



# ENERGY EFFICIENCY AND RENEWABLE ENERGY IN LOW-INCOME COMMUNITIES

## A GUIDE TO EPA PROGRAMS



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# Introduction

Investing in energy efficiency, renewable energy, and climate protection programs is an important way for state and local governments to provide a variety of benefits to low-income communities, including energy cost savings, job creation, improved air quality, and healthier homes.

This guide is designed to help state and local governments connect with EPA programs that can help them expand or develop their own energy efficiency/renewable energy (EE/RE) and climate initiatives in ways that benefit low-income communities.

The guide can also be used by low-income community leaders and stakeholder groups to understand better how they might take advantage of the EPA programs described here to bring the environmental, economic, and quality of life benefits of EE/RE and climate protection measures to their communities.

The program profiles are grouped according to the following general program types:

- Combined Heat and Power
- Energy Efficiency
- Policy and Planning
- Renewable Energy
- Smart Growth
- Water

Each profile includes the following sections:

- Basic information and contact details
- Relevant target sectors/audiences
- Services/assistance offered
- Value to low-income communities
- Suggested actions a state or local government could take
- Tools and resources

## [Bringing the Benefits of Energy Efficiency and Renewable Energy to Low-Income Communities: Additional Resources](#)

In addition to this guide, EPA is developing a series of case studies and webinars to highlight effective efforts by state and local agencies, non-profits, and utilities to bring EE/RE to low-income households.

The case studies and webinars, which will be available on EPA's [State and Local Climate and Energy](#) website, highlight proven, practical, scalable, replicable, and sustainable programs and policies, focusing on how they overcame common barriers to successful implementation.

In August 2015, the White House released a [guide to federal programs and activities to support EE/RE in low- and moderate-income communities](#). (PDF, 10 pp, 323 K). This guide expands upon the EPA programs included in the White House guide.

## Getting Started

Use the “Program Finder” table as a starting point to identify those programs that reach the sectors and audiences of interest to your organization.

Refer to the “Value to Low-Income Communities” and “Possible State and Local Actions” sections of each program profile for ideas on how to help bring the benefits of each program to low-income households.

Contact information is included in each program profile. If, after reading this guide, you have any questions about getting started, please contact the [State and Local Climate and Energy Program](#).

**Please note:** This document contains Internet addresses that were current when the document was produced (December 2015), but addresses may change over time. To stay informed of updates to this guide and to learn about other EPA EE/RE and climate materials and tools, please sign up for EPA’s [State and Local Climate and Energy Newsletter](#).

# Program Finder

The Program Finder table below shows which programs could be used to reach nine relevant sectors and audiences.

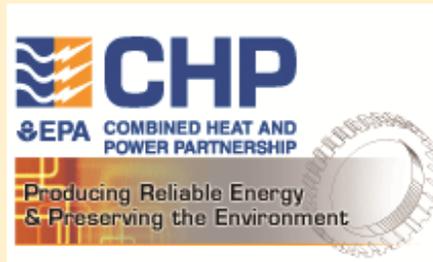
EPA Program (alphabetical order)	Agriculture	Commercial	Education	Government	Industry	Public	Real Estate Development	Residential	Utility/Program Administrators
Combined Heat and Power Partnership (p.6)	X	X	X	X	X		X		X
ENERGY STAR® (p. 9)	X	X	X	X	X	X	X	X	X
Green Power Partnership (p. 24)	X	X	X	X	X		X		
Heat Island Reduction Program (p. 15)		X	X	X		X	X	X	
Local Climate and Energy Program (p. 18)				X					
Smart Growth Program (p. 30)		X	X	X		X	X	X	X
RE-Powering America's Land (p. 27)		X	X	X	X		X	X	X
State Climate and Energy Program (p. 21)				X					
WaterSense (p. 34)		X	X	X		X	X	X	X

# Combined Heat and Power

## Combined Heat and Power Partnership

### Services Offered

- Analytical tools
- Matching buyers and sellers
- Professional networking
- Public recognition
- Technical assistance
- Training



### Relevant Sectors

- Agricultural
- Commercial
- Education
- Government
- Industry
- Real Estate Development
- Utility/Program Administrators

### Website

[www.epa.gov/chp](http://www.epa.gov/chp)

### Contact

CHP Partnership  
(703) 373-8108  
[chp@epa.gov](mailto:chp@epa.gov)

## Description

Typically, nearly two-thirds of the energy used to generate electricity is wasted in the form of heat discharged to the atmosphere. Additional energy is wasted during the distribution of electricity to end users. CHP is on-site electricity generation that captures the heat that would otherwise be wasted to provide useful thermal energy—such as steam or hot water—which can be used for space heating, cooling, domestic hot water and industrial processes. In this way, and by avoiding distribution losses, CHP can achieve efficiencies of over 80 percent, compared to 50 percent for conventional technologies (i.e., grid-supplied electricity and an on-site boiler).

## Services

The Partnership works with companies and organizations operating in the United States and its territories to promote the economic, environmental, and reliability benefits of CHP and provides tools and services to support development of new CHP capacity, such as the [Catalog of CHP Technologies](#), the [CHP Emissions Calculator](#), and a [database](#) of state and federal policies, funding opportunities and financial incentives. The program also provides public recognition for superior projects, and training through webinars and conferences.

## Value to Low-Income Communities

State and local governments can encourage public housing authorities and other developers and operators of low-income housing to incorporate CHP in new buildings when cost-effective, and to consider CHP retrofits when existing buildings require replacement of boilers or other heating, ventilation, and air conditioning equipment. The use of CHP can improve the reliability and efficiency of these systems, which in turn can reduce energy costs for building owners and residents.

## Possible State and Local Actions

- Implement policies that support the development of CHP at multifamily housing and community facilities.
- Provide incentives/rebates for the development of CHP projects (e.g., as in Connecticut, New Jersey, and California).
- Use State Revolving Fund money to fund the installation of CHP systems at wastewater treatment systems where they can use captured biogas as free fuel.
- Remove policy barriers that impede the development of CHP projects (e.g., standby utility rates, restrictions on electricity sales, and input-based emissions regulations).
- Develop an outreach campaign to promote CHP.
- Create CHP goals and targets as part of climate and energy plans.
- Allow CHP as an eligible resource under a renewable or energy efficiency portfolio standard.

## Tools/Resources

- [Catalog of CHP Technologies](#)

Provides an overview of how CHP systems work and the key concepts of efficiency and power-to-heat

ratios. It also provides information about the cost and performance characteristics of the principal commercially available CHP prime movers.

- [CHP Emissions Calculator](#)

Calculates the difference between the anticipated carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur dioxide (SO<sub>2</sub>), and nitrogen oxide (NO<sub>x</sub>) emissions from a CHP system to those of a separate heat and power system. The calculator also presents estimated emissions reductions as metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) and emissions from passenger vehicles.

- [dCHPP \(CHP policies and incentives database\)](#)

An online database that allows users to search for CHP policies and incentives by state or at the federal level.

# Energy Efficiency

## ENERGY STAR®

### Services Offered

- Analytical tools
- Awards and public recognition
- Environmental performance benchmarking
- Guidebooks/toolkits
- Marketing and sales tools and resources
- Professional networking
- Program planning assistance
- Technical support
- Training and webinars



### Relevant Sectors

- Commercial
- Education
- Government
- Industry
- Public
- Real estate development
- Residential (including owners, builders, service providers, etc.)
- Utility/Program Administrators

### Website

[www.energystar.gov](http://www.energystar.gov)

## Contact

[https://www.energystar.gov/about/contact\\_us?s=footer](https://www.energystar.gov/about/contact_us?s=footer)

## Description

ENERGY STAR is a U.S. EPA voluntary program that helps businesses and individuals save money and protect the climate through superior energy efficiency. ENERGY STAR includes a broad range of 16,000 partners across every sector of the economy, from manufacturers and trade associations, to retailers and efficiency program providers, to home builders and small businesses. ENERGY STAR represents products in more than 70 different categories, with more than 4.8 billion sold since 1992. More than 1.6 million new homes and more than 22,000 facilities carry the ENERGY STAR certification.

State and local governments can use ENERGY STAR as a platform for helping low-income communities benefit from energy efficiency in multiple ways, such as described below under “Possible State and Local Actions.”

## Services

ENERGY STAR offers a number of programs and services that can provide value to low-income communities.

- *ENERGY STAR for Commercial Buildings:* EPA works with businesses and institutions to make strategic energy management a standard part of organizational management. Building owners and facility managers use EPA tools to benchmark their energy and water use, set goals for improvement, develop action plans, measure success, communicate, and gain recognition for energy performance accomplishments. Top-performing buildings such as hospitals, hotels, office buildings, retailers, schools, grocery stores, warehouses, banks, and courthouses can earn ENERGY STAR certification using EPA’s [ENERGY STAR Portfolio Manager](#)<sup>®</sup> tool. EPA offers live Web conferences and pre-recorded online trainings. Website: [www.energystar.gov/buildings](http://www.energystar.gov/buildings)
- *ENERGY STAR for Congregations:* ENERGY STAR has been deeply engaged with the faith community since the mid-1990s, working with individual congregations, denominations, and interfaith organizations to save money through improved energy efficiency in their buildings, while also reducing greenhouse gas emissions. Like most commercial facilities, houses of worship (and religious schools, hospitals, etc.) can reduce energy costs and greenhouse gas emissions significantly with help from ENERGY STAR’s free information, tools, training and tech support for strategic energy management. Website: [www.energystar.gov/congregations](http://www.energystar.gov/congregations)
- *ENERGY STAR for Industry:* ENERGY STAR works collaboratively with manufacturing sectors to provide energy management direction, support, and tools to industrial companies as they build and refine energy management programs, reduce energy costs and carbon emissions, and improve competitiveness. ENERGY STAR offers road-tested resources, tools, benchmarks, and guidance to help companies establish energy programs that continuously improve energy efficiency. No-cost tools guide the development and refinement of energy management systems, achievement of greenhouse gas emission reduction goals, and definition of energy efficiency pathways for manufacturing operations. Specialized tools and information are available for more than 30 industrial sectors. ENERGY STAR also has energy management resources catered specifically for small and medium manufacturers. Website: [www.energystar.gov/industry](http://www.energystar.gov/industry)

- *ENERGY STAR Products*: EPA works with stakeholders—including manufacturers, trade associations, utilities, and energy and environmental advocates—to develop performance specifications for ENERGY STAR products that deliver significant energy savings. Manufacturers submit products for third-party certification based on testing in an EPA-recognized laboratory. EPA provides the ENERGY STAR logo, national campaigns, consumer education, marketing resources, training materials and a sophisticated product database. Website: [www.energystar.gov/products](http://www.energystar.gov/products)
- *ENERGY STAR Residential*:
  - ENERGY STAR Residential offers free, online tools to help homeowners assess their homes' energy efficiency. The [ENERGY STAR Home Energy Yardstick](#) provides a simple assessment of a home's annual energy use compared to similar homes, and the Home Energy Advisor assesses a home's energy use and provides customized recommendations to help reduce utility bills and improve comfort.
  - Home Performance with ENERGY STAR (HPwES), administered by DOE in conjunction with the EPA, offers a comprehensive, systematic approach to improving energy efficiency and comfort. HPwES is managed by a local sponsor that recruits, trains, and provides quality assurance over home improvement contractors who deliver comprehensive home energy assessments and efficiency installations.
  - Homes eligible to earn the ENERGY STAR label include single-family, low- and high-rise multifamily, as well as modular and manufactured homes. All homes that earn the ENERGY STAR label must meet stringent requirements for energy efficiency set by EPA. Websites: [www.energystar.gov/homeimprovement](http://www.energystar.gov/homeimprovement), [www.energystar.gov/homeperformance](http://www.energystar.gov/homeperformance), [www.energystar.gov/homes](http://www.energystar.gov/homes)
- *ENERGY STAR for Small Businesses*: ENERGY STAR assists small businesses and their trade and business associations, helping to improve their bottom line through energy efficiency while reducing greenhouse gas emissions. ENERGY STAR's tools and resources can help small businesses achieve the same energy and dollar savings, per square foot, as America's largest corporations. Website: [www.energystar.gov/smallbiz](http://www.energystar.gov/smallbiz)

## Value to Low-Income Communities

Energy efficiency improvements using ENERGY STAR products, targeted to lower income customers, can help reduce their electricity bills, improve health and safety conditions where they live and work, give them new job opportunities, and help to grow their local economies. They can also help low-income households retain more of their income and use it for other essentials such as education, health care, and home ownership.

Designing and constructing homes in low-income communities to be energy efficient helps residents save money on energy bills and can create local jobs. New ENERGY STAR certified homes are designed and constructed with comprehensive and integrated energy efficient systems and features. These homes also provide low-income residents with non-monetary benefits such as improved comfort and indoor air. And because ENERGY STAR certified homes cost less to operate, they provide low-income families a greater opportunity for home ownership.

Energy efficiency can help businesses—large and small—reduce costs, be competitive and profitable, and create and retain jobs in underserved communities. According to the U.S. Small Business Administration, America’s small businesses created nearly 2 million of the roughly 3 million private-sector jobs generated in 2014. Small businesses are likely to employ higher numbers of individuals with low educational attainment.

ENERGY STAR’s tools and resources can help faith communities achieve significant utility savings in their facilities. These funds can be redirected to their community mission, which typically includes programs and assistance to residents in low-income or overburdened communities. Congregational teams can also use ENERGY STAR tools, training and tech support to help people in their communities lower their utility costs and improve comfort for in their homes.

Many manufacturing plants are located within or near low-income communities. Air pollution from these plants can increase incidences of asthma and other respiratory illnesses. Energy efficiency is one of the lowest-cost and lowest-risk strategies both for governments seeking to control industrial pollution and for manufacturers looking to reduce their environmental footprint. Energy-efficient plants may be more competitive than less efficient sites, and potentially able to invest cost savings from energy efficiency in jobs at the site.

## Possible State and Local Actions

- Provide incentives for or require new public housing to be ENERGY STAR certified.
- Evaluate the cost-effectiveness of requiring or incentivizing energy efficiency improvements in housing grant programs.
- Develop approaches that improve access for small affordable housing owners and housing agencies to comprehensive energy services.
- Leverage ENERGY STAR tools to help improve accountability and reporting of savings tied to state and local energy program assistance.
- If an HPwES program exists in your state, enhance current incentives, marketing, financing, and training to target low-income communities.
- Encourage/provide incentives to the residential, commercial, and industrial sectors to purchase ENERGY STAR certified products (e.g., through rebate or coupon programs).
- Partner with local community associations to distribute ENERGY STAR products, such as energy efficient light bulbs, at public events, or directly to low income communities.
- Adopt policies that encourage benchmarking and disclosure for public and privately owned buildings.
- Leverage ENERGY STAR communications resources and partner with local organizations to celebrate successes and promote energy efficiency throughout the community.
- Guide local industrial plants to evaluate energy use, set baselines and goals with ENERGY STAR’s Challenge for Industry, and develop an energy savings program as part of conditions for receiving assistance, rebates, or grants. (ENERGY STAR offers tools to help companies track energy use and set goals.)

## Tools/Resources

- [Directory of Energy Efficiency Programs](#)  
Identifies organizations in each state that sponsor energy efficiency programs and that are partnered with ENERGY STAR.
- [Energy Efficiency Resources for State and Utility Programs](#)  
Targeted tools that can assist states and utilities in identifying opportunities for energy efficiency in industrial sectors.
- [ENERGY STAR Action Workbook for Congregations](#)  
A resource and planning guide for clergy, facility managers, business administrators, and congregational members.
- [ENERGY STAR Certified Homes Partner Locator](#)  
Identifies local builders who construct ENERGY STAR certified homes as well as Home Energy Raters and incentive programs.
- [ENERGY STAR Home Advisor](#)  
A tool designed to help homeowners improve their home's efficiency while adding comfort and value.
- [ENERGY STAR Challenge for Industry](#)  
Helps manufacturing sites set an easy energy reduction goal and achieve it.
- [ENERGY STAR Product Finder](#)  
Allows users to find product models that have earned the ENERGY STAR and compare features, savings and more.
- [ENERGY STAR Purchasing and Procurement Guidelines](#)  
Assists procurement officials in smart purchasing decisions; online training and case studies are also available.
- [Financial Resources](#)  
Strategies and incentives to finance energy efficiency projects.
- [Find Rebates for ENERGY STAR Certified Products](#)  
Searchable database of sales tax exemptions or credits, rebates, and other incentives from ENERGY STAR partners. Also see the [Database of Incentives and Joint Marketing Exchange](#) and the [list of federal tax credits](#).
- [Guidelines for Energy Management](#)  
Guidance on how to build an energy management program, based on the successful practices of ENERGY STAR partners.
- [Home Energy Yardstick](#)  
Allows homeowners to compare household energy use with others across the country and get recommendations for improvement; can be hosted on a state or local government website.
- [Industrial Energy Management Information Center](#)  
Contains energy savings information focused on specific industry sectors, plant utilities and process improvements.

- [My ENERGY STAR](#)  
Provides a personalized page for homeowners to track their actions and impacts, and discover special deals.
- [Portfolio Manager](#)  
Allows users to assess and track energy and water consumption within individual buildings as well as across an entire building portfolio.
- [Rapid Deployment Energy Efficiency \(RDEE\) Toolkit](#)  
Provides detailed program design and implementation guides for 10 broadly applicable energy efficiency programs.
- [Resources for ENERGY STAR Partners](#)  
Includes marketing, technical, and training/educational resources.
- [Service and Product Provider Directory](#)  
Locates companies that can help identify, prioritize, and implement quality projects that will improve total energy management.
- [Target Finder](#)  
Helps architects and building owners set aggressive, realistic energy targets and rate a building design's estimated energy use.

# Policy and Planning

## Heat Island Reduction Program

### Services Offered

- Guidebooks/toolkits
- Newsletter
- Technical assistance
- Webcasts

### Relevant Sectors

- Academic
- Commercial
- Government
- Public
- Real Estate Development
- Residential



## Website

[www2.epa.gov/heat-islands](http://www2.epa.gov/heat-islands)

## Contact

Victoria Ludwig  
(202) 343-9291  
[ludwig.victoria@epa.gov](mailto:ludwig.victoria@epa.gov)

## Description

This program helps create cooler communities and reduce the heat island effect by sharing information about heat island impacts, mitigation benefits, and policy advancements with state and local decision-makers and program implementers, the research community, industry, and the general public.

## Services

This program helps communities by providing valuable information about heat island science, impacts, and mitigation strategies. The program also provides tools and resources that support community action, including regular online news updates, webcasts with leading experts in the field, and regular email announcements on heat island topics.

## Value to Low-Income Communities

Elevated temperatures from urban heat islands, particularly during the summer, can affect people's health and quality of life, and a community's environmental quality. People in low-income areas can be especially vulnerable to these impacts due to limited tree canopy, lack of air conditioning and small living spaces, and limited access to health services. By taking action to reduce the heat island effect, local governments can achieve multiple goals that benefit low-income communities, including:

- Lower energy costs for residents and businesses
- Increased local economic development
- Improved public health and quality of life (e.g., fewer respiratory and heat-related illnesses)
- Better environmental conditions (e.g., less air and carbon pollution, reduced stormwater runoff)
- Increased community resilience to climate change impacts

## Possible State and Local Actions

- Implement heat island reduction strategies in low-income areas that increase the use of trees and vegetation, green roofs, cool reflective roofs, and cool pavements, in order to reduce air and surface temperatures.
- Integrate mitigation strategies into low-income communities through voluntary efforts such as demonstration projects, incentive programs, weatherization, urban forestry efforts, outreach, education, and awards.
- Include mitigation strategies in local and state policy and regulatory actions such as procurement, resolutions, ordinances, action plans, community design guidelines, zoning codes, building standards and codes, and regional air quality planning. Customize such actions for application in low-income communities.

## Tools/Resources

- [Heat Island Community Action Database](#)  
Provides examples of local and statewide initiatives to reduce heat islands and achieve related energy, air quality, human health, and water quality benefits, including those targeted to benefit vulnerable low-income communities. Each entry in the database includes a description of the activity, its current status, and a link to a website for more information.
- [Heat Island Newsletter](#)  
This periodic newsletter, distributed by email, provides announcements of funding opportunities, webcasts, publications, and events of interest to the heat island community.

- [Heat Island Webcasts](#)

Webcasts showcase the latest science and implementation activities, and highlight upcoming meetings related to heat island science, mitigation strategies, and public health impacts.

- [Reducing Urban Heat Islands: Compendium of Strategies](#)

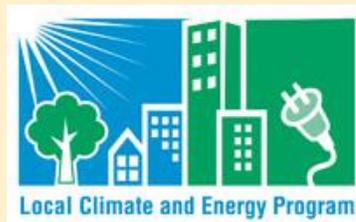
Describes the causes and impacts of summertime urban heat islands and promotes key strategies for lowering temperatures. The last chapter describes a range of voluntary and policy efforts undertaken by state and local governments to mitigate urban heat islands.

# Policy and Planning

## Local Climate and Energy Program

### Services Offered

- Analytical tools
- Guidebooks/Resources
- Newsletter
- Technical assistance
- Webcasts



### Relevant Sectors

- Government

## Website

[www3.epa.gov/statelocalclimate](http://www3.epa.gov/statelocalclimate)

## Contact

Andrea Denny  
(202) 343-9268  
[denny.andrea@epa.gov](mailto:denny.andrea@epa.gov)

## Description

This program helps local governments (including cities and towns, counties, regional governments, Tribes and U.S. territories) meet sustainability goals with cost-effective climate change and EE/RE strategies.

## Services

This program coordinates among federal, state, and non-governmental programs to provide comprehensive planning, policy, technical, and analytical information resources for municipal governments. Key resources include: the [Local Government Climate and Energy Strategy Series](#), which includes documents on energy efficiency, transportation, community planning and design, solid waste and materials management, and renewable energy; the [Local Climate Action Framework](#), a comprehensive, step-by step website that guides local governments through the process of designing,

implementing, and evaluating climate and energy programs; regular webcasts on topical issues; newsletters on training and funding opportunities, new tools and other resources; and the Climate Showcase Communities program.

## Value to Low-Income Communities

By implementing EE/RE strategies, local governments can reduce greenhouse gas emissions and achieve multiple community goals such as lowering energy costs; supporting local economic development; improving people's health and quality of life; and strengthening community resilience to climate change impacts.

## Possible Local Actions

- Review and evaluate EPA resources on local best practices to help set goals, select policies, and obtain funding for projects that help low-income neighborhoods.
- Read through the Climate Showcase Communities projects and replicate one that is a good fit for your community and sustainability goals.
- Implement cost-effective practices within government operations to redirect energy expenditures toward services.
- Engage low-income community members through education campaigns, demonstration projects, and community events to help them tap into available federal, state, and utility incentives.
- Develop EE/RE job-training programs that help create employment opportunities while also increasing local use of energy efficiency and renewable energy.

## Tools/Resources

### [Climate Showcase Communities](#)

This program supported 50 pilot communities that created replicable models of cost-effective and persistent greenhouse gas reductions. By sharing their successes and lessons learned, the program encourages and supports replication across the country. Many of these projects served low-income residents or could be adapted for deployment in vulnerable neighborhoods. Possible model projects include:

- [Advancing Greenhouse Gas Reductions through Affordable Housing; James City County, VA](#)
- [Community Energy Program; Santa Ynez Band of Chumash Indians, CA](#)
- [Cold Climate Energy Solutions; Duluth, MN](#)
- [Energy Smart Homes; Greenfield, MA](#)
- [Greenhouse Gas Reductions for Marginalized Communities; Honolulu, HI](#)
- [Healthy Energy Living Project; Choctaw Nation, OK](#)
- [Home Energy Affordability Loan Program; Little Rock, AR](#)
- [Non-Profit Greenhouse Gas Reduction Program; Baltimore, MD](#)
- [Re-energizing Our Urban Community; Aiken, SC](#)

- [Smart Trips; Eugene, OR](#)
- [Local Climate and Energy Webcasts](#)  
Webcasts provide access to experts, case studies, and training on successful strategies for promoting climate change mitigation and adaptation at the local level.
- [Local Government Climate and Energy Strategy Series](#)  
Documents in this series provide a comprehensive, straightforward overview of various greenhouse gas emissions reduction strategies that local governments can employ.

## Energy Efficiency

- [Energy Efficiency in Local Government Operations \(PDF\)](#)
- [Energy Efficiency in K-12 Schools \(PDF\)](#)
- [Energy Efficiency in Affordable Housing \(PDF\)](#)
- [Energy-Efficient Product Procurement \(PDF\)](#)
- [Combined Heat and Power \(PDF\)](#)
- [Energy Efficiency in Water and Wastewater Facilities \(PDF\)](#)

## Transportation

- [Transportation Control Measures \(PDF\)](#)

## Community Planning and Design

- [Smart Growth \(PDF\)](#)

## Solid Waste and Materials Management

- [Resource Conservation and Recovery \(PDF\)](#)

## Renewable Energy

- [Green Power Procurement \(PDF\)](#)
- [On-Site Renewable Energy Generation \(PDF\)](#)
- [Landfill Gas to Energy \(PDF\)](#)

# Policy and Planning

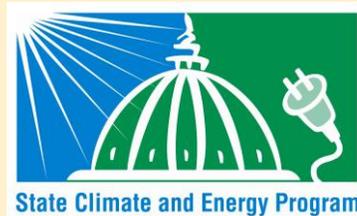
## State Climate and Energy Program

### Services Offered

- Analytical tools
- Guidebooks/toolkits
- Technical assistance

### Relevant Sectors

- Government



### Website

[www3.epa.gov/statelocalclimate](http://www3.epa.gov/statelocalclimate)

### Contact

Denise Mulholland  
(202) 343-9274

[mulholland.denise@epa.gov](mailto:mulholland.denise@epa.gov)

### Description

This program helps states develop and analyze energy efficiency and renewable energy policies and programs that reduce greenhouse gas emissions, lower energy costs, improve air quality and public health, and achieve economic development goals, and provides technical assistance to support state use of energy efficiency and renewable energy to comply with EPA air regulations. The State Climate and Energy Program advises states on proven, cost-effective best practices via guidance, analytical tools and data, webcasts, and newsletters.

## Services

Specific assistance includes:

- Identifying cost-effective state policies and initiatives that advance renewable energy, energy efficiency, and related technologies.
- Measuring and evaluating the environmental, energy, economic, and public health benefits of energy efficiency and renewable energy initiatives.
- Providing technical assistance to states on effectively using energy efficiency and renewable energy to comply with EPA regulations.
- Hosting webcasts that allow state staff to share information on best practices and innovative policies.

## Value to Low-Income Communities

EE/RE and climate protection programs and policies sponsored by state government agencies can achieve multiple goals that benefit low-income communities throughout the state, including lowering energy costs for residents and businesses, supporting economic development, improving people's health and quality of life, and strengthening the state's resilience to climate change impacts.

## Possible State Actions

- Develop state energy efficiency and renewable energy policies and programs that can save energy, lower electricity bills, create jobs, and reduce greenhouse gas emissions using EPA's tools and resources.
- Analyze and communicate the projected policy and program impacts and associated co-benefits, including air, health, energy, and economic benefits.
- Evaluate, measure, and verify results once policies or programs are in place.
- Develop an inventory of greenhouse gas emissions to establish a baseline and identify sectors or sources for targeted reduction efforts.

## Tools/Resources

### Guidance

- [Assessing the Multiple Benefits of Clean Energy: A Resource for States](#)  
Provides information about the energy, air, health, and economic benefits of EE/RE and the methods and tools available—including their strengths, limitations, and appropriate uses—to estimate them .
- [Clean Energy Lead by Example Guide](#)  
Provides guidance for states in establishing programs that achieve substantial energy cost savings within their own buildings and operations.
- [Energy-Environment Guide to Action: State Policies and Best Practices for Advancing Energy Efficiency, Combined Heat and Power, and Renewable Energy](#)  
Presents 16 best practices that states have used to develop EE/RE programs and policies.
- [State Climate and Energy Webcasts](#)  
Presents analytical questions to resolve key issues surrounding state climate and EE/RE efforts.

Participants include state energy, environmental, and utility staff. Papers and presentations from past calls are available.

- [Steps for States: Addressing Climate Change](#)

Provides an action framework states can consider when deciding the best approach for addressing their own climate change risks and reducing state greenhouse gas emissions with increased use of energy efficiency and renewable energy.

## Tools

- [AVoided Emissions and geneRation Tool \(AVERT\)](#)

Evaluates county, state and regional emissions displaced at electric power plants by energy efficiency and renewable energy policies and programs.

- [Clean Energy Financing Program Decision Tool](#)

Help state staff identify EE/RE financing programs suited to their jurisdiction's specific needs.

- [Co-Benefits Risk Assessment \(COBRA\) Tool](#)

Estimates the impact of air quality improvements on public health and the economic value of the health benefits.

- [Greenhouse Gas Equivalencies Calculator](#)

Converts energy savings into carbon dioxide emissions and translates this information into readily understandable terms, such as equivalent gallons of gasoline or electricity from homes.

- [State Greenhouse Gas Inventory and Projection Tool](#)

Generates a top-down estimate of greenhouse gas emissions at the U.S. state level.

# Renewable Energy

## Green Power Partnership

### Services Offered

- Analytical tools
- Guidebooks/toolkits
- Matching buyers and sellers
- Professional networking
- Public recognition
- Technical assistance



### Relevant Sectors

- Agriculture
- Commercial
- Education
- Government
- Institutional
- Industry
- Real Estate Development

## Website

[www3.epa.gov/greenpower](http://www3.epa.gov/greenpower)

## Contact

James Critchfield  
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[critchfield.james@epa.gov](mailto:critchfield.james@epa.gov)

## Description

The Green Power Partnership (GPP) promotes the use of renewable energy by providing technical assistance, resources and tools, and public recognition to entities that choose to use green power (i.e., electricity that is generated from resources such as solar, wind, geothermal, biomass, and low-impact hydro facilities). More than 140 local and eight state governments are already Green Power Partners. To see the Green Power Partnership Top Local Government list, visit:

<http://www3.epa.gov/greenpower/toplists/top30localgov.htm> For a list of all Partners, see <http://www3.epa.gov/greenpower/partners/index.htm>.

## Services

The Green Power Partnership promotes and recognizes Green Power Partners for their leadership in using green power. EPA assists Partners in promoting the concept of green power internally and externally, which often includes media coverage and related communications assistance. EPA also provides technical advice on navigating the green power procurement process.

## Value to Low-Income Communities

- The [Green Power Communities program](#) (an initiative of EPA's GPP) is increasing community use of renewable electricity across the country, including in low-income communities. The program is working to integrate and improve renewable energy procurement opportunities, such as community choice aggregations, to provide scale and leveraged buying power for these communities. Over 50 local governments across the nation are already EPA Green Power Communities. [GPP's Clean Energy Collaborative Procurement Initiative](#) provides a collaborative platform to help aggregate purchases at institutions (e.g., affordable housing, schools, critical services) that are cornerstones of all communities. The initiative can assist stakeholders from low-income communities, such as affordable housing building owners, with assessing collaborative EE/RE opportunities.

## Possible State and Local Actions

- Purchase green power or install green power on-site for government operations.
- Encourage localities to partner with EPA to become Green Power Communities, where the local government, businesses, and residents collectively use green power in amounts that meet or exceed [EPA's Green Power Community requirements](#).
- Encourage localities, companies, and industries to join as Green Power Partners.
- Encourage existing Partners in your state or locality to recruit other companies into the program or to expand their green power use.
- Set targets and goals for state and local agencies for buying green power.

## Tools/Resources

- [Green Power Locator](#)  
Provides information about the green power options in each state. Results include utility green electricity programs and renewable energy certificate (REC) products sold separately from electricity.

- [Green Power Resource Library](#)  
Includes documents meant to aid organizations in navigating the renewable energy procurement and renewable energy project development processes. It includes guidance documents, templates and actual examples of solicitations and contracts.
- [Guide to Purchasing Green Power \(PDF\)](#)  
Includes information about the different types of green power products, the benefits of using green power, and how to capture the greatest benefit from purchases.
- [Steps to Becoming a Green Power Community](#)
- [Steps to Becoming a Green Power Partner](#)

# Renewable Energy

## RE-Powering America's Land

### Services Offered

- Analytical tools
- Guidebooks/toolkits
- Technical assistance

### Relevant Sectors

- Commercial
- Education
- Government
- Industry
- Public
- Real Estate Development
- Utility/Program Administrators

## Website

[www.epa.gov/re-powering](http://www.epa.gov/re-powering)

## Contact

Adam Klinger  
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## Description

The RE-Powering America's Land Initiative encourages renewable energy development on current and formerly contaminated lands, landfills, and mine sites when such development is aligned with a community's vision for the site. This Initiative identifies the renewable energy potential of these sites and provides other useful resources for communities, developers, industry, state and local governments or anyone interested in reusing these sites for renewable energy development. These resources include technical assistance, screening tools, handbooks and best practice guides.

## Services

Specific assistance includes:

- Identifying contaminated lands, landfills and mine sites and screening such sites for renewable energy potential.
- Clarifying potential liability issues associated with redevelopment of contaminated properties with revised guidance tailored to the kind of tenant relationships often used in renewable energy development.
- Developing and disseminating handbooks, case studies and best practice guides to integrate the cleanup process with renewable energy development, demonstrate the feasibility of such installations and outline various considerations associated with renewable energy development on municipal solid waste landfills.
- Partnering with stakeholders and leveraging efforts across EPA.

## Value to Low-Income Communities

RE-Powering America's Land helps communities site renewable energy installations on contaminated lands, landfills, or mine sites that are often found in or adjacent to low-income communities and have limited reuse options. By using these lands to support renewable energy, communities can divert development pressures away from open space and preserve undeveloped land and habitat. Installing renewable energy can also help communities improve air quality, add to the economic vitality of the community, create jobs, and lower greenhouse gas emissions. RE-Powering America's Land partners with [EPA's Environmental Workforce Development and Job Training Grants Program](#), which provides competitive grant funding to recruit, train and place unemployed and under-employed residents, including low-income and minority residents, of solid and hazardous waste affected communities.

## Possible State and Local Actions

- Develop policies and utilize best practices that encourage renewable energy on contaminated lands in low-income areas.
- Analyze and communicate the projected policy and program impacts and associated co-benefits, including air, health, energy, land use and economic benefits.
- Conduct outreach to low-income communities about possible projects to gain their buy-in and support.
- Evaluate, measure, and verify results once policies or programs are in place.

## Tools/Resources

### Guidance

- [Best Practices for Siting Solar Photovoltaics on Municipal Solid Waste Landfills](#)  
This document provides assistance in addressing common technical challenges for siting solar photovoltaics on municipal solid waste landfills.
- [Handbook on Siting Renewable Energy Projects While Addressing Environmental Issues](#)  
This handbook provides tools to help interested parties determine the overall feasibility of siting

renewable energy production and some key considerations for integrating renewable energy development during all phases of typical cleanup processes.

- [RE-Powering Finance Fact Sheet](#)

Semi-annual publication using publicly available information to list the completed renewable energy installations on contaminated sites and landfills in the United States.

- [Revised BFPP Enforcement Guidance for Tenants](#)

This revised guidance and model comfort/status letters discuss the potential applicability of certain provisions under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Agency's intention to exercise its enforcement discretion in select circumstances with respect to liability.

## Tools

- [RE-Powering Mapper](#)

A preliminary screening tool that uses Google Earth to assess the renewable energy potential of over 80,000 contaminated lands, landfills, and mine sites.

- [RE-Powering's Tracking Matrix](#)

Semi-annual publication using publicly available information to list the completed renewable energy installations on contaminated sites and landfills in the United States.

- [Electronic Decision Tree](#)

A downloadable computer tool that walks users through a series of Yes / No / Skip questions supplemented by tips and links to relevant tools and information resources, allowing users to screen site suitability for solar photovoltaic and wind installations.

# Sustainable Communities

## Smart Growth Program

### Services Offered

- Analytical tools
- Guidebooks/toolkits
- Outreach support
- Technical assistance
- Public recognition

### Relevant Sectors

- Commercial
- Education
- Government
- Residential
- Public
- Real Estate Development
- Utility/Program Administrators

## Website

[www.epa.gov/smart-growth](http://www.epa.gov/smart-growth)

## Contact

Megan Susman  
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[susman.megan@epa.gov](mailto:susman.megan@epa.gov)

## Description

This program provides tools, research, and technical assistance to help communities grow in ways that are environmentally, economically, and socially sustainable. It encourages compact, walkable

development that uses land, energy, and water efficiently and has a mix of residential, commercial, and other uses.

## Services

The Smart Growth Program helps communities improve their development practices and get the type of development they want. The program works with local, state, and national experts to discover and encourage successful, environmentally-sensitive development strategies. In addition, it coordinates EPA's involvement in the [Partnership for Sustainable Communities](#) with HUD and DOT and works with other federal agencies to provide technical assistance on development issues to communities.

## Value to Low-Income Communities

Smart growth strategies improve quality of life, reduce greenhouse gas emissions, save money for residents and local governments, and can encourage economic development and revitalization that bring new jobs, homes, and amenities. Smarter, more efficient development uses energy, water, and other resources more efficiently, which can save money on household bills. Compact development can make it easier for people to get to destinations in their neighborhood and in the region without a car. Reducing the costs of transportation and energy reduces the overall cost of housing, which makes more homes more affordable to low-income residents.

## Possible State and Local Actions

- Engage members of the community in all aspects of planning and development to ensure that new development meets the needs of residents.
- Provide a mix of housing and transportation options that are affordable to people of various income levels.
- Review land use ordinances to determine if they allow the community to get the type of development it wants.
- Encourage walking, bicycling, and transit use by making streets safe and comfortable for all users.
- Encourage new development in infill and cleaned-up brownfield locations rather than on the fringe.
- Build compactly and mix land uses so that homes, stores, services, and workplaces are close enough together for people to walk or bike.

## Tools/Resources

### General Resources

- [Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development](#)  
Discusses land use and community design strategies that bring together smart growth, environmental justice, and equitable development principles and that community-based organizations, local and regional decision-makers, developers, and others can use to revitalize their communities.
- [Getting to Smart Growth, Volumes I and II](#)  
Each volume provides 100 concrete techniques for putting smart growth principles into action, along

with resources and brief case studies of communities that have applied these approaches to achieve better development. Also available in Spanish.

- [Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality \(2nd Edition\)](#)

Examines how development patterns affect the environment and human health and provides evidence that certain kinds of land use and transportation strategies can reduce development impacts.

- [Partnership for Sustainable Communities](#)

Includes case studies, announcements of funding and technical assistance opportunities, and tools and resources from EPA, HUD, and DOT.

## Technical Assistance

- [Building Blocks for Sustainable Communities](#)

Provides targeted assistance awarded through a competitive process to help communities with specific tools that have proven effectiveness and wide applicability.

- [Greening America's Capitals](#)

Provides assistance to state capital cities to develop a vision of environmentally friendly neighborhoods that incorporate innovative green infrastructure strategies. Reports from past projects are available on the website and may be helpful to communities interested in these strategies.

- [Governors Institute on Community Design](#)

Helps governors and their staff make informed decisions about investments and policy decisions that influence the economic health and physical development of their states. Run through a cooperative agreement.

- [Local Foods, Local Places](#)

Helps communities create more environmentally, economically, and socially sustainable places by promoting local foods.

- [Smart Growth Implementation Assistance](#)

Provides tailored, in-depth help to state, local, regional, and tribal governments that are seeking innovative solutions to a development-related challenge. Reports from past projects are available on the website and may be helpful to communities facing similar challenges.

## Case Studies and Examples

- [National Award for Smart Growth Achievement](#)

Provides write-ups of award winners, who provide models for other communities.

- [Smart Growth Illustrated](#)

Offers examples of how smart growth techniques look in communities around the country.

- [This Is Smart Growth](#)

Features 40 places around the country, from cities to suburbs to small towns to rural areas, that have found success by implementing smart growth principles. Also available in Spanish.

## Tools

- [Access to Jobs and Workers Via Transit Tool](#)

Provides indicators of accessibility to destinations by public transit. Indicators summarize jobs accessible by transit as well as workers, households, and population that can access the block group via transit.

- [Flood Resilience Checklist](#)

Can help communities identify ways to improve their resilience to flooding through policy and regulatory tools, including conserving land, directing development to safer locations, and protecting people and property in vulnerable settlements.

- [Smart Location Database](#)

Nationwide geographic data resource for measuring location efficiency that can help measure the built environment and transit accessibility of neighborhoods.

- [Sustainable Communities HotReport](#)

A web-based tool that gives community leaders and residents a quick and easy way to determine how well their community is performing on a variety of sustainability indicators, including transportation, housing, economic development, income, and equity.

- [Sustainable Community Indicator Catalog](#)

A catalogue of indicators to help communities measure progress toward their sustainability and equity objectives.

# Water

## WaterSense

### Services Offered

- Analytical tools
- Guidebooks/toolkits
- Outreach support
- Matching buyers and sellers
- Technical assistance



### Relevant Sectors

- Commercial
- Education
- Government
- Public
- Real Estate Development
- Residential
- Utility/Program Administrators

## Website

[www3.epa.gov/watersense](http://www3.epa.gov/watersense)

## Contact

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[watersense@epa.gov](mailto:watersense@epa.gov)

## Description

WaterSense, a partnership program sponsored by EPA, seeks to protect the future of our nation's water supply by offering people simple ways to use less water with water-efficient products, new homes, and services. Since the program's inception in 2006, WaterSense has helped consumers save billions of gallons of water and billions in water and energy bills.

## Services

The WaterSense Program labels products that are independently certified to meet EPA's criteria to use 20 percent less water and perform as well as conventional models. The WaterSense label is currently available on residential toilets, bathroom faucets and faucet accessories, showerheads, flushing urinals, flushometer-valve toilets, pre-rinse spray valves, weather-based irrigation controllers, and single- and multi-family homes. The WaterSense program also labels professional certification programs for landscape irrigation professionals. These WaterSense labeled programs verify professional proficiency in water-efficient irrigation system design, installation/maintenance, and auditing. The program also offers a range of guidance and tools to help commercial and institutional facilities improve their water efficiency.

## Value to Low-Income Communities

Assisting low-income members of a community to decrease their water use by providing incentives for WaterSense labeled products or promoting water-efficient behaviors can also help households lower their water and energy bills. Water efficiency measures can reduce water treatment and infrastructure costs by reducing the need to expand capacity, which may reduce water bills for customers. Saving water also reduces greenhouse gases and air pollution by reducing the amount of energy needed to transport, treat, and heat water.

## Possible State and Local Actions

- [Partner with WaterSense](#) for free access to tools, materials, and resources to promote water efficiency.
- Recommend, install, and or provide financial incentives for use of [WaterSense labeled products](#) or water efficient practices.
- Encourage water-smart landscapes and other actions to save water outdoors in public and private spaces.
- Offer technical training to builders about building water-efficient single and multi-family homes and provide incentives for [WaterSense labeled homes](#).
- Encourage users of [ENERGY STAR Portfolio Manager](#) to also track water through the tool.
- Network with water efficiency leaders to learn new ways to implement water efficiency.
- Participate in national outreach campaigns to help consumers save water.
- Recommend irrigation professionals certified by WaterSense labeled programs for irrigation system design, installation and audits.

## Tools/Resources

- Best management practices and other resources for the [commercial and institutional](#) sector.
- List of [WaterSense labeled products](#) and [irrigation partners](#).
- Tips and practices for [water-smart landscaping](#).
- Tools to [calculate water savings](#).
- [Water saving tips and messages](#) to help understand how water is used and how it can be saved.
- [WaterSense resources for kids](#).



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