

Alliance to Save Energy
U.S. Senate Committee on Finance
Energy Task Force

**Re: Residential Energy Efficiency – Section 25C, Nonbusiness Energy Property Tax Credit, and
Section 45L, New Energy Efficient Home Credit**

The Alliance to Save Energy is a non-profit, bipartisan alliance of business, government, environmental, and consumer-interest leaders that advocates for enhanced U.S. energy productivity to achieve economic growth; a cleaner environment; and greater energy security, affordability, and reliability. The Alliance is a coalition of nearly 130 businesses and organizations that collectively represent at least \$615 billion in market capital. The Alliance was founded in 1977 by Sens. Charles Percy (R-Ill.) and Hubert Humphrey (D-Minn.), and today has 14 members of Congress serving on an Honorary Board of Advisors.

Energy efficiency represents an extraordinary opportunity to simultaneously boost economic growth and competitiveness while significantly reducing carbon emissions. Without the gains in energy efficiency made since 1973, the U.S. economy today would require about 60 percent more energy than we currently use, and consumers and businesses would be spending \$800 billion more per year on energy, stifling investment and economic growth. As innovation and technology advancements in areas such as artificial intelligence, materials science and advanced building systems create vast new potential for improving efficiency across the economy, the opportunities ahead are even greater.

Nonetheless, the December 31, 2017, expiration of three efficiency incentives – 25C for existing home improvements, 45L for new home construction, and 179D for commercial buildings – left the U.S. tax code without any direct incentives for energy efficiency. This is a glaring omission that we urge you to rectify as soon as possible.

The importance of energy efficiency is underscored by two key facts:

- Energy efficiency is the single most impactful, cost-effective solution we have for addressing climate change. According to the International Energy Agency (IEA), energy efficiency must account for [more than 40 percent of the emissions reductions](#) needed to meet the goals of the Paris climate accord – more than any other mitigation strategy. Put another way, it is virtually impossible to achieve even modest carbon reduction goals without robust gains in energy efficiency.
- Energy efficiency is one of the largest employers in the energy sector and by far the largest in the clean energy field, with tremendous potential for growth. According to the [U.S. Energy and Employment Report](#), energy efficiency supports more than 2.3 million U.S. jobs (For context, wind and solar together support about 450,000 jobs). Roughly 70 percent of efficiency jobs are in construction and manufacturing – retrofitting homes and buildings and manufacturing high-efficiency building components and equipment. Tax incentives for efficiency improvements will directly stimulate economic activity and job growth in these fields.

There is strong evidence that longer-term, higher-value incentives are effective in pushing markets toward efficiency, with enormous impacts on carbon reduction, economic activity and consumer savings. For example, a Department of Energy analysis of energy savings from the 25C homeowner efficiency incentive found that a long-term, updated incentive could increase sales of affected products by 278 percent, saving consumers some \$52 billion in energy costs and avoiding nearly 340 million metric tons of CO2 equivalent.

Recent reports on rising energy consumption and carbon emissions underscore the imperative of acting quickly. Increased global demand drove a [2.3 percent increase](#) in energy consumption last year, according to the IEA, with a 3.4 percent increase in carbon emissions in the U.S. The demand for all sources of generation increased, yet energy efficiency gains saw only modest improvement. The Business Council for Sustainable Energy's [2019 Sustainable Energy in America Factbook](#) also showed that U.S. energy productivity – a measure of economic output per unit of energy consumed – declined by 0.4 percent as energy consumption outpaced GDP growth.

Well-designed tax incentives for efficiency improvements are among the best policy options we have for tackling carbon emissions while at the same time promoting economic growth, creating a more productive and competitive U.S. economy, and delivering savings and reduced energy costs to consumers.

Energy Efficiency Tax Incentives

The three expired efficiency incentives are particularly important because homes and buildings account for almost 40 percent of our energy use along with approximately 30 percent of greenhouse gas emissions. More than 1 million new homes are built in the U.S. annually, and many new and existing homes and buildings are likely to be in use for 50 or 100 years. By failing to incentivize energy efficiency improvements in both new and existing homes and buildings, we are locking in decades of energy waste, productivity losses and unnecessary emissions.

To make meaningful progress in managing energy consumption and reducing carbon emissions, we must have meaningful tax incentives – in the same way that we have incentives for numerous forms of energy generation. It is critical that these incentives be updated to reflect current efficiency technologies and reinstated with a forward-looking, multi-year extension to give manufacturers, contractors and consumers the certainty and predictability needed to drive efficiency gains.

As outlined in our attached proposal, the Alliance urges the Energy Taskforce to consider the improvements to Section 25C, Nonbusiness Energy Property Tax Credit, and Section 45L, Energy Efficient Home Credit, which would update efficiency requirements to ensure the latest technologies and market capabilities are supported, as well as increase the financial values to make the incentives more impactful for consumers and businesses.

Residential Buildings and Energy Efficiency

According to the Energy Information Administration (EIA), the residential and commercial building sectors combine to represent almost [40 percent](#) of the total energy consumed in the U.S. with households accounting for 55 percent of that sector.

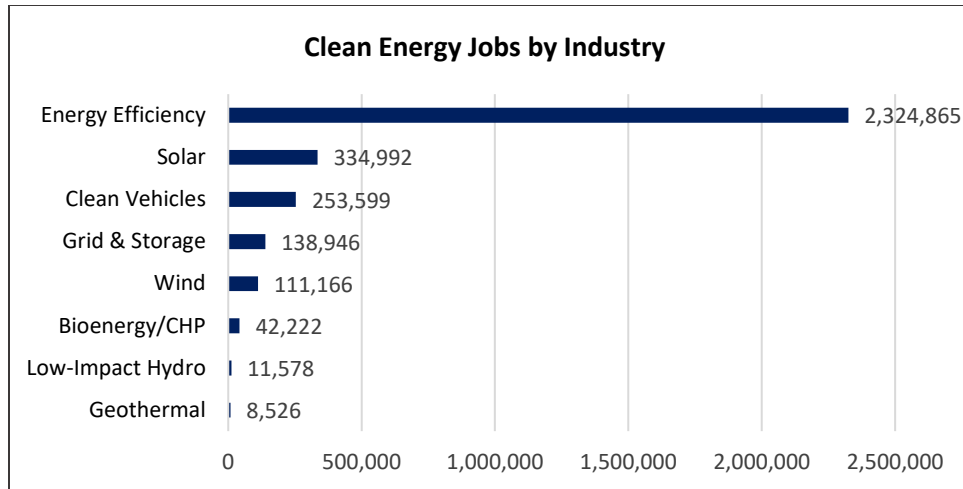
Characteristics and design of homes continues to change, as have consumer habits. For example, [86 percent](#) of homes built since 2000 have central air conditioning, and the total number of homes using air conditioning has increased to 87 percent nationwide. Additionally, approximately 35 percent of homes use electricity as their primary heating source during winter. With electricity use increasing six percent in 2018, and consumption expected to continue to grow at 0.7 percent for households and one percent for commercial floorspace per year, efficiency standards must keep pace to ensure energy availability and security.

With approximately half of the residential and commercial buildings in the U.S. built before 1980, thereby predating higher efficiency standards, and energy use increasing annually, tax incentives encouraging energy efficiency improvements represent a targeted, high-impact policy solution that would deliver long-term savings for homeowners.

Economy-wide Benefits of Energy Efficiency

Updating and strengthening energy efficiency tax incentives can play a major role in economic growth and energy cost savings for consumers. In the above-mentioned [study](#) issued last year, the Department of Energy analyzed energy savings from five product categories – gas furnaces, electric heat pumps, central air conditioners, gas water heaters, and electric water heaters – under the 25C homeowner efficiency incentive. The study concluded that if the incentives for each product were raised to \$500 and extended for 10 years, sales of high-efficiency products would increase by 278 percent, saving 320 TWh of electricity and 2.1 quadrillion BTUs of natural gas – yielding \$52 billion in consumer energy bill savings. According to the EPA’s Greenhouse Gas Emissions calculator, that translates to avoiding 337 million metric tons of CO2 equivalent – equivalent to the electricity use of half of all U.S. households for an entire year.

The energy efficiency sector also represents an enormous opportunity to grow our workforce and create good-paying American jobs that cannot be outsourced. According to the [2019 U.S. Energy and Employment Report](#) (USEER), energy efficiency jobs showed the highest rate of growth across the entire energy sector, adding 76,000 new positions in 2018 alone. The energy efficiency sector, including those who design, install, and manufacture energy efficiency products and services, accounts for one-third of all energy sector jobs and over two-thirds of all clean energy jobs, employing over 2.3 million people in 2018.



In fact, energy efficiency jobs outnumber electric power generation jobs in 48 states, and in 15 states, efficiency jobs exceed fuel, energy power generation, transmission, distribution, and storage jobs combined. Many of these jobs, almost 1.3 million, are in construction, which is projecting a significant 8.8 percent growth rate. Modernizing and updating Secs. 25C and 45L would promote significant additional job growth in the energy efficiency sector.

To further illustrate the impact of energy efficiency on U.S. employment, members of the Energy Task Force represent over 394,000 Americans employed in whole or in part in the energy efficiency sector (see Table 1):

Table 1. Energy Efficiency Sector Jobs in States Represented by Energy Task Force Members

Member	Jobs	Member	Jobs
Sen. John Thune (R-SD)	7,496	Sen. Debbie Stabenow (D-MI)	85,061
Sen. Chuck Grassley (R-IA) <i>ex officio</i>	20,587	Sen. Ron Wyden (D-OR) <i>ex officio</i>	42,547
Sen. Pat Roberts (R-KS)	17,287	Sen. Tom Carper (D-DE)	12,514
Sen. John Cornyn (R-TX)	162,816	Sen. Sheldon Whitehouse (D-RI)	12,773
Sen. Bill Cassidy (R-LA)	22,152	Sen. Maggie Hassan (D-NH)	11,733
Total Energy Efficiency Sector Jobs: <u>394,966</u>			

Reducing energy costs is also particularly important for low-income households, which spend a disproportionately high share of their income on utility bills. The average U.S. household spends almost \$2,000 per year on energy and in 2015, over 30 percent of households reported facing a challenge in paying energy bills or sustaining adequate heating and cooling. According to Oak Ridge National Laboratory, the cost of energy represents an average 16.3 percent of the income of households making less than 200 percent of the poverty level versus just 3.5 percent of the income of households making more than 200 percent of the poverty level. Efficiency policies – including incentives – are cost-effective, high-impact tools for driving new technologies to market and reducing household energy burden.

Related Expired Energy Efficiency Measures

The 25C and 45L incentives are part of a suite of three incentives aimed at improving the efficiency of the built environment. The related third expired energy efficiency tax incentive – also in need of modernization and extension – is the Section 179D Commercial Building Tax Deduction. Section 179D provides a tax deduction of up to \$1.80 per square foot to help offset some of the high costs of energy efficiency components and systems for commercial and large multifamily buildings. The 179D deduction has leveraged billions of dollars in private capital, resulting in the energy-efficient construction and renovation of thousands of buildings.

Conclusion

Energy efficiency is our greatest resource, and the absence of meaningful energy efficiency incentives is a glaring omission in the tax code and a lost opportunity to strengthen U.S. economic growth, sustainability and competitiveness. There is strong evidence that longer-term, higher-value incentives are effective in pushing market toward efficiency. Strengthening and extending these incentives presents a bipartisan, forward-thinking opportunity, providing stability and certainty for the future while creating jobs, promoting economic growth, and mitigating the effects of climate change. We look forward to continuing to work with the task force to advance bipartisan efficiency policy in the tax code.

ATTACHMENT:

May 1, 2019

The Honorable Nancy Pelosi
Speaker of the U.S. House
Washington, DC 20515

The Honorable Kevin McCarthy
U.S. House Republican Leader
Washington, DC 20515

The Honorable Mitch McConnell
U.S. Senate Majority Leader
Washington, DC 20510

The Honorable Chuck Schumer
U.S. Senate Democratic Leader
Washington, DC 20510

The Honorable Richard Neal
Chairman
U.S. House Committee on Ways and Means
Washington, DC 20515

The Honorable Kevin Brady
Ranking Republican Member
U.S. House Committee on Ways and Means
Washington, DC 20515

The Honorable Chuck Grassley
Chairman
U.S. Senate Finance Committee
Washington, DC 20510

The Honorable Ron Wyden
Ranking Democratic Member
U.S. Senate Finance Committee
Washington, DC 20510



Dear Speaker Pelosi, Republican Leader McCarthy, Majority Leader McConnell, Democratic Leader Schumer, Chairman Neal, Ranking Member Brady, Chairman Grassley and Ranking Member Wyden:

As companies and organizations representing millions of workers in energy efficiency, construction, manufacturing and other fields, we write to urge you to modernize and extend key tax incentives for energy efficiency that expired more than a year ago.

The expiration of three efficiency incentives on Dec. 31, 2017, left the U.S. tax code without any direct incentives for energy efficiency. This is a glaring and urgent omission in both climate policy and economic policy, and we urge you to address it as quickly as possible. We view this as a bipartisan opportunity that would accomplish a number of shared goals: Efficiency incentives have the potential to significantly reduce energy costs for consumers across the country, drive down carbon emissions, and stimulate job creation and economic activity.

Already, energy efficiency is by far the largest sector in the clean energy economy, supporting more than 2.3 million jobs across the country, the vast majority of which are in construction and manufacturing. Additionally, energy efficiency is widely viewed as the single most effective solution for addressing climate change.

Homes and buildings under construction or renovation today will likely be in use for 50 to 100 years, while energy intensive equipment such as air conditioners and furnaces will likely be used for a decade or more. As a result, by not incentivizing efficiency now in a sector that accounts for 40 percent of U.S. energy consumption, we are locking in unnecessary energy waste and carbon emissions for decades to come while also weakening U.S. economic productivity and competitiveness.

Specifically, we ask that you incorporate the attached updates to the 25C incentive for homeowner efficiency improvements and 45L incentive for new home construction, and pass a forward-looking, multi-year extension that would provide the certainty needed for consumers, manufacturers, contractors and others to fully capitalize on the incentives. The expired incentives, as written, are outdated and no longer reflect the current market for high-efficiency equipment and building technologies. In some cases, such as for water heaters, the efficiency metrics referenced are obsolete.

These updates to the incentives, and the call for a multi-year extension, are endorsed by the undersigned companies and organizations. We also support a modernized, forward-looking, multi-year extension of the 179D incentive for commercial building efficiency improvements.

We look forward to working with you on this important issue. If you have any questions, please contact Ben Evans at the Alliance to Save Energy at bevans@ase.org.

Sincerely,

A.O. Smith
Air-Conditioning, Heating & Refrigeration Institute
Alliance to Save Energy

American Council for an Energy-Efficient Economy (ACEEE)
American Institute of Architects
Andersen Windows & Doors
ASHRAE
Association of Energy Engineers
Carrier Corporation
Citizens for Responsible Energy Solutions (CRES)
Covestro LLC
Daikin US Corporation
Danfoss
DFW International Airport
DuPont
E4TheFuture
Energy Systems Group
Goodman Manufacturing
Hannon Armstrong
Hearth, Patio & Barbeque Association
Home Performance Coalition
Illuminating Engineering Society
Ingersoll Rand
Johnson Controls
Knauf Insulation
National Association of State Energy Officials
National Insulation Association
Natural Resources Defense Council
North American Insulation Manufacturers Association
Polyisocyanurate Insulation Manufacturers Association
Sheet Metal and Air Conditioning Contractors National Association
Signify
U.S. Green Building Council

cc: Members of the Senate Finance and House Ways and Means Committees

**Energy Efficiency Tax Incentives
Proposed Updates – Spring 2019**

For questions about this proposal please contact Ben Evans at the Alliance to Save Energy at bevans@ase.org.

45L Energy Efficient Home Credit

- Current:
 - Maximum Credit: \$2,000 for new homes and manufactured homes achieving higher target;
\$1,000 for manufactured homes achieving lower target.

- Requirements: Higher target: Energy consumption 50 percent below home built to IECC 2006. Lower target: Manufactured homes achieving 30 percent energy savings for heating and cooling or meeting ENERGY STAR requirements.
- **Proposed:**
 - **Maximum credit: \$2,500 for new homes that meet the building envelope requirements of the 2015 IECC and are certified in compliance with 2015 IECC Section R406 to achieve the Energy Rating Index (ERI) outlined in Table R406.4 (Which vary by climate region from ERI 51 to ERI 55). Note: To prevent incentive double-dipping, the ERI score must be achieved through efficiency measures only, exclusive of any renewable energy credits.**

Alternative credit: \$1,000 for homes and manufactured homes that meet ENERGY STAR requirements.

25C Nonbusiness Energy Property Credit for Existing Homes

- Current:
 - Maximum Credit: 10 percent up to maximum of \$500 (lifetime cap), with individual product category caps in some cases.
- **Proposed:**
 - **Maximum Credit: 15 percent up to maximum of \$1,200 (lifetime cap, reset upon enactment), with individual product category caps eliminated or raised in many cases. This allows a homeowner to do multiple projects. For example, homeowner could take \$600 credit for new HVAC AND take \$600 credit for envelope improvements such as insulation. Applicable expenses include labor costs. Where applicable, qualified equipment must be installed according to ACCA QI standards in effect at the time of enactment. If any referenced standard in this package is terminated, the Secretary of the Treasury, in consultation with the Secretary of Energy, shall replace it with a similar standard.**
 - Requirements:
 - Building Envelope:
 - Roof or roof products - ENERGY STAR.
 - **Proposed: Eliminate category as EPA is ending ENERGY STAR roof category.**
 - Exterior window, skylight or door - ENERGY STAR 6.0. (Credit for windows/skylights capped at \$200 and doors at \$500.)
 - **Proposed: Cap of \$200 for ENERGY STAR windows or \$600 for ENERGY STAR Most Efficient windows; and \$500 for ENERGY STAR doors, with limit of \$250 per door.**
 - Prescriptive criteria IECC 2009 for everything else.
 - **Proposed: IECC 2015. Product category cap raised to \$600.**
 - Qualified Energy Property:
 - Central air conditioner: Highest efficiency tier from CEE in effect 1.1.2009. Product category cap of \$300.
 - **Proposed: Highest CEE Tier in effect at date of enactment. (Currently SEER 18/EER 13 for Split Central AC and Split Air Source Heat Pumps; SEER 16/EER 12 for Packaged Central AC and Packaged Air Source Heat Pumps). Product category cap increased to \$600.**

- Furnace or boiler (natural gas, propane or oil): Annual fuel utilization efficiency rate of 95 or higher. Product category cap of \$150. Additionally, advanced main air circulating fans using no more than 2 percent of a furnace's total energy qualifies for a \$50 credit.
 - ***Proposed: AFUE equal to or greater than 97 percent for furnaces and 95 percent for boilers. Product category cap raised to \$300 for furnaces and \$600 for boilers. Additional \$300 furnace incentive available if converting from an existing non-condensing furnace to a condensing furnace. Fans provision removed.***
- Electric heat pumps: Highest efficiency tier from CEE in effect 1.1.2009. Product category cap of \$300.
 - ***Proposed: Highest CEE Tier in effect at date of enactment. (Currently SEER 18/EER 13 and HSPF 10.0 for Split Air Source Heat Pumps; SEER 16/EER 12 and HSPF 8.2 for Packaged Air Source Heat Pumps). Product category cap increased to \$600.***
- Water heater: Natural gas, propane or oil - Energy factor of at least 0.82 or thermal efficiency of at least 90 percent. (Electric heat pump water heaters with energy factor of at least 2.0 qualify). Product category cap of \$300.
 - ***Proposed: Gas, propane or oil storage water heaters – medium draw UEF equal to or greater than UEF 0.78; high draw UEF equal to or greater than 0.80. Gas, propane or oil tankless heaters UEF greater than or equal to 0.87 or TE greater than or equal to 0.90. Product category cap raised to \$400.***
 - ***Proposed: Electric heat pump water heaters – UEF equal to or greater than 3.0. Product category cap raised to \$600.***
- Biomass stove - Thermal efficiency of at least 75 percent. Product category cap of \$300.
 - ***Proposed: Thermal efficiency of at least 73 percent higher heating value through 2020 – and 75 percent higher heating value after 2020 – as reported by the EPA on the "List of EPA Certified Wood Stoves" or "List of EPA Certified Hydronic Heaters" or "List of EPA Certified Forced-Air Furnaces." Product category incentive cap raised to \$400.***