American Recovery and Reinvestment Act of 2009:

State and Local Guide to U.S. EPA Climate and Energy Program Resources

March 12, 2009

Contents

Overview

The American Recovery and Reinvestment Act of 2009 (ARRA 2009) offers unprecedented opportunities for state and local governments to reduce energy, reduce greenhouse gas (GHG) emissions, and create jobs through the implementation of clean energy (energy efficiency, renewable energy, and combined heat and power) programs.

The U.S. Environmental Protection Agency (EPA) has developed numerous resources over the years that can assist state and local governments as they work to ramp up existing clean energy programs and create new ones.

How to Use This Guide

This guide has been designed to help state and local governments see which EPA programs could be leveraged to expand or develop clean energy initiatives in their locality.

Each program description includes:

- Basic information and contact details
- Potential target audiences
- Highlights of ready-to-go tools and resources
- Suggestions of possible actions a state or local government could take to leverage EPA's offerings

The program finder table shows which programs could be used to develop initiatives in six categories—buildings; industry; electric power and renewable energy; transportation; energy education; and policy, planning, and energy security.

Companion Guide to ARRA 2009 Funding Opportunities

EPA's guide, *American Recovery and Reinvestment Act of 2009: A Guide to Renewable Energy and Energy Efficiency Incentives for Local and Tribal Governments*, catalogs clean energy funding opportunities available to local and tribal governments through ARRA 2009. Visit www.epa.gov/cleanenergy/stateandlocal.

Program Finder Table

EPA Program *(alphabetical order)*	Buildings (Residential and Non-Residential)	Industry	Electric Power and Renewable Energy	Transportation	Energy Education	Policy, Planning, and Energy Security
AgSTAR *(p. 21)*		✓	✓			✓
Climate Leaders ***(p.*** *13)*	✓	✓	✓		✓	
Combined Heat and Power Partnership *(p. 16)*	✓	✓	✓			✓
ENERGY STAR for Commercial / Public Buildings *(p. 6)*	✓				✓	✓
ENERGY STAR for Industry *(p. 14)*	✓	✓			✓	
ENERGY STAR Products *(p. 4)*	✓	✓			✓	✓
ENERGY STAR Residential—Existing Homes *(p. 9)*	✓				✓	✓
ENERGY STAR Residential—New Homes *(p. 11)*	✓				✓	✓
Green Power Partnership *(p. 18)*	✓	✓	✓		✓	
Heat Island Reduction Program *(p. 27)*	✓	✓				✓
Landfill Methane Outreach Program (LMOP) *(p. 19)*		✓	✓			✓
Local Climate and Energy Program *(p. 25)*	✓		✓	✓	✓	✓
National Action Plan for Energy Efficiency *(p. 28)*	✓	✓	✓		✓	✓
State Climate and Energy Program *(p. 23)*	✓		✓	✓	✓	✓

Please note: This document contains Internet addresses that were current when the document was produced, but addresses may change over time. If you discover a broken link, please notify Danielle Byrnett at byrnett.danielle@epa.gov so EPA can post a corrected version.

Program Profiles—Buildings

ENERGY STAR Products

Services Offered:
- ☑ Guidebooks/toolkits
- ☑ Technical assistance

Relevant Sectors:
- ☑ Commercial
- ☑ Government
- ☑ Industrial
- ☑ Public
- ☑ Residential
- ☑ Utility/Program Administrator

Web site:	**www.energystar.gov**
Contact information:	**Energy Star Hotline** **1-888-STAR YES (782-7937)** **hotline@energystar.gov**
Program Description:	Since 1992, the ENERGY STAR program has helped thousands of organizations across the residential, commercial, industrial, and public sectors take advantage of cost-effective opportunities to improve energy efficiency and reduce GHG emissions. ENERGY STAR qualified products allow consumers to identify the most energy efficient products on the market without having to sacrifice performance. EPA manages the ENERGY STAR program along with the Department of Energy.
Services:	EPA and its manufacturing partners develop specifications for products. EPA provides the ENERGY STAR logo, marketing resources, sales training materials, and sponsors a number of products. Categories of ENERGY STAR Labeled Products include Appliances, Heating and Cooling, Water Heaters, Home Insulation, Home Electronics, Lighting, Office Equipment, Commercial Food Services, and Other Commercial Products.
Value to Environment:	Energy efficiency is one of the lowest-cost strategies to address global climate change by reducing the amount of emissions associated with the burning of fossil fuels to produce energy.
Possible State & Local Actions:	• Purchase ENERGY STAR qualified products for government operations. • Require energy efficient equipment purchases for all state and local agencies. • Encourage/provide incentives to the residential, commercial, and industrial sectors to purchase ENERGY STAR qualified products (e.g., through rebate or coupon programs). • Offer consumers a "sales tax holiday" for the purchase of ENERGY STAR qualified products. • Partner with local community associations to distribute ENERGY STAR qualified products, such as compact fluorescent light bulbs, at public events. • Empower Americans to make energy efficient choices by supporting grassroots, community-based youth service projects; becoming an ENERGY STAR pledge driver; and/or sponsoring a local event during the "Change the World, Start with ENERGY STAR" campaign tour. • Declare October 1, 2009, Change a Light Day in your state or city. • Partner with local organizations to educate communities on the benefits of using ENERGY STAR qualified products in their businesses and homes. • Promote computer power management among businesses and institutions by joining EPA's Low-Carbon IT Campaign as an ally.

Buildings

Tools/Resources:	• **Find an ENERGY STAR Qualified Product** • **Clean Energy Policy Maps** (Shows which states have energy efficiency requirements for government operations) • **ENERGY STAR Purchasing and Procurement Guidelines** (Assists procurement officials in smart purchasing decisions; online training and case studies are also available) • **ENERGY STAR Quantity Quotes** (Connects institutions, corporations, and other purchasing groups with suppliers that sell ENERGY STAR qualified products in bulk) • **ENERGY STAR Partners** (Lists partners including schools, governments, home builders, home energy raters, cable providers, mortgage lenders, product manufacturers, and retailers) • **Learn about the ENERGY STAR Pledge** (Describes the "Change the World, Start with ENERGY STAR" campaign) • **Change the World, Start with ENERGY STAR Materials** (Includes key messages, sample press releases, sample newsletter, sample mayoral / gubernatorial proclamations for Change a Light Day, and more) • **Join the ENERGY STAR Low-Carbon IT Campaign** • **Low-Carbon IT Campaign Template Materials** (Offers templates to publicize your efforts through newsletters, press releases, and on your Web site) • **Energy Efficiency-Related Tax Credits in the American Recovery and Reinvestment Act of 2009** (Provides an update on economic stimulus-related changes to tax credits)

Buildings

ENERGY STAR for Commercial / Public Buildings

Services Offered:
- ☑ Environmental performance benchmarking
- ☑ Guidebooks/toolkits
- ☑ Public recognition
- ☑ Training

Relevant Sectors:
- ☑ Commercial
- ☑ Education
- ☑ Government
- ☑ Industrial
- ☑ Utility/Program Administrator

Web site:	• ENERGY STAR Buildings and Plants Home Page • ENERGY STAR for State and Local Governments
Contact information:	**Energy Star Hotline** **1-888-STAR YES (782-7937)** **hotline@energystar.gov**
Program Description:	Since 1992, the ENERGY STAR program has helped thousands of organizations across the residential, commercial, government, and industrial sectors take advantage of cost-effective opportunities to improve their buildings' energy efficiency and reduce greenhouse gas emissions. State and local governments lead by example by improving their own buildings, and they leverage relationships with building owners in the state to motivate them to do the same.
Services:	EPA provides tools and resources necessary for strategic energy management. Building owners and facility managers of all kinds of buildings can use EPA tools to benchmark their energy and water use in order to target investments on improvements—more than 80,000 buildings or 16 percent of building square footage—nationwide have already done so. Top-performing hospitals, hotels, office buildings, retailers, schools, grocery stores, warehouses, dormitories, banks, and courthouses can earn the ENERGY STAR label using EPA's Portfolio Manager tool. EPA offers live Web conferences, and pre-recorded online trainings for general audiences, as well as those specific to particular sectors.
Value to Environment:	Energy use in commercial buildings and manufacturing plants accounts for nearly half of total U.S. GHG emissions and nearly half of energy consumption nationwide. Energy efficiency is one of the most cost-effective strategies to address global climate change by reducing the amount of emissions associated with the burning of fossil fuels to produce energy. By 2008 alone, more than 6,000 commercial buildings and manufacturing plants earned the ENERGY STAR label for high efficiency. These buildings typically emit 35 percent less carbon dioxide into the atmosphere than average buildings. In total, the buildings and plants earning the ENERGY STAR in 2008 represented savings of more than $1 billion in utility bills and more than 7 million metric tons of carbon dioxide emissions.
Possible State & Local Actions:	• Use Portfolio Manager to determine an energy use performance baseline (similar to a miles per gallon rating for a vehicle), identify opportunities to improve energy efficiency in buildings, set energy consumption and greenhouse gas emission improvement goals, track progress, and measure results. • Set a target to benchmark a specified number of government buildings with Portfolio Manager by a target year (e.g., 2011). • Require state agencies (including prisons, schools, etc.) to benchmark their buildings with Portfolio Manager. • Establish a benchmarking competition among state and local government agencies or among local businesses. Recognize those achieving highest performance or greatest improvement.

ENERGY STAR for Commercial / Public Buildings

	• Work with utilities in the state or locality to enable automated benchmarking. • Require state/local staff to take Portfolio Manager online training. • Provide technical support to public, commercial, or industrial building benchmarking staff. • Mandate benchmarking and disclosure for public and privately owned buildings (e.g., as in California, Nevada, and the District of Columbia). • Require new state and local government buildings to use the ENERGY STAR New Building Design approach. • Join the ENERGY STAR Challenge as a participant organization committed to increasing energy efficiency in buildings by 10 percent or more. • Leverage ENERGY STAR communications resources to celebrate successes and promote energy efficiency throughout the community.
Tools/Resources:	**General Resources** • **Portfolio Manager** (Allows users to assess and track energy and water consumption within individual buildings as well as across an entire building portfolio) • **Directory of Energy Efficiency Programs** (Identifies organizations in each state that sponsor energy efficiency programs and that are partnered with ENERGY STAR) • **Service and Product Provider Directory** (Locates companies that can help identify, prioritize, and implement quality projects that will improve total energy management) • **ENERGY STAR Qualified Products and Procurement** • **Teaming Up to Save Energy** (Discusses how to structure, launch, and maintain an organization's energy team so it can improve energy performance across the organization) • **Financing Primer** • **ENERGY STAR Live Web Conferences and Pre-Recorded Online Trainings** **Building Resources** • **New Building Design Guidance** • **Building Upgrade Manual** • **Guidelines for Energy Management** • **Achieving "Designed to Earn the ENERGY STAR"** • **Apply for the ENERGY STAR Label** • **Building Profiles & Leaders' Stories** • **ENERGY STAR for Wastewater Plants** • **Showcase Dorm Rooms** **Calculators** • **Building Upgrade Value Calculator for Office Buildings** (Estimates the financial impact of proposed investments in energy efficiency in office properties) • **Financial Value Calculator and Cash Flow Opportunity Calculator** • **Target Finder** (Helps architects and building owners set aggressive, realistic energy targets and rate a building design's estimated energy use) • **Quantity Quotes** (Connects institutions, corporations, and other purchasing groups with

ENERGY STAR for Commercial / Public Buildings

	suppliers who sell ENERGY STAR qualified products in bulk) **Communications** • **ENERGY STAR Challenge** (National call-to-action to improve the energy efficiency of America's commercial, industrial, and public buildings by 10 percent or more. More than 300 local governments and 40 states have signed up to become Challenge Participant Organizations) • **ENERGY STAR Challenge Toolkit** (Provides communications materials to help spread the word on the benefits of energy efficiency, communicate commitments to energy efficiency, and promote energy efficiency throughout the community) • **Bring the Challenge to Your Community** (Shows how to begin a local ENERGY STAR Challenge campaign and recruit businesses, organizations, and localities to participate) • **Low Carbon IT Campaign** • **Change the World, Start with ENERGY STAR Campaign** • **ENERGY STAR for Kids**

ENERGY STAR Residential—Existing Homes (Home Performance with ENERGY STAR)

Services Offered:
- ☑ Analytical Tools
- ☑ Environmental performance benchmarking
- ☑ Guidebooks/toolkits
- ☑ Public recognition
- ☑ Technical assistance
- ☑ Training seminars

Relevant Sectors:
- ☑ Government
- ☑ Real Estate Development
- ☑ Residential
- ☑ Utility/Program Administrator

Web site:	**www.energystar.gov/homeperformance**
Contact information:	**Chandler von Schrader** **(202) 343-9096** **homeperformance@energystar.gov**
Program Description:	Through Home Performance with ENERGY STAR (HPwES), EPA and DOE offer a comprehensive, whole-house approach to improving energy efficiency and comfort. Unlike typical energy audit programs, the goal of HPwES is to turn recommendations into improved homes. HPwES is managed by a local sponsor that recruits, trains, and provides quality assurance over home improvement contractors who deliver comprehensive home energy audits and efficiency installations.
Services:	EPA and DOE can provide program start-up guidance for potential utilities or state energy offices. Once a sponsor has submitted an implementation plan and signed the partnership agreement, EPA will provide the ENERGY STAR logo mark, marketing resources, sales training materials, and sponsor outreach campaigns through which contractors, utilities, or other program administrators can work together to increase awareness of HPwES in the local market.
Value to Environment:	Energy efficiency is the lowest-cost strategy to address global climate change and air pollution by reducing the amount of emissions associated with the burning of fossil fuels to produce energy. To date, more than 50,000 homes have been served by ENERGY STAR Home Performance partners. Many homes are candidates for this program to achieve savings up to 30 percent through cost-effective home improvements.
Possible State & Local Actions:	• Enhance current HPwES program (incentives, marketing, financing, training, etc.) if a program already exists in your state. • Sponsor HPwES training programs for local contractors (curricula are currently available for purchase from NYSERDA and others). • Offer incentives to reduce the cost of HPwES energy audits to residents. • Provide incentives for energy efficiency improvements identified through HPwES assessments through any number of financial mechanisms (e.g., direct rebates, state revolving fund disbursements) • Join HPwES as a partner program sponsor.
Tools/Resources:	**General Resources** • **HPwES Brochure (PDF)** • **Home Performance with ENERGY STAR Locations by State** **Sponsor Resources** • **How to Develop a Local Program** • (Describes who can become a sponsor, the role of the program sponsor, where to start, and federal grant opportunities) • **Fact Sheet: HPwES – A Cost-Effective Strategy for Improving Energy Efficiency in Existing Homes (PDF)**

ENERGY STAR Residential—Existing Homes (Home Performance with ENERGY STAR)

- **Sponsor Guide (PDF)**
- **Program Plan Outline (PDF)**
- **Contractor Success Stories**
- **Financing Guidebook (PDF)**
- **Marketing Resources**
- **HPwES Newsletters**

Reduce Energy Use

- **Home Performance with ENERGY STAR**
- **Guide to Energy Efficient Heating and Cooling (PDF)**
- **Heat Smartly with ENERGY STAR at Home**
- **Home Sealing**
- **Duct Sealing**
- **ENERGY STAR Home Advisor**
- **Home Energy Yardstick**
  (Allows homeowners to compare household energy use with others across the country and get recommendations for improvement)
- **Change the World, Take the ENERGY STAR Pledge**

Find Incentives and Special Offers

- **Locate Rebates and Special Offers**
- **ENERGY STAR Qualified Product Tax Incentives**

ENERGY STAR Residential—New Homes

Services Offered:
- ☑ Guidebooks/toolkits
- ☑ Professional networking
- ☑ Public recognition
- ☑ Training/seminars

Relevant Sectors:
- ☑ Real Estate Development
- ☑ Residential
- ☑ Utility/Program Administrator

Web site:	**www.energystar.gov/homes**
Contact information:	**Energy Star Hotline** **1-888-STAR YES (782-7937)** **hotline@energystar.gov**
Program Description:	In the residential new construction marketplace, ENERGY STAR and its partners work together to promote the benefits and increase sales of energy efficient homes. Homes that earn the ENERGY STAR label must meet guidelines for energy efficiency set by EPA. ENERGY STAR qualified homes are at least 15 percent more energy efficient than homes built to the 2004 International Residential Code and include additional energy saving features that typically make them 20 to 30 percent more efficient than standard homes. Nationally, more than 940,000 new homes have earned the ENERGY STAR label.
Services:	EPA provides the ENERGY STAR logo mark, marketing resources, and sales training materials. EPA sponsors outreach campaigns through which builders and utilities can work together to increase awareness of ENERGY STAR qualified homes in the local market. EPA also hosts partner network meetings and offers opportunities for recognition for environmental stewardship.
Value to Environment:	Energy efficiency is one of the lowest-cost strategies to address global climate change and air pollution by reducing the amount of emissions associated with the burning of fossil fuels to produce energy.
Possible State & Local Actions:	• Promote program administrator (e.g., utility, builder, other) efforts to expand the market for ENERGY STAR new homes. • Offer training to building inspectors and code enforcement/compliance staff to help them become certified Home Energy Raters. • Offer technical training for builders to educate them about building energy efficient homes. • Provide incentives for or require new public housing to be ENERGY STAR qualified. • Provide loan guarantees for ENERGY STAR qualified home mortgages.
Tools/Resources:	**Learn About ENERGY STAR New Homes** • **Learn About the Features and Benefits of ENERGY STAR Qualified Homes** • **New Homes Partner Locator** • **Guidelines for ENERGY STAR Qualified New Homes** • **Resources for ENERGY STAR Partners** (Includes marketing, technical, and educational resources) **Communications Resources** • **Home Calc** (Assists partners in calculating and presenting the benefits of investing in an ENERGY STAR qualified home) • **Marketing Toolkit** (Allows a builder to create customized promotional materials to educate

	consumers about the features and benefits of ENERGY STAR qualified homes) • **Outreach Partnership** (Allows teams of ENERGY STAR partners to apply for financial and creative support from EPA to cooperatively promote ENERGY STAR qualified homes) • **Fact Sheets on the Features of ENERGY STAR Qualified Homes** (Provides information on many "tried-and-true" energy efficient features found in ENERGY STAR qualified homes related to home envelope, heating/cooling, lighting, appliances, and third-party verification) • **Presentations** (Offers customizable presentation templates that target builders, appraisers, and real estate agents) • **Free Webinars and Other Training Opportunities**

Program Profiles—Industry

Climate Leaders

Services Offered:
- ☑ Analytical tools
- ☑ Environmental performance benchmarking
- ☑ Guidebooks/toolkits
- ☑ Professional networking
- ☑ Public recognition
- ☑ Technical assistance
- ☑ Training/seminars

Relevant Sectors:
- ☑ Agricultural
- ☑ Commercial
- ☑ Government
- ☑ Industrial

Web site:	**www.epa.gov/climateleaders**
Contact information:	**Deb Berlin** **202) 343-9231** **berlin.deb@epa.gov**
Program Description:	The Climate Leaders program works with companies and federal agencies to develop comprehensive climate change strategies. Partners commit to reducing their impact on the global environment by completing an organization-wide inventory of their GHG emissions based on a quality management system, setting aggressive reduction goals, and annually reporting progress to EPA. Through program participation, partners create credible records of accomplishment and receive EPA recognition as environmental leaders.
Services:	Climate Leaders provides partners with technical assistance and resources for developing GHG inventories, reporting emission reductions, setting goals, and promoting successes. The program also organizes workshops and events where partners can interact and provides partners with tools to promote their successes.
Value to Environment:	The Climate Leaders program addresses the climate impact of an organization on a comprehensive basis. All sources of GHGs are considered, inventoried, and reduced, including onsite fuel consumption and energy use, industrial processes, onsite waste disposal, onsite air conditioning and refrigeration use, electricity and steam purchases, and mobile sources.
Possible State & Local Actions:	• Identify companies and municipal utilities in the state or locality that emit significant amounts of GHGs, or are otherwise looking to reduce their emissions, and encourage them to join as partners. • Encourage existing partners in the state or locality to recruit other companies into the program.
Tools/Resources:	• **Basic Information** (Contains an inventory management plan for partners to establish GHG data collection and calculation processes) • **Tools for Conducting a Greenhouse Gas Inventory for Large Companies** (Includes guidance for industry sectors that are significant GHG emitters) • **Tools for Conducting a Greenhouse Gas Inventory for Smaller Companies** (Provides guidance to companies that are low GHG emitters across different industry sectors) • **Tools for Setting a Greenhouse Gas Reduction Goal** (Provides a goal proposal template to describe how partners should set a GHG reduction goal and submit it to EPA for approval) • **Events** (Includes upcoming Webinars and information for Climate Leaders' annual conference)

ENERGY STAR for Industry

Services Offered:
- ☑ Analytical tools
- ☑ Environmental performance benchmarking
- ☑ Guidebooks/toolkits
- ☑ Public recognition
- ☑ Technical assistance

Relevant Sectors:
- ☑ Industrial

Web site:	**www.energystar.gov/industry**
Contact information:	**Elizabeth Dutrow** **(202) 343-9061** **dutrow.elizabeth@epa.gov**
Program Description:	ENERGY STAR works with manufacturing companies to reduce energy costs and emissions, demonstrate environmental leadership, and improve competitiveness. ENERGY STAR offers road-tested resources, tools, benchmarks, and guidance to help companies establish energy programs that continuously improve energy efficiency. Hundreds of small, medium, and large manufacturers have adopted the ENERGY STAR approach to achieving lasting energy savings.
Services:	ENERGY STAR can help companies develop and refine their corporate energy management program, meet GHG emission reduction goals, and define an energy efficiency pathway to meet their goals. Specialized resources are available for 10 sectors—cement, corn refining, food processing, glass, laboratories, motor vehicle, petrochemical, petroleum refining, pharmaceuticals, and pulp & paper—but the ENERGY STAR approach is built to accommodate manufacturers in any sector. General resources are available for industries of all types.
Value to Environment:	Energy efficiency is one of the lowest-cost strategies to address global climate change and air pollution by reducing the amount of emissions associated with the burning of fossil fuels to produce energy. Using the ENERGY STAR approach, hundreds of companies have established energy programs, set goals, established tracking systems, and are reducing their energy and GHG emissions.
Possible State & Local Actions:	• Use ENERGY STAR resources to help companies develop energy efficiency programs and ensure that manufacturers continue to focus on efficiency after energy projects have been completed. • Provide industries with energy program assessment tools available from ENERGY STAR as the first step toward establishing an energy program. • Leverage ENERGY STAR tools to help improve accountability and reporting of savings tied to state and local energy program assistance. • Guide industry to evaluate their energy use, set a baseline and goals, 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) • Refer manufacturing companies seeking mentoring relationships or networking opportunities with other industrial companies to the ENERGY STAR Partnership. • Encourage industry to join the ENERGY STAR partnership to demonstrate a commitment to longstanding energy performance. • Encourage companies with strong energy programs and that achieve significant savings to seek recognition from ENERGY STAR.

Industry

Tools/Resources:	• **ENERGY STAR Focus Industries** (Provides industry-specific tools and resources, including information on trends in energy use and energy intensity in the industry, a systematic analysis and discussion of the energy efficiency opportunities in manufacturing plants, and more) • **Industrial Energy Management Information Center** (Helps industrial energy managers looking for information on corporate energy management; also contains energy savings information tailored to industries and focused on specific plant utility and process improvements) • **Small and Medium Manufacturer Resources** • **Guidelines for Energy Management** (Builds on the successful practices of ENERGY STAR partners to help companies improve their energy and financial performance) • **Energy Program Assessment Matrix** (Helps organizations and energy managers compare their energy management practices to those outlined in the Guidelines) • **Networking and Best Practice Sharing** • **Web-based Seminars and Conferences**

Program Profiles—Electric Power and Renewable Energy

Combined Heat and Power Partnership

Services Offered:	Relevant Sectors:
☑ Analytical tools	☑ Agricultural
☑ Matching buyers and sellers	☑ Commercial
☑ Professional networking	☑ Government
☑ Public recognition	☑ Industrial
☑ Technical assistance	☑ Utility

Web site:	**www.epa.gov/chp**
Contact information:	**CHP Partnership Helpline** **703-373-8108** **chp@epa.gov**
Program Description:	Combined heat and power (CHP), also known as cogeneration, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. By installing a CHP system designed to meet the thermal and electrical base loads of a facility, CHP can greatly increase the facility's operational efficiency and decrease energy costs.
Services:	EPA provides technical assistance to energy users who are considering implementing CHP projects, including conducting analyses of economic viability for projects, assisting in feasibility studies, and providing information on technologies, vendors, and incentives. Partners can receive public recognition and have access to printed and Web-based outreach materials, tools, and resources, including an online database of funding opportunities and an online CHP emissions calculator.
Value to Environment:	Because they capture and utilize heat that would otherwise be wasted through electricity production, CHP systems require less fuel than equivalent separate heat and power systems to produce the same amount of energy. Since its inception in 2001, the CHP Partnership has assisted more than 160 projects representing 3,460 MW of new CHP capacity. On an annual basis, these projects will prevent the emission of more than 2.5 million metric tons of carbon dioxide equivalent.
Possible State & Local Actions:	• Provide incentives/rebates for the development of CHP projects by commercial businesses (e.g., as in Connecticut, New Jersey, 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. • Develop an outreach campaign to promote CHP in strategic market sectors.
Tools/Resources:	• **State Policy Resources** (Helps states identify and pursue policies and programs that support the increased use of clean distributed generation, such as CHP) • **Efficient Energy for Local Governments** (Describes how local governments are using CHP to reduce their operating costs, provide a hedge against volatile energy costs, increase their energy efficiency, and reduce emissions of GHGs and other pollutants from the combustion of fossil fuel) • **CHP Project Development Handbook (PDF)** (Provides information, tools, and hints on CHP project development, CHP technologies, and the resources of the CHP Partnership) • **Strategic Markets for CHP**

Combined Heat and Power Partnership

	(Offers information and outreach materials on CHP opportunities in key strategic markets: dry mill ethanol production, hotels and casinos, wastewater treatment facilities, utilities, data centers, and local governments) • **CHP Funding Database** (Lists state and federal incentives applicable to CHP and biomass/biogas projects, including financial incentives and favorable regulatory treatment) • **CHP Emissions Calculator** (Compares the anticipated carbon dioxide, sulfur dioxide, and nitrogen oxide 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 equivalent, acres of fir or pine trees, and emissions from passenger vehicles.)

Green Power Partnership

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

Relevant Sectors:
- ☑ Commercial
- ☑ Government
- ☑ Industrial

Web site:	**www.epa.gov/greenpower**
Contact information:	**Blaine Collison** **(202) 343-9139** **collision.blaine@epa.gov**
Program Description:	The Green Power Partnership promotes the use of renewable energy by providing technical assistance, networking possibilities, 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 90 local and 10 state governments are already Green Power Partners.
Services:	The Green Power Partnership promotes and recognizes Green Power Partners as environmental leaders. EPA assists Partners in promoting the concept of green power internally and externally, which often includes media coverage. EPA also provides organizations with a means to estimate the environmental benefits of switching to green power and provides technical advice on navigating the process of making a green power purchase.
Value to Environment:	Conventional electricity use is a significant source of air pollution and GHG emissions. Buying green power can make a real difference environmentally by encouraging the development of new, domestic renewable energy capacity, which produces electricity with significantly less air pollution and no net increase in GHG emissions.
Possible State & Local Actions:	• Purchase green power for government operations (e.g., as in Connecticut, Pennsylvania, Wisconsin). • Encourage localities to partner with EPA to become Green Power Communities, where local government, businesses, and residents collectively buy green power in amounts that meet or exceed EPA's Green Power Community purchase 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 purchases.
Tools/Resources:	• **Guide to Purchasing Green Power (PDF)** (Includes information about the different types of green power products, the benefits of green power purchasing, and how to capture the greatest benefit from purchases) • **Green Power Locator** • **Steps to Becoming a Green Power Community** • **Steps to Becoming a Green Power Partner** • **GHG Emissions Calculator** (Helps users communicate the value of a green power purchase by translating it from kilowatt-hours purchased into more understandable terms, such as an equivalent number of passenger vehicles, homes, or coal plants)

Landfill Methane Outreach Program

Services Offered:
- ☑ Analytical tools
- ☑ Guidebooks/toolkits
- ☑ Professional networking
- ☑ Public recognition
- ☑ Technical assistance

Relevant Sectors:
- ☑ Government
- ☑ Industrial
- ☑ Utility

Web site:	**www.epa.gov/lmop**
Contact information:	**Rachel Goldstein** **(202) 343-9391** **goldstein.rachel@epa.gov**
Program Description:	The Landfill Methane Outreach Program (LMOP) encourages the recovery of landfill gas (LFG)—mainly carbon dioxide and methane—for use as an alternative energy source, thus reducing GHG emissions. LMOP consists of four partner programs and an endorser program designed to assist different sectors of the LFG field. Through these programs, LMOP works with landfill owners/operators, industry organizations, energy providers and marketers, state agencies, communities, end-users, and other stakeholders to help them overcome barriers to LFG energy development. The program helps partners overcome barriers to project development by helping them assess project feasibility, find financing, and market the benefits of project development to the community.
Services:	LMOP offers a wide array of free technical, promotional, and informational tools as well as support services to assist with the development of LFG projects. These resources include the LMOP Online Toolkit; software tools for estimating emissions and emissions rates; a variety of technical documents; and informational brochures, fact sheet, and case studies.
Value to Environment:	LMOP has assisted in the development of approximately 360 LFG utilization projects. These projects have prevented the release of more than 28 million metric tons of carbon equivalent (MMTCE) into the atmosphere over the past 13 years. In 2007, operational LFG energy projects in the United States prevented the release of more than 21 MMTCE. This reduction is the carbon equivalent of the annual greenhouse gas emissions from more than 14 million passenger vehicles or the carbon sequestered annually by nearly 18 million acres of pine or fir forests.
Possible State & Local Actions:	• Participate in a state landfill methane outreach task force. • Work with LMOP to hold a state-based landfill gas workshop to outline progress in facilitating project development in the state, and receive input on state-specific issues affecting the development of landfill gas energy projects. • Develop a primer that provides guidance on state and local regulatory structure and project development opportunities specific to a state or locality. • Become an LMOP State or Community Partner that encourages coordination among permitting and regulatory offices to lower barriers and increase opportunities for LFG recovery. • Analyze city- or county-owned landfills for the technical and economic feasibility of a landfill gas energy project using LMOP tools and resources.

Landfill Methane Outreach Program

Tools/Resources:	**Learn More** • **Basic Information on LMOP and LFG** (Provides an overview of methane emissions from landfills and how LMOP is working collaboratively with businesses, states, energy providers, and communities to convert landfill gas to energy) • **Benefits of LFG Energy** • **Energy Projects and Candidate Landfills** • **How to Become a State Partner** • **How to Become a Community Partner** **Toolkit** • **Communicating the Benefits of LFG Energy Projects** (Offers tips for beginning or expanding outreach efforts for an LFG energy project) • **Promoting Your LMOP Participation** (Provides ideas for promoting your LMOP involvement, which can demonstrate your commitment to improving the environment) • **Sample Tools for LMOP Outreach** (Provides tools that can be used or adapted, or that can serve as a springboard for new outreach ideas)

AgSTAR

Services Offered:
- ☑ Analytical tools
- ☑ Guidebooks/toolkits
- ☑ Professional networking
- ☑ Public recognition
- ☑ Technical assistance
- ☑ Training/seminars

Relevant Sectors:
- ☑ Agricultural

Web site:	**www.epa.gov/agstar**
Contact information:	**Chris Voell** **202-343-9406** **voell.christopher@epa.gov**
Program Description:	AgSTAR is jointly sponsored by EPA, the U.S. Department of Agriculture, and the U.S. Department of Energy. The program encourages the profitable use of methane recovery (biogas) technologies at confined animal feeding operations (CAFOs) that manage manure as liquids or slurries. These technologies reduce methane emissions while achieving other environmental benefits.
Services:	AgSTAR offers project development resources, including a Web-based tool to assess project feasibility, provides technical assistance, publishes information and guidebooks, and sponsors events and workshops.
Value to Environment:	The AgSTAR program has successfully encouraged the development and adoption of anaerobic digestion technologies. Since 1994, the number of operational digester systems in the United States has grown to more than 125, producing significant benefits. In 2007, AgSTAR digester systems in the United States reduced 80,000 tons of methane emissions and generated 275 million kWh of energy.
Possible State & Local Actions:	• Use AgSTAR resources to identify CAFOs in the state or locality that do not have anaerobic digesters and offer technical assistance to evaluate potential. • Provide financial incentives for CAFOs to install anaerobic digesters. • Provide grants or tax incentives to help level the playing field for manure digester energy generation projects versus traditional energy generation. • Include manure digester biogas projects in state renewable energy or renewable portfolio standard incentive plans. • Implement state energy policies that provide appropriate state standards for net metering, standby charges, tariffs, and interconnection to the grid for distributed biogas generators.
Tools/Resources:	**General Information** • **AgSTAR Handbook** (Provides guidance on developing biogas technology at commercial farms) • **Market Opportunities Report (PDF)** (Assesses the market potential for biogas energy projects at swine and dairy farms in the United States) • **Funding On-Farm Biogas Recovery Systems: A Guide to Federal and State Resources** (Provides information about programs and strategies, such as low-interest loans, grants, and tax incentives, that can help parties interested in implementing anaerobic digestion technology) • **Industry Directory for On-Farm Biogas Recovery Systems (PDF)**

	(Helps farm owners and others interested in on-farm biogas recovery systems identify appropriate consultants, project developers, energy services, equipment manufacturers and distributors, and commodity organizations) **Anaerobic Digestion Systems** • **USDA-NRCS Biogas Interim Standards** • **A Protocol for Quantifying and Reporting the Performance of Anaerobic Digestion Systems for Livestock Manures (PDF)** • **Digester Performance Evaluations** (Characterizes environmental and financial improvements provided by anaerobic digesters)

Program Profiles—Policy, Planning, and Energy Security

State Climate and Energy Program

Services Offered:
- ☑ Analytical tools
- ☑ Guidebooks/toolkits
- ☑ Outreach support
- ☑ Technical assistance

Relevant Sectors:
- ☑ Government

Web site:	**www.epa.gov/cleanenergy/energy-programs/state-and-local/state.html**
Contact information:	**Julie Rosenberg** **(202) 343-9154** **rosenberg.julie@epa.gov**
Program Description:	The State Climate and Energy Program helps states achieve GHG reductions through the development of clean energy policies and programs. EPA provides states with and advises them on proven, cost-effective best practices, peer exchange opportunities, and analytical tools.
Services:	Specific assistance provided by the program includes: • Identifying and documenting cost-effective policies and initiatives that promote renewable energy, energy efficiency, and related clean technologies. • Measuring, evaluating, and communicating the environmental, energy, economic, and public health benefits of clean energy initiatives. • Offering a suite of national voluntary programs that provide partners with assistance and recognition for their clean energy actions. • Fostering peer exchange opportunities for state officials to share information on best practices and innovative policies.
Value to Environment:	State clean energy programs can improve air quality and public health, increase cost-effective energy efficiency and renewable energy, reap economic benefits, and lower GHGs.
Possible State & Local Actions	• Identify policies and programs that can save energy and reduce GHGs using EPA's tools and resources. • Analyze projected policy and program impacts and associated co-benefits. • Communicate the multiple benefits of clean energy policies and programs. • Evaluate, measure, and verify results once polices or programs are in place. • Develop an inventory of GHG emissions to establish a baseline and identify sectors or sources for targeted efforts.
Tools/Resources:	**Guidance** • **Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States** (Presents 16 best practices that states have used to develop clean energy programs and policies) • **State Best Practices** (Provides guidance, policy maps, and other supporting materials) • **State Technical Forum** (Explores analytical questions to resolve key issues surrounding state climate and clean energy efforts. Participants include state energy, environmental, and utility staff. Papers and presentations from past calls are available) • **Clean Energy Resources Database** (Provides summaries and links to dozens of clean energy resources useful to state

State Climate and Energy Program

	governments) **Tools** • **State GHG Inventory and Projection Tool** (Generates a top-down estimate of GHG emissions at the U.S. state level) • **Co-Benefits Risk Assessment (COBRA) Tool** (Estimates the impact of air quality improvements on public health) • **GHG Equivalency 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)

Local Climate and Energy Program

Services Offered:	Relevant Sectors:
☑ Analytical tools ☑ Guidebooks/toolkits ☑ Outreach support ☑ Technical assistance	☑ Government

Web site:	**www.epa.gov/cleanenergy/energy-programs/state-and-local/local.html**
Contact information:	**Andrea Denny** **(202) 343-926** **denny.andrea@epa.gov**
Program Description:	This program assists local governments in their climate change and clean energy efforts by providing technical assistance, analytical tools, and outreach support.
Services:	EPA is coordinating among federal, state, and non-governmental programs to make available comprehensive planning, policy, technical, and analytical information resources for municipal governments. The Local Program is also developing a Clean Energy Best Practices Guide for Local Governments and offers regular Webcasts on topical issues to local governments.
Value to Environment:	By implementing clean energy strategies, local governments can reduce emissions of air pollutants and greenhouse gases, lower energy costs, and improve the reliability and security of their energy system. Clean energy can also spur local economic development, improve public health and quality of life, and help communities meet sustainability and green building goals—all while providing opportunities for leadership and recognition.
Possible State & Local Actions:	• Establish a baseline of energy use and emissions to identify the largest opportunities for reductions. • Review and evaluate EPA's local best practices information and pick options that work for your community. • Implement cost-effective practices within government operations to lead by example. • Engage your community through education campaigns, ordinances, and demonstration projects.

Tools/Resources:	• **Local Best Practices**
	(Describe strategies that deliver clean, reliable, and low-cost ways to meet energy demand while reducing peak electricity system loads and the environmental impacts of energy use)
	• **Clean Energy Strategies Guides** (Additional guides are added periodically):
	  • **Energy Efficiency**
	  o **Energy Efficiency in Affordable Housing (PDF)**
	  o **Energy Efficiency Product Procurement (PDF)**
	  • **Energy Supply**
	  o **Green Power Procurement (PDF)**
	  o **On-Site Renewable Energy Generation (PDF)**
	  o **Combined Heat and Power (PDF)**
	  o **Landfill Gas to Energy (PDF)**
	• **Clean Energy Resources Database**
	(Provides summaries and links to dozens of clean energy resources useful to local governments)
	• **Local Clean Energy Webcast Series**
	(Discuss clean energy and climate-related topics of interest to local government

	officials. Webcasts are archived and available for later viewing on the site) • **American Recovery and Reinvestment Act of 2009: A Guide to Renewable Energy and Energy Efficiency Incentives for Local and Tribal Governments (PDF)** (Catalogs clean energy funding opportunities available to local and tribal governments through the 2009 economic stimulus)

Heat Island Reduction Program

Services Offered:	Relevant Sectors:
☑ Analytical tools	☑ Commercial
☑ Guidebooks/toolkits	☑ Government
☑ Professional networking	☑ Industry
☑ Public recognition	☑ Residential
☑ Technical assistance	☑ Utility

Web site:	**www.epa.gov/heatislands**
Contact information:	**Neelam R. Patel** **(202) 343-9384** **patel.neelam-r@epa.gov**
Program Description:	The Heat Island Program's purpose is to communicate policy, programmatic, scientific, and technological advancements to policymakers, program implementers at local and state levels, researchers, industry, and the general public. The program focuses on providing relevant information on current heat-island topics through its resources and communication infrastructure.
Services/resources:	The Heat Island Program provides communities with valuable information about the heat island impacts, tools and resources for implementing heat island reduction strategies, news on the latest scientific and technological advancements on heat island issues, and webcasts with leading experts in the field.
Value to environment:	Elevated temperatures from urban heat islands, particularly during the summer, can affect a community's environment and quality of life. While some heat island impacts seem positive—such as lengthening the plant-growing season—most impacts are negative—such as increased energy consumption, elevated air pollutant and GHG emissions, compromised human health and comfort, and impaired water quality. Efforts to reduce urban heat islands and mitigate their effects can lower risks associated with the negative impacts listed above.
Possible State & Local Actions:	• Implement heat island reduction strategies that increase use of trees and vegetation, green roofs, cool roofs, and cool pavements to reduce temperatures. • Integrate mitigation strategies into communities through voluntary efforts such as demonstration projects, incentive programs, weatherization, urban forestry efforts, outreach, education, and awards. • Include mitigation strategies into local and state policy and regulatory actions such as procurement, resolutions, ordinances, action plans, design guidelines, zoning codes, building standards and codes, and air quality standards.
Tools/Resources:	• **Reducing Urban Heat Islands: Compendium of Strategies** (Describes mitigation measures that communities can take to address the negative impacts of urban heat islands) • **Heat Island Community Actions Database** (Provides information on more than 75 local and statewide initiatives to reduce heat islands and achieve related benefits. Each entry in the database includes a description of the activity, its current status, and a link to a Web site for more information) • **Heat Island Webcast Series** (Provides timely information on heat island topics and an opportunity for participants to share their knowledge and expertise)

National Action Plan for Energy Efficiency

Services Offered:	Relevant Sectors:
☑ Analytical tools	☑ Commercial
☑ Guidebooks/toolkits	☑ Government
☑ Public recognition	☑ Industry
☑ Technical assistance	☑ Residential
	☑ Utility/Program Administrator

Web site:	**www.epa.gov/cleanenergy/eeactionplan.htm**
Contact information:	**Stacy Angel** **(202) 243-9606** **angel.stacy@epa.gov**
Program Description:	The National Action Plan for Energy Efficiency is a private-public initiative begun in the fall of 2005 to create a sustainable, aggressive national commitment to energy efficiency through the collaborative efforts of gas and electric utilities, utility regulators, and other partner organizations. Such a commitment can take advantage of large opportunities in U.S. homes, buildings, and schools to reduce energy use, save billions on customer energy bills, and reduce the need for new power supplies.
Services:	The National Action Plan for Energy Efficiency has developed a number of resources that may be useful to state and local governments, including a Vision for 2025, outreach tools, guides and papers, tools, sector collaborative resources, and presentations from regional meetings.
Value to Environment:	The Action Plan is helping to remove barriers to greater investment in cost-effective energy efficiency. Achieving all cost-effective energy efficiency by the year 2025 could reduce national greenhouse gas emissions by 500 million metric tons of carbon dioxide annually, equivalent to the emissions of 90 million vehicles.
Possible State & Local Actions:	• Build on what is working: leverage proven, documented, cost-effective programs and program designs; establish partnerships with parties responsible for existing energy efficiency efforts; build programs that can continue after economic stimulus funding expires. • Emphasize job creation: pursue energy efficiency programs that engage services and trades; develop and deploy the workforce training necessary to support the programs; consider the skills that will be in demand for the longer term. • Measure results: evaluate the energy, environmental, and jobs benefits of programs; require the use of established procedures for evaluation, measurement, and verification; strive for simplicity and for transparency in assumptions and results. • Plan for the future: develop the long-term state policy infrastructure for energy efficiency using the *National Action Plan for Energy Efficiency Vision for 2025* as a framework.
Tools/Resources:	**Getting Started** • **Vision for 2025** (Details a framework for carrying out the steps necessary to fully implement the Action Plan goals) • **Quick Start Energy Efficiency Programs (PDF)** (Describes a basic set of programs that are quick to get off the ground, offer measurable benefits in the near-term, and can be expanded to a broader and more comprehensive set of programs over a few years) • **Model Energy Efficiency Program Impact Guide (PDF)** (Provides guidance on evaluating the results of energy efficiency programs)

- **Understanding Cost-Effectiveness of Energy Efficiency Programs (PDF)**
  (Reviews the issues and approaches involved in considering and adopting cost-effectiveness tests for energy efficiency)
- **Guide for Conducting Energy Efficiency Potential Studies (PDF)**
  (Identifies three main applications for energy efficiency potential studies and provides examples of each)
- **Sector Collaborative Resources**
  (Provides an opportunity for end users from key sectors of the economy, electric and gas utilities, regulators, and partner organizations to jointly pursue the benefits of energy efficiency)

Utilities and Energy Efficiency

- **Aligning Utility Incentives with Energy Efficiency Investment (PDF)**
  (Describes the financial effects on a utility of its spending on energy efficiency programs, how those effects could constitute barriers to more aggressive and sustained utility investment in energy efficiency, and how adoption of various policy mechanisms can reduce or eliminate these barriers)
- **Utility Best Practices Guidance for Providing Business Customers with Energy Use and Cost Data (PDF)**
  (Summarizes current data practices, outlines the business and policy cases for action, and presents both basic and advanced approaches for providing consistent, standardized electronic energy consumption and cost data to business customers)
- **Guide to Resource Planning with Energy Efficiency (PDF)**
  (Describes the key issues, best practices, and main process steps for integrating energy efficiency into resource planning including how to help ensure that energy efficiency programs provide a resource as dependable and valuable to utilities and their customers as any supply-side resource)

Tools

- **Outreach Tools**
  (Provides links to newsletters, fact sheets, presentations, and a communications kit that can be used to communicate about energy efficiency and the National Action Plan)
- **Clean Energy Resource Database**
  (Describes key resources and documents relevant to the National Action Plan for Energy Efficiency)
- **Energy Efficiency Benefits Calculator**
  (Provides a simplified tool to demonstrate the business case for energy efficiency from the perspective of the consumer, the utility, and society)