

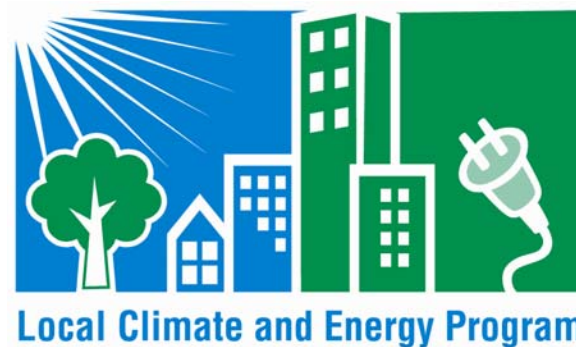
The U.S. EPA Local Climate and Energy Program webcast titled “**Smart Grid and Clean Energy for Local Governments**” will start in a few minutes.

Thank you for joining us.



Local Climate and Energy Program





## Smart Grid and Clean Energy for Local Governments

U.S. EPA Local Climate and Energy Webcast  
April 29, 2010

# Webcast Agenda

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- Introduction and U.S. EPA Local Climate and Energy Program Overview, **Emma Zinsmeister**
- U.S. EPA - Smart Grid: Implications and Opportunities for Clean Energy and Greenhouse Gas Emissions Reductions, **Stacy Angel**
- U.S. DOE - Smart Grid Activities by the U.S. Department of Energy, **Dan Ton**
- Austin, TX – Pecan Street Project, **Brewster McCracken**
- Boulder, CO - Smart Grid City: Developing the Smart Grid of the Future, **Kara Mertz**
- Q and A Session

# GoTo Webinar Software Logistics

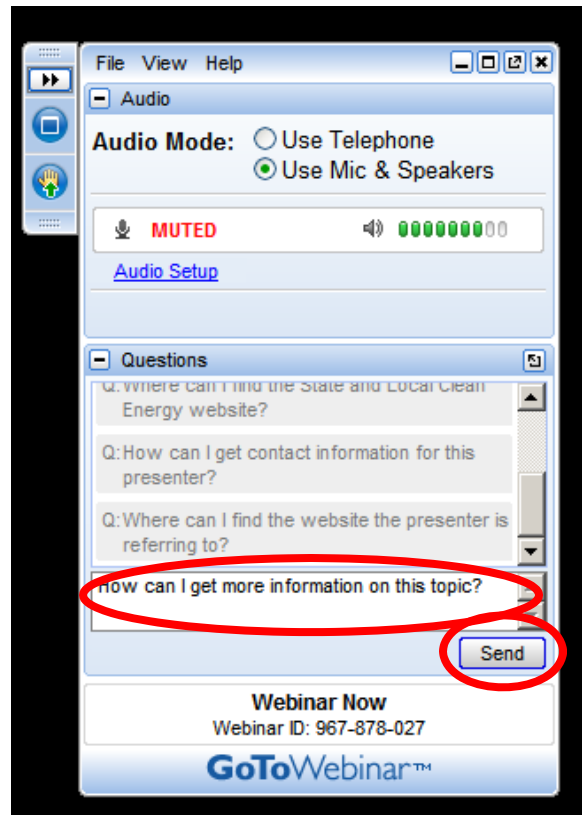


- You will be muted throughout this webcast to minimize background noise. You'll be able to submit questions and comments in writing.
- Today's session will be recorded and will be made available for download in a few weeks at:
  - All files:
    - <http://www.epa.gov/statelocalclimate/web-podcasts/local-webcasts-by-date.html>
  - Podcasts:
    - <http://www.epa.gov/statelocalclimate/web-podcasts/index.html>
- Throughout the webcast, if you have problems, please contact Nikhil Nadkarni at [nnadkarni@icfi.com](mailto:nnadkarni@icfi.com)

# Questions (GoTo Meeting)

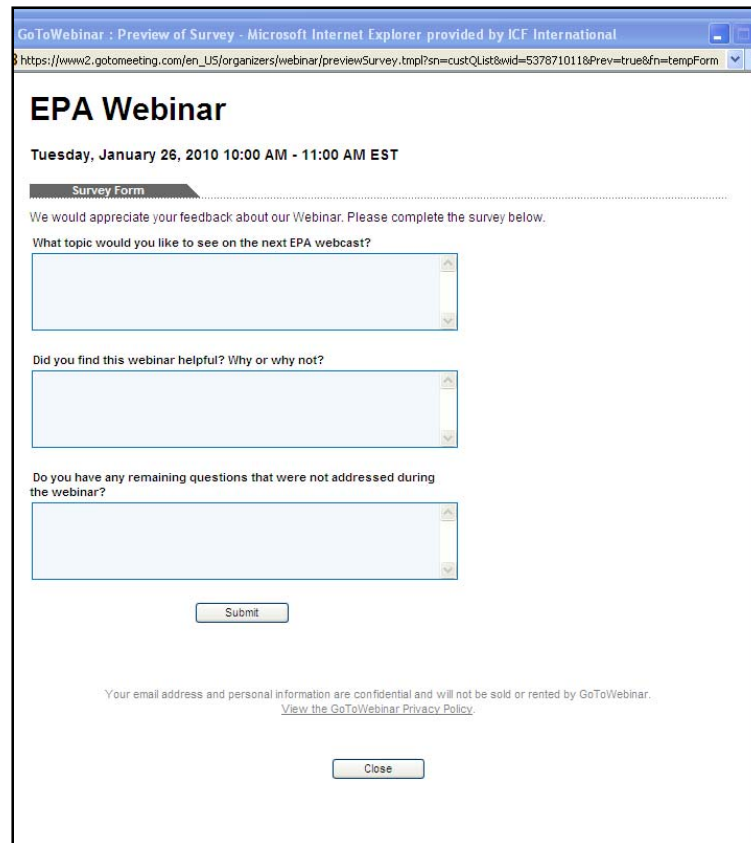
If you have a question, submit through the question pane.

We will compile these questions, and ask them during the Q&A session. Please include the name of the presenter who should answer your question.



# Optional Feedback (GoTo Meeting)

A pop-up window will appear once you exit GoTo Meeting. If you have feedback, please respond to the optional questions in the designated areas.



GoToWebinar : Preview of Survey - Microsoft Internet Explorer provided by ICF International  
https://www2.gotomeeting.com/en\_US/organizers/webinar/previewSurvey.html?sn=custQList&wid=537871011&Prev=true&Fn=tempForm

## EPA Webinar

Tuesday, January 26, 2010 10:00 AM - 11:00 AM EST

Survey Form

We would appreciate your feedback about our Webinar. Please complete the survey below.

What topic would you like to see on the next EPA webcast?

Did you find this webinar helpful? Why or why not?

Do you have any remaining questions that were not addressed during the webinar?

Submit

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# Local Climate and Energy Program

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## Informational and Peer Exchange Network

- Advance comprehensive climate and clean energy approaches in local governments and their communities
- Focus on established, cost-effective best practices: Energy efficiency first, renewable energy second
- Serve as a gateway to existing resources and programs
- Develop new tools, resources, and guidance
- Facilitate peer to peer exchange
- Showcase success stories

<http://www.epa.gov/statelocalclimate/local/index.html>

# Local Climate and Energy Program Goals



Assist localities (e.g., tribal governments, regional governments, municipalities and small communities) to:

- Reduce greenhouse gas emissions while achieving their sustainability goals
- Identify and work with expert partners and programs
- Understand, integrate, and maximize multiple benefits (e.g., energy savings, cost savings, public health benefits, economic growth, securing local energy) in planning and designing programs

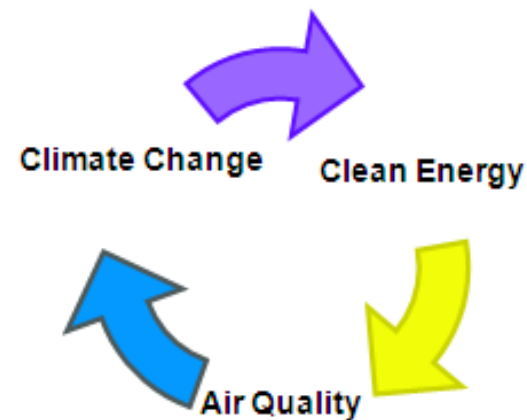


# EPA Local Climate and Energy Program Approach



## Multiple Benefits Framework for Climate - Clean Energy

- Local Governments can achieve:
  - Air quality improvements
  - Greenhouse gas emission reductions
  - Energy security and reliability
  - Economic development
  - Public health
  - Quality of life



Clean Energy: Energy Efficiency, Renewable Energy, Clean Distributed Generation

# Local Climate and Energy Program Resources

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- Website
- Additional webcasts and training opportunities
- Economic Recovery resources for energy efficiency and renewable energy
- Climate Showcase Communities Grant
- Local Climate and Energy Strategy Guides
- Information on additional technical support and EPA programs related to climate mitigation
- Smart Grid background document



# State and Local Climate and Energy Website – Released on February 16



Provides State and Local governments with:

- Information to develop comprehensive **climate strategies**
- Background on climate change topics
- Information to **develop and implement climate mitigation policies and programs**
- Links to a wide array of **tools, guidance documents, webcasts, podcasts, and other technical assistance resources**
- **Examples and case studies**

The screenshot shows the homepage of the State and Local Climate and Energy Program website. At the top is a navigation bar with 'Contact Us' and 'Share' links. Below is a large banner image depicting a sustainable city with solar panels, wind turbines, and green buildings. A 'Quick Finder' section is divided into 'State' and 'Local' categories, each with a list of resources. Below this is a paragraph about the program's technical assistance and a bulleted list of specific services. A 'State Climate and Energy Program' dropdown menu is open, showing a description of the local program and a 'State Examples' section with a map of the United States. On the right side, there are three widget sections: 'What's New' with recent news items, 'State Podcast' with a podcast link, and 'Local Podcast' with another podcast link. At the bottom right, there are sections for 'EPA State Technical Forum' (dated February 25, 2010) and 'EPA Local Webcasts'.

<http://www.epa.gov/statelocalclimate/index.html>

# Webcasts and Training



- Local Climate and Energy Webcast Series
  - Held monthly, announced via our listserv and website
  - Each call features local government case studies and speakers
  - Future Topics:
    - Green Roofs
    - Transportation Control Measures
    - Heat Island Reduction
  - View past webcasts at:
    - All files: [www.epa.gov/statelocalclimate/web-podcasts/local-webcasts-by-date](http://www.epa.gov/statelocalclimate/web-podcasts/local-webcasts-by-date)
    - Podcasts: [www.epa.gov/statelocalclimate/web-podcasts](http://www.epa.gov/statelocalclimate/web-podcasts)
- Next Webcast – Green Roofs will be held in early June; date TBD
- Additional Webcast Opportunities
  - ENERGY STAR Training Center <http://energystar.gov/training>
  - State Climate and Energy Technical Forum [www.epa.gov/statelocalclimateee/web-podcasts/forum.html](http://www.epa.gov/statelocalclimateee/web-podcasts/forum.html)
  - DOE Technical Assistance Project for State and Local Officials [http://apps1.eere.energy.gov/wip/tap\\_webcasts.cfm](http://apps1.eere.energy.gov/wip/tap_webcasts.cfm)
  - Information on other EPA Clean Energy webcasts is available at:
    - <http://www.epa.gov/statelocalclimate/web-podcasts/index.html>
    - <http://www.epa.gov/statelocalclimate/events/index.html>



# Local Climate and Energy Webcasts Widget & iTunes Channel



- Webcast Widget
  - Can be added to your website
  - Automatically updates with information on our next webcast
  - Copy the code from our website and paste it into the source code for your webpage:  
<http://www.epa.gov/statelocalclimate/widgets/downloadwidgets.html#local>
- iTunes Channel
  - Automatically receive podcasts of our webcasts by subscribing to our iTunes channel:  
<http://itunes.apple.com/podcast/us-epa-local-climate-energy/id311824706>
  - You will need software for playing MP3 files in order to listen to our podcasts
  - For more information, visit:  
<http://www.epa.gov/statelocalclimate/web-podcasts/index.html>



# EPA ARRA Resources for Energy Efficiency and Renewable Energy Projects



## State and Local Climate and Energy Economic Recovery Resources Website

[www.epa.gov/statelocalclimate/econ-recovery](http://www.epa.gov/statelocalclimate/econ-recovery)

### Funding Opportunities within ARRA 2009:

- **Document:** American Recovery and Reinvestment Act of 2009: A Guide to Renewable Energy and Energy Efficiency Opportunities for Local and Tribal Governments

### EPA Programs and Resources:

- **Document:** ARRA 2009: State and Local Guide to U.S. EPA Climate and Energy Program Resources

### Project Ideas and Implementation Support Resources:

- **Toolkits** - Rapid Deployment Energy Efficiency (RDEE)
- **Documents** – Clean Energy Funds, EECEBG drop-in text samples, Local Clean Energy Strategy Guides, Energy Star products for Shovel-ready projects
- **Webcasts** – Local climate and energy webcast series, Energy STAR building benchmarking webcasts, other Energy STAR webcasts

# Resource Guide: State & Local Guide to U.S. EPA Climate and Energy Program Resources



- Provides overview of EPA clean energy programs that can help expand or develop clean energy initiatives
- Each program description includes:
  - Basic information and contact details
  - Potential target audiences
  - Highlights of tools and resources
  - Suggestions of possible actions
- EPA programs are organized into six categories:
  - Buildings
  - Industry
  - Electric power and renewable energy
  - Transportation
  - Energy education
  - Policy, planning, and energy security



# Climate Showcase Communities Grant



- Competitive grant for local and tribal governments
- Goal: showcase documentable, replicable GHG reductions that build community capacity and address multiple benefits
- First 20 Showcase Communities announced Feb 25<sup>th</sup>
- Round 2 of Funding Expected to open in May 2010
  - \$10 million for 20-30 projects

<http://www.epa.gov/statelocalclimate/local/showcase>





# Climate Showcase Grant Framework



- Demonstrate integrated and sustainable community approaches that achieve large reductions in GHG emissions and additional co-benefits (Air Quality, Jobs, etc.)
  - Planning through implementation (including financing, technical assistance, policy development, training, and partnerships)
  - Major emission sources -- buildings, transportation, public services
  - Robust Measurement and Reporting
- Build networks and peer exchange to share approaches
  - Spur additional climate action
  - Support comprehensive and integrated GHG management that creates jobs
  - Offer forums for training and peer exchange
    - Regular webcasts for grantees
    - Annual Conferences



# Climate Showcase Communities & Smart Grid



- Two of the first 20 grantees are implementing smart grid technologies as part of broader efforts to achieve GHG emissions reductions
- West Chester, PA – West Chester Area School District
  - Developing a Student Conservation Corps to promote energy efficiency within the school district and the local business community
  - Three middle schools and three high schools will receive **“building dashboards”** that illustrate real-time resource and energy use
- Honolulu, HI – Department of Community Services
  - Promoting behavior change and efficiency retrofits in marginalized communities
  - Multi-faceted approach includes installing **real-time energy monitors**

# Local Climate and Energy Strategy Guides



- **Covers Multiple Strategies in Five Areas**

- Energy Efficiency, Energy Supply, Transportation, Community Planning and Design, Solid Waste and Materials Management
- For each strategy, outlines: benefits, measures, key participants, mechanisms for implementation, costs, funding, interaction with federal, regional, and state programs, case studies, and resources/references

- **Nine Draft Guides Currently Available**

- Energy Efficiency in Affordable Housing
- Energy Efficient Product Procurement
- Combined Heat and Power
- Energy Efficiency in Municipal Operations
- Smart Growth
- Green Power Procurement
- On-site Renewables
- Landfill Gas to Energy
- Energy Efficiency in K-12 Schools

- **Upcoming Guides**

- Transportation Control Measures
- Efficient Fleets
- Reducing Urban Heat Islands

<http://www.epa.gov/statelocalclimate/resources/strategy-guides.html>

# EPA Partnership and Technical Support Opportunities for Locals



- Help Local Governments:**
- Learn from Best Practices
  - Emphasize Co-Benefits
  - Integrate Planning
  - Prioritize EE as a Resource
- These programs offer:**
- Direct Technical Support
  - Peer Exchange
  - Tools and Guidance



**Collision Repair Campaign**



# Smart Grid Background Document



## Concise primer on smart grid for local governments

- What is a smart grid?
- Why make a smart grid?
- Is a smart grid a green grid?
- Barriers to smart grid implementation
- Federal efforts to implement a smart grid
- Current examples of smart grid deployment
- Resources for more information

The thumbnail shows the cover of a document titled "Smart Grid and Clean Energy for Local Governments Background and Resources". At the top is the Local Climate and Energy Program logo. Below the logo, the title is centered. Underneath the title, it says "U.S. Environmental Protection Agency Local Climate and Energy Webcast Series". The main body of the cover contains a paragraph of text and a blue box on the right side with the heading "Topics Covered in This Document". At the bottom, there is a small footnote.

Local Climate and Energy Program

*Smart Grid and Clean Energy for Local Governments*  
Background and Resources  
U.S. Environmental Protection Agency  
Local Climate and Energy Webcast Series

Recent trends, including increased electricity needs and advancements in grid management technologies, are causing the electric industry and regulators to rethink how the grid is managed. The industry is starting to employ "smart" grids that use information and communication technologies, which may make electric power systems more reliable and efficient. These technologies also might help enable integration of higher levels of renewable energy and increased energy efficiency. Although smart grid technologies are evolving, the use of some is becoming widespread, and there are examples of deployments in communities across the country.

**Topics Covered in This Document**

- What is a Smart Grid?
- Why Make a Smart Grid?
- Is a Smart Grid a Green Grid?
- Barriers to Smart Grid Implementation
- Federal Efforts to Implement a Smart Grid
- Current Examples of Smart Grid Deployment
- Additional Resources and Sources Cited

**What Is a Smart Grid?**  
Various definitions exist for a smart grid, and all involve using information and communications technologies on the electric grid system. The Energy Independence and Security Act of 2007 (EISA 2007) established federal policy support for a smart grid, characterizing it as the modernization of the nation's electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth. A key element of a smart grid is the increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid, as well as integration of distributed generation, demand response, and energy efficiency.<sup>1</sup>

To date, the majority of investments in smart grid technologies have been in the deployment of advanced metering infrastructure or "smart meters." These technologies may be used to provide generators, system managers, and customers with instantaneous information on electricity needs and prices. Potential exists for these parties to work together to meet electricity needs in the most efficient way possible. Complementary policies, which often must be established by utility regulators, are required to ensure that use of these technologies results in the desired benefits.

<sup>1</sup> For more information on EISA 2007 and smart grid, see Title XVII of EISA 2007, at [http://www.ea.energy.gov/EISA\\_Title\\_XVII\\_Smart\\_Grid.pdf](http://www.ea.energy.gov/EISA_Title_XVII_Smart_Grid.pdf)

Will be available at: <http://www.epa.gov/statelocalclimate/web-podcasts/local-webcasts.html>

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Main Website:

<http://www.epa.gov/statelocalclimate/local/index.html>

State and Local Climate and Energy Listserv:

[www.epa.gov/statelocalclimate/listservs/index.html#a01](http://www.epa.gov/statelocalclimate/listservs/index.html#a01)