



## YOUR ENERGY COLORADO NEWSLETTER

Issue 70

December 2017

Welcome to the 70th issue of CSU Extension's 'Your Energy Colorado' Newsletter. The mission of Your Energy Colorado is to facilitate sustainable energy decisions in the state. As the name implies, we put the power to determine Colorado's energy future in **your** hands.

This newsletter gives the public and our partners updates on our work and its context among all things energy. 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 Follow Us on [Facebook](#) to get energy tips and commentaries on emerging energy news.**



## YEC WEBSITE AND SOLAR CALCULATOR REFRESHED

We are very excited to announce a major refresh of the Your Energy Colorado website and the release of some meaningful upgrades to our solar calculator. While the style and homepage of the YEC site look largely the same, we've added a ton of new content, photos, and some great videos. What used to be webpages full of only FAQs have become visually stimulating, easily digestible pages full of content. We've greatly expanded on our existing material on saving energy at home, at work, and on-farm as well as on topics such as renewable energy and 'energy in Colorado'. In addition, we've added brand new sections on Transportation, Energy Policy, Energy and Environment, Fossil Fuels, and more. Main pages include Fast Facts to whet the appetite, and all pages are organized and written with Colorado energy consumers in mind. Enjoy the snippet from our new Home Energy Efficiency page below, tour the refreshed site, and bookmark it as your go-to resource for energy information in Colorado!

As far as the calculator, 450 assessments have been conducted on it since its inception seven months ago, and we hope to see that number grow stronger with new upgrades. Our two major upgrades are a utility dropdown menu and a monthly financial analysis. The utility dropdown lets users select their utility in order to have their cost per kilowatt-hour automatically populate for the financial savings estimate. All rural electric cooperatives, both investor-owned utilities, and municipal utilities for Fort Collins and Colorado Springs are listed. The monthly financial analysis component is shown on Results pages. It tells users how much their old electric bills cost and how much their new bills (after solar) would be, plus how much their monthly loan payments and monthly property insurance increases would cost. This comparison allows users to easily see expected savings or costs for an average month in the first year after installing a system. Combined with the robust set of

cash flow results for Years 1-20, estimates of ROI (return on investment), and NPV (net present value), and other information we believe our tool provides the most financial information you can find on a potential solar investment while being quick and easy to work with. See for yourself!

Visit YEC website 2.0

Try the upgraded solar calculator

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## FUN AT THE SOLAR DECATHLON

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Members of the Your Energy Colorado team at CSU Extension took a tour of the one-of-a-kind Solar Decathlon when it came to Denver in October. Extension agents from the San Luis Valley, northeast Colorado, Gilpin County, Larimer County, Archuleta County, and Eagle County joined the state Energy Specialist for the tour. We were able to visit about half a dozen homes that had been brought in pieces from all round the world and reassembled in Denver for the competition. UC Berkeley and the University of Denver partnered on the “matchstick” home shown in the photo. A team from a Swiss University assembled a small commercial building surrounded by an interior envelope that took in passive solar radiation and kept the main interior regulated from extreme temperatures. Other cool features of buildings we toured included living walls of moss, low-flow showerheads with LED time indicator lights, and a modular, interchangeable furniture to maximize use of small spaces. All homes/buildings used solar PV and batteries to be net zero and all teams had to charge an electric vehicle and drive it for 15 miles per day using the energy produced by the home. See more of the innovative and exciting work being done in the competition [here](#).



Extension agents from the San Luis Valley, northeast Colorado, Gilpin County, Larimer County, and Archuleta County with the state Energy Specialist at the Solar Decathlon.

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## FEEDLOT ASSESSMENTS FOR SOLAR ENERGY (FASE) PROJECT ACCEPTING APPLICATIONS

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has begun accepting applications for free solar energy assessments for Colorado animal feeding operations and diversified farms with animal agriculture. The assessments will provide participants with estimated system sizes, costs, savings, and other information needed to decide whether investing in a solar array is a sound investment. Solar systems could be installed on buildings, open space, or even as shade structures over open feedlots. The solar arrays to be evaluated would be tied into the grid and used to offset the electricity costs of pumping water, lighting, ventilation, or other agricultural uses.



The timing of the project is driven by a few factors. Costs for solar panels have decreased by 75% in the last five years. The 30% federal tax credit for solar will be reduced after 2019. USDA, the sponsor of the project, offers 25% grants for the installation of renewable energy systems by agricultural producers. In addition, the Colorado Department of Agriculture has also agreed to provide funding for solar PV project in agriculture that show the promise of being cost-effective. Applications from operations with at least one meter on a Small Commercial or equivalent utility rate are particularly encouraged, as energy prices tend to be relatively high on these rates.

CSU is accepting applications on an ongoing basis up to a limit of 30. Farms accepted into the Feedlot Assessments for Solar Energy (FASE) program will be contacted within two months of submitting an application. For more information and to submit the brief application, visit <http://rec.colostate.edu/fase>

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## SOLAR AND EFFICIENCY WORKSHOPS CONTINUE

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CSU Extension/Your Energy Colorado continues to build off of the success we've had with our Know Before You Go (Solar) and other energy workshops. Sixty people attended a solar workshop in Frisco hosted by High Country Conservation, a capacity crowd of 40 attended the same workshop at the Larimer County Extension office in Fort Collins, and over 130 people attended a blow-out four-hour solar energy workshop in Lafayette that was hosted by the Cities of Lafayette and Louisville along with other partners. A couple of other workshops are scheduled for the winter – don't miss your chance to learn about home energy options like solar and efficiency, or [contact us](#) to bring a workshop to your community!

### **December 6, 5:30-7pm**

Home Energy Efficiency workshop with CSU Extension and Xcel Energy  
Englewood Civic Center

Contact Tim Aston to register: (303) 738-7907 or [taston@arapahogov.com](mailto:taston@arapahogov.com)

### **January 19, 2-3:30pm**

Know Before You Go Solar  
Estes Valley Library, Estes Park

[Register here.](#)

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## LOCAL GOVERNMENT ENERGY ACADEMY IN

# THE WORKS

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Many local governments want to save money spent on energy, stabilize energy costs, develop images as sustainability leaders, reduce carbon footprints, engage citizens on energy, or use energy as a tool for economic development. An array of funding and program opportunities as well as success stories exist to help communities move forward with one or more of these goals. However, finding these resources with limited staff time can be difficult. To address this gap, Colorado State University Extension's Local Government Energy Academy (LGEA) will highlight funding and program opportunities as well as success stories in a pilot series of regional workshops across the state. CSUE has put together an advisory committee to develop a curriculum, schedule, and outreach plan for the LGEA. The curriculum will be taught by local government, program administrator, and outside expert speakers. Local government elected officials, staff leaders, and board/commission members will be invited to attend the workshops along with designated champions/partners. The LGEA workshops themselves will be 1-2 days, and follow up technical assistance will be provided to LGEA graduates to help them implement goals. Guiding principles of the program include:

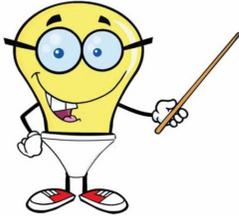
- Peer to peer learning, discussion, and interactions
- Diverse case studies in local government energy, from operations to community efforts
- Delivery by program administrator/technical assistance experts
- Elected official education and opportunities to guide staff
- In-depth presentation of options to staff including examples
- Feeling that specific follow-up support is clearly transmitted
- Presentations balanced with activity/engagement
- Small, rural communities balanced with larger communities

We anticipate offering our first pilot LGEA workshop in late spring or summer. We are in conversations with potential "anchor" communities to host an LGEA workshop and are open to conversations with interested communities. Characteristics of an anchor local government for an LGEA workshop include:

- Interest in clean energy
- Lack of resources or information to identify or implement projects
- Local champion who can dedicate time to identifying and implementing projects
- Not already participating in Xcel Partners in Energy program or planning process in which menu of options will already be well understood
- In reasonable proximity to other local governments in the region who may want to attend an LGEA workshop

Contact [Cary Weiner](#) if you're interested in learning more about hosting an LGEA workshop in your community.





**ENERGY  
-IN-  
BRIEFS**

## ENERGY-IN-BRIEFS

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### **Solar Tax Credits 101**

The federal tax credit for solar energy is generous. The credit for 30% of the installed cost runs through the end of 2019, in 2020 it decreases to 26%, and in 2021 it decreases again to 22% before ending completely in 2022. Of course there are a couple of caveats.

[Read more.](#)

### **2017 EV Comparison**

With the end of the calendar year coming up quickly, now may be a good time to shop for that all-electric vehicle you've been considering. If you can make a purchase by December 31, you'll be able to get up to \$7,500 in federal tax credits back when you file next year. So, we've taken the list of U.S. News & World Report's Best Electric Cars, filtered them for the ones available in Colorado, and created a side-by-side comparison.

[Read more.](#)

### **Green Power Purchasing**

As utilities continue their march toward clean and renewable energy, it may be time to rethink the value of green power purchasing programs. These programs, such as Xcel's WindSource program, can be hard to understand. At a basic level, a utility customer can choose to pay a premium on one's own energy consumption to support renewable energy.

[Read more.](#)

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## IN THE NEWS

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- [Breckenridge Commits To Renewable Energy Townwide By 2035](#), The Associated Press, CPR, 11/17/20
- [Colorado Among States Asking Court To Reconsider Obama Era Oil-Gas Rule](#), The Associated Press, CPR, 11/7/17
- [Here's How Far the World Is From Meeting Its Climate Goals](#), The New York Times, 11/6/17
- [Comparing Coal Fiscal Policies for Western States](#), Headwaters Economics (A Report), November 2017
- [Trump tax plan will pull plug on \\$7,500 credit for electric vehicle buyers](#), Greg Gardner, The Chicago Tribune, 11/3/17
- [Colorado Solar Firms Anxiously Await Trade Commission, Trump Moves On Imports](#), Grace Hood, Colorado Public Radio, 10/30/17
- [Vehicles, oil and gas top sources of Front Range ozone](#), NCAR study shows, Amelia Arvesen, Boulder Daily Camera, 10/30/17
- [Colorado-New Mexico Border: More Evidence Links Earthquakes To Energy Waste Wells](#), The Associated Press, Colorado Public Radio, 10/25/17
- [Study: Pollution kills 9 million a year, costs \\$4.6 trillion](#), Katy Daigle, The Associated Press, 10/20/17
- [Even opponents of a Denver initiative say green roofs are laudable, but is a mandate the right approach?](#) Jon Murray, The Denver Post, 10/19/17
- [Colorado ranks first in Western states scorecard on outdoor recreation, responsible drilling, public-lands access](#), Jason Blevins, The Denver Post, 10/17/17
- [Colorado regulators propose new oil and gas pipeline rules, but critics call for more](#), Christopher Osher, The Denver Post, 10/16/17

- [Oil giant Shell bets on electric cars, Matt Egan, 10/12/17, CNN Money](#)
- [How Low Can You Go? Boulder Net Zero Office Tests New Ways To Save Energy, Grace Hood, Colorado Public Radio, 10/11/17](#)
- [As Solar Energy Booms, College Students Showcase Innovative Homes In Denver, Nathan Heffel, CPR, 10/6/17](#)
- [Rocky Flats' Nuclear Legacy Remains, Despite Upcoming Settlements And Trail Plans, Ryan Warner, CPR, 10/3/17](#)
- [Colorado Issued Big Fines For Big Oil And Gas Operators, Ben Markus, CPR, 10/10/17](#)
- [Colorado's \\$68.7 million from VW emissions-cheating settlement will replace older vehicles, fund electric charging stations, Tamara Chuang, The Denver Post, 9/18/17](#)
- [The Sharing economy helps fight climate change \(but not as much as you think\), Sophie Yeo, The Washington Post, 9/18/17](#) (note: this article is about an academic paper published by 3 CSU professors)
- [Colorado oil and gas officials set their sights on pipelines after Firestone, Cathy Proctor, Denver Business Journal, 9/11/17](#)
- [Tesla, Vestas pair up to develop ways to combine storage and wind, Peter Maloney, UtilityDive, 9/5/17](#)
- [Can Denver cut its greenhouse-gas emissions by 80 percent? It will take 100 percent renewable energy, Bruce Finley, The Denver Post, 9/6/17](#)
- [Xcel Energy Ponders Early Retirement For 2 Coal-Fired Generators In Pueblo, The Associated Press, Colorado Public Radio, 8/30/17](#)

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## RESOURCE SPOTLIGHT: NEW VIDEOS

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Our new website features 5 new videos that provide quick and fun overviews on a variety of topics:

- [How to Get Started with Home Energy Efficiency](#)
- [How to Maximize Home Energy Performance](#)
- [Renewable Energy Options for the Home](#)
- [Know Your Solar PV Options](#)
- [How To Quickly Estimate a Solar Payback](#)

Enjoy this preview of How To Quickly Estimate a Solar Payback:



# DID YOU KNOW?

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LED holiday lights use 1/10<sup>th</sup> of the energy used by incandescent holiday lights.

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## UPCOMING EVENTS

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### December 6, 5:30-7pm

Home Energy Efficiency workshop with CSU Extension and Xcel Energy  
Englewood Civic Center

Contact Tim Aston to register: (303) 738-7907 or [taston@arapahoe.gov](mailto:taston@arapahoe.gov)

### December 12-13

CH4 Connections: the methane emissions conference  
Lory Student Center, CSU campus, Fort Collins

[More information and registration.](#)

### January 19, 2-3:30pm

Know Before You Go Solar  
Estes Valley Library, Estes Park

[Register here.](#)

### March 12-14

[Solar Power Mountain West 2018](#)

Hyatt Regency Aurora Conference Center

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## YOUR ENERGY COLORADO RESOURCES

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- Follow the [Your Energy Colorado Facebook page](#) for energy tips, news commentaries, and more
- Visit our [Energy-In-Briefs blog](#)
- Download and/or print CSU Extension energy [fact sheets](#)
- Download and/or order printed copies of our [Home Energy Guide](#)
- [Calculate your savings](#) from switching light bulbs, a new furnace, a low-flow showerhead, adding insulation and more
- Assess your [solar potential, costs, and benefits](#)
- Conduct a [DIY home energy audit](#)
- Watch [energy webinars](#)
- [Borrow an energy kit](#) to teach youth, for a public demonstration, or to conduct a home energy assessment
- Teach one of our many hands-on, standards-based [energy lesson plans](#)
- Ask an [energy expert](#) a question
- Track energy legislation in Colorado and nationwide using the CSU Center for the New Energy Economy's [Advanced Energy Legislation Tracker](#)
- [Contact us](#) to request an energy efficiency, solar, farm energy, or Colorado energy workshop



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