

Impacts of the Energy Savings and Industrial Competitiveness Act

(S. 2137 Portman-Shaheen / HR 3962 Welch-McKinley)

The Energy Savings and Industrial Competitiveness Act includes important provisions to improve the energy efficiency of homes and commercial buildings, industry, and federal buildings. If passed, it would be the most significant energy efficiency policy law since 2007.

ACEEE estimated the impact of several of the most important provisions. Combined, over the lifetime of measures implemented through 2050 they would save more than \$50 billion (after needed investments), reduce as much carbon dioxide emissions as caused by all U.S. cars and light trucks in a year, and cut energy waste by almost the total energy use of U.S. industry in a year. A previous study from ACEEE estimated that the legislation also would create more than 100,000 additional jobs. Key provisions include:

Combined cumulative impacts of selected provisions through 2050

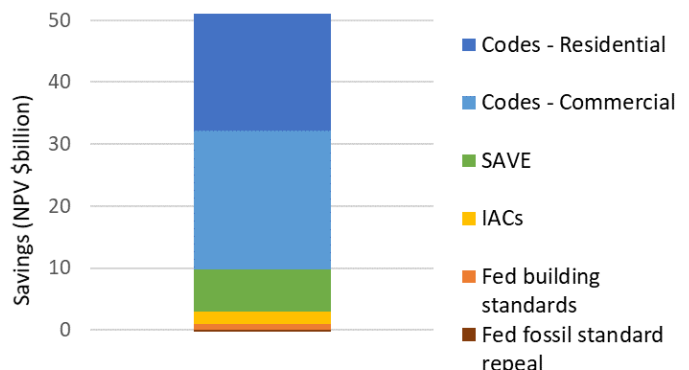
- **\$51 billion** savings (net present value)
- **32 quadrillion Btu** of energy saved
- **1.3 billion tons** of CO₂ emissions avoided

Sections 101-102. Building energy codes would have by far the largest impact on energy efficiency. These provisions would direct the Department of Energy (DOE) to work with states, Indian tribes, local governments, code and standards developers, and others through a rulemaking process to develop energy savings targets for model building energy codes. DOE would also assist state and tribal adoption of these codes and implement a new grant program to help homebuilders, contractors, trades, code officials and others cost-effectively implement updated building energy codes. Code adoption remains voluntary and at the discretion of state, tribal, and local governments.

Section 424. The **SAVE Act** would support home energy efficiency by accounting for energy savings when underwriting mortgage loans through the Federal Housing Administration and other federal mortgage programs including Fannie Mae and Freddie Mac. This would enable homeowner energy cost savings to be realized in the value of the home.

Section 202 would expand and strengthen DOE **Industrial Assessment Centers (IACs)**, which train college students and conduct energy audits at small and medium-size manufacturing plants. It would authorize new IACs at community colleges and at training programs, Centers of Excellence to help other IACs, internships and apprenticeships to further student training, and implementation assistance through Small Business Administration loans. Sec. 111 would also create similar centers for building efficiency.

Sections 421-423 would replace the never-implemented fossil fuel standard for new and renovated federal buildings with other **federal energy management** provisions. They would extend overall building energy intensity and water reduction targets for federal agencies through 2027 and 2030 respectively, require agencies to implement cost-effective measures identified in energy audits, expand standards for new buildings to cover major retrofits, and authorize the existing Federal Energy Management Program.



Net energy bill savings after investment (cumulative for lifetime of measures through 2050)

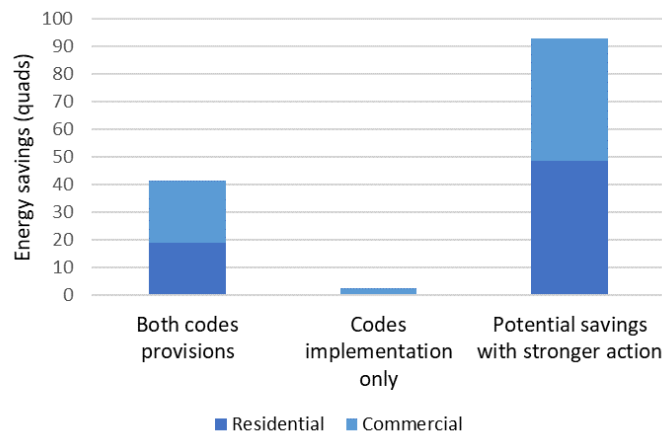
Methodology and Detailed Results

The estimated savings for each provision is the difference between energy use in likely scenarios with and without enactment of the bill. We also estimated the added investment needed to achieve the savings. For the baseline scenarios, we used the Energy Information Administration’s *Annual Energy Outlook 2019* and other sources on current energy use. For the specific impacts of each provision, we generally used expert judgment on likely implementation and effects.

Estimated cumulative impacts of selected provisions of ESICA (for the lifetime of measures through 2050)

	Net savings (\$billion NPV)	Benefit: cost ratio	Cumulative energy savings (quads)	Electricity savings (TWh)	Natural gas savings (Tbtu)	CO ₂ emissions reductions (MMT)
Codes - Residential	18.9	2.4	11.0	861	3,184	484
Codes - Commercial	22.5	2.2	17.0	1,725	2,066	696
SAVE	6.7	2.6	2.8	239	710	125
IACs	2.0	2.7	1.1	88	259	47
Fed building standards	1.0	1.7	0.5	47	109	25
Fed fossil standard repeal	-0.3	0.9	-0.8	-70	-167	-34
Total	50.8	2.2	31.6	2,891	6,160	1,343

We also considered two side cases on building energy codes: We estimated the impact from Sec. 102 on codes implementation without Sec. 101 and estimated the potential impact if DOE and the states made a strong push for better codes under the combined codes provisions. The figure below shows these results as “Codes implementation only” and “Potential savings with stronger action,” respectively. Sec. 102 achieves only a fraction of the estimated savings from Sec. 101 and 102 combined because the potential from improved compliance is only a small percentage of the available savings from better codes. However, its savings would still be comparable to our estimates for SAVE or IACs. The aggressive implementation case shows the large savings potential, which could more than double the already large savings we estimated for the likely impact.



Energy savings for various building energy codes scenarios (cumulative for lifetime of measures through 2050)

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The American Council for an Energy-Efficient Economy acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors.