

IdleBox 2.0: What's In It for You?

September 22, 2016

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IdleBox Has a New, Easier-to-Use Interface!

The screenshot shows the IdleBox website interface. At the top, it features the U.S. Department of Energy logo and navigation links for Home, About, Coalitions, Partnerships & Projects, Technical Assistance, News & Events, and Coordinator Toolkit. The main heading is "IdleBox Toolkit for Idling Reduction Projects". Below this, there is a "What is Idling?" section, a "Use IdleBox to:" section with bullet points, and a "Core Resources" section with sub-categories like "Messaging Materials", "Letters & Pledge Forms", and "Technical Resources". There is also a "Specialty Resources" section with sub-categories for "Personal Vehicles", "Light- and Medium-Duty Fleet Vehicles", and "Heavy-Duty Vehicles". The page includes a "STOP Idling. START Saving." graphic and a photo of two people. At the bottom, there is a section for "Are You a Clean Cities Coordinator?"

- IdleBox is now organized by **Core Resources** and **Specialty Resources**.
- Coordinator-only tools are available through a separate sign-in at the bottom of the page.

cleancities.energy.gov/idlebox



IdleBox Now Serves Multiple Audiences

- More intuitive organization of tools (by vehicle type rather than by communication format)
- Designed to work for both Clean Cities staff and for the general public.
 - Tools anyone can use are accessible through the main page; tools for Clean Cities folks are available through a link at bottom of main page.



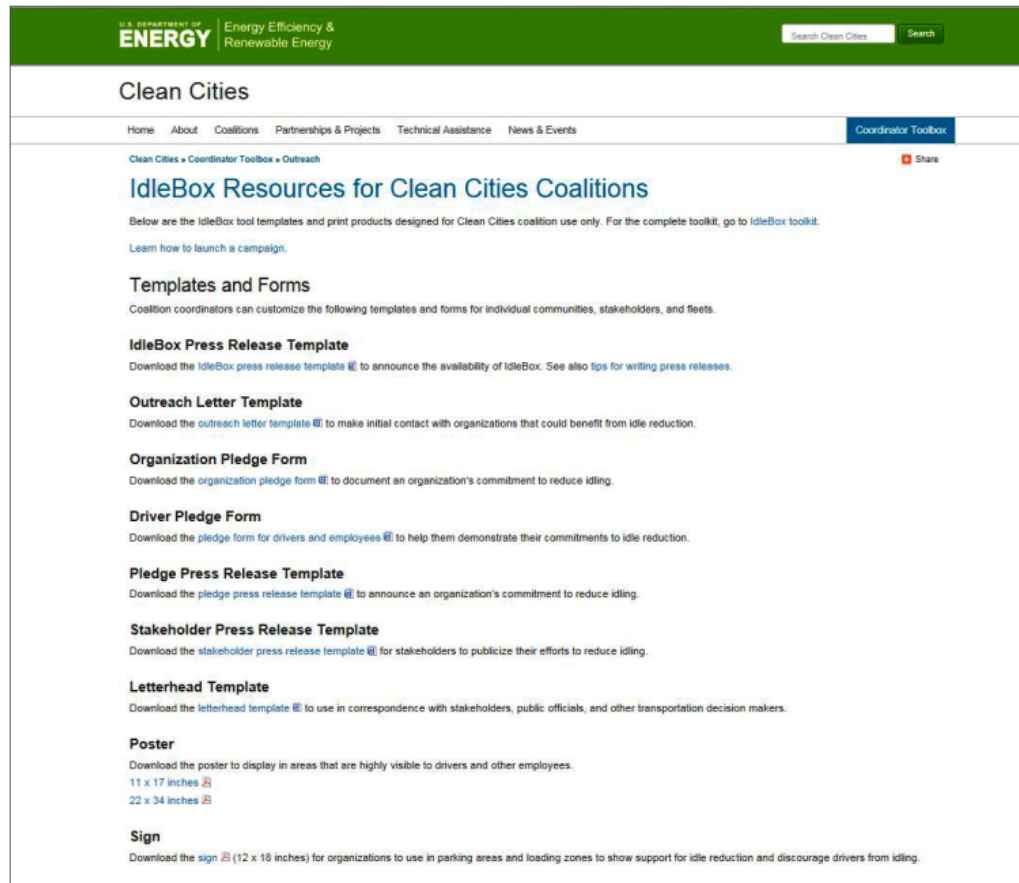
Bank of Utah used IdleBox materials to encourage its drive-through-window users to shut down rather than idle while waiting in line (February 2015).

Coordinator-Only Tools Accessed Through Sign-In

Are You a Clean Cities Coordinator?

IdleBox has additional resources for Clean Cities coalitions.

[Go to the Coalition IdleBox Resources.](#)



The screenshot shows the 'Clean Cities' website with a green header for the U.S. Department of Energy, Energy Efficiency & Renewable Energy. A search bar is in the top right. The main navigation includes Home, About, Coalitions, Partnerships & Projects, Technical Assistance, News & Events, and a highlighted 'Coordinator Toolbox' button. The page title is 'IdleBox Resources for Clean Cities Coalitions'. Below the title, there is a paragraph: 'Below are the IdleBox tool templates and print products designed for Clean Cities coalition use only. For the complete toolkit, go to [IdleBox toolkit](#). Learn how to launch a campaign.' The page lists several resources with download links: 'IdleBox Press Release Template', 'Outreach Letter Template', 'Organization Pledge Form', 'Driver Pledge Form', 'Pledge Press Release Template', 'Stakeholder Press Release Template', 'Letterhead Template', 'Poster' (with sizes 11 x 17 inches and 22 x 34 inches), and 'Sign' (12 x 18 inches).

What Is IdleBox?

IdleBox is an **electronic, modular toolkit** to help you advance and implement the acknowledged low-hanging fruit of fuel economy—**idling reduction**.

Modular for maximum flexibility.

Originally developed for use by Clean Cities coalitions only, it is now organized to assist anyone who wants to advance idling reduction.



What's in IdleBox?

- PowerPoint presentations
- Outreach letters and press releases
- Information cards, tip sheets, and pledge forms
- Poster and sign
- Idling calculator
- IdleBase (a database of idling laws)
- Technical reference materials
- And more . . .



IdleBox Organization: Core Resources


Core Resources

Messaging Materials

Fact Card 

Fact Card Template 

Tip Sheet 

Stop Idling Graphic 

Stickers 

Sign Template 


Poster Template: 11" x 17"  or 22" x 34" 

Letters & Pledge Forms



Outreach Letter 


Press Release 

Organization Pledge Form 

Driver or Employee Pledge Form 

Technical Resources

Idle Reduction Savings Calculator: Excel  or PDF 

Database of Idling Regulations 

National Idling Reduction Network News

Core Resources: Messaging Tool Example



STOP Idling. **START \$aving.**

-  **IDLING IS EXPENSIVE >>>**
up to a gallon or more of fuel per hour, depending on vehicle size
-  **IDLING POLLUTES >>>**
a gallon of fuel creates about 20 lbs. of greenhouse gases
-  **IDLING THREATENS HEALTH >>>**
breathing vehicle emissions increases risk of respiratory illness

Idling uses more fuel than restarting your engine

Idling wastes
6 BILLION GALLONS OF FUEL each year in the U.S.




STOP Idling. **START \$aving.**

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Idling wastes
6 BILLION GALLONS OF FUEL each year in the U.S.

Core Resources: Letter and Pledge Template Tool Example



Date _____

Recipient's Name and Title _____
Company _____
Address _____

Dear _____,

In today's tough economy, every dollar counts. Did you know that there are simple ways to reduce fleet costs with minimal or even no expenses?

- In 2011, UPS reduced idling time in fleet vehicles, **saving 653,000 gallons of fuel**
- In 2011, Coca-Cola **saved more than 1 million gallons of fuel** over 2010 with automatic engine shut-down capabilities, along with other initiatives
- Staples has increased its **fleet's fuel efficiency by more than 20%** with automatic idle reduction and other strategies.

Idling reduction is the 'low-hanging fruit' of fuel economy; it can be easy to implement and often requires little or no financial investment.

Why Care About Idling?

- Idling is expensive: Idling may consume a gallon of fuel or more per hour, depending on the vehicle.
- Idling pollutes: Each gallon of fuel burned creates about 20 lbs. of greenhouse gases.
- Idling threatens health: Breathing vehicle emissions increases the risk of respiratory illness.
- Idling decreases energy and economic security: In 2011, the U.S. imported 45% of its petroleum. Reducing idling reduces dependence on imported petroleum, increasing energy security.



We are **Clean Cities [coalition name]**, a regional coalition of the U.S. Department of Energy's national Clean Cities initiative. Our mission is to promote the reduction of imported petroleum and the use of alternative fuels and advanced vehicle technology.

I will call you in the coming week to request a brief meeting to discuss how your **fleet/company/organization** can save money and support the environment with simple idling reduction measures. If you prefer, please call me directly at the number given below.

Sincerely,

Coordinator name _____
Coordinator title, Coalition name _____
Coordinator phone number _____
Coordinator e-mail address _____

Space for local coalition logo

Dear _____,

In business, every dollar counts. Did you know that there are simple ways to reduce fuel costs with minimal or even no expense?

Reducing the time a vehicle idles is the simplest form of fuel economy; it can be easy to implement and often requires little or no financial investment.

Why Care About Idling?

- **Idling is expensive:** Idling may consume a gallon of fuel or more per hour, depending on the vehicle.
- **Idling pollutes:** Each gallon of fuel burned creates about 20 lbs. of greenhouse gases.
- **Idling threatens health:** Breathing vehicle emissions increases the risk of respiratory illness, especially in children.

[If desired, provide a description of a success with idling reduction for a local or regional company.]

We are **Organization Name**, provide a brief description. I believe we have a shared interest in increasing economic and environmental sustainability. Your organization's previous sustainability efforts, such as **specific example**, demonstrate an investment in reducing your carbon footprint. With the help of the Clean Cities [Idling Box Toolkit](#), we are helping organizations like yours reap the benefits of idling reduction. In addition to the organizational strategies, individual pledges for idling reduction can show your employees how to make a personal contribution.

I will call you in the coming week to request a brief meeting to discuss how you can save money and support the environment with simple measures to reduce idling. If you prefer, please call me directly at the number below.

Sincerely,

Name _____
Title, Organization name _____
Phone number, E-mail address _____

Space for organization's logo

Core Resources: Technical Tool Example

Idle Reduction Savings Calculator

Share the **Idle Reduction Savings Calculator** to help fleet managers estimate their organization's savings with idle reduction.

Argonne **Clean Cities**
ANL/ES&E U.S. Department of Energy

Idling Reduction Savings Calculator

For an interactive Excel version of this calculator, please go to http://www.transportation.anl.gov/downloads/idling_worksheet.xls

Calculate Costs for Avoidable Idling

1 How much fuel is used for idling? (If you don't know, see reference table on reverse.) $\text{gallons/hour} \times \text{hours/year} = \text{gallons/year}$ Realistically, how many hours each year might you use idling reduction (IR) devices instead of idling? $\text{gallons/year} \times \$ \text{/gallon} = \text{Avoidable Idling Fuel Costs} = \$ \text{/year} +$

2 $\text{gallons/hour} \times \text{hours/year} \times \text{miles/gallon} = \text{miles/year}$ What is your average fuel economy? "Miles of idling" (idling is like putting miles on your engine)

3 How much does an oil change cost? $\text{\$/oil change} \div \text{miles/oil change} = \text{\$/mile}$ How many miles between oil changes? "Miles of idling" $\text{\$/mile} \times \text{miles/year} = \text{Preventive Maintenance Cost}^1 = \$ \text{/year} +$

4 How much does an engine overhaul or new vehicle cost? $\text{\$/overhaul or replacement} \div \text{miles/overhaul or replacement} = \text{\$/mile}$ How many miles between overhauls or vehicle replacement? "Miles of idling" $\text{\$/mile} \times \text{miles/year} = \text{Overhaul or Replacement Cost}^1 = \$ \text{/year}$

5 Add values in right-hand column = **Total Avoidable Idling Costs** = \$ /year

Calculate Costs for Idling Reduction (IR) - Device and/or Electrified Parking Space (EPS)

6 How much fuel is used by the IR device? $\text{gallons/hour} \times \text{hours/year} = \text{gallons/year}$ Price of fuel (same as price listed in line 1) $\text{gallons/year} \times \$ \text{/gallon} = \text{Fuel cost for IR device} = \$ \text{/year}$ How many hours each year could you use IR devices instead of idling?*

7 Maintenance cost for IR device $\text{\$/year} + \text{\$/year} = \text{Operating Cost for On-board IR Device} = \$ \text{/year}$

8 Cost per hour to plug into EPS $\text{\$/hour} \times \text{hours/year} = \text{\$/year}$ How many hours each year could you use EPS instead of idling?* $\text{\$/year} + \text{\$/year} = \text{Total Operating Costs for IR} = \$ \text{/year}$

Calculate Savings from IR



9 Capital cost of on-board IR device $\text{\$/year saved} + \text{\$/year saved} = \text{Payback Time} = \text{years}$ SAVINGS Line 5 - Line 8

10 $\text{gallons saved/year}$

* Total number of hours from lines 6 and 8 should equal the number of hours in line 1.
 ^1 FMV Recommended Practice 115B, "Analysis of Costs from Idling and Power-to-Devices for Heavy-Duty Trucks", 2008; Technology & Maintenance Council, American Trucking Associations (TMCA/ATA).

www.anl.gov/energy-systems/downloads/vehicle-idle-reduction-savings-worksheet

Core Resources: Technical Tools Example, *cont.*

Idling Reduction Savings Calculator

For an interactive Excel version of this calculator, please go to http://www.transportation.anl.gov/downloads/idling_worksheet.xls

How Much Fuel Is Used for Idling?

Vehicle Type	Class	Fuel Type	Size Indicator		Idling Fuel Use (gal/h)		Source
			Engine Size (l)	GVWR (lb)	No load	With load	
Passenger Car (Ford Focus)	1	G	2	–	0.16	0.29	ANL 1
Passenger Car (Volkswagen Jetta)	1	D	2	–	0.17	0.39	ANL 1
Passenger Car (Ford Crown Victoria)	1	G	4.6	–	0.39	0.59	ANL 1 & 2
Medium Heavy Truck	6	G	5–7	19,700–26,000	0.84	–	WVU
Delivery Truck	5	D	–	19,500	0.84	1.1 ¹	NREL
Tow Truck	6	D	–	26,000	0.59	1.14 ²	ORNL
Medium Heavy Truck	6–7	D	6–10	23,000–33,000	0.44	–	WVU
Transit Bus	7	D	–	30,000	0.97	–	ORNL
Combination Truck	7	D	–	32,000	0.49	–	ORNL
Bucket Truck	8	D	–	37,000	0.90	1.50 ²	ORNL
Tractor-Semitrailer	8	D	–	80,000	0.64	1.15 ^{1,1}	TMC

D = diesel, G = gasoline, Gal = gallons(s), GVWR = gross vehicle weight rating, h = hours(s), l = liter(s), lb = pounds(s), PTO = power take-off.
¹ High idle.
² PTO on.
³ Air conditioning on.

Sources

ANL 1: Stulenber, K., and Lohse-Busch, H. "APRF [Advanced Powertrain Research Facility at Argonne National Laboratory] Conventional Vehicles Snapshot Study." Presentation to U.S. DOE, December 2, 2012.

ANL 2: Rask, E., Keller, G., Lohse-Busch, H., et al. (2013). "Final Report: Police Cruiser Fuel Consumption Characterization." Work performed by Argonne National Laboratory for the Illinois Tollway Authority.

NREL: National Renewable Energy Laboratory Project Draft Final Report for the Period August 1, 2012, through March 31, 2014, "Data Collection, Testing and Analysis of Hybrid Electric Trucks and Buses Operating in California Fleets." ARB Agreement Number 11-600. NREL Contract Number FIA-12-1763, April 15, 2014.

ORNL: Lascourain, M.B.; Franzese, O.; Capps, G.; et al. (2012). *Medium Truck Duty Cycle Data from Real-World Driving Environments: Project Final Report* (ORNL/TM-2012/240). Work performed by Oak Ridge National Laboratory for the U.S. DOE.

TMC: TMC Recommended Practice 1108, "Analysis of Costs from Idling and Parasitic Devices for Heavy Duty Trucks" (2003). Technology & Maintenance Council, American Trucking Associations (TMC/ATA).

WVU: Khan, ABM S.; Clark, N.N.; Gautam, M., et al. (2009). "Idle Emissions from Medium Heavy Duty Diesel and Gasoline Trucks." *Journal of the Air & Waste Management Association* (59.3) 354–359.

Other Idling Reduction Resources

- IdleBox www.cleancities.energy.gov/idlebox
- IdleBase <http://cleancities.energy.gov/idlebase>
- National Idling Reduction Network News [energy.gov/eere/vehicles/vehicle-technologies-office-national-idling-reduction-network-news](http://www.energy.gov/eere/vehicles/vehicle-technologies-office-national-idling-reduction-network-news)
- Argonne National Laboratory <http://www.transportation.anl.gov/engines/idling.html>
- Alternative Fuels Data Center http://www.afdc.energy.gov/conservation/idling_reduction_basics.html

Specialty Resources

Specialty Resources



Personal Vehicles

[Idling Reduction for Personal Vehicles](#) 📄 (Fact Sheet)

[Which Is Greener: Idle, or Stop and Restart? Comparing Fuel Use and Emissions for Short Passenger-Car Stops](#) 📄 (Fact Sheet)

[Reducing Personal Vehicle Idling](#) 📄 (Presentation)

[Stop and Restart Effects on Modern Vehicle Starting System Components—Longevity and Economic Factors](#) 📄 (Technical Report)



Light- and Medium-Duty Fleet Vehicles

[Idling Reduction Basics for Fleets](#) 📄 (Presentation)

[Technology Solutions](#) 📄 (Presentation)



Heavy-Duty Vehicles

[Long Haul Truck Idling Burns Up Profits](#) 📄 (Fact Sheet)

[Idling Reduction for Long-Haul, Heavy-Duty Trucks](#) 📄 (Presentation)

[Emissions From Idling Heavy-Duty Trucks and Idling-Reduction Equipment](#) (Technical Report)



Emergency & Other Service Vehicles

[Idling Reduction for Emergency and Other Service Vehicles](#) 📄 (Fact Sheet)

[Case Study – Idling Reduction Technologies for Emergency Service Vehicles](#) (Technical Report)

Specialty Resources: Personal Vehicles



Personal Vehicles

Idling Reduction for Personal Vehicles (Fact Sheet)

Which Is Greener: Idle, or Stop and Restart? Comparing Fuel Use and Emissions for Short Passenger-Car Stops (Fact Sheet)


Reducing Personal Vehicle Idling (Presentation)

Stop and Restart Effects on Modern Vehicle Starting System Components—Longevity and Economic Factors (Technical Report)

Why Do Drivers Idle? Habits and Myths

"Doesn't restarting my engine use more gas than idling?"


"Isn't idling good for your engine?"



Specialty Resources: Light- and Medium-Duty Fleet Vehicles



Light- and Medium-Duty Fleet Vehicles

Idling Reduction Basics for Fleets  (Presentation)

Technology Solutions  (Presentation)

Idling Reduction Technology Solutions

- Technology Options To Support Idling Reduction in Light- and Medium-Duty Vehicles
- Calculating Costs
- Savings and Payback
- Funding Resources

Idling Reduction Basics for Fleets

- What Is Idling?
- What Vehicles Idle?
- Some Idling Is Difficult To Avoid
- Much Idling Is Wasteful
- Why Care About Idling?
- What Can YOU Do?
- IdleBox Can Help!

 **STOP Idling.**
START \$aving.



 **STOP Idling.**
START \$aving.



Specialty Resources: Heavy-Duty Vehicles



Heavy-Duty Vehicles

Long Haul Truck Idling Burns Up Profits (Fact Sheet)

Idling Reduction for Long-Haul, Heavy-Duty Trucks (Presentation)

Emissions From Idling Heavy-Duty Trucks and Idling-Reduction Equipment (Technical Report)

What Are the Costs and Consequences of Idling?

Fuel Use, Costs, and Typical Payback

Power Source	Services	Fuel Use (gal/hr)	Typical Equipment Cost (\$)	Charge (\$/hr)	Typical Payback (yr)
Idling	All	0.6-1.5	NA	NA	NA
Auxiliary power unit	All	0.2-0.5	8,000-12,000 ^a	NA	3.6
Diesel-fired heater	Heat	0.04-0.08	900-1,500 ^a	NA	0.6
Heat recovery	Heat (limited duration)	Negligible	600	NA	<1
Storage cooling	Air conditioning	0.5	8,500-8,800 ^a	NA	5
Automatic engine start/stop system	All (intermittent)	0.25	1,500-2,500 ^a	NA	1
EPS (single system)	All	NA	5 ^b	1.85 ^b	NA
EPS (dual system)	All	NA	Up to 2,500 ^c	1.00	1

NA = not applicable; EPS = electrical parking space.
^a Assumptions for payback: \$3.00/gal fuel, 1.0 hr for idling, 0.1 \$ for APUs, mid-range prices, heat and AC each used once; vehicle fuel economy 7 mpg; site energy cost for electricity: 10¢/kwh; average price. Changes in any of the assumptions (e.g., diesel fuel per hour) will affect payback time.
^b Includes installation. (North American Council for Freight Efficiency (NACFE) and the Carbon, Not Boxes (CNB) and the American Agreement on Emissions Reduction Solutions, 2014).
^c Cost for vehicle adapter for single or dual EPS and cost for reduced equipment for dual system TNC.
^d This is a standard rate, but discounts are available for rates > 10 hours. In addition, previously services are available for 90% off.



www.cities.energy.gov/idlebase

ENERGY Energy Efficiency & Renewable Energy

Long-Haul Truck Idling Burns Up Profits

Long-haul truck drivers perform a vitally important service. In the course of their work, they must take rest periods as required by federal law. Most drivers remain in their trucks, which they keep running to provide power for heating, cooling, and other necessities. Such idling, however, comes at a cost: it is an expensive and polluting way to keep drivers safe and comfortable. Increasingly affordable alternatives to idling not only save money and reduce pollution, but also help drivers get a better night's rest.



A long-haul truck idles about 1,800 hours per year for rest periods alone. Photo credit: Shutterstock/603454

Idling Wastes Fuel and Increases Engine Wear

Idling a heavy-duty truck consumes about 0.8 gallon of fuel per hour. Even when diesel costs as little as \$2.50 a gallon, fuel for one 10-hour rest period will cost \$20. Typically, a long-haul truck idles about 1,800 hours per year, using about 1,500 gallons of diesel. Argonne National Laboratory (Argonne) estimates that, in the U.S., rest-period truck idling consumes up to 1 billion gallons of fuel annually at a cost of around \$3 billion. Idling also accelerates engine wear and tear. Where manufacturer warranties and maintenance intervals apply to "hours operated" rather than "miles traveled," the cost of idling is greater than just fuel.

Idling Degrades Air Quality

Argonne estimates that rest-period idling results in the emission of about 11 million tons of carbon dioxide, 55,000 tons of nitrogen oxides, and 400 tons of particulate matter annually in the U.S. These emissions contribute to climate change and diminish local air quality, which can affect the health of not only those living in the community, but the truck drivers themselves.

Idling May Be Illegal

Many state and local laws restrict the idling of heavy-duty trucks, and violating idling laws can result in steep fines. Clean Cities' IdleBase (www.cities.energy.gov/idlebase), a database of idling laws and ordinances, catalogs known idling restrictions and penalties for all classes of on-road vehicles. The American Transportation Research Institute (atri-online.org) provides a downloadable cab card for laws specific to heavy-duty trucks.

Alternatives to Idling Heavy-Duty Trucks

Some current idling alternatives use up to 95% less fuel, saving power for climate control and electrical devices. Most APUs are powered by diesel, but battery-powered APUs and alternative-fuel APUs are also available. Some APUs are equipped to plug into a power pedestal for grid power (see Electrified Parking Spaces on the next page).

Auxiliary Power Units

Auxiliary power units (APUs) provide drivers with on-board power for climate control and electrical devices. Most APUs are powered by diesel, but battery-powered APUs and alternative-fuel APUs are also available. Some APUs are equipped to plug into a power pedestal for grid power (see Electrified Parking Spaces on the next page).

Considerations: On-board power allows use wherever needed. APUs have an initial high cost and are heavy, although most states have weight exemptions for APUs (see www.energy.gov/vehicles/map/state-recognition-auxiliary-power-weight-exemption). Diesel APUs can keep the driver comfortable for as long as needed, but require regular maintenance. For trucks model year 2010 and newer, idling emissions are so well controlled that a diesel APU's particulate matter (PM) emissions will actually be higher than the truck engine's emissions. In California, diesel APUs on trucks newer than model year 2007 must be equipped with a diesel particulate filter. Battery APUs are essentially battery-electric air conditioners with heat supplied either by electrical resistance heating or by a diesel bank heater.



VEHICLE TECHNOLOGIES OFFICE

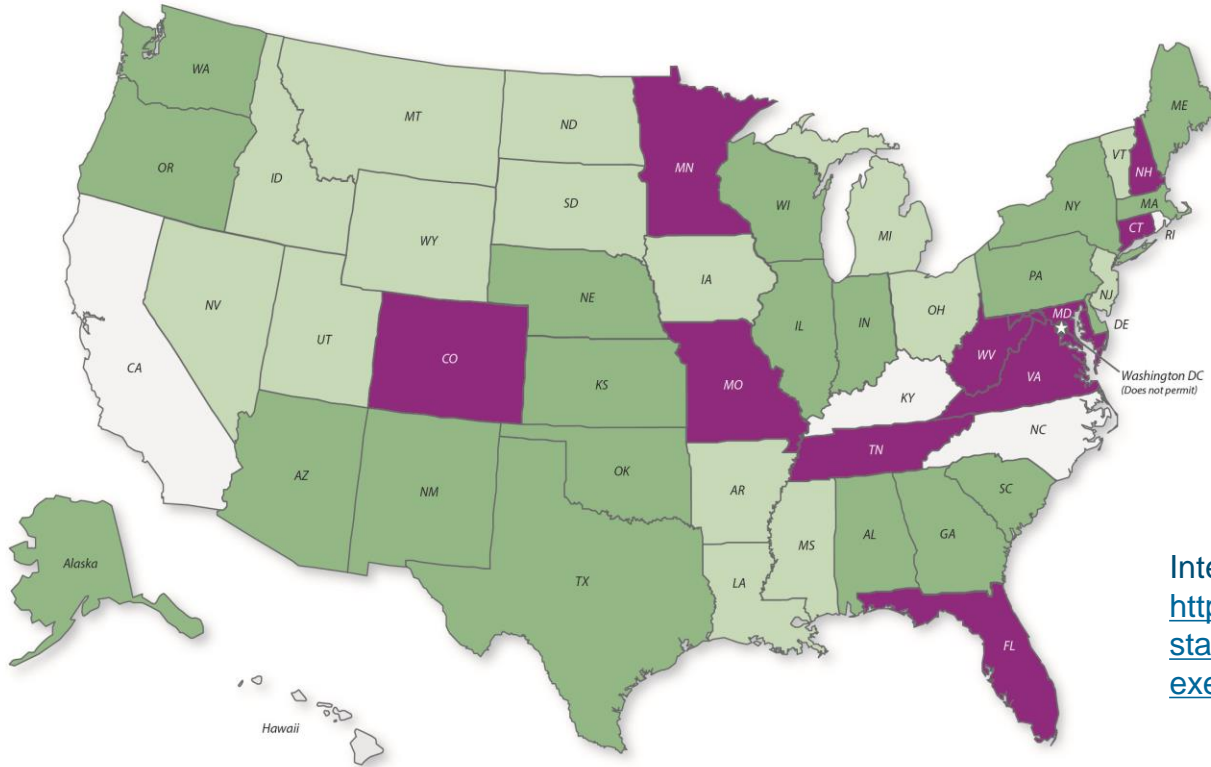
http://www.afdc.energy.gov/uploads/publication/hdv_idling_2015.pdf



U.S. Department of Energy

Specialty Resources: Heavy-Duty Vehicles, *cont.*

APU Weight Exemption Status



Interactive map at <http://energy.gov/eere/vehicles/map-state-recognition-auxiliary-power-weight-exemption>

- Allows a 550-lb weight exemption by state law.
- Allows a 400-lb weight exemption by state law.
- Allows a 400-lb weight exemption by enforcement policy rather than by state law.
- Does not permit an APU weight exemption.

Specialty Resources: Emergency & Other Service Vehicles



Emergency & Other Service Vehicles

Idling Reduction for Emergency and Other Service Vehicles (Fact Sheet)

Case Study – Idling Reduction Technologies for Emergency Service Vehicles (Technical Report)

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Idling Reduction for Emergency and Other Service Vehicles

Emergency vehicles, such as police cars, ambulances, and fire trucks, along with other service vehicles such as armored cars, are often exempt from laws that limit engine idling. However, these vehicles can save fuel and reduce emissions with technologies that allow them to perform vital services without idling.

Police Vehicles

Police cruisers spend much of their time parked and running while officers monitor traffic, help at accident scenes, write reports, and wait to be called. Officers commonly require lights, radios, computers, radar, and video cameras.

In one recent report about police vehicle fuel consumption, the cruiser studied was found to idle 60% of the time during normal operation and need 21% of its total fuel while parked. While the engine provided 250 horsepower (hp), together all of the accessories needed less than 2 hp. (Air conditioning consumed the most power, followed by external lighting.)

Several idling-reduction systems, with varying capabilities and costs, are available for police vehicles. Power-management systems may significantly reduce (but not eliminate) idling. They allow the vehicle's battery to power auxiliaries in engine-off mode and monitor the battery's state-of-charge. When the battery charge falls below a preset threshold, the system restarts the vehicle's engine to recharge the battery.

Another option is a heat-recovery device, which uses a small pump to circulate coolant from the warmed engine, providing heat to the passenger compartment after the engine has been turned off.

Battery auxiliary power units (APUs) are another option for police vehicles. These units store power when the engine is running and supply it to the vehicle's electrical devices for 4 hours or more when the engine is off.



Police vehicle auxiliaries can fit in the trunk. Used with permission of Argonne National Laboratory.

Ambulances

Ambulance engines are idled to power equipment, computers, refrigeration equipment, as well as the vehicle. Idling these diesel engines until the drivers complete paperwork wastes fuel but produces significant respiratory or cardiovascular pollution.

On-board battery-powered APUs provide needed functions are available: the APU to charge at the hospital while the ambulance is being on the roof to provide additional installed near the emergency at for power and receive conditions.



Ambulance hooked up to a power source and conditioned air. Used with permission of Argonne National Laboratory.



VEHICLE TECHNOLOGIES OFFICE



ANL/ESD-16/3

Case Study – Idling Reduction Technologies for Emergency Service Vehicles

Energy Systems Division



http://www.afdc.energy.gov/uploads/publication/idling_emergency-service_vehicles.pdf



Organizing an Idling Reduction Campaign

- Target audience
- Strategy
- Messaging
- Phasing and timing



IdleBox Tools to Use: Press Release

Send a **Press Release** announcing the availability of IdleBox in your area.

- Local/regional media
- Aligned organizations
- Government entities
- Stakeholders
- Potential stakeholders

All media, not just print media

Company/Organization/Town letterhead;
the letter is a general template that can
be modified to suit.

FOR IMMEDIATE RELEASE

[Company/Organization/Town] Turns a Shade Greener
Reducing vehicle idling saves money and supports a cleaner environment

City, State | Month Day, Year — [Company/Organization/Town] is undertaking a new initiative, "STOP Idling. START \$aving," to save money, reduce greenhouse gas emissions, and improve air quality. Through this initiative, [Company/Organization/Town] has committed to reducing idling through organizational policy and outreach to its employees, including limiting idling at its facilities to no more than **___ minutes/seconds**. [Company/Organization/Town] will tap simple idling reduction strategies with the help of the U.S. DOE's Clean Cities program's [IdleBox](#) toolkit.

[Name and title of official] says of the new idling reduction effort, *Add a quote. Sample:* "The adoption of the 'STOP Idling. START \$aving,' campaign allows [Company/Organization/Town] to further its commitment to sustainability. Using the Clean Cities IdleBox toolkit helped us calculate what idling was costing us and pointed to strategies that could help reduce idling. It also gave us tools to educate drivers. [Company/Organization/Town] embraces the opportunity to improve air quality, minimize our contributions to climate change, and save money through idling reduction."

According to U.S. DOE's Argonne National Laboratory and Clean Cities program, idling from on-road vehicles wastes about 6 billion gallons of fuel annually in the U.S. To learn more about how Clean Cities helps reduce transportation-related petroleum use, go to <https://cleancities.energy.gov/>.

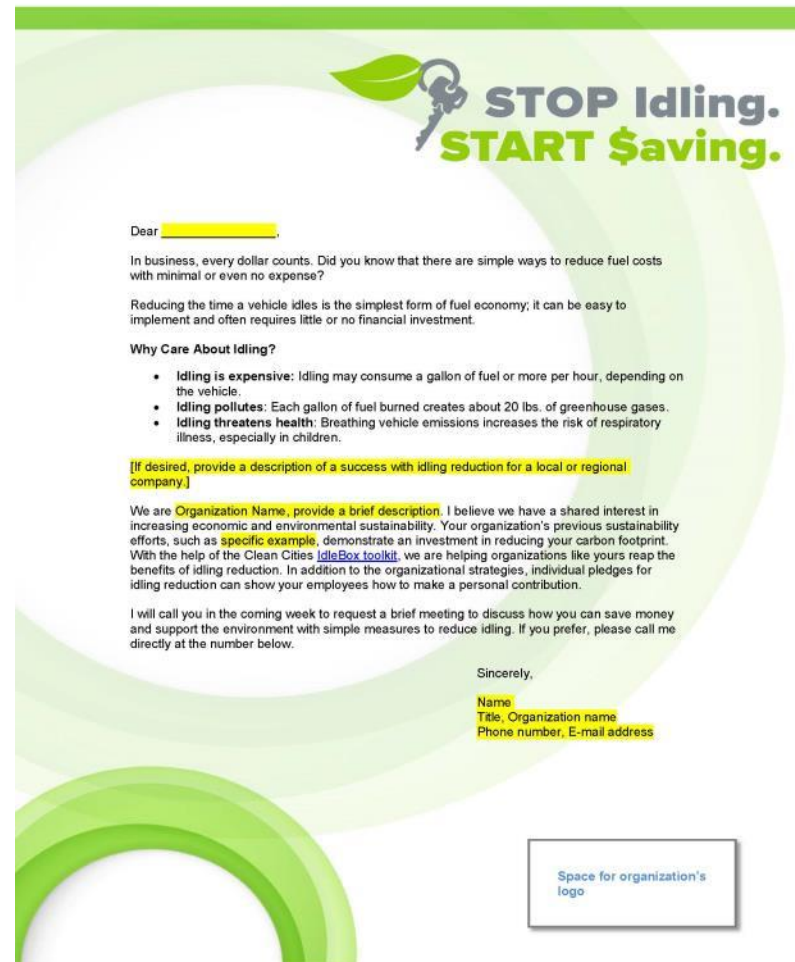
###

Contact:
[Name, organization,
and other contact information]

[Boilerplate copy about the organization]

IdleBox Tool to Use: Initial Outreach Letter

Send an **Initial Outreach Letter** to target organizations to introduce IdleBox and request a call or a meeting.



The image shows a template for an initial outreach letter. It features a green and white color scheme with a large circular graphic in the background. At the top right, there is a logo with a leaf and a key, accompanied by the text "STOP Idling. START \$aving." The letter body contains several sections: a salutation "Dear [redacted]", a paragraph about fuel economy, a section titled "Why Care About Idling?" with three bullet points, a section for success stories, a paragraph about the organization's interest, and a closing paragraph. The letter ends with a signature line and contact information fields. A box at the bottom right is labeled "Space for organization's logo".

STOP Idling. START \$aving.

Dear [redacted],

In business, every dollar counts. Did you know that there are simple ways to reduce fuel costs with minimal or even no expense?

Reducing the time a vehicle idles is the simplest form of fuel economy; it can be easy to implement and often requires little or no financial investment.

Why Care About Idling?

- **Idling is expensive:** Idling may consume a gallon of fuel or more per hour, depending on the vehicle.
- **Idling pollutes:** Each gallon of fuel burned creates about 20 lbs. of greenhouse gases.
- **Idling threatens health:** Breathing vehicle emissions increases the risk of respiratory illness, especially in children.

[If desired, provide a description of a success with idling reduction for a local or regional company.]

We are **Organization Name**, provide a brief description. I believe we have a shared interest in increasing economic and environmental sustainability. Your organization's previous sustainability efforts, such as **specific example**, demonstrate an investment in reducing your carbon footprint. With the help of the Clean Cities [IdleBox toolkit](#), we are helping organizations like yours reap the benefits of idling reduction. In addition to the organizational strategies, individual pledges for idling reduction can show your employees how to make a personal contribution.

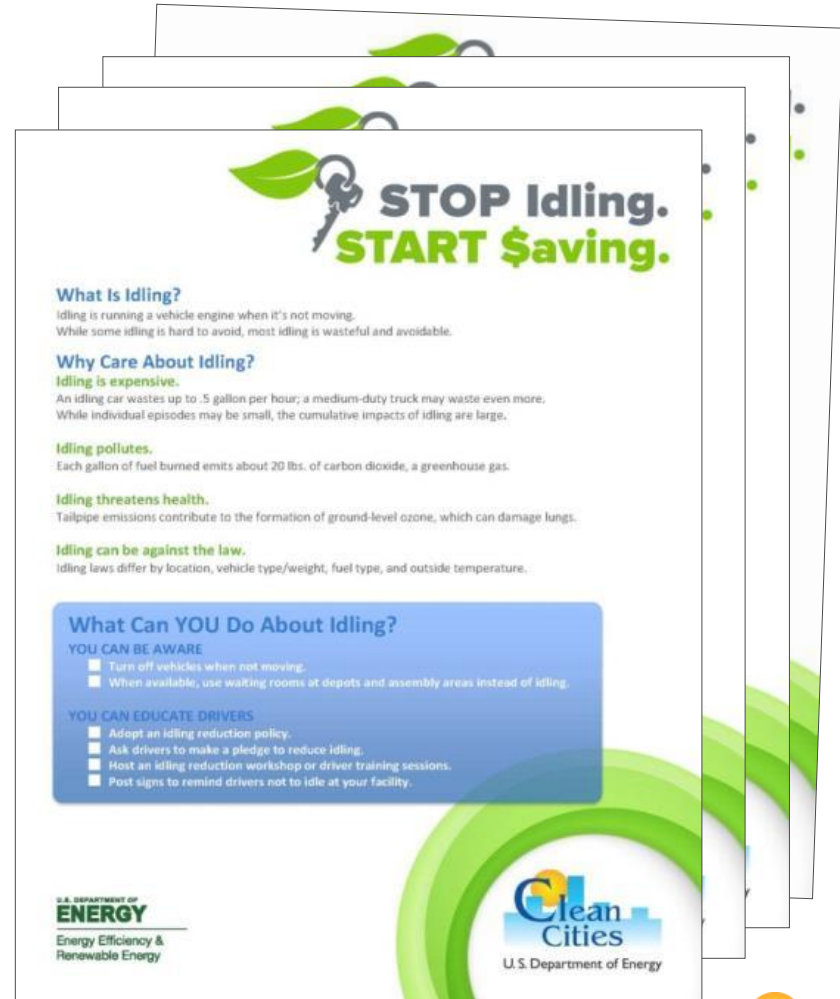
I will call you in the coming week to request a brief meeting to discuss how you can save money and support the environment with simple measures to reduce idling. If you prefer, please call me directly at the number below.

Sincerely,
Name [redacted]
Title, Organization name [redacted]
Phone number, E-mail address [redacted]

Space for organization's logo

IdleBox Tools to Use: Messaging Giveaways

Stickers, fact cards, and tip sheets



IdleBox Tools to Use: Posted Messaging

- Display of **signs** in loading, unloading, and parking areas
- Display of **posters** in employee areas




▲ Sign



▲ Poster

IdleBox Tools to Use: Pledge Forms



Organizational Idling Reduction Pledge

We at [name of company or organization] hereby pledge our commitment to idling reduction. In support of this pledge, we establish the following guidelines for our facility, our vehicles, and our employees.


1. Excessive idling (more than seconds/minutes) is prohibited at our facility, including during pickups and deliveries.
2. Drivers of our vehicles will not idle unnecessarily (more than seconds/minutes) on or off site.
3. All employees are encouraged to limit unnecessary idling in their private vehicles.

Name/Signature of Policy Official: _____

Title: _____

Date: _____

Space for organization's logo



Individual Idling Reduction Pledge

I, [name], hereby pledge to protect myself, others, and the environment by limiting vehicle idling. I will not idle [name of company or organization] vehicles for more than seconds or minutes unless necessary.

I also pledge to avoid idling my personal vehicle unless required for safety or health reasons. Opportunities to reduce idling include drive-through businesses (such as banks, pharmacies, and fast-food restaurants); schools and daycare centers; and while waiting to pick up passengers.

Name/Signature: _____

Business/Organization Name: _____

Date: _____

Space for organization's logo

IdleBox Tool: IdleBase



cleancities.energy.gov/idlebase

IdleBox Tool: IdleBase, cont.

A	B	C	D	E	F	G
Illinois	Type of Vehicle	Idling Restriction	Exemptions	Consequences of Infraction	Regulation	Resources
Counties in the Chicago Area: <ul style="list-style-type: none"> • Cook • DuPage • Lake • Kane • McHenry • Will • Aux Sable and Goose Lake Townships in Grundy • Oswego Township in Kendall Counties in the Metro East St. Louis Area: <ul style="list-style-type: none"> • Madison • St. Clair • Monroe 	Diesel vehicles ≥8,000 lbs	10 minutes/hour	Traffic conditions or controls. Prevent a health or safety emergency. Emergency or law enforcement purposes. Service or repair. Government inspection. Idling necessary to operate auxiliary equipment to accomplish intended use of vehicle. Guarding contents of armored vehicle. Bus can idle a maximum of 15 minutes/hour to maintain passenger comfort. Resting in sleeping berth. Mechanical difficulties out of control of operator. Airport ground control support. Buses owned by public transportation authorities on bus route. Implements of husbandry. Electric utility service vehicles. If temperature <32F or >80F, idle limit to 30 minutes/hour while in queue.	\$90 for first conviction. \$500 for second or subsequent conviction in 12-month period. Fines are divided and paid to 3 groups, dependant on the county that wrote the ticket.	625 Illinois Compiled Statutes (ILCS) 5/11-1429	http://www.lga.gov/legislation/ilcs/fulltext.asp?DocName=062500050K11-1429
City of Chicago	Diesel-powered vehicles	3 minutes/hour	Emergency vehicles providing health and safety services. Airport support vehicles necessary for airport operations. Engine running is necessary to operate auxiliary equipment to accomplish the intended use of the vehicle. Vehicles standing with engine running for purpose of service, repair, or inspection. Vehicles standing in traffic. Air conditioning if temperature >80F or heat if temperature <32F. Operation of APU or generator set. Mechanical requirements or difficulties out of operator's control. Vehicles standing due to automatic regeneration of diesel particulate filters or pre-shutdown cooling required by engine manufacturer.	\$250 per violation	Chicago Municipal Code, Section 9-80-095	http://www.cityofchicago.org/dam/city/depts/dao/general/ESB_PD/Es/StandingLimitOrdinanceAssessed.pdf



National Idling Reduction Network News



The screenshot shows the Energy.gov website header with the logo and navigation menu. The main content area features a breadcrumb trail, a title, a sidebar with links, and a descriptive paragraph.

ENERGY.GOV
Office of Energy Efficiency & Renewable Energy

Search Energy.gov | Q

SERVICES | EFFICIENCY | RENEWABLES | TRANSPORTATION | ABOUT US | OFFICES >

Home » Vehicle Technologies Office: National Idling Reduction Network News

VEHICLE TECHNOLOGIES OFFICE: NATIONAL IDLING REDUCTION NETWORK NEWS

[Vehicles Home](#)
[About Vehicle Technologies Office](#)
[Plug-In Electric Vehicles & Batteries](#)

The National Idling Reduction Network brings together trucking and transit companies; railroads; ports; equipment manufacturers; Federal, state, and local government agencies (including regulators); nonprofit organizations; and national research laboratories to identify consistent, workable solutions to heavy-vehicle idling for the entire United States. Below is the most recent issue; the archives are available on the [Archives page](#).

<http://energy.gov/eere/vehicles/vehicle-technologies-office-national-idling-reduction-network-news>

To subscribe, e-mail pweikersheimer@anl.gov

Success with IdleBox: Tips from Clean Cities Coalitions

- Start with stakeholders and build from those successes.
- Reach out to new audiences knowing that success will take multiple “touches.”
- Seek collaborative partnerships with other organizations that will benefit.
- Consider nontraditional fleets (e.g., Meals on Wheels).
- Use IdleBox to assist in ordinance development and outreach to local media.

IdleBox in Use

IdleBox has a range of uses, from policy development to fleet outreach to messaging to the general public.

West Palm Beach, Florida, used IdleBox materials for the launch of its no-idling policy for public utility vehicles (November 2014).



IdleBox in Use



The poster features a red header with the text "ENVIRONMENTAL INITIATIVES" and "REDUCE OUR CARBON FOOTPRINT" next to a green leaf icon. The main headline reads "STOP Idling. START \$aving." with a key icon. Below this, three bullet points are listed: "IDLING IS EXPENSIVE" (up to a gallon of fuel per hour), "IDLING POLLUTES" (a gallon of fuel creates about 20 lbs. of greenhouse gases), and "IDLING THREATENS HEALTH" (breathing vehicle emissions increases risk of respiratory illness). The ComEd logo is present, along with a circular seal for "ComEd ISO 14001 Certified SINCE 2008". A large green graphic at the bottom contains the text: "Idling uses more fuel than restarting your engine. Unnecessary idling at ComEd wastes over HALF A MILLION GALLONS of fuel AND more than \$2 MILLION each year." A small copyright notice "© Commonwealth Edison Company, 2011" is at the bottom left.

ENVIRONMENTAL INITIATIVES
REDUCE OUR CARBON FOOTPRINT

**STOP Idling.
START \$aving.**

- IDLING IS EXPENSIVE**
up to a gallon or more of fuel per hour, depending on vehicle size
- IDLING POLLUTES**
a gallon of fuel creates about 20 lbs. of greenhouse gases
- IDLING THREATENS HEALTH**
breathing vehicle emissions increases risk of respiratory illness

ComEd
An Exelon Company

Idling uses more fuel than restarting your engine

Unnecessary idling at ComEd wastes over **HALF A MILLION GALLONS** of fuel AND more than **\$2 MILLION** each year

ComEd ISO 14001 Certified
SINCE 2008

© Commonwealth Edison Company, 2011

"At **ComEd**, we used the IdleBox toolkit to create posters and information cards that were used for an internal education program. Employees provided feedback that the anti-idling booth was their favorite of the day, and many said that they were going to change their behavior to limit or reduce idling of their personal vehicles after hearing about the impacts."

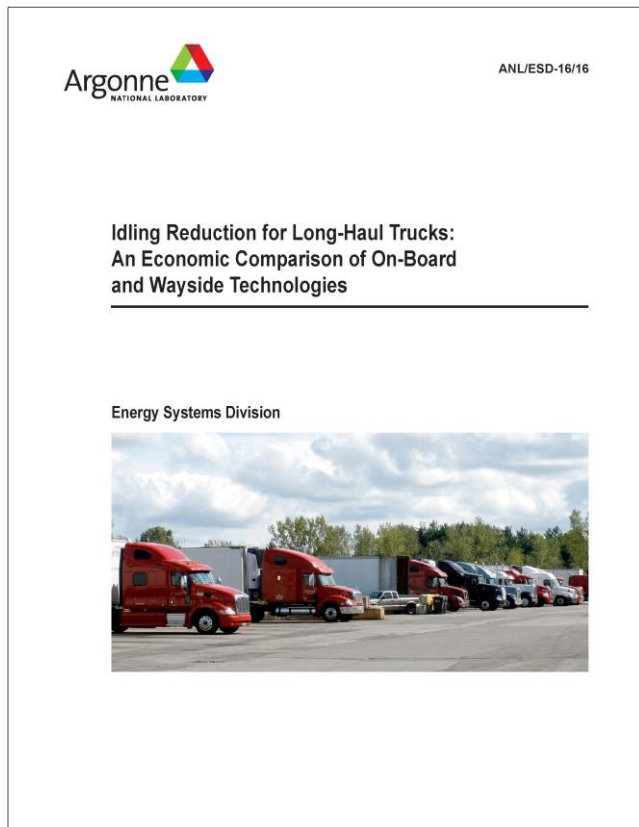
–**Marla Westerhold** of the **Environmental Department at ComEd**, Illinois' largest electric utility.

Wrapping Up

- IdleBox is not a static product. With your input, we will continue to add new tools and refine existing ones.
- Share your success stories with us! If you conduct an outreach event and perhaps have some lively photos, please share with us—we may be able to highlight your activities on the IdleBox home page!



Watch for New IdleBox Tools



- Technical paper on economics of on-board vs. wayside technologies for long-haul heavy-duty trucks
- Compendium of idling-reduction equipment manufacturers (all vehicle types)
- Looking forward: Where do idling reduction and Smart Mobility intersect?
 - Smart parking will reduce time drivers spend cruising—going nowhere—looking for a space.
 - Off-hours delivery can speed deliveries and pickups in congested areas, reducing or eliminating time in queues.

A Few Words on EPA and NHTSA's Phase 2 GHG Rules

- The use of idle reduction (IR) technologies is one way truck manufacturers can achieve compliance with Phase 2 standards.
- Automatic engine shutdown systems (AESS) are a base requirement for any manufacturer seeking compliance through IR; additional IR equipment may be installed for more credit.
- Credits range from 1% for adjustable AESS programmed to 5 minutes to 6% for tamperproof AESS combined with a battery-powered APU. Diesel APUs with tamperproof AESS will receive a 4% credit, which is the same as that for tamperproof AESS alone.
- Beginning with MY 2024 trucks, APUs are expected to be equipped with diesel particulate filters (DPFs), as currently required in California.

We welcome your questions and comments!

Work sponsored by the Clean Cities Program, U.S. Department of Energy's Office of Vehicle Technologies, to which we give our thanks.

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