

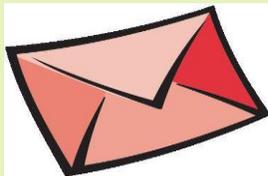
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U.S. Dept. of Energy Funding Opportunities



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April 2015 Newsletter Upcoming Events:

Maine Clean Communities Stakeholder Meeting, April 7, 2015, Portland, ME. Contact Shea Maritato for more information (smaritato@gpcog.org).

Ocean State Clean Cities Coalition Stakeholder Meeting, April 13, 2015, Providence, RI [Click here to register!](#) For more information, contact Wendy Lucht (wlucht@uri.edu).

SECOND Maine Clean Communities Stakeholder Meeting, April 15, 2015, Auburn, ME. Maine is doing it up big this month with TWO STAKEHOLDER MEETINGS! Contact Shea Maritato for more information (smaritato@gpcog.org)

ACT Expo, May 4-7, 2015, Dallas, TX. Register for the #1 clean fleet event. Early bird rates through January 16. [Click here to register!](#)

Funding Opportunities:



Electric Vehicle Charging Station (EVSE) Rebate offered!

This EVSE rebate program will enable the development of an EV charging network in the state that will be available to New Hampshire residents and businesses, as well as to those who visit our state for business or to take advantage of our many recreational and cultural opportunities.

The rebate program is designed to support development of EVSE at strategic locations to enable operation of EVs throughout New Hampshire and connect to charging corridors in neighboring states. Targeted areas of deployment include Interstate highways and other major transportation corridors, as well as key destinations such as tourist attractions, large retail centers and large employment centers.

Rebates will first be offered for installation of "DC fast chargers" on Interstate 93 south of Interstate 89. The maximum rebate for DC fast chargers is \$12,000. The rebate program will be available for "Level 2" charging equipment (up to \$5,000) at other strategic locations thereafter. Charging stations must be publicly accessible at all times. All rebates must be pre-approved and are subject to certain eligibility criteria. Qualifying proposals will be evaluated in the order in which they are received. Funding for the rebate program is through the New Hampshire Office of Energy and Planning using US Department of Energy funds, in partnership with NH DES and Granite State Clean Cities Coalition. A total of \$49,000 is available for fiscal years 2015 and 2016.

For program guidance and a pre-approval application form please visit NHDES' Drive Electric NH homepage or visit www.des.nh.gov and look under "What's New."

News of Interest:

Question of the Month: *What are the key terms and considerations I should remember when discussing emissions?*

Answer: When discussing emissions, it is important to use the appropriate terms, know the context, and present a complete picture. The U.S. Department of Energy (DOE) has a number of tools and resources available to understand and calculate the emissions benefits of alternative fuels and vehicles (see below). But first, let's get back to the basics.

Criteria Pollutants versus Non-Criteria Pollutants

Vehicles emit both criteria pollutants and non-criteria pollutants. In compliance with the Clean Air Act, the U.S. Environmental Protection Agency (EPA) classifies six common pollutants as ***criteria pollutants*** based on certain health and environmental standards:

- Carbon monoxide (CO)
- Oxides of nitrogen (NOx)
- Particulate matter (PM)
- Ozone
- Oxides of sulfur (SOx)
- Lead

For more information about criteria pollutant emissions, refer to the EPA Six Common Air Pollutants page

(<http://www.epa.gov/oaqps001/urbanair/>).

Greenhouse gases (GHGs), including carbon dioxide, are considered **non-criteria pollutants**. The following also fall into this category:

- Volatile organic compounds (VOCs)
- Total hydrocarbons (HCs)
- Methane
- Air toxics
- Other organic gases

For more information about GHG emissions, refer to the EPA Overview of GHGs page (<http://www.epa.gov/climatechange/ghgemissions/gases.html>).

Measuring Emissions

You can evaluate vehicle emissions through a number of lenses. Considering emissions in different contexts can present a more impactful picture, depending on the stakeholder.

- **Life cycle emissions:** Emissions generated through all stages of a fuel's life, including raw material extraction, processing, manufacturing, distribution, use, and disposal or recycling. Life cycle emissions are typically considered when evaluating "global pollutants," or pollutants that have an impact regardless of where they are emitted. For example, GHGs are usually measured on a life cycle basis.
- **Tailpipe emissions:** Emissions directly from the exhaust of the vehicle. Tailpipe emissions are considered when looking at "local pollutants," or pollutants that impact air quality directly where they are emitted. For example, criteria pollutants, such as PM, are typically measured as tailpipe emissions.
- **Evaporative emissions:** Emissions from the vehicle's fuel system and during the fueling process, not including the combustion of the fuel. Evaporative emissions are also considered when evaluating "local pollutants."

When quantifying or presenting emissions benefits for a particular project, make sure to ask yourself which type of information would have the most impact. For example, an air quality organization (e.g., your local American Lung Association chapter) would like to hear about tailpipe and evaporative emissions. A national company focused on their footprint and impact on climate change would want to hear about life cycle emissions.

Emissions Standards

EPA sets tailpipe and evaporative emissions standards for new vehicles.

- For information on federal **non-GHG emissions standards**, including CO, NO_x, PM, and organic gases,

visit the EPA's Emission Standards Reference Guide: <http://www.epa.gov/otaq/standards/>. EPA's Tier 3 Vehicle Emission and Fuel Standards Program page (<http://www.epa.gov/otaq/tier3.htm>) covers the regulations for light-duty, medium-duty, and some heavy-duty vehicles that will be phased in beginning in 2017.

- For information about federal **GHG emissions standards**, which are implemented in conjunction with the National Highway Traffic Safety Administration's fuel economy standards, visit EPA's Regulations & Standards page: <http://www.epa.gov/otaq/climate/regulations.htm>.

The California Air Resources Board (CARB) enforces vehicle emissions standards for California that are more stringent than federal EPA standards. Vehicles may be certified as compliant with federal standards, CARB standards, or both. For information on CARB's emissions standards, visit the Mobile Source Program Portal (<http://www.arb.ca.gov/msprog/msprog.htm>). Several other states have chosen to comply with certain CARB standards as well, so read up on the requirements in your state. See the AFDC Laws & Incentives website for more information (<http://www.afdc.energy.gov/laws>).

Other Considerations

It is important to take into account the "full package" when looking at alternative fuel vehicle (AFV) emissions; again, try to anticipate questions from the audience to tease out the most relevant information. For example, keep the following in mind:

- While a fuel may not offer large reductions in one pollutant, it may offer significant benefits in other pollutants.
- Emissions information should also be presented in the larger context of federal and state regulations.
- Be sure you are comparing "apples to apples" when looking at AFV and conventional vehicle emissions. For instance, look at which pollutants are covered, and whether tailpipe, life cycle, and/or evaporative emissions are being measured. Every study is different, so it can be very difficult to compare outcomes of one to outcomes of another.

Emissions Analysis Tools

With all of that in mind, the following tools can be used to calculate fleet emissions and plan for overall emission reductions:

- AFDC Petroleum Reduction Planning Tool (<http://www.afdc.energy.gov/prep/>)
- Argonne National Laboratory's (ANL) Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool (<https://greet.es.anl.gov/afleet>)

- ANL's Greenhouse Gases, Regulated Emissions, and Energy use in Transportation (GREET) Model (<https://greet.es.anl.gov/>)
- Compressed Natural Gas (CNG) Vehicle and Infrastructure Cash-Flow Evaluation (VICE) Model 2.0 (http://www.afdc.energy.gov/vice_model/)

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