

ACEEE at 40



We invite you to join us on a journey— a journey to a clean energy future.

We need to act soon, because climate change is quickly getting worse. Its effects—flooding, storms, drought, heat waves, wildfires—hurt our health, our economy, our planet.

We know what to do. Energy efficiency is a vital solution. It can halve energy use and heat-trapping emissions by 2050, getting us halfway to our climate goals.

Plus, it will create jobs, save money, boost grid resilience, reduce air pollution, and improve public health.

ACEEE, a research, education, and advocacy nonprofit celebrating its 40th year, has shown that efficiency works. Since 1980, energy efficiency has helped cut US energy use in half relative to the size of the economy and thus is saving more than \$2,000 per capita each year in lower energy bills.

We can build on this progress and create a healthier, equitable world for our children and grandchildren—a world that uses far less energy and emits far fewer emissions than today, a world with good jobs and clean air, a world where everyone thrives.

We will not get there overnight. We need transformative change and robust investments in energy-efficient appliances, buildings, vehicles, and industrial plants.

Given the urgency of the climate threat, we need to be bold and take risks.

Join us.



Where We've Been



1980s:

- ▷ Led efforts to develop and adopt US energy efficiency appliance standards, which now save a typical household about \$500 each year on utility bills.
- ▷ Played key role in defending and expanding the Department of Energy's energy R&D programs.

1990s:

- ▷ Helped launch the voluntary ENERGY STAR® program, which helps consumers find energy-efficient products and improves the efficiency of buildings and homes.
- ▷ Led efforts to include lamp, motor, and HVAC standards in the Energy Policy Act of 1992, which will achieve cumulative energy bill savings of \$340 billion through 2035.

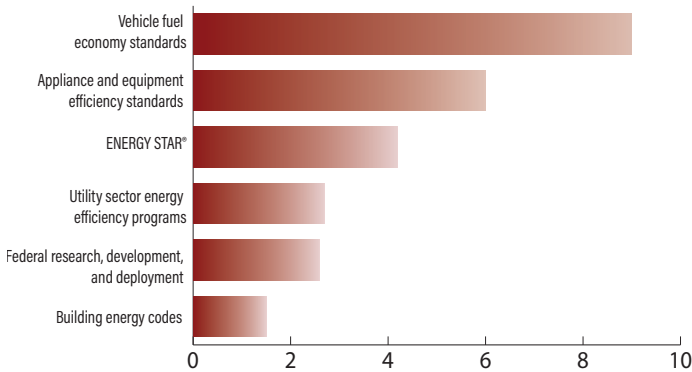
2000s:

- ▷ Led efforts to establish CAFE provisions (2007) and heavy-duty fuel economy standards, spurring an increase in the average new car's fuel economy from 20.6 miles per gallon in 2007 to 24.9 mpg in 2017, to a projected 36.0 mpg in 2025.
- ▷ Led efforts to expand appliance standards to 23 additional products, including light bulbs, through 2005 and 2007 US legislation.

2010s:

- ▷ Helped set new US product efficiency standards, which will avoid three billion metric tons of carbon dioxide emissions by 2030 and save hundreds of billions of dollars.
- ▷ Led efforts to hike heavy-duty vehicle fuel economy standards, which will reduce average fuel consumption and greenhouse gas emissions of new trucks and buses by 37% from 2010 levels.

Approximate 2017 Energy Savings from Major Energy Efficiency Policies (quads)



Energy efficiency has enriched our economy and our lives. ACEEE helped make that happen. We have helped to halve US energy intensity (energy use per real dollar of GDP) since our founding in response to steep oil price increases in the 1970s.

The result? US energy consumption has remained flat even though the population and economy have grown, and we live in bigger homes, use more devices, and drive more. Our cars now go further on a gallon of gas, and clothes washers use 80% less energy to run a load of laundry than they did in 1990.

ACEEE has contributed to major efficiency policies and programs, including those listed above which have collectively saved 20% of total US energy consumption.

ACEEE initiatives: When they began

1980: Buildings Summer Study

1983: International work, starting with Brazil

1990: Work in India; Consumer Guide to Home Energy Savings

1993: Work in China

1995: Industrial Summer Study

1997: Market Transformation Symposium

1998: GreenerCars

1999: Appliance Standards Awareness Project

Where We're Going

ACEEE's roadmap shows how energy efficiency can halve energy use by 2050 and get the United States halfway to its climate goals. With robust investments in cost-effective, technically possible efficiency measures, the United States can slash emissions, decarbonize the industrial sector, and deliver energy savings worth more than \$700 billion a year.

Here's how we get there:

Buildings

- ▷ Zero-energy building codes
- ▷ Appliance efficiency standards and ENERGY STAR® labeling
- ▷ Widespread retrofits of existing homes and buildings
- ▷ Smart buildings (e.g., learning thermostats, lighting with motion detectors)
- ▷ Electrification of space and water heating

Transportation:

- ▷ Light- and heavy-duty vehicle fuel economy standards
- ▷ Improved mobility options (ride sharing, public transit, walkable communities)
- ▷ Smart freight transport (digitization of logistics, collaborative shipping)
- ▷ Aviation efficiency (improved engines, flight control)

Industry:

- ▷ Technical assistance and financing for energy-efficient technologies and practices
- ▷ Strategic energy management and smart manufacturing
- ▷ Collaborative research into transformative industrial process technologies
- ▷ Research into and procurement of low-carbon feedstocks and products

Buildings can deliver two-fifths of the energy savings, transportation one-third, and industry one-fourth.

For details, see aceee.org/halfway-there

2001: Energy Efficiency as a Resource Conference

2005: Forum on Energy Efficiency in Agriculture

2007: *State Scorecard*; Finance Forum; Behavior, Energy & Climate Change Conference

2008: Hot Water Forum

2012: *International Scorecard*

2013: *City Scorecard*

2014: Intelligent Efficiency Conference

2015: SmarterHouse website

2017: *Utility Scorecard*

2018: Rural Energy Conference; Conference on Health, Environment, and Energy; Electric Vehicles Convening

2019: Forum on Connected and Automated Vehicles: Energy Impacts

How You Can Help:

To tackle the climate challenge, we must grow the national political will, commitment, and funds for new and existing efficiency and integration technologies. We call for a rapid and massive scaling of our initiatives.


By 2030, we aim to double the rate of annual US efficiency gains:

- ▷ **Buildings.** Double the rate of existing building retrofits, and make at least one of every four new buildings zero net energy and carbon neutral.
- ▷ **Transportation.** Hike fuel efficiency of new vehicles by at least 50%, achieve 20% market penetration for electric vehicles, and cut freight vehicle miles by 10%.
- ▷ **Industry.** Cut greenhouse gas emissions by a third and ensure that half of industrial plants use strategic energy management.

ACEEE is committed to this grand challenge.

With our research, advocacy, and conferences, we are uniquely positioned to collaborate with businesses, governments, academia, philanthropy, and public interest, health and environmental justice groups.

The magnitude of the challenge demands nimble, fearless leadership. We must take chances, pursue yet unproven initiatives, and learn from mistakes. ACEEE has created the Halfway There Fund to give us the flexibility to innovate, experiment, and fund the transformation needed for a clean energy future.



Please join us. We know energy efficiency can get us halfway toward US climate goals, but we cannot get there without you.

Support the Halfway There Fund

"Through research and outreach, ACEEE plays a leading and critical role in the energy efficiency community."

—John Godfrey, Samsung Electronics America

"ACEEE will have a critical role in helping the United States and, increasingly, the world, chart the right path to carbon reduction."

—Janice Berman, Pacific Gas & Electric

"Thank you to ACEEE for continuing to push cities around America to lead on sustainability and in the fight against climate change."

—Phoenix Mayor Greg Stanton

"ACEEE is the definitive arbiter of what is energy efficient and what is not. If ACEEE says X, Y, Z saves energy, you can be confident that it does."

—Rick Counihan, Nest