

Idling Reduction: Strategies and Technologies



Amanda Graor

**Senior Air Quality Planner
Mid-America Regional Council**

What's It All About?



- Why reduce idling?
- Verified Technologies
- Low Tech - Low Cost – No “Credit”



Why Reduce Idling?

- Environmental benefits: reductions of NO_x, PM, CO, CO₂, and air toxics
- Economic benefits: fuel savings, decreased maintenance, prolonged engine life; decreased reliance on oil imports
- Cost/Benefit: \$2,500 per NO_x ton reduced



Why do we idle?



Myth or Fact?

It's better to just leave the engine idling because a "cold start" produces more pollution.

- Top Reasons:
 - Climate Control
 - AC
 - Heat
 - Power accessories
 - TV
 - Appliances
 - Protect the engine in cold weather
 - Habit/Custom

How much idling?



Myth:

An EPA study found that the emission pulse contains less pollutants than 10 minutes of continuous idling

- U.S. Dept of Energy:
460,000 long-haul trucks on highways each day
 - 6 hours of idling per 10 hour mandatory rest period
- California Air Resources Board (CARB):
Estimates of short-haul idling
 - 6 min/day for medium duty
 - 105 min/day for heavy duty

The cost of idling



- Idling uses 3 billion gallons of fuel per year
 - 838 million gallons of fuel is from heavy duty diesel trucks
- Lost value of fuel:
 - \$1.4 billion per year
- Additional Costs:
 - Increased maintenance

Myth or Fact?

It is better to run an engine at regular speed than at a low idle.



Why Reduce Idling?

- U.S. Dept. of Energy estimates that 460,000 long-haul trucks cross U.S. highways each day.
 - Idling for 6 hours during mandated 10 hour rest period uses 838 Million gallons of fuel per year at a cost of \$1.4 Billion annually
- California Air Resources Board (CARB) estimates non-layover idling time
 - 6 Minutes per day for Medium Duty
 - 105 Minutes per day for Heavy Duty





- Battery-Electric APUs
- Diesel Fueled APUs
- Vehicle-Battery Systems
- Truck Stop Electrification (On- & Off-Board)
- Thermal Energy Storage Systems
- Fuel Fired Heaters



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- Automatic Start-Up/Shut-Down

Alternative Options



- Sleeper curtains, window shades, tints, insulated windows, door seals, etc.
- Battery operated window fans
- Idle only when necessary (policy)
- Driver pledge/recognition programs



**MID-AMERICA REGIONAL COUNCIL
AIR QUALITY PROGRAM**

Thanks!
Amanda Graor

816.474.4240

agraor@marc.org