

# Feds aim to cut greenhouse gas emissions by 28 percent

August 28 2011, By Cory Nealon

---

NASA opened an energy efficient office building at Langley Research Center in Hampton, Va. The Navy is running boats on biofuel in Norfolk.

But those efforts only go so far as NASA, the Department of Defense - and every other federal agency under White House orders to curb [greenhouse gas](#) emissions by 28 percent by 2020 - struggle to meet the goal.

"2020 is not that far away," said R. Roy Whitney, chief information officer and chief technology officer at Jefferson Lab, a nuclear physics lab in Newport News, Va., run by the Energy Department.

President [Barack Obama](#) has been unable to push comprehensive [climate change](#) and [energy legislation](#) through Congress. As a result, he is taking a piecemeal approach, often by issuing executive orders or relying upon established but loosely enforced laws.

Examples include tougher standards the U.S. [Environmental Protection Agency](#) issued last month for coal-fired power plants and a planned increase in [fuel economy standards](#) for automobiles.

Obama issued the greenhouse gas emissions order in October 2009. According to a White House statement, the federal government is the largest energy consumer in the United States - it spent more than \$24.5 billion on electricity and fuel in 2008.

Achieving the greenhouse gas goal would save up to \$11 billion in energy costs through 2020, the equivalent of taking 17 million cars off the road for a year, the statement said.

"Our goal is to lower costs, reduce pollution and shift Federal energy expenses away from oil and towards local, clean energy," Obama said in the statement.

The order is poised to have a significant impact on Hampton Roads, a region sometimes known as "Pentagon South" due its high concentration of military installations and related industry.

## NEW LANGLEY BUILDING

In June, NASA opened a 70,000-square-foot office building at Langley that earned the highest designation possible from the U.S. Green Building Council's Leadership in Energy and Environmental Design rating system. The Navy, meanwhile, is using algae-based [biofuel](#) to power its patrol boats; it plans to incrementally add larger boats - frigates, cruisers, destroyers - culminating in a "green" carrier strike group in 2016.

Such an option isn't available to Jefferson Lab, officially the Thomas Jefferson National Accelerator Facility. Home to power-sucking lasers that are brighter than the sun and a near mile-long atom-smashing machine, the lab consumes the same electricity - 250 megawatts a day - as 5,000 houses combined.

The Energy Department buys electricity from Dominion Virginia Power, whose power-generation portfolio consists largely of coal, nuclear and natural gas power plants. Where the power comes from matters, Whitney said, because greenhouse gas emissions from electricity use are estimated according to regional power supplies.

Hampton Roads is part of an EPA-defined region that runs from Maryland to Georgia, over to eastern Texas and up to Illinois. The region relies heavily on coal and natural gas, which contribute significant greenhouse gas emissions. It also has dozens of nuclear reactors that produce no emissions.

Cutting the lab's emissions by 28 percent - based on 2008 energy use - will be especially difficult considering it is undergoing an expansion that will double its power usage by 2015, Whitney said. The lab may partner with the region's other federal agencies to lobby for more renewable and nuclear energy in Virginia and beyond.

"You've got a divergent group of federal agencies here," said Craig Quigley, a former Navy admiral who heads the Hampton Roads Military and Federal Facilities Alliance. "But energy is a common denominator among all of them."

## ACHIEVABLE GOAL

Dominion, the state's dominant utility company, is converting three small coal-fired power plants into biomass power plants. Biomass, which includes organic materials such as wood, corn and garbage, is exempt from [greenhouse gas emissions](#) reporting.

Dominion also plans to build a transmission line from Virginia Beach to connect with future offshore wind turbines. A state-sponsored report said offshore wind turbines could produce 3,200 megawatts, but boosters say it'll likely be at least 10 years before that happens.

In 2009, about 6 percent of the state's electricity came from renewable sources - the same percentage as Maryland and North Carolina. But unlike the neighboring states, Virginia does not mandate that a certain amount of its energy come from renewable sources. Environmental

groups say the mandate will spur quicker investment.

Being that Obama's order is just that - not a law established by Congress - it could be undone as early as 2013 if a new president is elected.

Whitney and Quigley are aware of that, but they said it's not altering their plans.

"Energy is not getting any cheaper," Quigley said. "And it's not getting any more plentiful."

Benjamin Cuker, an environmental science professor at Hampton University, said while Obama's order is lofty, it is achievable.

Government must retrofit old buildings with energy-saving windows, light bulbs and other devices, construct new energy efficient buildings, invest in solar and geothermal power, and promote telecommuting and teleconferencing, he said.

"I think it's completely reachable," he said. "It's a matter of getting over the momentum of past practices."

(c)2011 the Daily Press (Newport News, Va.)

Distributed by MCT Information Services

Citation: Feds aim to cut greenhouse gas emissions by 28 percent (2011, August 28) retrieved 13 May 2024 from <https://phys.org/news/2011-08-feds-aim-greenhouse-gas-emissions.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.