



William Brown <swctaos@gmail.com>

Renewable Taos Newsletter - October 2016

1 message

William Brown <swctaos@gmail.com>
To: William Brown <swctaos@gmail.com>

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Newsletter

Hello, All – Remember to click on images and blue highlighted text for more information.

WIND POWER RAPIDLY REPLACING COAL & NATURAL GAS-FIRED ELECTRICITY IN COLORADO

Our neighboring state of Colorado is leading the way in displacing both coal and natural gas as sources of electrical power. Among USA Mountain states, Colorado's rapid buildup of wind power is exemplary in offsetting demand for natural gas.



WIND TURBINES ALONG A RURAL COLORADO ROAD (Helen H. Richardson, The Denver Post,

RENEWABLE TAOS NEWSLETTER

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RENEWABLE TAOS NEEDS YOU!



10/19/2016)

According to the U.S. Energy Information Administration (EIA), Colorado's use of natural gas for electrical power has remained almost flat for the past decade. This contrasts with seven other Mountain states where natural gas consumption has increased substantially over the same period.

Since 2006, Colorado has added more wind power generation than Arizona, Idaho, New Mexico, Nevada, Montana and Utah combined.

Colorado is accomplishing its renewables transition with policy changes. Today, the state requires investor-owned utilities (IOUs) to generate 30 percent, and other utilities (including Tri-State Generation and Transmission Association, Inc.) to generate 20 percent of electricity from renewables by 2020.

State's RPSs Help Renewables Progress — But It Is Not Enough

Nonetheless, **Renewable Portfolio Standards (RPSs)** for Mountain states are driving a rising use of wind, solar and other non-hydropower renewables.

The EIA reports that MT, CO, NV, AZ & NM have RPSs and UT has a renewables goal. The EIA reports that these six states installed nearly 9 gigawatts (GW) of renewable generating capacity between 2005 and 2015. WY and ID do not have RPSs or renewables goals, but have installed more than 2 GW of renewables during the same period.

The EIA offers an optimistic view on Mountain States and New Mexico renewables. About 7 GW of new generating capacity, including 2.5 GW from solar and 2.1 GW from wind should become operational by the end of 2018. NM has the most planned wind power additions (more than 1 GW) and Nevada has the most planned solar additions (almost 1 GW).

New Mexico and everyone else need to ramp up renewables generation and transmission. Tell your political representatives to think of New Mexico's RPS as a minimum that we should exceed quickly. Do not think of our RPS as a ceiling on how much in the way of renewables we need to add to our generating capacity.

**HUMAN-CAUSED
WARMING HAS
DOUBLED WILDFIRE
BURN AREAS IN OUR
AMERICAN WEST SINCE
1984**

Many scientific studies over the past few decades

JOIN NOW!



**BOB BRESNAHAN'S BLOG
IS A KEY TO HOW KIT
CARSON ELECTRIC CO-
OP OPERATES**

Read Bob's articles and offer your own comments on KCEC's activities and issues.

**THE NEW MEXICO
SOLAR ENERGY
ASSOCIATION
NMSEA**



**LEARN ABOUT AND SUPPORT
NMSEA - ONE OF THE FIRST
SOLAR AND SUSTAINABLE
ENERGY ORGANIZATIONS IN
THE USA**

**CAPTURE FREE ENERGY
ON YOUR PROPERTY**

have predicted increases in the numbers, areas and intensities of wildfires in our American West. In early October 2016, researchers published confirmation that wildfires burned about **16,000 square miles more** USA western forests than expected for pre-warming conditions. This is an area about [the size of Massachusetts and Connecticut combined](#).

In the [Proceedings of the National Academy of Sciences \(Oct 18, 2016\)](#), the researchers explained that rising temperatures make the air dryer, drawing moisture out of plants, trees and dead vegetation, and making forests more likely to burn.



**BLUE CUT WILDFIRE, WRIGHTWOOD, CA
IRFAN KHAN, LOS ANGELES TIMES
AUGUST 20, 2016**

John T. Abatzoglou (University of Idaho) and A. Park Williams (Columbia University) write that "... human-caused climate change caused over half the documented increases in fuel aridity since the 1970s and doubled the cumulative forest fire area since 1984."



**PROCEEDINGS OF THE NATIONAL
ACADEMY OF SCIENCES OF THE UNITED
STATES OF AMERICA**

Whereas many elements such as fire suppression and human settlement influence wildfire activity, climate change continues to be the increasingly dominant factor.

The wildfire analysis concludes that human-caused climate change will "...continue to chronically enhance the potential for western US forest fire activity," at least until there are fewer forested areas left to burn.

ALMOST EVERY DAY



**SUPPORT OUR LOCAL
SOLAR SYSTEMS
INSTALLERS!**



**THE U.S. GLOBAL CHANGE RESEARCH
PROGRAM PROVIDES ABUNDANT
INFORMATION ON OUR CLIMATE
CRISIS**



**GUZMAN RENEWABLE ENERGY
PARTNERS IS OUR
WHOLESALE ELECTRICITY
PROVIDER FOR KIT CARSON
ELECTRIC COOPERATIVE**

TEXAS UTILITY-SCALE SOLAR TO CUT POWER MARKET PEAK PRICES

Bloomberg New Energy Finance (BNEF)

estimated in mid-October that solar power will “shock” the Texas power market’s on-peak daytime prices. Within the Electric Reliability Council of Texas (ERCOT) regional grid, solar power benefits because it produces its peak power during mid-day when demand is highest.



The Electric Reliability Council of Texas (ERCOT) manages the flow of electric power on the Texas Interconnection (Texas Grid) that supplies power to 24 million Texas customers – representing 85 percent of the state’s electric load.

According to BNEF U.S. Power Analyst Nicholas Steckler, “The favorable economics associated with solar’s daytime generation are driving a large forecast for growth. The ERCOT grid operator expects the first two gigawatts (GW) of utility-scale solar will come online by 2018, and BNEF’s estimate points to another 1.9 gigawatts (3.9 GW total) by the end of the decade.”

ERCOT is well-known for its daytime price spikes because of strong electricity demand for daytime air conditioning. BNEF expects on-peak price reductions as much as \$2.58 per megawatt-hour by 2020 with more utility-scale solar power coming online. This amount could be in the range of a 30 percent or more wholesale price reduction for Texas electricity customers.

This example illustrates the potential economic value of utility-scale solar, especially across our USA Southwest. Urban areas throughout our region have high demands for mid-day energy to power air conditioning and other uses. Solar power with its mid-day peaks in production is a perfect match for this demand.

Solar energy is an abundant resource in Taos County and vicinity. Developing this resource for our own energy demands — and for sales to the regional grid — offers us a promising economic future.

info@RenewableTaos.org

Contact Renewable Taos, Inc. to discover how we can work together to develop our local solar

"WHAT THE HELL IS A GIGAWATT?" – MARTY MCFLY



IN “BACK TO THE FUTURE,” MARTY MCFLY WANTED TO KNOW. “DOC” BROWN KNOWS, AND YOU MIGHT WANT TO KNOW TOO.

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**A GIGAWATT (GW) IS ONE MILLION KILOWATTS.**

**A MEGAWATT (MW) IS ONE THOUSAND KILOWATTS.**

*“Gigawatt is a unit of measurement of power typically used to estimate the power produced by large power plants or even to represent power capacity of countries. The total installed capacity of renewable energy systems such as wind and solar worldwide are represented in the Gigawatt scale.”*

— Solar Mango

**OUR KIT CARSON ELECTRIC CO-OP SERVICE AREA ENERGY DEMAND CURRENTLY AVERAGES ABOUT 36 MEGAWATTS, OR 0.036 GIGAWATTS.**

**THE SAN JUAN COAL-FIRED GENERATING STATION IN NORTHWESTERN NEW MEXICO PRODUCES ABOUT 1,800 MEGAWATTS, OR ABOUT 1.8 GIGAWATTS.**

resource.

## RENEWABLE TAOS SUPPORTS NEW MEXICO PARTICIPATION IN A REGIONAL MARKET FOR RENEWABLE ENERGY

Renewable Taos, Inc. continues to send our [Regional Market Letter](#) letter statewide urging support for a western states regional market for renewable energy. Responses to our blueprint for New Mexico renewables have been uniformly favorable to date.



### Our Renewable Taos Regional Market Letter is being sent statewide in New Mexico.

We urge New Mexico:

To participate in a regional market for energy services for the Western Interconnection electric power grid.

To upgrade our renewable energy infrastructure with an emphasis on utility-scale renewable energy generation and transmission throughout the state.

To invest [State Investment Council \(SIC\)](#) and other New Mexico funds in renewable energies – notably wind and solar power – that are now in strong demand throughout our region.

We are sending this letter to federal, state and local political representatives plus federal and state agencies, businesses, NGOs and other selected parties.

## GIGAWATTS AND HOUSEHOLD ENERGY USE



THE AVERAGE AMERICAN HOUSEHOLD DEMANDS ABOUT 1.2 KILOWATTS OF ELECTRICITY, SO A GIGAWATT COULD POWER MORE THAN 833,000 SUCH HOUSEHOLDS.



### BENEFITS OF A REGIONAL ENERGY MARKET

A regional energy market would better use resources, especially renewables, to reduce greenhouse gas emissions and costs.

Enabling the ISO's sophisticated market and grid optimization systems to pick the lowest cost energy to serve demand and give preference to renewable resources across a wide geographic region also means grid planners can build a cleaner, more resilient energy generation and delivery network that will create tangible economic benefits.

– CALIFORNIA INDEPENDENT SYSTEM OPERATOR (CAISO), 2016

Our letter will be part of an invitation package for a renewable energy planning meeting to be hosted by Taos County within the next 3-4 months.

Please feel free to comment on the contents of our letter, or ask your questions about next steps.

[info@RenewableTaos.org](mailto:info@RenewableTaos.org)

Please join us by urging politicians, businesses, NGOs and others to make the changeover to a sound economic future by developing clean energy — New Mexico's most valuable and abundant resource.

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## OUR MISSION

**Renewable Taos** is dedicated to promoting and facilitating a full transition to renewable energy and energy efficiency in Taos County and our surrounding region.

We advocate for local generation of renewable energy with an emphasis on local ownership. We build community partnerships to facilitate the transition to renewables, and propose and support projects. We recognize that energy efficiency is integral to the transition to renewable energy. We also work with other organizations to change the political climate in the state and country to facilitate the transition to renewable energy and energy efficiency.

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**Edited by:** William M. Brown, October 2016

## ELECTRIFY EVERYTHING WITH RENEWABLES!



*"Tackling climate change is a complicated undertaking, to say the least. But here's a good rule of thumb for how to get started:*

**Electrify everything.**

*Replace technologies that still run on combustion, like gasoline vehicles and natural gas heating and cooling, with alternatives that run on electricity, like electric vehicles and heat pumps. Get as much of our energy consumption as possible hooked up to the power grid."*

**VOX**

**SEPTEMBER 19, 2016**



This message was sent to Renewable Taos Members by [swctaos@gmail.com](mailto:swctaos@gmail.com)

Renewable Taos, Inc.  
502 Piñon Court  
Taos, NM 87571  
<http://www.renewabletaos.org>

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