

AFLEET ONLINE 2018 INTRODUCTION

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AFLEET Online Introduction



“AFLEET ONLINE TOOL” TO ANALYZE AFV COSTS & BENEFITS

- **New user friendly, web-based AFLEET Tool based on spreadsheet's Simple Payback Calculator**
 - Incorporated feedback from 20+ coordinators
- **Examines light-duty & heavy-duty vehicle:**
 - Petroleum use
 - GHG emissions
 - Air pollutant emissions
 - Simple Payback
- **Contains 18 fuel/vehicle technologies**
 - Conventional
 - Hybrids
 - Plug-in electrics
 - Alternative fuels: CNG, LNG, LPG, H2, ethanol, biodiesel, renewable diesel
- **AFLEET Tool 2018 (online): afleet-web.es.anl.gov/afleet/**



AFLEET ONLINE TUTORIAL – START PAGE

■ About, Start New Project & Load Project

AFLEET Tool 2018

The Department of Energy has enlisted the expertise at Argonne to develop the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool for Clean Cities Coalition stakeholders. This online version of AFLEET compares new alternative fuel vehicles to gasoline (light-duty) and diesel (heavy-duty) vehicles using the following metrics:

- **Petroleum use**
- **Greenhouse gas emissions**
- **Air pollutant emissions**
- **Simple payback**

The online version provides the same results as the AFLEET Tool 2018 spreadsheet's Simple Payback Calculator. To download the spreadsheet and user manual, please visit: https://greet.es.anl.gov/afleet_tool

For any questions contact: greet@anl.gov

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AFLEET ONLINE TUTORIAL – VEHICLE SELECTION

■ 1st step: select vehicle type

- LDV (compare to gasoline) = passenger car/truck, light commercial truck
- HDV (compare to diesel) = school/transit bus, refuse, single unit short/long, combination short/long truck

[<Back](#)


Select a vehicle type to get started

 Passenger Car	 Passenger Truck	 Light Commercial Truck	 School Bus	 Transit Bus
 Refuse Truck	 Single Unit Short- Haul Truck	 Single Unit Long- Haul Truck	 Combination Short-Haul Truck	 Combination Long-Haul Truck

AFLEET ONLINE TUTORIAL – AFV SELECTION


- 2nd step: select alternative fuels


<Back


 Passenger Car


Fuel Prices


Fuel Options


 DIESEL


 Gasoline Hybrid Electric


 PHEV


 EREV


 EV


 FCV


 B20


 B100

 RD20

 RD100

 E85

 LPG

 CNG


Fuel Type	Fuel Economy (MPGGE) ?	Purchase Price (\$)
Gasoline	26.2	20,000

Calculate Total Results

AFLEET ONLINE TUTORIAL – AFV SELECTION


- 3rd step: enter fuel economy & purchase price


<Back


 Passenger Car


Fuel Prices


Fuel Options


 DIESEL


 HEV


 PHEV


 EREV


 EV


 FCV


 B20


 B100

 RD20

 RD100

 E85

 LPG

 CNG

Fuel Type	Fuel Economy (MPGGE) ?	Purchase Price (\$)
Gasoline	26.2	20,000
HEV	36.4	22,000
EREV	35.6	34,000
E85	26.2	20,500
CNG	24.9	27,000

Calculate Total Results

AFLEET ONLINE TUTORIAL – AFV SELECTION

- 4th step: fuel prices

The screenshot shows the 'AFLEET ONLINE TUTORIAL – AFV SELECTION' interface. At the top, there's a '<Back' button, a 'Passenger Car' icon, and 'Fuel Prices' and 'Fuel Options' buttons. On the left, a list of vehicle types is shown: DIESEL, HEV, PHEV, EREV, EV, FCV, B20, B100, RD20, RD100, E85, LPG, and CNG. A modal window titled 'Fuel Prices' is open, displaying a table with fuel types, units, and prices. The table has three columns: 'Fuel', 'Fuel Unit', and '\$/Fuel Unit'. The rows are: Gasoline (Gallon, 3.00), Electricity (kWh, 0.06), E85 (Gallon, 2.25), and CNG (GGE, 1.8). At the bottom of the modal, there are 'Fuel Options' and 'Done' buttons.

Fuel	Fuel Unit	\$/Fuel Unit
Gasoline	Gallon	3.00
Electricity	kWh	0.06
E85	Gallon	2.25
CNG	GGE	1.8

- **4th step: enter # of vehicles, mileage, state, PHEV options, feedstock sources, petroleum/GHG/air pollutant options**

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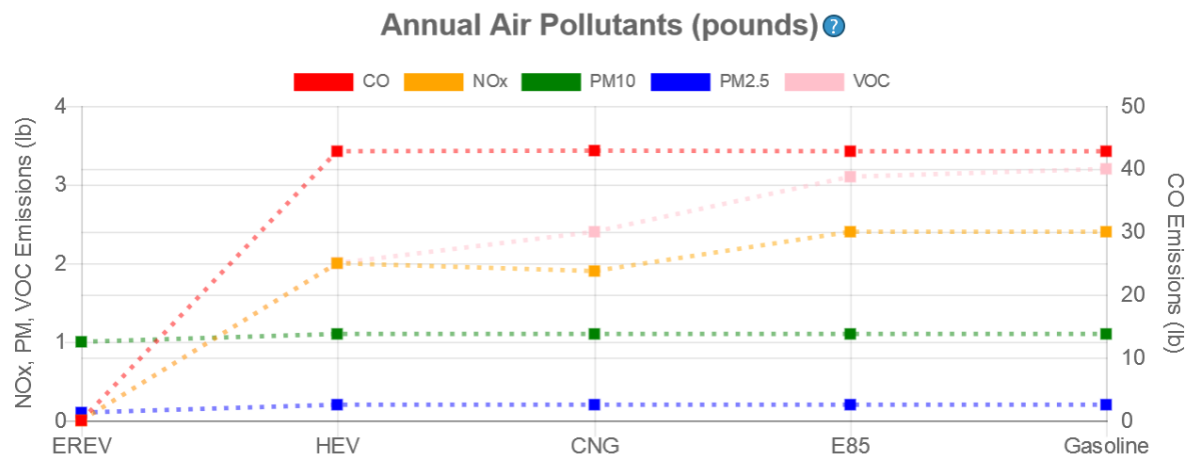
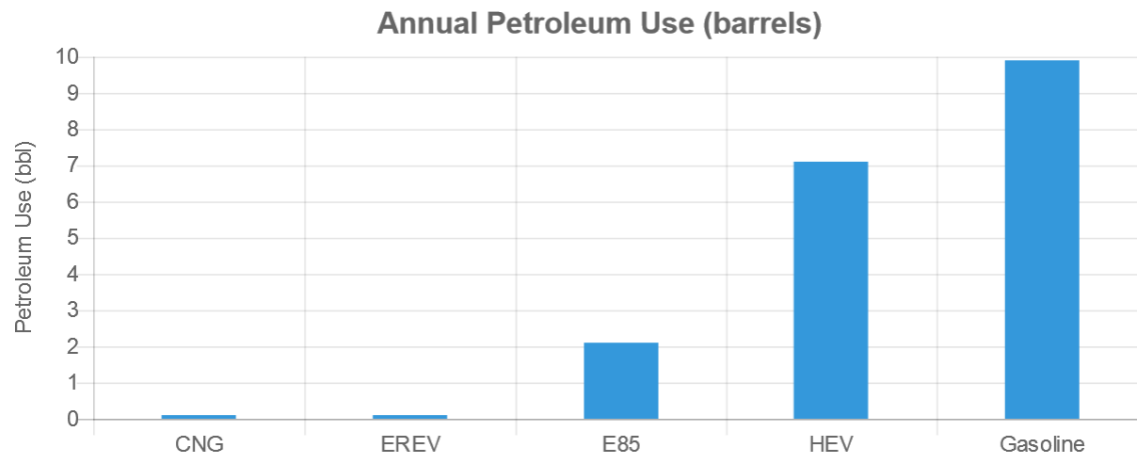
AFLEET ONLINE TUTORIAL – RESULTS

- 5th step: view simple payback, GHG, petroleum, air pollutant results



AFLEET ONLINE TUTORIAL – RESULTS

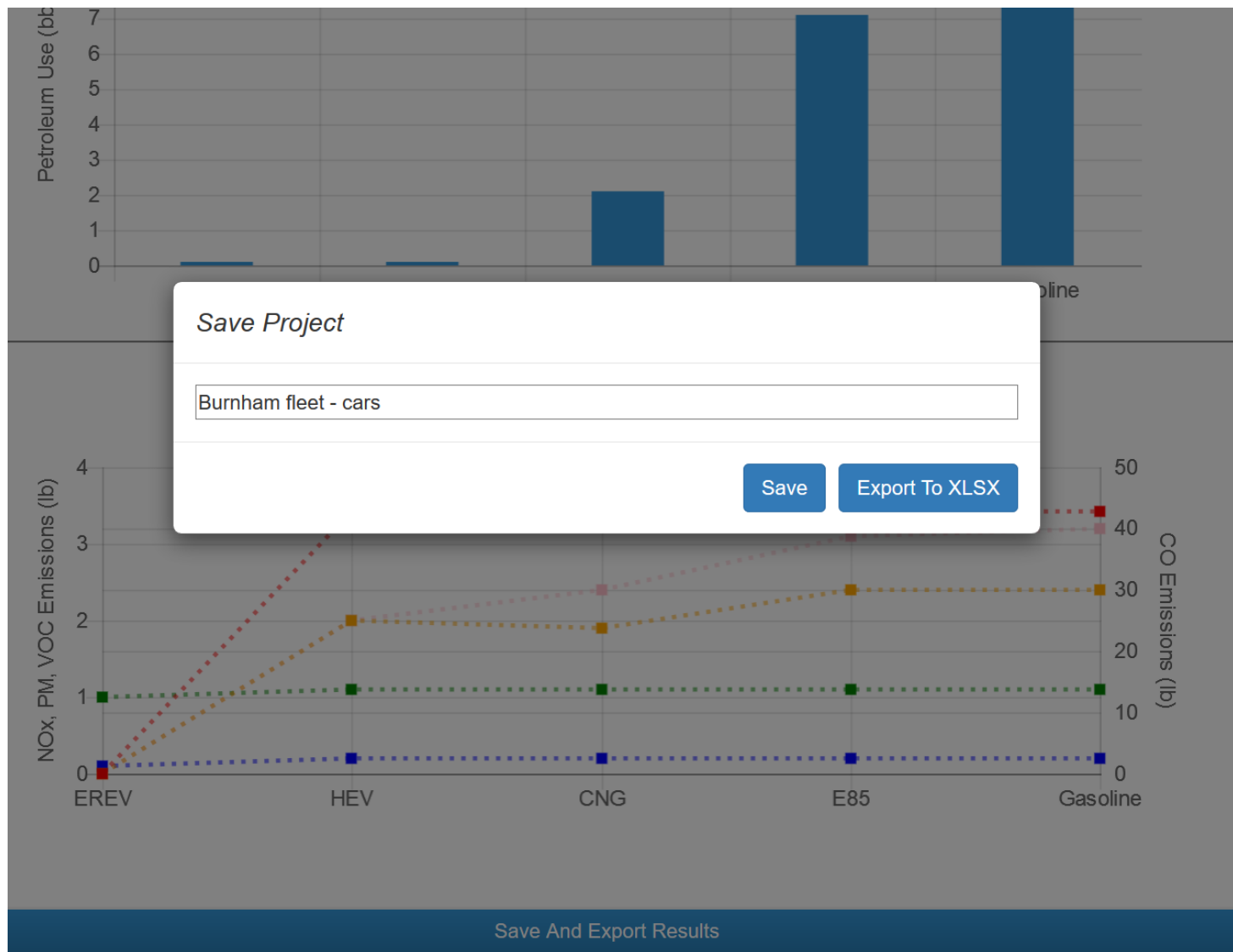
- 5th step: view simple payback, GHG, petroleum, air pollutant results



Save And Export Results

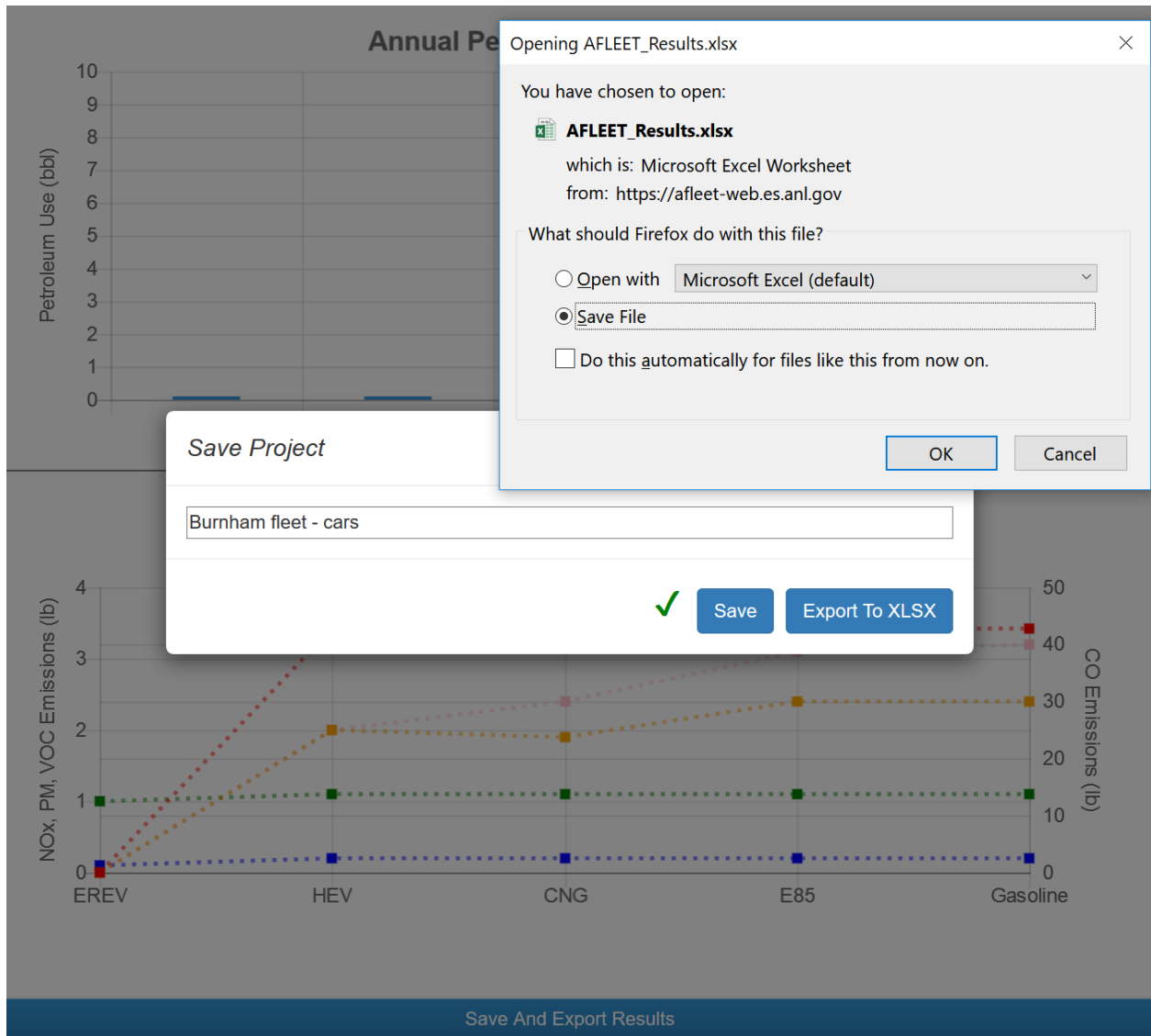
AFLEET ONLINE TUTORIAL – RESULTS

- 6th step: save project, export results



AFLEET ONLINE TUTORIAL – RESULTS

■ 6th step: save project, export results



AFLEET ONLINE TUTORIAL – RESULTS

- **7th step: view exported results**

A1

AFLEET

A

B

C

D

E

F

G

H

1

AFLEET

2

Passenger Car

3

4

5

Fuel Type

Fuel Economy

Purchase Price

6

Gasoline

26.2

\$20,000

7

HEV

36.4

\$22,000

8

EREV

35.6

\$34,000

9

E85

26.2

\$20,500

10

CNG

24.9

\$27,000

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

Fuels

Fuel Prices

Vehicle Options

Results

Ready

Calculate

AFLEET			
Passenger Car			
Fuel	Fuel Unit	\$/Fuel Unit	
Gasoline	Gallon	\$3.00	
Diesel	Gallon	\$1.67	
Electricity	kWh	\$0.06	
Gaseous H ₂	kg	\$12.68	
B20	Gallon	\$1.80	
B100	Gallon	\$3.25	
RD20	Gallon	\$0.00	
RD100	Gallon	\$0.00	
E85	Gallon	\$2.25	
Propane	Gallon	\$1.76	
CNG	GGE	\$1.80	
LNG	Gallon	\$2.28	
DEF	Gallon	\$2.80	

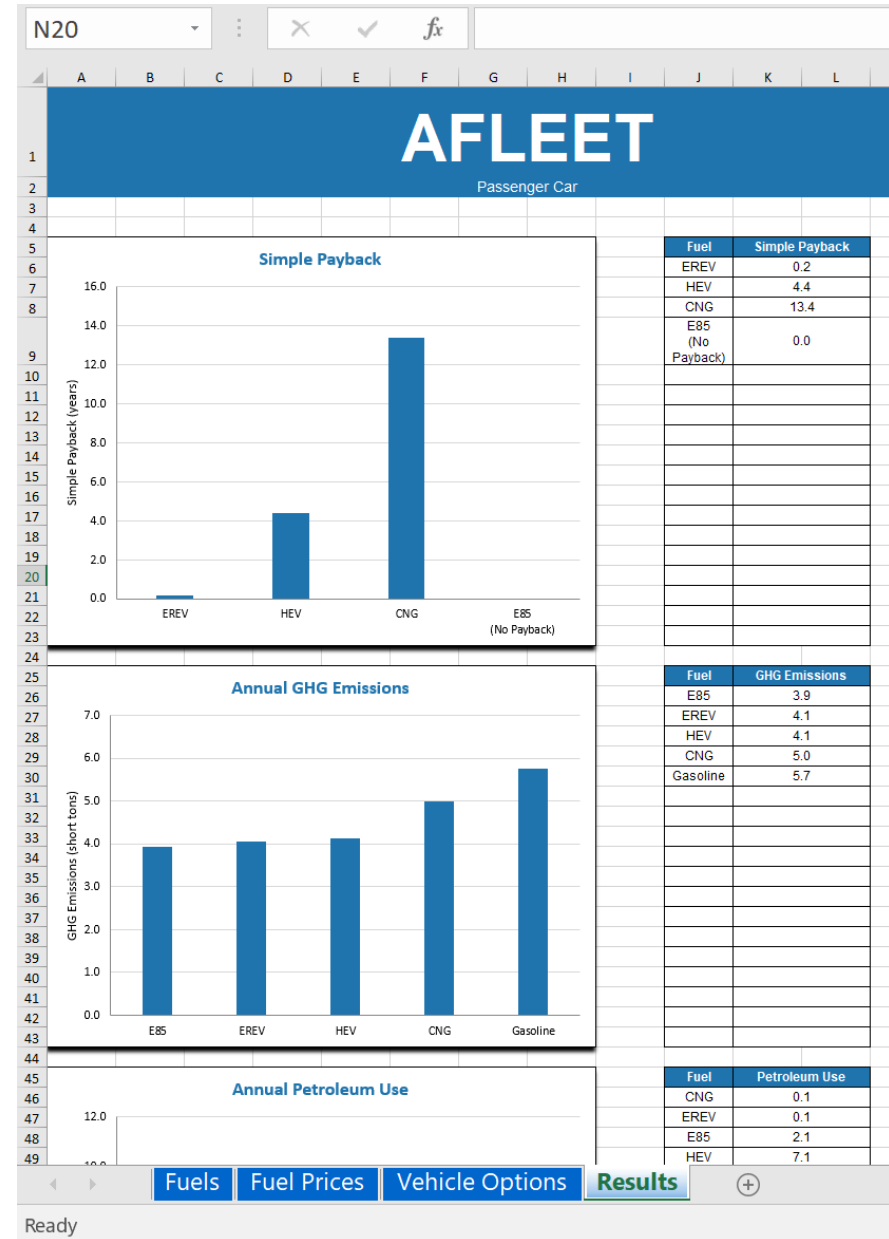
Fuels
Fuel Prices
Vehicle Options
Results

Select destination and press ENTER or choose Paste

AFLEET ONLINE TUTORIAL – RESULTS

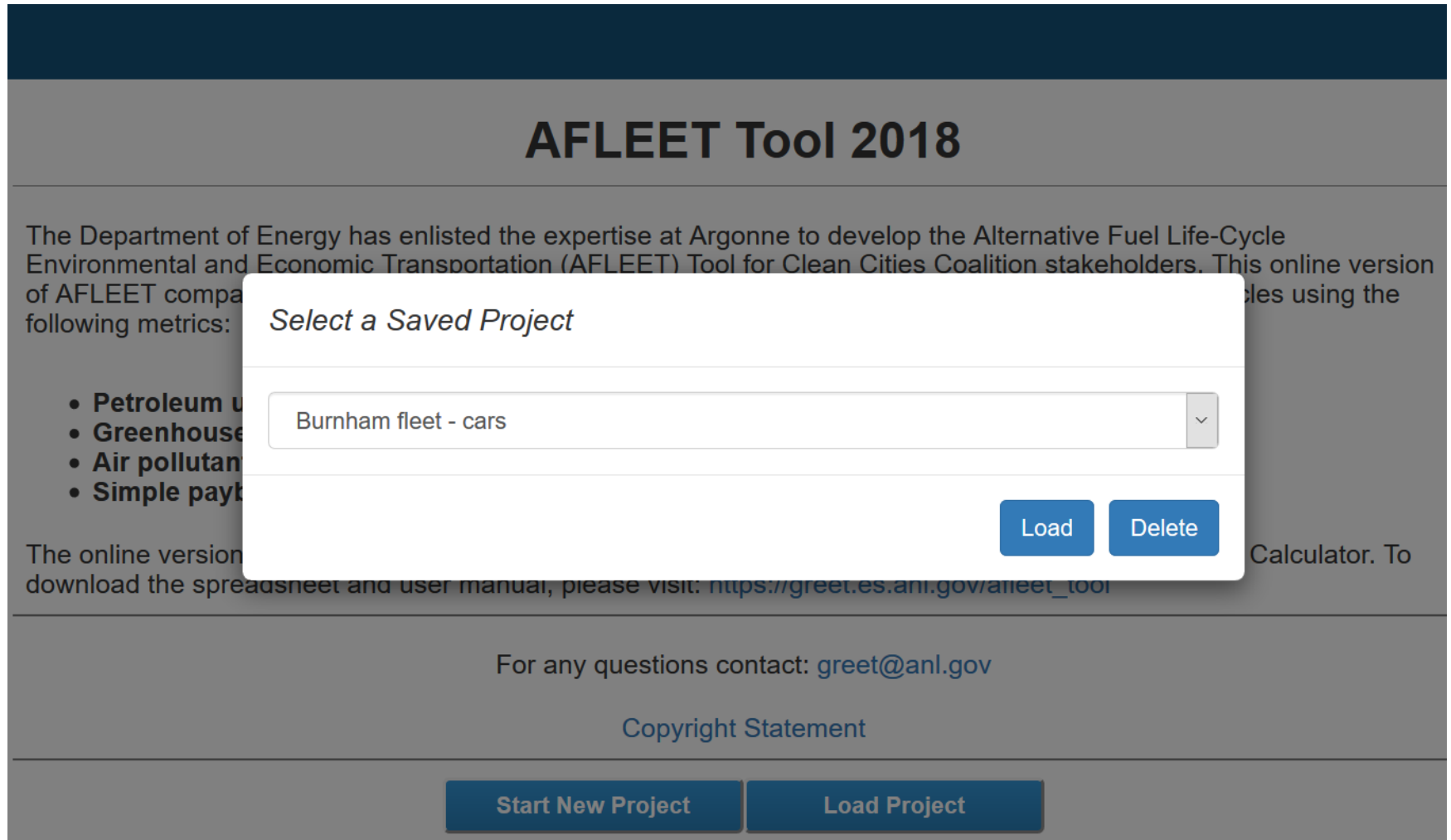
7th step: view exported results

AFLEET							
Passenger Car							
State	IL						
Annual Mileage	12,400						
Biodiesel Feedstock Source	Soy						
Renewable Diesel Feedstock Source	Soy						
Ethanol Feedstock Source	Corn						
CNG Feedstock Source	North American NG						
LNG Feedstock Source	North American NG						
Conventional NG Feedstock Source	66%						
NG LPG Feedstock Source	69%						
Source of Electricity	RFC						
Gaseous H ₂ Production Process	Refueling Station SMR (On-site)						
Diesel In-Use Multiplier	No						
Use Low NO _x Engines?	Yes						



AFLEET ONLINE TUTORIAL – LOAD PROJECT

- 8th step: load a saved project from home page



The screenshot shows the AFLEET Tool 2018 home page. A modal window titled "Select a Saved Project" is open in the center. The modal contains a text input field with the value "Burnham fleet - cars" and a dropdown arrow on the right. Below the input field are two blue buttons: "Load" and "Delete".

AFLEET Tool 2018

The Department of Energy has enlisted the expertise at Argonne to develop the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool for Clean Cities Coalition stakeholders. This online version of AFLEET compares different vehicle technologies and fuels using the following metrics:

- Petroleum use
- Greenhouse gas emissions
- Air pollutants
- Simple payback

The online version of the AFLEET Tool is available at https://greet.es.anl.gov/afleet_tool. To download the spreadsheet and user manual, please visit: https://greet.es.anl.gov/afleet_tool

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AFLEET ONLINE SUMMARY

- **Argonne's new user-friendly, web-based AFLEET Tool analyzes simple payback, petroleum use, GHGs and air pollutants**
 - Based on AFLEET 2018 Simple Payback Calculator
- **Replicates AFLEET 2018 spreadsheet's Simple Payback Calculator**
- **Save and load projects online**
- **Export results to a spreadsheet**

THANK YOU!!!

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