

# CAN THE U.S. ELECTRIC GRID HANDLE RISING VEHICLE ELECTRIFICATION DEMANDS?



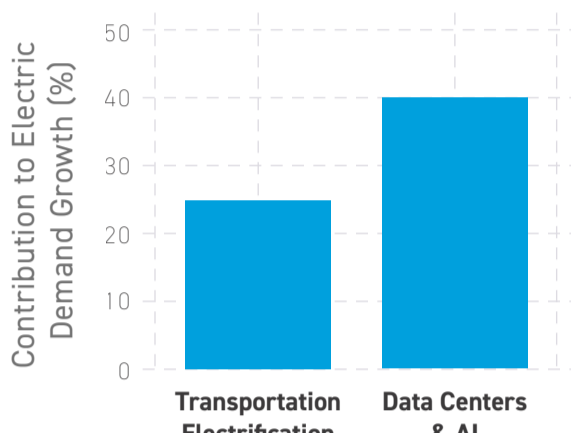
The transition of the United States to Electric Vehicle (EV)-powered transportation raises a vital question:

**Can our electric grid, including utilities, municipal systems, and independent system operators, handle the projected demand?**

## Understanding the impact of EV power demand on our energy infrastructure.

### 1 PROJECTED DEMAND GROWTH

Transportation electrification will contribute **25%** of the projected electric demand growth in the U.S. by 2030. Data centers and AI will contribute **40%**.



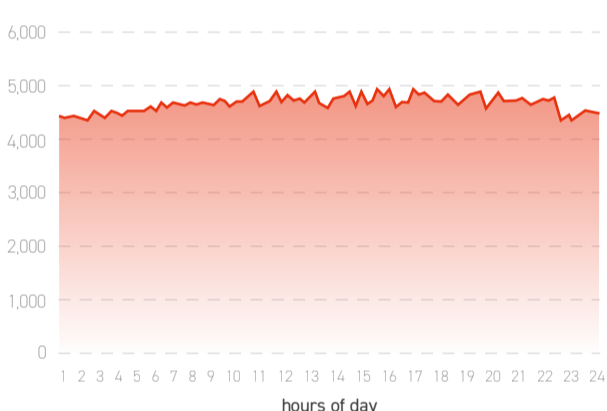
Every **5%** penetration of commercial fleet electrification adds **~110,000 MWh** of new load, about what it takes to power all the homes in Syracuse, New York for one month. Importantly, and unlike data centers, **fleet charging load is manageable because it's distributed**, and can occur at times when the grid can easily handle it.



### 2 COMPARING DEMAND CHARACTERISTICS

For data centers and AI, the load is relatively flat, inflexible, and **"always on."** In contrast, EV fleet charging demand often occurs at **off-peak times** and is uniquely manageable to complement other grid demand.

5,000 kW Capacity Facility: Daily Load Shape Example



Data Centers/AI: Flat, inflexible, always-on demand.

5,000 kW Capacity Facility: Daily Load Shape Example



EV Fleet Charging: Variable, often off-peak, adaptable.

### 3 BENEFITS OF EV FLEET ELECTRIFICATION

EV fleet electrification provides a **flexible, grid-friendly load**, reducing stress through off-peak charging and energy dispatch. This makes it a key asset in supporting sustainable energy use.



Responsive to grid stress events.



Can be scheduled for off-peak times.



Potential to dispatch energy back to the grid.



Complementary to other local electric loads.

### 4 STRATEGIC PLANNING AND INVESTMENT

Optimizing grid capacity with strategic planning and investments in infrastructure.



Fleet electrification presents a **more adaptable** and **less grid-intensive** load, crucial for managing grid stress and reducing environmental impact.

Learn how to electrify your fleet at [electrada.com](https://electrada.com) →