

nationalgrid

Building a Smarter, Stronger, Cleaner and More Equitable Energy Future

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Where We Are, Where We're Headed

- **We're On Our Way.** Achieving New York's ambitious climate and clean power targets is an ongoing success story that's already underway, and there is much more to do.
- **Upgrades Ahead.** The current grid must be at least twice as large as is it today to accommodate rising demand. That means expanding and upgrading the electric network at a significant pace and scale, in collaboration with policymakers, customers and communities.
- **Future Forward.** We must transform our capabilities and create a network that's fundamentally smarter, stronger and cleaner. This future network must:
 - Deliver 70% renewable energy by 2030 and 100% zero-emission electricity by 2040
 - Enable deployment of new, electrified end-use technologies and clean resources
 - Provide a more individualized, seamless and improved experience for all customers



6K MW
of solar by 2025



3K MW
of energy storage
by 2030



1-2M
home heat
pumps by 2030



100%
zero-emission new
vehicles by 2035



9K MW
of wind by 2035

Our Clean Energy Vision



Affordability and Customer Choice

Reduce costs, maintain affordability and enable greater customer choice through energy efficiency and demand response programs



Advancing Smart Electrification

Develop a smarter, stronger, cleaner electric network of the future that delivers energy equitably where and when it's needed



Decarbonize the Energy System

Decarbonize the existing pipeline distribution network to help achieve climate goals while maintaining reliability

Anticipating Demand: The Upstate Upgrade

New York needs ...

The 2035 Electricity Network in New York



Offshore wind

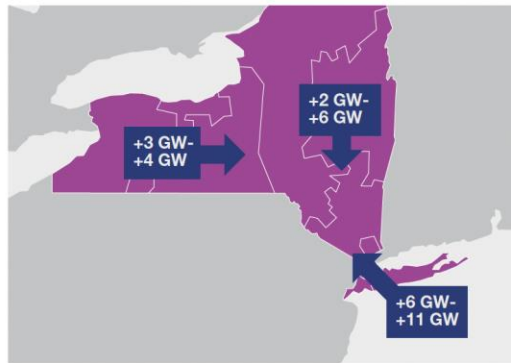


Onshore Solar and Wind



Storage

New Renewable Generation Capacity in 2035



Up to
1.5 million

Electric Vehicles

Will be garaged and installed at buildings in our New York Territory by 2035

Up to
250,000

Heat Pumps

↑ Increase in network capability required at points on the network, and direction of electricity flow.

Network boundary

... enabled by National Grid projects ...

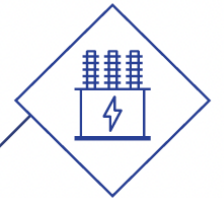
At least
600 miles

New and upgraded transmission line in National Grid right-of-ways by 2030

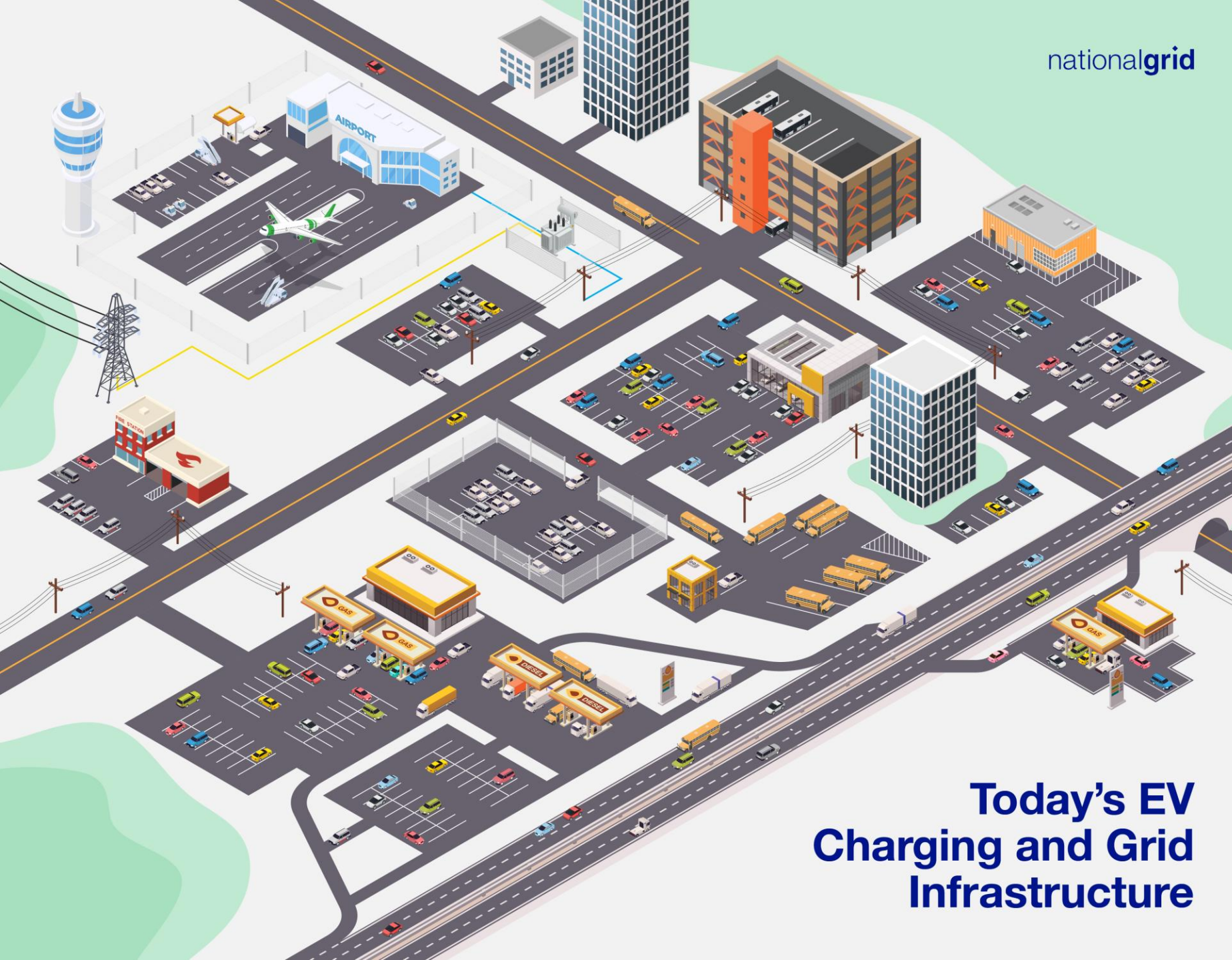


At least
45

New and upgraded substations in National Grid's network by 2030



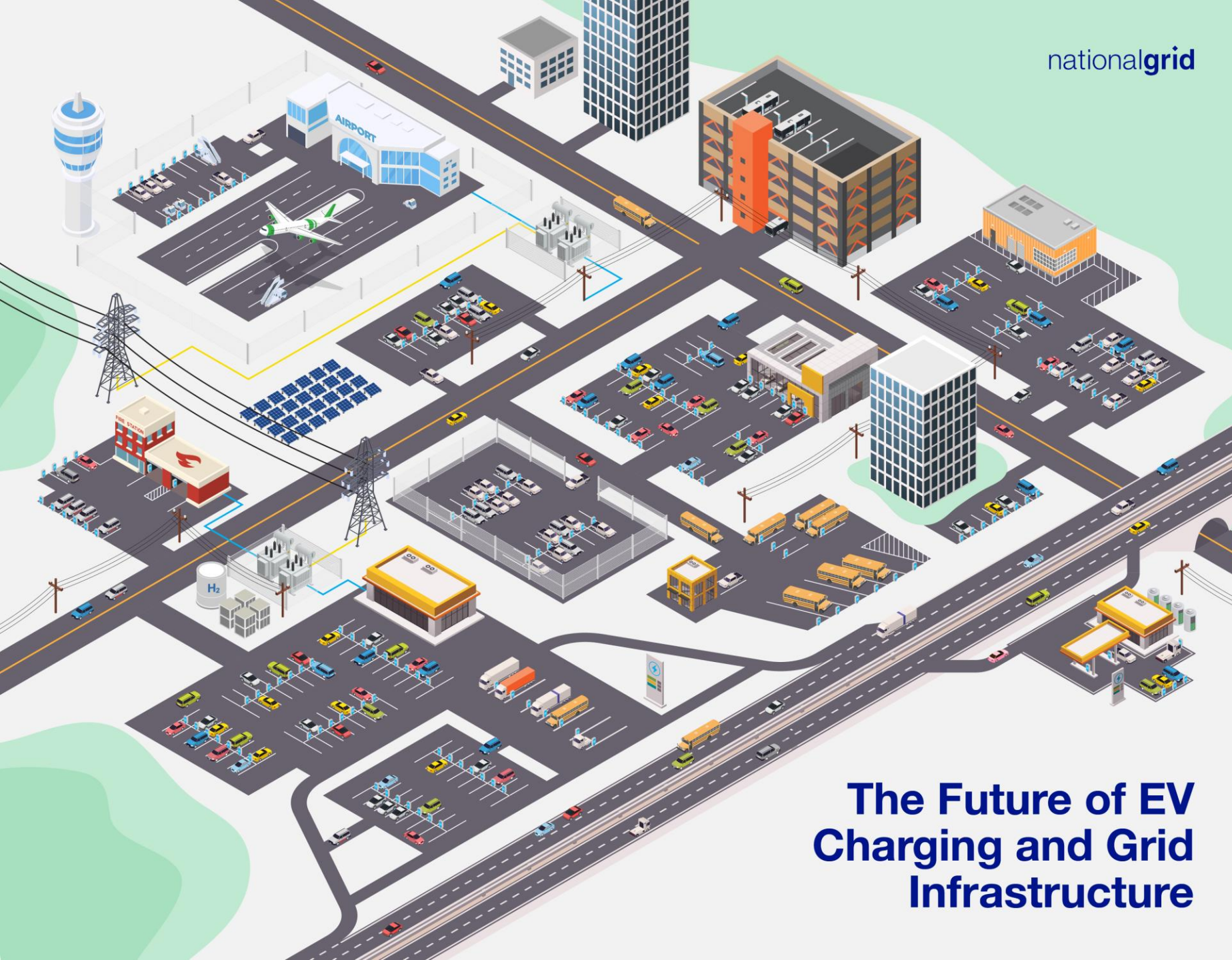
... centered on smarter, stronger, cleaner infrastructure and technology



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**We're moving
from the present
(limited electric
vehicle charging,
heavy reliance
on fossil fuels)...**

**Today's EV
Charging and Grid
Infrastructure**



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...and preparing
our service
territory for
greater access to
EV charging

**The Future of EV
Charging and Grid
Infrastructure**

Projected charging capacity for 71 Northeastern highway sites

Megawatts of power to meet annual peak demand, over time



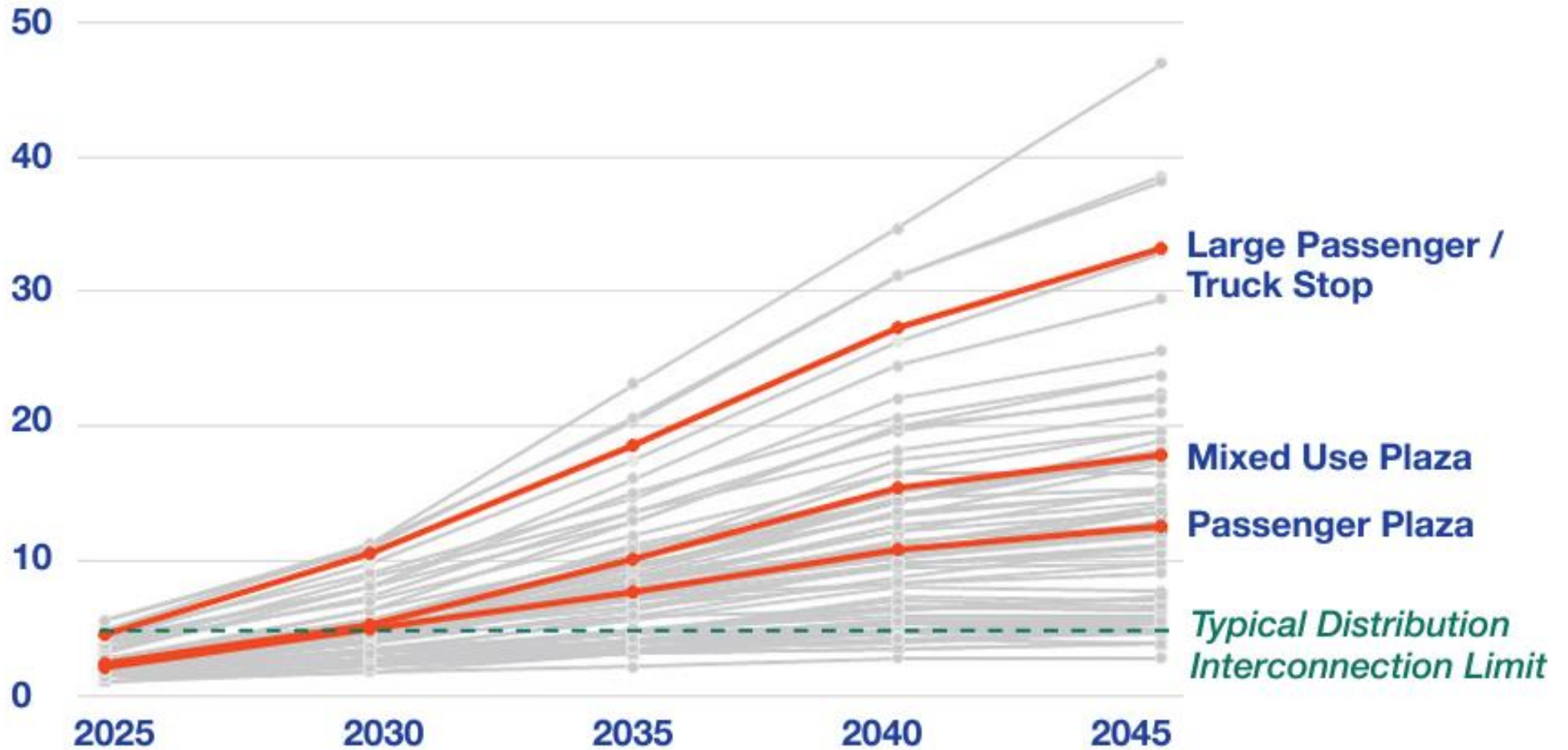
Large Industrial Plant
(40+ Megawatts)



A Small Town
(20 Megawatts)



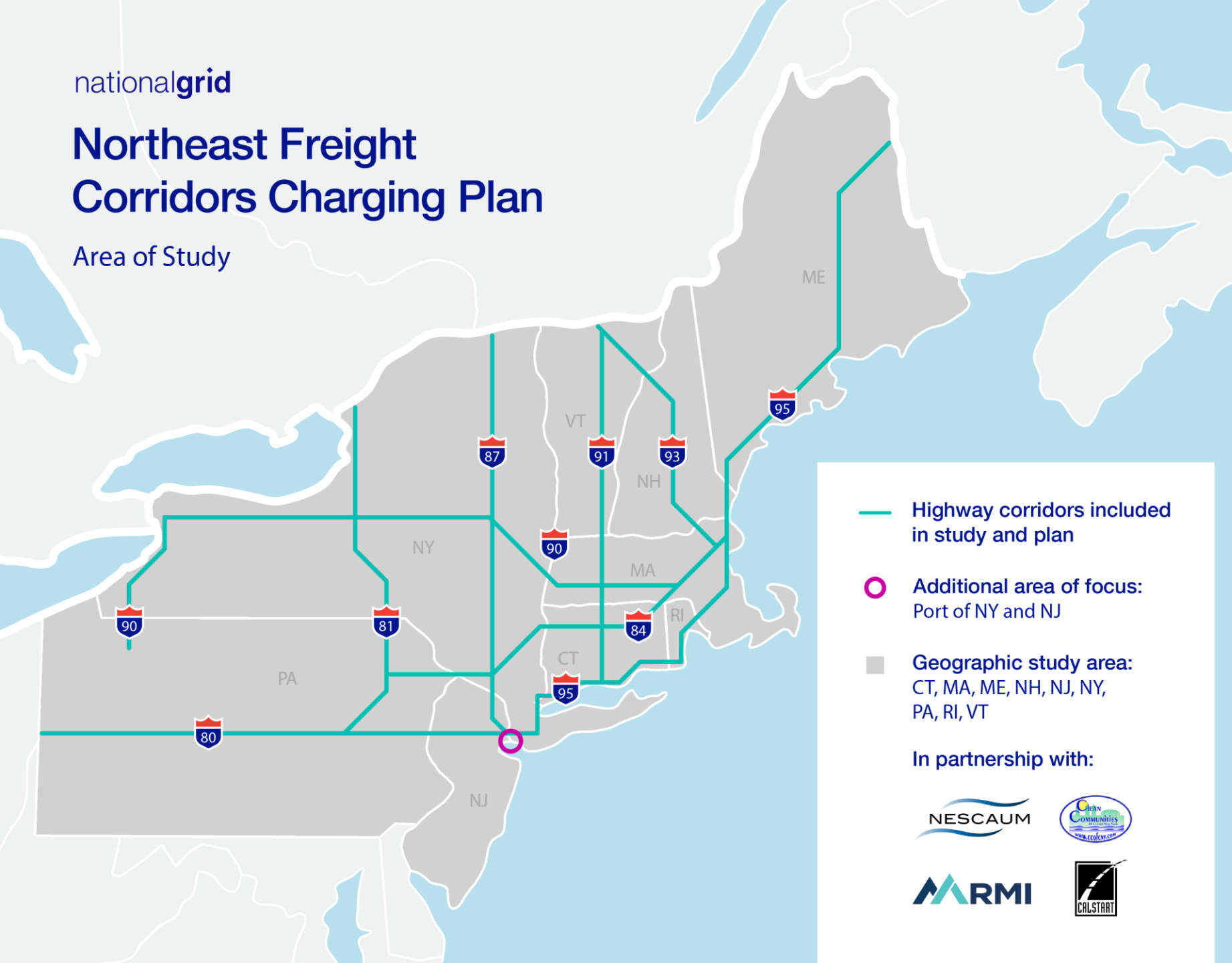
A Stadium
(5 Megawatts)



Note: Analysis seeks to match ZEV goals for New York + Massachusetts, makes simplifying assumption that all ZEVs are electric. See study for discussion of assumptions, including role of hydrogen fueling and impact on capacity. Comparisons are approximations.

Northeast Freight Corridors Charging Plan

Area of Study



The Northeast Freight Corridors Charging Plan is a \$1.2M, 2-year long study and Regional MHDV Charging Plan funded by the Department of Energy Vehicle Technologies Office.

This study will cover nearly **3,000 miles of freight corridors in the Northeast** through studying 100+ sites along those corridors, as well as the electrification needs of the Port of New York and New Jersey.

This study is also informing the newly announced **Federal Zero-Emission Freight Corridor Strategy.**

Thank You

