

PROMOTING EV CHARGING STATIONS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS

Information, Incentives, and Installation Guidelines
for New York Property Owners & Developers

NOTICE

This resource was prepared by **Energetics, a division of Akimeka, LLC, and WXY architecture + urban design** (hereafter the "Contractors") in the course of performing work contracted for and sponsored by the **New York State Energy Research and Development Authority (NYSERDA)**. The opinions expressed in this report do not necessarily reflect those of NYSERDA or the State of New York, and reference to any specific product, service, process, or method does not constitute an implied or expressed recommendation or endorsement of it. Further, NYSERDA, the State of New York, and the Contractors make no warranties or representations, expressed or implied, as to the fitness for particular purpose or merchantability of any product, apparatus, or service, or the usefulness, completeness, or accuracy of any processes, methods, or other information contained, described, disclosed, or referred to in this report. NYSERDA, the State of New York, and the Contractors make no representation that the use of any product, apparatus, process, method, or other information will not infringe privately owned rights and will assume no liability for any loss, injury, or damage resulting from, or occurring in connection with, the use of information contained, described, disclosed, or referred to in this report.

NYSERDA makes every effort to provide accurate information about copyright owners and related matters in the reports we publish. Contractors are responsible for determining and satisfying copyright or other use restrictions regarding the content of the reports that they write, in compliance with NYSERDA's policies and federal law. If you are the copyright owner and believe a NYSERDA report has not properly attributed your work to you or has used it without permission, please email print@nyserderda.ny.gov

ABOUT US

ENERGETICS

Energetics, a division of Akimeka, LLC, is an engineering and management consulting firm assisting government and industry in developing new solutions in energy, climate, transportation, and security.

WXY

WXY architecture + urban design is a planning and design firm focused on social and environmental transformation of the public realm at multiple scales.



NYSERDA

As a public benefit corporation, **NYSERDA** offers objective information and analysis, innovative programs, technical expertise, and support to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels. NYSERDA advances energy solutions while working to protect the environment.

CONTENTS

- 1** Intro to EV Charging
- 2** Developer Incentives
- 3** EV Building Codes & Guidelines
- A** Appendix

HIGHLIGHTS

- EV charging needs are growing because EV registrations are increasing as EV options continue to diversify and expand
- EV charging offers benefits for developers, including qualifying for LEED points and tenant retention
- Municipalities are establishing codes and requirements around EV charging
- Planning and preparing for EV charging during design and construction reduces future installation costs

1

EVs & EV CHARGING

Basics & Background

EV Market Characteristics

Charging Station Type Comparison

EVs & Charging Stations in New York

EV Global Warming Emissions In The U.S.

Benefits of Charging Stations

Charging Station Cost Considerations

Low Cost Charging Station Installation Strategies

Charging Station Installation Case Study

BASICS & BACKGROUND

PLUG-IN HYBRID EV (PHEV)

- Battery-powered electric motor (smaller battery) with an internal combustion engine powered by another fuel (gas, diesel, etc.)
- 24 models available in the US, with an average of 22 e-miles, and median price of \$55,408*
- 14–47 e-mile range / 6–17 kWh battery pack
- PHEV drivers must charge more frequently



Honda Clarity PHEV



Mitsubishi Outlander PHEV

BATTERY EV (BEV)

- Battery-powered electric motor (larger battery), must plug into chargers for energy, but uses no gas
- 16 models available in the US, with an average of 220 e-miles and median price of \$39,000*
- 58–370 e-mile range / 24–100 kWh battery pack
- BEV drivers rely on public charging to extend the electric range for longer distance travel



Chevrolet Bolt



Tesla Model 3

*Source: [EVAdoption.com](https://www.evadoption.com), as of May 2019.

EV MARKET CHARACTERISTICS

ENVIRONMENTALLY CONSCIOUS USERS



Solar array and EVSE, Latham

MUNICIPAL, UNIVERSITY, AND SHARED MOBILITY FLEETS



Municipal Signage, Ulster County

INCREASING EV OPTIONS AND DIVERSE USERS



Toyota, Tesla, Nissan, and Chevy EVs parked in Utica

EVs are an enticing option for consumers concerned about environmentally sustainable transportation.

Many universities and municipalities are procuring EVs, while carshare and rideshare programs are attracted to the low operational costs of EVs.

New models, better ranges, and lower prices are making EVs an attractive option for diverse users and needs.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) COMPARISON

LEVEL OF CHARGE IMPACTS THE DURATION OF CHARGING

LEVEL OF CHARGE

AC LEVEL 1

- Best for 6 hour+ or overnight charging
- Requires 120 volt supply at 12–16 amps
- Alternating Current (AC) provided at 1.4–1.9 kW
- Minimal peak load/demand charge impacts
- Station hardware \$500–\$1,000 per port

AC LEVEL 2

- Best for 2–6 hour dwell times
- Requires 208/240V supply at 20–80 amps
- AC provided at 3.3–19.2 kW (6.6 kW most common)
- Minimal peak/load demand charge
- Station hardware \$600–\$5,000 per port

DC FAST CHARGE

- 30-minute fast charging for high turnover contexts
- Requires 3-phase 480 volt supply at 80–200 Amps
- Direct Current (DC) provided at 40–100 kW
- Station hardware \$7,000–\$50,000 per port

SUITABLE INSTALLATION CONTEXTS



Single-Family



Multi-Family



Single-Family



Multi-Family



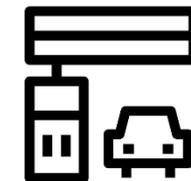
Commercial



Municipal/
Private Fleet



Municipal/
Private Fleet



Public Metro
Areas

EV & EVSE IN NEW YORK

NEW YORK STATE

BEV: 20,431

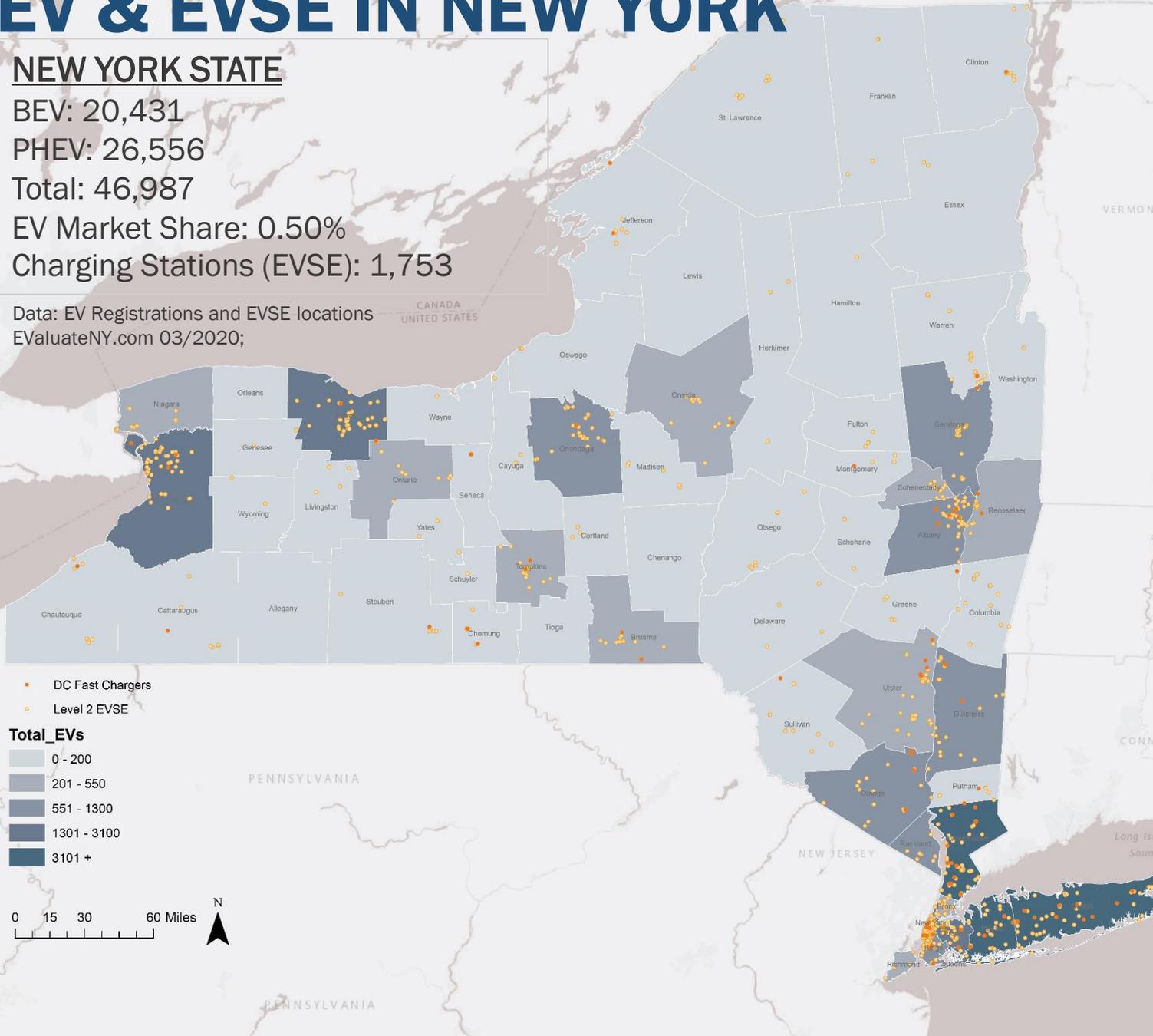
PHEV: 26,556

Total: 46,987

EV Market Share: 0.50%

Charging Stations (EVSE): 1,753

Data: EV Registrations and EVSE locations
 EvaluateNY.com 03/2020;



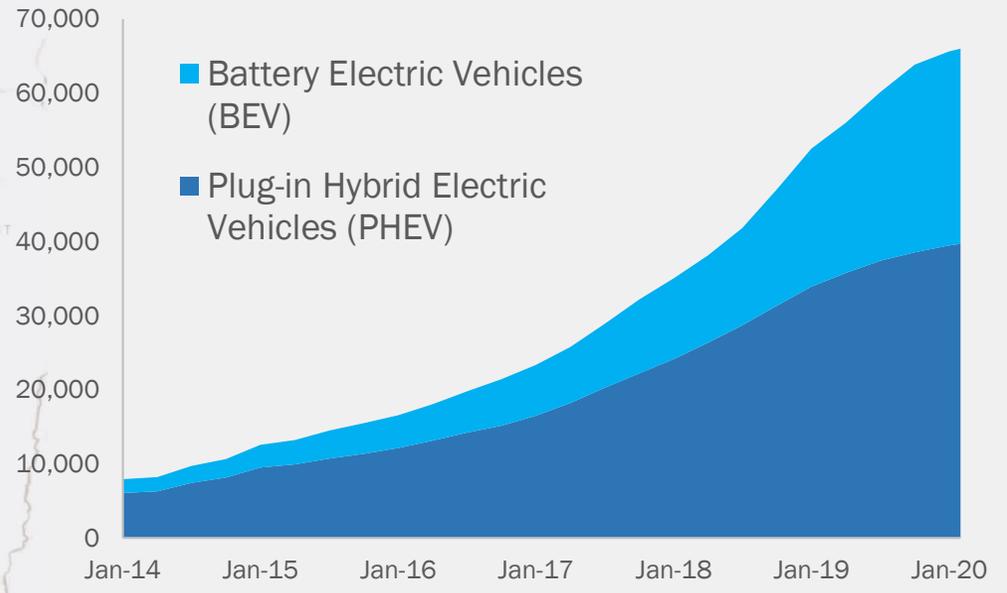
- DC Fast Chargers
- Level 2 EVSE

Total_EVs

- 0 - 200
- 201 - 550
- 551 - 1300
- 1301 - 3100
- 3101 +



Total Registered EVs in NYS

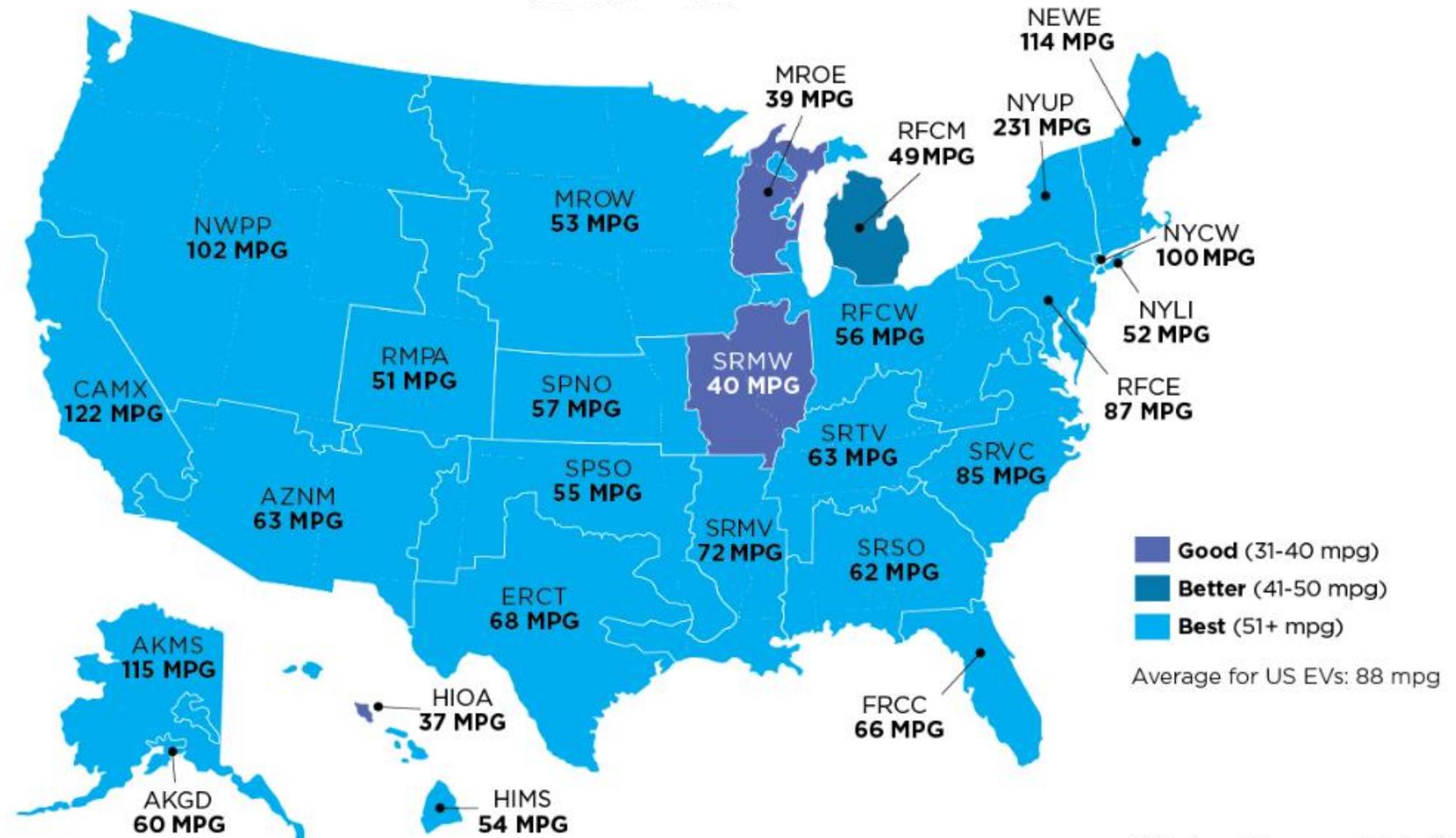


EV GLOBAL WARMING EMISSIONS IN THE U.S.

The emissions profile of BEVs is dependent on the electrical grid that powers them

MPG calculations are the miles an EV can drive for the equivalent emissions of burning one gallon of gasoline.

- An EV driven in any part of the US produces less greenhouse gas emissions than an average conventional gasoline car
- 94% of Americans live in regions where EVs have lower emissions than a 50 MPG gasoline car



© Union of Concerned Scientists

BENEFITS OF CHARGING STATIONS

OWNER/DEVELOPER



Commercial Parking Lot, Glenmont

- LEED points and other sustainability bonuses
- Greater tenant retention
- Stronger garage lease negotiating power

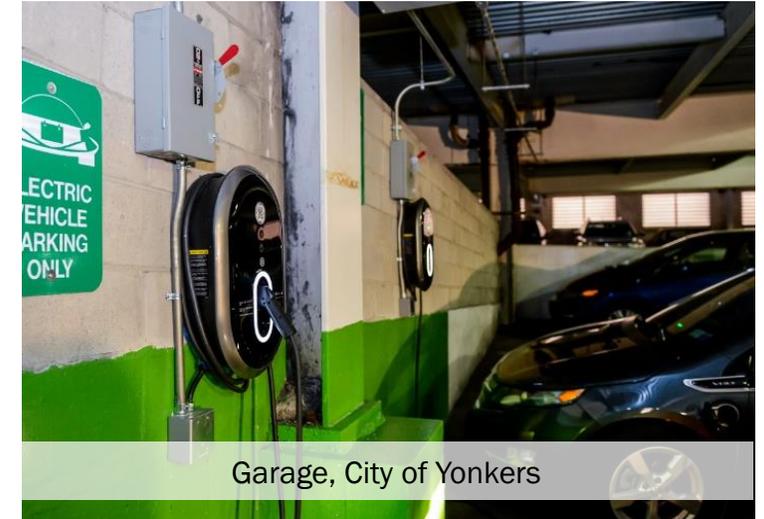
TENANT



Parking Garage, Rochester

- Attractive amenity
- Ease of access and reliability of exclusive use
- Enables EV ownership for those without other charging options

GARAGE OPERATOR



Garage, City of Yonkers

- Higher revenue potential for charging
- Futureproofed for emerging vehicle technology

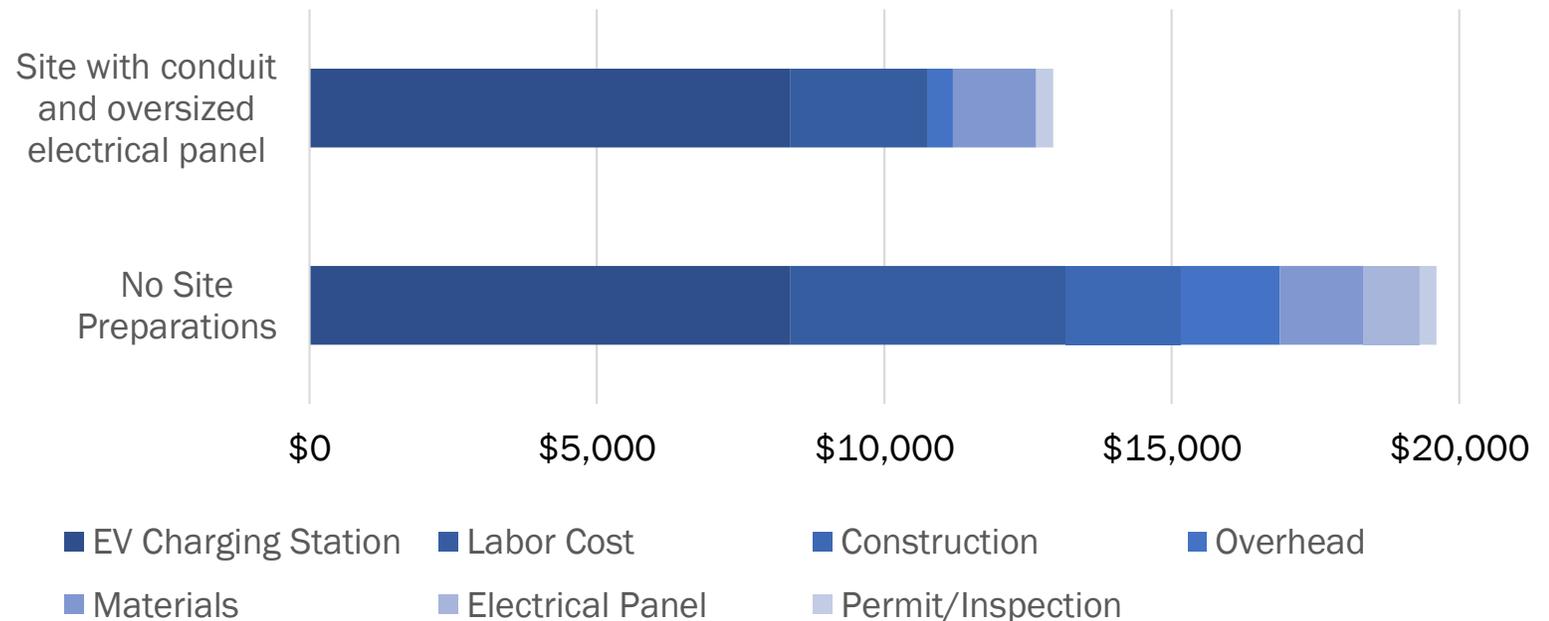
LEVEL 2 EVSE COST CONSIDERATIONS

PREPARING FOR FUTURE EVSE INSTALLATIONS CAN SIGNIFICANTLY LOWER COSTS

- Average NYS installation costs are decreasing:
 - NYSERDA Charging Station Deployment Program 2012-2016: \$20,000 per dual-port
 - NYSERDA Charge Ready Program 2018-now: \$13,300 per dual-port (~\$6,000 for hardware and ~\$7,000 for installation).
 - Total dual-port costs range from \$3,000-\$25,000.

- Preparing site can reduce total installation costs by 33% or \$6,700
 - 1”-1.5” conduit run from the electrical panel to the potential EV charging station location
 - Electrical panel with additional capacity and available breaker slots

Dual Port Charging Station Average Costs



LOWER COST EVSE STRATEGIES

OPTIONS FOR LONG-DWELL PARKING (MORE THAN 6 HOURS)

- Workplaces
- Commuter Lots
- Airports
- Hotels
- Multi-Unit Dwellings
- All-Day Parking Garages

PLUG SWITCHING

- Configure parking or implement usage policy to allow/require vehicles to move once charged
- Install stations with longer cords that can reach additional charging spaces

LOW POWER CHARGING

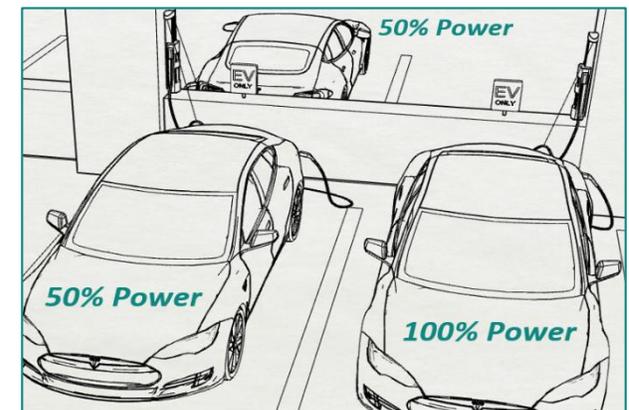
- Level 1 stations reduces electrical demand by charging at a lower power level
- An existing circuit for a single-port 6.6 kW Level 2 station can power two or more Level 1 stations or two 3.3 kW Level 2 stations, which allows more EVs to charge without increasing electrical capacity

POWER SHARE/AUTOMATED LOAD MANAGEMENT

- Load management systems can share or control the charging power for each port to limit electrical upgrades
- Existing stations can be managed by an upstream power controller to share available electricity, reduce demand costs, and enable additional stations on existing circuits



EVs have a portable charging cord that plugs into a 110V outlet and a site could provide only outlets for use by these portable cords as a very low cost option. However, EV charging outlets must be on a dedicated circuit and three-prong outlets will experience wear from everyday use (the EV connector was specifically designed for this).



CASE STUDY: ARCHER GREEN APARTMENTS

A LEED Gold mixed-use development in Jamaica, Queens converts a former NYPD garage into 380+ affordable residential units, 60,000sf of commercial, and 15,000sf of community facilities. The 222-unit garage includes 11 EVSE for residential tenants, commercial shoppers, and the NYPD fleet.

Developer: Omni New York, LLC

Garage Type: Two-level covered with valet service

Total Parking: 150 residential/commercial, 72 NYPD

Number of Parking Spaces with EVSE Installed: 5 residential/commercial spaces, 6 NYPD parking spaces

Utility Provider: ConEdison

Trenching: None

Furthest Distance from Electrical Panel: 200ft

Conduit Run Cost: ~\$20/LF

Total Cost Per Station: ~ \$15k/station

Subsidy/Incentive Programs Used: LEED points

EVSE Operation: Parking operators will cover costs of electricity, maintenance and operation of EVSE. Drivers will be responsible for the cost of parking.



Archer Green Apartments in Jamaica, Queens by Omni New York LLC

2

INCENTIVES

Sustainability Recognition for Charging Stations

LEED Credits

Incentives and Funding Resources

Leveraging Incentives Case Study

SUSTAINABILITY RECOGNITION FOR EVSE

LEED



Awards LEED points to new buildings that designate 5% of parking spaces as preferred parking for green vehicles and a for EVSE installations.

ENERGY STAR



Excludes energy use for EV charging from total energy consumption calculations so EV charging does not lower overall ENERGY STAR score.

STARS



A self-reporting framework for colleges and universities to measure their sustainability performance that awards points for EVSE in the "Support for Sustainable Transportation" category.

LEED CREDITS

RATING SYSTEM

POINTS

LEED v3 (2009)

- Category: “Alternative Transportation – Low Emitting and Fuel-Efficient Vehicles (Green Vehicles)”
- No new projects can be registered under v2009
- Existing projects will have until June 30, 2021 to become certified

3/110

LEED NEW CONSTRUCTION v4 (2013)

- Designate 5% parking for green vehicles or 20% discounted parking rate and:
 - Option 1: EVSE in 2% of all parking spaces or
 - Option 2: Liquid, gas, or battery facilities in 2% of all parking spaces

1/110

INCENTIVES & FUNDING RESOURCES

PROGRAM	INCENTIVE
<u>NYSERDA Charge Ready NY</u>	\$4,000 per port for installations in multi-unit dwellings, workplaces, public access (can stack with NYS tax credit, but not other NYS rebates)
<u>NYS Dept. of Taxation and Finance Alternative Fuels and EV Recharging Property Credit</u>	Tax credit for installation of charging stations equal to the lesser of \$5,000 or 50% of the cost of property, less any cost paid from the proceeds of grants
<u>NYS Department of Environmental Conservation Municipal Zero-emission Vehicle Rebate and Infrastructure Program</u>	Rebates for municipalities to install public EVSE. Rebates also available for the purchase or lease clean vehicles for fleet use.
<u>New York Power Authority Charge NY</u>	Assistance and incentives for EV Charging stations for municipalities

Note: All programs are subject to change and funding may be resource or time limited

RESOURCE	DESCRIPTION
<u>Department of Energy Alternative Fuels Data Center</u>	Laws and Incentive resources by State
<u>Joint DOT & DOE Guide to Federal Funding & Financing EV/EVSE</u>	Federal financing, funding, and other incentive opportunities
<u>Clean Cities Coalition Network</u>	Part of DOE Vehicle Technologies Office – local coalitions can be a resource for more information

Charge Ready NY Rebate

NYSERDA offers rebates of \$4,000 per qualified Level 2 charging stations. Any public or private entity, such as municipalities, for-profit companies, and non-profit organizations, is eligible.

Eligible Locations and Charging Station Type



Public parking lot with 10 or more parking spaces that is open to the general public at least 12 hours per day and 5 days per week.



Workplaces with 15 or more employees and a parking lot with at least 10 parking spaces that primarily serves employees who work at or near the lot.



Multi-unit dwelling with 5 or more housing units and a parking facility with at least 8 parking spaces that primarily serves the multi-unit dwelling.

Requirements

- Charging stations must be included as a **qualified Charge Ready NY station**
- Must be installed after September 18, 2018 and remain in **operation for at least four years**
- Charge Ready NY rebates **CAN be combined** with the New York State tax credit for installing charging stations
- The Charge Ready NY rebate **CANNOT be combined** with other New York State charging station rebate programs from NYSERDA, the Department of Environmental Conservation, the New York Power Authority, or other State entities.

More information is available at: www.nyserda.ny.gov/Charge-Ready-NY

CASE STUDY: HURON CAMPUS

This business campus near Binghamton used multiple funding sources and an optimal site selection to reduce installation costs by nearly 90%. The stations were mounted on an existing structure near the electric service panel which required a very short conduit run with no trenching. They pre-purchased the station networking fees to include in the total project cost for which the incentives were applied, which will save money on these future costs.

Station Owner: Huron Real Estate Associates, LLC

Parking Type: Open surface lot

Total Parking: ~275 spaces

Number of EVSE Installed: Two dual port stations

Make-ready Requirements: Wire run through existing conduit plus ~40 feet in new conduit to an existing structure where stations are mounted

Cost per Station: ~\$1,900 (x 4)

Total Installation Costs: ~\$2,400

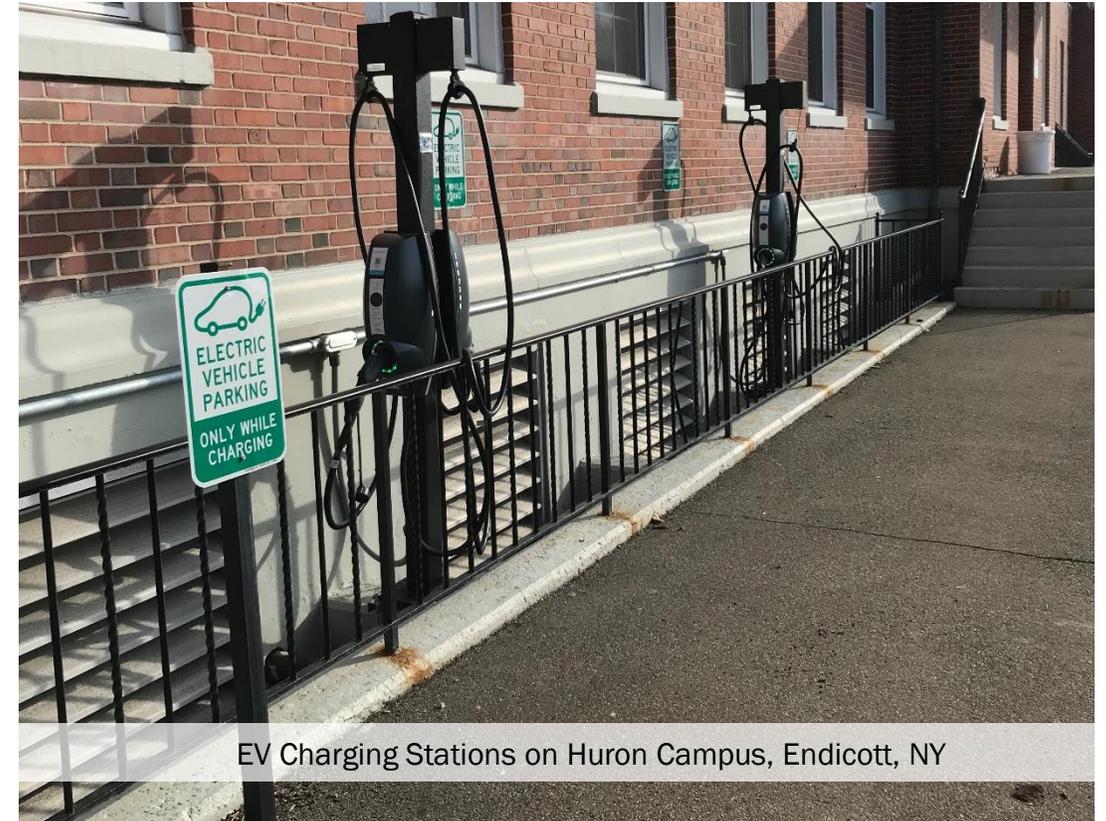
Networking Fees: ~\$3,900 pre-purchased for four years

Electrical Costs: ~\$6,000

Station Activation Fees: ~ \$500

Total Project Cost: ~\$20,500

Total Incentive Value: ~ \$18,250 (\$16,000 from NYSERDA's Charge Ready NY and 50% of the remaining \$4,500 from the NYS Alternative Fuels Property Tax Credit)



EV Charging Stations on Huron Campus, Endicott, NY

3

CODES & GUIDELINES

NY County EV Building Code Overview

NYC Local Law No. 130 Case Study

Facilitating Installation & Cost Mitigation

Best Practices

EXAMPLES OF EV/EVSE BUILDING CODES BY COUNTY (NY)

Municipality	County	Local Law	Defines EVSE in local code	Establishes permitting process for EVSE	Designates EVSE as traditional parking	Sets design standards for EVSE installations	Sets installation requirements based on site space	% EVSE Required
Cohoes	Albany	Chapter 285 Zoning and Land Use § 285 - 176			X			
Otto	Cattaraugus	§ 6.6 Electric Vehicle Supply Equipment (EVSE)	X	X				
Brutus	Cayuga	§ 125-110: Electric Vehicle Supply Equipment Regulations	X	X		X		
Redhook	Dutchess	Local Law No. 1-2014					X	5%
Brockport	Monroe	Local Law No. 2 of 2016 – Electric Vehicle Charging Stations				X	X	
Port Washington North	Nassau	§ 176-213 Electric Vehicle Charging Systems				X	X	
New York City	New York	Local Law No. 130					X	20%
Oneida	Oneida	Local Law No. 2 Of 2016 – EVResolution 16-115					X	
Ithaca	Tompkins	§ 271 - 16 Planned DevelopmentZone No. 15			X		X	5%
New Paltz	Ulster	§ 140-52 - Site Plan Review					X	5%

EV and EVSE regulations and policy are continuing to expand. It is expected that existing regulations will become more aggressive in the amount of EVSE needed and additional jurisdictions will start to adopt these.

CASE STUDY: NYC LOCAL LAW NO. 130 (2013)

Amendment to 2009 Building Codes	Section 406.2.11 Parking Garages	Section 406.7.11 Open Parking Lots
<ul style="list-style-type: none">Concerning parking garages and open parking lotsWhen an alteration of a parking garage or an open parking lot includes an increase in the size of the electric service, such alteration shall include provisions for the installation of EV charging stations, in accordance with sections 406.2.11 and 406.7.11 <p>Source: NYC, Local Law 130</p>	<ul style="list-style-type: none">Parking garages shall be capable of supporting EVSE for at least 20% of parking spaces and be capable of providing a minimum electrical capacity of 3.1 kWElectrical room supplying the garage must be able to accommodate a panel that provides 3.1kW of electrical capacityDoes not apply to mercantile buildingsCan waive requirement if parking facility will be used for less than 3 yearsAffordable housing with over 50% affordable units are exempt	<ul style="list-style-type: none">Open parking lots shall be capable of supporting EVSE for at least 20% of parking spaces and be capable of providing a minimum supply of 11.4 kVARaceway cannot be smaller than 1 inchElectrical room supplying the garage must be able to accommodate a panel that provides 3.1kW of electrical capacity for each stall connected with the racewayDoes not apply to mercantile buildingsCan waive requirement if parking facility will be used for less than 3 yearsAffordable housing with over 50% affordable units are exempt

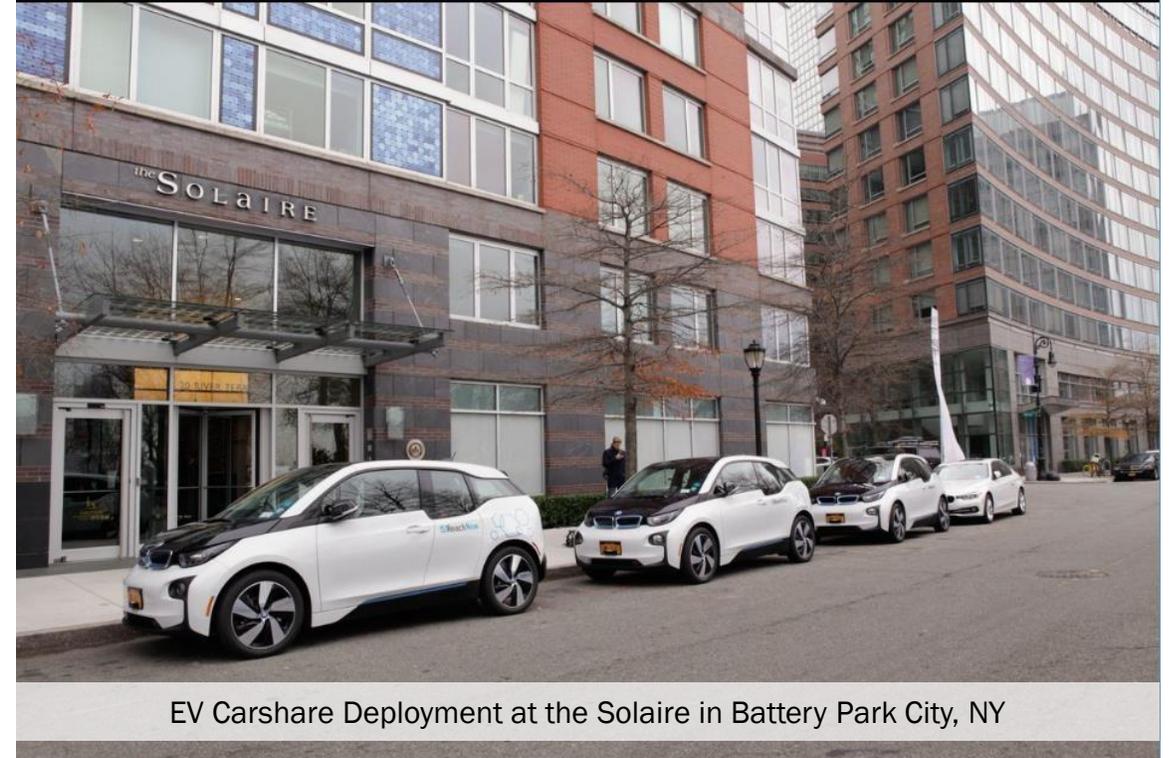
FACILITATING INSTALLATION

CONSIDER THE FOLLOWING IN PLANNING OR INSTALLING EVSE

Site Prep	Monitoring	Operations
<ul style="list-style-type: none">• Consult with licensed electrician and notify your local utility• Place EVSE close to electrical panel• Use electrical panel with additional capacity and available breaker slots• Fit design to the required electrical capacity• Energy management systems can split power among multiple circuits <p>Source: US DOE, ChargeNY</p>	<ul style="list-style-type: none">• Electricity can be monitored by EVSE software, available through network subscription• Network subscriptions are necessary for station pricing/revenue• Meter accuracy should meet utility billing standard• Place new meters close to power source to reduce trenching costs• Incentives offered by utilities (i.e. ConEd) may reduce cost of separate meter	<ul style="list-style-type: none">• Valet parking reduces access issues• Monthly parking reservation system could manage access and payments• Establish system or policy to move fully charged vehicles to regular parking spots• Use visible signage and pavement markings dictating EVSE user etiquette and terms of use

BEST PRACTICES

- **Promote EV use** through dedicated **partnerships** with electric car rental companies or electric ride share programs
- Organizations may **install charging stations** and **use EVs** in their fleet to **promote EV adoption**.
- **Gain LEED credits** through V4 Alternative Transportation Conventional Vehicle Trip Reduction (3-15 Points)
- **Standard signage** helps EV drivers **locate stations** while also fostering **increased EV awareness** and advertising a **commitment to sustainability**.





For More Information

For more information on EVs and EV charging stations, associated programs, and funding opportunities

Visit: www.nyserda.ny.gov/ChargeNY

Email: transportation@nyserda.ny.gov

A

APPENDIX

Links & Resources

Relevant Documents

Frequently Asked Questions

Recent Presentation Updates

LINKS & RESOURCES

EV & EV CHARGING STATION INFORMATION	AUTHOR	FORMAT	LINK
Charge NY	NYSERDA	Web	www.nyserderda.ny.gov/All-Programs/Programs/ChargeNY
Charging Station Options	NYSERDA	Web	www.nyserderda.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Basics/Charging-Station-Options
EV Benefits	NYSERDA	Web	www.nyserderda.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Basics/Benefits
EV Global Warming Potential	UoCS	Web	https://blog.ucsusa.org/dave-reichmuth/are-electric-vehicles-really-better-for-the-climate-yes-heres-why
Multi-State Zero-Emission Vehicle (ZEV)	ZEV Task Force	Web	www.zevstates.us
NYS EV Registrations	NYSERDA	Web	www.nyserderda.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Tools/Electric-Vehicle-Registration-Map
GRANTS, REBATES & PROGRAMS	AUTHOR	FORMAT	LINK
Alternative fuels and EV recharging property credit	NYS Dep. Taxation	Web	www.tax.ny.gov/pit/credits/alt_fuels_elec_vehicles.htm
Clean Cities	Clean Cities	Web	https://cleancities.energy.gov/coalitions/
Clean Energy Communities	NYSERDA	Web	www.nyserderda.ny.gov/Contractors/Find-a-Contractor/Clean-Energy-Community-Coordinators
Climate Smart Communities	DEC	Web	www.dec.ny.gov/energy/76910.html
Drive Clean Rebate	NYSERDA	Web	www.nyserderda.ny.gov/All-Programs/Programs/Drive-Clean-Rebate
EV Green Building Charging Credits	U.S. DOE	Web	https://energy.gov/eere/vehicles/workplace-charging-credit-green-building-certification
EV Resources for Planners and Municipalities	NYSERDA	Web	www.nyserderda.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Info/Planners-and-Municipalities
GreeNR: The New Rochelle Sustainability Plan	Web	Web	www.newrochelleny.com/349/GreeNR-Sustainability-Plan
NYP&A Electric Vehicle Programs	NYS/NYP&A	Web	www.nypa.gov/innovation/programs/chargeny
The New Rochelle Comprehensive Plan, 2015	New Rochelle	Web	www.newrochelleny.com/944/EnvisioNR
Ulster County Alive! EV Tourism Program	Ulster County	Web	www.ulstercountyalive.com/electric-vehicle-tourism
Ulster County Green Fleet Initiative	Ulster County	Web	http://ulstercountyny.gov/environment/environment/sustainability-energy/green-fleet-initiative
Volkswagen Settlement Funds for EV	EPA	Web	www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement
Zero Emission Vehicle (ZEV) & ZEV Infrastructure	NYS DEC	Web	www.dec.ny.gov/energy/109181.html

LINKS & RESOURCES

REPORTS & BEST PRACTICES	AUTHOR	FORMAT	LINK
A Guide to EVSE Planning and Policy Tools	NYSERDA	PDF	www.nyserdera.ny.gov/-/media/Files/Programs/ChargeNY/Planning-and-Policy-Tool-Guide.pdf
Best Practices Guides for Charging Stations	NYSERDA	Web	www.nyserdera.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Resources/Best-Practice-Guides-for-Charging-Stations
Comprehensive Plan Development Guidebook	Syracuse University	PDF	http://efc.syr.edu/wp-content/uploads/2015/03/ComprehensivePlanning.pdf
Costs Associated with Non-Residential EVSE	U.S. DOE	PDF	www.afdc.energy.gov/uploads/publication/evse_cost_report_2015.pdf
EV Cluster Analysis	NYSERDA	PDF	www.nyserdera.ny.gov/-/media/Files/Programs/ChargeNY/EVSE-Cluster-Analysis.pdf
EV Ready Codes for the Built Environment	NYSERDA	PDF	www.nyserdera.ny.gov/-/media/Files/Programs/ChargeNY/EV-Ready-Codes-for-the-Built-Environment.pdf
EV Tourism in NYS	NYSERDA	PDF	www.wxystudio.com/uploads/2100021/1491839916811/Electric-Vehicle-Tourism-in-New-York-State.pdf
EVSE Signage Guidance	NYSERDA	PDF	www.nyserdera.ny.gov/-/media/Files/Programs/ChargeNY/EVSE-Signage-Overview.pdf
Exploring EV Adoption in NYC, 2010	NYC Mayor's Office	PDF	www.nyc.gov/html/om/pdf/2010/pr10_nyc_electric_vehicle_adoption_study.pdf
NY County Local Law 130	NY County	PDF	www1.nyc.gov/assets/buildings/local_laws/ll130of2013.pdf
NYS EV and EV Charging Station Data Reports	NYSERDA	Web	www.nyserdera.ny.gov/Researchers-and-Policymakers/Electric-Vehicles/Resources/Electric-Vehicle-Charging-Station-Data
Overview of EV deployment in the Northeast	NYSERDA	PDF	www.nyserdera.ny.gov/-/media/Files/Programs/ChargeNY/PEV-Deployment-in-the-Northeast.pdf
Siting and Design Guidelines for EVSE	TCI	PDF	www.transportationandclimate.org/sites/default/files/EV_Siting_and_Design_Guidelines.pdf
The NYC Electric Vehicle Readiness Plan	Empire Clean Cities	PDF	https://cleancities.energy.gov/files/u/projects_and_partnerships/project_material/supporting_material/232/nyc_readiness_plan.pdf
LEED Credit Library	USGBC	Web	www.usgbc.org/credits

RELEVANT DOCUMENTS

Plug-in EVs available in NY

BATTERY ELECTRIC VEHICLE MODELS AVAILABLE IN NEW YORK STATE

BMW i3 *** Starting MSRP: \$44,650 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 153	Chrysler Volt *** Starting MSRP: \$34,430 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 238	Ford Focus Electric *** Starting MSRP: \$22,100 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 115	Nissan Leaf *** Starting MSRP: \$24,290 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 150	Smart Car *** Starting MSRP: \$14,200 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 99
---	--	--	--	---

PLUG-IN HYBRID ELECTRIC VEHICLE MODELS AVAILABLE IN NEW YORK STATE

BMW i8 *** Starting MSRP: \$134,000 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 24	Chrysler Volt *** Starting MSRP: \$34,430 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 238	Ford Focus Electric *** Starting MSRP: \$22,100 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 115	Nissan Leaf *** Starting MSRP: \$24,290 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 150	Smart Car *** Starting MSRP: \$14,200 Federal Incentive: \$7,500 NY Incentive: \$3,500 Electric Range (mi): 99
---	--	--	--	---

Electric Vehicle Charging Station Informational Poster



Plug-in EV Informational Poster



EV Planning and Policy Tool Summary

EV PLANNING AND POLICY TOOL SUMMARY	
GOALS	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PROCESSES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
CODES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PERFORMANCE AND IMPLEMENTATION	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required

NY State Incentives and Discounts

New York State Incentives and Discounts for Electric Vehicles, EV and EV Charging	
INCENTIVES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
DISCOUNTS	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required

Site Selection Guide for EV Charging Stations

SITE SELECTION GUIDE FOR EV CHARGING STATIONS	
GOALS	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PROCESSES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
CODES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PERFORMANCE AND IMPLEMENTATION	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required

Action Items for EV Ready Communities

ACTION ITEMS FOR EV READY COMMUNITIES	
GOALS	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PROCESSES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
CODES	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required
PERFORMANCE AND IMPLEMENTATION	<ul style="list-style-type: none"> Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required Identify where and how EVSE is allowed, incentivized or required

Communities Taking Action: New York State Local Examples



Frequently Asked Questions

Getting Started

What are the best first steps when considering installing EVSE?

- Contact your local electrician and utility to determine how much power is available at your site to be dedicated to EVSE. Then contact a qualified installer to schedule a site visit. Work with the installer to identify the best location for your station, keeping in mind the distance from the power and trenching through concrete can increase costs.

Does the NYS DOF State Tax Rebate apply to multi-family development?

- This [tax credit](#) is available “only when the property is used in a trade or business located in New York State”

Can PSEG’s workplace charge program apply for EVSE in multi-family developments?

- PSEG’s workplace charging program is [no longer accepting applications](#)

Earning LEED Points

Regarding LEED points, what does it mean to devote 5% of parking spaces to green vehicles, but only need 2% of parking spaces to be equipped with EVSE?

- Green vehicles are not necessarily all EV, so 5% of parking spaces need to be designated as preferred parking space for all sorts of green vehicles (a discounted parking rate of at least 20% for green vehicles is an acceptable substitute for preferred parking spaces)
- Furthermore, EVSE needs to be installed in at least 2% of all parking spaces used by the project, and these EVSE parking spaces must be provided [“in addition to preferred parking spaces for green vehicles”](#)

Frequently Asked Questions

Incentives

What programs or incentives do NYPA and ConEdison offer?

- This presentation contains the most relevant programs and incentives for developers, but for more information on more programs and incentives, [this PowerPoint](#) outlines NYSERDA's and NYPA's incentives
- [ConEdison has various incentives](#), but only 2 target developers/business owners: their [EV Fast Charging Per-Plug Incentive](#); and their [Business Incentive Rate](#)

PACE Financing – is this tool available to finance EVSE developments?

- [PACE is a new tool](#) that “offers property owners up to 100% funding for energy efficiency and renewable energy projects that can... reduce energy use and utility bills”
- However, PACE loans will be available for energy efficiency and renewable energy projects in NYC in early 2020; program eligibility guidelines have not yet been released
- Currently NYS has a Commercial Property Assessed Clean Energy (C-PACE) project, managed through [Open C-PACE](#)

How does the Charge Ready NY rebate work?

- Sites interested in the [Charge Ready NY Rebate](#) will work with a qualified installer to identify a pre-approved station and networking service for their site. After submitting the site plans from the installer, NYSERDA will pre-approve the installation for the rebate. The total approved rebate amount will be reimbursed after the installation is complete.

Can the Charge Ready NY rebate and the NYS Alt. Fuels Property Tax credit be used together?

- The [NYS Alternative Fuels Property Tax](#) credit is available to businesses and this credit can be applied to the cost remaining after the Charge Ready NY rebate. Sites interested in pursuing the tax credit should check with their tax preparer to confirm eligibility.

Resource Document Updates

- Frequently Asked Questions added to the Appendix and updated (slide 31 and 32)
- Case Study for New York City Council Local Law 130 added (new slide 22)
- Case Study for Huron Campus added (new slide 19)
- Updated cost information for charging station installations from Charge Ready NY added (slide 12)
- Information on using portable charging cords with an outlet added (slide 13)
- Updated EV registration and EVSE location information based on March 2020 numbers (slide 10)
- Added slide on the MPG data based on the 2020 Union of Concerned Scientists report (slide 11)
- Added slide to direct readers to NYSERDA Charge NY page (slide 26)