



Park It. Plug It. Profit.

AEG Stakeholder NYC Challenge Q4 2023

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Mission & challenges

Fermata Energy founded to drive two goals through the commercialization of V2X bidirectional EV charging:

- Accelerate the adoption of EVs
- Accelerate deployment of renewable energy resources

Urgent challenges to be addressed:

- Develop commercially viable programs to accelerate equity access to EVs in NYC
- Accelerate fleet adoption of bidirectional charging to support grid resilience
- Streamline utility EV and DER program and create V2X interconnection processes



V2X lowers EV costs & extends equity access



20

CHARGER kW



VDER

(Value of Distributed Energy Resources)
STAND-ALONE BATTERY



\$4K - \$5K

PER YEAR IN REVENUE OR SAVINGS;
REDUCING TCO OF VEHICLE

\$4K - \$5K

PER YEAR



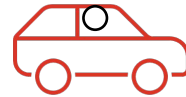
75%

SHARE FOR
V2X CARSHARE



\$3K - 4K

FOR CAR PAYMENT + DRIVER
INSURANCE





Transportation electrification could support grid and neighborhood resilience

Future of EVs in NYC:

2 million cars today

2019 EVs in the 5 boroughs: 80,300

2020 EVs in the 5 boroughs: 117,842

YoY increase: 47% from 2019 to 2020

Assuming this rate by the end of this decade all 2 million cars will be EVs

Batteries onboard EVs by 2030 will be equivalent to:

Projected 230 MWh untapped capacity

Critical to support grid resilience

NOTES: Number of cars as reported in StreetsBlogNYC, <https://nyc.streetsblog.org/2018/10/03/car-ownership-continues-to-rise-under-mayor-de-blasio/> at the end of 2017, noting a 9% vehicle registration increase over a 4-year period; BEV registrations as reported to the NY DMV (<https://www.atlasevhub.com/materials/state-ev-registration-data/#data>), and assume 115 kWh for average battery size based on a reported 28.9 kWh - 200kWh range of commercial car batteries in Car and Driver <https://www.caranddriver.com/features/a36051980/evs-explained-battery-capacity-gross-versus-net/>



Urgency: Redefine processes

PRIORITY:

Prioritize V2X interconnection to achieve goals to accelerate transportation electrification, support grid resilience and provide equity access to EVs.

POTENTIAL IMPACT:

ConEd handles 7,000 - 9,000 interconnection requests a year for DERs, what happens when it gets up to 30,000 V2X interconnection requests a year for EVs?

Data source: ConEd reports on interconnection queue
[https://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/286d2c179e9a5a8385257fbf003f1f7e/\\$FILE/Con%20Ed%20September%202022%20Public.xlsx](https://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/286d2c179e9a5a8385257fbf003f1f7e/$FILE/Con%20Ed%20September%202022%20Public.xlsx)

Partnership solutions:

- A V2X interconnection process that accelerates infrastructure development
- Engage public-private partnerships to deploy bidirectional charging systems paired 2nd use EVs, such as Nissan LEAFs, through driver-benefit programs at low income communities

Detail:

- Utility: Build on the NY Coordinated Electric System Interconnection Review (CESIR) process that has successfully mitigated solar and stationary storage backlog
- Support innovative funding for driver programs to cover insurance & vehicle purchase costs



Final statement slide

To achieve New York's Climate, Health, and Equity goals through clean transportation, a critical obstacle to collectively overcome in 12 months is:

The lack of an accelerated processes for V2X project interconnection