U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

STATE AND LOCAL RESOURCES FOR A CLEAN ENERGY FUTURE

Winter 2016

ENERGY EFFICIENCY AND RENEWABLE ENERGY is a win-win-win for state and local governments. Investing in clean energy creates **vibrant** and **healthy communities**, provides a **secure**, **reliable and resilient source of energy** for homes and businesses, and produces well-paying, local jobs. As centers for innovative policies and programs, **state and local governments are valued partners** to the Department of Energy (DOE). And they are critical to powering the nation's economic engine with clean energy.

One of DOE's primary forums for engaging state and local governments is the Office of Energy Efficiency and Renewable Energy's (EERE) **Weatherization and Intergovernmental Program Office** (WIP). WIP strategically coordinates with state and local leaders to accelerate the adoption of energy efficiency and renewable energy technologies and best practices. These partnerships help American communities, businesses, and industries overcome barriers to a viable clean energy economy. In particular, WIP is responsible for administering the **Weatherization Assistance Program** and the **State Energy Program**. WIP also helps state and local governments meet their energy goals by sharing resources, peer learning opportunities, and best practices on the **State and Local Solution Center**.

On the following pages, you will find resources organized into **four action areas**:

- **Develop a Clean Energy Plan**
- **Design and Implement Clean Energy Programs**
- **Pay for Clean Energy**
- **Access and Use Energy Data**

You will also find four targeted opportunities for impact in your jurisdiction, and information regarding initiatives and resources in the areas of **renewable power, sustainable transportation, and energy-saving homes, buildings, and manufacturing**.

Contact us

stateandlocal@ee.doe.gov

WIP.energy.gov/solutioncenter

TAKE A CLOSER LOOK

1 ENERGY SAVINGS PERFORMANCE CONTRACTING

Energy Savings Performance Contracting (ESPC) is a **budget-neutral** strategy that can help public sector organizations mobilize clean energy projects despite limited budgets. ESPC projects have the potential for significant energy savings:

- A typical ESPC project in the MUSH (municipalities, universities, schools, and hospitals) market **saves approximately 13% to 31% annually** compared to its baseline consumption
- Total estimated **annual energy savings potential** in the MUSH market: **199.5-262.3 trillion BTU**

More than 20 state and local partners are working closely with DOE to catalyze public sector **energy efficiency investments of $2 billion** and apply best practices to enhance energy savings performance contracts.

For more information on these efforts, visit http://energy.gov/eere/slsc/espc

2 BENCHMARKING AND TRANSPARENCY POLICIES AND PROGRAMS

Buildings account for **40 percent** of the total energy used in the U.S., and potential savings of about **$80 billion annually** in energy costs.

Benchmarking building energy use is the foundation of **smart energy management** and a **best practice** in the real estate industry. Benchmarking measures energy use of a building and compares its performance to similar buildings. This information helps building owners identify savings opportunities and track the results of their energy efficiency efforts over time.

State and local governments are increasingly benchmarking their own buildings as standard practice and **encouraging the private sector** to do the same through voluntary programs and mandatory policies. **Twenty-two** cities have recently **worked with their utilities and DOE** to develop best practice approaches for **streamlining data access** for benchmarking

For more information, visit http://energy.gov/eere/slsc/benchmarking

3 HIGH PERFORMANCE STREET AND OUTDOOR LIGHTING

Outdoor lighting **consumes a significant amount of energy—about 1.3 quadrillion Btu annually**—costing about **$10 billion per year**.

In the last five years, municipalities have switched to new LED technologies, which can **reduce energy costs by approximately 50%** over conventional lighting technologies and provide **additional savings of 20% to 40%** with advanced lighting controls.

In addition, LED lights reduce carbon emissions, reduce light pollution, and improve nighttime safety in public spaces.

To see tools DOE has developed to assist public and private organizations, visit http://energy.gov/eere/slsc/outdoor-lighting

4 ENERGY EFFICIENCY SAVINGS OPPORTUNITIES AND BENEFITS

Energy efficiency could **save** consumers and businesses **up to 1 billion MWh of electricity** by 2030, and bring cost savings, economic development, affordability, reliability, and other air quality and environmental benefits to the U.S. With these benefits, efficiency can be used to help meet state, local, and corporate climate and energy strategies, goals, and air regulations.

An important step for most energy efficiency planning efforts involves **identifying and quantifying savings opportunities**. DOE has developed numerous resources that show economic **energy efficiency potential nationally and state-by-state**, along with information that speaks to diverse audiences about the opportunities, and technical resources to support understanding the **energy and carbon savings from efficiency**.

To access these resources, visit http://energy.gov/eere/slsc/eeopportunities

KEEP THE *conversation* GOING

- Sign up to receive the State and Local Spotlight WIP.energy.gov/solutioncenter
- Explore resources on the State and Local Solution Center http://energy.gov/eere/slsc/explore
- Check out Federal Funding for State and Local Clean Energy Programs http://energy.gov/eere/wipo/federal-funding
- Register for upcoming State and Local webinars WIP.energy.gov/solutioncenter
- Contact us for additional information or assistance: stateandlocal@ee.doe.gov

WIP.energy.gov/solutioncenter

TAKE ACTION

The State and Local Solution Center provides resources to advance successful, high-impact clean energy policies, programs, and projects for states and local governments across the country. By championing state and local leadership, addressing specific market barriers, and promoting standardized approaches, the State and Local Solution Center aims to help states and local governments take clean energy to scale in their communities. The resources are organized into four actions leaders can take to accelerate the transition to a clean energy economy:

DEVELOP A CLEAN ENERGY PLAN

Developing a long-term blueprint toward a clean energy future is a critical planning measure that assures sound energy management and accelerates the transition to a clean energy economy. Available resources include:

- NASEO Statewide Comprehensive Energy Plans – Energy plans from 38 states and DC establish a baseline of energy planning processes, plan elements, and market implications.
- Guide to Community Energy Strategic Planning – Introduces a step-by-step process for creating a robust strategic energy plan for your government and community that can help save money, create local jobs, and improve our national security.
- Implementation Model: Municipal Action Plan for Sustainability in Cleveland – See a local energy plan with proven results.

DESIGN AND IMPLEMENT CLEAN ENERGY PROGRAMS

State and local governments are uniquely positioned to advance clean energy goals through programs that leverage their roles as both facility/infrastructure owners and governing authorities. This section provides states and local governments with resources for designing and implementing effective clean energy programs to help achieve the goals put forth in their strategic energy plans. Available resources include:

- Energy Audits and Retrocommissioning: State and Local Policy Design Guide and Sample Policy Language – Provides guidance and sample policy language to help state and local governments enact and implement policies addressing energy assessments of or improvements to existing commercial buildings.
- Operations and Maintenance Best Practices: A Guide to Achieving Operational Efficiency – Highlights O&M programs targeting energy and water efficiency that are estimated to save 5% to 20% on energy bills.
- Implementation Model: North Carolina's Utility Savings Initiative – Outlines how the State of North Carolina designed and implemented a comprehensive energy and water management program.

Solution Center: **WIP.energy.gov/solutioncenter**

PAY FOR CLEAN ENERGY

An important component of a clean energy strategy is finding a way to pay for key energy initiatives. Many state and local governments have found ways to use both innovative financing mechanisms as well as traditional finance tools to support their strategic energy goals. Some of these mechanisms include bonding tools, Energy Savings Performance Contracting, on-bill finance, and PACE, among others. Available resources include:

- Implementation Model: Milwaukee's Property Assessed Clean Energy (PACE) Program – Details Milwaukee's policy, planning and partnership efforts to set up their PACE program.
- Energy Investment Partnerships: How State and Local Governments are Engaging Private Capital to Drive Clean Energy Investment – Outlines how state and local governments have created partnerships to leverage private funds to invest in the jurisdictions' clean energy goals.
- State and Local Energy Efficiency Action Network-Credit Enhancement Overview Guide – Provides considerations for state and local policymakers and energy efficiency program administrators designing and implementing successful credit enhancement strategies for residential and commercial buildings.

ACCESS AND USE ENERGY DATA

Whether for a single building, campus, or municipality, any energy efficiency improvement or energy data management program should include activities such as benchmarking, establishing an energy baseline, and verifying and measuring results to identify impacts and effectiveness. The foundation for all of those actions is having access to your energy data. Available resources include:

- Benchmarking and Transparency Policy and Program Impact Evaluation Handbook - Provides both a strategic planning framework and standard methodologies to determine the energy and non-energy benefits of benchmarking and transparency policies and programs.
- Fact Sheet: Benefits of Evaluation, Measurement, and Verification – Summarizes the benefits of performing evaluation, measurement, and verification activities.
- A Utility Regulator's Guide to Data Access for Commercial Building Energy Performance Benchmarking – Offers policy options and considerations to state utility commissions in providing access to energy use data to help commercial customers manage energy costs through building energy benchmarking.

ENGAGING WITH EERE

The Office of Energy Efficiency and Renewable Energy (EERE) works with states and local governments to accelerate deployment of energy efficiency, renewable energy, and sustainable transportation technologies and market-based solutions. States and local governments can draw on EERE's education and workforce development activities to build a technical staff to support market deployment and enhance economic vitality.

EERE cross-cutting initiatives such as the Better Buildings Initiative, SEE-Action Network, and Cities-LEAP provide state and local decision-makers technical assistance and resources to lead in clean energy innovation.

Below are a few examples of EERE initiatives and resources for state and local governments in the areas of energy efficiency, renewable energy, and sustainable transportation. To learn more about these areas and other opportunities, visit the State and Local Solution Center.

RENEWABLE POWER

SOLAR

- Race to 7-Day Solar is a competition to slash the time it takes to go solar by 75% by motivating communities, solar companies, and utilities to work together to streamline the process.

GEOTHERMAL

- Regulatory and Permitting Information Desktop Toolkit for Geothermal is a suite of tools to facilitate efficient permitting of new geothermal projects at the federal, state, and local levels.

WIND

- WINDExchange is a hub that helps communities weigh the benefits and costs of wind energy, understand the deployment process, and make wind development decisions.

WATER

- Water Power Resource Assessment and Characterization webpage offers reports and maps that assess the technically recoverable energy available in the nation's waterways and oceans.

ENERGY-SAVING HOMES, BUILDINGS, & MANUFACTURING

BUILDINGS

- Standard Energy Efficiency Data Platform allows cities and states to streamline the complex process of standardizing disparate building energy data. Users can combine, clean, store, compare, and share large amounts of building data from multiple sources using this free open source database.

HOMES

- Home Energy Score is a national standardized tool that state and local governments can use to collect building energy-related metrics to inform energy goals and milestones, demonstrate sustainability leadership, and guide energy-related investments.

ADVANCED MANUFACTURING

- Industrial Assessment Centers provide no-cost technical assistance to small- and medium-sized municipal waste and water utilities by helping them identify ways to reduce energy and water use and increase productivity.

SUSTAINABLE TRANSPORTATION

VEHICLES

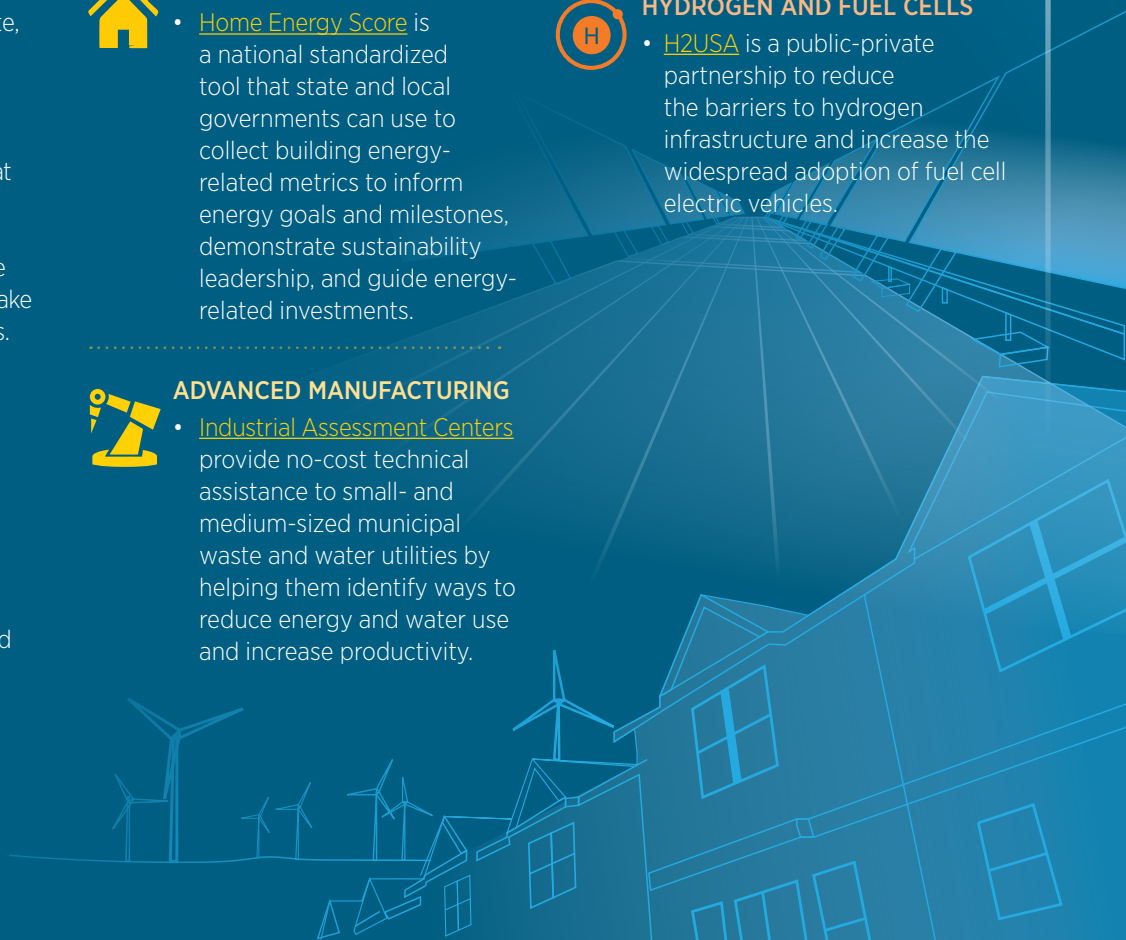
- Clean Cities supports public-private coalitions dedicated to minimizing petroleum use in transportation.

BIOENERGY

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

HYDROGEN AND FUEL CELLS

- H2USA is a public-private partnership to reduce the barriers to hydrogen infrastructure and increase the widespread adoption of fuel cell electric vehicles.



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