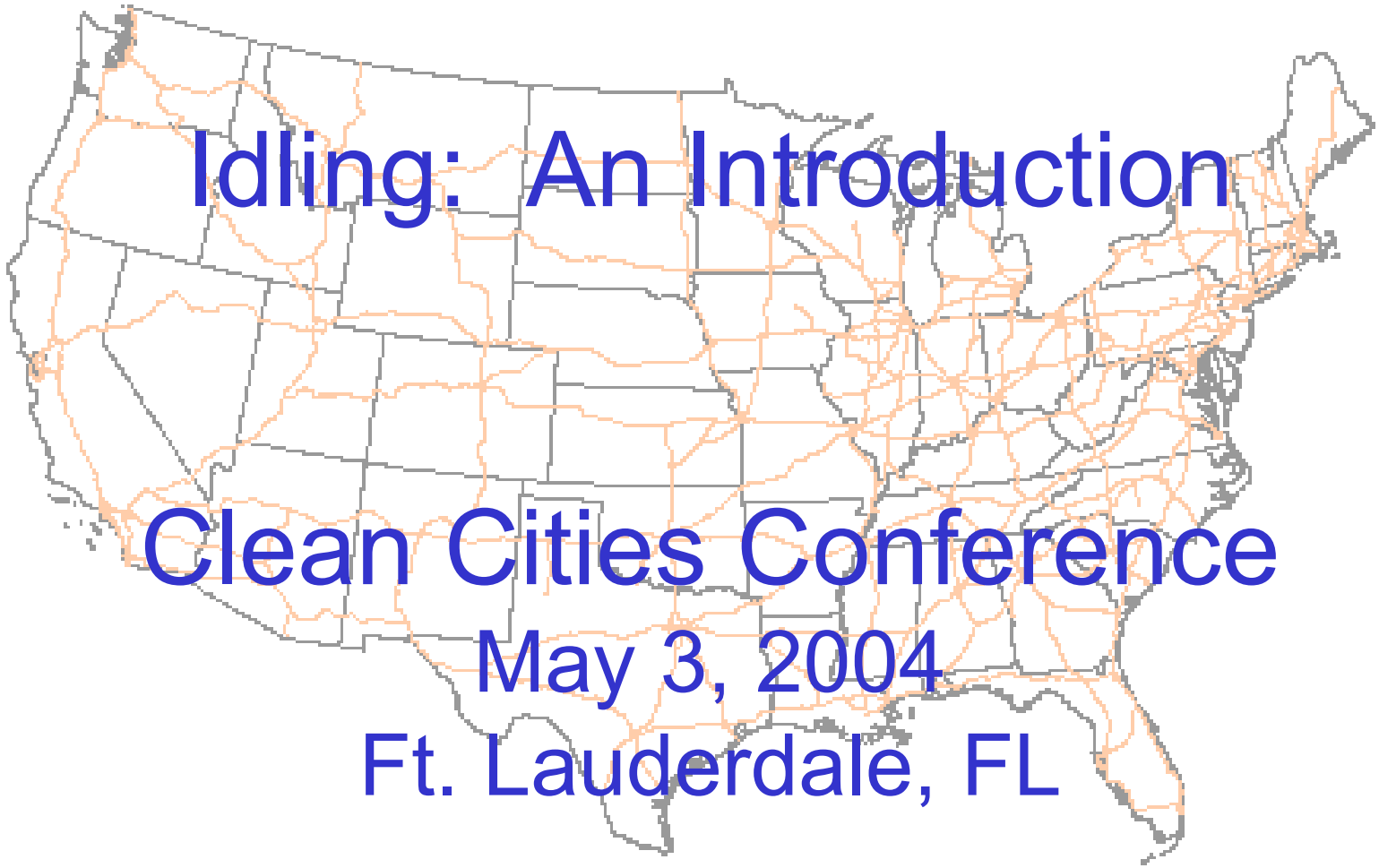
Agency



Idling: An Introduction

Clean Cities Conference

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Ft. Lauderdale, FL

What is Idling?

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- Operating the vehicle's engine in the idle mode for a long duration
  - Long duration = 6+ hours/day, continuous engine idling
  - Minimum amount of time = 15 minutes
  - Does not include idling due to traffic conditions

Why do trucks idle?

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- To supply air conditioning or heat to the sleeper compartment
  - Only hot or cold weather? No, idling occurs in all weather conditions.
- To supply heat to the engine in cold weather
  - Protects engine block from freezing
  - Allows for easier start-up
- To operate on-board appliances (e.g., television, microwave)
  - Sleeper compartment is their “home away from home”
- To maintain battery charge while operating on-board appliances

Why is idling a concern?

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- Truck/fleet owner: wastes fuel, increases maintenance costs, and decreases engine life
- Truck driver/truck stop: potential health impacts
- Citizens: harmful pollutants (air toxics), ground level ozone (oxides of nitrogen), greenhouse gases (CO2), noise pollution
- Country: increased dependence on foreign oil imports

What exactly are the impacts?

- Fuel Impacts = 1 billion gallons per year
- Carbon Dioxide = 11 million tons per year
- Oxides of Nitrogen = 180,000 tons per year
- Particulate Matter = 5,000 tons per year

What can be done to reduce idling?

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- Educate
  - Truck owners: fuel waste, maintenance costs, and shortened engine life
  - Truck drivers: health and safety impacts
- Provide bonuses
  - Fleet owners provide bonuses to reduce idling
- Pass State laws
  - Limits on idling
- Deploy idle reduction technologies
  - On-board and off-board technologies

What is the “best” approach?

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- Education:
  - Most fleet owners know that idling is wasteful
  - Most truck drivers understand that a truck stop filled with idling vehicles is probably an unhealthy environment

“Best” approach (cont.)

- Bonuses:
  - Some major fleets do offer this with limited success
  - But if it’s too cold or hot truck drivers will need to rest comfortably and idle regardless of the extra money.
- Anti-idling laws:
  - Usually not enforced
- Idle reduction technologies:
  - Provide the driver’s needs, but they are expensive

What are the idle reduction technology choices?

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- Automatic shut-down/start up systems
- Diesel fuel fired heaters
- Auxiliary power units/generator sets
- Electrified parking spaces
  - On-board/off-board
  - Off-board only

Electrified Parking Spaces

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- On-board/Off-board
  - Requires that truck come equipped with (1) electric HVAC, (2) inverter/charger, (3) plug-in hardware, and (4) requires location owner or 3rd party install electrical conduit ("hook-up") in the ground
  - Cost: truck driver = $4,000; location owner = $5,000 per space
- Off-board only
  - Requires truck driver to purchase plastic window template (1 time cost of $10.00) and pay $1.25-$1.50 per hour of use; requires 3rd party to install HVAC system above truck parking spaces at $10,000 per parking space

What can the Coalitions do?

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- Step 1: determine whether or not you have an idling problem
- Step 2: consider all alternatives and approaches to fit your situation
- Step 3: develop a project team composed of the Federal government, state, technology manufacturer, truck stop, fleets, and community
- Step 4: solicit funds or loans
- Step 5: deploy/implement

More information

- Fuel consumption
  - **http://www.epa.gov/smartway/idlingimpacts.htm**
- NOx emissions
  - **http://www.epa.gov/smartway/idlingimpacts.htm**
- PM emissions
  - **http://www.epa.gov/smartway/idlingimpacts.htm**
- Bonuses
  - Contact Schneider National for more information
- Anti-idling laws
  - **http://www.epa.gov/smartway/idlingalternatives.htm**
- Idle reduction technologies
  - **http://www.epa.gov/smartway/idlingalternatives.htm**