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News. June, 2013. Issue #15. 8,600 ESB [video views](#).

Where there is no vision, the people perish.
- Proverbs 29:18

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News About EnergyShouldBe (ESB)

We are working on 9 short videos that we hope to begin releasing over the next few months.

Electricity

Is a High Renewables Future Really Possible?

An excellent summary & review. Part one covers recent studies considering the future. Part two looks at places where high renewables are a reality today. (both G).

http://blog.rmi.org/blog_05_22_2013_is_a_high_renewables_energy_really_possible_part_one

http://blog.rmi.org/blog_05_23_2013_is_a_high_renewables_energy_really_possible_part_two

South & Central America Could Generate 100% Renewable Electricity (G)

<http://www.scientificamerican.com/article.cfm?id=latin-america-enjoys-abundant-renewable-energy-but-lacks-policies-for-use>

UK \$150 Billion in Savings From Renewables & Nuclear. 90% Renewables by 2030. (G)

<http://www.businessweek.com/news/2013-05-22/u-dot-k-dot-urged-to-boost-clean-energy-as-150-billion-of-savings-seen>

Sunpower Corporation: Solar Barely Scratched Surface of \$2.2 Trillion World Market.

Solar is *just at the beginning of a fundamental transition. The non-incentivized market is much bigger than the early adopter market.* (G)

<http://cleantechnica.com/2013/05/23/solar-its-barely-scratched-surface-of-2-trillion-market/>

Hot Water Geothermal & Concentrating Solar Hybrid Generation

There is an abundance of accessible geothermal energy that is below boiling temperature and therefore not particularly efficient at making electricity. An innovative project to use concentrating solar heating to upgrade the quality of a hot water geothermal resource is underway in Oregon. (G)

<http://www.csp-world.com/news/20130603/00987/csp-geothermal-hybrid-project-be-funded-us-department-energy>

Floating Offshore Platform for Deepwater Wind

Assemble the platform, tower, and turbine in dry dock and then tugboat the finished turbine into position in deep water and anchor it. Reduces costs. Website & PDF (both G).

<http://www.principlepowerinc.com/products/windfloat.html>

<http://www.principlepowerinc.com/images/PrinciplePowerWindFloatBrochure.pdf>

Ontario Goes From 25% Coal to 0% Coal in a Decade

...phasing out coal-fired generation is expected to save the province “approximately \$4.4 billion annually when health and environmental costs are taken into consideration.” (article: PG)

http://www.powermag.com/coal/Ontario-Goes-Coal-Free-in-a-Decade_5538.html

Spinach Protein on Silicon to Produce Cheap Efficient PV?

Researchers are depositing a thin layer of a spinach protein called PSI onto silicon wafers to create a “biohybrid”. *Then they determined PSI converts sunlight into electrical energy with nearly 100 percent efficiency, compared to conversion efficiencies of less than 40 percent achieved by manmade devices.* (G rated)

<http://news.vanderbilt.edu/2012/09/spinach-power-a-major-boost/>

India Cell Phone Company’s Approach to Delivering Power to Rural Areas

Cell phone charging is a challenge in the developing world and in many cases is motivation for people to get solar electric panels. For less than the cost of kerosene lamp fuel, cell phone company OMC is literally delivering electricity to people’s front door. ... *OMC rethought the business model for charging. For a fee paid per day, week, or month OMC’s customers get a fully charged LED lantern or PowerBox that runs several lights, fans, and, of course, charges their mobile phones. OMC delivers to their doorsteps in the afternoon and picks up the equipment for charging in the morning, every day.* (G)

<http://thesolutionsjournal.anu.edu.au/node/22511>

Transportation

How Much Cheaper to Drive on an Electric Gallon?

Compare the US average or by state the cost of gasoline versus charging an electric vehicle (EV). In Colorado, as this is written, a “gallon” of electricity is \$1.12. A gallon of gasoline is \$3.78. (Calculator: G)

<http://energy.gov/articles/egallon-how-much-cheaper-it-drive-electricity>

ESB Note: We probably will want to charge our EVs during the wee hours of the morning. The electrical distribution & transmission systems are at their lowest use, the wind often blows best, and most of us are asleep anyway. As new wind projects (in Colorado at least) are coming in at around 3.5 to 6 cents a kWh, add on a couple of cents for costs to deliver the electricity, and we could be charging our EVs at just 60 to 80 cents per “electric gallon” equivalent to gasoline - at least at night and when the wind is blowing.

Selling EVs: Part 1: Educational - *An everyday electric car with gas for longer trips.*

Auto manufacturers have had 80 years to perfect selling fossil cars to us. Electric cars have been challenging to sell in part because they need to be explained. For example: Q: What are the differences between hybrids (HEV), plug-in hybrids (PHEV), extended range EVs (EREV), and pure EVs? The answers: HEV's are fossil fueled cars with some electric advantages but that can't plug-in; PHEVs are a mostly fossil hybrid that can plug-in for a few miles of electric driving; EREVs: mostly electric vehicle with a backup gasoline generator; and finally EVs, no fossils needed. The last 2 (mostly or all EVs) tend to be more fun to drive than mostly fossil cars.

The tagline on this commercial for the Chevy Volt is *An everyday electric car with gas for longer trips*. A short, clear explanation of an EREV. (1 minute, G)

www.youtube.com/watch?v=C9c38boYVfY

Selling EVs: Part 2: Then There is the Sexy Humorous Approach (article & videos G)

<http://www.autoblog.com/2013/06/20/fiats-environmentally-sexy-online-matchmaking-site-amuses/>

Tesla Model S Supercharger Stations: FREE or FASTER?

Tesla demonstrates 90 second battery swap robot station they plan to install in select Supercharger stations. Supercharger gives 200 mile charge in 30 minutes and is forever free to Model S owners. The battery swap will cost less than a tank of gas and, as they demonstrate, two swaps can occur in less time than filling one gasoline car. (7 minute battery swap video, Supercharger website, both G)

<http://www.youtube.com/watch?v=H5V0vL3nnHY>

<http://www.teslamotors.com/supercharger>

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