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News. August, 2012. Issue #6. 1010 ESB [video views](#).

*There is no energy crisis, food crisis or environmental crisis. There is only a crisis of ignorance.*  
- R. Buckminster Fuller

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## **ESB**

### **A Milestone: 8/30/12: More Than 1000 ESB Video Views**

#### **August Speaking & Teaching Engagements**

Middle Eastern Student Leaders. Boulder, CO.

*Boulder, Colorado. From Mostly Coal & Fossils to Mostly Renewables*

<http://www.ewcsusimideast2012.com/index.html>

Solar Energy International Solar Businesses & Technical Sales Class. Carbondale, CO.

*The Best Story Wins! Policy, Politics, Solar Sales, and You.*

<http://www.solarenergy.org/workshop/solar-training-solar-business-and-technical-sales>

Gridwise Architecture Council. Seattle, WA.

*Renewables, Smartgrids, Baseload, and Local Policy in Boulder.*

<http://www.gridwiseac.org/>

## **Electricity**

### **Solar Tax Credit, When Used for Leasing, Brings in More Taxes Than It Costs**

(G)

<http://www.earthtechling.com/2012/07/solar-tax-breaks-boost-us-coffers-analysis-says/>

### **Walmart 90 MW of Solar Electric By Year End**

This makes Walmart a major player in installed PV in the US. And they are installing solar PV because it makes economic sense: *Each system must add to the bottom line for the individual store.* (G)

<http://www.bloomberg.com/news/2012-07-30/wal-mart-beats-apple-ikea-in-u-s-solar-installations.html>

### **Vertical Axis Wind Turbines Getting Another Look**

Almost all large-scale wind turbines today are “horizontal” axis - blades in front like a propeller airplane. Research and development of vertical axis turbines were stopped in the 1990s - vertical like a helicopter with wire-whisk shaped blades on top. Large, off-shore, vertical axis turbines are getting another look for their ease of maintenance and construction.

Can modern materials & design compensate for their more difficult to construct bearings, blades, and brakes? (G)

<http://www.renewableenergyworld.com/rea/news/article/2012/08/offshore-use-of-vertical-axis-wind-turbines-gets-closer-look>

## **Transportation**

### **The Best Motorcycle: Electric**

*Electric motorcycles: taking 100 years of motorcycle development to the next level.*

*The (Brammo) Empulse is simply a more pure experience than any gasoline-powered bike could ever be. It steers incredibly quickly, flicking into a corner or through a chicane like a much lighter, much more aggressive bike. Think supermoto fast, but unlike one of those bikes, it's absolutely stable once you're leaned over. Doesn't matter what you do to it in a corner — brake, accelerate, bounce around, drag the peg, hit a rock — it just stays absolutely planted.*

While range issues - how many miles can you drive in a day - remain, EVs continue to progress very rapidly. And for increasingly many people, dealing with an EV's range requires just thinking about range a bit differently, not any actual lifestyle changes. (G)

<http://hellforleathermagazine.com/2012/08/brammo-empulse-the-electric-motorcycle-has-finally-arrived/>

### **California EV Survey**

Californians own 1/3 of all US EVs. What can we learn about them and their EVs? Summary on the webpage - scroll down the page for an excellent survey report and infographic. (G)

<http://www.energycenter.org/pevsurvey>

Generally, California EV owners own Nissan Leafs, park & charge them at night in an attached garage on a house they own, own an historically fueled vehicle as well, live with one other person, are well educated, have above-average income, drive 800 miles per month and less than 30 miles per day, and use the EV as their primary vehicle.

39% have solar electric panels (PV) on their homes now, 17% more plan on getting PV panels in the next year. By utilizing Time-Of-Use (TOU) electric rates to charge late at night, EV owners can save money - paying just \$0.90 to \$1.90 per gallon equivalent - and enjoy a 10 to 50% reduction in greenhouse-gasses than when charging at mid-day.

## **Misc.**

### **How to Get to 100% Renewable Energy Globally by 2050**

Good report made for the World Wildlife Fund. Article (G) and report (PG).

<http://grist.org/article/2011-02-03-how-to-get-to-100-percent-renewables-globally-by-2050/>

[http://wwf.panda.org/what\\_we\\_do/footprint/climate\\_carbon\\_energy/energy\\_solutions/renewable\\_energy/sustainable\\_energy\\_report/](http://wwf.panda.org/what_we_do/footprint/climate_carbon_energy/energy_solutions/renewable_energy/sustainable_energy_report/)

### **Excellent: What is Needed for a Sustainable Energy Future**

By Department of Energy Secretary Dr. Stephen Chu & Dr. Arun Majumdar. Dense and detailed. A lot of technical detail fit into a few pages.

Ends by observing that it takes about 50 years to convert from one energy source to the next... so over 50 years we went from mostly wood to mostly coal. *The Stone Age did not end because we ran out of stones; we transitioned to better solutions. The same opportunity lies before us with energy efficiency and clean energy.* Note that today's solar panels are about 50 years old ... (VG).  
[www.nature.com/nature/journal/v488/n7411/full/nature11475.html](http://www.nature.com/nature/journal/v488/n7411/full/nature11475.html)

### **Interactive Map Shows Renewable Resources**

Choose the area you want to see by using the “query” pull-down menu at the top of the window, and then see results by renewable resource at the bottom of the window. (PG)

[http://maps.nrel.gov/re\\_atlas](http://maps.nrel.gov/re_atlas)

### **LED Street Lighting Saves Money, Saves Carbon, & Improves Safety With New Features**

In Chattanooga, an LED street lighting retrofit is expected to save \$2.7 million per year (from a current budget of \$3.7 M).

<http://www.businessweek.com/articles/2012-05-10/chattanooga-radio-operated-streetlamps>

Global Green, the company that makes the lighting systems, combines LED lighting with wireless networking to allow energy savings of 50% of old high-pressure sodium (HPS) lights and the system offers countless improvements over traditional street lights: *improved light quality and color; wireless monitoring to track exact energy usage; situational functionality, such as dimming, flashing, or brightening the lights; elimination of light pollution; self-reporting malfunctions, and an expected life five times longer than outdated HPS lights.* (G)

<http://www.globalgreenlighting.com>

2 minute video of the LED lights in action (G):

<http://www.youtube.com/watch?v=mvdMiRE2riQ>

### **Our mailing address is:**

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