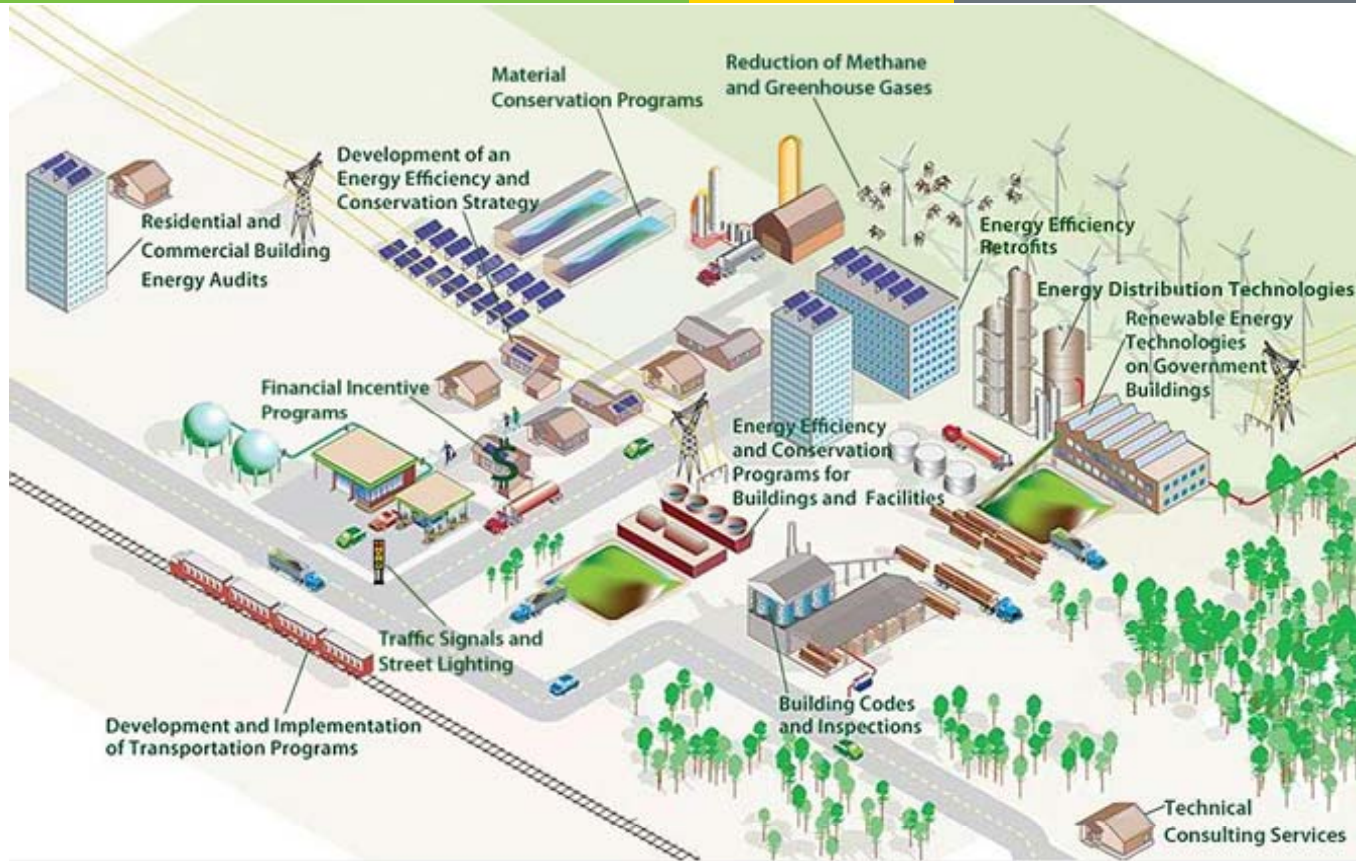


Building the Clean Economy

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



Presented by: Johanna Zetterberg
Deputy Program Manager
Office of Weatherization and
Intergovernmental Programs

January 23, 2010
Mayors Innovation Project

- Market transformation, policy context, local leadership
- Direct funding for deployment and local innovation
 - EECBG Formula Grants
 - Clean Cities
 - 48C Manufacturing Tax Credit
 - Recovery through Retrofit
 - Retrofit Ramp-UP
- Innovative EE policies
- Innovative financing
- DOE resources to support your efforts

- Drivers from the White House
 - Make the U.S. a leader on climate change
 - Deploy the cheapest, cleanest, fastest energy source – energy efficiency
 - Pick up the fruit on the ground
- Focus
 - Built environment – homes/buildings use 71% electricity in U.S.
- Need
 - Deep market penetration
 - Comprehensive, deep retrofits in each home/building
 - Job creation and economic growth
 - Scale UP and replicate!



- Lasting structural and behavioral changes in the marketplace (Consortium for Energy Efficiency)
- Continuous intervention in the market becomes unnecessary (Blumstein et al. 2000)
- 3-Part Solution:
 1. Financing models
 - Emphasize strategies that stretch amortization periods, buy down risk, and attach value to property, not owner
 2. Comprehensive programs
 - Triggers and incentives that bring more participants in
 3. Policy drivers at Federal-state-local levels
 - Need a seamless policy framework that builds on jurisdiction's strengths and responsibilities

- **Obstacles**
 - First cost barrier
 - Owner discounting future value of energy and \$ savings
 - Expensive to borrow money
- **Strategies**
 - Amortize loan over longer period
 - Property tax assessments
 - On-bill financing – utilities or municipalities
 - EE Mortgage products
 - Access to low or no cost money
 - Buy down interest rate
 - Reduce administrative and transaction costs through aggregation
 - Risk reduction – secure/guarantee loans

More Participants – Comprehensive Programs

- Obstacles
 - Voluntary participation – restricted to “Early Adopters” 12-20%
 - High transaction costs
- Strategies
 - Permit or loan triggers audits and improvements
 - Time-of-Sale
 - Renovation permits
 - Property tax assessments
 - Aggregation
 - ESCOs
 - Forward Capacity Markets (ex: ISO New England)
 - Turn key efficiency services from big box/retailers – including financing
 - Expand existing programs
 - Weatherization, HPwES, community development

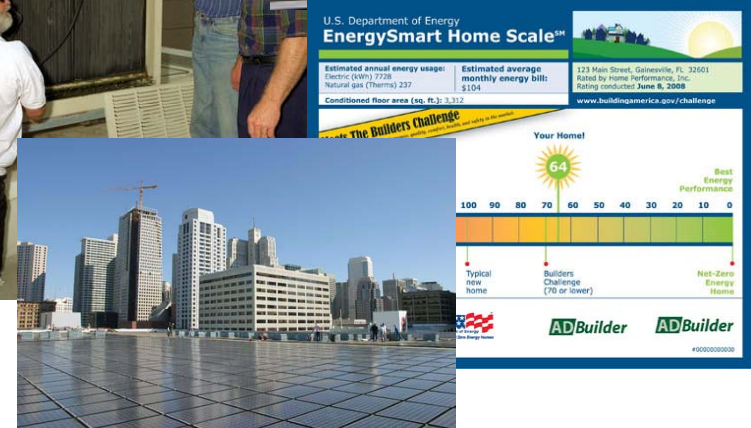
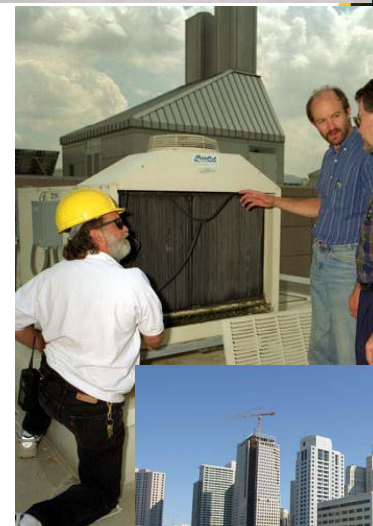
- Local
 - Berkeley FIRST (CA)
 - San Francisco Clean Energy Loan Program (CA)
 - Palm Desert Independence Loan Program (CA)
 - Montgomery County HELP – Home Energy Loan Program (MD)
 - Boulder ClimateSmart Loan Program (CO)
 - Annapolis EZ (Energy Zone) Loan Program (MD)
- State/Regional
 - RGGI
 - Public benefit funds
 - ISO New England Forward Capacity Markets
 - Oregon Trust and Efficiency Vermont
 - Pennsylvania Home Energy Loan Program Great Bear Bank/AFC First
 - California AB 811, AB 32, CPUC loading order

America Must Lead Energy Technology Revolution

DOE Traditionally Invests in Technology Innovation R & D



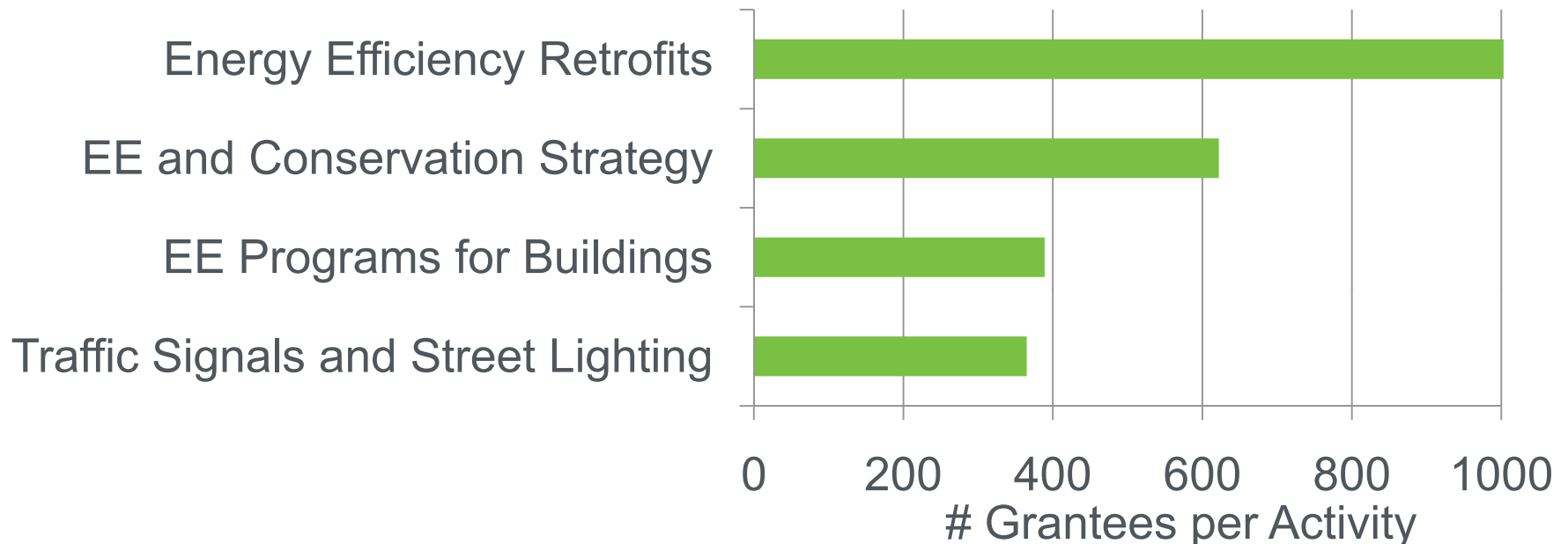
Mayors Deliver Innovation Through Policy and Programs



- New program bringing together DOE and over 2,300 local communities for the first time
 - Cities across the nation are leading the way
 - Empowering local communities to make strategic investments to meet the nation's long term clean energy and climate goals
- EECBG funds \$3.2 billion for 14 activity types
 - \$2.3/\$2.7 MM of formula grants awarded (2093/2359 grantees)
 - \$390 MM Retrofit Ramp-up Program for innovative models of whole-neighborhood retrofits
 - \$64 MM additional competitive awards
- DOE and Mayors working together to make the program a success

EECBG Applicants Developed a Diverse Set of Proposals

Top 4 EECBG Activity Type Frequency



Examples of Additional Activities

- Energy Audits
- Building Codes and Inspections
- Renewable Energy Technologies on Government Buildings
- Energy Distribution Technologies
- Development and Implementation of Transportation Programs

Portland EECBG \$5,626,100 total allocation

- Financial Incentive Program: Portland Clean Energy Fund Pilot. One of the priority action items in the 2009 Climate Action Plan is to establish an investment fund with public and private capital to provide Portland residents with easy access to low-cost financing for energy performance improvements. We propose to use EECBG funds to provide part of the initial capitalization for a \$5 million revolving loan fund for energy efficiency upgrades in the residential housing sector. Loan obligations will be repaid on the homeowner's heating bill.



<http://www.cleanenergyworksportland.org/>

Competitive Retrofit Ramp-Up Program (R²) In Progress

- Up to \$390 million initiative to fund building retrofit programs that reach whole neighborhoods under EECBG
- 8-20 awards in range of \$5-\$75M
- Applications received 12/14/09
- Under review now by independent experts



DOE seeks program models that:

- Are neighborhood-focused on existing buildings
- Deliver verified energy savings
- Achieve a high ratio of leverage (5:1)
- Are sustainable beyond exhaustion of grant funds
- Are replicable and scalable
- Include the support of multiple partners

http://www.eecbg.energy.gov/about/competitive_grants.html

Two examples:

Property-Assessed Clean Energy (PACE) loans

- Repaid through property taxes.
- All PACE programs are required to follow federal best-practices, posted at http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

On-bill financing

- Loans repaid through utility bills.

Clean Cities Supports Local Decisions that Reduce the Use of Petroleum in Transportation



Energy Efficiency & Renewable Energy

\$300 million in Recovery Act to support local decisions to reduce petroleum in transportation

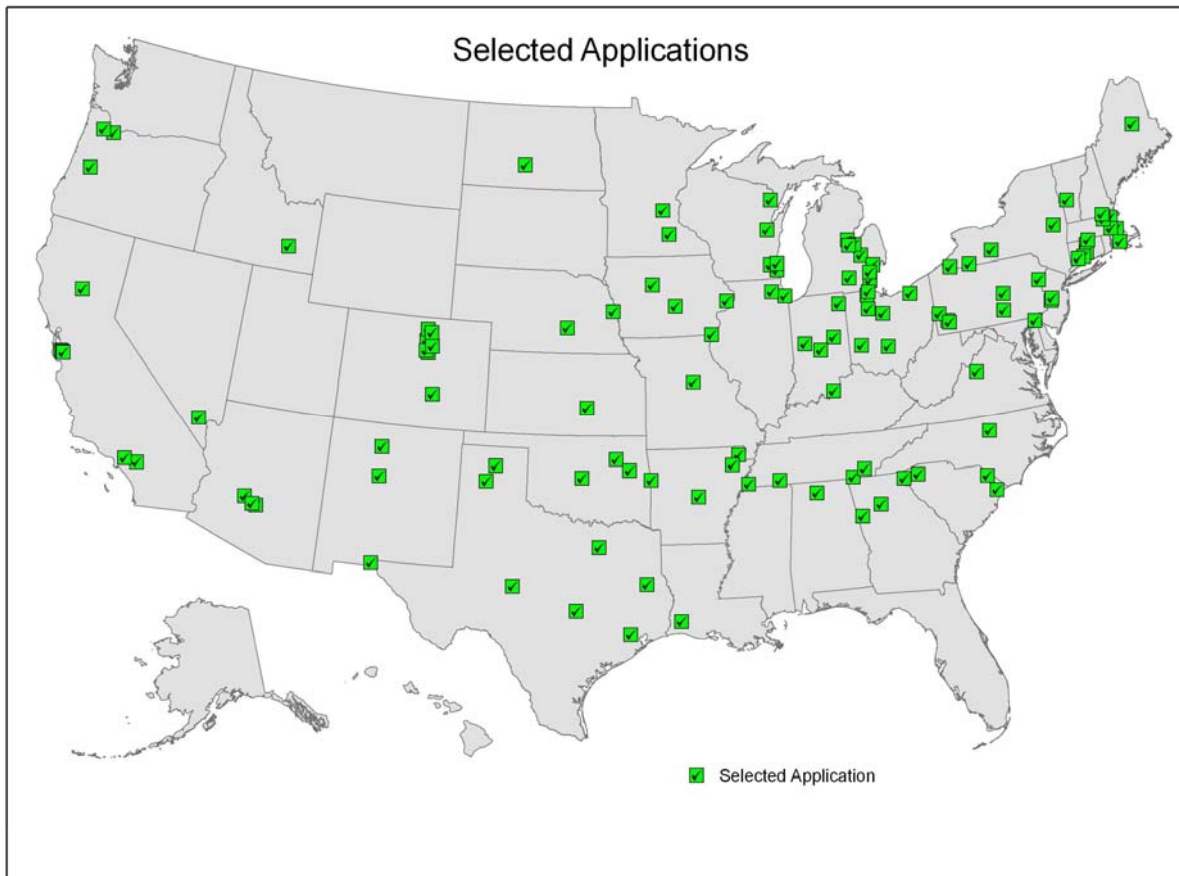
(e.g. alternative fuels, hybrid, idle reduction, blended fuels, fuel economy)



Highly leveraged program with 87 local coalitions
Has helped displace more than 2 billion gallons
of petroleum since 1993

48C Manufacturing Tax Credits Spur American Manufacturing

\$2.3B in awards, leveraging \$5B in private sector capital

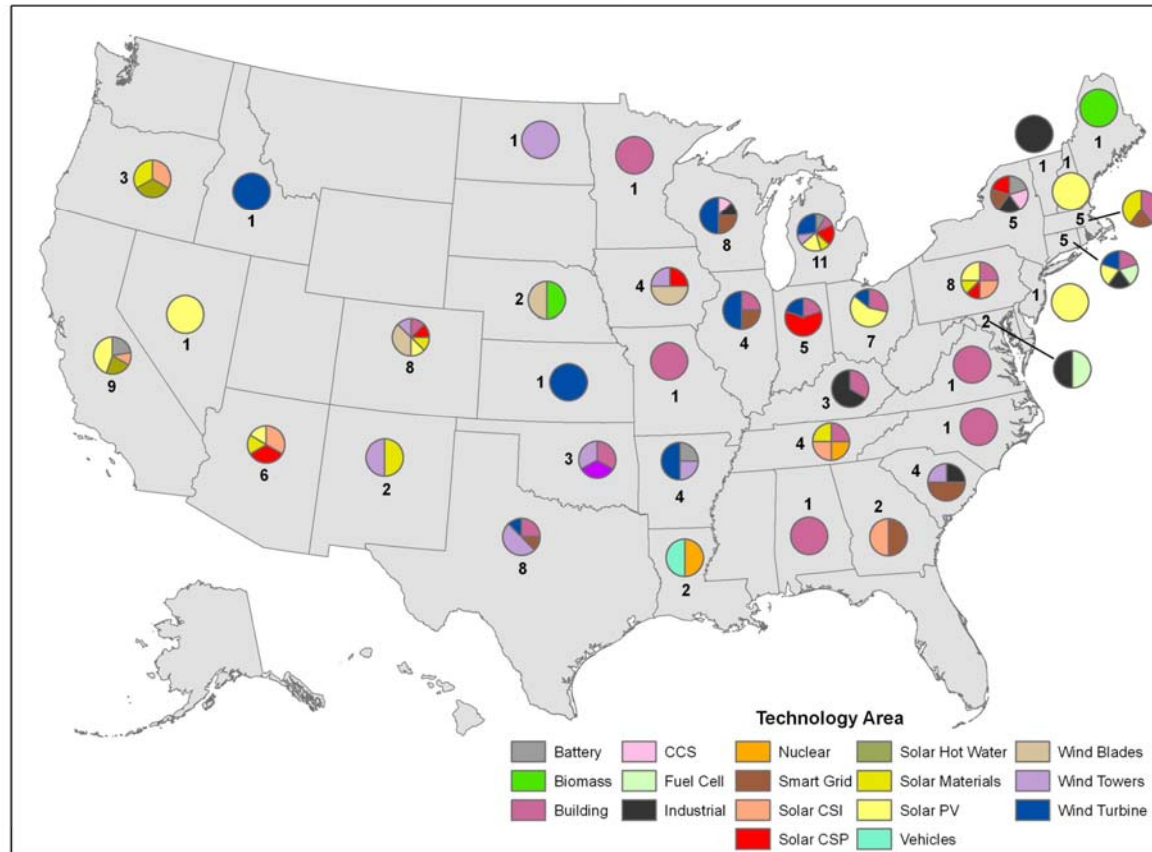


Jan 7, 2010

- American manufacturing of energy technology leads to jobs and energy security

48C Tax Credits Are Technologically Diverse

<http://www.energy.gov/recovery/48C.htm>



Jan 7, 2010

• What can cities do to attract technology manufacturing in their town?

Vice President Biden's Call for Recovery Through Retrofit

In May 2009, Vice President Biden called on the Council of Environmental Quality to develop a proposal for Federal action to lay the groundwork for a self-sustaining home energy efficiency retrofit industry.



<http://www.whitehouse.gov/administration/eop/ceq/initiatives/retrofit>

Established an Interagency Task Force

- **Headed by Office of the Vice President and the Council on Environmental Quality**
- Department of Agriculture
- Department of Commerce
- Department of Education
- Department of Energy
- Department of Housing and Urban Development
- Department of Labor
- Department of Treasury
- Environmental Protection Agency
- Equal Employment Opportunity Commission
- General Services Administration
- Small Business Administration
- Executive Office of the President
 - Council of Economic Advisers
 - Domestic Policy Council
 - National Economic Council
 - Office of Management and Budget
 - Office of Public Engagement and Intergovernmental Affairs
 - Office of Science and Technology Policy

Recovery through Retrofit Aims to Reduce Barriers to Allow Local Policies to Flourish

BARRIERS



SIX RECOMMENDATIONS

Access to Information:

Consumers do not have access to straightforward and reliable information.

Develop Energy Performance Label for Homes (DOE)

Develop a National Home Energy Performance Measure (DOE)

Access to Financing:

Homeowners face high upfront costs and are often unable to recoup the value of their investment.

Support Municipal Finance Programs (DOE)

Improve Energy Efficiency Mortgages (HUD)

Expand State Energy Revolving Loan Funds (DOE)

Access to Skilled Workforce:

There is an insufficient amount of skilled workers to expand energy retrofit programs on a national level.

Establish National Workforce Certification and Training Standards (DOE/DOL/SBA)

DOE TA Resources – Ready to Help you Roll Out Innovative Financing



Energy Efficiency & Renewable Energy

- State and municipal revolving loan funds
- Third party loans
- Energy savings performance Contracting (ESPC)
- Property-Assessed Clean Energy (PACE)
- On-Bill Repayment
- Energy Efficient Mortgages
- Power Purchase Agreements

Send requests for technical assistance on financing to:

Bret Kadison – bret.kadison@ee.doe.gov

Resource Portal for Financing Programs

<http://www.eecbg.energy.gov/solutioncenter/financialproducts/default.html>

How to Guide for PACE Programs <http://rael.berkeley.edu/files/berkeleysolar/HowTo.pdf>

Federal Government's Policy Framework for PACE Financing Programs

http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf

State legal authority for PACE programs is collected by the DSIRE database

[http://www.dsireusa.org/incentives/index.cfm?EE=1&RE=1&SPV=0&ST=0&searchtype=P
TFAuth&sh=1](http://www.dsireusa.org/incentives/index.cfm?EE=1&RE=1&SPV=0&ST=0&searchtype=P
TFAuth&sh=1)

Take home: top 3 Picks

- ✓ Property Assessed Clean Energy (PACE) programs
- ✓ Target 90% compliance with existing building codes
- ✓ Adopt and enforce most recent building codes

Why these 3?

- Drive innovation
- No/low cost
- Fuel local job growth
- Opportunity for national leadership status
- Improve building stock assets
- Federal support and technical assistance

For More Information

- EECBG Program Page
<http://www.eecbg.energy.gov/>
- EECBG Solution Center
<http://www.eecbg.energy.gov/solutioncenter/default.html>
- EECBG Program Guidance
http://www.eecbg.energy.gov/about/program_guidance.html
- EERE Recovery Act Activities
<http://www.eere.energy.gov/recovery/>
- Weatherization and Intergovernmental Program
<http://www.eere.energy.gov/wip/>

Energy Empowers Website – Success Stories

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

your stories...

Energy Empowers

from a clean energy economy

Weatherization Helping Idahoans Save Green by Going Green

Pocatello, Idaho – Helen Humphreys never thought she could afford the upfront costs of making her home energy-efficient, but stimulus money helped her home get weatherized and lowered her energy bills. [Read More.](#)

Multimedia

Here you'll witness the first-hand stories of people like you who have taken the next steps toward a future of renewed prosperity. By pushing the limits of energy efficiency and renewable energy technologies and supporting some of America's most innovative businesses, we are saving American jobs and continuing to build a clean-energy economy that will improve the lives and reward the ingenuity of the American people.

Powering Up for Recovery in Michigan
Elizabeth Rolinski can't wait to reopen the factory she was once

Being energy efficient and using renewable energy isn't just a fad—it's a real force that's changing people's lives, putting people back to work, and helping rebuild America's economy. Here you can read more about the stories of the people who have been touched by these technologies.

[Share Your Stories With Us](#)

See Where These Stories Happen

[Energy Empowers Blog](#)

[Ohio town installing 'green' traffic signals](#)

Thank You

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