ACEEE Fact Sheet
American Council for an Energy-Efficient Economy

Impacts of the E-QUIP Tax Proposal

Most investments in existing commercial and multifamily buildings are not eligible for the immediate tax write-off that is available to other business investments under the 2017 Tax Cut and Jobs Act. Instead, they are subject to depreciation periods of 15, 20, 27.5, 30, 39, or 40 years, depending on the kind of building, whether the investments affect the interior or exterior, and the tax status of the owner. This patchwork of depreciation periods is largely unrelated to the actual useful lives of the products.

Total cumulative impacts

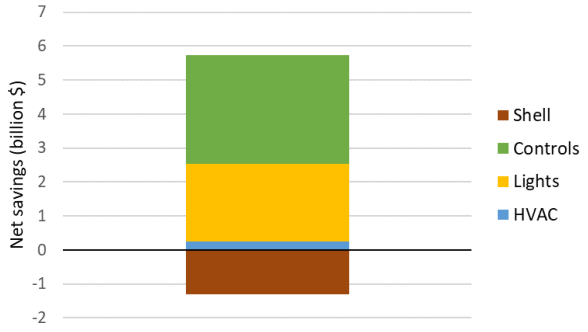
- 130,000 net additional job-years
- $15 billion energy-bill savings (present value)
- $11 billion business and federal investment
- 100 million tons of CO_2 emissions avoided

The Energy Efficient Qualified Improvement Property (E-QUIP) proposal would give building energy investments accelerated, uniform 10-year depreciation if they meet strict energy efficiency criteria. This depreciation would apply to heating and cooling equipment (air conditioners, heat pumps, furnaces, boilers, water heaters, and variable-speed drives), lighting, controls for equipment and lighting, and building shell components (roofs, insulation, and windows) installed from 2020 to 2025.

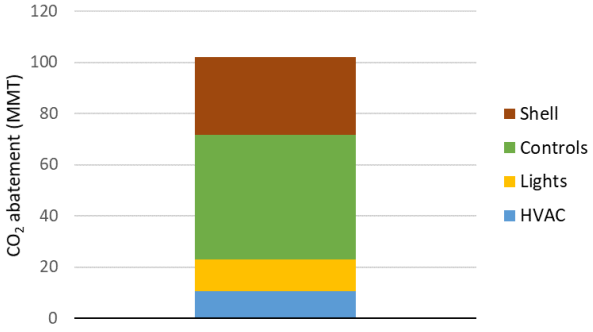
Analysis of Impacts

The American Council for an Energy-Efficient Economy (ACEEE) analyzed the economic and environmental impacts the E-QUIP proposal would have if enacted. We used two methods, explained below, to estimate the market impact of this incentive. In the main scenario, we estimated that over their lifetimes, the measures spurred by this incentive would save $15 billion in energy bills (present value). The measures would also eliminate carbon dioxide emissions equivalent to the tailpipe emissions of 22 million cars and light trucks in a year or 560,000 rail cars full of coal. The cost in this scenario is $5 billion in lost tax revenue and another $5 billion in spending by building owners (both present value). The investment and energy savings would result in more jobs—a net increase of 130,000 job-years (total years of employment) spread over many years.

The savings come from multiple kinds of equipment and building components in commercial and multifamily buildings. Because the values of the incentive and the market situations vary widely by product and by scenario, the market effects also vary widely. The impacts in the main scenario are shown in more detail below.



Net energy-bill savings after added investment (NPV for lifetime of measures implemented 2020–2025)



Reduction in CO_2 emissions (cumulative for lifetime of measures implemented 2020–2025)

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

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Methodology

Cumulative CO_2 reductions equivalent to emissions from

- 22 million cars and light trucks in a year
- 12 million homes in a year
- 560,000 rail cars full of coal

We assumed that the accelerated depreciation would primarily impact owners who were already planning to purchase new products by influencing their choice of a conventional or an energy-efficient product. We collected information on the energy use, cost (including installation), sales, and lifetimes of new covered equipment and building components with typical efficiency levels and of similar products that meet the criteria of the draft bill. These data came from a variety of sources, including Technical Support Documents for Department of Energy rulemakings, the Energy Information Administration's (EIA's) *Commercial Buildings Energy Consumption Survey*, RSMeans, market surveys, and expert judgment. We used EIA's *Annual Energy Outlook* for projected energy costs and average carbon intensities. We consulted with The Real Estate Roundtable and National Association of Real Estate Investment Trusts (Nareit®) on the ownership of commercial and multifamily buildings and the applicable marginal tax rates and depreciation schedules. The data and analysis do not consider changes in building occupancy due to the COVID-19 epidemic.

Although most of the energy-efficient products appear to be cost effective without any incentive, current market adoption is mostly very low. Consequently, we cannot use a simple investment analysis to project the market effects of accelerated depreciation. After considering several ways of estimating the impacts, we report two here. The main scenario assumes a wide range of implicit discount rates for the energy savings, leading to a normal distribution of the price at which building owners will buy the efficient products. The present value of the tax incentive then shifts the price. The alternative scenario uses a demand elasticity for the cost of capital. The change in demand of the efficient product is proportional to the decrease due to the incentive in the energy savings needed to yield a specified after-tax rate of return.

Scenario Results

The E-QUIP proposal would have significant energy and climate benefits that exceed its cost. The details for specific products vary significantly across the scenarios. In the main scenario, the impact is greatest from heating, ventilation, and air-conditioning (HVAC) controls, lighting controls, and roof insulation (though the cost of roof insulation also is relatively high). In the alternative scenario, most of the savings are from HVAC controls and lighting.

Cumulative energy and carbon savings and present value of financial savings and spending in two scenarios

	Cumulative savings		Investment and savings present value (million $)			Cumulative net added job-years
	Energy (TBtu)	Carbon dioxide (MMT)	Energy-bill savings	Building owner investment	Reduced federal taxes	
Main scenario						
HVAC	253	11	1,537	1,225	69	
Lighting	335	12	2,499	258	–62	
Controls	1,232	49	7,781	3,496	1,107	
Building shell	691	30	3,148	209	4,234	
Total	**2,510**	**102**	**14,966**	**5,188**	**5,348**	**129,515**
Alternative scenario						
HVAC	89	4	445	71	77	
Lighting	505	19	3,758	634	–337	
Controls	613	25	3,890	319	1,597	
Building shell	201	10	797	–2,608	3,631	
Total	**1,407**	**57**	**8,889**	**–1,584**	**4,968**	**78,666**

See longer Issue Brief or contact Lowell Ungar at (202) 507-4759 or LUngar@aceee.org for more information including detailed methodology and results