REDUCING FEDERAL ENERGY DOLLARS (R-FED) ACT OF 2011

SECTION-BY-SECTION

SECTION 1 - SHORT TITLE

This section entitles the legislation as the "***Reducing Federal Energy Dollars (R-FED) Act of 2011***."

SECTION 2 – DEFINTIONS

This section defines "Executive Agency" and "Secretary".

SECTION 3 – TRANSPARENCY AND ACCOUNTABILITY OF ENERGY USE BY FEDERAL FACILITIES

This section requires an annual government-wide report on the energy and water use associated with buildings including savings attributable to regulations or design or technological features, case studies from commissioning and energy and water evaluations, and whether or not high-performance building requirements have been achieved. This includes reports from required energy and water evaluations and commissioning in existing reporting requirements to encourage identification and sharing of best practices. The report is to be published on a publicly available website.

SECTION 4 – MODERNIZING FEDERAL BUILDING ENERGY EFFICIENCY PERFORMANCE STANDARDS

This section updates the edition of the baseline standard used to set federal building energy efficiency standards after a reasonable time for analysis rather than relying on a positive determination from the Department of Energy. The Department of Energy is currently authorized to issue updated federal building energy efficiency performance standards when the underlying standards are updated. However, such revisions have not taken place. This has resulted in current federal buildings being designed using out-of-date standards which add unnecessary costs to the design. This reduces costs due to the use of multiple standard versions in the design of buildings and then in demonstration of compliance.

SECTION 5 – SURVEYING RENEWABLE ENERGY POTENTIAL OF FEDERAL FACILITIES

This section would mandate a survey of federal facilities to identify potential locations for renewable energy projects. For example, the survey would determine a list of available rooftops of federal buildings that could become potential sites for solar panels.

SECTION 6 – SMART METERING BY FEDERAL FACILITIES

Current law only requires buildings to be metered "to the maximum extent practicable". The Department of Energy has said additional clarity needs to be provided and that metering *specific systems* – such as a building's air conditioner– should be encouraged. Metering tells you how much energy is being used, similar to the one most homes have and that are checked by power companies. "Smart meters" are usually digital and able to connect to computer systems that allow you to track the data in real time.

This section would provide clearer and more solid requirements for federal metering and require for annual updates in metering plans that are required by current law. Specifically this legislation would require a minimum of whole building smart meters for all federal buildings, owned or leased, that are 50,000 square feet or greater, and smart "sub-meters" for subsystems that use 30 percent or more of a building's energy. To the extent possible, data should be provided daily and provide hourly consumption of electricity.

SECTION 7 – BETTER MANAGING COMPUTER ENERGY USE AT FEDERAL AGENCIES

President Obama's Fiscal Year 2011 budget outlined how the Department of Veterans Affairs is saving a significant amount of money by operating their computers more efficiently. Using new computers that use less energy, and software that automates when a computer is turned on and off, the agency plans to save around **$32 million over the next 5 years**. This section would require other federal agencies to adopt steps similar to that of the Department of Veteran Affairs' successful example.

SECTION 8 – BROADENING DEFINITION OF RENEWABLE ENERGY TO INCLUDE THERMAL

Section 203 of EPAct 2005 limits "renewable energy" to "electric energy" generated from a renewable source. This section expands the definition of EPAct 2005 § 203 to include thermal energy in Federal purchase requirements. This will allow for thermal energy to be counted as renewable for the purposes of federal energy requirements, as well as be consistent with the "renewable energy" definition in Executive Order 13423. Renewable thermal energy is often more cost effective than electric energy due largely to its greater market maturity.

SECTION 9 – EXPANDING THE USE OF ENERGY SAVINGS PERFORMANCE CONTRACTS

This section does two things. First it provides authorizing language to allow ESPC's to finance the installation of new generation capacity at existing federal dams which do not currently have hydroelectric generation facilities. While current law clearly allows ESPCs to be used at existing federal hydroelectric facilities, it does not specify whether ESPCs can be used to install new generation capacity at existing federal dams which do not currently have hydroelectric generation facilities.

Secondly, this section provides authority to permit the federal government to leverage the ESPC financing structure for non-building applications. The ESPC statute does not currently permit ESPCs

for other than existing federally owned buildings and facilities. There are significant amounts of energy expended in mobility applications that could be reduced if third party financing were available to fund non-building activities. Three fourths of fuel consumed by DOD goes to ships, planes, and tanks. There are potential opportunities to reduce energy use across all those platforms.

It is estimated that $10 billion will have to be invested by the federal government to reach the 2015 goal of a 30% energy intensity reduction by federal agencies (compared to a 2003 baseline). It is estimated that $3 billion of that total will have to come from ESPCs. Assuming a contract will have to be in placed by the end of 2014 to be reflected in 2015. Thus around $1 billion in ESPCs will be needed each year. The current annual ESPC value in the federal government is approximately $600 million.

SECTION 10 – MODERNIZING OUTDATED, INEFFICIENT FEDERAL BUILDING DESIGNS

This section would authorize GSA to use funds from the Federal Building Fund Capital Account to update designs to current standards. Considerable time may pass between the appropriation of funds for the design of a project and an appropriation for construction. In the intervening time, applicable standards may have changed, but no additional design funds are available to update the original design to current standards.

SECTION 11 – ONGOING COMMISSIONING OF FEDERAL FACILITIES

Ongoing commissioning "is the process of ensuring that all the subsystems for heating, air conditioning, Plumbing, Electrical, Fire/Life safety, and Building Security are operating as intended by the building owner and as designed by the building architects and engineers." Under current law, Agencies shall implement ongoing commissioning for all real property over $10 million in value or greater than 50,000 square feet or energy intensity great than $2 a square foot, based on guidance provided by the Federal Energy Management Program (FEMP). The problem is that agencies are not required to pursue continuous commissioning for the recommended facilities.

This section would mandate continuous commissioning for all real property over $10M in value or greater than 50,000 square feet or energy intensity great than $2 a square foot. Ongoing commissioning of federal facilities will ensure optimum efficiency for facilities. It will also ensure that the federal government gets the best rate of return from the buildings we may later want to dispose of. It is estimated by Texas A&M researchers that as much as 20% of the energy used in an average commercial building is waste associated with poorly commissioned systems.[1]

[1] http://esl.eslwin.tamu.edu/continuous-commissioning-.html

SECTION 12 – GAO AUDIT OF FEDERAL ENERGY MANAGEMENT EFFORTS

This section requires a GAO audit and report of the progress of federal energy management efforts, including cost savings associated with consumption and intensity reduction goals. It also asks GAO to recommend ways to streamline federal energy management mandates contained in statute and Presidential Executive Orders.