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Tesla asks EV owners to unplug during heatwave, but there's a better solution

Article

The news: **Tesla** is telling its customers to refrain from EV charging during peak electricity demand hours to help keep the Texas power grid from failing.

- As Texas grid operator **Electric Reliability Council of Texas (ERCOT)** takes emergency action to prevent blackouts during a heatwave, it's asking Texans to avoid running appliances during peak energy demand hours between 2 and 8 pm, per The Verge.
- Meanwhile, **Tesla is sending alerts to vehicle dashboard screens asking for no EV charging between 3 and 8 pm to spare the grid**. It made a similar request during a Texas heatwave in May.
- EVs aren't the only affected tech. Cryptocurrency mining in Texas had to unplug this week to avoid power outages.

The grid vs. climate change: The warm, heavily populated states of Texas and California have demonstrated grid vulnerabilities during heatwaves in recent years, and worsening climate change and the parallel rise in air conditioning use are set to tax the grid more broadly.

- With varying local rates of warming, states like New Jersey could also experience more grid troubles in coming years.
- Renewable energy is needed to help curb climate change but has reliability issues. Texas' wind speeds have dropped considerably during the heatwave.
- Fully charging a 100-mile-range EV battery is equivalent in cost to running AC for six hours, per AAA, so rising EV adoption and energy drags like crypto mining and data centers could intensify blackout risk.

The bidirectional charging opportunity: The current message—unplugging an EV during peak power-demand hours to help prevent blackouts—doesn't have to be the only solution.

- The situation in Texas illustrates the need for bidirectional EV charging in which power can flow from vehicle batteries to help supply the grid with energy.
- It also incentivizes people to follow requests to not charge during peak hours because they'll earn a little money by sending power to the grid instead.

What's the catch? Although some EVs are equipped with bidirectional charging capabilities, there are technical hurdles, including the right charging hardware and software integration.

- More partnerships between power companies and EV makers could help advance the technology.

- However, progress may be slow due to inaction by some energy providers who could profit from blackouts.

Dig Deeper: *Learn more about bidirectional charging in our Analyst Take: EVs take more than just flipping a switch. Can the grid handle it?*

Technologies Used to Support Sustainability Goals According to Senior Executives Worldwide, by Industry, Oct 2021

% of respondents

	Tech	Healthcare	Financial	Consumer/ retail
Internet of things (IoT)	88%	73%	65%	52%
Cloud	87%	80%	84%	56%
AI	82%	50%	52%	38%
Data management/analytics	63%	63%	63%	36%
Digital platforms	57%	55%	49%	44%
5G/high-speed connectivity	55%	25%	31%	29%
Robotic process automation (RPA)	53%	58%	39%	52%
Virtual collaboration	48%	40%	29%	25%
Digital twin computing	33%	23%	20%	10%
Alternative energy	28%	23%	9%	26%
Renewable energy	23%	28%	10%	27%
Electric vehicles	15%	25%	15%	40%
Quantum computing	15%	13%	21%	0%
Photonic networks	10%	18%	8%	12%
AVs/drones/robotics	8%	25%	11%	32%

Note: in the next two years
Source: NTT, "Innovating for a Sustainable Future" in partnership with ThoughtLab, Feb 22, 2022

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