

ENERGY EFFICIENCY & RENEWABLE ENERGY RESOURCES

FOR STATE & LOCAL LEADERS



SUMMER 2019

U.S. DEPARTMENT OF
ENERGY

Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY

Energy efficiency and renewable energy are a **win-win** for state and local governments and K-12 schools.

Investments in energy efficiency and renewable energy technologies and infrastructure help create vibrant and healthy communities; provide a secure, reliable source of energy for homes and businesses; and produce well-paying local jobs. As key decision makers for American energy investments, state and local governments are valued partners to the U.S. Department of Energy (DOE). Energy innovations at the state and local level help power the nation's economy.

The Weatherization and Intergovernmental Programs Office (WIP) is part of DOE's **Office of Energy Efficiency and Renewable Energy** (EERE) and supports DOE's mission to create greater energy affordability, security, and resiliency. WIP's mission is to **enable strategic investments** in energy efficiency and renewable energy technologies using innovative practices across the United States in partnership with a wide range of stakeholders, including state and local organizations and community-based nonprofits. WIP supports DOE's strategic objective **to lower energy bills while expanding cost-effective energy choices** for all Americans through the Weatherization Assistance Program (WAP) and State Energy Program (SEP). For example:

- WAP has weatherized more than **7 million homes** and **annually supports 8,500 jobs** across the country. Through these weatherization improvements, households save an average of \$283 every year.
- States use SEP funds to implement their energy security, economic development, resiliency, and emergency preparedness plans. Since 2010, SEP has supported states in **reducing energy waste** in more than 38,800 public buildings (181 million square feet) through energy efficiency upgrades.

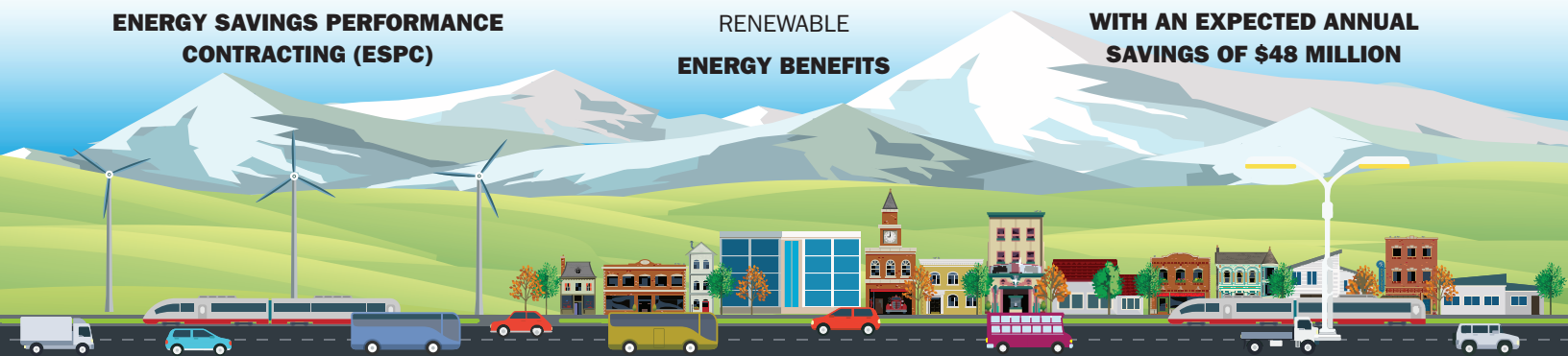
WIP also helps state and local governments meet their energy goals by **developing tools and solutions** to barriers; convening and creating peer exchanges to showcase public-sector leadership and effective private-public partnerships; and providing information from leading technical experts.

State and Local Leaders successfully leveraged resources to

ACHIEVE OVER
\$2 BILLION
IN PUBLIC-SECTOR ENERGY
EFFICIENCY INVESTMENTS VIA
**ENERGY SAVINGS PERFORMANCE
CONTRACTING (ESPC)**

COMMIT UP TO
\$335 MILLION
TO HELP LOW-INCOME HOUSEHOLDS
ACCESS ENERGY EFFICIENCY AND
RENEWABLE
ENERGY BENEFITS

ACHIEVE A COMMITMENT TO
UPGRADE
1.3 MILLION
STREET LIGHTS
**WITH AN EXPECTED ANNUAL
SAVINGS OF \$48 MILLION**



**Learn more:
ESPC Toolkit**

New Resource: Evaluating Results:
Three ESPC Measurement and
Verification Resources



**Learn more: Clean Energy for
Low Income Communities
Accelerator Toolkit**

New Resource: Reducing Energy
Burden for Low Income Residents in
Multifamily Housing with Solar Energy



**Learn more:
Outdoor Lighting Toolkit**

New Resource: Street Lighting
Acquisition Evaluation Tool

Visit the State and Local Solution Center to find resources with valuable lessons learned and replicable solutions.

energy.gov/EERE/SLSC

Take A Closer Look



Benchmarking Building Energy Use

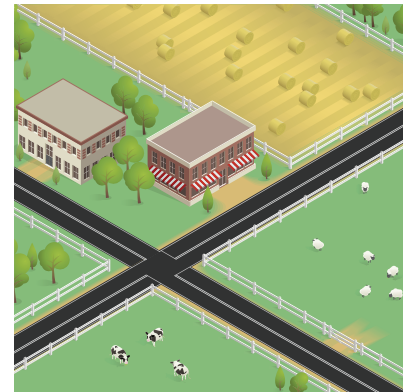
- Benchmarked buildings achieve average energy savings of 2.4% annually. Over 10 years, this results in cumulative energy savings of more than 20%
- **Potential energy cost savings for state and local governments are more than \$700 million per year**

Learn more and find resources: energy.gov/eere/slsc/benchmarking

Assisting Rural Communities

- Rural households spend on average 23% more annually than urban households on residential energy
- **Energy efficiency and distributed energy resources can reduce rural energy burden**

Learn more and find resources: energy.gov/eere/slsc/rural-resources



Supporting Sustainable Wastewater Infrastructure

- Water and wastewater treatment operating costs typically account for 30%-40% of annual municipal energy budgets
- **Upgrade projects in wastewater treatment facilities can reduce total facility energy consumption by up to 50%**

Learn more and find resources: energy.gov/eere/slsc/wastewater-infrastructure

WIP Project Map

This interactive project map allows users to click each state and open a new web page summarizing that state's SEP and WAP projects, recently published WIP success stories, and state-related Better Buildings initiatives.

Learn more and find resources: energy.gov/eere/wipo/weatherization-and-intergovernmental-program-office-projects-map

C-PACE Working Group

DOE is partnering with states, local governments, and market partners to improve access to Commercial Property Assessed Clean Energy (C-PACE) financing and drive \$60 million in investment for building energy improvements by 2022. The working group web page includes a Year in Review summary. Learn more and find resources:

energy.gov/eere/slsc/commercial-pace-working-group

Keep the Conversation Going

Subscribe to Updates: energy.gov/eere/slsc/subscribe

Explore Resources: energy.gov/eere/slsc/explore

Contact Us: stateandlocal@ee.doe.gov

Take Action

The State and Local Solution Center provides resources to support the energy priorities of states, local governments, and K-12 school districts. These resources, along with WIP activities, produce almost immediate results, saving taxpayer dollars, making full use of domestic energy resources, boosting local economic development, cutting energy waste, improving energy independence and security, and furthering the development of energy infrastructure. The resources are organized into four lead-by-example actions public sector leaders can take:



Develop an Energy Plan

The development of a long-term energy plan is a foundational step for establishing and meeting state and local energy objectives. Effective planning enables energy performance improvements, cost savings, job growth, and public health benefits for all.

Resources include:

- **Highlights of State and Local Planning for Energy Efficiency and Renewable Energy** – Features state and local government planning efforts that showcase model energy efficiency, renewable energy, and sustainable transportation technologies, along with promising practices across jurisdictions.
- **Low-Income Energy Affordability Data Tool** – Assists communities in program planning and making better energy policy decisions by improving their understanding of low-income household characteristics. It provides interactive state-, city-, and county-level graphs and data on low-income housing characteristics, fuel type, and average energy expenditure and burden.
- **Guide for Incorporating Energy Efficiency in State Energy Plans** – Provides guidance for incorporating energy efficiency into state plans and offers tips and examples at each stage in the energy-planning process. The Guide complements the National Association of State Energy Officials (NASEO) State Energy Planning Guidelines.
- **State-by-State Energy Efficiency Potential** – Shows economic energy efficiency potential in residential, commercial, and industrial buildings, plus a catalog of state and utility energy efficiency potential studies.



Design and Implement Energy Programs

State and local governments are uniquely positioned to identify and achieve their energy efficiency and renewable energy goals through programs leveraging their roles as both governing bodies and owners of facilities and infrastructure.

Resources include:

- **Energy Efficiency and Renewable Energy Resources for Rural K-12 School Energy Managers and Educators** – Provides resources and some best practices that can help rural states, local school administrators, school boards, and facilities personnel make prudent decisions regarding the use of operating funds, capital budgets, and other financing mechanisms for energy efficiency improvements as part of their master facilities management plan.
- **Low-Income Energy Burden Resource Summary** – Highlights important differences between electricity prices and energy burden, or the share of a household's income that is spent on energy, and how energy efficiency measures hold potential to reduce energy burden by eliminating energy waste in low-income households.
- **State Energy Program Implementation Models** – Describes state approaches to overcoming an energy barrier. Implementation models serve as “how-to” guides for other states who wish to replicate programs that are achieving energy efficiency savings.
- **Remote Alaskan Communities Energy Efficiency (RACEE) Competition** – Empowers remote Alaskan communities to develop reliable, affordable, and replicable solutions using energy efficiency and renewable energy technologies.



Pay For Energy Initiatives

An important component of a successful strategy is finding a way to pay for energy initiatives. Many state and local governments have found ways to use both innovative financing mechanisms and traditional finance tools to support their energy goals. Some mechanisms include bonding tools, loans, Energy Savings Performance Contracting (ESPC), Property Assessed Clean Energy (PACE), and on-bill financing.

Resources include:

- **Commercial PACE Financing and the Special Assessment Process: Understanding Roles and Managing Risks for Local Governments** – Addresses barriers facing local governments uncertain about creating or joining a commercial PACE program. The issue brief discusses division of responsibilities among local governments and third-party partners, as well as potential risks associated with commercial PACE programs and strategies for risk management.
- **Expanding ESPC to New Markets** – Introduces ESPC through a series of sector specific guides to increase energy efficiency and upgrade facilities in certain market sectors. Sector guides are available for K-12 schools, fleets and fueling infrastructure, and wastewater treatment facilities. Upcoming guides will address small projects, multifamily public housing, and hospitals.
- **Low-Income Energy Efficiency Financing Through On-Bill Tariffs** – Explains how utilities use on-bill tariffs to help all customers—including those with limited incomes—pay for energy efficiency improvements that save money and can be repaid over time on the utility bill for that meter.
- **Current Practices in Efficiency Financing: An Overview for State and Local Governments** – Presents guidance to state and local governments as they determine which financing programs best suit the needs of their communities.



Access and Use Energy Data

States, local governments, and school districts are using data-driven energy management to cut energy waste and realize associated cost savings. The average commercial building wastes 30% of the energy it consumes, so capturing even 20% of that wasted energy has the potential to save states and local governments nearly \$6 billion per year. Whether for a single building, campus, or across a portfolio of assets, effective energy management includes activities such as establishing an energy baseline, benchmarking, using energy data to identify savings opportunities, and measuring and verifying results.

Resources include:

- **Benchmarking and Transparency: Resources for State and Local Governments** – Provides state and local leaders with streamlined access to key existing resources for developing and implementing high-impact building energy benchmarking and transparency programs in their jurisdictions.
- **Energy Data Management Guide** – Presents a seven step framework for establishing a robust and sustainable energy data management program in the public sector—the foundation for strategic energy management.
- **Putting Data to Work** – Examines how data from building performance ordinances can deliver an array of benefits for local governments, energy efficiency service providers, utilities, and building owners.
- **Evaluation, Measurement, and Verification of Energy Data** – Offers a web portal that provides a variety of resources on evaluating the performance of energy efficiency activities.

Engaging with EERE

EERE's mission is to create and sustain American leadership in the transition to a global clean energy economy. Its vision is a strong and prosperous America powered by clean, affordable, and secure energy.

Examples of EERE initiatives and resources for state and local governments in the areas of energy efficiency, renewable energy, and sustainable transportation are shown below. To learn more, visit the State and Local Solution Center: energy.gov/eere/slsc/other-state-and-local-resources.

RENEWABLE POWER



SOLAR

SolSmart helps communities across the country become "open for solar businesses" through no-cost technical assistance and national recognition.



GEOTHERMAL

Regulatory and Permitting Information Desktop Toolkit is a suite of tools to facilitate efficient state and federal permitting of new geothermal, solar, and transmission projects.



WIND

WINDEXchange provides resources to help communities weigh the benefits and costs of wind energy and get data, analysis tools, and information about each step in the wind energy development process.



WATER

Hydropower Vision is a first-of-its-kind comprehensive analysis to evaluate future pathways for hydropower in the United States. It is focused on continued technical evolution, increased energy market value, and environmental sustainability.



GOVERNMENT

The WIP Project Map enables users to explore recent SEP and WAP projects, WIP success stories, and public-sector Better Buildings initiatives.



HOMES

Home Energy Score provides homeowners, homebuyers, and renters directly comparable and credible information about a home's estimated energy use. Like a miles-per-gallon rating for a car, the Home Energy Score is based on a standard assessment of energy-related assets to easily compare energy use across the housing market.



BUILDINGS

The Standard Energy Efficiency Data Platform streamlines the process for cities and states to manage and standardize portfolio-scale building energy and attribute data. Users can leverage, combine, clean, store, analyze, and share building performance, audit, and other relevant data using this open-source database.

The Zero Energy Schools Accelerator provides school districts with technical guidance and resources to help break down barriers to achieving zero net energy.



ADVANCED MANUFACTURING

The Industrial Assessment Centers Program provides small- and medium-sized manufacturers with no-cost energy assessments from local engineering universities, while also training the next generation of energy engineers.

SUSTAINABLE TRANSPORTATION



VEHICLES

Clean Cities coalitions bring together cities and other key stakeholders to drive the development and use of affordable domestic transportation fuels, technologies, and energy-efficient mobility solutions.



BIOENERGY

Integrated Biorefineries Interactive Map showcases biorefineries by state at pilot, demonstration, and pioneer scales.



HYDROGEN AND FUEL CELLS

H2@Scale is an initiative that brings together national labs and industry to enable large-scale hydrogen production, storage, and use across sectors.

EERE FUNDING opportunities are available at the EERE Exchange: eere-exchange.energy.gov.

For other federal funding opportunities, visit grants.gov.

BETTER BUILDINGS is a DOE initiative designed to improve the lives of the American people by driving leadership in energy innovation. Through Better Buildings, DOE partners with leaders in the public and private sectors to make the nation's homes, commercial buildings, and industrial plants more energy efficient by accelerating investment and sharing of successful best practices. For more information, visit betterbuildingsinitiative.energy.gov.

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