Energy Efficiency’s Role in Rural Prosperity

• Moderator
  • Jessica Rackley, Program Director, NGA

• Speakers:
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  • Fritz Ebinger, Clean Energy Resource Teams – Rural Energy Development
Energy Efficiency’s Role in Rural Prosperity

Amy Royden-Bloom
State Energy Program Manager

July 19, 2019
We enable **STRATEGIC INVESTMENTS** in energy efficiency and renewable energy technologies through the use of **INNOVATIVE PRACTICES** across the United States and a wide range of stakeholders, in **PARTNERSHIP** with state and local organizations and community-based nonprofits.

**RESULTS:**

- Saving taxpayer dollars
- Making full use of domestic energy resources
- Cutting energy waste
- Improving energy independence and security
- Furthering the development of energy infrastructure
State Energy Program (SEP)

SEP provides funding and technical assistance to 56 states, territories, and the District of Columbia to
• enhance energy security,
• advance state-led energy initiatives, and
• maximize the benefits of increasing energy efficiency.

**SEP Creates Jobs**

1 job created for every $2,500 invested = over 3,900 estimated jobs in FY18

*Example: Texas Clean Energy Incubators*

**SEP is Cost-Effective**

$4.50 saved for every $1 federal invested

*Example: Illinois’ Wastewater Treatment Facility Program*
States implemented energy security, resiliency, and emergency preparedness plans;

Developed state-led strategic energy initiatives;

Invested in expanded use of energy resources abundant in states;

Piloted innovative energy projects within the private sector, K-12 schools and universities; and

Developed 9 Implementation Models that serve as “how-to” guides for states who wish to replicate the programs achieving energy efficiency savings.
Why does energy efficiency matter for rural prosperity?

- **High energy burden in rural areas**
  - Household energy burdens—the percentage of household income spent on energy bills.
  - Rural areas face a 4.4% median energy burden, compared to 3.3% nationally.
  - Rural low-income households 3x energy burden of higher-income households.

- **Less money spent on energy bills; more $ for other priorities**
  - Approximately 41% of households in rural areas have incomes below 200% of the federal poverty level, or $49,200 for a family of four in 2017.
Challenges in bringing energy efficiency to rural areas

- Low population density
- Lack of broadband access
- Customer reluctance
- Lack of financial means
- Shortage of qualified workers

* Source: ACEEE Report September 2018 Reaching Rural Communities with Energy Efficiency Programs
Examples of State Successes

Bridging the Rural Efficiency Gap (Maine SEP Competitive Award)
Example: Weatherization Week

Kansas Small Rural Business Energy Audits
Mitigate operating cost burdens for rural food markets and grocery stores by providing energy audits

Alaska Rural Communities (Alaska SEP Competitive Award)
Example of Recently Launched Effort

- Advancing Energy Efficiency in Underserved Small, Medium, and Rural Communities
  - Launched February 2019
  - Lead state: RI; Partnering States: MA and WV
  - Goal: engage 150 communities across 9 states; if successful, annual energy savings of over $179M/year.
DOE Technical Assistance

• State and Local Solution Center: https://energy.gov/eere/slsc

We help states, local governments, and K-12 schools:

- Develop an Energy Plan
- Design and Implement Energy Programs
- Pay for Energy Infrastructure
- Access and Use Energy Data
DOE Resources and Initiative

- **Rural Resources Webpage**

- **Energy Efficiency and Renewable Energy Resources for Rural K-12 School Energy Managers and Educators**

- **Clean Energy for Low Income Communities Accelerator (CELICA) Toolkit**

- **Low-income Household Energy Burden Varies Among States- Efficiency Can Help in All of Them: Fact Sheet**

Sustainable Wastewater Infrastructure of the Future (SWIFT) Accelerator

70+ facility partners in 22 states working to achieve 30% ENERGY SAVINGS
Understanding the rural energy burden in your state
Goal: Help stakeholders make data-driven decisions on energy goals and program planning by improving their understanding of low income and moderate income household energy characteristics.

Low-income Energy Affordability Data (LEAD) Tool

https://www.energy.gov/eere/slsc/maps/lead-tool
Next Steps

• WIP is currently researching the following opportunity areas:

  - Small & Rural Wastewater Treatment
  - Small & Rural K-12 School Districts
  - Correctional Facilities
  - Resilience

OUR GOAL:
Maximize energy and cost savings
Stay Connected

- State and Local Solution Center
  - More than 500 tools, resources, and best practices

- State and Local Spotlight
  - Monthly newsletter with ~27,000 subscribers

Subscribe: [http://energy.gov/eere/slsc](http://energy.gov/eere/slsc)

Contact: stateandlocal@ee.doe.gov
QUESTIONS?

THANK YOU!

Amy Royden-Bloom

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Energy and Rural Prosperity

Fritz Ebinger, J.D.
Energy Policy Institute
Helping Minnesotans build clean energy

MISSION
We connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects.
How does CERTs work?

**STAFF**
Regional coordinators and statewide support

**STEERING COMMITTEES**
One per region; governing body for regional team

**REGIONAL TEAMS**
Anyone can join; broad range of skills, interests, and backgrounds
How does CERTs help?

**Hands-on assistance**
For cities, counties, utilities, farmers, businesses, and other organizations looking to make a change

**Practical steps to clean energy**
Resources for getting started, moving forward, and completing projects

**Learning opportunities**
We host events, create resources, and highlight clean energy stories and jobs
CERTs Audiences

- Cities & Counties
- Utilities
- Farmers
- Businesses & Orgs
- Schools
- Underserved Communities
- Residents
- Tribal Nations
We’re all about people
CERTs Right Light Guides & App

Customized for 70+ utilities

mncerts.org/lighting
CERTified Campaigns

MILK the SAVINGS

$aving Watts & Drops

LIGHT UP YOUR STATION & SAVE

GET READY TO GOBBLE UP SAVINGS!

COMMUNITY SOLAR GARDENS
Sharing farm case studies

- Zumbrota Farm harvesting solar power to reduce energy costs
- Ronningen Dairy Farm adds solar PV to their West Concord operation
- Jorgenson Hog Farm in Westbrook, MN cashes in with wind, solar PV
- Family farm invests in renewable energy, saves barn
- Learning about solar energy at Featherstone Farm

- Solar exceeds expectations at Guentzel Family Farms in Eagle Lake
- Hoffman Farms near Chatfield saves money with utility rebates
- The Popps are harvesting solar and wind energy on their farm
- Turkey farmers learn about solar air and LED lighting technologies
- Langmo Bros. Farm pilots LED lighting for turkey barns
• Network of Extension professionals and educators
• Land-Grant universities addressing the nation’s energy needs
• Share energy research, programs, and resources
• Primarily serve rural stakeholders
Energy & Rural Poverty

In MN, households below 50% of the Federal Poverty Level spend 25% to 46% of income on energy bills.

P.S. Fuel Poverty is ridiculous in NoDak and parts of Wisco

Map & Data Visualization Credit: Jordan Wirfs-Brock
See also, ACEEE, The High Cost of Energy in Rural America, July 2018; Chandler, Adam, “Where the Poor Spend More Than 10 Percent of Their Income on Energy, June 8, 2016.
Conserv. Improvement Program

• Mandate: 1.5% retail energy savings over 3-year avg.

• Applies to electricity and natural gas utilities; No fuel-switching policy!

• Result: Weatherization Service Gap for the rural Propane Reliant

• MN: 135,000 homes rely on Low-income Heating Assistance Program
Barriers: The Hidden Obvious

Market Conditions

No Time

Farm Business Exit

Not a Priority
GRANT: USDA-REAP

• Rural Small Business - town with less than 50,000 people

• Farmer – derive more than 50% of your income from agricultural production (crops, livestock, timber, etc.)

Tangletown Gardens / Wise Acre Farm – Plato, MN
GRANT: USDA-REAP

- 25% of project cost
- Two deadlines:
  - October 31, 2019
  - April 30, 2020
- Start project after application is submitted

Turkey Farm by CB Solar – Washington, IA
Property-Assessed Clean Energy (PACE)

Finance efficiency and renewable upgrades for commercial or agricultural property owners

• Project cost is repaid as a separate item on property taxes

• Eliminates the burden of upfront costs

mncerts.org/pace
How does PACE work?

1. Landowner has a site assessment or energy audit

2. Port Authority approves loan/lien financing of the project cost up 20% of tax assessor’s property valuation.

3. LGU adds the property tax assessment as a tax lien

4. Owner pays back the loan/lien for up to 20 years (usually 10 years at 5% fixed rate).

Simple! Easy!
Grant 10% of project cost
Equip improvements and energy efficiency!
Funding cycle once per year
Deadline Mid-December
50%-60% success rate
No-Go: USDA RESP On-Bill Financing

• Rural Energy Savings Program
• 0% for 20 years for borrowing utility...Yay!
• 3% lending rate to end-user...Boo!

Means: Money loser in admin. costs and loan defaults to elec. coops.

Energy Efficiency & Conservation Loan Program (EECLP) has same problem: 1.5% lending rate to end-user: Too Low.
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