



Energy Efficiency

Impact Report

SYNOPSIS OF KEY FINDINGS

ACEEE
American Council for an Energy-Efficient Economy

**ALLIANCE
TO SAVE ENERGY**
using less, doing more.

The Business Council
for Sustainable
Energy®

The Energy Efficiency Impact Report, released by American Council for an Energy-Efficient Economy (ACEEE), the Alliance to Save Energy, and Business Council for Sustainable Energy (BCSE), is a **first-of-its-kind report that evidences the vast impact of energy efficiency on our society.**

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Over the decades, energy efficiency has transformed the way we use energy and has helped build a cleaner economy that is more secure, more affordable, and more productive. But at a time when we should be expanding policies and investments in energy efficiency, there are concerning signs these initiatives are being weakened.

Regaining momentum is critical for U.S. economic and environmental leadership. Given the accelerating urgency of climate change and the race to improve U.S. productivity and competitiveness in a quickly evolving international market, we need to fully capitalize on the expansive, diverse, affordable, and innovative energy efficiency toolkit.

Using 53 indicators, the Energy Efficiency Impact Report explores a variety of sectors, including utilities, buildings, industry, and transportation and examines how policy and other tools are used to incentivize energy efficiency.

The following key findings articulate the sweeping impacts of our energy efficiency investments, policies, and innovations to date and justifies the need for continued advancement.



Key Finding #1

Energy Efficiency Fuels the Economy

By getting twice the economic output from our energy than in 1980, efficiency drives U.S. economic competitiveness and allows for less energy to drive a higher quality of life.



The 2.3 million energy efficiency jobs in the U.S. make up 40% of all energy jobs with 70% of the workers employed by small businesses.

Key Finding #2

Energy Efficiency Improves Lives and the Planet



Without the energy efficiency investments made since 1980, energy consumption and emissions **would have been 60% higher**, and consumers would be paying nearly **\$800 billion more per year in energy costs**. Efficiency's benefits go beyond energy and cost savings, including a cleaner environment and improved public health.



In 2017, avoided air pollution due to energy efficiency was responsible for \$540 million in public health benefits, including avoided non-fatal heart attacks and asthma exacerbations.

Key Finding #3

Energy Efficiency Policies Work

Six key energy efficiency policies and programs — fuel economy standards, appliance and equipment energy efficiency standards, ENERGY STAR®, utility sector efficiency programs, federal research and development, and building energy codes — saved an estimated 25 quadrillion British thermal units of energy in 2017. **Without these savings, annual U.S. energy use would have been about 23% higher.**



Appliance and equipment standards have helped deliver up to **80% in energy savings since 1980**, often while improving size, capacity, and performance.

A black and white photograph of a large industrial facility, likely a power plant or refinery, at night. The structure is complex, with many levels, pipes, and scaffolding. Numerous bright lights are visible, creating a high-contrast scene with some lens flare effects. The facility is set against a dark background.

Key Finding #4

Energy Efficiency

Is a High-
Priority
Resource

Energy efficiency **is the foundation of deep decarbonization** and is one of the **best-established and most-implemented examples of a distributed, zero-carbon resource**. Energy efficiency, together with grid integration technologies, also plays an important role in shaping electricity demand to match supply, making it an enabler in deploying other renewable resources.



Energy efficiency is **responsible for half the carbon dioxide emissions reductions** in the power sector relative to 2005.

Key Finding #5

Energy Efficiency Untapped Potential

There is enormous remaining potential for existing energy efficiency technologies, but new technologies that enable greater control, connectivity, and higher levels of system optimization are also evolving, yielding even more impressive outcomes. **Getting to the next level of energy efficiency deployments will require extensive policy, programmatic support, and sustained commitment.**



Global investment in digital infrastructure and software for electricity systems **has increased by more than 20% annually** from 2014 to 2016.



Key Finding #6

Energy Efficiency Investment is Critical

Investment in energy efficiency over the past decades has shifted our economic, social, and environmental trajectory. However, **investments are not keeping pace**. Additionally, trends toward increasing size and number of buildings and devices, and increasing vehicle miles traveled, may lead to significant increases in energy use without accelerated energy efficiency.



Estimated total U.S. energy efficiency investment levels from 2016 to 2018 **have fallen by almost 20%**.

Energy efficiency has already made its mark on the U.S. energy economy and society.

However, we must raise our ambitions to support energy efficiency — advancing on tried-and-true policies that unlock private capital, drive innovation, and ensure energy efficiency is accessible for all while preparing for energy efficiency's future.

To take advantage of evolving opportunities, we must consider energy efficiency as the foundation of our path forward, and leverage its massive scale and versatility to prepare for tomorrow's challenges.

GET THE COMPLETE REPORT ONLINE: **EnergyEfficiencyImpact.org**

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