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John Oliver on the US power grid: 'It's not failing us, we are failing it'

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5-6 minutes

John Oliver delved into the beleaguered US power grid on Sunday's Last Week Tonight, parsing the various strains on the system of generators that produce electricity and the vast network of wires that bring it to homes.

"If it feels like there have been more outages than usual recently, that's because there have," said Oliver, as the number of annual blackouts in the US doubled from 2015 to 2020 owing to equipment failures and natural disasters such as freezing temperatures and hurricanes. "And that is not good for numerous reasons, the most obvious one being sitting around without power for any period of time absolutely sucks," Oliver explained.

Power outages also wreak havoc on sewage treatment plants, water purification centers, and people who rely on electronic medical equipment like ventilators and powered wheelchairs.

That's on top of the imperative of renewable energy to fight climate change – to meet the goal of net zero carbon emissions by 2050, the US will probably require a 40-60% increase in electricity consumption. "The truth is, if everyone suddenly had an electric car tomorrow, that might be great for the planet, but it could push our grid to its absolute limit," said Oliver.

The host surveyed the history of the three US power grids – the eastern interconnection, the western interconnection and the Texas interconnection. "It's basically like Major League Baseball in that there are two dominant groups and then assholes in Texas who would rather make up their own rules," he joked, referring to the [Houston Astros cheating scandal](#).

The first US electric system was built in 1882 in New York City, and expanded by the rural electrification administration in 1935. There

are now [600,000 miles of transmission lines and 5.5m miles](#) of local distribution lines, a system of connectivity Oliver described as a “supreme engineering achievement of the 20th century”.

That system is now perilously burdened by age – most power lines were built in the 1950s and 60s with a 50-year life expectancy – and the extreme weather posed by climate change.

The combination of issues can be deadly: the 2018 [Camp fire](#) in California, the state's deadliest in history, was ignited when 90-year-old hooks, ignored by Pacific Gas and Energy, gave way and caused power lines to fall on to metal equipment and shower drought-stricken land with sparks. “You can't just keep something that old in place and expect it to keep working forever,” Oliver said. “PG&E basically took the same approach to their equipment as Democrats did with Ruth Bader Ginsburg, and in both cases, it didn't end well.

“Basically, we've got a power grid built in the 20th century that is not equipped to deal with the needs and stresses of the 21st,” he continued. The necessary upgrades include many relatively small fixes – the installation of micro-grids, weather-proofing, better storage facilities for excess energy – but one huge one: the shift to renewable energy plants such as solar and wind farms, which can't be built just anywhere.

“The physical generation of renewable energy isn't really the problem here,” Oliver explained. “The key issue is the transmission of it. Basically, how do you get that energy from where it's made, like a wind farm in Wyoming, to where it is needed, which could be a thousand miles away.”

The answer is transmission lines, “the absolute heart of our grid, and we're going to need more of them”, said Oliver. But there are several difficulties to refreshed transmission lines, starting with location: building hundreds of miles of lines is a logistical nightmare, and local opposition to bigger towers can derail plans for years.

The second is cost – one estimate puts decarbonizing the power grid at \$2.5tn over the next decade, a difficult price tag for many lawmakers to swallow. “Set aside that blackouts can cost us a lot of money, as the people of Texas will tell you after [what happened to them](#) earlier this year,” said Oliver. “There are also many benefits here that are not purely monetary – a cleaner grid helps combat climate change, meaning that maybe your grandkids won't die in

weekly lava hurricanes, which does seem pretty worthwhile.”

In other words, “framing this merely as net profit is so weird. It's like saying ‘what's the return on investment in funding the fire department? How much money do we make off that?’”

There have been some improvements, however. The infrastructure bill that passed the House this week included \$65bn to improve the power grid, with a portion dedicated specifically to transmission upgrades and expansion. “It is a good start, while also being not nearly enough,” said Oliver.

“But the key thing going forward here might be to start thinking about this differently than we currently are,” he added, “because for far too long, whenever we've experienced blackouts, we tend to think of it as the power grid ‘failing’. But the truth is, it's not failing us; we are failing it, by asking it to do something it was not designed to do, in conditions that it was not designed to handle.”

Oliver concluded with a call to “act boldly, and quickly, as if our lives and our shitty casseroles depend on it”.