



**CERT**ified campaigns

Act to implement energy solutions!

## GREEN UP YOUR FLEET!

A Healthier Environment for Our Children

### How does Project Green Fleet retrofit my fleet?

The free installation process is easy and takes on average 3-4 hours per bus, depending upon bus model and type of equipment used.

Schools can choose to do the installation and maintenance in-house (following a training session), or can have the retrofit performed by local vendors.

**Project Green Fleet will pay for training and installation costs.**

**Your newly-retrofitted vehicles will reduce emissions from 30-50% and dramatically improve the air quality inside the bus cabin.**

**All of this is FREE with participation in Project Green Fleet. Learn more at [projectgreenfleet.org](http://projectgreenfleet.org).**

### OFFICIAL CAMPAIGN GUIDE

**Did you know diesel vehicles account for only 10% of traffic on Minnesota roads but contribute more than 50% of all traffic related air pollution? With a simple, FREE retrofit we can reduce emissions by 30-50% per vehicle!**

**Using a simple, FREE retrofit we can help keep Minnesota's air clean and reduce air pollution. With the help of Project Green Fleet you can retrofit your local school district's school bus fleet to reduce hazardous diesel fumes.**

**Project Green Fleet retrofitted vehicles *reduce emissions from 30-50%* and dramatically *improve the air quality* inside the bus cabin.**

### Is it Right for Me?

Good candidates for the retrofits include fleets *older* than model year 2007. Buses with model years between the mid-1990s to 2006 are typically the ideal candidates. Older buses, those likely to be taken out of service with the next five years, are typically excluded.

If buses in your fleet fall within the target model years, Project Green Fleet will cover the entire cost of the equipment, installation and training (optional) to retrofit your fleet. Pollution control equipment and installation usually cost \$1,500-\$2,000 per school bus, but with Project Green Fleet this equipment is free, and installation costs are 100% covered. Additionally, the retrofits have no impact on vehicle performance!

### To get involved you can contact:

**Jordan Hansen**  
Project Green Fleet  
[jhansen@mn-ei.org](mailto:jhansen@mn-ei.org)  
612-334-3388 x104

**Patrick Santelli**  
Clean Energy Resource Teams  
[schoolscuttingcarbon@cleanenergyresourceteams.org](mailto:schoolscuttingcarbon@cleanenergyresourceteams.org)  
612-625-3759





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### How Does it Work?

Pollution control equipment has minimal impact on a diesel vehicles performance and fuel economy. The only ongoing maintenance after retrofit equipment is installed involves the periodic – approximately twice per year – replacement of a filter. Replacement filters cost about \$40 each.

Project Green Fleet will send out engineers to determine your fleet's needs.

Common emission reduction technologies include:

- *Diesel Oxidation Catalyst (DOC)*: a small catalytic converter like device place in front of the muffler. The DOC rarely requires maintenance, if ever.
- *Closed Crankcase Filtration System*: a closed crankcase system that returns engine blow-by gases to the combustion system. Filters should be replaced after 500 hours of operation.

The installation process is easy and takes on average 3-4 hours per bus depending upon the fleet model and type of equipment used. Schools can choose to do the installation and maintenance in-house (following a training session), or can have the retrofit performed by local vendors. Project Green Fleet will pay for training and installation costs.

### Why Retrofit?

Diesel exhaust is produced when a school bus, heavy-duty truck or other vehicle with a diesel engine burns diesel fuel resulting in hazardous toxins. Pollution control equipment installed through Project Green Fleet reduces these toxins, which include particulate matter, carbon monoxide and hydrocarbons from the exhaust stream. The toxin reductions create a healthier school bus environment for your children.

The American Academy of Pediatrics has recently concluded that levels of ozone and particulate matter are high enough in many parts of the U.S. to threaten children's health. Exposure to this particulate matter in vehicle exhaust, even briefly, can irritate the lungs, particularly in asthmatics. For more information regarding diesel exhaust on health affects, a good resource is <http://www.ehhi.org/reports/exhaust/exhaust06.pdf>.

A recent study completed by researchers at Columbia University's Mailman School of Public Health has linked exposure to particles from diesel exhaust to respiratory systems in young inner city children.<sup>1</sup> Children are especially susceptible to adverse effects of exposure to diesel exhaust because they breathe more air relative to their body weight than adults. School bus fleets that participate in Project Green Fleet reduce emissions from 30-50% and dramatically improve the in-cabin air quality for both students and drivers.

<sup>1</sup> Columbia University Mailman School of Public Health. *Exposures to Metals and Diesel Emissions in the Air Are Linked to Respiratory Symptoms in Young Inner City Children*. Accessed 25 November 2009. <http://www.mailman.hs.columbia.edu/>

#### Want to do more?

##### *A note about other upgrades*

Project Green Fleet also offers technical assistance to perform other diesel engine upgrades, although these programs are not free at this time:

- *Auxiliary Power Unit*: Supplies cooling, heating, and electric power to vehicles to prevent unnecessary idling.
- *Diesel Engine Repower*: Replaces an old engine with a cleaner, more efficient engine.
- *Diesel Multistage Filtration System*: a two-stage filter system that traps particulate matter. This system is designed to be maintenance-free, but it must operate with a minimum exhaust temperature to be effective.



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### How do I sign up? The Step-by-Step:

**1. Check to see if your school is already signed up**

Visit [Project Green Fleet's Participant List](http://Project Green Fleet's Participant List) ([tinyurl.com/PGF-participants](http://tinyurl.com/PGF-participants)) to see if your school has already partnered. Don't see your district? Visit [Project Green Fleet's Website](http://Project Green Fleet's Website) ([projectgreenfleet.org](http://projectgreenfleet.org)) to learn more.

**2. Talk with your organization about Project Green Fleet**

It is important to talk to your school district about the benefits of retrofitting school buses. Project Green Fleet targets school buses and other diesel vehicles that are likely to have five or more years of expected operating life. Eligible vehicles are generally those built before 2007 that lack emission control systems found on newer vehicles. Find more information about Project Green Fleet and Diesel Retrofits at the [CERTs Project Green Fleet Campaign Webpage](http://CERTs Project Green Fleet Campaign Webpage) ([greenfleet.mncerts.org](http://greenfleet.mncerts.org)).

**3. Assess Your Fleet**

Work with your fleet manager to gather information about the size of your fleet (Number of buses and other diesel vehicles), age of the fleet, and the fleet operator.

**4. Contact CERTs or Project Green Fleet**

Contact [Jordan Hansen](#) (Project Green Fleet) or [Patrick Santelli](#) (CERTs), or sign-up at [Project Green Fleet](http://Project Green Fleet) ([www.projectgreenfleet.org/contact/index.html](http://www.projectgreenfleet.org/contact/index.html)) to initiate the process. CERTs can help you spread the word.

**5. Fleet Verification**

A Project Green Fleet staff member will work with you to verify information about your fleet, manage the retrofit process, address technical questions and provide your fleet information to one of Project Green Fleet's contracted equipment vendors. Contact [Jordan Hansen](#) to get started.

**6. Work with Equipment Vendor**

The equipment vendor will analyze the fleet, determine what pollution control equipment is needed and develop an installation plan for the equipment based on your individual needs.

**7. Project Green Fleet Equipment Order**

MEI staff will place an order for the equipment. It takes 4-6 weeks for equipment to be manufactured and shipped. Project Green Fleet covers the cost of installation, installation training, and diesel emission reduction equipment.

**8. Installation and/or Training**

The fleet owner or operator can choose to either have the installation done by existing trained installers or to have their own staff trained to complete the installations. The equipment vendor will provide training at no cost to fleets that want to complete installations in-house. Installation takes approximately 3-4 hours per bus.

**9. Tell your story!**

CERTs would love to hear about your experience. How easy the installation process was, if more energy related projects have been initiated in your community, or if you want more ways to get involved, we want to hear about it! Leave us a note at the [CERTs Green Fleet Project Campaign Webpage](http://CERTs Green Fleet Project Campaign Webpage) ([greenfleet.mncerts.org](http://greenfleet.mncerts.org)).

### Contact Us

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