



QUESTAR

Gas



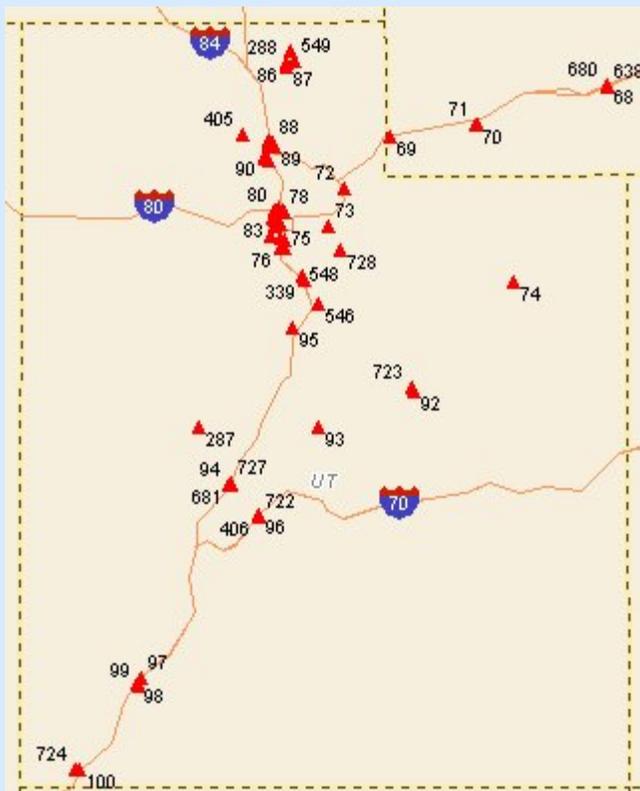
Clean Cities Coordinator Peer Exchange
Santa Fe, New Mexico

April 10, 2008

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Compressed Natural Gas Refueling Sites in Utah



- CNG-Compressed Natural Gas Public: 21
- CNG-Compressed Natural Gas Private: 72
- House Bill 103: Open up the University of Utah refueling site to the public.

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Utah has one of the lowest CNG fuel prices in the nation.



- Utah's current price for CNG is 63.8 ¢
- Questar has the 2nd largest Infrastructure of CNG refueling stations in the nation.

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Infrastructure and Development Grant for CNG Refueling Sites.

Utah Clean Cities received a grant for \$367,375 with a match in-kind to develop addition CNG refueling sites.

Partners:

Public:

- RB's 66
- LW's Travel Plaza

Private

- Diamond Parking
- Semi Service
- Abby Carpet
- Porter Development
- Hale Theater

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Grant

Utah Clean Cities Received a Grant for \$367,375 with an In-Kind Match to Develop Additional CNG Refueling Sites

Original Grant was for 3 Private and 2 Public Stations.

- Federal Match 29.2%

\$367,375 From DOE

\$889,600 From 5 Partners

\$1,256,975

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Grant

Utah Clean Cities Received a Grant for \$367,375 with an In-Kind Match to Develop Additional CNG Refueling Sites

- Actual Match was **21%**
\$367,375 From DOE
\$1,375,358 From 7 Partners
\$1,742,733

Actual Grant for 5 private stations, 74 vehicles and 2 public with 4,000 vehicles.

- Already displacing 57,000 (GGE) from only 2 of the 5 private stations.

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Station Grand Opening



RB's 66 Woods Cross Grand Opening.



Approximately 100 people attended including; Governor Huntsman and our own "Ernie Oakes".

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Station Grand Opening

You're Invited!!!

LW's Travel Plaza,
Perry/Brigham City

\$0.63⁸/gge

NGV Station Grand Opening

Monday April 14, 2008
10:30 a. m.

1674
West off I-15, Exit 362

Please RSVP by April 7 to Robin Erickson, 801 535-7736

The invitation graphic is set against a background of a gas station interior. It includes several logos: a "Perry 66" sign with a price list (211¢, 321¢, 378¢) and an NGV logo; a large "LW's" logo; a "NGV Powered by Natural Gas" logo; and a photo of a gas pump with an NGV logo. The text is arranged in a central, eye-catching layout.

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Contact us:

www.Utahcleancities.org

or

Robin Erickson at 535-7736

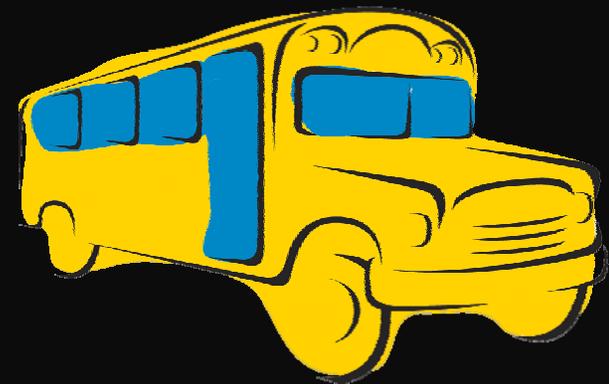
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Get On The Bus... For Cleaner Air



But First Some Fast Facts

- There are approximately 500,000 school buses in operation in the U.S.
- 54 percent of all U.S. students ride a school bus to school.
- 25 million students are transported to school by bus each day.
- One out of 12 people living in the United States rides a bus to school.
- School buses travel approximately 4.3 billion miles each year.
- 95% of all school buses operate with diesel engines— about 1/3 were built prior to 1990.



Good News

- School bus drivers provide a tremendous service in the United States.
- School buses are by far the safest way for students to get to school.
 - The Federal Government has determined that a student is nine times safer in a school bus than in an automobile.
 - A student traveling to school is 96 times more likely to be involved in a fatal accident in a private vehicle than in a school bus.

Good News

- School buses decrease air pollution by replacing automobiles that would otherwise transport students to school.
- In fact, if the students on one school bus were driven to school in 20 private vehicles, it would result in:
 - Six times more Hydrocarbon
 - Three times more Carbon Monoxide
 - Two times more Nitrous Oxide
 - Five times more Carbon Dioxide

There Is Bad News

Diesel engines produce more harmful exhaust than unleaded gasoline engines.

- 66 percent of particulate pollution from on-road sources comes from diesel exhaust, even though diesel-powered vehicles are a small percentage of all vehicles.
- Diesel exhaust contains more than 40 toxic chemicals.
- 15 chemicals in diesel exhaust are cancer causing (carcinogenic). In fact, it is estimated that 70 percent of airborne cancer risk comes from diesel exhaust.



There Is Bad News

“Children are especially vulnerable”

- Young children inhale 50 percent more air per pound of body weight than adults.
- Developing lungs are unable to defend against the fine (small) particulates in diesel exhaust which can become permanently lodged in the lungs.
- Polluted air inhibits healthy lung development.

Is Anything Being Done?

YES!

A national campaign is underway to reduce diesel engine pollution in the United States. This includes both off-road (construction, agriculture, locomotion) and on-road (trucks, buses, diesel automobiles) sources.



Is Anything Being Done?



The best thing that school bus drivers can do is reduce the amount of time that buses unnecessarily idle.

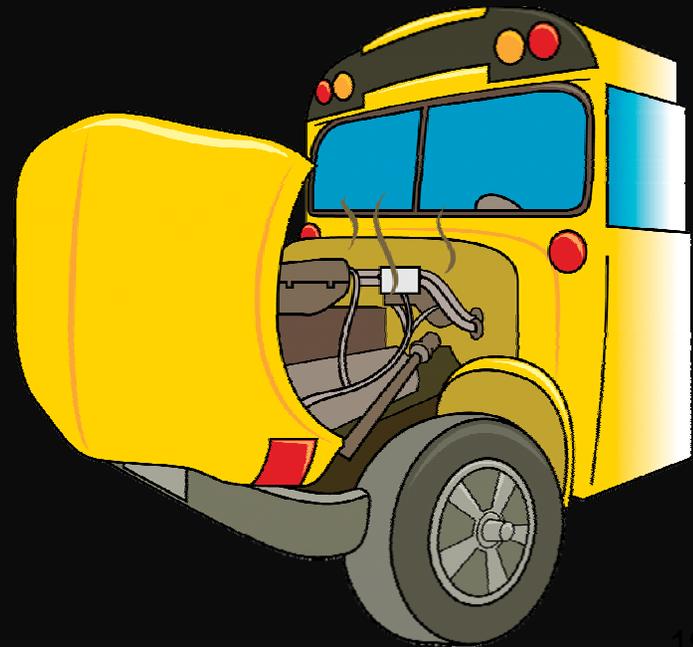
Idling Buses Emit Harmful Particulates Into The Air

- Diesel exhaust accumulates in the bus interior when idling.
- Diesel exhaust may enter the school building through air intakes when the bus is in close proximity to the school.
- Children are exposed to exhaust fumes as they board buses and while traveling to and from school.

Are There Good Reasons To Idle A Diesel Engine?

Myth: Idling is good for the diesel engine.

Fact: Excessive idling actually damages engine components and necessitates more frequent maintenance.





Think Of It This Way...



If every bus that transported children to school were to idle for just one less minute both to and from school every day.....

Think Of It This Way...

1,500,000 Gallons Of Fuel Would
Be Saved Every Year.



In Summary...

- Bus drivers make a major contribution to the safe and efficient transportation of students to school.
- Air quality is also improved because school buses replace many private vehicles that would otherwise transport students to school.
- Diesel exhaust is much more toxic than the exhaust from unleaded fuel vehicles and children are vulnerable to its effects.
- Minimizing student and bus driver exposure to diesel exhaust and reducing general air pollution is the goal of the National Clean Diesel Campaign.



Current Status of School Buses

- Over 400 drivers have signed pledge forms to reduce idling more than 10 minutes a day
- Washington County school district/UCCC sent letters about the idling program to school board members, principals, teachers, and parents
- 21 school districts throughout Utah have requested the Idle Reduction presentation
- Prior to the end of the year, all school buses in Utah will be on the Idle Reduction Program
- 2009 USOB School Bus Drivers Standards Book will adopt the idle reduction curriculum



And There's More.



11 schools have requested this banner

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2008 Legislated House Bills

H.B. 146



- Statewide idle reduction policy for all school buses.
- Start a diesel retrofit campaign for school buses in Utah from years 1993-2006, approximately 2000 school buses starting with a non-attainment area
- Fields of Fuel documentary about biodiesel

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And There's More Benefits To Idling Reduction

- The Press
 - KSL Television Broadcast of Salt Lake City School District Idle Reduction Presentation
 - Deseret Morning Newspaper article about school bus idle reduction
 - Logan Herald Newspaper article from the Cache Valley Idle Reduction Presentation



And There's More Benefits To Idling Reduction

- Other Presentations
 - Utah State Board of Education Standards Committee of 15 approved idle reduction curriculum
 - Utah State Board of Education Legislative Group of 65 approved idle reduction and diesel retrofit House Bill
 - Utah Moms For Clean Air Idle Reduction Presentation to charter schools



And There's More Benefits To Idling Reduction

- Presentations to Businesses
 - **Hogle Zoo**
 - Concerned about the air quality for the animals and the 2000 children per day that come to the zoo
 - Adopted a Green Team idle reduction program
 - **CompHealthLab**
 - First idle reduction presentation introducing "What You Can Do to Clean the Air"
 - Approximately 100 employees attended the presentation and pledged to reduce idling time by more than 5 minutes a day



What Can You Do To Clean The Air?

Starting up - Idle for no more than 30 seconds to circulate the oil through your engine. Don't use remote starters: they promote unnecessary idling.



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What Can You Do To Clean The Air?

En Route - Turn off your engine when you:

- Run an errand to a convenience store
- Drop into a fast food restaurant
- Wait in a drive-through line
- Stop to speak with a friend
- Talk on a cell phone
- Wait for somebody (for example, your child after school)
- Go through a car wash or wait in line for your turn
- Wait for a train to go through a level crossing.

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What Can You Do To Clean The Air?

Be Idle Free

Idling is when you have the engine running, but the car is not in motion. A good rule of thumb is, if you are going to be stopped for more than 10 seconds, when not in traffic, you should turn off your car.

Idling produces greenhouse gas emissions.

If all drivers in the country reduced their idling time by only *five minutes a day*, we would reduce the amount of carbon dioxide (CO₂) released into the atmosphere by 1.6 million tons. This would be the equivalent of taking 500,000 cars off the road overnight!

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What Can You Do To Clean The Air?

Drive your vehicle less.

- Carpooling
- Public Transportation
- Walking
- Biking
- All Reduce Emissions, Are Great Forms Of Exercise And Save Money On Gas.

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What Can You Do To Clean The Air?

Purchase a fuel efficient vehicle.

- Down Size your Vehicle
(With a Vehicle that Meets Air Quality And Fuel Economic Standards.)
- Biodiesel
- Hybrid
- Compressed Natural Gas (CNG)
- Low Speed Electric Vehicle (NEV)
- Conversion Kits

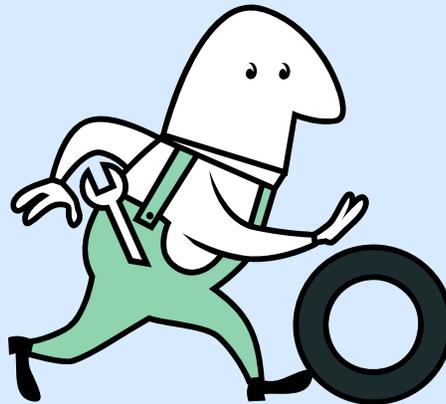
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What Can You Do To Clean The Air?

Proper Maintenance Of Your Vehicle

- Properly inflated tires.
- Regular maintenance on your vehicle will reduce emissions.
- make sure your vehicle is properly tuned.



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What Can You Do To Clean The Air?

- “Tele-Work”-office work from home.
- Staggering Work Hours-to avoid traffic Congestion On the Freeway.
- Drive The Speed Limit.
- Use Cruise Control

Idling contributes to smog.

In addition to CO₂, vehicle exhaust releases other toxic substances which pollute our air. Poor air quality and smog are linked to increased hospitalizations, respiratory disorders and premature deaths

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Common Myths About Idling

Myth #1

The engine should be warmed up before driving.

Reality

True, the engine must be warmed up, but idling is not an effective way to warm up your vehicle, even in cold weather. The best way to do this is by driving the vehicle. With today's modern engines, and the advent of electronic engines, you need no more than about 30 seconds of idling before driving away, even on the coldest winter days.

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Common Myths About Idling

Myth #2

Idling is good for your engine.

Reality

Excessive idling can actually damage your engine components. An idling engine is not operating at its peak temperature, which means that fuel does not undergo complete combustion. This leaves fuel residue that can condense on cylinder walls, where they can contaminate the oil and damage parts of the engine.

For example, fuel residues are often deposited on spark plugs. As you spend more time idling, the average temperature of the spark plug drops. This makes the plug get dirty more quickly, which increases fuel consumption by four to five percent.

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Common Myths About Idling

Myth #3

Shutting off and restarting your vehicle is hard on the engine.

Reality

Frequently restarting has little impact on engine components like the battery and the starter motor. Component wear caused by restarting the engine is estimated to add \$10 per year to the cost of driving, money likely to be saved many times over due to fuel savings.

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Common Myths About Idling

Myth #4

Shutting off and restarting your vehicle uses more gas than if you leave it running.

Reality

The bottom line is that over 10 seconds of idling uses more fuel than restarting the engine. As a rule of thumb, if you are going to stop for 10 seconds or more - except in traffic - turn off the engine. You'll save money, and you won't produce harmful Carbon Dioxide, the leading greenhouse gas.

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What Can You Do To Clean The Air?

- Spread the word to family and friends.
- Start your own idle-free campaign.
- Write your representatives letting them know you want a state law idle-reduction program.



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