

Extension Clean Energy Outreach

By Leigh Fortson, Renewable Energy Advocate

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Popular Wind-Energy Tax Credit Stumbles in Congress

Source: Denverpost.com

Though the wind-energy tax credit is widely supported among Republicans and Democrats here, the push to get it extended has become an almost full-time job on the part of a handful of senators, including Colorado's two Democrats.

Colorado's entire delegation — save GOP Representative Doug Lamborn of Colorado Springs — supports an extension. So does Iowa's congressional delegation. Lots of senators and House members, both liberals and conservatives, have signed up to support it.



But the production-tax-credit extension — which costs \$4.1 billion over 10 years and includes some other renewables such as geothermal — has thrice failed in the U.S. Senate.

"If anything, the drumbeat gets louder that we need to do something," said U.S. Democratic Senator Mark Udall. "It may take longer than we all want."

Wind has a good business story that Democrats and Republicans love: Manufacturing sites have grown from 30 in 2004 to more than 400, sprawling across congressional districts in 43 states and employing 30,000 people in a sector otherwise left

wanting in the latest economic downturn.

Operators receive the tax credit — worth 2.2 cents per kilowatt-hour generated — only once turbines are up and producing power. Industry types argue that achieving a fruitful production line is laborious and expensive. The turbines themselves cost several million dollars.

"I'm sympathetic now," said Republican Representative Mike Coffman. "This industry, its business model, seems to be built with the continuation of these subsidies, and so I think if you pull the rug out from under them right now, you're going to hurt a lot of jobs."

Some members, such as Lamborn, will never support the production tax credit because they believe the government should not pick winners and losers in the private sector.

Wind-powered turbines generate electricity at the Ponnequin Wind Farm in Weld County. The industry employs 30,000 people, but jobs are threatened by Congress' inability to agree on extending a widely-backed tax credit.

To read the entire article: http://www.dailycamera.com/news/ci_20305377/popular-wind-energy-tax-credit-stumbles-congress

Senate Republicans Defeat Proposal to Strip Subsidies from Oil Companies

Source: Politicalintelligence.com

Senate Republicans foiled President Obama's plan to strip \$24 billion in tax subsidies from the country's largest oil companies, potentially fueling an election-year issue among voters disgruntled by escalating gas prices.

The 51-47 vote was mostly along party lines. Most Democrats voted in favor of eliminating the subsidies but fell far short of the 60 votes needed to withstand a filibuster. Only Republican Senators Olympia Snowe and Susan Collins, both of Maine, joined the Democrats.

Four Democrats - Jim Webb of Virginia, Mary Landrieu of Louisiana, Ben Nelson of Nebraska and Mark Begich of Alaska - voted against repealing the subsidies. Begich and Landrieu represent states with large oil revenues.

The vote represented a showdown between Democrats and Republicans, as they bait each other on the politically explosive issue.

It's become a talking point on the presidential campaign but is also expected to be a point of contention in other races, including those that could decide the fate of which party will control Congress.



Massachusetts Senator John Kerry...said in a statement: "It's an opportunity missed for the Senate to make the tax code fairer and smarter. We could've made a down payment on energy independence and stopped having taxpayers subsidize the country's most profitable companies at the same time. These were tax subsidies that even President Bush and I agreed were a waste, and more than ever, Americans paying soaring gas prices don't need to subsidize these companies this way any longer."

To read the entire article: <http://www.boston.com/Boston/politicalintelligence/2012/03/senate-republicans-defeat-white-house-proposal-strip-subsidies-from-oil-companies-senate-gop-defeats-white-house-plan-strip-oil-subsidies/ukS3mjDoTIO86sAp0rMTmL/index.html>

Sprawling Solar Plant on Tap for San Luis Valley

Source: denverpost.com

The San Luis Valley, already home to three solar power plants, could soon become the site of a sprawling 6,200-acre solar complex — a facility that would generate three times as much electricity as the other plants combined.

While the project could bring needed jobs to one of Colorado's poorest counties, it has triggered worries about its potential environmental impacts.

Still, the Saguache County Board of Commissioners voted 2-1 to issue a permit for the project — 30 miles north of Alamosa and 10 miles west of Great Sand Dunes National Park.



The project by Santa Monica, California based SolarReserve will use "concentrating solar" technology rather than solar panels.

Solar panels directly turn sunlight into electricity. Concentrating solar uses mirrors to focus the sun's heat into a molten salt reservoir in a tower that can then be used to make steam to turn a turbine.

"We have the capacity to store the heat so as to be able to make electricity around the clock," said Kevin Smith, SolarReserve's chief executive, in an interview.

The company has options on 6,200 acres of land, of that; about 4,000 will be used for solar generation. When

complete, the site will include two 656-foot-tall towers visible from up to 25 miles away. Each tower will be located on a 12-acre "power island" and surrounded by 1,700 acres of heliostats, or sun-tracking mirrors.

Read more: [Sprawling solar plant on tap for San Luis Valley - The Denver Post](http://www.denverpost.com/breakingnews/ci_20262088/sprawling-solar-plant-tap-san-luis-valley#ixzz1qQQmWOHY)
http://www.denverpost.com/breakingnews/ci_20262088/sprawling-solar-plant-tap-san-luis-valley#ixzz1qQQmWOHY

Valley Geothermal Resources Assessed

Source: Alamosanews.com

Growing national energy needs have the Bureau of Land Management redefining geothermal energy leasing terms for the San Luis Valley.

After two years of scoping, the agency is ready to take public comments on a preliminary environmental assessment for geothermal energy leasing in the San Luis Valley. The assessments identify public lands with the potential for geothermal development and provide a stipulation list for future leases. It would also amend the 1991 BLM San Luis Valley Resource Area Management Plan, aligning it to the BLM 2008 Geothermal Leasing Programmatic Environmental Impact Statement (EIS).

"We already have protections, but we don't think they are good enough," said BLM Renewable Energy Team Project Manager Joe Vieira in an open house meeting at Adams State College. "We know more now. We think that a company might come along in the future and want to develop a power plant. We want the rules clear for everybody."

The state of Colorado is aiming to have two 50 Mw geothermal power plants in operation by 2040.

To read more, go to: http://www.alamosanews.com/v2_news_articles.php?heading=0&page=72&story_id=24157

Poo-Powered Rickshaw Unveiled at Denver Zoo

Source: Huffpost.com

Poop. Is there anything it can't do? On Wednesday, The Denver Zoo introduced what is believed to be the world's first poo-powered motorized tuk tuk showcasing The Denver Zoo's very own patent-pending gasification technology.

Called The Tour de Tuk Tuk, the rickshaw, which uses animal poop and human trash as fuel, leaves Denver Thursday and will stop at zoos in Colorado Springs, Albuquerque, N.M. and Phoenix, Ariz. before arriving at its final destination at the Association of Zoos and Aquariums in Palm Desert, Calif. this Monday, March 27.

The tuk tuk was purchased from Thailand and then re-designed to run on gasified pellets made from animal droppings and waste generated by the zoo's staff and human visitors, according to The Denver Post. The poo-powered tuk tuk is the second prototype The Denver Zoo has put together to show off their sustainable energy system -- the first? A blender used to mix margaritas at a zoo event.

The zoo's sustainability manager, Jennifer Hale, pointed out to *The Denver Post* that this energy system has big potential, "This is not just a zoo thing. It can be applied on campuses, in communities and many other environments."

To read the entire article, go to: http://www.huffingtonpost.com/2012/03/22/poo-powered-rickshaw-unve_n_1372881.html?ncid=edlinkusaolp00000003#s805699&title=Denver_Zoos_PooPowered



USDA Explores Feasibility of Alternative Energy Production at Airports

Source: US Fed News



A recent study conducted by researchers from the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) highlights the potential for alternative energy production at airports. The study's findings were published in an article titled "Airports Offer Unrealized Potential for Alternative Energy Production" in *Environmental Management* and indicate that airports may want to consider converting to alternative fuels where it is both economically and environmentally beneficial.

"Some available grasslands at airports have the potential to spur the type of innovation we need to build American-made, homegrown biofuels and biobased products that will help to break our dependence on foreign oil and move our nation toward a clean energy economy,"

said Agriculture Secretary Tom Vilsack. "Converting airport grasslands to biofuel, solar or wind production not only provides more environmentally-sound alternative energy sources for our country, but may also increase revenue for airports and reduce the local abundance of potentially hazardous wildlife to aircraft. Such efforts may be particularly beneficial for rural economic development, as many rural airport properties contain expansive grasslands that potentially could be converted to biofuel crops or other renewable energy sources."

While federally obligated airports have restrictions on how land may be used, the Federal Aviation Administration (FAA) is committed to working with airports interested in pursuing the potential for changes in land use to support alternative energy production.

Researchers at the USDA-APHIS National Wildlife Research Center (NWRC) note that many airport properties are already managed to reduce wildlife abundance and habitat quality as part of efforts to avoid wildlife collisions with aircraft. Once biofuel crops are identified for airport use that have low wildlife-strike risks compared to existing airport landcovers, converting grasslands to these land uses could produce renewable energy and also provide airports with an additional source of revenue.

Ongoing and future NWRC research hopes to identify renewable energy practices, including specific types of biofuel crops, which limit use by wildlife hazardous to aircraft and are compatible with safe airport operations. NWRC researchers and collaborators are currently studying wildlife use of solar arrays and adjacent airport grasslands in Arizona, Colorado and Ohio, as well as wildlife use of experimental plots containing switchgrass and mixed warm-season native grasses in Mississippi. Researchers note the economic profitability of biofuel, solar or wind production will vary markedly, but will depend primarily on yield, establishment and maintenance costs, opportunity costs of land (i.e., land rental or revenue from other commodities), and processing or utilization costs. For many airports where land is currently available, the benefits may outweigh the costs.



Photo Courtesy of USDA

Drilling Won't Lower Gas Prices, but This Will

Source: Dailycamera.com

In this political season, we're hearing the broken-record answers to \$4 gas: Drill baby, drill; build the Keystone XL pipeline; and raid emergency reserves.

None will solve the price problem today or in years to come. Each feeds the United States' oil addiction. Each risks damaging the environment or draining strategic supplies. Most important, this noisy debate over supply misses the point: Nothing will cut gas prices right now. But by reducing how much gas we use -- by reducing demand -- we are already on the road to cutting fuel bills.

With 98 percent of the world's oil reserves in the hands of other countries, and an international cartel exerting a powerful hand on prices, the United States cannot control what we pay each day at the pump. Under President Obama, drilling is already up 12 percent. Nonetheless, prices have risen. Even new drilling every place that has the oil industry panting will not provide enough to reduce prices significantly.

The U.S. Energy Information Administration estimates that new drilling on the outer continental shelf would not affect prices over the next decade and would cut them by only three cents a gallon in 2030.

As Oppenheimer & Co.'s top oil analyst, Fadel Gheit, told CBS News, "If we drill in the middle of Manhattan and everybody drilled in their backyard we would not have enough oil to move the global market."

The proposed Keystone XL pipeline is also a dry hole. It would pump heavily polluting low-grade tar sand oil from land-locked Alberta, Canada, to Texas portside refineries. Most of the finished product would be loaded onto tankers -- and sent to foreign ports, rather than U.S. gas stations. We'd shoulder the potential environmental pain -- pipeline leaks and refinery pollution -- for little domestic supply gain.

Tapping the Strategic Petroleum Reserve makes no sense. Iran is threatening to shut the Strait of Hormuz, through which nearly 20 percent of the world's oil passes each day. Do we want to reduce our emergency reserve just before we might need it? Besides, the modest amount that it would add to supply would have only a small and short-lived impact on prices at the pump. It's another non-starter.

In short, we're in a hole. We can't drill or pump our way out. That is why cutting demand is imperative for a country that gulps 20 percent of the world's oil production each day.

Read all: http://www.dailycamera.com/opinion/ci_20293303/drilling-wont-lower-gas-prices-but-this-will

End of Coal Power Plants? EPA Proposes New Rules

Source: msnbc.msn.com

The Obama administration proposed the first-ever standards to cut carbon dioxide emissions from new power plants -- a move welcomed by environmentalists but criticized by some utilities as well as Republicans, who are expected to use it as election campaign fodder.

"Right now there are no limits to the amount of carbon pollution that future power plants will be able to put into our skies -- and the health and economic threats of a changing climate continue to grow," Lisa Jackson, head of the Environmental Protection Agency, said in a statement.

While the proposed rules do not dictate which fuels a plant can burn, they would require any new coal plants essentially to halve carbon dioxide emissions to match those of plants fired by natural gas.

The proposed standards have divided the power industry between companies that have moved toward natural gas, such as Exelon and NextEra, and those that generate most of their power from coal, such as Southern Co. and American Electric Power.

Record low prices for natural gas and the looming air rules already have pushed many companies to put older coal plants into retirement.

To read all: <http://usnews.msnbc.msn.com/news/2012/03/27/10886373-end-of-coal-power-plants-epa-proposes-new-rules>



Accepting Climate Change an Economic Luxury

Source: Miller-McCune.com

Shifts in opinion on climate change have had more to do with the state of the economy than the weather outside, partisan politics, or the media's influence, according to new research.

Environmentalists, scientists, and pollsters have devoted a lot of ink and energy over the last few years assessing a curious trend in perceptions about climate change. Several years ago, the American public appeared to start rejecting the idea of climate change: poll after poll showed concern over the problem tailing off and suspicion of the science behind it rising.

What was going on here? Did opinion on climate reflect the partisan politics of the moment? Were people swayed by the weather outside, perhaps by that rash of crazy snowstorms in the winter of 2009-10? Were the dipping poll numbers simply the result of poor question wording? Or was it something more obvious?

"One of the things that was the most striking to me initially was that this just seemed to so obviously be correlated with the recession," said Lyle Scruggs, an associate professor of political science at the University of Connecticut. "Opinion drops off right about the time the recession started."



Scruggs was surprised more analysis of all this poll data didn't point to the economy. So he looked into the correlation himself. Examining four decades of opinion polling data on environmental policy, he found that shifts in opinion on climate change have had more to do with the state of the economy than the weather outside, partisan politics, or the media's influence. His analysis recently was published in the journal [Global Environmental Change](#).

All of this suggests that the downturn was a temporary one. And, as if on cue, new polling data has just come out revealing concern about the climate is on the rebound. And, wouldn't you know it, the economy is starting to rebound, too.

On its face, this connection between the economy and the environment isn't particularly surprising. The two are depicted as adversaries. This certainly has been the narrative around the Keystone XL pipeline, which

divides advocates into those who want jobs and those who want a clean environment, as if they are mutually exclusive.

To read all: <http://www.miller-mccune.com/environment/accepting-climate-change-an-economic-luxury-40495/>

Support for Renewable Energy Broad and Deep

Source: helenair.com

Two impartial polls, one conducted in Montana and another in six Western states, illustrate the extent to which Western voters support renewable energy development and policies. Both polls were conducted by a bipartisan team that includes Republican pollster Lori Weigel with Public Opinion Strategies, and Democratic pollster Dave Metz with Fairbanks, Maslin, Maulin, Metz and Associates.

The Montana poll found that three out of four Montana voters support increasing the amount of electricity we get from clean, renewable wind, solar and geothermal resources. Over 75 percent of voters support expanding and extending the state's renewable energy standard from a 15 percent renewable energy target by 2015 to a 25 percent renewable energy target by 2025.

The poll conducted in Wyoming, Colorado, Arizona, New Mexico, Montana and Utah found that Western voters view renewable energy as a job creator and a way to improve their state's economic situation. An overwhelming majority of Montana voters also view renewable energy as an important part of our energy future. Eighty-six percent of respondents supported increasing the use of wind and solar energy, compared to only 32 percent that would like to see the state increase its use of coal.

To read the entire article go to: http://helenair.com/news/opinion/support-for-renewable-energy-broad-and-deep/article_c1841b28-7708-11e1-a043-001871e3ce6c.html

Bits and Pieces

Correction: In the March, 2012 edition of this newsletter, I neglected to give credit to writer Peter Black for his story generated through the Colorado News Agency called: *Lawmakers Seek to Harness the Wind and Tie It to the Land*. Although the news agency was given credit, Mr. Blake's name was not included. My apologies!

State-level estimates for natural gas for data year 2010 are available at The State Energy Data System data bank ([SEDS Updates](#).) Data highlights include:

- U.S. consumption of natural gas totaled 24 quadrillion Btu in 2010, a 4-percent increase from 2009. The top consuming States were Texas, California, and Louisiana.
- U.S. natural gas expenditures totaled \$160 billion in 2010, essentially the same as in 2009. For 2010, the residential sector accounted for 34 percent of total expenditures, the electric power sector accounted for 24 percent, the industrial sector accounted for 23 percent, the commercial sector accounted for 18 percent, and the transportation sector accounted for less than 1 percent.

Energy Office Restructure Moving

Source: the Colorado Statesman

The House Agriculture, Livestock and Natural Resources Committee backed a bill that would reorganize the Governor's Energy Office.

House Bill 1315, sponsored by Republican Representative Jon Becker of Morgan, would change the name of the Governor's Energy Office to the Colorado Energy Office. It would prescribe the office's role as promoting traditional and renewable energy, spurring economic development and job creation, increasing energy security, lowering long-term consumer costs, protecting the environment and creating a balanced energy portfolio for Colorado's energy future.

The measure passed the committee on a 10-2 vote and now moves to appropriations. "This bill is meant to improve efficiency within the Governor's Energy Office," commented Becker. "By amending the current mission, we are promoting sound and sensible solutions for Colorado's energy economy."

News from Cary Weiner and other Current Events

CSU Clean Energy Specialist

(970) 491-3784

www.ext.colostate.edu/energy

Contact Cary if you have questions about the information below.

The DIY Home Energy Assessment tool has been peer-reviewed and published.

Go to: <http://www.ext.colostate.edu/pubs/pubs.html#energy>

- **Colorado Energy Master – In Your County?**

Our pilot offering of the Colorado Energy Master program (www.ext.colostate.edu/energymaster) was successful with 40 participants in 4 counties. We have developed a tentative schedule for fall of 2012 (September – November) and would like to expand to as many counties as are willing and able to participate. Please contact me soon if you would like to bring this great program to your county in the fall of 2012.

- **Agricultural Energy**

Our new Center for Agricultural Energy has just formed an advisory board and will soon begin taking applications for reduced-cost irrigation energy audits.

- **Other**

We continue to post short audio and video bits that you and the people you serve may find useful. Go to: www.ext.colostate.edu/energy.

April 10, 2012

Putting the Fun Back in Infrastructure: The Electric System and the Future of Energy

Rocky Mountain Innosphere – Free and open to public. No registration necessary.

320 E. Vine Drive

Fort Collins

Contact: Maggie Koerth-Baker, Science Editor at Boingboing.net

April 18, 2012, 8:30 AM – 4:00 PM

The Cenergy Expo

Lory Student Center, Main Ballroom

Colorado State University

The Cenergy Expo is an annual university event that attracts over three hundred professionals with the goal of promoting connections between CSU faculty/student research and clean energy industry, government, investors, start-ups, non-profits, and the media. For more information: [Download Agenda](#).

- Breakfast and Lunch provided
- Parking permits available for sponsors

[Parking Map \(Orange meter parking is directly north of the Lory Student Center. You may also use lots 330, 332, 505, 575, Yellow P's represent Daily Permit Dispensers\)](#)

April 27 --Event Center at Phillips County Fairground, Holyoke, CO

April 28—Country Steak Out, 19592 E. 8th Ave, Fort Morgan, CO

Energy Expo 2010: Learning About Renewable Energy for Residents

For more information please call 970-522-3200 X 276

REGISTER ON LINE: <http://bit.ly/exposignup>

Sponsored by CSU Extension, Rocky Mountain Farmers Union, Governor's Energy Office, Highline Electric Association and the Colorado Department of Labor and Power.

May 7-8

[6th Annual Energy Efficiency Finance Forum](#), Omni Parker House Hotel, Boston Mass.

<http://www.aceee.org/conferences/2012/eeff>

May 13 – 17

World Renewable Energy Forum, Colorado Convention Center, Denver

<http://wref2012.org>, (303) 443-3130

WREF 2012 will examine how renewable energy technologies address the world's economic, environmental and security challenges at every scale, from off-grid villages to gigawatt power plants. WREF 2012 will be the premier international renewable-energy conference of the year!

September 24-27, 2012

6th Annual Algae Biomass Summit

Sheraton Denver Downtown Hotel

www.algalbiomass.org

The Biodiesel Education Program at the University of Idaho has created a seven-lesson curriculum to help kid's ages 8-12 understand the concepts of energy and renewable energy. The renewable energy focus of this curriculum is biodiesel.

The curriculum was written for 4-H clubs, but can easily be used by elementary school teachers as well.

The curriculum features hands-on activities such as an energy tour, a matching game, a fossil fuels timeline, a renewable energy model, and viscosity wands.

The Biodiesel Education Program is making this curriculum available at no cost.

See this link to download the student workbook and instructor's manual:

<http://www.uiweb.uidaho.edu/bioenergy/4-H.shtml>

Resources:

Use the calculator at the [Colorado Carbon Fund](http://www.coloradocarbonfund.org) website and offset now!

The CSU Healthy Homes Partnership has posted a coloring book that can help children learn about energy saving and related issues. Go to www.healthyhomespartnership.net and type in saving energy in my home.

Learn About Your Kilowatt Use

Twenty three Colorado State University Extension offices across the state are now offering Kill-a-Watt™ electricity monitors through a free loan program. The devices measure appliance electricity use and offer opportunities for Colorado residents to save energy and money. The meters are plugged in to an outlet and appliances are plugged into the meter. The meter then measures the appliance's electricity use and can project energy cost and use data over an hour, day, week, month, or year. Once meter users learn about how much a second refrigerator or "phantom load" costs, for instance, they may decide to take action to improve their bottom line.

<http://www.ext.colostate.edu/energy/killawatt/index.html>

Smart Energy Tips, a great online e-zine, can help you learn more about keeping your cooling and heating bills down, and your carbon footprint at a minimum. Go to: <http://www.smartenergyliving.org>

CSU Energy Website

To learn more about wind, solar, geothermal, and biofuels, visit our energy website at:

<http://www.ext.colostate.edu/energy>

Furthermore

Go to <http://hes.lbl.gov/hes/db/zip.shtml> and you can do an online calculation of your own energy use and carbon footprint. It's easy to use. Tell your communities about it.

Send me anything that's newsworthy that you're doing in the world of energy efficiency and renewables. We need to keep our colleagues up to date on what's going on in Extension and the value of our role.