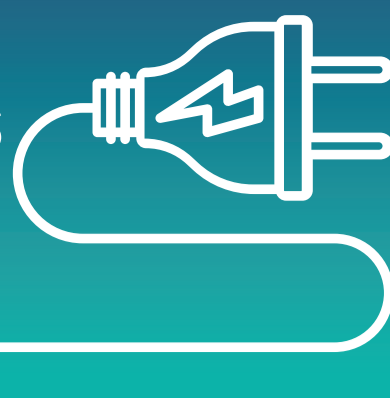
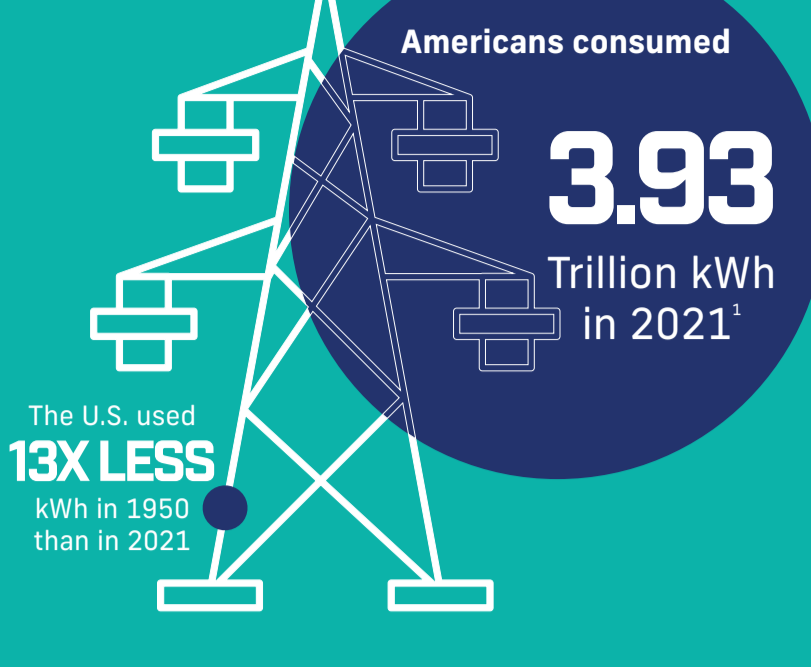


# Energy Resilience Challenges & Energy Storage Solutions



## U.S. Electricity Consumption



Beyond the table stakes of lights and heating and cooling, there is greater demand to power technology – **the average person spends 8.6 hours a day using tech.**<sup>2</sup>



**26.4M** EVs on U.S. roads by 2030<sup>3</sup>

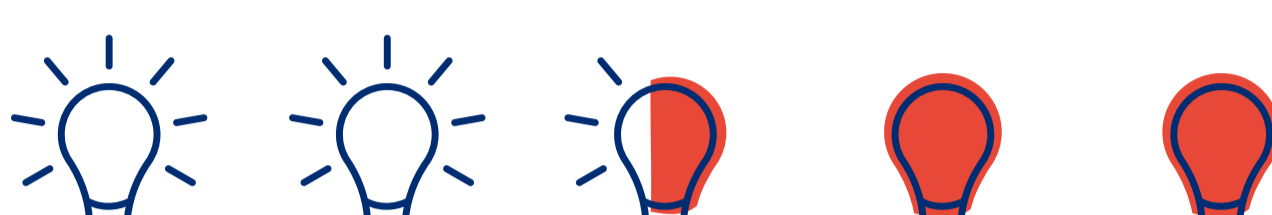
With additional tax incentives and rebates, electric vehicles will become a growing part of American life.

The more electrified the U.S. becomes, the more important it is to strengthen the resilience of our electric grid.

## Grid Interrupted

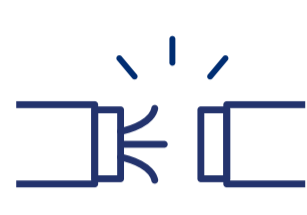
Annually, power outages are costing the U.S. economy<sup>4</sup>

**\$150B**



And they have **increased by 64%** compared to 10 years ago.<sup>5</sup>

IN 2022...



**133**

major power disturbances or unusual occurrences



**7,917,633**

customers were impacted



**86**

of these outages lasted 30 minutes or longer<sup>6</sup>

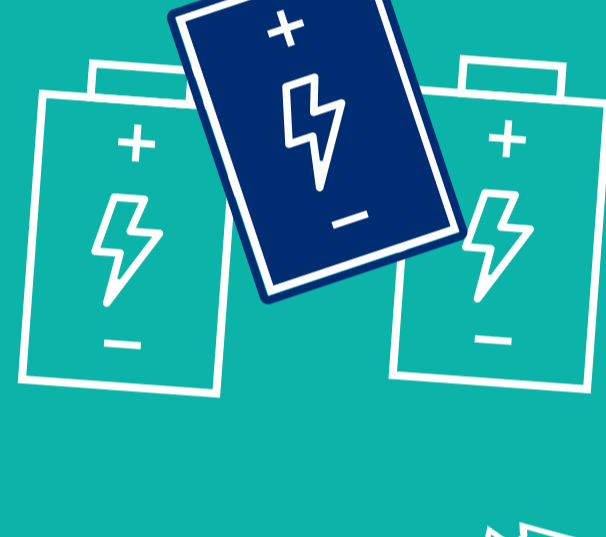
Significant weather events coupled with aging grid infrastructure have been major contributors to the issue.

**500,000+**

homes and businesses were without power in the eastern half of the United States and Texas on Christmas Eve 2022.<sup>7</sup>

An overhaul of America's electric infrastructure would cost over **\$2 trillion.**<sup>8</sup>

## Call in Backup

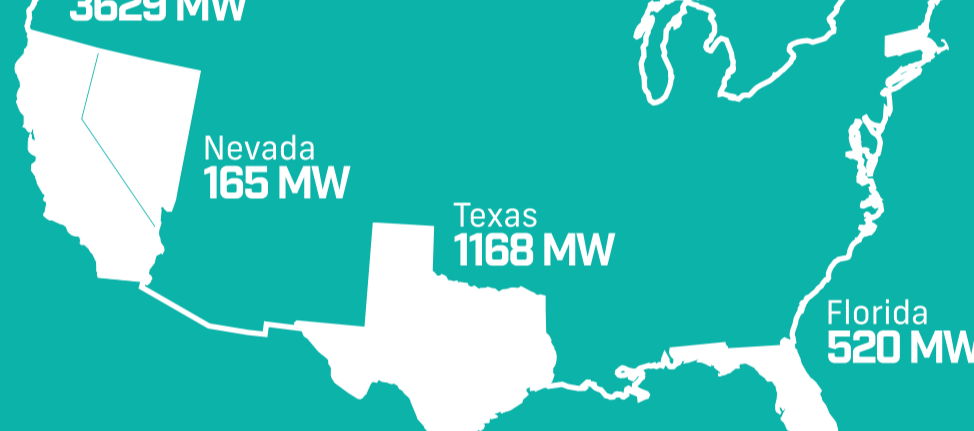


Battery capacity in the U.S. has more than tripled to

**6,702 MW**

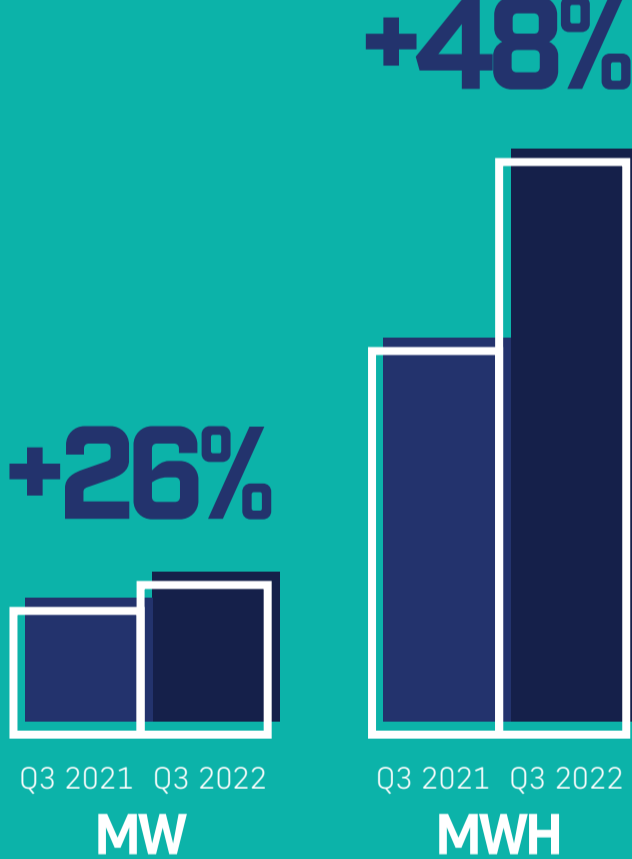
since the start of 2021.<sup>9</sup>

The top five states ranked by battery capacity are:

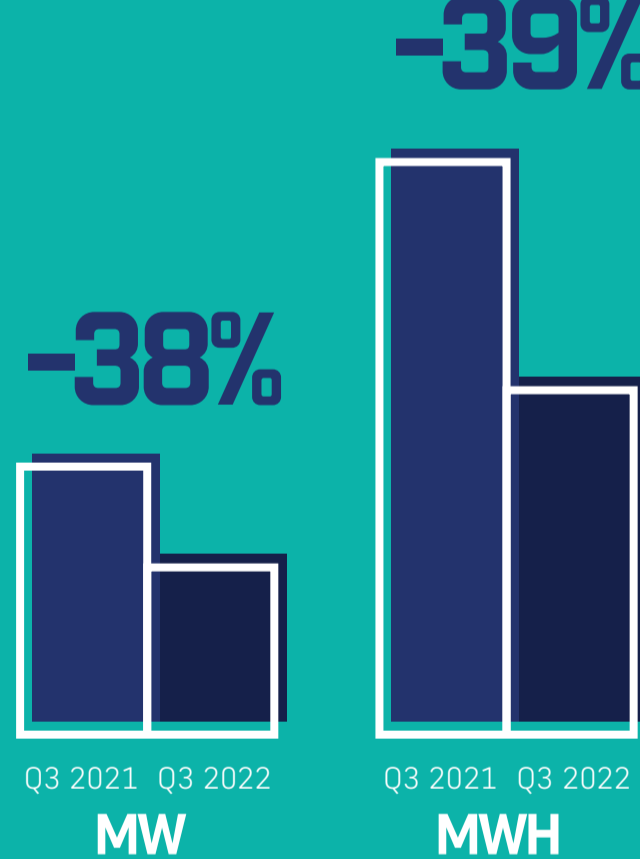


Larger, grid-scale applications of energy storage are growing quickly, while other commercial, industrial and community-scale (CCI) applications still need to catch up.<sup>10</sup> Between **Q3 2021 and Q3 22**, the U.S. saw:

### GRID-SCALE SEGMENT YOY CHANGES



### CCI SEGMENT YOY CHANGES



Battery energy storage systems can help keep businesses and communities running for days or even weeks.

## Meeting Energy Storage Needs

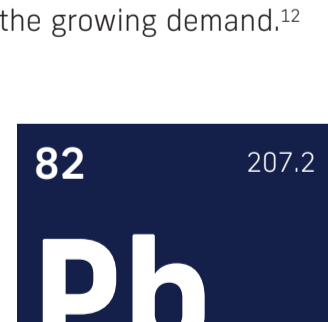
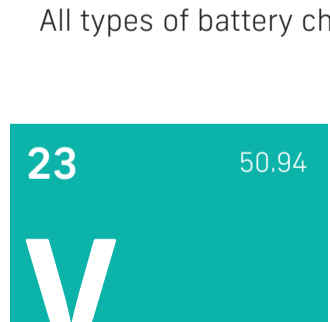


**125 GIGAWATTS**

of installed capacity.

The projected growth of utility-scale diurnal (during the day) energy storage deployments through 2050.<sup>11</sup>

All types of battery chemistries will be needed to meet the growing demand.<sup>12</sup>



## Meet Stryten Energy

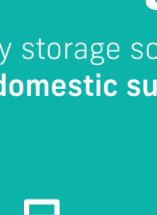
U.S.-based manufacturer of energy storage solutions supported by a vertically integrated domestic supply chain.



Robust portfolio of advanced lead, lithium and vanadium battery chemistries



Manufacturing space totalling 2.5 million square feet



10 plants and three innovation centers in the U.S.



Distribution and service centers across North America to support our customers

An industry leader backed by more than a century of expertise, Stryten Energy's customers benefit from our strong domestic presence with greater product availability, market readiness to meet evolving needs and the assurance of higher environmental and safety manufacturing standards in the U.S.

For more information on energy storage trends and solutions, visit [stryten.com](https://stryten.com).

<sup>1</sup> <https://www.eia.gov/energyexplained/electricity/use-of-electricity.php>  
<sup>2</sup> <https://www.deseret.com/u-s-world/2020/3/17/21184252/technology-screen-time-bed-sleep-8-hours-pbs-cnn-fox-news>  
<sup>3</sup> <https://www.eei.org/News/news/All/eei-projects-26-million-electric-vehicles-will-be-on-us-roads-in-2030>  
<sup>4</sup> <https://www.cnbc.com/video/2022/08/12/why-the-us-power-grid-has-become-unreliable.html>  
<sup>5</sup> <https://www.cnn.com/2022/09/14/us/power-outages-rising-extreme-weather-climate/index.html>  
<sup>6</sup> [https://www.eia.gov/electricity/monthly/epm\\_table\\_grapher.php?t=epmt\\_b\\_1](https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_b_1) (Data from January 2023)  
<sup>7</sup> <https://www.reuters.com/world/us/over-14-million-without-power-us-east-coast-texas-winter-storms-2022-12-23/>  
<sup>8</sup> <https://www.utilitydive.com/news/battery-capacity-growth-zpryme-report-nextera-massachusetts/634457/>  
<sup>9</sup> <https://www.woodmac.com/industry/power-and-renewables/us-energy-storage-monitor/>  
<sup>10</sup> <https://www.nrel.gov/news/program/2021/grid-scale-storage-us-storage-capacity-could-grow-five-fold-by-2050.html>  
<sup>11</sup> <https://www.stryten.com/transition-to-clean-energy-with-vanadium-battery-technology/>  
<sup>12</sup> <https://www.stryten.com/transition-to-clean-energy-with-vanadium-battery-technology/>