

Melissa

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U.S. DEPARTMENT OF
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EERE Network News

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News and Events**President Obama Orders Federal Agencies to Trim Greenhouse Gases**

President Obama signed an executive order on October 5 that sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. The Executive Order requires federal agencies to set a greenhouse gas emissions reduction target for 2020 within 90 days. It also requires federal agencies to increase their energy efficiency, reduce the petroleum consumption of their fleets, conserve water, reduce waste, support sustainable communities, and leverage their federal purchasing power to promote environmentally-responsible products and technologies. The new Executive Order



The federal government's commitment to sustainability is demonstrated at Nellis Air Force Base, near Las Vegas, Nevada, where a 14-megawatt solar power facility forms a patchwork pattern on the landscape. [Enlarge this photo.](#)
Credit: Master Sgt. Robert Valenca, U.S. Air Force

makes reducing greenhouse gas emissions a priority for the federal government, which occupies nearly 500,000 buildings, operates more than 600,000 vehicles, employs more than 1.8 million civilians, and purchases more than \$500 billion per year in goods and services.

In his order, President Obama requires agencies to meet a number of energy, water, and waste reduction targets, including reducing their vehicle fleet petroleum use by 30% by 2020; beginning in 2020, designing all new federal buildings to achieve net-zero energy use by 2030; improving their water efficiency by 26% by 2020; minimizing their buildings' impacts on storm water runoff; recycling or diverting 50% of their waste by 2015; and meeting sustainability requirements in 95% of all applicable contracts. Within 180 days of the order, the federal government will also develop guidance for locating federal buildings in a manner consistent with sustainable development. Some recent examples of federal environmental stewardship include the planned construction of a 600-kilowatt wind turbine at a Veterans Affairs Medical Center in St. Cloud, Minnesota, and the planned installation of an 8-megawatt solar photovoltaic system at the Denver Federal Center in Lakewood, Colorado. See the [White House press release](#) and the Executive Order ([PDF 87 KB](#)). [Download Adobe Reader](#).

The Executive Order follows the president's proclamation of October as National Energy Awareness Month. The president called on the people of the United States to mark the month by making clean energy choices that can both rebuild our economy and make it more sustainable. Noting that the federal government is the largest consumer of energy in the United States, the proclamation noted that the Obama Administration is committed to lead by example in the use of clean energy and energy efficiency. The proclamation also notes that we face a turning point in our nation's energy policy, and that we can either allow climate change to wreak unnatural havoc, or we can create jobs deploying low-carbon technologies to prevent its worst effects. See the president's [proclamation](#).

20 Solar Homes Take Shape on the National Mall for the Solar Decathlon

The assembly of 20 solar homes on the National Mall in Washington, D.C., is rapidly approaching completion, as the 2009 Solar Decathlon prepares to open, free to the public, on October 9th. The Solar Decathlon is an international event in which DOE challenges university teams to design and build homes that run entirely on solar energy. The teams ship their partially constructed homes to the National Mall, assemble them, and then compete in ten contests. This year, the 20 teams came from universities in Arizona, California, Illinois, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota, Missouri, New York, Ohio, Pennsylvania, Texas, Virginia, and Wisconsin, as well as Puerto Rico, Canada, Germany, and Spain. Trucks rolled onto the National Mall just after midnight on the morning of October 1, and since then, the teams have been steadily working to assemble their solar homes. See the [DOE press release](#) and the [Solar Decathlon Web site](#).



Construction is underway at the Solar Decathlon, which opens to the public on October 9. [Enlarge this photo](#).

Credit: Richard King, DOE Solar Decathlon

This is the fourth running of the Solar Decathlon, and for the first time, the competition features a stand-alone electrical microgrid to which each team will have to connect their home. Starting on October 8, each home will be monitored for its performance in five areas relating to performance and livability: comfort (maintaining comfortable temperature and humidity in the home), hot water (producing a sufficient quantity at a high enough temperature), appliances (such as keeping refrigerated items at the right temperature), home entertainment (running a television, computer, lights, and other devices), and net metering. For the net metering competition, homes must use zero net energy over the course of a week, and teams receive a bonus for producing more energy than their home consumes. Other contests rate the teams for their communications with the public and for the architecture, engineering, and market viability of their homes. The overall winner will be announced on October 16. See the Solar Decathlon's [Contests and Scoring page](#).

DOE is the primary sponsor of the 2009 Solar Decathlon, which is also sponsored and managed by DOE's National Renewable Energy Laboratory. Homes will open to the public beginning on October 9, and will be open for tours weekdays from 11 a.m. to 3 p.m., and from 10 a.m. to 5 p.m. on weekends, through October 18 (with the exception of October 14). Not able to come to D.C.? You can keep up with the Solar Decathlon online through [daily journals](#) posted by DOE's Richard King, the Solar Decathlon director; [photos of the day](#) from the event; [YouTube videos](#); [time-lapse photos](#) from three cameras at the event; [blogs](#) from the teams; the [Solar Decathlon Facebook page](#) (become a fan!); and even a [Twitter feed](#)!

DOE Delivers \$72 Million to Seven States and Territories for Clean Energy

DOE delivered more than \$72 million in American Recovery and Reinvestment Act funds on October 1 to five states and two territories to support energy efficiency and conservation activities. Under DOE's Energy Efficiency and Conservation Block Grant (EECBG) program, the recipients will implement programs that lower energy use, reduce carbon pollution, and create green jobs locally. The seven entities receiving funding are the states of Idaho, Nevada, New Jersey, Oregon, and South Dakota and the territories of Puerto Rico and the U.S. Virgin Islands.

The awards to the state and territorial energy offices will be used to support their energy efficiency priorities, along with funding local conservation projects in smaller cities and counties. At least 60% of each award will be passed through to local cities and counties not eligible for direct EECBG awards from DOE. The EECBG Program was funded for the first time by the Recovery Act and provides formula grants to states, cities, counties, territories, and federally-recognized Indian tribes nationwide to implement energy efficiency projects locally.

Projects eligible for support include the development of an energy efficiency and conservation strategy, energy efficiency audits and retrofits, transportation programs, the creation of financial incentive programs for energy efficiency improvements, the development and implementation of advanced building codes and inspections, and the installation of renewable energy technologies on municipal buildings. For example, South Dakota will use a portion of its nearly \$10 million in grants to provide competitive zero-interest loans to public and private entities benefiting the community. And the U.S. Virgin Islands will direct some of its nearly \$10 million in grants to purchase and install a renewable landfill-gas-to-energy treatment system. See the [DOE press release](#) and the [EECBG Program Web site](#).

DOE and Chinese Ministry Co-Host Their First Electric Vehicle Forum

The first U.S.-China Electric Vehicle Forum, which brought together more than 140

U.S. and Chinese officials to discuss progress in the electric vehicle industry and opportunities, concluded October 1 in Beijing, China. David Sandalow, DOE's assistant secretary for policy and international affairs, joined with Minister Wan Gang of the Chinese Ministry of Science and Technology to co-host the event, which highlighted the rapidly growing electric vehicle industry in both countries. The countries are the two largest auto markets and energy consumers, and together emit more than 40% of the world's greenhouse gases.

"The U.S. and China share a strong common interest in putting millions of electric vehicles on the road soon, which will lessen our dependence on foreign oil and help address the global climate challenge," said Sandalow. "Working together, we can accomplish more than acting alone."

The Electric Vehicle Forum provided a venue for experts to exchange recent developments and identify promising opportunities for collaboration on technical advances and policy issues. The forum builds upon growing U.S.-China collaboration on clean energy technologies. In July, the United States and China announced plans to develop a U.S.-China Clean Energy Research Center (CERC) that will facilitate joint research and development on clean energy by bringing together teams of scientists and engineers and providing an information clearing house to help researchers in both countries. The CERC has identified clean vehicles as a priority for joint projects and is expected to help advance cooperative projects identified during the Electric Vehicle Forum. See the [DOE press release](#).

Obama Administration Invests \$300 Million in a Green Federal Fleet

The Obama Administration has met a goal to invest \$300 million from the American Recovery and Reinvestment Act in more fuel-efficient vehicles for the federal fleet. The U.S. General Services Administration (GSA) announced on October 1 that it met the goal of purchasing the new vehicles in fiscal year 2009, which came to a close on September 30. The GSA started by ordering 3,100 fuel-efficient hybrid vehicles on April 1 for \$77 million, then ordered an additional 14,105 fuel-efficient vehicles on June 1, including a variety of alternative-fuel and hybrid vehicles, for \$210 million. In its final wave of purchasing, the GSA bought five compressed natural gas buses, 35 hybrid electric buses, and one hybrid electric car for \$12.4 million, bringing the total to \$300 million. Of the 17,246 vehicles, ordered from six manufacturers, most will be delivered by the end of October. Only the newly ordered buses will take longer, arriving in the third quarter of 2010.

GSA will use the new vehicles to replace older, less-efficient models in the federal fleet. Each new replacement vehicle will have a higher miles-per-gallon rating than the one it replaces. By increasing fuel efficiency, the Recovery Act vehicles will save an estimated 16.7 million gallons of fuel over the next seven years, preventing the emission of 334 million pounds of greenhouse gases and saving taxpayers at least \$40 million in fuel costs. As the older vehicles being replaced are sold, the money from the sales will be used to make additional investments toward greening the federal fleet. See the [GSA press release](#).

EPA Aims to Limit Greenhouse Gas Regulations to Large Facilities

The U.S. Environmental Protection Agency (EPA) is proposing a rule that would limit future greenhouse gas (GHG) regulations under the Clean Air Act to large industrial facilities emitting the equivalent of 25,000 tons or more of carbon dioxide annually. The rule will also require a permit when major emitters of GHGs make modifications that increase their GHG emissions. That permit requirement will be triggered with emission increases equivalent to somewhere between 10,000 and 25,000 tons of

carbon dioxide. The EPA isn't sure where exactly to set this "significance level" for modifications, and it is seeking comments on the best value to use. The proposed rule will limit GHG regulations to facilities such as power plants, refineries, and factories, which produce nearly 70% of U.S. GHGs.

The EPA is currently proposing to regulate GHGs from cars and light trucks under the Clean Air Act, as part of joint rule on fuel economy with the National Highway Traffic Safety Administration. The EPA intends to finalize that regulation in the spring of 2010, and once that happens, GHGs will be treated as pollutants under the Clean Air Act. That would automatically trigger regulations for relatively small GHG emitters, a situation that the EPA is intending to avoid. Under the proposed rule, small and medium-sized businesses such as farms and restaurants, as well as many other facilities, would not be subject to GHG regulations. As noted in the proposed EPA rule, allowing GHG regulations to apply to relatively small emitters would cause state permitting authorities to be "paralyzed by permit application in numbers that are orders of magnitude greater than their current administrative resources could accommodate."

The proposed "tailoring" rule addresses six greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. With the proposed industrial emissions thresholds, EPA estimates that 14,000 large sources would need to obtain operating permits that include GHG emissions because they exceed the 25,000 ton threshold. Most of these sources are already subject to clean air permitting requirements because they emit other pollutants. In addition, 400 new sources or modified sources would be subject to review each year for GHG emissions. Under the Clean Air Act, the EPA will ensure that these new or modified sources are using the best available control technologies and energy efficiency systems to minimize GHG emissions. The EPA plans to develop sector- and source-specific guidance that will help permitting authorities and industrial facilities better understand GHG emissions for each type of facility, methods for estimating those emissions, available GHG measurement and monitoring techniques, and strategies to minimize GHG emissions. The EPA also plans to revisit its thresholds after five years to see if they can be lowered.

Under the proposed rule, the EPA estimates that about 3,000 GHG emitters will be newly subject to Clean Air Act permit requirements, and most of those will be municipal landfills. Landfills account for about 23% of human-caused methane emissions in the United States, and the new regulations are likely to encourage the capture of landfill methane emissions and their use as a renewable energy source. The proposed rule, announced by the EPA on September 30, will be open for public comment for 60 days once it has been published in the Federal Register. As of October 6, it had not yet been published. See the [EPA press release](#), a [fact sheet](#) on the proposed rule, and the full proposal ([PDF 533 KB](#)). [Download Adobe Reader](#).

Energy Connections

EIA Forecasts Lower Heating Bills this Winter

The average U.S. household will spend \$960 for space heating during this winter's heating season, marking an 8% decrease from last year, according to DOE's Energy Information Administration (EIA). The EIA's "Short-Term Energy Outlook," released on October 6, attributes most of the savings to lower fuel prices, particularly for natural gas, which is experiencing a slump in prices due to a growing supply that

currently exceeds the demand. The EIA expects natural gas inventories to reach a record high of more than 3.8 trillion cubic feet by the end of October. Propane is produced during natural gas processing, so propane inventories are also higher than normal. As a result, households heated with these fuels will achieve the greatest savings this winter, with natural gas users seeing a 12% decline in winter heating bills and propane users seeing a 14% decline. Those using heating oil or electricity are projected to experience more modest declines of about 2% from last year. The EIA defines the winter heating season as running from October 1 to March 31 of the following year. See the [EIA press release](#) and the "[Short-Term Energy Outlook](#)."

The EIA has also increased its projected drop in energy-related carbon dioxide emissions for 2009. Back in August, when the EIA started projecting annual energy-related carbon dioxide emissions, it forecast a 5% drop in 2009, while the current "Short-Term Energy Outlook" forecasts a 5.9% drop for the year. A number of factors contributed to the projected decline, including an increased use of renewable energy, the substitution of natural gas for coal in electric power plants, a decrease in industrial demand for coal, less natural gas use in industry and buildings, and a drop in demand for jet fuel, diesel fuel, and heating oil. Coal experienced the biggest drop in demand, at 10.1%, accounting for 63% of the drop in energy-related carbon dioxide emissions. U.S. greenhouse gas emissions are dominated by energy-related carbon dioxide emissions, so the decline in the latter would generally suggest an overall lowering of U.S. greenhouse gas emissions. See the [EIA press release](#) and the EIA supplemental report, "[Understanding the Decline in CO2 Emissions in 2009](#)."

This newsletter is funded by DOE's [Office of Energy Efficiency and Renewable Energy \(EERE\)](#) and is also available on the [EERE Web site](#). If you have questions or comments about this newsletter, please [contact the editor](#), Kevin Eber.

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