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News. October, 2015. Issue #43. 73,000 ESB [video views](#). 100% Renewable by 2035.

We may encounter many defeats, but we must not be defeated.
-- Maya Angelou, author and poet

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Moving to 100% Renewables

Interactive US Solar Grid Parity Map

This map shows which states will have residential solar electric grid parity as the cost per watt of solar falls. Note that in Colorado, my solar installer friends tell me that typical residential installs average \$3.50/watt. This makes most of the US “green” for solar grid parity. (G)

<http://sunmetrix.com/sunmetrix-grid-parity-map-for-residential-solar-energy-in-the-united-states/>

Study: Elevated CO2 Levels Make You Stupid

A Harvard study confirms a previous study that levels of CO2 commonly found in buildings lowers intelligence. This adds one more reason to stop burning fossil fuels.

In the 1800s, CO2 levels were at 180 PPM. Now they are at 400 PPM and rising quickly. In cities, the CO2 level may be as much as 100 PPM higher due to burning fossils for transport and electricity. This “fresh” air is the minimum level for CO2 in buildings - where most of us spend most of our time. The CO2 in buildings can be 200 to 400 PPM higher than the outside air.

The studies found that, on average, a typical participant's cognitive scores dropped 21 percent with a 400 ppm increase in CO₂. The article shows the astonishing findings for four of the nine cognitive functions scored in a double-blind test of the impact of elevated CO₂ levels. (PG)
<http://thinkprogress.org/climate/2015/10/26/3714853/carbon-dioxide-impair-brain/>

Energy Storage and the Utility of the Future

GM: Battery Prices Down to \$145 / kilowatt-hour (kWh) Already

Cost-effective battery storage is essential to allow renewables to grow above 50 to 60% of electricity production.

GM's numbers indicate that economies of scale for lithium-ion battery production may be being reached sooner than previously expected. Two years ago, Navigant Research estimated that battery-pack costs would hit \$180/kWh by the end of the decade. And a 2014 study in Nature Climate Change pegged battery-pack costs at about \$300/kWh, so that \$145 figure is a lot lower than others expect. (G)

<http://www.autoblog.com/2015/10/08/gm-li-ion-battery-cost-per-kwh-already-down-to-145>

Real-World Deployments of Energy Storage

From the Energy Storage North America conference. (PG)

<http://www.greentechmedia.com/articles/read/ESNA-2015-Storage-in-Action-Part-1>

Africa: Bridging the Energy Gap With Renewables & New Business Models (G)

<http://www.greentechmedia.com/articles/read/Meet-the-Optimistic-Entrepreneurs-Serving-the-Energy-Poor-in-Africa>

Wisconsin Judge Strikes Down Residential Solar Fees From Electric Utility

Judge Peter Anderson decided that the state Public Service Commission did not have enough evidence to back up its decision to impose fees on residential solar systems. (G)

<http://www.jsonline.com/business/judge-rejects-we-energies-plan-to-assess-solar-panel-owners-extra-fees-b99606784z1-338962302.html>

Washington, DC Non-Profit is Attempting to Take Over the Distribution Grid

This is projected to add \$1 Billion in extra value to DC customers over staying with a traditional electric for-profit monopoly. (G)

<http://www.greentechmedia.com/articles/read/Newly-Formed-Non-Profit-Files-to-Purchase-Pepcos-DC-Assets>