

Clean Fleet Toolkit





The Clean Fleet Toolkit



...



Emissions Calculator Tool

[Introduction](#)[Fleet Inventory](#)[Impacts](#)[Recommended Actions](#) ▾

Welcome to the UN Environment / Clean Fleet Toolkit

This Toolkit will help you develop a strategy for reducing the environmental impacts of your fleet of cars, trucks, buses and motorcycles, as well as generators; many of the options presented also lower costs and improve performance. For more information on the various topics related to clean fleet management, go through the Tools.

Step 1

Fill in the Fleet Data

Start with entering your fleet data in the [Fleet inventory](#) tab, replacing the default placeholder figures.

Step 2

Impacts of Your Emissions

This basic data will then allow you to estimate your impacts as shown in the [impacts](#) tab.

Step 3

View Your Options

You'll then be able to review possible actions described in the subsequent [Actions](#) tab.

IMPORTANT DISCLAIMER:

This toolkit only gives rough, ballpark estimates of your emissions, costs and savings. Actual results are influenced by a number of factors, including: driver behavior; road conditions; traffic patterns; fuel type and quality; vehicle age, condition, technology and standards; mileage; maintenance; altitude; and (in the case of plug-in electric vehicles) the type of power plant producing electricity.

The purpose of this Tool is to provide an indication of your fleet's current emissions, and the relative improvement that different options provide. The important aspect to focus on is the improvement your fleet can achieve.



...



Emissions Calculator Tool

[Introduction](#)[Fleet Inventory](#)[Impacts](#)[Recommended Actions](#)

General Information

Fleet Name:

Diesel Sulphur Level: (in ppm)

You can confirm the sulphur levels in your region [here](#)

Petrol price: (in USD)

per liter

Diesel price: (in USD)

per liter

Electricity price: (in USD)

per KW/h

Approx. electricity from fossil fuels:

in percentage



Passenger cars (GASOLINE) < 2.7 tonnes



Passenger cars (DIESEL) < 2.7 tonnes



Passenger cars (ELECTRIC) < 2.7 tonnes





...



...



Passenger Small Trucks & SUVs (DIESEL) < 2.7 tonnes

—

Vehicle Categories	No of Vehicles	Total annual mileage (km/yr)	Total annual fuel consumption (l/yr)	Average annual mileage per vehicle (km/yr)	Average fuel efficiency (l/yr)
Pre-Euro < 1992 OR no catalytic convertor	<input type="text" value="e.g. 7"/>	<input type="text" value="e.g. 200000"/>	<input type="text" value="e.g. 30000"/>	28572.42	6.67
Euro I 1992-1995	<input type="text" value="e.g. 3"/>	<input type="text" value="e.g. 70000"/>	<input type="text" value="e.g. 9000"/>	1234.56	7.89
Euro II 1996-1999	<input type="text" value="e.g. 50"/>	<input type="text" value="e.g. 40"/>	<input type="text" value="e.g. 30"/>	1234.56	7.89
Euro III 2000-2004	<input type="text" value="e.g. 50"/>	<input type="text" value="e.g. 40"/>	<input type="text" value="e.g. 30"/>	1234.56	7.89
Euro IV 2005-2008	<input type="text" value="e.g. 50"/>	<input type="text" value="e.g. 40"/>	<input type="text" value="e.g. 30"/>	1234.56	7.89
Euro V 2009-2013	<input type="text" value="e.g. 50"/>	<input type="text" value="e.g. 40"/>	<input type="text" value="e.g. 30"/>	1234.56	7.89
Euro VI 2014-Present	<input type="text" value="e.g. 50"/>	<input type="text" value="e.g. 40"/>	<input type="text" value="e.g. 30"/>	1234.56	7.89



Passenger Small Trucks & SUVs (ELECTRIC) < 2.7 tonnes

+



Light Duty SUVs, Trucks & Vans (GASOLINE) 2.7 - 4.5 tonnes

+



Light Duty SUVs, Trucks & Vans (DIESEL) 2.7 - 4.5 tonnes

+



Medium Duty SUVs, Trucks & Vans (DIESEL) 4.5 - 15 tonnes

+





...



Emissions Calculator Tool

[Introduction](#)[Fleet Inventory](#)[Emissions](#)[Recommended Actions](#)

Emissions of your feet



Passenger cars (GASOLINE) < 2.7 tonnes



Passenger cars (DIESEL) < 2.7 tonnes



Passenger cars (ELECTRIC) < 2.7 tonnes



Vehicle Categories

	No	Distance (kg/yr)	CO (kg/yr)	VOC (kg/yr)	NO _x (kg/yr)	SO _x (kg/yr)	PM ₁₀ (kg/yr)	CO ₂ (kg/yr)
Hybrid Electric Vehicles (HEVs)	7	200,000	1,850.0	192.0	274.0	400.0	400.0	70,500.0
Plug-in Hybrid Electric	7	200,000	1,850.0	192.0	274.0	400.0	400.0	70,500.0
Battery Electric (pure plug-in)	7	200,000	1,850.0	192.0	274.0	400.0	400.0	70,500.0



Passenger Small Trucks & SUVs (GASOLINE) < 2.7 tonnes





...



Use alternatives to generators



Using solar energy to provide hot water is an excellent way to lower operating costs, and has a good return on investment. Beyond that, Photovoltaic (PV) solar power can be used to generate electricity. PV panels can either replace or supplement your grid electricity and back-up generator in order to lower running costs and emissions.

Fill in the following with information specific to your site:

Electricity demands for the site: (in kW)

e.g. 10



Cost for solar panel with inverter + battery system: (in USD/kW) 

e.g. 3,260




Total cost of solar panel system:

32,600

Payback time for this PV system

5 Years

If the PV system is to replace or supplement grid electricity:

The energy output of a PV system will depend on the solar radiation (kWh/m²) of the location. Three examples of solar radiation (4, 5, 6 kWh/m²) are provided below, with the corresponding energy value created from different sized PV systems (kW). Energy value is the cost savings per year based on your cost of electricity. 

Size of PV system (in kW)	Energy value (USD/year)		
	for 4 kWh/m ²	for 5 kWh/m ²	for 6 kWh/m ²
2	480	564	696
5	1,200	1,404	1,728
7	1,680	1,968	2,400
10	2,400	2,808	3,432
15	3,600	4,224	5,136



The Clean Fleet Toolkit



Eco Driving

[Home](#) - Clean Fleet Toolkit


Eco-driving refers to a driving style characterized by lower speeds, gentler acceleration and braking, and "thinking ahead" in traffic. With improved driver behavior, there are great safety benefits. Better driving also saves on fuel consumption, and maintenance costs for brakes, clutches and vehicle suspension.



...



 **Eco-driving reduces costs and increase safety**

 General tips for Eco-driving

 Idling wastes fuel

Increased fuel consumption and maintenance requirements, and lower safety occur with aggressive driving. Time studies show that fast starts, weaving in and out of traffic, and accelerating to and from traffic signals do not save much time. Instead, these behaviors waste fuel and quickly wear out car components such as brakes and tires.

Training courses in eco-driving result in a 20% reduction in fuel consumption. Without refresher courses and incentives, drivers can return to some of their previous driving styles, thus reducing the long-term benefits of the training. However, some of the benefits still remain: drivers who have completed these courses usually retain a 5-10% improvement over the long term.