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News. November, 2016. Issue #55. 97,000 ESB [video views](#). *Low-Cost 100% Renewable by 2035.*

Somewhere inside all of us is the power to change the world.
– Roald Dahl, Author.

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Moving to 100% Renewables

75% of Trump Voters Want More Renewables. Net Metering Supported Across the Board.

A poll of 1,000 people conducted by the Republican polling firm Public Opinion Strategies illustrates this dynamic. According to the poll, 75 percent of Trump voters support "action to accelerate the deployment and use of clean energy" -- including solar, wind, energy efficiency, and community renewable projects.

...no matter where voters sit on the political spectrum, most think that net metering is fair. (G)

<https://www.greentechmedia.com/articles/read/new-survey-shows-renewable-energy-polls-ridiculously-well-among-trump-voter>

Open Electricity Markets

"Open" Markets = fair, competitive, deregulated, or choice markets. Avoid "Enrons" by insuring lots of competition. A city or county chooses default suppliers. Individuals and businesses can opt-out directly to the market.

San Francisco Community Choice to 100% by 2030

California allows communities to leave their monopoly electric utility and make their own generation choices. San Francisco's choice is 100% renewable electricity. (G)

<https://ilsr.org/san-francisco-strides-toward-an-all-renewable-future/>

Nevada Votes For Open Markets in a Landslide

72% of voters support question 3. 3's title says: *Shall Article 1 of the Nevada Constitution be amended to require the Legislature to provide by law for the establishment of an open, competitive retail electric energy market ...* (G)

[https://ballotpedia.org/Nevada_Legislature_to_Minimize_Regulations_on_the_Energy_Market_and_Eliminate_Legal_Energy_Monopolies,_Question_3_\(2016\)](https://ballotpedia.org/Nevada_Legislature_to_Minimize_Regulations_on_the_Energy_Market_and_Eliminate_Legal_Energy_Monopolies,_Question_3_(2016))

Low Electricity Rates Cause Electric Company Threats to Open Markets

Open electricity markets bring the first real competition to many old traditional coal and nuclear generators. And open electricity markets often mean low costs for electricity - great if you are a customer or a wind and solar developer with low prices. Less good if you are uncompetitive. FirstEnergy has threatened to *sell or close its big coal and nuclear power plants within 18 months unless Ohio and Pennsylvania return to regulating them and setting prices or create a regulation-like structure for them.*

Interestingly, the reader comments after the article are overwhelmingly un-sympathetic to FirstEnergy and supportive of open markets. (G)

http://www.cleveland.com/business/index.ssf/2016/11/firstenergy_to_sell_or_close_p.html

Energy Storage and Miscellaneous

Germany, India, Netherlands, and China Consider Banning New Fossil Fueled Vehicles...

... in the 2025 to 2035 time frames. Who will be first? (G)

<https://www.greentechmedia.com/articles/read/what-country-will-become-the-first-to-ban-internal-combustion-cars>

French Heating and Cooling Using Seawater and Heat Pumps (PG)

<http://www.renewableenergyworld.com/articles/2016/11/thassalia-france-s-first-marine-geothermal-energy-power-plant-inaugurated.html>

Balancing the Grid With Wind Derived Synthetic Inertia

The large spinning mass in traditional fossil, nuclear, and hydro generators helps smooth out fluctuations in the grid's frequency. This is always important for keeping the lights on, but is particularly important just after an unplanned failure of a generator or transformer somewhere on the grid. While wind turbines have inertia themselves, since the wind is constantly varying anyway, the wind turbines typically use power electronics to create AC power - the inertia of the blades is not directly connected to the grid.

As we add more and more wind power and solar power, we are shutting down traditional "spinning" power plants. To help keep the lights on, we need to replace the frequency smoothing that used to be provided by mechanical inertia. This article is about using the power electronics on wind turbines to provide that grid service. (VG)

<http://spectrum.ieee.org/energywise/energy/renewables/can-synthetic-inertia-stabilize-power-grids>