



### **Overview**

The American Council for an Energy-Efficient Economy (ACEEE), a nonprofit, 501(c)(3) organization, acts as a catalyst to advance
 energy efficiency policies, programs, technologies, investments, and behaviors. We believe that the United States can harness
 the full potential of energy efficiency to achieve greater economic prosperity, energy security, and environmental protection for all its people.

### ACEEE carries out its mission by:

- Conducting in-depth technical and policy analyses
- O Advising policymakers and program managers
- Working collaboratively with businesses, government officials, public interest groups, and other organizations
- Convening conferences and workshops, primarily for energy efficiency professionals
- Assisting and encouraging traditional and new media to cover energy efficiency policy and technology issues
- Educating consumers and businesses through our reports, books, conference proceedings, press activities, and websites

ACEEE was founded in 1980 by leading researchers in the energy field. Since then we have grown to a staff of about 50. Projects are carried out by ACEEE staff and collaborators from government, the private sector, research institutions, and other nonprofit organizations. ACEEE focuses on these program areas:

- Energy policy (federal, state, and local)
- Research (including programs on buildings and equipment, utilities, industry and agriculture, transportation, behavior, economic analysis, and international)
- Outreach (including conferences, publications, and the Ally Program)

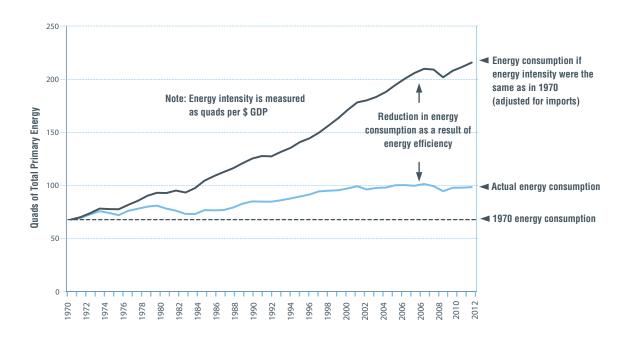
Since 1980, ACEEE has accomplished a great deal and has become known as America's leading center of expertise on energy efficiency. Our reputation is based on the high quality, credibility, and relevance of our work, as well as our bipartisan approach. ACEEE's thorough and peer-reviewed technical work is widely relied on by policymakers, business and industry decision-makers, consumers, media, and other energy professionals.

# **ACEEE Accomplishments**

equipment standards	ACEEE has been working to support the development of energy efficiency technologies, programs, and policies for over 30 years. During this time, we have had many significant accomplishments, including: Leading efforts to develop, promote, and negotiate appliance and equipment standards, including standards adopted by Congress in legislation in 1987, 1988, 1992, 2005, and 2007. Nearly 50 products are now covered by federal standards, with savings in 2010 from standards already adopted equal to more than 7% of
utility energy efficiency	2010 U.S. electricity use. Playing a major role in the development and implementation of utility energy efficiency programs, which are now spending about \$6 billion per year and
	reducing U.S. electricity use by more than 2%.
federal legislation	Playing a leading role in the development of energy efficiency provisions in the
	federal Energy Policy Acts of 1992 and 2005, the 2002 and 2008 Farm Bills, and
	the Energy Independence and Security Act of 2007.
state consultation	Assisting many states with adopting and implementing energy efficiency policies
	and programs. For example, we played a leading role in helping to pass 2008
	legislation in Maryland that commits the state to reducing electricity use by $15\%$ by
	2015. We continue to provide advice on strategies for meeting this target.
policies and programs	Tracking best practices in state and utility energy efficiency policies and programs.
building codes	Helping to develop model building codes for new homes and commercial
	buildings, which have been adopted in the majority of U.S. states.
combined heat and power	Collaborating with many government officials, companies, advocates, and
	trade associations to advance programs and policies that encourage the use
	of combined heat and power systems (CHP) that cut energy waste in electricity
	generation by as much as half.
transportation efficiency	Initiating the first transportation efficiency program by a non-governmental
	organization, contributing to recent U.S. fuel efficiency standards for passenger
	vehicles and heavy-duty trucks, and also leading initiatives on efficiency in freight
	movement and strategies for reducing vehicle miles traveled.
economic analysis	Providing assessments of net jobs and other economy-wide benefits resulting
D <sup>o</sup> D	from local, state, and national investments in energy efficiency improvements.
R&D	Supporting strong research and development programs at the federal and state
	levels, in order to develop the next generation of efficiency technologies and
publications	practices.
conference organizing	Issuing more than 500 publications on energy efficiency topics.
	Organizing 71 conferences and events, engaging more than 22,000 attendees.

These steps, combined with efforts from our many allies, have helped slow the growth in U.S. energy demand since the 1970s. If energy use per dollar of Gross Domestic Product (adjusted for imports) were the same as in 1970, the United States would have used about 78% more energy than it actually consumed in 2010. In other words, energy efficiency is now our number one energy resource, accounting for more than 70% of what energy use would have been, had earlier technology and market trends remained static (see figure below).

#### U.S. Energy Use in Relation to GDP Energy Consumption in the United States 1970 - 2012

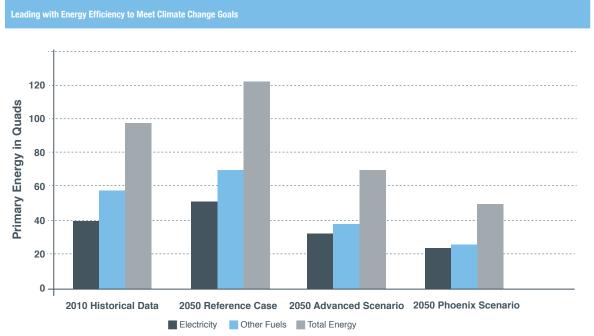


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## **Strategic Directions**

While ACEEE has accomplished much to promote energy efficiency, the potential for new energy efficiency gains is enormous. The United States could reduce its energy use—by as much as 40-60% by 2050—if we are willing to embrace a more focused and aggressive approach (see the graph below). Such an approach will require integrating energy efficiency solutions more deeply and broadly into our economy, utilizing new technologies, and applying systems approaches that go beyond what's been done before. We will also need to advance innovative policies and broaden support for energy efficiency to help us achieve these deep reductions.

A large share of our past energy efficiency gains came from improvements in individual products, appliances, and equipment, such as light bulbs, refrigerators, electric motors, and vehicles. While discrete, device- or component-level improvements will continue to play an important part in reducing energy use, looking ahead we must take a more holistic, systems-efficiency approach if we are to scale up energy efficiency dramatically to meet future energy challenges.



Note: This figure is from ACEEE's 2012 report, "The Long-Term Energy Efficiency Potential." The Advanced Scenario assumes extensive use of efficient technologies and significant systems optimization. The "Phoenix" Scenario (so-named as it rises "from the ashes" of an older built environment) includes extensive changes to infrastructure and development patterns as well as even more aggressive technology and system savings.

Systems-efficiency approaches include: deep retrofits to existing homes and commercial buildings; improved transportation systems and reductions in vehicle miles traveled; reductions in energy use of new and previously unaccounted for items such as home and workplace electronics; and better understanding how to influence human behavior in all these areas.

ACEEE will lead the way with its ground-breaking research and policy work. We will continue to advance and support energy efficiency policy at the federal, state, and local levels, with a particular focus on states that have adopted innovative approaches to energy efficiency. We will continue to work on appliance, equipment, and vehicle efficiency standards; utility energy efficiency programs and policies; consumer information; and building codes, while expanding our work in areas such as energy efficiency financing; energy efficiency as an environmental compliance strategy; tax reform to spur energy efficiency investments; and energy use disclosure for building purchasers and renters.

To achieve policy success, we will continue to build broad-based bipartisan support for energy efficiency among key stakeholders. We will expand our efforts to quantify and document key benefits of energy efficiency to increase the reach and influence of our work, and we will enhance strategic alliances with energy efficiency leaders in business and environmental, faith-based, and community development groups.

If we can realize deep reductions in energy use, we can make our economy more productive, creating jobs, improving our energy security, and addressing climate change. Energy efficiency measures lead to more jobs because investments in energy efficiency are more labor intensive per dollar spent than building new power plants and developing fossil fuel resources. And, when energy efficiency reduces energy bills, the resulting savings can be reinvested in the economy.

Energy efficiency improves our security by reducing the amount of energy we need to purchase from unstable regions of the world. It can also reduce the strain on power, pipeline, and rail systems, improving reliability. Energy efficiency helps the environment by reducing air pollution from burning fuels and reducing the need to build and develop new mines, wells, and power plants. Energy efficiency is far more achievable than other mitigation options. As a result, it should be the first strategy for improving our environment.

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### Federal, State and Local Energy Policy

Many of ACEEE's accomplishments are by virtue of our impact on federal, state, and local energy policies.

ACEEE has worked on federal energy policy since the 1980s. We played a central role in the development of the National Appliance Energy Conservation Act of 1987, and the energy efficiency provisions in the Energy Policy Acts of 1992 and 2005 and the Energy Security and Independence Act of 2007. These provisions address appliance and equipment efficiency standards and voluntary programs, building codes, utility energy efficiency programs and policies, fuel economy standards for vehicles, and industrial efficiency efforts. We also played a substantial role in the development of energy efficiency sections in recent farm bills. Many of these provisions were developed in cooperation with interested businesses and all received bipartisan support. We testify frequently before Congress and work closely with congressional staff in both parties to help shape new initiatives and to analyze the impacts of energy and climate policy proposals. We also weigh in on the federal budget process, promoting increased funding for the most effective energy efficiency programs. In addition to working with Congress, we work with federal agencies, advising them on programs and policies, and participating in formal rulemakings on energy efficiency issues. Most of our federal policy work involves research and education, but we do a limited amount of lobbying using unrestricted funds.

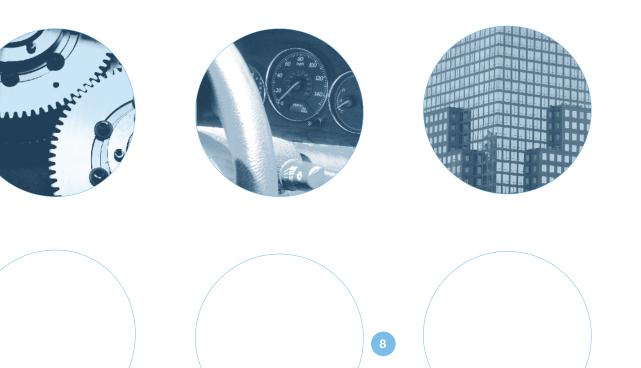
At the state level, ACEEE works closely with public officials and local energy efficiency advocates — we provide advice, analysis, and technical support, but local officials and advocates take the lead. Our annual *State Energy Efficiency Scorecard* and web-based State Policy Database serve as a research foundation for our state policy work, tracking ongoing state energy efficiency policies and performance. While we provide direct assistance to many states (approximately two dozen in a typical year), we concentrate our efforts on large- and mediumsized states that are poised to make major decisions on energy efficiency policy issues. We support these states by preparing detailed energy efficiency potential and policy studies, and providing direct technical assistance. In recent years we have helped Arkansas, Florida, Indiana, Maryland, Michigan, New York, Ohio, Pennsylvania, Texas, Virginia, West Virginia, and Wisconsin to adopt or implement significant energy efficiency legislation or regulations, with additional legislation and regulations likely in several of these states. We are working in

additional states that are considering establishing new energy efficiency policies, including Kentucky, Louisiana, Missouri, North Carolina, and South Carolina. We also work on state policies that can potentially be moved up to the national level. For example, we have worked with several states to develop state appliance and equipment efficiency standards, which have subsequently been adopted by Congress.

In 2009 we began working on local energy efficiency policies, supporting efforts by cities, counties, and regional agencies. We have developed case studies on successful local policies, written longer reports and white papers on local policy options, spoken widely on local energy efficiency issues, and developed a local policy calculator to estimate the impacts of several specific local energy efficiency policies using local data. We have also worked more intensively with stakeholders in the Greater Cincinnati area and with the cities of Philadelphia and New Orleans.

## **Research and Analysis**

ACEEE's research and analysis activities play important dual roles in developing energy policy and helping to capture the best technical, program, and policy practices that can be used to reduce energy use cost-effectively. Our efforts draw upon our unique body of knowledge and expertise developed over more than three decades of studying and promoting energy efficiency. Taking an interdisciplinary approach, we employ our diverse backgrounds in physical and social sciences to survey what is happening in the marketplace; analyze the technical and economic potential for energy efficiency; seek to understand consumer energy decisions; and assess the potential for regulations, policies, and programs to achieve energy savings. In addition, we track technology and market developments that create new energy efficiency opportunities.



## **Research Programs** and Representative Projects

Buildings and Equipment	Buildings and Equipment, ACEEE's oldest research program, analyzes
	opportunities for energy efficiency in appliances and equipment; building design,
	construction, and operation; and programs and policies that encourage consumers
	to make energy-efficient product choices.
Utilities	Utilities documents and reviews ratepayer-funded energy efficiency programs
	and supporting policies; prepares regular surveys of best program designs and
	practices; and supports administrators, implementers, and regulators in designing
	the next generation of programs and policies.
Transportation	Transportation fosters innovative technologies, programs, and policies for
	increasing motor vehicle fuel economy, reducing emissions, and enhancing overall
	transportation system efficiency.
Industry	Industry applies expertise in energy efficiency for the manufacturing sector
	(including clean distributed energy resources such as combined heat and power-
	CHP), and assesses technologies, practices, programs, and policies to achieve
	increased energy efficiency in manufacturing.
<b>Policy Analysis</b>	Policy Analysis evaluates the potential for energy efficiency; assesses the
	impacts of federal, state, and local energy policies and programs; and collects
	key resources to support policymakers, program implementers, and efficiency
	advocates.
<b>Economic Analysis</b>	Economic Analysis encourages the use of sound economic modeling practices;
	studies the impacts of energy policies on jobs and the economy; and assesses the
	net economic benefits of energy efficiency technologies, practices, and policies.
<b>Behavior Analysis</b>	Behavior and Human Dimensions of Energy Use explores how energy users
	think about their energy use and how programs can better engage participants in
	reducing their energy use through energy efficiency improvements.
Agriculture	Agriculture addresses the unique energy efficiency program and policy needs
	of farms, ranches, and rural communities by assessing energy use patterns and
	identifying opportunities for improved energy efficiency practices, technologies,
	programs, and policies.
Financing	Financing tracks best practices in energy efficiency financing and explores the role
	the financial community can play to encourage investments in energy efficiency.
International	International works with colleagues from around the world to adapt technology,
	program, and policy experiences from the United States to their economies, and
	seeks new ideas from abroad that will work in the United States.

### **Outreach**

ACEEE reaches out to diverse audiences to build support for energy efficiency in a variety of ways:

### Conferences

Brings together disparate stakeholders to focus on multiple aspects of energy efficiency and the role it plays in addressing critical issues such as climate change; energy resources and markets; utility structure and regulation; human behavior and energy use; and energy use in buildings, industry, and agriculture. Recent conferences include:

- Summer Study on Energy Efficiency in Buildings
- Summer Study on Energy Efficiency in Industry
- National Symposium on Market Transformation
- Energy Efficiency as a Resource
- Behavior, Energy, and Climate Change Conference
- Energy Efficiency Finance Forum
- Hot Water Forum: Water Heating, Distribution, and Efficiency Use
- Forum on Energy Efficiency and Agriculture

### **Publications**

Provides research and technical analysis of current energy efficiency policies and practices, as well as forecasts future trends. Includes research reports, white papers, fact sheets, policy briefs, legislative testimony, conference proceedings, and consumer guides. Major recent reports include:

- State Energy Efficiency Scorecard
- A Defining Framework for Intelligent Efficiency
- The Long-Term Energy Efficiency Potential: What the Evidence Suggests
- Missouri's Energy Efficiency Potential: Opportunities for Economic Growth and Energy Sustainability
- Energy Efficiency Resource Standards: A Progress Report on State Experience

- The Efficiency Boom: Cashing In on the Savings from Appliance Standards
- A National Survey of State Policies and Practices for the Evaluation of Ratepayer-Funded Energy Efficiency Programs
- Heavy-Duty Vehicle Fuel Efficiency and Greenhouse Gas Emissions: The 2014-2019 Standards and a Pathway to the Next Phase
- Cash for Clunkers: A Missed Opportunity for Fuel Economy Gains
- Advanced Metering Initiatives and Residential Feedback
  Programs: A Meta-Review for Household Electricity-Saving
  Opportunities

### ACEEE's Website

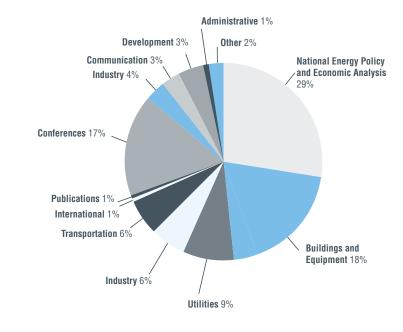
Shares ACEEE's work online by providing publications, conference presentations, and conference proceedings papers as free downloads. Energy efficiency policies at the federal, state, and local levels can be monitored through online tools such as the State Policy Database. Consumers can learn about making wise energy efficiency choices relating to their homes and their vehicles through:

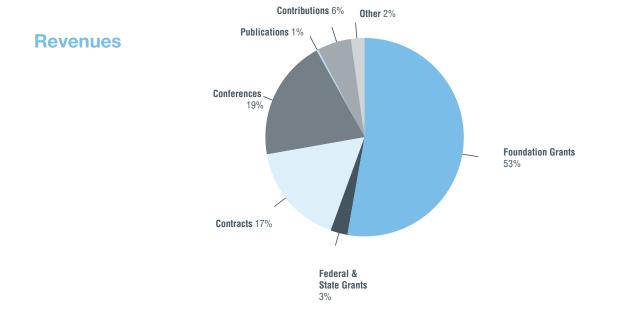
- aceee.org/consumerguide—Consumer Guide Online
  (based on the Consumer Guide to Home Energy Savings)
- o greenercars.org—online presence of ACEEE's Green Book™: The Environmental Guide to Cars and Trucks
   Ally Program

### Provides a forum for friends and colleagues to help support our mission and jointly advance the broad vision of an energy efficiency future. ACEEE engages Ally members in timely discussions and networking opportunities through policy briefings, webinars covering recently published research and analysis, conferences, and one-to-one interaction with staff and Board members.

# Financial information 2010–2011

**Expenses** 





# Sources of Funding 2010–2011

#### FOUNDATIONS

ClimateWorks Green Tech Action Fund New America Foundation The Energy Foundation The John Merck Fund The Kresge Foundation The Overbrook Foundation The William and Flora Hewlett Foundation Tides Foundation Turner Foundation, Inc. World Wildlife Fund Z. Smith Reynolds Foundation

#### FEDERAL, REGIONAL, STATE, AND INTERNATIONAL AGENCIES

Arkansas Energy Office Arlington County, Virginia California Energy Commission Connecticut Energy Efficiency Fund Dairyland Power Cooperative Maryland Energy Administration Missouri Department of Natural Resources National Association of State Energy Officials New York State Energy Research and Development Authority Ontario Power Authority Oregon Department of Energy U.S. Department of Energy U.S. Environmental Protection Agency Western Governors' Association

#### UTILITIES

Alliant Energy Arizona Public Service Austin Energy Baltimore Gas & Electric BC Hydro Bonneville Power Administration Centerpoint Energy Commonwealth Edison Connecticut Light and Power Company Consumers Energy Dominion Électricité de France National Grid Northeast Utilities NSTAR Gas & Electric NV Fnerav Pacific Gas and Electric Company Sacramento Municipal Utility District San Diego Gas & Electric Company Seattle City Light Sempra Utilities Southern California Edison Company Southern California Gas Company Southern Company Tennessee Valley Authority United Illuminating Xcel Energy

### NATIONAL LABORATORIES AND RESEARCH INSTITUTES

Argonne National Laboratory Battelle, Pacific Northwest National Laboratory Electric Power Research Institute Gas Technology Institute Lawrence Berkeley National Laboratory National Renewable Energy Laboratory Oak Ridge National Laboratory

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**OPower** Ormat Technologies Philips Electronics North America Corporation Recycled Energy Development Research Into Action Resource Solutions Group Robert Bosch LLC Rockwell Automation Schneider Electric Science Applications International Corporation Shaw Environmental Group Summit Blue Consulting Tendril Networks Tetra Tech TRC Solutions Van Ness Feldman Verizon Weidt Group Willdan Willis Energy Services

#### NONPROFIT ORGANIZATIONS

Air Conditioning, Heating and Refrigeration Institute Alliance for Water Efficiency California Institute for Energy and Environment Center for Energy and Environment Collaborative Labeling and Appliance Standards Program Clean Wisconsin **CNT Energy** Fcos Energy Center of Wisconsin Energy Trust of Oregon Georgia Institute of Technology Geothermal Exchange Organization Greater Cincinnati Energy Alliance International Council on Clean Transportation International District Energy Association Institute for Electric Efficiency Institute for Industrial Productivity Institute for Market Transformation Iowa Energy Center Michigan Environmental Council National Electrical Manufacturers Association National Housing Trust National Wildlife Federation Natural Resources Defense Council North American Insulation Manufacturers Association Northwest Energy Efficiency Alliance PFCI Polyisocyanurate Insulation Manufacturers Association Pump Systems Matter Regulatory Assistance Project Southern Environmental Law Center Stanford University TopTen USA University of California Vermont Energy Investment Corporation

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