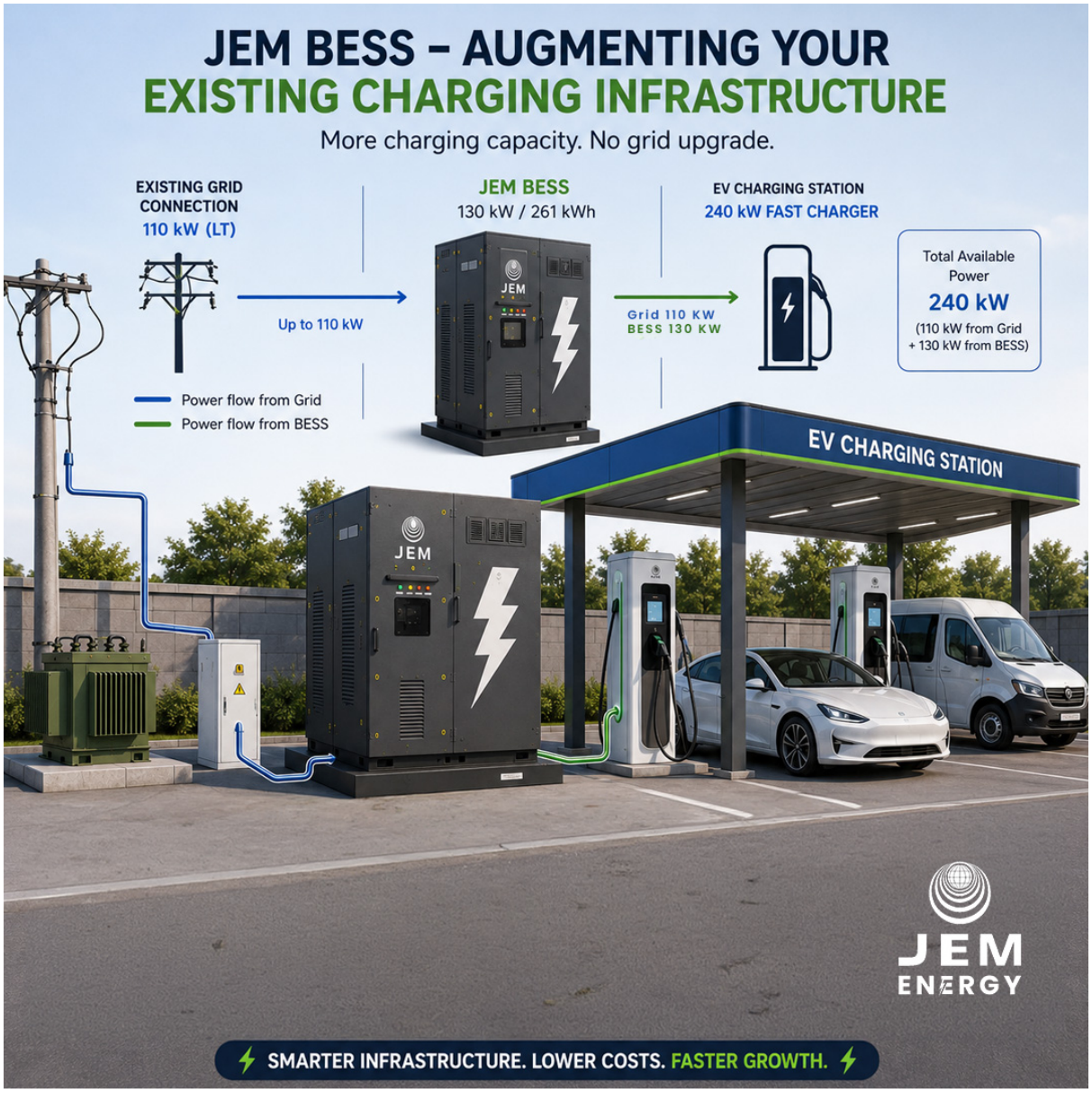

How do you deploy a 240 kW EV Fast Charger on a site that only has a 110 kW grid connection?

This was the challenge faced by one of our EV fleet charging customers.

Their charging station was operating on a **110 kW LT grid connection**, but growing fleet demand required the deployment of a **240 kW DC fast charger**.

The conventional approach was straightforward—but painful:

Apply for an additional 130 kW load sanction
Wait for DISCOM approvals
Upgrade transformers and power infrastructure
Install HT connectivity
Shift from LT to HT tariff

The result? Significant CAPEX, lengthy project timelines, and higher operating costs.

Instead, the customer chose a different path.

JEM Energy's BESS-Based Charging Infrastructure Upgrade

We deployed a **130 kW / 261 kWh Liquid-Cooled Battery Energy Storage System (BESS)** and integrated it with the charging station through intelligent controls and power management software.

Here's how it works:

The site continues to draw **110 kW from the grid**

During peak charging demand, the BESS supplies the additional power required

Together, the grid and BESS deliver the full power needed for a **240 kW fast charging experience**

The outcome?

The charging station effectively doubled its available charging capacity **without upgrading its grid connection.**

Results Delivered

Immediate capacity expansion without waiting for utility approvals

No DISCOM approvals, transformer upgrades, or HT migration required

15% lower charging cost by continuing to operate on an LT connection

Reliable backup power during outages

DG-free operations and zero downtime

Payback within 3 years from demand-charge savings alone

Overall project payback of approximately 2.5 years

15-year system design life

The system shown here is the actual **JEM Energy liquid-cooled BESS**, manufactured at our facility and now ready for dispatch.

As EV adoption accelerates, the industry needs solutions that can scale charging infrastructure **faster than grid infrastructure can be upgraded.**

Battery Energy Storage Systems are rapidly becoming the most practical way to unlock additional charging capacity, improve station economics, and accelerate EV adoption—without waiting for the grid to catch up.