

FEDERAL INVESTMENTS IN ENERGY EFFICIENCY – DRIVING PRODUCTIVITY AND COMPETITIVENESS

Energy efficiency is widely understood to be our nation's most abundant energy resource and a critical component of U.S. productivity and competitiveness. Developing more efficient building components, manufacturing technologies, electric grids, appliances and machinery is important not just for delivering energy savings and protecting natural resources but for continuing U.S. economic leadership.

Advanced, highly efficient manufacturing practices, for example, can play a key role in rebuilding the American manufacturing sector, while emerging technologies for high-efficiency consumer products are creating new commercial markets across the globe. To lead, the U.S. must continue investing in a suite of federal energy efficiency programs that deliver a big return on investment. Federal efficiency initiatives – dating to the creation of the Department of Energy in the early 1970s – have a long tradition of demonstrated success and bipartisan support. In addition to strengthening American leadership and competitiveness, they:

- Stimulate a broad energy efficiency economy that is among the leading employers in the energy sector, [supporting 2.2 million jobs nationwide](#) in manufacturing, construction and other fields.
- Save consumers billions of dollars in energy costs annually through initiatives such as appliance standards, building energy code support, and the ENERGY STAR program. The average household, for example, [saves almost \\$500 every year from federal minimum efficiency standards](#) for common appliances such as dishwashers, dryers and water heaters.
- Help reduce carbon emissions. Energy efficiency is the single most powerful tool we have for reducing emissions – and the cheapest. Appliances and other products meeting the federal government's ENERGY STAR criteria, for example, [have reduced U.S. carbon emissions by 2.7 billion metric tons since 1992](#) – more than twice the carbon reduction that would result from eliminating the energy use of every U.S. household for an entire year.

KEY FEDERAL ENERGY EFFICIENCY PROGRAMS

Advanced Manufacturing Office – FY2017 Funding Level: \$257.5 million

With a goal of spurring innovation in U.S. manufacturing, AMO works with industry partners, small businesses, universities, and other stakeholders to develop emerging technologies, including improved efficiency, with the potential to strengthen U.S. competitiveness in the manufacturing sector and create high-quality U.S. manufacturing jobs.

Building Technologies Office – FY2017 Funding Level: \$199.1 million

Residential and commercial buildings represent more than 40 percent of U.S. annual energy consumption, which equates to a national energy bill of [more than \\$400 billion](#). BTO leads a network of national laboratory, university, small business and industry partners to develop and deploy innovative, cost-effective energy saving solutions for US buildings, including helping to develop model building energy codes and appliance standards.

Vehicle Technologies Office – FY2017 Funding Level: \$306.959 million

VTO supports research, development and deployment of efficient and sustainable transportation technologies that will reduce U.S. dependence on petroleum by improving energy efficiency and fuel economy. These technologies include advanced batteries and electric drive systems, lightweight materials, advanced combustion engines, alternative fuels, as well as energy efficient mobility systems.

Federal Energy Management Program – FY2017 Funding Level: \$27 million

The U.S. government is the single largest energy consumer in the country with more 360,000 buildings and 600,000 vehicles. FEMP helps federal agencies improve their efficiency and reduce energy costs by identifying cost-effective solutions, facilitating public-private partnerships and identifying government best practices.

- Since 1975, FEMP has helped agencies [cut the energy intensity of their facilities by 49 percent](#).
- This significantly reduces federal spending and saves taxpayer dollars: Plans outlined in the [2018 FEMP budget](#) are estimated to save \$18 billion in federal energy and water costs by 2025.

State Energy Program – FY2017 Funding Level: \$50 million

SEP helps states maximize the benefits of energy efficiency and renewable energy by serving as a resource for technical assistance, technology deployment, strategic partnerships, state energy plans, and financial assistance, among other resources. SEP also helps states develop energy emergency plans in preparation for natural disasters to strengthen resilience and reliability. Its major goals include increasing American energy efficiency, reducing energy costs, improving reliability, developing alternative energy resources, promoting economic growth, and decreasing oil imports.

- For every \$1 of investment the federal government provides to the SEP, [\\$4.50 is saved from reduced energy bills](#).
- Every [\\$50 million in SEP funding results in \\$585 million in economic development](#).

Weatherization Assistance Program – FY2017 Funding Level: \$225 million

WAP offers grant-based assistance to low-income families to improve the energy efficiency of their homes - helping families in need save money on their energy bills while also improving the health and safety of the home. Since its start in 1976, WAP has [weatherized over 7.4 million homes](#); helping millions of families reduce their energy bills.

- A typical year in [WAP operations delivers](#) \$340 million in energy savings, supports 8,500 jobs, and has a program-wide benefit cost ratio of 4:1

ENERGY STAR – FY2017 Funding Level: ~\$42 million

ENERGY STAR is a model for public-private partnerships around the world with more than 16,000 partner companies and organizations. It covers a broad range of sectors – appliances, electronics, residential homes, commercial buildings, manufacturing plants – and is highly cost-effective: ENERGY STAR costs approximately \$42 million annually but delivered [\\$34 billion in savings in 2015 alone](#).

Research and Development:

National Laboratories

DOE's national labs have been among the leading scientific institutions in the world since their founding more than sixty years ago, playing a key role in making the U.S. a global leader in innovation, scientific advancement and cutting-edge technology, including in energy efficiency. Labs such as Lawrence Berkeley National Laboratory, National Renewable Energy Laboratory and Oak Ridge National Laboratory are not only leading us to the latest efficiency breakthroughs but are helping companies across the country become more productive and competitive.

ARPA-E – FY2017 Funding Level: \$306 million

ARPA-E supports high-impact, potentially transformational energy technologies, including for efficiency, that are too early for private-sector investment. After surviving a rigorous selection process, ARPA-E awardees develop new ways to generate, store, and use energy – yielding big results from a limited amount of funding.