

# Energy



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## CSU EXTENSION ENERGY NEWSLETTER

Issue 60

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Welcome to the 60<sup>th</sup> issue of the CSU Extension Energy newsletter. This newsletter is distributed as a way to give the public, our partners, and Extension staff updates on CSU Extension energy work and its context in Colorado. Our overall mission is: 1. to empower Coloradans to make more informed energy decisions; and 2. to promote a broad, unbiased understanding of energy issues.

Please forward this newsletter to anyone you think might be interested. Also feel free to send us your organization’s energy-related news and events for listing in future newsletters. And don’t forget to Like us on [Facebook](#) to get updates on select energy news from Colorado and around the world.

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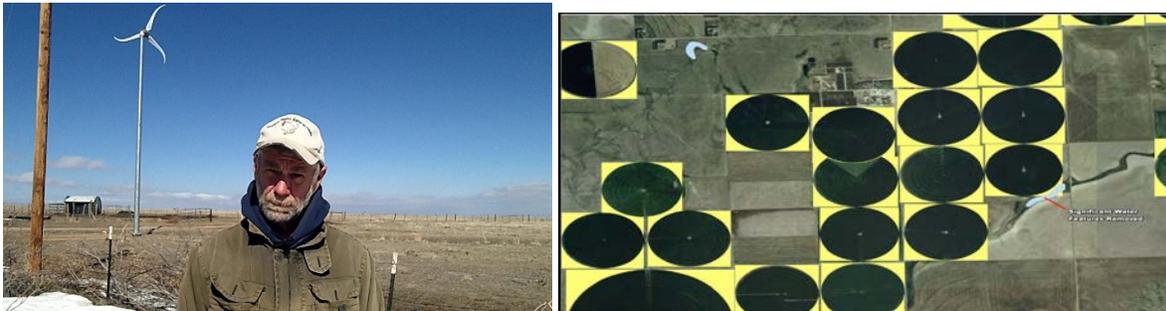
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### GRANT RECEIVED FOR ON-FARM SOLAR AND WIND ASSESSMENTS

Colorado State University’s Rural Energy Center is the recipient of a \$50,000 USDA Rural Energy for America Program grant award to conduct feasibility assessments for solar and wind on Colorado farms. Agricultural producers who irrigate square fields with center pivot sprinklers may be able to host solar or wind systems on the corners of their fields and are the target audience of the assessments. The grant will allow for 30 basic assessments to be conducted over a two year project period which began in April. Six of the most feasible systems will be selected for an in-depth analysis to include assistance with siting and permitting. Formal partners on the project

include Highline Electric Association, Morgan County Rural Electric Association, Rocky Mountain Farmers Union, Colorado Corn Growers, and the Colorado Department of Agriculture.

Each basic assessment will provide a producer with a report identifying system size, sample turbine or solar array type, upfront cost, annual savings, simple payback period, return-on-investment, and other details. The project aims to provide producers with the information they need to make informed decisions about installing a renewable energy system to offset irrigation pumping electricity. The project also hopes to identify utility rate structures and net metering policies most amenable to renewable energy projects for irrigators.



NREL/ESRI

## **RURAL COMMUNITY ENERGY ASSESSMENTS UNDERWAY**

Community energy assessments are underway for the towns of Buena Vista and Kersey, Colorado as part of a CSU Rural Energy Center pilot program. The program is funded by various sponsors, including the Colorado Energy Office, CSU Extension, and the CSU Center for Collaborative Conservation.

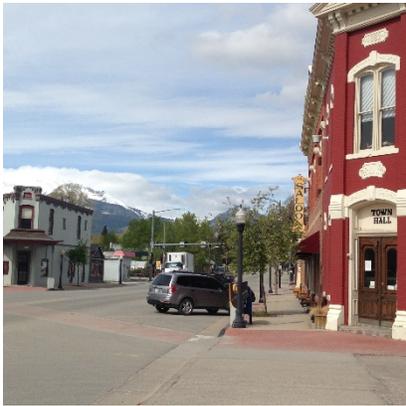
The assessments are looking for funding, financing, and economic development opportunities in energy efficiency and renewable energy (EERE) in the public, residential, commercial, and agricultural sectors of these two communities. So far, energy stakeholder meetings to paint the picture of EERE in these communities have been held, with engaged participation from realtors, utilities, a Chamber of Commerce, local government officials, agricultural producers, Weatherization Assistance Providers, energy auditors and contractors, and others. Public building lighting assessments have been completed in both towns, and business lighting assessments have been completed in Kersey. Information gained from the meetings and lighting assessments will inform the opportunities we identify for the towns. Hard metrics will be provided in reports due in August so that the communities can use data in context to make informed decisions about how to move forward.

Example findings from an assessment could include: 3 local beef ranches are eligible for NRCS-EQIP cost share funds for solar stock tanks; 12 local irrigators are eligible for rural electric cooperative rebates for energy efficient motors; 4 local small businesses are eligible for 25% grants from USDA's Rural Energy for America Program for energy efficient lighting; the town hall is eligible for an energy performance contract to make various improvements paid through guaranteed energy savings; 110 out of 150 eligible local homes can still participate in the state

Weatherization Assistance Program; and 2 local home energy auditors are eligible for free Home Energy Score rater training through the Colorado Energy Office.

Possible actions as a result of such findings could include: a winter workshop for irrigators and agricultural producers on specific energy opportunities; grant writing assistance for small businesses; technical assistance to the municipality to receive and review a potential energy performance contract; partnering with the local weatherization assistance provider to increase outreach efforts; and hosting a regional Home Energy Score rater training. The Rural Energy Center would conduct direct outreach and would partner with other relevant organizations to provide the community with these services.

If you know of a small, rural Colorado town (i.e. population 5,000 or less) that may be interested in participating in assessments scheduled for the fall or into the first half of 2016, please contact Cary Weiner: [cary.weiner@colostate.edu](mailto:cary.weiner@colostate.edu) or (970) 491-3784.



### **ANOTHER SUCCESSFUL COLORADO ENERGY MASTER PROGRAM**

Forty individuals participated in CSU Extension's 4<sup>th</sup> annual offering of the Colorado Energy Master program. Most participants completed all coursework and a project on their way to becoming certified Colorado Energy Masters. The revised curriculum received positive reviews, including particular fondness for classes on Energy and Climate Change, Transportation Alternatives, and Home Energy Assessments. Host counties included Archuleta, Arapahoe, Eagle, and Rio Grande. Colorado Energy Master projects ranged from creating a revised kit and lesson plans for CSU Extension's School Energy Activity Loan (SEAL) Program to creating a fact sheet on community solar to conducting home energy assessments and much, much more.

We are reviewing the program and our capacity for it in the future as we continue to look for innovative ways to empower Coloradans about our energy choices.



## **MUNICIPAL ELECTRICITY IN COLORADO PANEL**

What will the future of electric power from municipal utilities look like in the coming years? That topic was explored by more than 50 people who met earlier this month at the El Paso County Extension office in Colorado Springs.

Representatives from Colorado Springs Utilities, the Southeastern Colorado Renewable Energy Society, Fort Collins Utilities, Colorado Association of Municipal Utilities, and Fort Carson, which is Colorado Springs Utilities' largest customer and a sustainability leader, served as panelists. Colorado State University Extension Energy Specialist Cary Weiner was the moderator for the evening's discussions, which included opening comments from Colorado Springs City Council member Jan Martin.

Topics included the role of energy policy, integrating renewable energy sources onto the grid, distributed generation, smart grids and energy efficiency.

Weiner said the idea was to help identify the opportunities and challenges for municipal utilities in clean and renewable electricity. Areas of agreement among panelists included:

- the idea that municipal utilities – or “munis” – largely reflect the will of the people;
- electricity rates should include the cost of carbon emissions and other impacts not accounted for in the current pricing structure;
- munis should be concerned about selling less electricity;
- electric vehicles and micro grids present an opportunities for munis and;
- munis should do more to engage customers.

John Romero from Colorado Springs Utilities raised the notion of overnight game changers - or “Ubers” in his words - in the electric power sector, while Weiner cited Tesla's new residential-scale battery as a possible example. This battery can store electricity generated with rooftop solar panels for use at night or during times of peak demand for utilities.

Much of the discussion centered on what the “utility of the 21st century” might look like. “Many attendees want change and want it quickly,” Weiner said. “They want to see a utility that is driven not by revenue alone, but by performance measures such as customer empowerment, environmental impact, and community development. This evening served to let municipal utilities hear from concerned citizens but it also served to educate citizens on the very real challenges utilities face when trying to be responsive to a diverse set of demands.”

The event was part of an ongoing conversation in Colorado Springs as that city’s electric utility puts together its integrated resource plan for the next five years. It was hosted by CSU Extension and the Southeastern Colorado Renewable Energy Society.



## **CSU RECEIVES FIRST PLATINUM SUSTAINABILITY RATING**

Colorado State University, including our CSU Extension programs across the state, has received the first Platinum rating and the highest score ever submitted in STARS, the Sustainability Tracking, Assessment & Rating System. STARS is provided by the Association for the Advancement of Sustainability in Higher Education (AASHE) and is considered the most comprehensive and well-respected sustainability assessment for colleges and universities.

CSU Extension was highlighted for our contribution in:

- Sustainability-related continuing education courses
- Native Plant Master Certification
- Colorado Energy Master Certification

For more information visit [CSU's Green Initiatives](#) page.



## **DID YOU KNOW?**

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The total area of non-irrigated corners of center-pivot irrigated fields in Colorado was estimated to be 314,674 acres, which could yield 223,418 acres of installed solar PV panels assuming 71% coverage in triangular plots. The total potential annual electricity production for the state from such installations was estimated to be 56,821 gigawatt hours (NREL, 2011). This is roughly equivalent to total annual electricity generation in the state.

## **CSU EXTENSION ENERGY RESOURCES**

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- Borrow a [Home Energy Audit Loan \(HEAL\) program kit](#) from your local Extension office
- Conduct a [DIY home energy audit](#), solar assessment, or wind assessment
- Download a [fact sheet](#) or online decision tool
- View recorded webinars and [videos](#)
- Borrow a [School Energy Activity Loan \(SEAL\) program kit](#)
- Teach from our [Clean Energy Curriculum for Colorado Middle and High Schools](#)
- Ask an [energy expert](#)
- Track energy legislation in Colorado and nationwide using the CSU Center for the New Energy Economy's [Advanced Energy Legislation Tracker](#)