The Energy Savings and Industrial Competitiveness Act of 2011 (Shaheen-Portman)

Comprehensive Summary

The Energy Savings and Industrial Competitiveness (ESIC) Act of 2011 is a national strategy to increase the use of energy efficiency technologies in the residential, commercial, and industrial sectors of our economy, while also fostering job creation.

This bipartisan bill uses a variety of low-cost tools to reduce barriers for private sector energy users and drive adoption of off-the-shelf efficiency technologies that will save businesses and consumers money, make America more energy independent, and reduce emissions. Efficiency technologies are commercially available today, can be widely deployed in every state in the nation, and pay for themselves through energy savings relatively quickly.

The Shaheen-Portman bill will help speed the transition to a more energy efficient economy, increasing both our economic competitiveness and our energy security for the coming decades, while stimulating the economy and encouraging private sector job creation.

Why is the legislation in the national interest?

- Reliable and affordable energy is a key component of a vibrant economy.
- Despite an intense focus on the development and deployment of advanced energy technologies, energy efficiency remains -- and likely will remain for the foreseeable future -- the cheapest and fastest approach we have to improve our nation's energy infrastructure and our economy's energy independence.
- U.S. commercial and residential buildings combined consume 40 percent of all energy used, the U.S. industrial sector consumes more energy than any other sector of our economy, and the federal government is the largest single energy consumer in the country. All three offer opportunities for energy savings at relatively low cost.
- The deployment of energy efficiency technologies is therefore critical to meeting the energy and environmental objectives of the U. S., as well as driving economic growth across all regions of the country.

Major provisions of the legislation and their energy savings

BUILDINGS

The U.S. buildings sector consumes 72% of electricity, 55% of natural gas and 40% of U.S. primary energy. Investments in building efficiency are among the most cost-effective, energy-saving measures we can make.

- Building Energy Codes
    - Strengthens national model building codes for new homes and commercial buildings by working with independent code-setting organizations to set efficiency targets that build toward a goal of achieving net-zero-energy buildings by 2030.
    - Adoption and enforcement is reserved for the states, but the Department of Energy (DOE) is empowered to offer technical assistance.
    - Authorizes funding to incentivize and assist states to meet the model codes.

> ➢ SAVINGS - If fully adopted by states, this provision could save enough energy to equal the total energy used by 73 million typical American households and provide $90 billion annually in energy savings to the economy by 2035. (Source: the American Council for an Energy-Efficient Economy (ACEEE))

- Appliance Standards
    - Provides standards agreed to by manufacturers and efficiency advocates for outdoor lighting, residential heating ventilation and air conditioning (HVAC), residential appliances (refrigerators, washers, dryers, dishwashers, etc), and other products.

> ➢ SAVINGS - Saves enough energy annually to meet the total energy needs of about 4.6 million American households once fully implemented by 2030. Net consumer savings estimated at more than $43 billion annually by 2030. (Source: ACEEE)

- Worker Training and Capacity Building
    - Establishes a DOE program for university-based Building Training and Assessment Centers to provide worker training in energy-efficient commercial building design and operation, modeled after the existing Industrial Assessment Centers (IACs).
    - Based on *ACELA* (S.1462 in 111th) Sec. 243.

BUILDING EFFICIENCY FINANCE

- Rural Energy Savings Program
    - Helps establish a loan program for customers of rural electric co-ops to pay for energy-efficiency improvement projects to their homes or small businesses.
    - Directs the Rural Utilities Service (RUS) to make zero-interest loans to Rural Electric Cooperatives. In turn, the co-ops would offer low-interest, micro loans for energy-efficiency upgrades to their rural small business and residential customers. Customers would repay the loans over 10 years through their electric bills, at an interest rate of not more than three percent.

- Authorizes sufficient federal funding to leverage $2 billion in loans to electric co-ops for building efficiency renovations.
- Originally proposed as part of S. 3102 in the 111th Congress by Sen. Merkley, Lugar, Shaheen, Graham, Bennet, and Johnson.

> ➢ SAVINGS – The NH Rural Electric Cooperative has been running a similar program for 10 years - SmartSTART. On average, they have found that participants have cut their electricity use by 1/3 through efficiency improvements. (Source: NH Electric Co-op)

- Energy Efficiency Upgrades for Existing Buildings
  - Expands the DOE Loan Guarantee Program to include commercial, industrial and MUSH (municipal, university, schools and hospitals) building efficiency upgrades.
  - Unlocks one of the key barriers to making efficiency upgrades to existing buildings by making access to capital easier through the DOE loan guarantee program.
  - Originally proposed as part of S. 3780 in the 111th Congress – The Recovery Through Building Renovation Act by Sens. Shaheen and Landrieu.

> ➢ SAVINGS - A 2009 McKinsey & Company study found that an investment of $73 billion by private entities in making existing commercial buildings more energy efficient would provide present-value savings of $104 billion and save $11 billion annually by 2020.

INDUSTRY

The U.S. industrial sector consumes 30 percent of all energy used by our economy. This is more energy used than by any other sector and offers immense opportunity to improve efficiencies. By installing more efficient equipment and adopting efficient processes, in areas like power factor and load management, manufacturers can achieve significant energy savings. These savings allow them to reduce costs on consumers and create jobs.

- Manufacturing Revolving Loan Funds
  - Works with states and lenders to establish revolving loan programs for manufacturers to invest in more efficient processes and equipment that will allow them to be more productive and less energy dependent.
  - Authorizes the DOE to competitively award grants to community lenders, private financial institutions, and state partnerships to establish the loan funds.
  - Based on ACELA Sec 201.
- Manufacturing Partnerships with DOE
  - Establishes industry-led partnerships through the existing Industrial Partnership Program (ITP) to develop industry-specific (ex. glass, steel, cement, forest and paper, chemicals, aluminum, etc.) roadmaps to identify technologies and practices necessary to reduce energy intensity.

    - Stimulates, through competitive grants to industry and small businesses, the development, deployment and commercialization of innovative energy efficient technologies and processes.
    - Establishes a joint industry-government R&D partnership program within the ITP, in collaboration with the National Institute for Standards and Technology (NIST) and any other relevant agencies, to enable industry to shift towards sustainable manufacturing and industrial processes.
- Supply Star
    - Builds off the successful Energy Star program and establishes a DOE program to help companies make their supply chains more efficient. DOE can provide companies with financing, technical support, and training to help improve their supply chain efficiency. Companies that are successful in making their supply chain more efficient are rewarded with the Supply Star label, helping consumers make more informed purchasing decisions.
    - Originally introduced as part of S. 3396 in the 111th Congress by Sens. Bingaman, Scott Brown and Pryor.
- Electric Motor Rebate Program
    - Authorizes a DOE rebate program to incentivize the use of more energy efficient electric motors. According to the DOE, electric motors consume over 25% of the electricity in the U.S. and many operate inefficiently.

> ➢ SAVINGS - Power Efficiency Corporation estimates that if this type of energy saving technology were installed on all applicable motors and applications, the U.S. manufacturing sector alone would save 15 billion kWh, or approximately $1 billion in annual energy costs. (Source: Power Efficiency Corporation)

FEDERAL ENERGY EFFICIENCY

The government is the largest single energy consumer in the country, accounting for 1.5 percent of all energy used in fiscal 2008. Federal agencies spent $25 billion in 2008 on energy, including $7 billion to operate federal buildings.

- Requires federal agencies to adopt computer power-saving techniques. The Veterans Affairs Department recently mandated employees turn off the computers at the end of the work day, and acquired new computers that use less energy and software that automates when a computer is turned on and off. Combined, the VA plans to save around $32 million over the next 5 years.
- Requires agencies to share best practices for implementing advanced metering technology to remotely monitor and better manage energy usage of government buildings.
- Amends federal renewable energy purchasing requirements contained in EPAct 2005 to include “thermal” energy, providing parity for solar and biomass thermal efficiency technologies with other renewable energy technologies.

- Clarifies that Energy Service Companies (ESCOs) can be used by federal agencies to install electric vehicle charging infrastructure, making it easier for agencies to use electric vehicles.
- Authorizes the General Services Administration (GSA) to use existing funds to update federal building designs to current standards for projects still pending construction, as considerable time may pass between the appropriation of funds for the design of a federal building project and an appropriation for construction.