

# Fossil Fuel Elimination Rule

## Issue Brief

**Section 433 of the Energy Independence and Security Act of 2007 mandates elimination of all fossil fuel-generated energy use in federal buildings by the year 2030. The mandate covers new buildings and major renovations of at least \$2,500,000 (in 2007 dollars).** This provision was originally planned as a goal, but evolved into a mandate for the federal government. The Federal Register published a Draft Rule as issued by the Department of Energy (DOE) in October 2010. A final rule is on hold as a result of challenges observed by federal agencies when assessing how to comply with the requirement beyond the first few years.

**Request** Congress should substantially modify or eliminate EISA section 433

### What Are the Potential Impacts of Implementing this Mandate?

- Potential reduction of large-scale “deep” retrofits that could limit efficiency opportunities and renewable installations in federal buildings.
- Limits and ultimately restricts the adoption of natural gas combined heat and power and waste heat recovery systems in federal facilities.
- The statute also creates a bias in federal policy at odds with the important role that domestically abundant, clean and affordable natural gas can serve in meeting the energy needs of not only federal buildings, but those of homes and businesses as well.

### Rationale for Request

- **The mandate is duplicative:** Currently, federal agencies are under mandates to reduce energy use, increase use of renewable energy and attain sustainability as required by the *Energy Policy Act of 2005*, the *Energy Independence and Security Act of 2007*, and reinforced through Executive Order 13514.
- **The mandate increases costs of compliance:** Energy managers for federal agencies have separate reporting structures separate efficiency and energy use requirements -- report creates a mandate that is duplicative of pre-existing requirements seems like wasted effort.
- **The Federal government cannot find a long term path to compliance:** The mandate seeks to reduce fossil fuel use by 65% by 2020 with total elimination by 2030 – a target viewed as generally unattainable. The areas in which federal facilities operate are the same as other U.S. facilities and therefore have access to the same fuel mix and array of technologies. Currently, there is no recognized path to a 100% renewable grid – by 2030 or over a longer timeframe.
- **The mandate reduces energy efficiency upgrades in federal Buildings:** The mandate is applicable to major retrofits as well as new buildings. Currently, the Administration is working hard to do “deep retrofits” of federal buildings – that is, reducing energy use significantly. This would be a major retrofit and would trigger the fossil fuel elimination rule. Agencies, many of which do not have the ability to comply with the fossil fuel generated energy reduction mandate, and some of which are using natural gas on site to improve efficiencies, will not undertake the retrofits or renovations. This will end up costing the federal government, and hence the taxpayer, more for its energy bills.

- ***The mandate restricts adoption of high-efficiency technologies such as combined heat and power (CHP):*** Efficient technologies such as combined heat and power, which are often fueled with natural gas, would not be possible in accordance with the reduction of fossil fuel-generated energy. DOE, in its proposed rule, acknowledges the challenge of simultaneously using energy efficient CHP and waste heat recovery technology while complying with the mandated reduction in fossil fuel-generated energy. DOE's stated intent with the rule is to ensure the rule does not penalize or discourage the use of on-site CHP. Natural gas CHP would not be a viable compliance solution.
- ***The mandate is far more aggressive than any other effort to reduce energy use, fossil fuel use or reduce carbon emissions:*** Even during consideration of a federal legislative framework for reducing carbon emissions in 2008-2009, the general goal was understood to be the an 80% *reduction* of greenhouse gas emissions by 2050 -- which many agreed was aggressive. Federal facilities operate with the same grid infrastructure as other buildings.
- ***The mandate runs counter to the Presidential position on natural gas as part of an "all of the above" energy strategy:*** President Obama has recently stressed the need for development of "every available source" of American energy in the most recent state of the union address. This mandate would halt the pursuit of increased use of natural gas to support the national priorities of helping to improve our economy, reduce environmental impacts and secure our nation's energy future.

### Examples of Projects that would be Hindered by the Rule

- ***Food and Drug Administration, White Oaks Campus, Silver Spring, MD:*** General Services Administration teamed up with Honeywell to construct a combined heat and power plant and solar array using Super Energy Savings Performance Contracts (ESPCs). The build out is staged to match a multi-year campus development. The project is currently expanding to 20 MW of cogeneration, including a 5.6 MW dual fuel engine and three 4.5 MW natural gas combustion turbines, two 1130-ton absorption chillers, two 1130-ton and three 1980-ton electric chillers and three 10 MMBtu/hr hot water boilers. The ESPCs also include integrated plant controls, building automation systems, an 1,800 square feet fixed solar array and a 300 square feet single-axis tracking solar array. *The \$71 million installed system cost is estimated to save \$5.8 million in annual energy cost savings and \$6.5 million in annual reduced O&M costs when all of the supported campus buildings are complete.*
- ***Elmendorf Air Force Base:*** Ameresco installed decentralized boiler plants (boilers, water treatment, required auxiliaries, and building structure as necessary) to serve 130 facilities. In order to provide freeze protection against boiler failure, each building has at least two steam boilers, each sized for 60% of the peak building load. Ameresco also coordinated with ENSTAR Natural Gas to construct 8 miles of new natural gas lines to supply the distributed boiler systems throughout the base. The company upgraded two substations so Elmendorf could receive electrical service from the local electric utility. *This project is cited as the most successful of the Air Force and delivered 500,000 annual MMBTUs above the guarantee of 1,000,000 MMBTUs and provided an initial investment from Ameresco of \$48 Million.*
- ***U.S. Marine Corps Air Ground Combat Center, Twentynine Palms, CA:*** Working with Johnson Controls, the facility used Energy Savings Performance Contracting to install a dual-fueled co-gen plant, with the primary fuel being natural gas and included energy efficiency upgrades, new efficient lighting, and an on-site 1.2 megawatt photovoltaic solar array. The 7.5 megawatt co-gen plant that is able to supply electricity when power is not available from the utility. *The energy savings will cumulate to \$138 million over the 20-year performance contract term.*