

Electric companies not thrilled with surge in solar

By Michael Grunwald, Time

America is having a solar revolution, and it's a big deal. Solar installations increased more than 1,000 percent during President Obama's first term and contributed nearly half the new power capacity added to the grid in the first quarter of this year.

We've always gotten energy from the sun—oil, gas and coal are essentially millions of years' worth of photosynthesized sunlight—but now we're getting it directly, without drilling or spilling or earth-broiling emissions. Solar prices have plunged 80% since 2009, a boon to installers like SolarCity, Sungevity and Sunrun, which have grown from a few hundred customers to more than 35,000 today.

It's also good for consumers, who can get clean power that's cheaper than coal in large swaths of the country.

Maybe you're not interested in reducing our dependence on fossil fuels or promoting one of our fastest-growing domestic industries. Maybe you'll never put solar panels on your roof. But you should still care about the solar revolution, because it's on the verge of blowing up the electricity business. The shift from centralized plants to decentralized rooftops won't be as widespread as the shift from landlines to cell phones, but it could be just as disruptive.

The power sector is dull and complex. But the key thing to know is that utilities make most of their money in two ways: selling electricity to their customers and building stuff that gets factored into regulators' formulas on rates. So they want their customers to buy as much of their juice as possible, partly for the revenue, partly so they can justify building

more power plants at a guaranteed profit.

That makes it awful for a utility when a customer goes solar. He won't need as much power from the grid during peak daytime hours, and he can even sell power back to the grid, which means lower revenue for the utility and flimsier justifications for new plants. It's like having a new mini-competitor.

Utilities are fighting back in states like California, pushing to roll back solar ratepayers' right to sell power back to the grid. They justify their efforts by arguing that so-called net metering hurts nonsolar customers. A Californian's electric bill is calculated by multiplying the amount of power he uses by a rate that's supposed to cover all the utility's costs plus some profit.

So it's true that if he goes solar and needs less power from the grid, other ratepayers will have to pay a larger share of the cost of distribution lines, service calls, decommissioned nuclear plants and so forth. But studies suggest that even nonsolar ratepayers benefit from the solar stampede because their utilities don't need to turn on expensive fossil-fueled "peaking plants" as often to meet high demand and won't need to build as many new plants to meet future demand.

That raises a separate question: Why are utility bills calculated in ways that have so little to do with the services provided? For example, wholesale prices in electricity markets are usually very high during peak hours and very low overnight, but consumers generally pay the same retail price no matter when they consume. It's like paying a set monthly rate for groceries on the basis of weight, regardless of whether you're buying caviar or crackers.

Now imagine a system of dynamic pricing that reflected the real cost of power at the time of purchase and then empowered consumers to make choices accordingly. They'd have an

incentive to run their dishwashers at off-peak hours, which would help utilities manage their loads. Solar would be even more cost-effective, especially when combined with fuel cells, batteries or other emerging technologies that could store power for when the sun stops shining. Electric vehicles could become roving utilities, charging at night when power is cheap and selling power back to the grid at peak hours.

Most of these changes would be devastating for utilities, which is why so many are lobbying to hold back the tide. But eventually, change will come. Utilities are going to have to find new ways to do business, or they will go where the landline is going—away.□

Study: Wildfires have role in global warming

By Geoffrey Mohan, Los Angeles Times

Wildfires such as the Yarnell Hill blaze in Arizona may be warming Earth's atmosphere far more than previously thought, according to a study by Los Alamos National Laboratory.

Researchers at the Department of Energy facility normally chase fires throughout the western U.S., to measure their atmospheric effects. But in 2011, they took advantage of a conflagration that came to their doorstep – the Las Conchas fire that burned more than 150,000 acres and briefly caused the evacuation of the sprawling facility in the New Mexico desert.

“This was just an opportunity in our backyard,” said Manvendra Dubey, a senior atmospheric scientist at the laboratory. “It

was a freebie for me, so I couldn't miss that opportunity."

After the brief evacuation ended, Dubey's team set up monitoring devices while the fire continued to rage across the desert scrubland. Their analysis, which included painstaking counting and classification of thousands of particles, revealed components that had not been considered in climate models, most of which have suggested that cooling and warming effects of two kinds of aerosols tended to cancel each other out.

The Los Alamos team identified tar balls – spherical, carbon-based particles – that are 10 times more prevalent than soot particles, and can boost the heating effect of wildfire emissions, according to the study, published last week in the journal Nature Communications.

"We provided the data that shows that current estimates, which are close to zero or show a very slight warming, are incorrect and the warming will be higher," Dubey said. "We are confident this will change the results and show that fire emissions will have a tendency to warm."

Close examination of soot also showed these particles were sheathed by organic coatings that "act like a lens to focus sunlight and amplify the sunlight that soot absorbs," Dubey said.

Wildfires have increased in number, intensity and acreage throughout the southwestern U.S. over the last three decades, driven by climate change and forest management decisions to suppress fires instead of letting them take their natural course. That burning biomass pumps tons of aerosols into the atmosphere, directly changing how sunlight is absorbed, and indirectly affecting the process by influencing cloud formation.

"For a given amount of water vapor in the atmosphere, you could be condensing the water in many, many more small

particles. So clouds could become brighter,” Dubey said. “These tar balls can get embedded, and soot can get embedded in clouds, and the clouds can then absorb more sunlight and evaporate faster.”

Climate scientists generally focus on the effects of two aerosols: soot, or black carbon, and smoke, known as organic carbon. Smoke tends to scatter solar radiation, for a net cooling effect. But black carbon absorbs it. Research in the last decade has increasingly suggested that black carbon may be the second strongest contributor to atmospheric warming, behind carbon dioxide, the most well-known greenhouse gas.

The Los Alamos researchers also attempted to simplify the complex chemistry and physics of aerosols. Climate models, they said, should consider aerosols as a combination of tar balls, soot and “other” particles, including smoke and irregularly shaped specks of dust and salt. Soot, they said, can be further classified by its degree of coating, enabling climate modelers to capture the nuanced effects of these particles.

The study results could push the U.S. back into the spotlight cast on emitters of black carbon, said Dubey, who recently spent several months in India. U.S. policymakers have increasingly pointed to the Indian subcontinent and China as major sources of emissions from burning biomass, largely from wood and charcoal fires.

“All these things emit the same; if you burn wood in your open stove or you have a fire, you have some similar emissions,” Dubey said. “I think this gives us all a common language to develop solutions to it.”

More structures in path of Bison Fire

The Bison Fire is now the largest wildland fire on record in Northern Nevada – at 25,733 acres.

While the fire is 40 percent contained, it is threatening 98 structures in Douglas and Lyon counties. Lyon County Sheriff's Department has implemented a voluntary evacuation for Smith Valley subdivision. This will be in place at least through Wednesday afternoon.

Full containment is still expected on July 14.

The cost, to date, to fight this fire is \$4,814,994. Aircraft is the biggest expense.

The following road closures to non-residents are currently in place for:

- * Pine Nut Road at the intersection of Out-R-Way
- *East Valley Road at Grandview
- *Sunrise Pass Road at Coyote Rock
- *Brunswick Canyon Road
- *Mexican Dam Road
- *Sunrise Pass Road at Artesia Road.

Lightning started fire July 4. An old mining structure was lost and one firefighter twisted a knee.

– Lake Tahoe News staff report

Smoke from fires creating unhealthy conditions

The Kyburz Fire and other wildfires in the region are creating smoky conditions in some areas of El Dorado County, prompting the county Air Quality Management District and Health Services Department to issue an advisory.

Officials expect that El Dorado County may continue to be affected on an intermittent basis. Smoke conditions can vary a great deal in El Dorado County because of the terrain, wind direction and weather.

Fine particles in smoke can cause health issues, especially for children, older people or those with lung problems.

The following advise is applicable to people being affected by the Bison Fire in Douglas County, too.

Residents who see or smell smoke should consider taking precautions:

- Healthy people should delay strenuous exercise until the smoke has cleared.
- Children and older people should consider avoiding outdoor activity, especially prolonged outdoor exercise.
- People with health-related illnesses, particularly those with lung problems, should stay indoors.
- Windows and doors should stay closed as much as possible. Use the recycle or re-circulate mode on the air conditioner in your home and car.

- Avoid using non-HEPA paper face mask filters that do not filter extra fine particles.
- Keep airways moist by drinking lots of water.

Wildfire smoke can cause coughing, watery and itchy eyes, and difficulty breathing. People with questionable or severe symptoms should seek medical advice. When there is smoke in the air, the smoke visibility index can help people assess the air quality based on visibility in their area.

To assess visibility:

- Face away from the sun. Determine visibility range by looking for targets that are at known distances (miles).
- The visibility range is the distance at which high-contrast objects disappear.
- After determining visibility in miles, use the following Wildfire Smoke Visibility Index to assess air quality.

Visibility Range (miles)	Health Category	Precautions
10+	Good	None
5 – 10	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion.
3 – 5	Unhealthy for Sensitive Groups	Sensitive people should reduce prolonged or heavy exertion.

1.5 – 3	Unhealthy	Sensitive people should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
1 – 1.5	Very Unhealthy	Sensitive people should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
< 1 miles	Hazardous	Sensitive people should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

Kyburz Fire at 80%
containment



First day assault on Kyburz
Fire. Photo/Eldorado
National Forest

Firefighters made significant gains on the Kyburz Fire overnight. The 615-acre blaze is 80 percent contained.

The fire is burning on the north side of Highway 50 in the Eldorado National Forest.

While the highway is completely open, officials are urging motorists to drive slowly, and watch for fire personnel and debris on the road.

Crews will continue today to hold and improve line around the perimeter of the fire, and begin mop up operations. Steep terrain, multiple dead snags, and increasing winds are likely to present challenges to firefighters today.

The fire started early afternoon July 8 when a vehicle lost a tire and that sparked the fire.

– Lake Tahoe News staff report

Empty school costs DCSD thousands each month

By Kathryn Reed

ZEPHYR COVE – A prime piece of real estate on the South Shore sits idle, with no buyer in sight.

The empty 36,000-square-foot former Kingsbury Middle School in Stateline is costing the district between \$10,000 and \$15,000 a month to ensure the alarm is on, pipes don't freeze and other basics are taken care of.

The Douglas County School District board first voted to put the 10-acre site on the market in January 2012.



Kingsbury Middle School sits empty. Photo/LTN file

Superintendent Lisa Noonan told the board July 9 that no buyer has come forward. The potential sale has been on the agenda each time the board meets in Tahoe – which is quarterly.

While groups have come forward expressing interest and people have looked at the property, no one has put in an offer. Noonan said all the lookers have said they need to raise the cash.

It's possible the county's area plan that is nearly through

the Tahoe Regional Planning Agency approval process could ease some of the stipulations on what the land could be used for. There are also Nevada education rules that limit future uses.

The property is listed at \$4 million based on an appraisal from close to two years ago. Per state law the district cannot sell for less than the asking price.

An attorney advising the district has said based on the length of time the property has been on the market that legally the price could be lowered.

But board members were not thrilled with that idea, even without offers, based on the real estate market improving at Lake Tahoe.

Board President Tom Moore told Noonan, "I think in October we'll be looking for creative recommendations in how to go forward (if there is no buyer)."

In other action Tuesday:

- The board voted 4-1 (Neal Freitas abstained and Sharla Hales was absent) to turn Aspire into a stand-alone high school. It has been an alternative education program in the valley until now. The plan is to seek accreditation this coming school year.

634-acre Kyburz Fire at 40% containment

Updated 8:25pm:

No estimate is being given on when full containment of the

Kyburz Fire might be achieved.

It has consumed 634 acres and is 40 percent contained.

Highway 50 between Tahoe and Placerville is open without controls.

A shed and outhouse have burned to the ground.

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Cool weather and no wind overnight allowed firefighters on the Kyburz Fire to contain 40 percent of the blaze.

The fire remains at 160 acres.

Two outbuildings have been destroyed. No other structures are threatened.

Officials are not estimating when full containment will be achieved.

The blaze started July 8 about 12:40pm when a vehicle lost a wheel which sparked the fire.

A music camp evacuated, but no one else has been displaced.

Highway 50 between Lake Tahoe and Placerville is open with escorts.

– Lake Tahoe News staff report

Bison Fire threatening

structures in Lyon County

Updated 7:45pm:

The voluntary evacuation area for the Bison Fire has grown to parts of Lyon County.

Sheriff's deputies were going door to door this evening asking residents to leave Pipeline Canyon.

The fire that is predominately in Douglas County has consumed 25,773 acres and is 25 percent contained. Full containment is still slated for July 14.

There are now 1,065 firefighters on the scene. On firefighter twisted a knee.

Several old mining structures have been destroyed.

Additional heavy helicopters are assisting in the aerial firefighting efforts, with winds on Tuesday posing less of a problem on certain areas of the fire than in past days.

The following road closures to non-residents are currently in place for:

Pine Nut Road at the intersection of Out-R-Way

East Valley Road at Grandview

Sunrise Pass Road at Coyote Rock

Brunswick Canyon Road

Mexican Dam Road

Sunrise Pass Road at Artesia Road.

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Crews were able to make significant progress on the Bison Fire

early Tuesday morning after the winds died down about 3am.

It has, however, increased in size to 25,733 acres. It is 25 percent contained, with full containment expected July 14.

The fire in the Pine Mountains of Douglas County started July 4 from a lightning strike.

The fire ran through the Slater Mine area on Sunday burning several old structures, but no further structures have been reported destroyed.

Road closures in the area are still in place.

– Lake Tahoe News staff report

Report: 2000-10 hottest decade on record

By K. Kaufmann, Desert Sun

It's now official. The decade of 2001-2010 was the warmest on record, causing almost a 2,300 percent spike worldwide in heat-related deaths.

That shocking figure is one of many contained in the report, "The Global Climate 2001-2010, A Decade of Climate Extremes," released last week in Geneva by the World Meteorological Organization. An agency of the United Nations, the WMO has members from 191 countries and territories worldwide and is dedicated to creating networks for collecting and sharing weather and climate data and expertise.

The report is 20 pages of meteorological figures and charts,

some rather technical, but what it all boils down to, in the report's opening sentence, is that:

"The first decade of the 21st century was the warmest decade recorded since modern measurements began around 1850. It saw above-average precipitation, including one year – 2010 – that broke all previous records.

"Many of these events and trends can be explained by the natural variability of the climate system. Rising atmospheric concentrations of greenhouse gases, however, are also affecting the climate. Detecting the respective roles being played by climate variability and human-induced climate change is one of the key challenges facing researchers today."

What all this means, according to the WMO summary of the report:

"Every year of the decade except 2008 was among the 10 warmest years on record. ... Results from WMO's survey showed that nearly 94 percent of reporting countries had their warmest decade in 2001-2010 and no country reported a nationwide average decadal temperature anomaly cooler than the long-term average."

The long-term analysis is important, the report notes, because distinguishing between individual extreme weather events and climate change requires long-term data, precisely because extreme weather events do not occur frequently. A decade is the minimum time frame for detecting temperature changes, the report says.

Rash of car thefts in South Lake Tahoe

Auto thieves in South Lake Tahoe are targeting vans.

In three days five vehicles have been stolen or thieves tried to steal them.

No arrests have been made.

Thefts include:

- July 4: 1992 Dodge van stolen from 2111 South Ave. This van was located and recovered locally.
- July 7: 1993 dark Green Ford Aerostar Van was stolen from 861 Emerald Bay Road. This van has not been located. It has "bondo" material on the left rear quarter panel and has separating paint. It has a California license plate No. 4BLP370.
- July 7: 2013 a black 2000 Ford E350 was broken into at 924 Emerald Bay Road. The ignition was damaged.
- July 9: 2006 Ford E350 1-ton diesel extended length van was stolen from 976 Emerald Bay Road. This vehicle has not been located. It is all white. It has a California license plate No. 8G35339 and displays the number 16 in 4-inch block letters near both front doors and on rear of the van.
- July 9: An attempt was made to steal a 1989 Ford Bronco from 976 Emerald Bay Road. The ignition was damaged.

In another case, which may be related, the Placerville Police Department investigated the theft of a van from the Marshall Hospital parking lot in Placerville on July 8. This vehicle was recovered.

Officers suggest the following tips to protect you from having your vehicle stolen.

- Do not leave keys in vehicle. Thieves are very skilled at locating hidden keys.
- Lock your vehicle. No community is exempt from this type of crime, and this simple step will ward away the less determined criminal.
- Diminish attention. Don't leave valuables or documents in plain view.
- Security devices. Remember to activate your alarm if equipped. Steering wheel inhibitors and other theft protection systems such as LoJack can help as well.
- Report suspicious activity. Watch out for your neighborhood and business parking areas.

– Lake Tahoe News staff report