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News. February, 2015. Issue #35. 51,000 ESB [video views](#). *100% Renewable by 2035.*

There is nothing more difficult to plan, no more dangerous to manage, than the creation of a new system. For the creator has the enmity of all who would profit by the preservation of the old system and merely lukewarm defenders in those who would gain by the new one.

- Niccolo Machiavelli

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Electricity

Off-Shore Wind Turbine Foundations Without Cranes Save \$s

Two big expenses of off-shore wind turbine installation are the need for ship-mounted cranes and waiting for very good weather to install the wind turbine foundation. These issues may be addressed by this hollow floating foundation that is tug-boat towed into place, filled with water to sink it into position, a lower section is pumped with concrete from the surface to fully match the sea floor, then made much heavier by pumping sand in a slurry to fill the cavity. The foundation can be removed at the end of its life by reversing the process. (PG). Watch the video on the website.

<http://seatawer.com/technology/>

Washington Post: “Best Idea in a Long Time: Covering Parking Lots With Solar Panels”

Interesting article with lots of statistics. (G)

<http://www.washingtonpost.com/news/energy-environment/wp/2015/01/28/the-best-idea-in-a-long-time-covering-parking-lots-with-solar-panels/>

Iowa Wind Transition: “What’s Remarkable is How UnRemarkable…”

“...wind will account for nearly as much capacity (39 percent) as coal. What’s remarkable about this transition is that for homeowners and businessmen, it has been largely unremarkable. ... there have been no outages or blackouts because of growing wind capacity.

The only thing locals may have noticed is that their electric rates haven’t gone up in a decade and their air is cleaner—the state’s wind energy plants will avoid more than 8.7 million tons of dangerous carbon dioxide pollution every year... the equivalent of taking 1.55 million cars off the road.” (G)

<http://thehill.com/blogs/congress-blog/energy-environment/232968-the-presidents-climate-plan-cleaner-reliable>

Micro Wind Turbines Installed on the Eiffel Tower (G)

<http://cleantechnica.com/2015/02/24/eiffel-towers-custom-painted-micro-wind-turbines-will-wow-millions/>

Transportation

EVs Are Better: Electric Taxis in London

London has a new range-extended electric cab called the Metrocab. Cabbie Preston Morris, said: *"It is great news for me, and for cabbies across London that the Metrocab is now licensed to work in the capital. The cash savings on fuel are significant, the ride and comfort outstanding, and my first customers are thrilled with the new cab. With its air suspension providing unrivalled comfort, panoramic glass roof for views of the city and silent powertrain, what's not to like?"*

London Mayor Boris Johnson has described the Metrocab as *"superb and absolutely beautiful. A masterpiece of British engineering. The Rolls-Royce of taxis that can do 100mpg."* (Article (G). Scroll down to the press release)

<http://www.autoblog.com/2015/02/12/range-extended-ev-taxis-london/>

Energy Storage, Etcetera

Study: Using Demand Response to Balance the Grid

Right now the energy on the grid is balanced centrally - usually by large centralized generators. “Balancing” an electric grid means making sure that the total amount of electricity being used and generated are pretty close to the same all of the time. When that balance is off either way, our lights go out.

When power engineers talk balancing, they mean controlling the frequency of the power signal - 60 cycles per second in the US. The way the grid shows it is out of balance is that the frequency is too high or low. This study looks at using the frequency of the grid along with smart meters that respond to frequency automatically by reducing a customer’s demand. Can that, by itself take the place of central balancing? The answer from this one paper is, at least theoretically, “yes.” If this approach proves out, and expanded to include local energy storage and solar generation, it may be more cost-effective and replace yet another expensive function of large, centrally organized electric utilities. (PG)

<http://spectrum.ieee.org/energywise/energy/the-smarter-grid/decentralized-grid-balancing-is-possible-study-finds>