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Can Utilities Prep The Market For A Deluge Of Electric Vehicles?

By Ken Silverstein, Senior Contributor · May 17, 2023

WHAT IT COVERED

National business coverage of how utilities are preparing grid and charging infrastructure for rapid growth in electric vehicle adoption.

MY ROLE

Supported fleet electrification and EV infrastructure communications during this period.

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By Ken Silverstein, Senior Contributor. ⓘ Ken Silverstein covers global energ...

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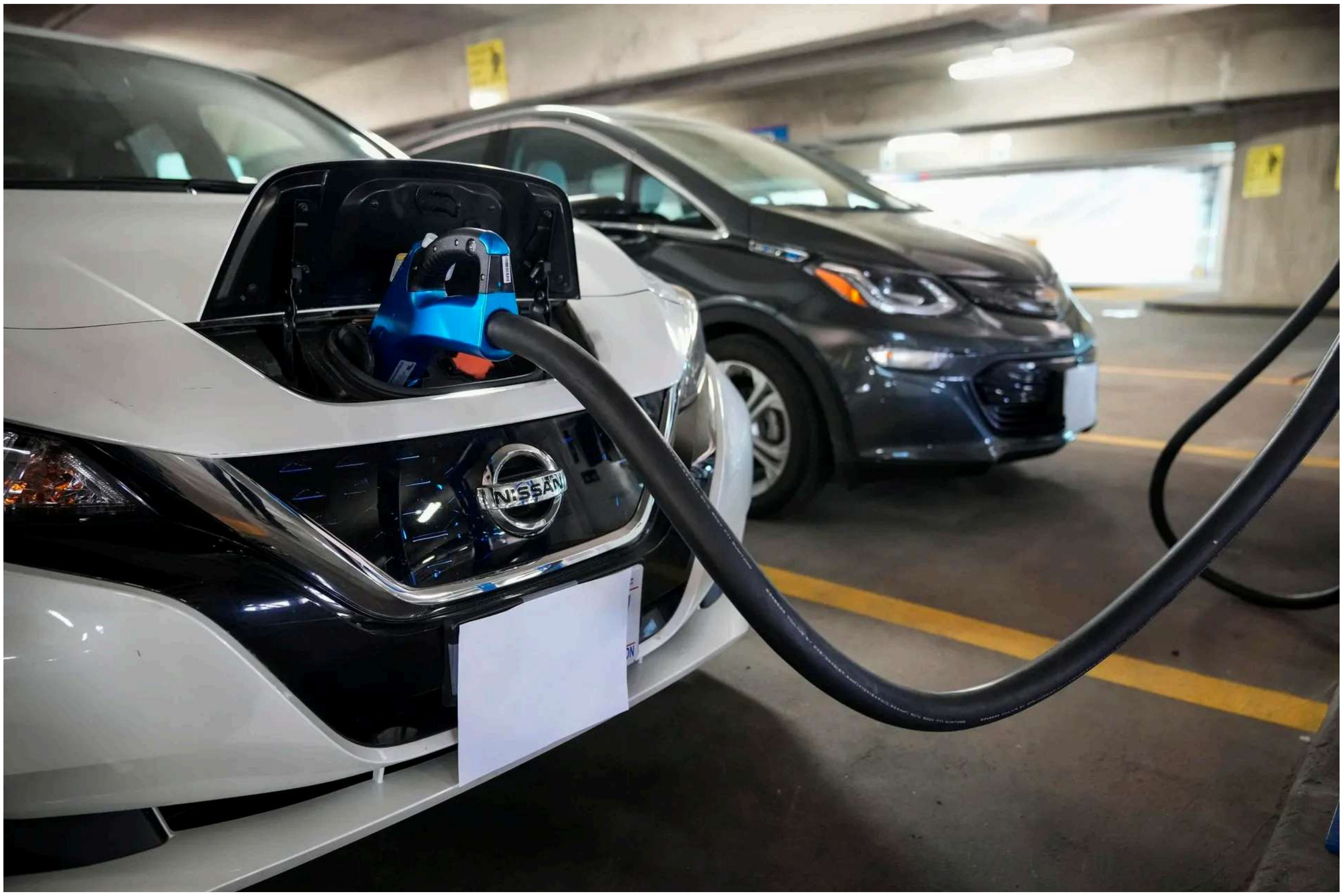

WASHINGTON, DC - APRIL 22: Electric vehicles are displayed before a news conference with White House Climate Adviser Gina McCarthy and U.S. Secretary of Transportation Pete Buttigieg about the American Jobs Plan and to highlight electric vehicles at Union Statio ... More
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The Edison Electric Institute projects 26.4 million electric vehicles in 2030, giving utilities new revenues but putting pressure on them to make substantial outlays. They have already invested over $3 billion into the charging infrastructure, with nearly $1 billion in underserved communities.

The goal is to build the charging infrastructure to at least 10 million new ports to meet the demand. And the wires must handle the increased traffic, requiring utilities to invest heavily in the transmission and distribution infrastructure.

"Getting the market ready is important for adoption," says Lon Huber, senior vice president Duke Energy DUK-0.2% during a symposium held by the United States Energy Association where this reporter was a panelist. "That is what we do. We are planners. We're infrastructure experts: we operate the grid, which literally wraps around the world many times. Think about the expertise that's required to maintain something like that. We need policies that utilize the expertise utilities have honed over 100 years, bringing it to the infrastructure market to ensure it's equitable and reliable so they don't revert to the internal combustion engine."

The major car companies are expanding production of their electric vehicles, including BMW, Ford, General Motors GM-1%, Nissan, Toyota, and Kia.

To get there, the U.S. Department of Energy says that the transmission and distribution network must expand by 60% by 2030 — and to triple by 2050. The Edison Electric Institute says it is ahead of the game, working with policymakers and various stakeholders to make this happen.

The REPEAT Project says that if the transmission grid fails to develop more than 1% yearly, it will increase U.S. greenhouse gas emissions by 800 million tons annually by 2030. Stated differently, if the grid doesn't grow, the goal of the Inflation Reduction Act will go unrealized, losing more than 80% of the emissions gains. That hurts wind, solar, and electric vehicles. To hit net zero, the grid must grow 2% to 3% yearly.

How Do EVs Compare to Traditional Cars?

SUN VALLEY, CA - DECEMBER 11: The Department of Water and Power (DWP) San Fernando Valley Generating Station is seen December 11, 2008 in Sun Valley, California. Under a new climate plan before state regulators, California would take major steps toward cutting.. **... More**
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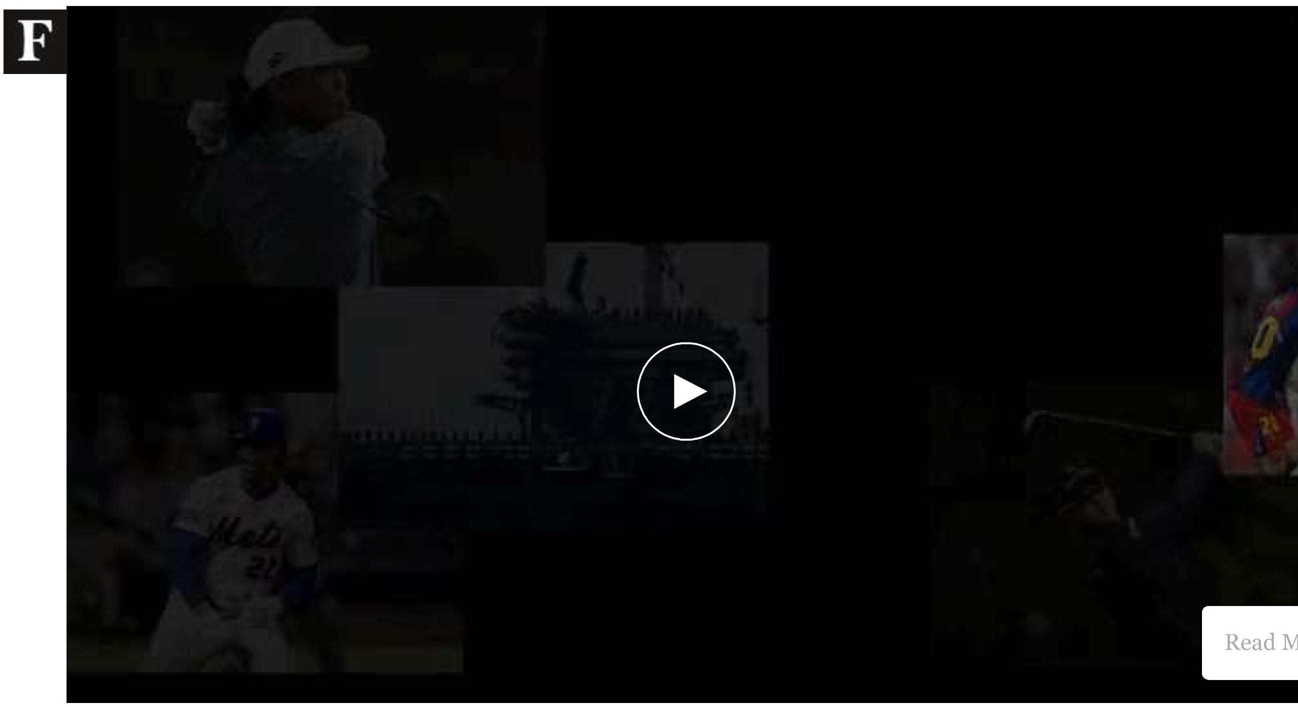
Wood MacKenzie says battery technology is advancing and the devices will hit an inflection point in 2027 — when price and quality are improving expeditiously.



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"ConEdison has fully leaned into supporting the ambitious, clean energy goals of New York State and the city, and we've set ambitious targets of our own through our clean energy commitment," says Britt Reichborn-Kjennerud, director of e-mobility for the utility. "With nearly a third of the carbon emissions in New York State due to transportation, this sector cannot be ignored. We do have a very robust grid planning process. But we're also thinking about more proactive ways to plan for these loads to support this transition."

She notes that managing the charging times through demand response programs or time-of-use rates will push EV owners to juice up during off-peak times. That will reduce infrastructure needs, helping manage everyone's costs.