

New York State National Electric Vehicle Infrastructure Formula Program Plan



Department of
Transportation

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National Electric Vehicle Infrastructure Formula Program Deployment Plan August 1, 2022

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Introduction

The National Electric Vehicle Infrastructure (NEVI) Formula Program (Program or NEVI Program) provides the New York State Department of Transportation (NYSDOT) and its partner agencies an opportunity to build on New York State's significant efforts to reduce greenhouse gas emissions and support the use of zero emission battery electric vehicles (EVs) in New York State and the nation. The NEVI funding received through the Infrastructure Investment and Jobs Act (IIJA)¹ will complement ongoing EV infrastructure and incentive programs within New York State. The NEVI Program funds will be focused on supporting publicly available direct current fast charging (DCFC) sites along EV Alternative Fuel Corridors throughout the State that have been designated by the United States Federal Highway Administration (FHWA). New York State has taken full advantage of the FHWA's Alternative Fuel corridor designation opportunities since its inception and has a robust network of designated EV Alternative Fuel Corridors (see Figure I-1). FHWA guidance provided in February 2022 places a strong emphasis on initially addressing DCFC EV charging gaps along Interstate highways designated by FHWA as EV Alternative Fuel Corridors. The Program also focuses initially on charging for light-duty zero emission battery electric vehicles.

This National Electric Vehicle Infrastructure Formula Plan (Plan) represents a coordinated effort between partner agencies within the State of New York Including NYSDOT (lead); the New York State Energy Research and Development Authority (NYSERDA); the New York State Department of Environmental Conservation; the New York Power Authority; the New York State Department of Public Service (DPS); the Long Island Power Authority; and the New York State Thruway Authority, collectively referred to as the partner agencies. The partner agencies have been working collaboratively to develop an understanding of DCFC needs along the designated corridors and have been considering strategies for how funding can most efficiently result in publicly available DCFC that meet the NEVI requirements. It also reflects initial stakeholder outreach efforts to inform Plan development. Plan development has also been informed by extensive stakeholder and public engagement that has occurred over the last two years through the State's Climate Action Council work².

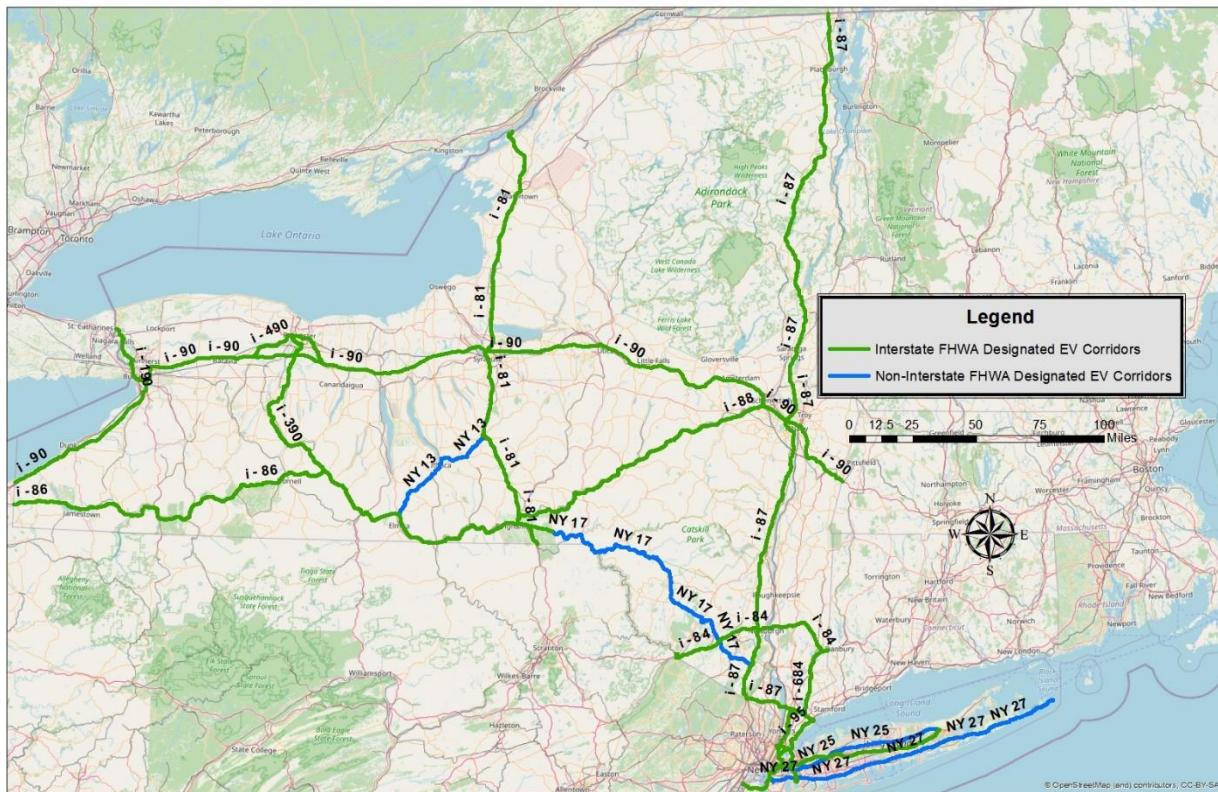
This Plan is a first step. Details of the NEVI program are still under development by FHWA and the newly formed Joint Office of Energy and Transportation. FHWA released proposed minimum standards and requirements for projects funded with NEVI funds in a Federal Register Notice of Proposed Rulemaking (NPRM) issued on June 22, 2022. The public comment period runs until August 22, 2022. Further, complementary efforts that are underway within the State will impact the future market conditions for DCFC EV charging sites. For example, the Public Service Commission has an open proceeding in which a commercial tariff for EV charging, that utilizes alternatives to the traditional demand charge, will be approved or modified by the end

¹ Also referred to as the Bi-partisan Infrastructure Law (BIL)

² More information about the Climate Action Council is available at: <https://climate.ny.gov/Our-Climate-Act/Climate-Action-Council>

of 2022.³ As more NEVI Formula Funding Program information becomes available and more details emerge from New York State efforts, NYSDOT, in collaboration with its partner agencies, will refine this Plan. Similarly, given the timeline for development of this Plan, stakeholder and public outreach for use of NEVI funds, while initiated in the development of this Plan, will continue as the State moves forward with NEVI funding implementation.

Figure I-1: New York State Designated EV Alternative Fuel Corridors



³ Case 22-E-0236, et al., Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging, Notice Soliciting Comments (issued April 21, 2022).

NEVI Program Background

The National Electric Vehicle Infrastructure (NEVI) Formula program was established by the Infrastructure Investment and Jobs Act (IIJA) which was signed into law by the President in November 2021. New York State is expected to receive \$175 million in NEVI Program funding over the five-year period of the IIJA, from October 1, 2021 through September 30, 2026, as provided in the law. Funding cannot be used until a state has submitted its Plan to the Joint Office and FHWA has approved the Plan. That approval is expected by September 30, 2022.

On February 10, 2022, the Joint Office of Energy and Transportation was officially launched, and FHWA issued initial guidance to the states to assist in implementing the NEVI Formula Funding Program.⁴ The guidance reaffirms the requirement within the IIJA that “any EV charging infrastructure acquired or installed with NEVI Formula Program funds shall be located along a designated EV Alternative Fuel Corridor.”⁵

FHWA has issued calls for Alternative Fuel Corridor designations since 2016,⁶ providing annual opportunities for the states to request corridor designations. New York State has taken full advantage of these opportunities for corridor nominations and currently has an extensive designated EV Alternative Fuel Corridor network of 1,787 centerline miles of interstate highways and 290 centerline miles of state highways.⁷ New York State’s designated EV Alternative Fuel Corridors are shown Figure 1.

⁴ The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance is available at: https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf.

⁵Id at 11.

⁶ Additional information on Alternative Fuel Corridors is available at: https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/.

⁷ “Note that the category of designation within the AFC program (Corridor Ready or Corridor Pending) has no bearing on eligibility for NEVI Formula Program use – all designated AFCs are eligible corridors for NEVI Formula Program projects.” – see [National Electric Vehicle Formula Program Q&A, available at: https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/nevi_program_faqs.pdf](#).

Figure 1: New York State Designated EV Alternative Fuel Corridors



States are required to use the NEVI Formula Program funds to support DCFC for EVs along these corridors until FHWA certifies that all of a state's EV Alternative Fuel Corridors are "fully built out". The guidance released in February defines the criteria for an EV Alternative Fuel Corridor to be fully "built out":

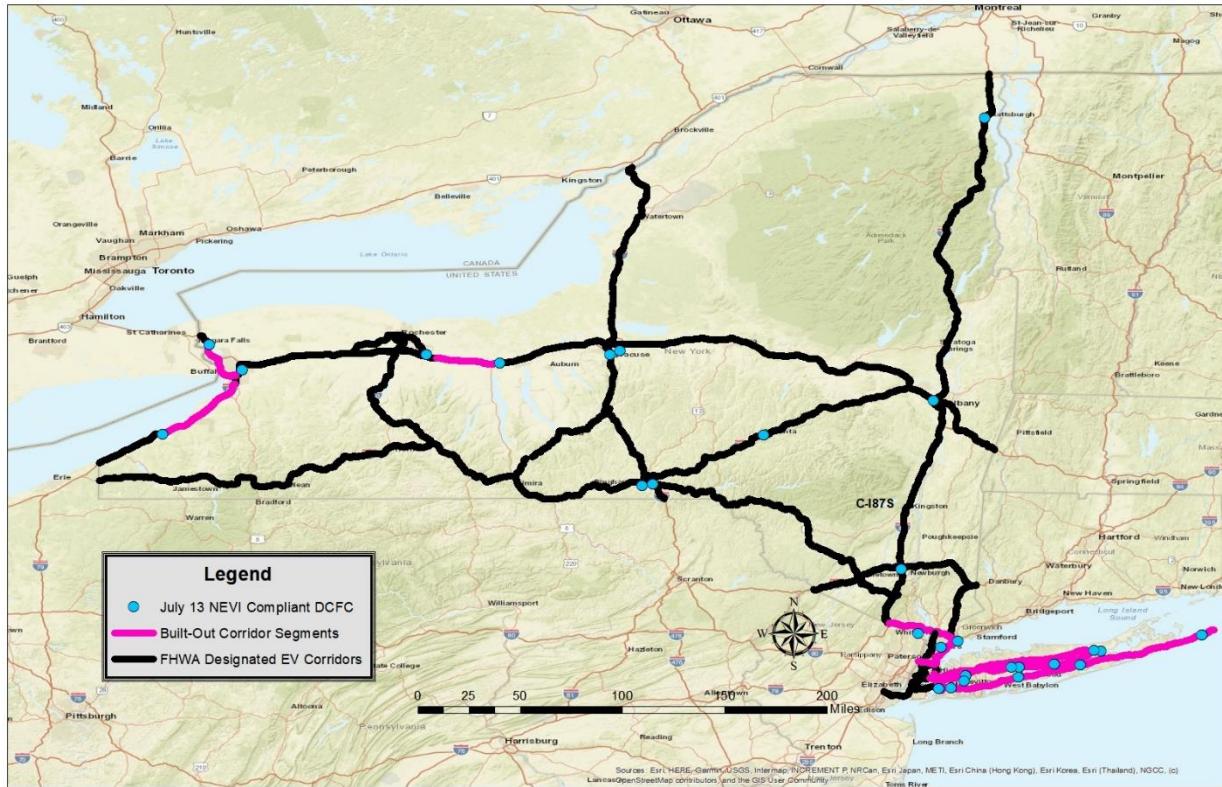
- "EV charging infrastructure is installed every 50 miles along the State's portions of the Interstate Highway System within 1 travel mile of the Interstate;
- EV charging infrastructure includes at least four 150kW Direct Current Fast Chargers (DCFC) with Combined Charging System (CCS) ports capable of simultaneously DC charging four EVs;
- EV charging infrastructure has minimum station power capability at or above 600kW and supports at least 150kW per port simultaneously across four ports for charging..."⁸

States may consider using funds for EV investments in other publicly accessible locations that are open to the general public in locations other than these corridors after the FHWA has certified that all of a state's designated EV Alternative Fuel Corridors have met the criteria for "built out".

⁸ The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance at 12.

New York State has reviewed EV Alternative Fuel corridor locations where existing DCFC currently meets the NEVI built out criteria.⁹ These are shown in the map below. As the map makes clear, there is still a need for additional DCFC along the designated EV Alternative Fuel Corridors to meet the NEVI “built out” criteria.

Figure 2: New York State Designated EV Alternative Fuel Corridors and NEVI Compliant Sites



Through the NEVI Formula Funding program, New York State will identify opportunities to support the creation of a safe, reliable, convenient, and equitable fast charging electric vehicle infrastructure network. The network will meet the needs of EV drivers and provide infrastructure so EV drivers can safely travel throughout the state, into adjacent states and into Canadian provinces to reach interstate, regional and long-distance destinations. The focus of New York State's initial NEVI investments will be to support NEVI compliant DCFC within 1 travel mile of existing FHWA designated EV Alternative Fuel corridors to fill gaps throughout the state and provide a connected network to border states and Canadian provinces. As encouraged by the Joint Office guidance, the State seeks to facilitate public-private or private investment in charging infrastructure to support the growing demand for full battery electric vehicles.

⁹ Station Data for Alternative Fuel Corridors, available at: <https://afdc.energy.gov/corridors>, as of July 13, 2022.

New York State Overview: Land Use and Demographics/Economy/Climate

Land Use and Demographics

As of July 2021, New York State is home to nearly 19.8 million people.¹⁰ Although the 2020 census counted a population of 20.2 million, the loss in population is considered temporary due to COVID, and population growth is expected in the long-term. The 2012 Statistical Abstract (US Census) expects New York State's population to grow to 22 million by 2040, with an accompanying trend of urbanization. According to most recent U.S. Census estimates, New Yorkers who identify as being white (not Hispanic or Latino) make up 55% of the population, followed by (in percentages) Latino (19%), African Americans (18%), Asian Americans (9%) and Native Americans (1%).¹¹ New York State is home to many immigrants and many non-English speakers, with 22% being foreign born and more than 30% of households speaking a language other than English at home.¹² Nearly 8% of New Yorkers under the age of 65 have a disability. Approximately 63% of the working age population (over the age of 16) participates in the civilian labor force and commutes an average of 33.5 minutes to work.¹³ Nearly 13% of the population lives in poverty.¹⁴

New York State's land area encompasses 47,126 square miles. On average, New York's population density per square mile is 429 persons. However, population density varies significantly throughout the state. New York City's density is much higher at more than 29,000 persons per square mile, while Hamilton County in the northern part of the state has a density of 3 persons per square mile.¹⁵ The U.S. Land Cover Map (Figure 3) illustrates the various land uses throughout the state and highlights urbanized areas (red color).

¹⁰ U.S. Census Bureau QuickFacts: United States, July 2021 Census Data, available at: <https://www.census.gov/quickfacts/fact/table/NY,NJ,US/PST045221>, as of July 18, 2022.

¹¹ Id.

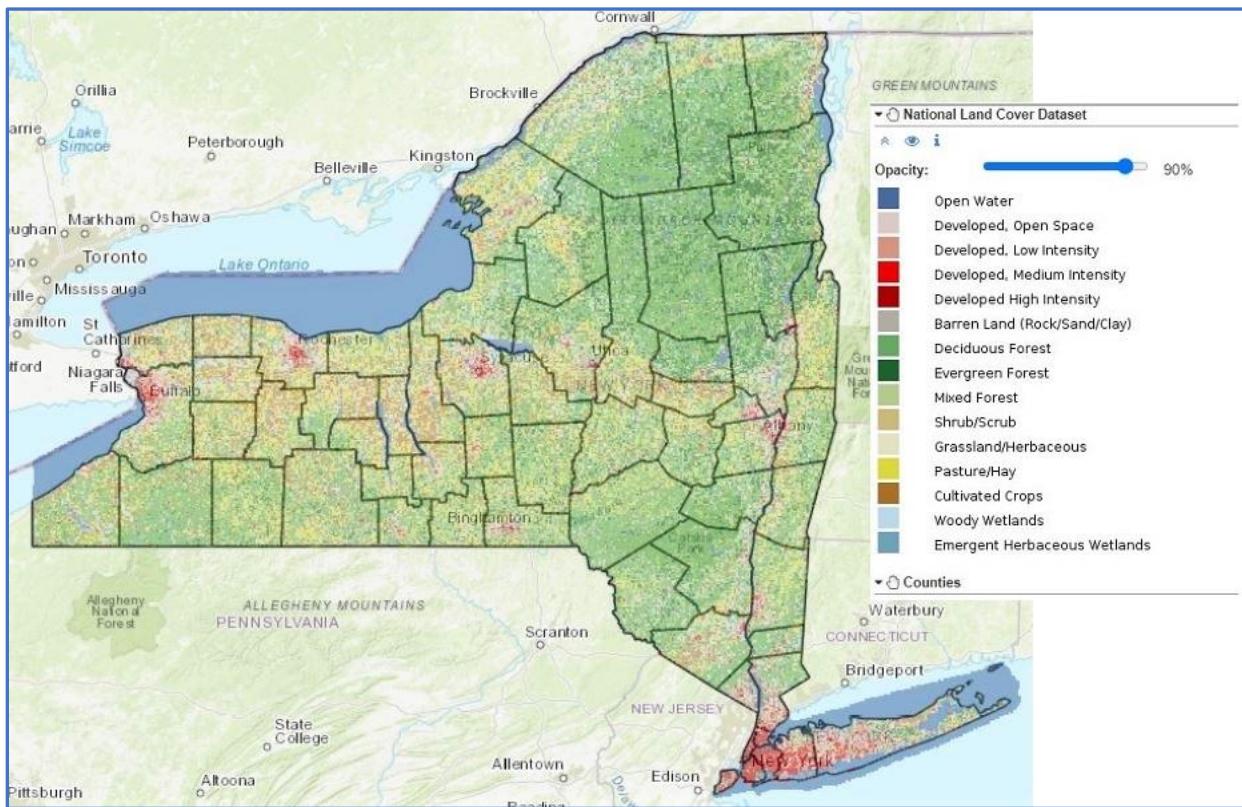
¹² Id.

¹³ Id.

¹⁴ Id.

¹⁵ U.S. Census Bureau Quickfacts, available at: [U.S. Census Bureau QuickFacts: United States – New York query](https://www.census.gov/quickfacts/fact/table/NY,NJ,US/PST045221).

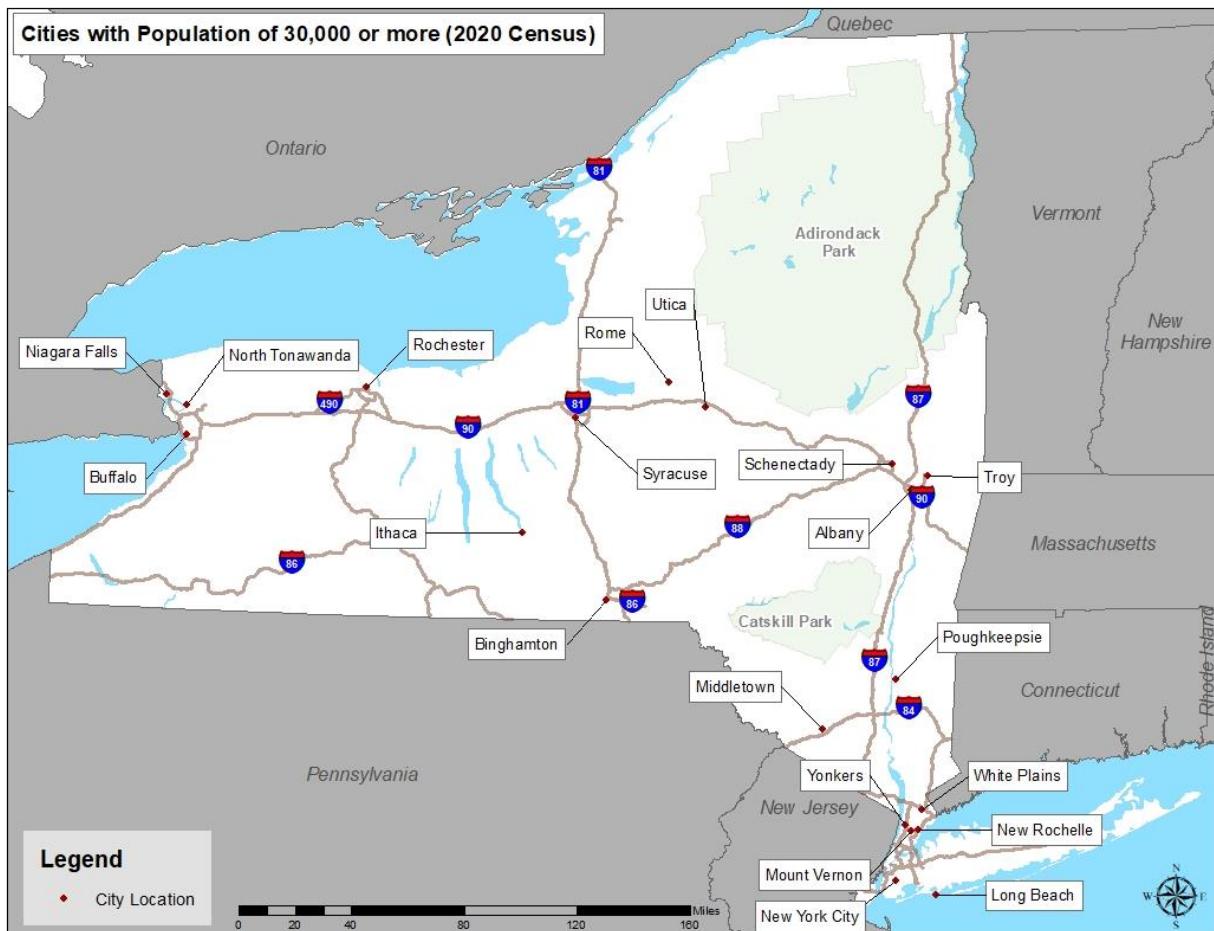
Figure 3: New York State National Land Cover Dataset (NLCD). NLCD 2011



Source: [MRLC Viewer](#)

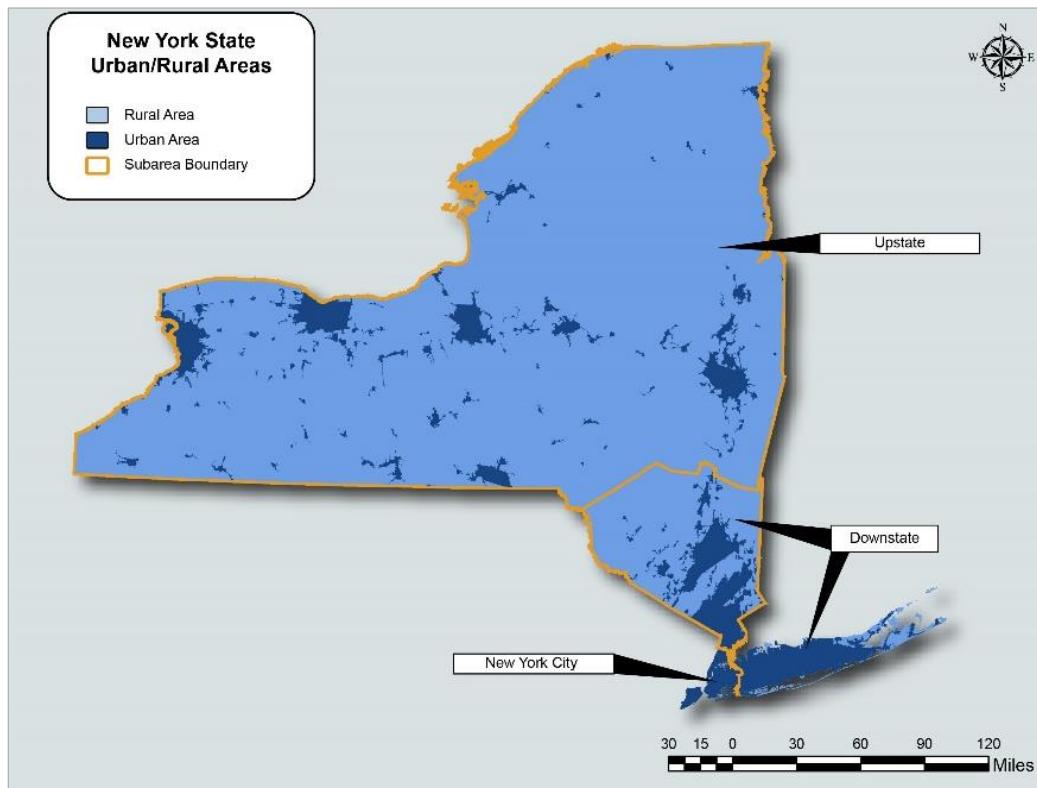
Highly developed areas are clustered throughout the state. The NY City Metropolitan Area is by far the largest, consisting of New York City (which by itself is home to 43% of the State's residents), the Long Island counties Nassau and Suffolk, and the adjacent northern suburban counties of Westchester and Rockland. This area embodies 64% of New York's population. Buffalo in western NY is the second largest city, followed by (in order of population size, 2020 Census, cities with a population greater than 30,000) Yonkers, Rochester, Syracuse, Albany, New Rochelle, Mount Vernon, Schenectady, Utica, White Plains, Troy, Niagara Falls, Binghamton, Long Beach, Rome, Ithaca, Poughkeepsie, North Tonawanda and Middletown. New York's urban areas are shown in Figure 4.

Figure 4: Cities in New York with a Population of 30,000 or More



Although much of the state's population lives in metropolitan areas, most of the State's geography is rural in nature, as shown in the map in Figure 5 below.

Figure 5: New York State Urban/Rural Areas



Source: [U.S. Decennial Census TIGER/Line Shapefiles, 2020](#). Creighton Manning, 2020.

Outside of urban areas, land use is dominated by forested lands, pastureland and cultivated crops. New York has 18.6 million acres of forests, which cover approximately 62% of New York's total land area. Deciduous, evergreen and mixed forests are predominantly found at higher elevations, while crops (vegetables, apples) and pasture lands (dairy industry) are cultivated in the lower lying areas with more fertile soils. Agriculture and forestry support multiple economic sectors through livestock, dairy, crops, timber, wood products and bioeconomy products.¹⁶

According to Open Data NY, New York State has 1,605 counties, cities, towns and villages.¹⁷ These municipalities have “home rule powers”, which are among the most far-reaching in the nation, making local governments a full partner with the State in the shared responsibility for providing services.¹⁸ As EV adoption expands, more EV charging stations will be needed to provide an extensive community EV charging network throughout the state, making coordination with local municipalities important.

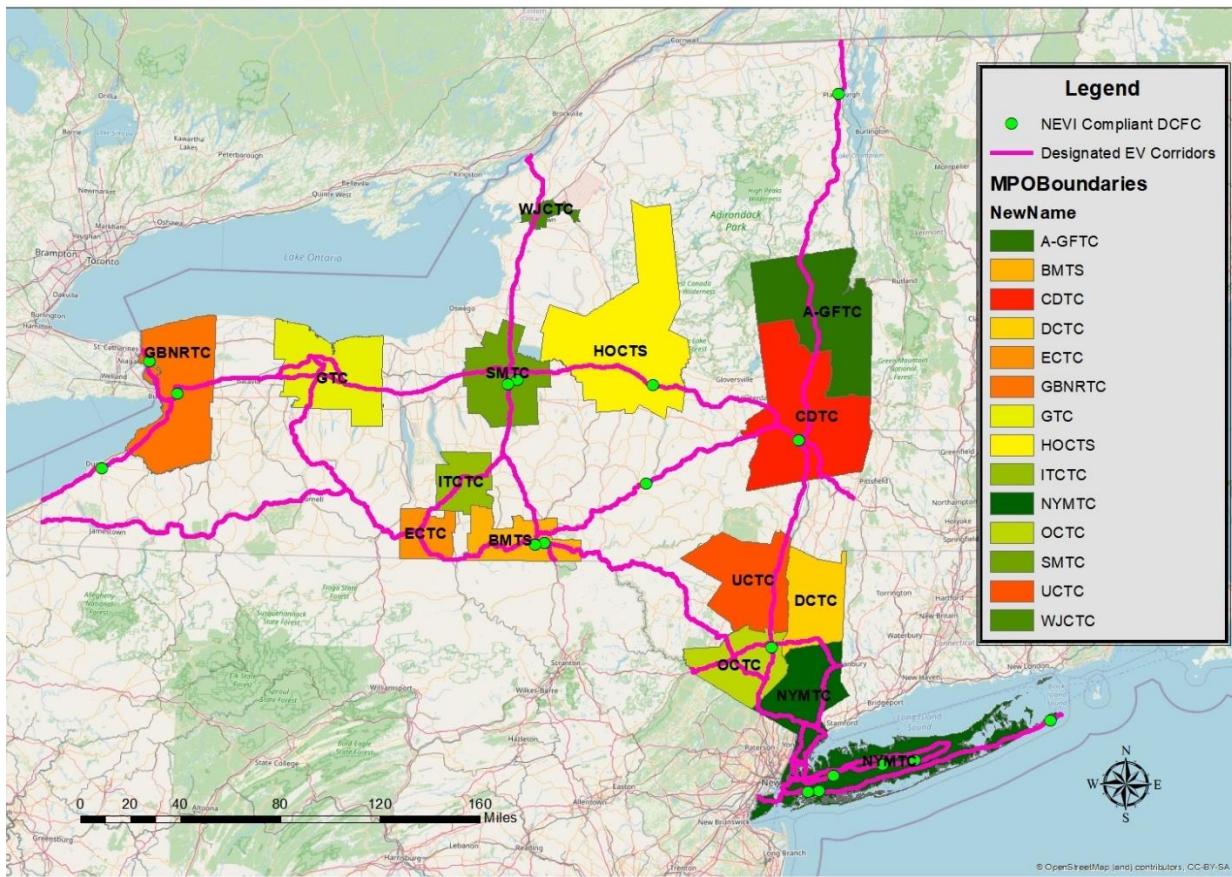
¹⁶ Climate Action Council, Draft Scoping Plan, Chapter 15 Agriculture and Forestry, p. 193, available at: <https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan>.

¹⁷ Open Data New York, NY Municipalities and County FIPS codes, available at: <https://data.ny.gov/Government-Finance/NY-Municipalities-and-County-FIPS-codes/79vr-2kdi/data>

¹⁸ Division of Local Government Services, Local Government Handbook, November 16, 2018, p. 34, available at: https://dos.ny.gov/system/files/documents/2021/10/localgovernmenthandbook_2021.pdf.

Further, in urbanized areas, Metropolitan Planning Organizations (MPOs) will also need to be partners in the NEVI Formula Program funding. Federal regulations require that MPOs be established in urban areas with a population of 50,000 or more.¹⁹ There are 14 MPOs in New York State, as shown in Figure 6. MPOs are composed of local elected officials, representatives of major modes of transportation such as transit providers, and appropriate state transportation officials, including NYSDOT. Federally funded projects within MPO areas must be included on an MPO's Transportation Improvement Program (TIP). All federally funded transportation projects are included on the State's Statewide Transportation Improvement Program (STIP), which includes the projects on MPO TIPs and all federally funded projects outside of MPO areas. As NEVI Program Funds are federal transportation funds, NYSDOT will coordinate with the MPOs to ensure proper planning and programming of NEVI Formula Program funds within MPO areas.

Figure 6: New York State Metropolitan Planning Organization (MPO) Areas and EV Alternative Corridors



¹⁹ 23 CFR 450.310: Metropolitan planning organization designation and redesignation.

<https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450/subpart-C/section-450.310>

Economy

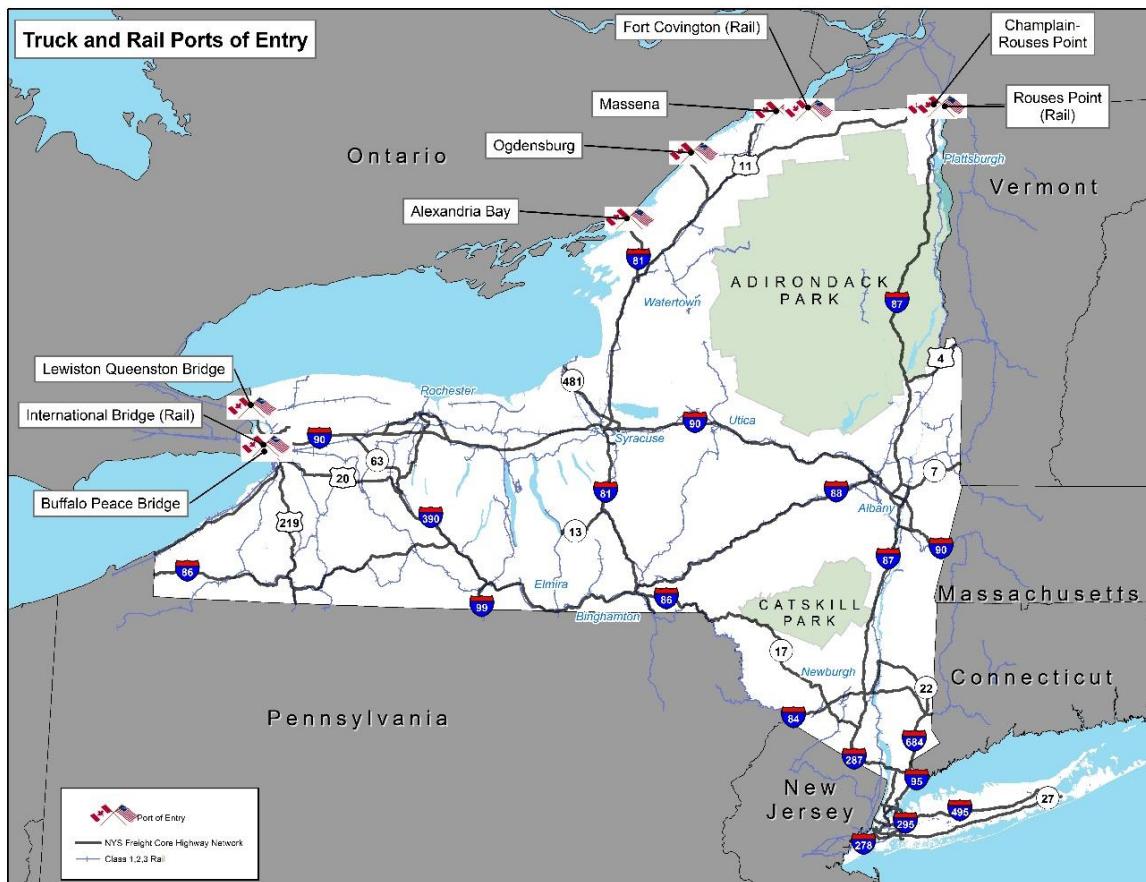
With a population of nearly 20 million, New York State is home to a large consumer market which attracts goods from domestic and international sources. New York State's economy ranks as one of the largest in the world. New York City is the leading center for banking, finance and communications and many of the world's largest corporations are located in Manhattan or Westchester County. New York State is also home to very rural areas that rely on agriculture and tourism. This diversity will create a variety of considerations for New York's expansion of its EV fast charging network. Where development densities are extremely high, access to land and appropriate levels of electric power to support DCFC can be challenging; where development is low, particularly in areas that are extremely remote, access to three-phase power and cellular service for charging stations can also be a challenge. In such rural areas, DCFC are not likely to be profitable in the near-term due to limited traffic volumes which are expected to result low usage levels. New York State's designated EV Alternative Fuel corridors exist within both of these development scenarios.

Though this initial Plan focuses on light duty passenger vehicles, in the longer term, the availability of alternate fuels to support freight needs will also be a necessity. In 2012, the State's highways, rails, pipelines, maritime ports and airports moved 1.7 billion tons of freight valued at \$2.3 trillion. By 2040, this freight movement is projected to increase 48% by weight and 73% by value.²⁰

More than two-thirds of the freight that moves within New York State's transportation network is through-traffic, having both an origin and destination outside of the State. This volume demonstrates the importance of New York's freight network not only to New York State but to the region and nation. New York's transportation network serves as an important conduit for freight moving regionally, nationally and internationally. More than \$120 billion in freight moved between New York State and Canada in 2021, about 20 percent of the total trade between the US and Canada. More than 80 percent of this US-Canada trade crossed New York State land borders via truck. The Buffalo-Niagara crossings rank second in the nation and Champlain Lacolle (Rouses Point) ranks fourth in the nation among all highway border crossings with Canada in terms of value of trade (3rd and 5th in the nation, respectively, in terms of volume of trade by all modes).

²⁰ Source: New York State Department of Transportation Freight Transportation Plan, available at: <https://www.dot.ny.gov/freight-plan>.

Figure 7: New York State International Land Border Crossings with Commercial Traffic



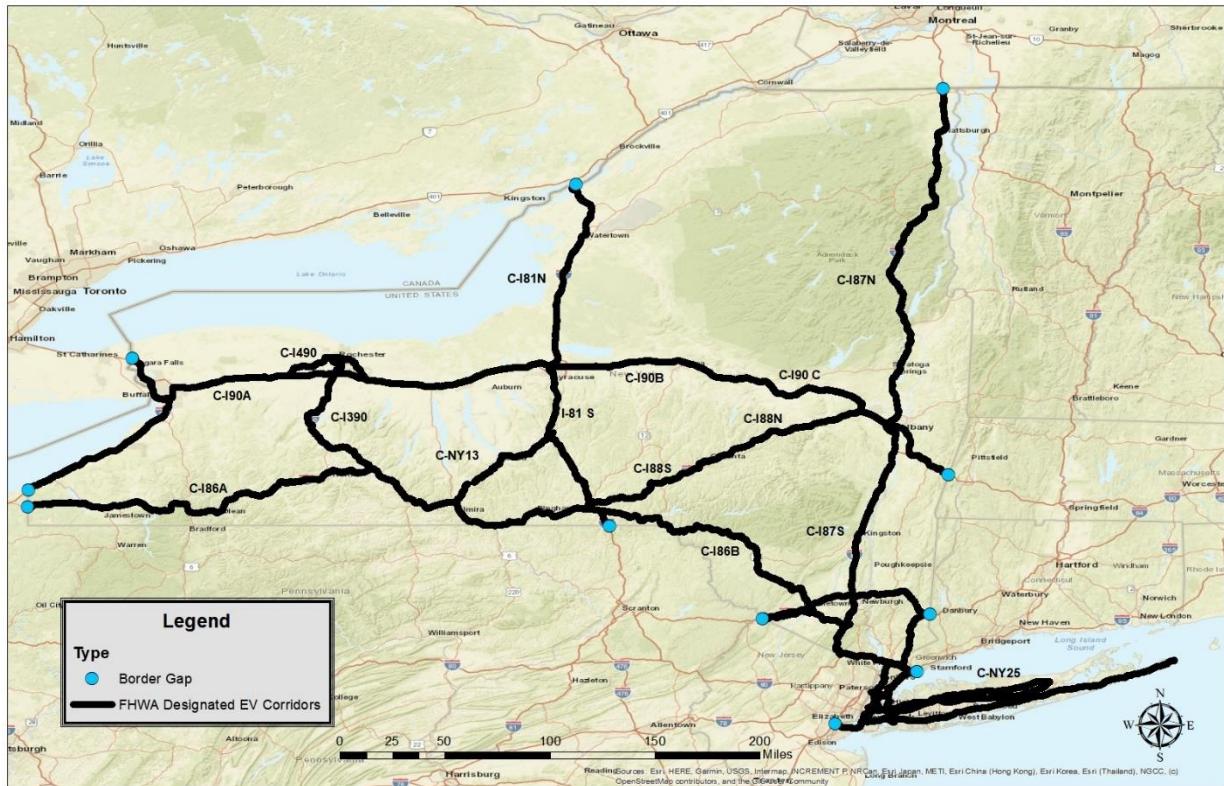
Source: New York State Freight Transportation Plan

Trucking moves 84% of all freight tonnage in New York State and is the only mode that can directly serve all statewide origins and destinations. Highways move 84% of the freight tonnage in the State, making them a critically important part of the State freight network.²¹

New York's portion of the Interstate Highway System provides critical regional, national and international connections for both freight and passenger vehicles. Major corridors include Interstate 87, providing connections from New York City to the Canadian border and Montreal; Interstate 81, connecting Pennsylvania to Ontario; and Interstate 90, connecting to New England in the east and to Ontario, Pennsylvania and Ohio in the west and Midwest, as well as to ports and markets on the West Coast. Other interstates also provide critical connections within New York and to adjacent states. These corridors are all FHWA EV designated Alternative Fuel corridors. New York State's currently designated EV corridors have 11 border crossings at the end of its designated corridors. Three of these are international border crossings with Canada, with the provinces of Quebec and Ontario.

²¹ Id.

Figure 8: Border Crossings at Ends of Designated EV Corridors

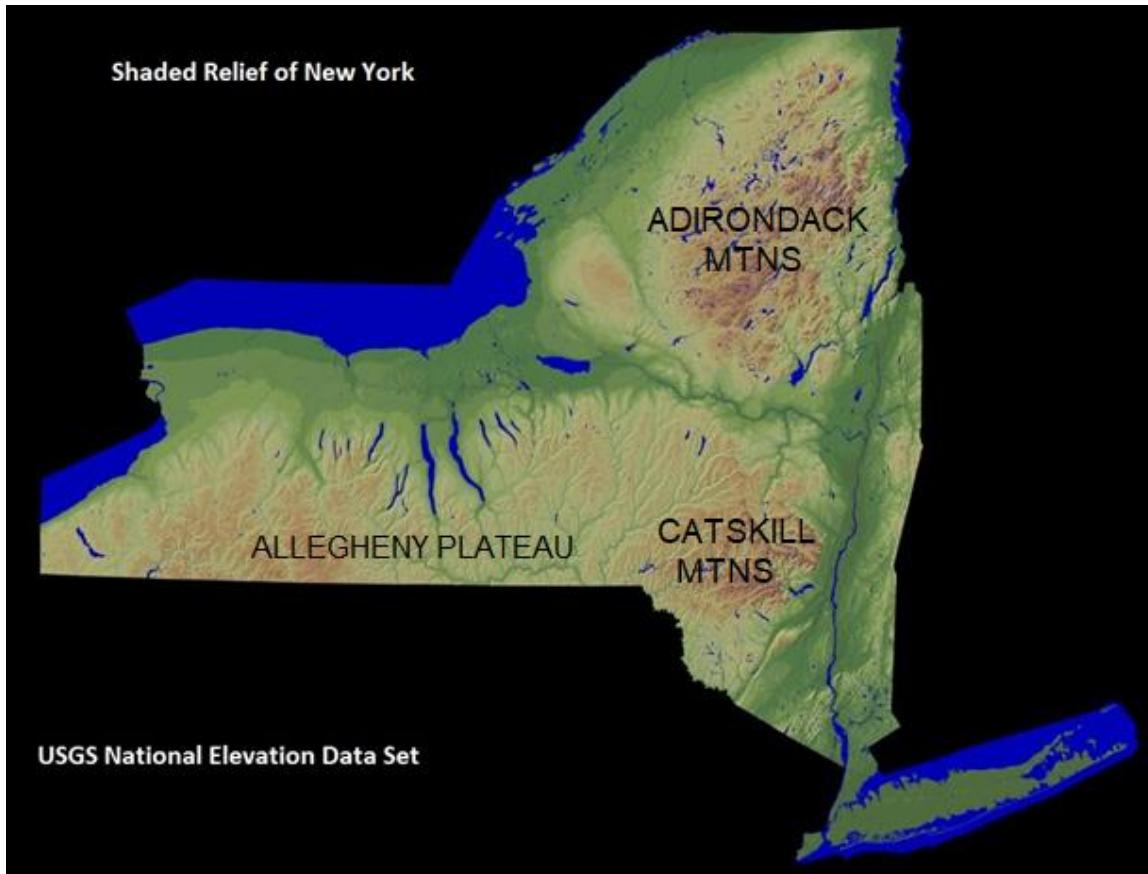


Terrain and Geography

NY State's geography is diverse and includes extensive metropolitan areas, historic cities, villages and hamlets nestled between farmlands, forests, the Atlantic Coast, the Great Lakes, major rivers such as the Hudson River and the Susquehanna, and mountain ranges including the Adirondacks, Catskills and the Alleghany Plateau. Commerce established in previous centuries took root along the larger rivers and canals that served to ship goods and commodities. Today, New York's economy has transformed into the 13th largest global economy of the 21st century.²² This vital economy is now supported by a network of interstate, state and local highways, railroads, ports, commuter rail, public transportation services, marine and aviation, all of which support the movement of people, goods and services 365 days a year.

²² [Countries With A Bigger GDP Than New York - WorldAtlas](#)

Figure 9: New York State Terrain



This transportation network serves some of the most densely populated areas in the US and must traverse the highly variable New York State landscape to keep its economy strong and vital. A drive from Montauk, on the easternmost area of Long Island, to Niagara Falls, in the western portion of the State, stretches more than 520 miles and requires a 9-hour drive. Goods movement from New York City's ports to the Canadian border in Champlain, north of Plattsburgh, stretches more than 330 miles and requires a nearly 6-hour driving time. Similarly, New York State's roadways serve as critical connections to New England to the east, New Jersey and Pennsylvania to the south, and points west.

In addition to the 47,126 square miles of land area, New York State boasts 7,429 square miles of water areas that must be traversed by the State's highways and local roads.²³ The State has

²³ U.S. Census Bureau, Statistical Abstract of the United States: 2011, Geography and Environment, Table 355. Land and Water Area of States and Other Entities: 2008, available at: <https://www2.census.gov/library/publications/2010/compendia/statab/130ed/tables/11s0355.pdf>.

considerable elevation differences from the low-lying coastal plains in the southeast and the Great Lakes plains in the north, to the Adirondacks (5,344 feet above sea level), Catskills (4,180 feet above sea level) and the Alleghany Plateau (4,000 feet above sea level), as well as the hills and valleys deposited or carved out by ice age glaciers in the Finger Lakes and beyond. The challenges of such a diverse terrain are equaled by a wide-ranging climate.

A Changing Climate

New York State's climate can be described as humid continental. The average annual temperature varies from about 40°F in the Adirondacks to about 55°F in the New York City metropolitan area. However, temperatures do vary significantly by season and location within the State. Extreme temperatures of -52 degrees to 108 degrees Fahrenheit have been recorded by the National Oceanic and Atmospheric Administration's State Climate Extremes Committee.²⁴ The wettest parts of the state, including parts of the Adirondacks and Catskills, the Tug Hill Plateau, and portions of the New York City metropolitan area, average 50 inches of precipitation per year. Mountain effects produce localized amounts of precipitation in excess of 60 inches per year at inland locations. Parts of western New York are relatively dry, averaging about 30 inches of precipitation per year. In all regions, precipitation is relatively consistent in all seasons, although droughts and floods are not uncommon.²⁵ More details on New York State's climate can be found in [Appendix A](#).

Very cold temperatures (below 30 degrees Fahrenheit) have a significant effect on electric battery and charging performance. Charging is much slower in cold temperatures, and DCFC may only charge at a fraction of their rated speed in cold temperatures. Further, all-wheel drive vehicles are more popular in snowy climates. These vehicles have lower range than identical vehicles with front or rear wheel drive, which could trigger the need for additional charging. Very high temperatures (above 100 degrees Fahrenheit) can present a risk for battery failure and degradation, although it is not generally an issue in New York State.

New York State's Approach to Extreme Weather and Climate Change

New York State has launched multi-pronged efforts to protect its citizens from the crippling impacts of extreme weather events such as those brought by hybrid storm Sandy (2012), and Tropical Storms Irene (2011), Fred, Henri, and Ida (2021). The State's focus includes proactively addressing transportation infrastructure risk to increase public safety and to reduce future transportation disruptions and the high costs of emergency reconstruction.

²⁴ The State Climate Extremes Committee: National Oceanic and Atmospheric Administration has the following record temperatures in New York State: Maximum [High] Temperature: 108 degrees – Troy, NY July 22, 1926. Maximum [Low] Temperature: -52 degrees, Old Forge, NY February 18, 1979. Available at: <https://www.ncei.noaa.gov/access/monitoring/scec/records/ny/all>.

²⁵ Responding to Climate Change in New York State, available at <https://www.nyserda.ny.gov/climaid>. 2014 Supplement – Updated Climate Projections Report. Section 2.1 Average Temperature and Precipitation (page 2).

New York State also invests in climate science and guidance to help decision-making. New York State Climate projections and resources and guidance can be found at the following weblinks:

- NYS State adopted sea level rise projections - [Part 490, Projected Sea-level Rise - Express Terms - NYS Dept. of Environmental Conservation](#)
- Observed and Projected Climate Change in New York (August 2021) - [Observed and Projected Climate Change in New York State 2021 \(ny.gov\)](#)
- Responding to Climate Change in NYS (ClimAID): [Responding Climate Change in New York State \(ClimAID\) - NYSERDA](#)
- Community Risk and Protection Act Implementation Guidance including the NYS Flood Risk Management Guidance; Using Natural Resiliency Measures to Reduce Risk; Guidance for Smart Growth Public Infrastructure Assessment - [Community Risk and Resiliency Act \(CRRA\) - NYS Dept. of Environmental Conservation](#)

New York has passed nation-leading legislation to reduce the State's greenhouse gas emissions and make New York's economy carbon neutral by 2050. Three recent legislations are especially relevant:

- **New York State's Community Risk and Resiliency Act (CRRA)**²⁶ signed into law in 2014 requires that certain state permit and funding programs consider future climate risk - including sea level rise, storm surge and inland future conditions - in project design and planning. CRRA was updated in 2019 to address additional hazards including storms, wind and extreme temperatures (heat and cold). NYSDOT and other agencies are working with the New York State Department of Environmental Conservation and the New York State Department of State to identify ways to implement the additional provisions of the CRRA and provide State guidance. In 2020, the State published implementation guidance to support decision-making that addresses flooding risk including the "NYS Flood Risk Management Guidance"; "Using Natural Measures to Reduce the Risk of Flooding"; and the "Guidance for Smart Growth Public Infrastructure Assessment".²⁷
- **New York State Climate Leadership and Community Protection Act**²⁸ - The Climate Leadership and Community Protection Act (Climate Act) was signed into law in 2019. It requires that New York reduce economy-wide greenhouse gas emissions 40 percent by 2030 and by no less than 85 percent by 2050, from 1990 levels. The law created a

²⁶ New York State Community Risk and Resiliency Act, available at: <https://www.dec.ny.gov/energy/102559.html>

²⁷ New York State Department of Environmental Conservation, New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act, August 2020, available at:

https://www.dec.ny.gov/docs/administration_pdf/crrafloodriskmgmtgdnc.pdf; Using Natural Measures to Reduce the Risk of Flooding and Erosion, August 2020, available at:

https://www.dec.ny.gov/docs/administration_pdf/crranaturalmeasuresgndc.pdf; and Guidance for Consideration of Flood Risk in Smart Growth Public Infrastructure Assessment, August 2020, available at:

https://www.dec.ny.gov/docs/administration_pdf/crrasmartgrowth.pdf.

²⁸ New York State Climate Leadership and Community Protection Act, available at: <https://climate.ny.gov/>

Climate Action Council charged with developing a scoping plan that will place New York on a path toward carbon neutrality. Seven Advisory Panels, made up of public and private sector representatives from industry, advocacy, and academia were created to focus on developing strategies to reduce greenhouse gas emissions from their specific sector. These Advisory Panels include a Climate Justice Working Group (CJWG) and a Just Transition Working Group (JTWG). The Advisory Panels held sector-specific discussions and hosted public meetings throughout the third quarter of 2020 and in 2021 to gather input as strategies were developed. Panels then provided recommendations to the Council for consideration for inclusion in the Draft Scoping Plan which was published in December 2021 and describes the actions needed to achieve New York's ambitious greenhouse gas reduction targets.

The JTWG focus is to help ensure an equitable transition for New York's workforce in the State's renewable energy economy.²⁹ The JTWG's just transition principles, included in the Draft Scoping Plan, were developed to serve as a guide for Advisory Panel recommendations with the acknowledgement that each may have different applicability depending on the economic sector. The principles were developed to support a fair and equitable movement from fossil fuel-based economies toward the achievement of the carbon neutral future envisioned by the Climate Act. The Climate Act presents economic development opportunities for the State and its communities. Accordingly, the principles were also defined with local, regional and statewide job creation and workforce development in mind. As such, these principles will also influence New York State's NEVI plan where appropriate, specifically:

- Stakeholder-engaged transition planning;
- Collaborative planning for a measured transition toward long-term goals; and
- Equitable access to high quality, family sustaining jobs.

CJWG is comprised of representatives from Environmental Justice communities statewide, including three members from New York City communities, three members from rural communities, and three members from urban communities in upstate New York, as well as representatives from the State Departments of Environmental Conservation, Health, Labor and the New York State Energy Research and Development Authority (NYSERDA).³⁰ The CJWG has an important advisory role in the Climate Action Council process; it provides strategic advice for incorporating the needs of disadvantaged communities into the Scoping Plan, including the strategies identified for the transportation sector. The CJWG is supportive of the rapid transition to zero-emission vehicles (ZEVs), but also advised that prioritizing access to transit and lower-cost options for transportation, rather than just personal vehicles, is critical for low- and

²⁹ More information about the Just Transition Working Group is available at:

<https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-08-25-dec-and-nyserda-announce-members-of-just-transition-working-group-to-support-implementation-of-states-nation-leading-climate-law>.

³⁰ More information about the Climate Justice Working Group is available at: <https://climate.ny.gov/Our-Climate-Act/Climate-Justice-Working-Group>.

moderate-income (LMI) New Yorkers. Specifically related to the transition to ZEVs, the CJWG encourages the State to ensure that the ZEV transition benefits the State's residents economically. The extensive involvement of the CJWG in the Climate Action Council's scoping plan process provides a valuable disadvantaged community perspective that is informing the State's NEVI Plan.

The multi-sectoral Draft Scoping Plan is the result of extensive outreach and expert engagement and includes recommendations that specifically address climate change and resilience across all sectors of the economy.³¹ Notably, the Draft Scoping Plan includes extensive strategies to address the transportation sector, both resiliency and greenhouse gas mitigation. Transitioning to ZEVs is among those recommended strategies. The Final Scoping Plan is due to be released by January 1, 2023. The implementation of the strategies recommended from the Final Scoping Plan will support the goals of the NEVI formula funding program.

Two other reports were created in 2021 as required by the Climate Act. The first of these reports is New York's Disadvantaged Communities Barriers and Opportunities Report, which analyzes why some communities are disproportionately impacted by climate change and by air pollution and have unequal access to clean energy.³² This report breaks down the barriers faced by disadvantaged communities in being able to own and access all the goods and services necessary to:

- Make homes energy efficient, weather-proofed, and powered by renewable energy;
- Provide clean transportation such as fuel efficient and electric cars, vans, trucks, buses and bikes, as well as walkable streets and livable neighborhoods; and
- Ensure safety and health in the face of ever harsher climate impacts.

This report recommends actions for New York State agencies to design climate protection and clean energy programs through a lens of justice and these recommendations will be considered as New York State develops the details of its NEVI Formula Program goals and implementation program.

The second report, released by the JTWG in 2021 is the Jobs Study (Study).³³ The Study serves to forecast clean energy job growth tied to the State's decarbonization goals, with the following specific objectives:

- The number of jobs created to counter climate change, which shall include but not be limited to the energy sector, building sector, transportation sector, and working lands sector;

³¹ The Climate Action Council Draft Scoping Plan is available at: <https://climate.ny.gov/Draft-Scoping-Plan>.

³² New York State Disadvantaged Communities Barriers and Opportunities Report, December 2021, available at: <https://climate.ny.gov/-/media/Project/Climate/Files/21-35-NY-Disadvantaged-Communities-Barriers-and-Opportunities-Report.pdf>.

³³ Just Transition Working Group 2021 Jobs Study, December 2021, available at: <https://climate.ny.gov/-/media/Project/Climate/Files/JTWG-Jobs-Report.pdf>.

- The projection of the inventory of jobs needed and the skills and training required to meet the demand of jobs to counter climate change; and
- Workforce disruption due to community transitions from a low-carbon economy.

The Study team leveraged its modeling framework and analysis to better understand and characterize job requirements and how those requirements can be constructed into workforce training and development pathways, including for priority populations and Disadvantaged Communities.

The Study presents evidence of the significant growth anticipated over the next 30 years. However, the Study notes the transportation sector, specifically conventional fueling stations (gas stations), account for more than one-third to almost one-half of all displaced jobs in the four primary sectors (electricity, fuels, buildings, and transportation) from 2019 to 2030, as more drivers shift to lower-cost charging of electric vehicles.³⁴ This finding indicates that traditional fueling stations will likely need to adapt beyond providing gasoline for cars to avoid diminishing opportunities for revenue and employment.

Occupationally, the largest job increases from 2019 to 2030 will be found in installation and repair occupations.³⁵ They are expected to account for almost two-thirds of added jobs in the growth subsectors. This finding indicates the value of additional research to understand the education and training resources that lead into these positions and the different career paths that can be found in this category of occupations.

The findings of the Study will be considered as New York State develops its NEVI Formula Program goals and implementation program.

In general, the State will need to consider these Climate Act strategies and any subsequent state policies in the development of its NEVI Formula Program implementation plan.

- **Accelerated Renewable Energy Growth and Community Benefit Act**³⁶ signed into law April 3, 2020, the act supports the transition to an emissions-free electric grid in New York by establishing the first in the nation Office of Renewable Energy Siting and a new “Build Ready” program to streamline the siting and development of large-scale renewable projects. The act also creates Host Community Benefit programs that provides utility bill discounts to communities that host renewable energy facilities, and establishes a state-wide grid planning program to identify and advance transmission and

³⁴ Jobs Study at 6.

³⁵ Id. at 8.

³⁶ More information on the Accelerated Renewable Energy Growth and Community Benefit Act is available at: <https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-04-03-NEW-YORK-STATE-ANNOUNCES-PASSAGE-OF-ACCELERATED-RENEWABLE-ENERGY-GROWTH-AND-COMMUNITY-BENEFIT-ACT-AS-PART-OF-2020-2021-ENACTED-STATE-BUDGET>

distribution infrastructure that ensures renewable energy can be reliably and cost-effectively delivered to New Yorkers.

New York State Context for NEVI

As described above, New York State is a diverse State, supporting diverse topographies, demographics, economic needs, geography, and a changing climate. Also, the State has a multi-pronged approach to addressing resiliency and climate change. Similarly, the NEVI Formula Program will build on many years of effort in New York State supporting clean energy development and incentivizing the use of the EVs. [Appendix B](#) provides a listing of New York State programs, laws, regulations, and initiatives that are supportive of the growth of EV use in New York State.

To date, New York's Public Service Commission has declined to exercise jurisdiction over:

- publicly available EV charging stations;
- the owners or operators of such charging stations, so long as the owners or operators do not otherwise fall within the Public Service Law (PSL's) definition of electric corporation; or,
- the transactions between the owners or operators of publicly available EV charging stations that do not otherwise fall within the PSL's definition of electric corporation.³⁷

Initiatives that are particularly relevant to the NEVI Plan are described below:

- [New York State's EV Make-Ready Program](#) is a utility-funded incentive program that is designed to stimulate the development of enough public EV charging infrastructure across the state to support the charging needs of an estimated 850,000 zero emission vehicles on the road in New York by 2025.³⁸ The Make-Ready program runs through 2025. The budget for the Make-Ready Program is broken up between New York's investor-owned utilities (IOUs), and Long Island. New York's six IOUs have a total budget of \$701 million.³⁹ PSEG Long Island has a total budget of \$91 million.⁴⁰ These funds will be used to meet⁴¹ the goal of installing approximately 58,000 level 2 and 2,000 DCFC plugs. New York State's EV Make Ready Program provides developers and site hosts with incentives that cover 50 to 100 percent of the equipment and installation costs to make sites ready for EV charging for Level 2 and DCFC stations. The Public Service Commission, which authorized the program,

³⁷ Case 13-E-0199, [In the Matter of Electric Vehicle Policies](#), Declaratory Ruling on Jurisdiction Over Publicly Available Electric Vehicle Charging Stations (issued November 22, 2013) (Declaratory Ruling), p. 5.

³⁸ Case 18-E-0138, [Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure](#), Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020).

³⁹ EV Make-Ready Program, Program Overview, available at: <https://jointutilitiesofny.org/ev/make-ready>.

⁴⁰ PSEG Long Island EV Make Ready Program, available at:

<https://www.psegliny.com/saveenergyandmoney/greenenergy/ev/makeready>.

⁴¹ <https://jointutilitiesofny.org/ev/make-ready>

placed an emphasis on publicly accessible stations that use non-proprietary plug types⁴² by providing higher incentive levels of up to 90 percent of the eligible make-ready costs, or 100 percent for stations located in disadvantaged communities.⁴³ Stations that do not meet the accessibility criteria are eligible for lower incentive levels that cover up to 50 percent of the eligible make-ready costs.

The Public Service Commission also requires the Joint Utilities to identify locations suitable for electric vehicle supply equipment and infrastructure siting and to proactively educate developers on synergistic cost-saving opportunities with the objective of maximizing public charging utilization. These directives will ensure the efficient use of ratepayer funds invested and provide fair, equitable access and benefits to all utility customers.⁴⁴ Each of New York's IOUs published load serving capacity maps for their service territories in December of 2020, which enables developers and site hosts to screen potential locations and measure the EV charging demand that can be supported by the existing infrastructure.

Utilities are necessary partners for any developer because they supply the underlying infrastructure and power that is resold as a service to the EV charging customer. To implement the EV Make-Ready program, the IOUs hired additional staff, some of whom work directly with developers and site hosts, to assist with the application and utility processes. New York's utility companies also play a critical role in the development of the public EV charging infrastructure because they maintain the resiliency and reliability of the grid.

The EV Make-Ready program has been available since July 2020. The Department of Public Service (DPS) Staff will initiate the program's mid-point review no later than October 2022. The mid-point review will involve a comprehensive examination of the program's effectiveness, and the identification of recommended changes to the program design, budget, eligibility criteria, and charging station deployment goals.

NYSDOT and partner agencies have engaged the Joint Utilities in the preparation of this Plan and will continue to coordinate to further understand where the EV Make-Ready program, additional utility-specific EV programs, and the NEVI Formula Program funds can be leveraged to implement goals common to each program.

⁴² SAE CCS

⁴³ SAE CCS

⁴⁴ The Joint Utilities are comprised of Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc. ("Con Edison"), New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"), Orange and Rockland Utilities, Inc. and Rochester Gas and Electric Corporation. Together, the Joint Utilities provide electric service to over 13 million households, businesses, and government facilities across New York State.

- Commercial Tariff for Electric Vehicle Charging: Public Service Law Section 66-s requires the Public Service Commission to initiate a proceeding in 2022 that will establish alternatives to traditional demand-based rate structures to facilitate faster charging for light duty, heavy duty and fleet electric vehicles. This proceeding was initiated in April 2022.⁴⁵

Demand charges, which are based on the maximum power or kW that a customer requires over a billing period, can create significant operating cost barriers for DCFC stations, particularly in the current market, where EV adoption and charging station utilization are low. During the proceeding, DPS staff will propose a new rate design or operating cost relief program that addresses these financial challenges. The Public Service Commission proceeding is currently underway, and the legislation requires that the Commission approve or modify the Staff proposal by the end of 2022. The new tariffs or operating cost relief programs are expected to improve the economics of DCFC stations across New York, particularly in locations where the utilization of public charging infrastructure is expected to be low.

- DCFC Per-Plug Incentive Program: This existing program provides cost relief for publicly accessible DCFC charging stations in the form of an annual bill credit for up to seven years.⁴⁶ The incentive levels are designed to offset a portion of the EV charging station's operating costs which include demand charges. The program budgets of \$39 million provide enough funding to support 1,434 plugs across the IOUs and Long Island through 2025.
- Evolve NY: This program, managed by the New York Power Authority is investing up to \$250 million to build up to 800 EV charging stations statewide by 2025.⁴⁷ The focus is on Direct Current Fast Charging (DCFC) stations along major travel corridors.
- Volkswagen Settlement-funded DCFC Program: This program, administered by NYSERDA in partnership with the NYS Department of Environmental Conservation, is investing \$11 million from the Volkswagen Settlement funds in DCFC stations across upstate New York. Initial rounds of the program in 2021 and 2022 targeted stations in six economic development regions of the State that at the time had fewer DCFC stations.⁴⁸ The first two rounds are expected to result in 20 sites with four fast chargers at each site. While the focus of this program was to invest in DCFC stations in communities, a number of station locations may be adjacent to Alternative Fuel Corridors and – when they are built - may be able to

⁴⁵ Case 22-E-0236, et al., Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging, Notice Soliciting Comments (issued April 21, 2022).

⁴⁶ DCFC Per-Plug Incentive Program, Program Overview, available at:
https://jointutilitiesofny.org/ev/dcfc_incentive_program.

⁴⁷ Evolve NY, available at: <https://evolveny.nypa.gov/>.

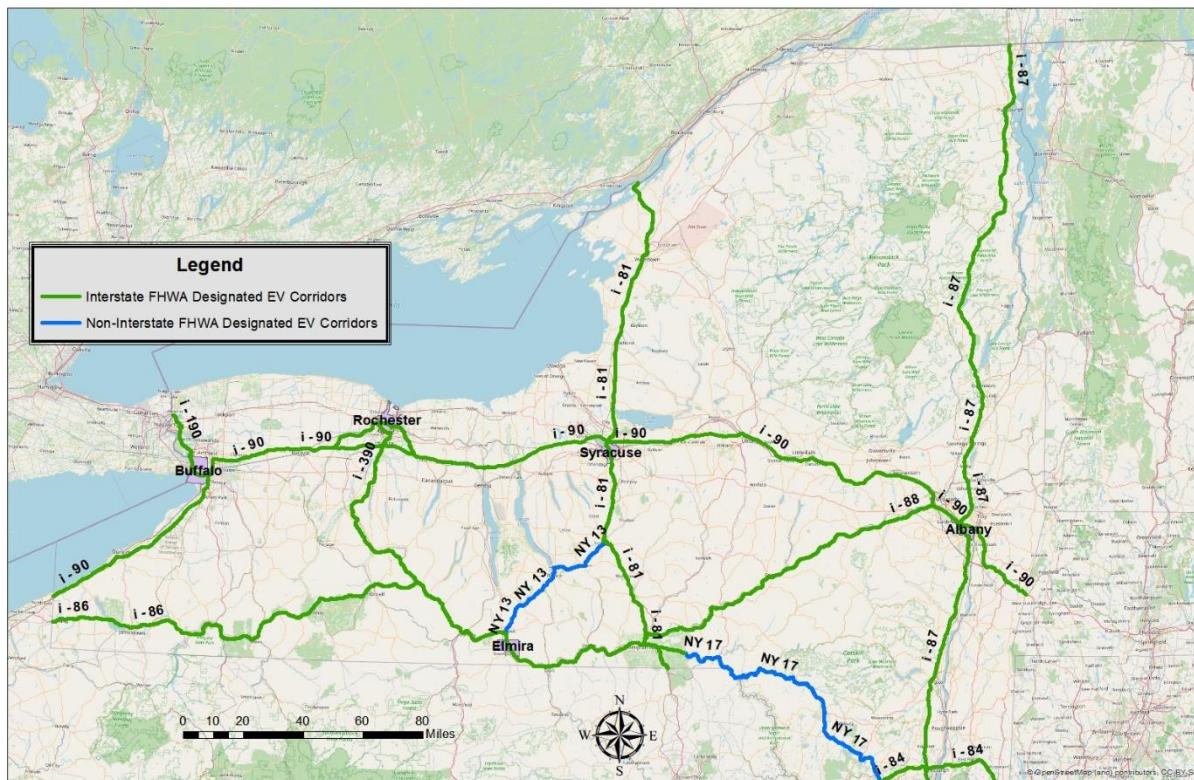
⁴⁸ Additional information regarding the Volkswagen-settlement Funded DCFC program is available at:
<https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-11-12-governor-cuomo-announces-11-million-in-Volkswagen-settlement-funds-to-expand-electric-vehicle-fast-charging-stations-in-New-York>.

meet NEVI criteria for DCFC stations. Additional rounds of this program may be made available in 2022.

New York State's Alternative Fuel Corridors

The following corridors are currently recognized by the FHWA as EV Alternative Fuel Corridors in New York State. The descriptions and maps of these corridors are shown below. More detailed descriptions can be found in [Appendix C](#).

Figure 10: Designated EV Alternative Fuel Corridors: North of I-84



Eastern New York

- Interstate 87 – Canada border to Albany (175 centerline miles)
- Interstate 87 – Albany to New York City (149 centerline miles)
- Interstate 90 – Syracuse to Massachusetts border (173 centerline miles)

Central and Western New York

- Interstate 90 – Pennsylvania border to Buffalo (70 centerline miles)
- Interstate 90 – Buffalo to Syracuse (152 centerline miles)
- Interstate 81 – Canada border to Syracuse (98 centerline miles)

- Interstate 81 – Syracuse to the Pennsylvania border (85 centerline miles)
- Interstate 390 – Rochester to Interstate 86 (75 centerline miles)
- Interstate 86 – Pennsylvania border to Elmira (199 centerline miles)
- Interstate 86/State Route 17 – Elmira to Interstate 87 (192 centerline miles)
- Interstate 88 – Interstate 81 to Interstate 90 (133 centerline miles)
- State Route 13 – State Route 17 to Interstate 81 (53 centerline miles)

Figure 11: New York City Metropolitan Area: I-84 and South



- Interstate 84 – Port Jervis to the Connecticut border (71 centerline miles)
- Interstate 684 – NY-22 to Interstate 287 (32 centerline miles)
- Interstate 95 – New Jersey border to the Connecticut border (28 centerline miles)
- Interstate 495 – Manhattan to Riverhead (70 centerline miles)
- Interstate 278 – New Jersey border to Interstate 95 (34 centerline miles)
- Interstate 678 – Interstate 95 to JFK Airport (16 centerline miles)
- Interstate 287 – New Jersey Border to Interstate 95 (35 centerline miles)
- State Route 25 – Manhattan to Orient Point (115 centerline miles)
- State Route 27 – Interstate 278 to Montauk (122 centerline miles)

Approach/Outreach

New York State is committed to an open process in the development of its NEVI Formula Program plans and procedures. As described above, New York State's NEVI outreach builds on robust outreach efforts from its climate and clean energy work, including that of the Transportation Advisory Panel to New York's Climate Action Council.

As part of the outreach conducted for the Climate Act Scoping Plan, the New York Climate Action Council's JTWG and seven multi-sector Advisory Panels, including the Transportation Advisory Panel; representatives from public, private, academic, environmental, and community groups; labor unions; environmental justice communities; impacted industries; and renewable energy developers, met on several occasions to debate and analyze the impacts of transitioning to clean energy on the labor market. Together, the JTWG and the Council's Advisory Panels identified recommendations to help ensure that New York's workforce is prepared for - and stands to benefit from - the State's transition to a clean economy. New York will consider these recommendations as it develops its NEVI Formula programs and procedures.

Specific to DCFC in the context of the NEVI Formula Program, beginning in May 2022, New York State initiated outreach to electric vehicle charging stakeholders to inform them of – and engage them in - NEVI Plan development. To date, this has included:

- Initial discussions with the Joint Utilities and the Long Island Power Authority to better understand utility issues and constraints along the designated corridors, and how the State can coordinate with utility companies as NEVI-compliant DCFC site development moves forward.⁴⁹ These conversations will continue as the State moves forward with Plan implementation. An area of continued interest by the State is the incorporation of the publicly available load serving capacity maps developed by the utilities, which can be used to screen locations along the designated corridors for suitable grid capacity for EV charging.
- A NEVI website was launched on June 3, 2022. The website provides the public with background information on the NEVI program; answers frequently asked questions; provides an opportunity to submit initial input and comments via a short survey; and to sign up for additional information about the program. To date, the site has received hundreds of visitors and the State has received 179 completed surveys to help inform initial Plan development. A summary of these comments can be found in [Appendix D](#). The State has also received more than 200 requests to stay informed as the Plan moves forward, which establishes initial lists of interested stakeholders. New York will maintain this site as more information on the State's NEVI Formula Program becomes available.
- New York State has engaged the 14 New York State metropolitan planning organizations (MPOs) to review NEVI Formula Program funding guidance and coordinate Plan

⁴⁹ The Joint Utilities are comprised of: Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc. ("Con Edison"), New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"), Orange and Rockland Utilities, Inc. and Rochester Gas and Electric Corporation. It does not include utilities on Long Island.

development and strategies with metropolitan plans and more localized knowledge of issues related to DCFC.

- New York State has built on years of relationships with the EV industry, specifically years of its clean energy efforts and has supplemented this engagement with other interested industry stakeholders, many of which expressed interest via the State's public website or through direct outreach to New York State agencies. New York State held a discussion with EV industry experts on June 27.
- NYSDOT and its agency partners held a Public Information Meeting on July 20, 2022, attended by 330 participants many of whom asked questions related to New York's NEVI planning efforts. A summary of the session is provided in [Appendix E](#).

New York State is building on the extensive stakeholder, public and environmental justice advocate engagement undertaken through the Climate Act Scoping Plan development. The State will be further engaging with disadvantaged community (DAC) stakeholders as the Plan moves forward. Initially, the State will engage the DAC stakeholders that participated during the Climate Act Scoping Plan development and will discuss issues and opportunities for the use of NEVI Formula Program funding to benefit disadvantaged and underserved areas; explore potential opportunities for transportation electrification within disadvantaged communities; and ensure that the economic benefits from EVs reach underserved communities and are appropriately measured, consistent with Justice40 and the goals of New York State's Climate Act. As the State considers its program implementation strategy, it will work with local community advocates to ensure the appropriate stakeholders are included.

In addition, the State will leverage research conducted in the development of many of the ongoing state programs that support EV charger deployment. For example, research conducted by New York State's Department of Public Service (DPS) to identify immediate and long-term actions to best support ZEV market growth in New York State revealed the following related to publicly accessible DCFC:

- The costs to "make-ready" a site for EV charging present an economic barrier to EV charging station developers. This includes electrical transformer upgrades, trenching and boring for conduits, conductors, poles, and towers.
- For upstate DCFC station locations, where electric vehicle adoption rates are lower than the downstate New York City Metropolitan area, the expected charging station utilization during the initial ten-year period of operation are estimated to result in negative 10-year net present value and initial return on investment, even with make-ready support. The Public Service Commission therefore allowed the make-ready incentives to be combined with additional incentive programs that were specified in the authorizing order, to ensure a minimum level of near-term investment. The NEVI

program is a welcome source of additional support that DPS will consider for potential alignment.⁵⁰

Goals For NEVI Formula Program Funding

Through the NEVI Formula Program, New York State will identify opportunities to support the creation of a safe, reliable, convenient and equitable fast charging electric vehicle infrastructure network. The network will meet the needs of EV drivers and provide infrastructure so EV drivers can safely travel throughout the state and into adjacent states and Canadian provinces to reach interstate, regional, and long-distance destinations. The focus of New York State's initial NEVI investments will be to complement current state efforts and encourage the EV industry to build, operate and maintain NEVI compliant DCFC within 1 travel mile of existing FHWA designated EV Alternative Fuel corridors to fill gaps along the corridors throughout the state and provide a connected network to border states and Canadian provinces. Consistent with FHWA guidance, New York will focus initially on the interstate corridors.

As encouraged by the Joint Office guidance, the State seeks to facilitate public-private or private investment in charging infrastructure to support the growing demand for full battery electric vehicles. The State is looking to maximize the benefits of the NEVI Formula Program and to ensure that funding can be made available as efficiently as possible, while complying with the rules of Title 23, United States Code (USC), as required by law. NEVI investments are limited to designated EV alternative fuel corridors until corridors are designated as fully built out. Federal guidance also indicates that NEVI Formula Program funds can be used to support EV charging workforce development activities. NEVI Formula Program funds can be used for both construction of facilities and for operations and maintenance costs for up to five years. New York is considering all of these options for addressing the State's EV charger workforce and corridor charging site needs.

Addressing Equity

New York State recognizes the importance of addressing the needs of disadvantaged and underserved communities. New York State's Climate Act requires that clean energy programs provide 35% of the benefit (goal of 40%) to disadvantaged communities.⁵¹ The Climate Act defines Disadvantaged Communities as "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain

⁵⁰ Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Department of Public Service Staff Whitepaper Regarding Electric Vehicle Supply Equipment and Infrastructure (issued January 13, 2020).

⁵¹ New York's Climate Act recognizes that climate change doesn't affect all communities equally. The Climate Act charged the Climate Justice Working Group (CJWG) with the development of criteria to identify disadvantaged communities to ensure that frontline and otherwise underserved communities benefit from the state's historic transition to cleaner, greener sources of energy, reduced pollution and cleaner air, and economic opportunities.

socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households.”⁵² (Additional information on the CJWG’s DAC criteria is provided in [Appendix F](#))

As discussed above, the Climate Act established the Climate Justice Working Group (CJWG) and charged this group with developing specific criteria to identify disadvantaged communities throughout the State.⁵³ This group has undertaken significant outreach in developing the criteria and draft community areas. Before these criteria and areas are adopted, there is a public review and comment period. At the time of the drafting of this Plan, the draft criteria and maps are available for public review.⁵⁴ The process is expected to be finalized by the end of 2022 and will be reflected in the Climate Action Council’s final Scoping Plan.

Figure 12 shows the State’s EV alternative fuel corridors, New York State’s draft disadvantaged communities and communities identified under the federal Justice40 guidance. New York’s initial priority for the use of NEVI Formula Program funding will be to support the build out of FHWA designated EV alternative fuel corridors within identified gap areas along interstates, consistent with federal guidance. As described below, EV fast charging gaps and opportunities vary throughout the State.

Resolving gaps in rural areas along interstate EV Alternative Fuel corridors will be important to provide more certainty to EV drivers that the state’s extensive interstate network can be traveled safely with opportunities for publicly available, accessible charging. Urban areas may also have early opportunities for additional NEVI compliant sites to meet corridor build out requirements. A number of gap areas pass through disadvantaged communities.

In addition, opportunities to invest in workforce development could help expand job creation and opportunities that could benefit disadvantaged communities. Maintaining an ever-increasing fleet of EVs in New York State and installing and maintaining a NEVI-compliant network of EV charging stations will require an expanded workforce of technicians and mechanics. New York State has begun to focus on ways to support the development of these new job opportunities and career pathways, especially in disadvantaged communities. NYSERDA’s workforce development programs support internships and fellowships for early-career residents of disadvantaged communities who are interested in getting into clean energy careers. New York State has developed a curriculum on EV maintenance through the State University of New York system, which is beginning to be taught at more trade schools across the State. Many unions and trade groups in New York State, including the International Brotherhood of Electrical Workers (IBEW) and several automobile dealers’ associations, have been proactive at training their members for the transition to electric vehicles.

⁵² New York Environmental Conservation Law §75-0101(5).

⁵³ Climate Act, Climate Justice Working Group, available at: <https://climate.ny.gov/Our-Climate-Act/Climate-Justice-Working-Group>.

⁵⁴ See Climate Act, Disadvantaged Communities Criteria, available at: <https://climate.ny.gov/Our-Climate-Act/Disadvantaged-Communities-Criteria>

Figure 12: New York State Draft Disadvantaged Communities and Justice40 Areas (Outside of the New York Metropolitan Area)

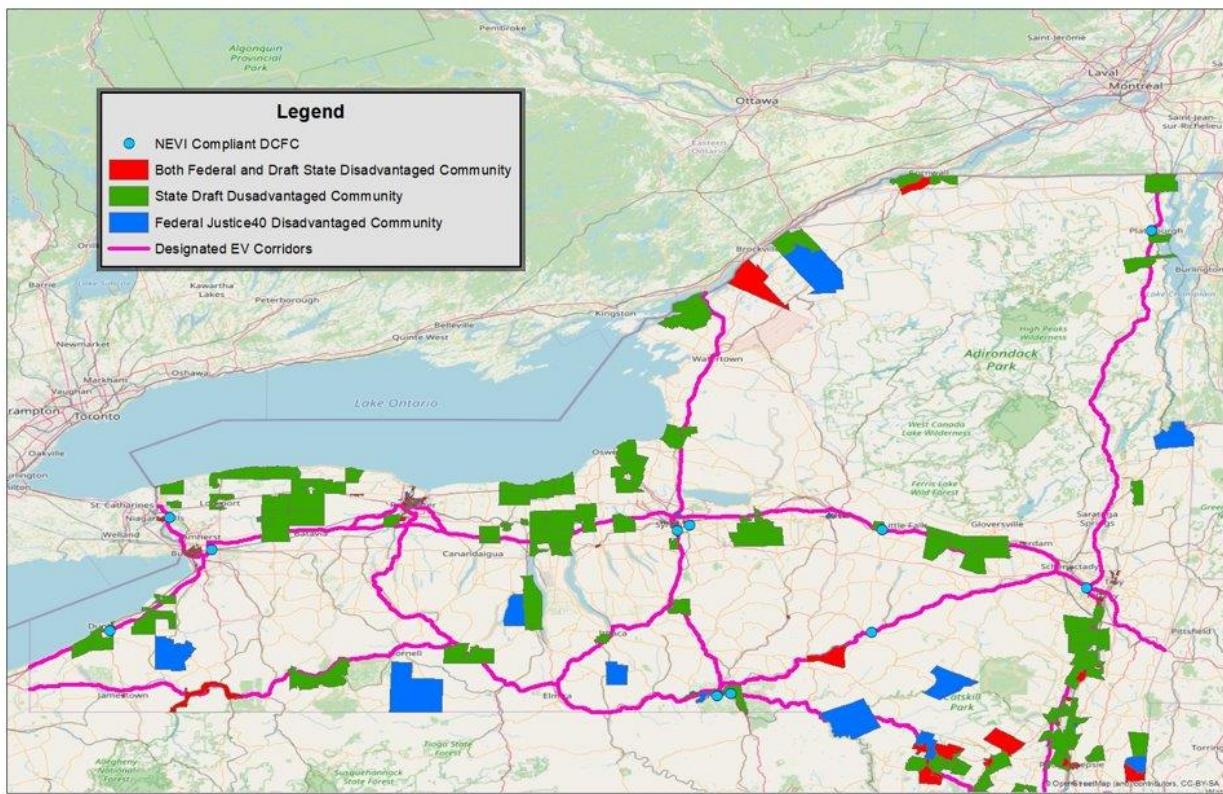
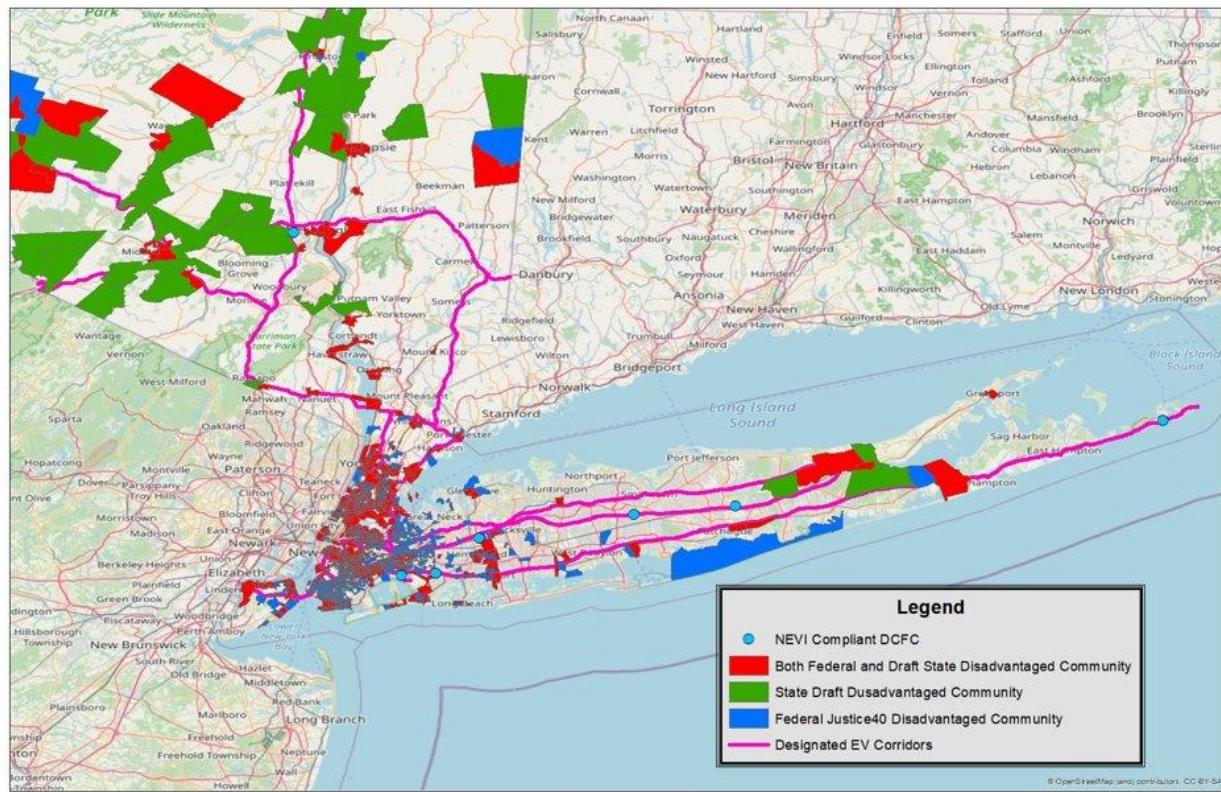


Figure 13: New York State Draft Disadvantaged Communities and Justice40 Areas, New York City Metropolitan Area



New York State will build on the significant outreach from the Climate Action Council Scoping Plan work. New York will continue to engage stakeholder representatives and members of the disadvantaged communities to seek additional input as to the needs of these communities to inform how to best use NEVI Formula Program funds to support current recommendations and future needs. New York expects this outreach, as well as the ongoing Climate Action Scoping Plan work, to inform how the benefits of NEVI investments to disadvantaged communities can be measured. An initial meeting of representatives for and members of disadvantaged communities is being organized for later this summer.

NEVI guidance indicates that NEVI Formula Program funds should be used, in general, “for the acquisition and installation of electric vehicle charging infrastructure and serve as a catalyst for further deployment of such infrastructure.”⁵⁵ The availability of fast charging will help support the broader goals of EV adoption. However, the needs of underserved and disadvantaged communities will extend beyond the direct acquisition and installation of charging along the designated EV corridors. The development of jobs as the EV market grows and sites expand as well as more direct community charging will be important. The State is exploring the ability to use NEVI funds to support workforce development. Further, once the State’s designated EV

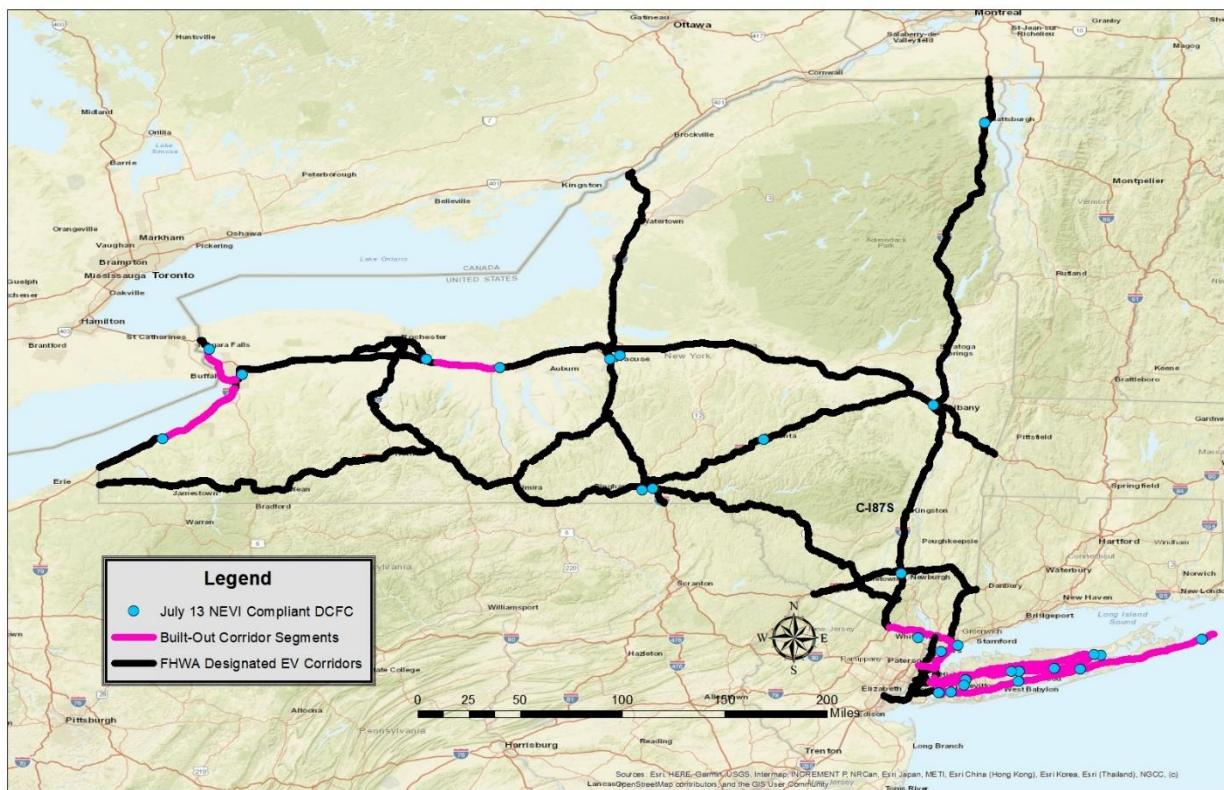
⁵⁵ U.S. Department of Transportation Federal Highway Administration, Bipartisan Infrastructure Law, Fact Sheets, available at: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nevi_formula_program.cfm.

Alternative Fuel corridors are deemed “built out”, that is, once FHWA has determined that the State’s corridors meeting NEVI criteria, there are expanded opportunities to use the funding to support electric vehicle charging within communities.

Preliminary Gap Locations

Figure 14 shows the State’s designated EV Alternative Fuel Corridors and current NEVI compliant charger locations.⁵⁶ As the map shows, all corridors will need additional compliant DCFC sites before the State’s EV Alternative Fuel corridors can be designated as corridors that meet built out standards.

Figure 14: Designated EV Alternative Fuel Corridors and NEVI Compliant Chargers, 2022



New York has identified areas along - and at the ends of - the State’s designated EV Alternative Fuel corridors that do not meet the NEVI “built out” criteria for DCFC sites. These are identified as preliminary gap areas and categorized as follows:

- “Corridor gap areas” are areas with more than 50 miles between NEVI compliant charger locations along a designated corridor.

⁵⁶ U.S. Department of Energy, Alternative Fuels Data Center, Station Data for Alternative Fuel Corridors, available at: <https://afdc.energy.gov/corridors> as of July 13, 2022.

- “Anchor gaps” are gaps between a NEVI compliant site and the end of a designated corridor. These gaps may be less than 50 miles.
- “Border gaps” are gaps between NEVI compliant sites and a state or international border along a corridor.

The terms “gap area” or “gaps” used throughout this Plan refer to all three of these types of gaps unless specified.

Based on the analysis, New York State currently has 13 corridor gap areas, 8 anchor gaps, and 10 border gaps at the ends of the designated EV corridors. Gaps areas identified by the State represent a conservative understanding of how the Joint Office will consider any exceptions proposed by a state and the considerations used to render a state’s corridors fully “built out.” FHWA, through the designation process for Alternative Fuel Corridors, has considered corridor designations from corridor endpoint to corridor endpoint. New York’s understanding is that “built out” will be measured from one NEVI compliant site to the next, meaning that a NEVI compliant site must be within one travel mile of the endpoint of a designated corridor. This means potential corridor gap locations can be less than 50 miles if the location of a compliant site is less than 50 miles from the end of the corridor (or from a State border without a connecting designated EV alternative fuel corridor and NEVI compliant site).

Current Planned Investments:

New York State partner agencies have reviewed known plans for installing NEVI compliant charger sites along the designated EV Alternative Fuel corridors during the timeline of this Plan (through third quarter 2023). At this time, these known plans for DCFC sites along the designated EV Alternative Fuel corridors include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and eight New York State Thruway Authority service area locations that construction is expected to be completed by third quarter 2023 as part of Phase 1 of its redevelopment plan, with adequate power to meet NEVI requirements.⁵⁷ Collectively, these sites are referred to as “known plans” or “known planned investments” within this Plan. Note that New York State is aware of additional plans for NEVI compliant sites, both from the continuing investments in the Thruway Authority service areas and from Electrify America investments planned in New York State, but these are not anticipated to be publicly available within the next year (the timeline of this Plan).

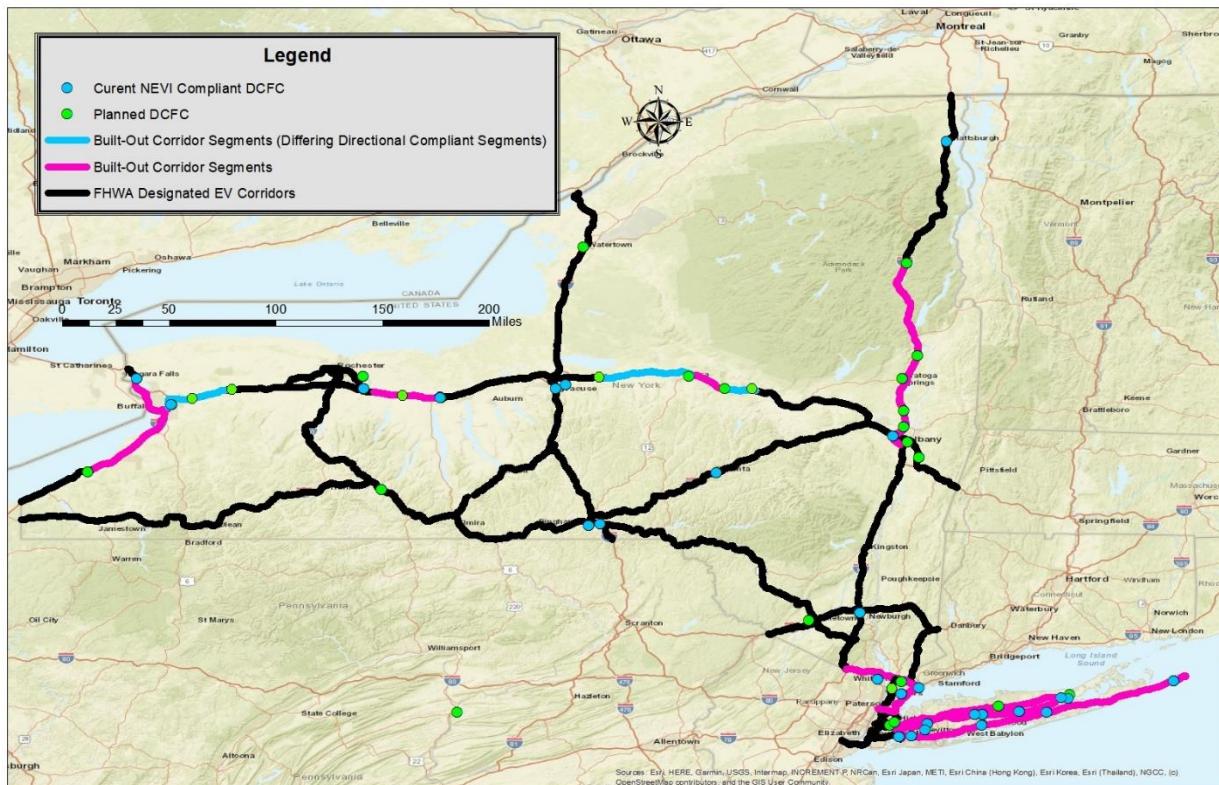
Figure 15 shows the statewide view of preliminary gap areas that are expected by third quarter 2023 following completion of known planned locations. New York will continue to assess

⁵⁷See New York State Thruway Authority Service Area Project Map, available at: <https://www.thruway.ny.gov/travelers/travelplazas/service-area-project/locations.html>, as of July 18, 2022.

progress in addressing corridor, border, and anchor gaps (gaps) along the State's designated EV Alternative Fuel corridors. New York will identify where support from the NEVI Formula Program can be leveraged to build compliant DCFC sites along the designated EV Alternative Fuel corridors to meet NEVI program "built out" criteria.

Maps 15 and 16 below show the preliminary assessment of gap areas that will remain at the time the next Plan submission is anticipated. This assumes all planned EVolve NY and New York State Thruway service area compliant DCFC sites noted above (known plans) are complete and open to the public.

Figure 15: Preliminary Gap Areas Considering Planned Investments by 2023*



* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction expected to be completed by the end of the third quarter, 2023 with adequate power to meet NEVI requirements.

Based on current information available for the known plans for DCFC charger locations that would be NEVI compliant and built by 2023, New York anticipates 31 preliminary gaps statewide, 13 preliminary corridor gap areas, 8 preliminary anchor gaps and 10 preliminary border gaps. The gap areas have been split into two areas based on the nature of the gaps as described below:

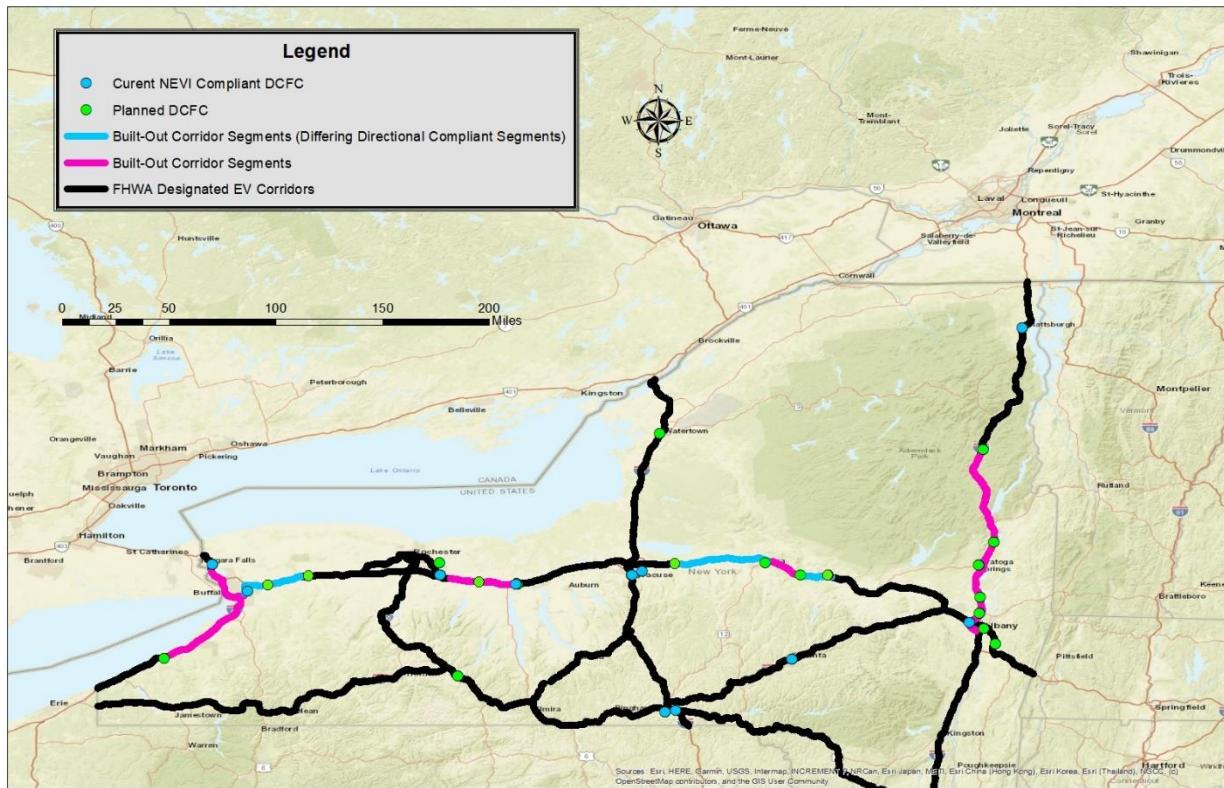
- North of I-84: There are expected to be 20 preliminary gap areas north of I-84 (13 corridor gaps and 7 border gaps with border states and Canadian provinces). Some of

these preliminary/potential gap areas will likely require more than one NEVI compliant DC FC site to meet the “built out” criteria and bring the gap area into compliance.

- I-84 and Points South (including New York City and Long Island): 11 preliminary gap areas (8 anchor gaps and 3 border gaps with other states).

The preliminary gap areas north of I-84 that are anticipated to exist in 2023 at the end of this Plan period are shown below.

Figure 16: Preliminary Corridor Gap Areas North of I-84 Considering Planned Investments by 2023*



* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction expected to be completed by the end of the third quarter, 2023 with adequate power to meet NEVI requirements.

The characteristics of these areas are described in more detail below and the table detailing these areas can be found in [Appendix F](#).

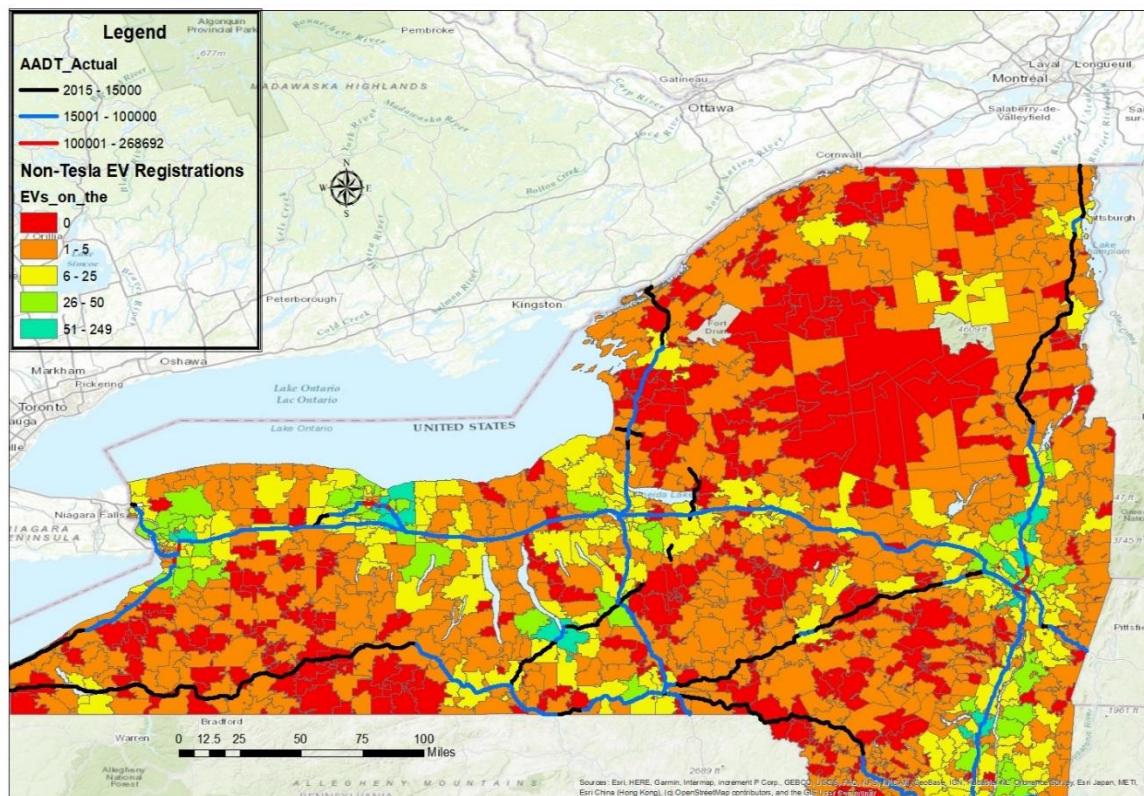
Characteristics of Gap Areas North of I-84

The maps below provide additional data related to the gap areas north of I-84. Gap areas in this portion of the State consist of remaining gaps along the Thruway corridor as the Thruway Authority’s service area reconstruction project continues. It is anticipated that once all service areas are completed, the Thruway corridor will meet NEVI corridor criteria. The remaining corridor and border gaps in this area of the State are more rural and are characterized by few

options for fast charging, low battery electric vehicle registrations, lack of population density, low average annual daily traffic (AADT) volumes and in some very rural locations, limited availability of three-phase electric power. These areas also have fewer fast charging opportunities of any kind (i.e., locations that offer fast charging, but do not meet NEVI standards).

Figure 17 below shows the current AADT for the Designated EV Corridors as well as current registrations for non-Tesla BEVs for each ZIP code area, along with the identified low volume gaps. These maps confirm that the gap areas generally are located along EV Alternative Fuel corridor segments that have the lowest AADT and in areas where there are minimal BEV registrations.

Figure 17: Average Annual Daily Traffic and Electric Vehicle Registrations North of I-84

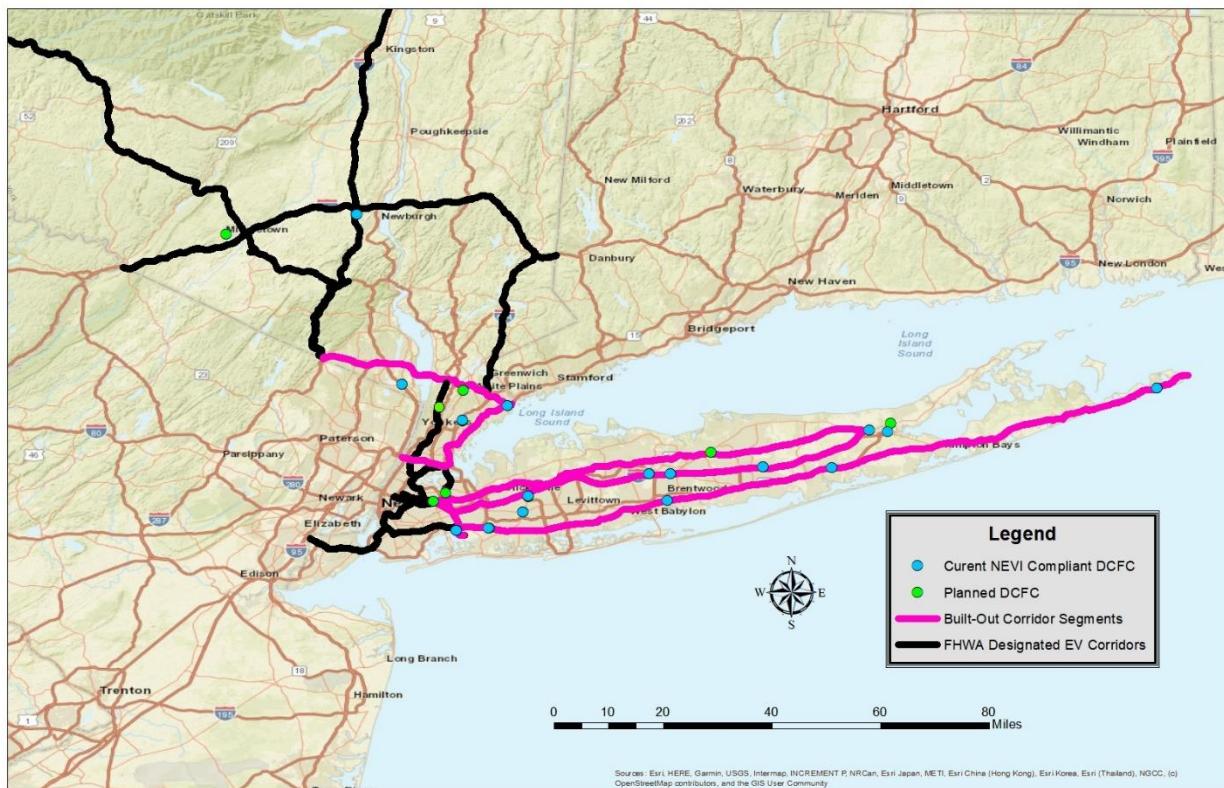


Gap Areas I-84 and Points South (including New York City and Long Island)

Gap areas on I-84 and points south (Figure 18 below) have different characteristics. All identified gaps are anchor gaps or border gaps (i.e., less than 50 miles). These areas are more heavily urbanized and are characterized by a higher number of battery electric vehicle registrations, densely populated areas, high AADT volumes and high availability of three-phase electric power with high demand on current electrical capacity and higher real estate costs. Although there are several potential NEVI compliant anchor and state border gaps in this area,

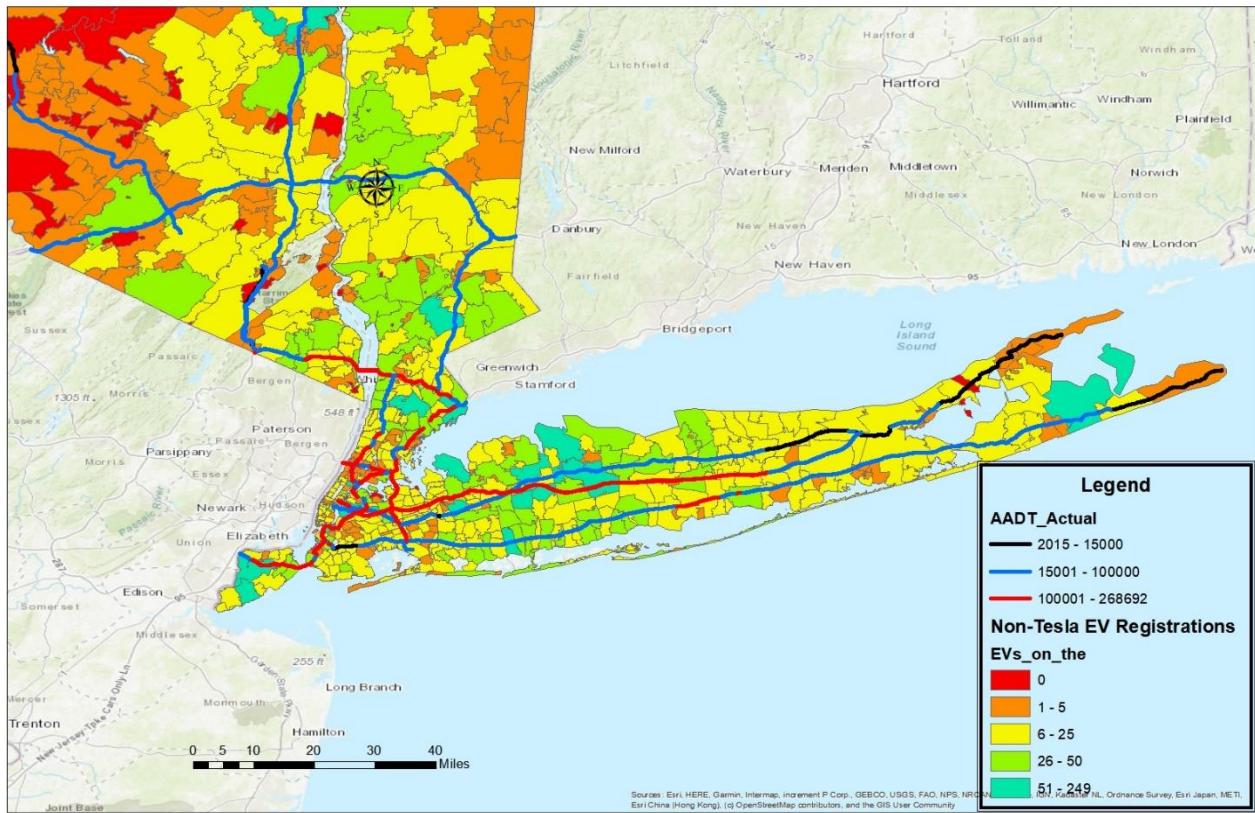
there are also many more existing EV fast charging sites in these areas, though they are not necessarily NEVI compliant. There are 19 non-NEVI compliant DCFC sites within 1 mile of the designated corridors, totaling 121 DCFC chargers. Seven of the charger stations have 10 or more chargers, with one site having 25. Of the 19 sites, 12 are Tesla sites and of the non-Tesla sites five have only one charger. It is not clear why the remaining two non-Tesla sites are not NEVI compliant.

Figure 18: Preliminary Gap Areas I-84 and Points South, Considering Planned Investments by 2023*



* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction expected to be completed by the end of the third quarter, 2023 with adequate power to meet NEVI requirements.

Figure 19: Average Annual Daily Traffic and Electric Vehicle Registrations South of I-84



Building out the Designated Alternative Fuel Corridors

New York's strategy for building out the designated corridors is still under development but will need to balance three sets of needs:

- The need to provide adequate charging services along the corridors in rural areas, where “make ready” utility infrastructure costs and the anticipated low usage of stations can inhibit private investment in DCFC sites; access to cellular service limits the connectivity for site development; and there are limited existing NEVI-compliant host sites with required amenities. These areas include gaps along I-87, I-81, I-88 and I-90 as well as border locations with Pennsylvania along I-86 in western New York. (See [Appendix H](#) for an example of one gap analysis.)
- The need for strategic DCFC opportunities in urban areas. Consideration will need to be given to how the grid can accommodate NEVI compliant DCFC sites and to identifying locations for publicly available NEVI compliant host sites that can accommodate the needs of urban EV drivers where there is already a high growth in demand for fast chargers, particularly by commuters and others that utilize designated EV corridors on a regular basis.

- The desire to accelerate the ability to use NEVI funds beyond the designated EV corridors for community and other localized EV charging needs that are not conducive to a designated corridor approach. These may be publicly accessible community chargers that serve the needs of multi-unit housing residents or other important connecting roadways and routes, including those that serve tourist destinations that may not be located along a designated EV corridor.

To fill existing corridor gaps, NYSDOT and its partner agencies are considering the following:

- Use of NEVI Formula Program funding to complement/leverage existing plans and programs. These include leveraging and complementing the EV Make-Ready Program, EVolve NY Program and VW Settlement-funded DCFC Program described earlier. It should be noted, however, that these programs are also evolving:
 - The EV Make-Ready program will undergo a mid-point review beginning no later than this October. At the conclusion of the review, the Public Service Commission will consider any proposed modification to the program design, budget, eligibility criteria and a host of other considerations relevant to the programs funded in the July 2020 Order. Information learned during this review related to deployment of DCFC sites will be considered by NYSDOT and its partner agencies. DPS Staff, who will develop the proposed changes to the EV Make-Ready program for consideration by the Public Service Commission, will also coordinate with NYSDOT to ensure alignment with the NEVI Formula Program, to the extent possible during this timeframe.
 - The Public Service Commission is developing a commercial tariff or operating cost relief program for EV charging that will provide an alternative to traditional demand-based commercial tariffs. The economics of potential sites, particularly in lower use areas will be directly impacted by this proceeding, which is expected to be completed by the end of 2022.
- While New York State seeks to support the development of DCFC in identified gaps within the designated alternative fuel corridors, the State is still considering how to do this strategically and effectively.
- New York State will need to consider the economics of high powered DCFC stations in rural areas of the State because of the low AADT and lack of existing station host sites along the designated corridors. In addition, New York State will need to consider the data reporting and station reliability requirements when designing funding opportunities and oversight requirements.

The NPRM for the minimum standards and technical requirements of the NEVI Formula Program was released on June 22, 2022, with a sixty-day comment period through August 22, 2022. Any solicitation that may be issued as part of this program, or sites constructed or upgraded to meet NEVI standards will need to comply with these requirements, once finalized. Based on the NPRM, these will include:

- Access and availability of the chargers 24 hours a day, seven days a week and on a year-round basis;
- Ensuring minimum annual uptime of 97 percent for the charging ports;
- Securing equitable and accessible payment options (draft NPRM suggests payment options include contactless payment methods, that contactless payment be accepted from all major debit and credit cards and that access and service are not restricted by membership or payment method type);
- Equipment will need to meet certification requirements (NPRM calls for Occupational Safety and Health Administration Nationally Recognized Testing Laboratory);
- Ensuring physical security (NPRM suggests considerations such as lighting, siting, driver and vehicle safety, fire prevention, tampering, charger locks and illegal surveillance of payment devices, and cybersecurity strategies to mitigate vulnerabilities);
- Supplying data as may be required by the final NEVI standards, including availability of real-time data;
- Compliance with Americans with Disabilities Act (ADA) of 1990;⁵⁸
- Compliance with any adopted technical standards for interoperability such as ISO 15118, Open Charge Point Protocol (OCPP) and Open Charge Point Interface 2.2.;
- Compliance with standards for traffic control devices or on-premises signage; and
- Installation, operation, and maintenance to be performed by a skilled workforce with the appropriate licenses.

New York State will shape its use of NEVI Funding Program funds as more details become available.

Medium/Heavy-Duty Charging

New York State recognizes the importance of medium/heavy-duty vehicles and the growing need for charging as fully electric medium- and heavy-duty all-electric vehicles become available. However, the medium- and heavy-duty electric vehicle market is still developing, and the needs of commercial vehicles and drivers is materially different from those of personal vehicles and drivers. The larger dimensions of commercial vehicles require different DCFC station design considerations such as the ability to pull-through and access to longer cables. Commercial vehicle charging sites will also need to consider the power needs of these vehicles,

⁵⁸"EV charging stations must comply with ADA and Section 504 requirements and be accessible to and usable by individuals with disabilities, including those using wheelchairs or other assistive equipment. Key considerations include safety and ease of use. Specifically, designs for EV charging stations must ensure adequate space for exiting and entering the vehicle, unobstructed access to the EV charging stations, free movement around the EV charging stations and connection point on the vehicle, and clear paths and close proximity to any building entrances." NEVI Formula Program Q&A, p. 4: Available at:

https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/nevi_program_faqs.pdf.

and should consider the needs of commercial drivers, such as the need for longer dwell times and the availability of more comprehensive amenities.

The initial focus of the NEVI Formula Program and New York State's efforts is on light duty passenger battery electric vehicles. However, New York will undertake outreach to the commercial vehicle community to better understand commercial medium/heavy duty electric vehicle needs and opportunities, which may provide for site locations that both meet corridor build out requirements and can accommodate both light and medium/heavy duty electric vehicle charging or future proofing strategic site locations to accommodate medium/heavy duty electric vehicle charging in the future.

Risks/Challenges

- Compliance with Federal Rules: All NEVI Formula Program Funds are subject to project administration and funding requirements (2 Code of Federal Regulations 200) as well as the rules of 23 United States Code that govern highway projects construction and management, to the extent NEVI funds are used for construction of, or material acquisition for DCFC stations including all make ready infrastructure required to service the station. Examples of program requirements that need to be met:
 - 23 USC §111 which precludes charging for the use of commercial facilities (including EV chargers) within interstate rest areas if such rest areas were constructed after 1960 (the New York State Thruway Authority is grandfathered) using federal highway funds;
 - Compliance with Disadvantaged Business Enterprise program regulations;⁵⁹
 - Compliance with the Americans with Disabilities Act;⁶⁰
 - Compliance with Buy America requirements;⁶¹
 - Compliance with the National Environmental Policy Act (NEPA),⁶²
 - Compliance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Uniform Act)⁶³
 - Ownership rules for property purchased with federal funds; and
 - Compliance with federal rules related to how income or revenue earned from the operation of an EV charging stations can be used.

NYSDOT continues to work with its FHWA Division office to seek additional guidance on how these rules apply to this program and how to best support potential recipients in meeting all requirements. The State is exploring options for using the NEVI Formula

⁵⁹ 49 CFR Parts 23 and 26.

⁶⁰ 42 USC Ch. 126.

⁶¹ 41 USC Ch. 83.

⁶² 42 USC Ch. 55.

⁶³ 42 USC Ch. 61.

Program funding efficiently to support the installation and operation of NEVI compliant chargers to build out New York's designated EV Alternative fuel corridors, but the specific contracting mechanism to deploy the NEVI funds is still under development.

- Supply Chain: While utilities in New York typically stock transformers to support new customers or replace older equipment, these stocks may become depleted and lead times for new transformers are now in excess of one year. Lead times on electrical switchgear are also increasing. This makes the desired 6-month timeline from signed contract to completion of a NEVI project unrealistic.
- Power/Site Host Capabilities: Some areas along New York State's designated EV alternative fuel corridors have little or no power, and few or no appropriate site locations for DCFC stations. Sites with poor cellular reception are also problematic for deploying DCFC equipment.
- Incentives: Setting appropriate incentives to encourage new investment and maximize opportunities to establish new - or upgrade existing - charging sites are still under consideration.
- Technical requirements: Meeting technical requirements is a challenge/risk as the technical standards are still under development. New York State will comply with all federal technical standards, including cybersecurity, once these are finalized.
- Workforce: Ensuring adequately trained workforce exists to support the operation and maintenance of DCFC stations to meet NEVI program requirements.

Program Measures/Monitoring

The choice of measures and metrics will depend, in part, on the regulations and requirements that result from the current Notice of Proposed Rulemaking (NPRM) for additional NEVI program requirements. The NPRM does address proposed requirements for data collection which may impact the list below.

Initial Metrics under consideration for the NEVI Formula Program funding include:

- NEVI compliant DCFC sites completed;
- Number of charging sessions on NEVI supported DCFC chargers;
- Total energy (kWh) dispensed and average energy (kWh) per session on NEVI-supported DCFC chargers;
- Average power level (kW) per session, average power level (kW) during each 15-minute interval and peak kW for each 15-minute interval on NEVI-supported DCFC chargers;
- Average vehicle connection time and average session time;
- Uptime for NEVI funded DCFCs located within EV Designated Alternative Fuel Corridors (97 percent minimum). Reasons for downtime/time to address;
- Alternative Fuel Corridor Gaps remaining;

- Average time from contract signing to public opening of a project funded with NEVI funds;
- Change in equipment and installation costs over time;
- Unit cost (\$/kWh) to drivers;
- NEVI DCFC sites within ¼ mile of a New York State defined disadvantaged community or federal Justice40 defined area;
- Age of NEVI compliant chargers (indication of remaining useful life);
- Number of workforce training programs funded and candidates trained (with consideration of DAC benefit); and
- Number of workforce training opportunities resulting in successful employment (with consideration of DAC benefits).

Planned Use of NEVI Funds

October 2022 to September 2023

Over the next year, New York State will continue to determine the most efficient/effective way to provide NEVI Funding Program incentives to support the installation and operation of electric vehicle infrastructure and the availability of a trained workforce to support the operation and maintenance of this infrastructure. Several options are under consideration:

- Potential use of NEVI Formula Program funding for operations and maintenance incentives to support the construction of new - or upgrade of existing - facilities to NEVI compliant standards.
- Potential use of NEVI Formula Program funds to complement existing New York State programs such as Make-Ready and EVolve NY.
- Potential use of NEVI Formula Program funds for capital installations, consistent with 23 USC requirements.
- Potential use of NEVI Formula Program funds for workforce development, exploring how these funds can complement existing programs.

As of the time of the writing of this Plan, key details are still under development including:

- Outcome of federal NPRM related to technical standards for the NEVI Formula Program;
- Outcome of the commercial tariff proceeding underway in New York State; and
- Clearer understanding from FHWA of how NEVI Formula Program funds can be effectively administered consistent with all federal requirements.

Key to the continued development of this Plan will be additional outreach to stakeholder groups including industry experts, potential site hosts, municipalities and Tribal Nations, along identified gaps and disadvantaged community representatives. The State will also be working closely with the Joint and municipal utilities and rural cooperative electric utilities, as needed,

to consider power needs and opportunities within gap areas. The State will also consider all public comments received on this Plan and through its website to inform continued program development and future Plan updates.

New York would expect to have a plan for how the State will make funding available before the submission of the next required Plan update.

Five Year Goals for the NEVI Formula Program Funds

The State will continue to monitor NEVI-compliant sites along its EV Alternative Fuel Corridors with a goal of reaching “built out” status for all corridors within the State, based on current criteria, before the end of the five-year program period. This may require a request for exceptions if adequate power is not available in certain locations; if sites to meet NEVI compliance are not reasonably available at corridor ends (anchor or border sites); or if NEVI compliant sites are just beyond the 50-mile threshold.

The State’s longer-term goals are to continue to build out the State’s EV charging network both along the designated corridors and on other important connecting roadways and routes. The State also will continue to explore more complete coverage to meet the emerging needs of medium- and heavy-duty all electric trucks as well as public transportation and for-hire fleets. NEVI Formula Program funding is one important source that will complement other State programs and initiatives as the State’s climate work continues.

Appendix A: Climate in New York State

New York State's climate can be described as humid continental. The average annual temperature varies from about 40°F in the Adirondacks to about 55°F in the New York City metropolitan area. The wettest parts of the state, including parts of the Adirondacks and Catskills, the Tug Hill Plateau, and portions of the New York City metropolitan area, average 50 inches of precipitation per year. Mountain effects produce localized amounts of precipitation in excess of 60 inches per year at inland locations. Parts of western New York are relatively dry, averaging about 30 inches of precipitation per year. In all regions, precipitation is relatively consistent in all seasons, although droughts and floods are not uncommon.⁶⁴

Average Temperature⁶⁵

- Observed: New York has warmed at an average rate of 0.25°F per decade since 1900. Annual average temperatures have increased in all regions of the state. More recently, warming has accelerated: since 1970, the statewide annual average temperature has risen about 0.6°F per decade, with winter warming exceeding 1.1°F per decade.
- Projected: Annual average temperatures in New York State are projected to rise 4.1°F to 6.1°F by the 2080s. Climate change modeling predicts that the anticipated increases in temperature will not be uniform across New York State, and some areas may be more affected by these changes than others. By 2100, some regions of New York could experience an increase in average temperature of more than 12°F. Throughout the state, summers will become warmer and winters milder.

Extreme Temperatures⁶⁶

- Observed: The frequency of cold waves has decreased across the contiguous U.S since the early 1900s, while the frequency of heat waves has increased since the mid-1960s.
- Projected: The total annual number of individual hot days, and the annual frequency and duration of heatwaves in New York State are expected to increase as the century progresses. Conversely, the number of extreme cold days, of either of the above two definitions, will likely decrease.

Average Precipitation⁶⁷

- Observed: Most regions of the state have experienced an increase in average annual precipitation over the past century. In addition to increased mean annual precipitation

⁶⁴ Responding to Climate Change in New York State, available at: <https://www.nyserda.ny.gov/climaid> 2014 Supplement – Updated Climate Projections Report. Section 2.1 Average Temperature and Precipitation (page 2).

⁶⁵ New York State Department of Environmental Conservation, Observed and Protected Climate Change in New York State: An Overview, August 2021, Average Temperature, p. 3, available at:

https://www.dec.ny.gov/docs/administration_pdf/ccnys2021.pdf

⁶⁶ Id.

⁶⁷ Id. at 5.

across New York State, both year-to-year variability and multiyear variability of precipitation have become more pronounced.

- **Projected:** Natural variability in precipitation amounts across time and geographic areas is large, so precipitation projections are less certain than those for temperature. Most of the increase in total precipitation is expected in winter and spring, with little change expected in the summer.

Extreme Precipitation⁶⁸

- **Observed:** The nationwide trend of increasingly frequent extreme precipitation events has been particularly pronounced in the Northeast, including New York. The proportion of total annual precipitation falling in the heaviest 1% of events increased by 38% in the Northeast, between the periods 1901–1960 and 1986– 2016. More recently, from 1958–2016, this increase was 55%.
- **Projected:** ClimAID projects increases in the frequency and duration of precipitation events with more than one, two, and four inches of precipitation at daily timescales, and that the frequency and severity of downpours at sub-daily or even sub-hourly timescales are also very likely to increase. For example, by the end of the century, even a lower greenhouse gas emissions scenario is expected to bring increases in the proportion of annual precipitation falling in the heaviest 1% of events to greater than 40% over the period 1986– 2015.

Drought⁶⁹

- **Projected:** Although projections of drought have not been quantified, Horton et al, project that late summer, short-term droughts will become more frequent toward the end of the century, but it is not known if the risk of multiyear droughts will change. The effects of drought will be exacerbated by increased evaporation of surface moisture caused by higher temperatures.

Snowfall⁷⁰

- **Observed:** The state averages about 40 inches of snow annually, but annual snowfall varies considerably across the state, from more than 175 inches per year in the Adirondacks and Tug Hill Plateau to less than 36 inches per year on Long Island and in the New York City metropolitan area. However, southern portions of the state can experience heavy snowfall events in excess of 20 inches, associated with nor'easters.
- **Projected:** Snowfall in New York is likely to become less frequent, and the combination of less early winter snowfall and earlier snowmelt will lead to a shorter snow season; fewer days with snow on the ground; decreased snow depth and water equivalent. The

⁶⁸ Id.

⁶⁹ Id. at 6.

⁷⁰ Id.

degree to which the intensity of individual snowstorms will change is uncertain. Cold parts of the state could continue to experience heavy snowfall events due to the capacity of the warmer atmosphere to hold more moisture.

Sea Level Rise⁷¹

- Observed: Sea level rise is the most directly observable effect of climate change in New York State. Sea level rise can result in sunny-day (often called nuisance) flooding during high tides, permanent inundation, and deeper and more extensive flooding during coastal storm events. Sea level along the State's oceanic coast and in the Hudson River has risen by more than 1 foot since 1900, or about 1.2 inches per decade.
- Projected: New York State has adopted science-based sea level rise projections by regulation, applicable to the State's entire tidal coastline, which includes the tidal coast of Long Island and the New York City and the Hudson River to the federal dam in Troy.

Coastal Storms⁷²

Coastal storms can strike the State in two forms: tropical cyclones (hurricanes and tropical storms) and extratropical cyclones (nor'easters). Tropical cyclones generally occur between July and October and can bring storm surges, high winds and heavy precipitation. Nor'easters tend to strike during cooler months and are generally weaker than tropical storms. However, their longer duration can extend their period of high winds, flooding and wave action over several tide cycles. Higher flood waters, attributable to anthropogenic sea level rise, have caused measurably greater damage during recent storms including Hurricane Sandy (2012). Warming waters may also drive stronger winds and additional moisture in a warmer atmosphere can result in heavier precipitation during such storms.

- Observed: Approximately 70 tropical or subtropical cyclones have struck New York as hurricanes or tropical storms since the mid-nineteenth century. The frequency, intensity, and duration of extreme precipitation events and coastal storms and flooding are increasing, exemplified by recent patterns of extreme weather.
- Projected: It is unclear how the number of tropical cyclones will change. Although the number of the most intense hurricanes forming in the North Atlantic Basin will likely increase, the implications of this increase for New York State are unclear as the tracks of tropical storms are highly variable and poorly understood. Precipitation amounts associated with tropical cyclones will likely increase. Projected changes in frequency or severity of nor'easters are not clear, but one modeling study projected a westward shift in nor'easter tracks, potentially making nor'easter landfall in the State more likely. Any increase in frequency or intensity of coastal storms could result in more frequent coastal

⁷¹ Id. at 8.

⁷² Id. at 9.

flood events. However, even absent changes in storm frequency or intensity, sea level rise alone will result in an increase in coastal floods of any particular depth.

Appendix B: New York State Electric Vehicle Supportive Programs, Laws and Regulations

Programs:

Drive Clean Rebate for EVs (<https://www.nyserda.ny.gov/Drive-Clean-Rebate>)

- **General Description:** Drive Clean Rebate is a point-of-sale rebate of up to \$2,000 for the purchase or lease of new all-electric and plug-in hybrid passenger vehicles. Participating car dealers provide discounts to their customers at the time of sale and apply to NYSERDA for reimbursement. This is in addition to the federal tax credit, which currently offers up to \$7,500 per vehicle for qualifying manufacturers.

New York Truck Voucher Incentive Program (NYTVIP) (<https://www.nyserda.ny.gov/All-Programs/Truck-Voucher-Program>)

- **General Description:** NYTVIP provides point-of-sale rebates to fleets across New York State that purchase or lease new medium- and heavy-duty electric trucks and buses (weight class 3 through 8) and scrap a similar older diesel vehicle that is part of their fleet. Participating truck or bus dealers provide discounts to their customers at the time of sale for reimbursement.

New York City Clean Trucks Program (NYCCTP) (<https://www.nycctp.com/about/>)

- **General Description:** NYCCTP provides point-of-sale rebates to commercial truck owners operating within the program-approved New York City Industrial Business Zones that purchase or lease new medium- and heavy-duty electric trucks (weight class 4 through 8) and scrap a similar older diesel vehicle that is part of their fleet. Participating truck dealers provide discounts to their customers at the time of sale for reimbursement.

Charge Ready NY (<https://www.nyserda.ny.gov/All-Programs/ChargeNY/Charge-Electric/Charging-Station-Programs/Charge-Ready-NY>)

- **General Description:** Charge Ready NY provided rebates of \$4,000 per plug (\$4,500 per plug in disadvantaged communities) to install Level 2 EV charging stations at public, workplace, and multifamily locations statewide. Funding for this program was exhausted in September 2021 but New York State may offer a different Level 2 charging program in the future.

EV Make-Ready Program

18-E-0138, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020). Available at:

<https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-E-0138&submit=Search>)

- **General Description:** This program supports the development of electric infrastructure and equipment necessary to accommodate an increased deployment of EVs within New York State. The program provides entities seeking to install Level 2 and/or Direct Current Fast Charging incentives that will offset a large portion of, or in some cases, all of the infrastructure costs associated with preparing a site for EV charger installation.

NYS Tax Credit for EV Charging Stations

[\(https://www.tax.ny.gov/pit/credits/alt_fuels_elec_vehicles.htm\)](https://www.tax.ny.gov/pit/credits/alt_fuels_elec_vehicles.htm)

- **General Description:** NYS offers tax credits of 50% of the cost of an EV charging station, up to \$5,000, for EV charging station installations at public and workplace locations, available through 12/31/27.

EVolveNY Program (<https://evolveny.nypa.gov/>)

- **General Description** This program will provide up to \$250 million to build up to 800 EV charging stations statewide by 2025, with a focus on Direct Current Fast Charging stations along major travel corridors.

NYSERDA DCFC Program

- **General Description:** This program, administered by NYSERDA in partnership with the NYS Department of Environmental Conservation, is investing \$11 million from the Volkswagen Settlement funds in DCFC stations across upstate New York. Initial rounds of the program in 2021 and 2022 targeted stations in six [Regional Economic Development Council](#) (REDC) areas (Western NY, Finger Lakes, Central NY, Southern Tier, Mohawk Valley, and North Country) that at the time had fewer DCFC stations.⁷³ The program selects a charging station developer to install four plugs at three or four different locations in each REDC. The funding covers up to 80% of the capital costs of the stations. Two rounds have been completed

⁷³ Additional information regarding the Volkswagen-settlement Funded DCFC program is available at: <https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-11-12-governor-cuomo-announces-11-million-in-Volkswagen-settlement-funds-to-expand-electric-vehicle-fast-charging-stations-in-New-York>.

(2021, 2022) and are expected to result in 20 sites. Round 3 is expected to be made available in 2022.

Municipal ZEV and ZEV Infrastructure Rebates and Grants

(<https://www.dec.ny.gov/energy/109181.html>)

https://www.dec.ny.gov/docs/administration_pdf/21zevcvfs.pdf

https://www.dec.ny.gov/docs/administration_pdf/22zevcvfs.pdf

https://www.dec.ny.gov/docs/administration_pdf/22zevinfs.pdf

- **General Description:** These programs offer grants to municipalities for up to \$7,500 per vehicle for the purchase of EVs and from 80-100% of the EV charging station costs (based on the median household income of the municipality in which the infrastructure will be installed).

NYS Thruway and NYC Bridge & Tunnel Discounts

(<https://www.thruway.ny.gov/ezpass/greentag.html>)

- **General Description:** NYS Thruway Authority offers a 10% discount on tolls to efficient vehicles, including EVs, if they apply for a special EZ-Pass. The Metropolitan Transportation Authority (MTA) and Port Authority of New York and New Jersey (PANYNJ) offer a 10% discount on NYC bridges and tunnels at off-peak hours to the same types of vehicles.

DCFC Per-Plug Incentive Program

(https://jointutilitiesofny.org/ev/dcfc_incentive_program#:~:text=The%20DCFC%20Per%2DPlug%20Incentive,by%20offsetting%20electric%20delivery%20cost)

- **General Description:** The DCFC Per-Plug Incentive Program (DCFC PPI) provides an annual declining per-plug incentive to qualifying public DCFC operators. The purpose of the incentive is to support DCFC while utilization is relatively low by offsetting electric delivery cost.

Multi-State Light –Duty Zero Emission Vehicle MOU and Action Plan

- New York State was an original signatory to the Light-duty Zero Emission Vehicle MOU (2013). The signatory states agreed to coordinate actions to ensure successful light-duty zero-emission vehicle programs and created a multi-state ZEV Taskforce. The initial signatory states agreed to the collective target of at least 3.3 million light-duty ZEVs on the road by 2025 and to establish fueling infrastructure to support this number of

vehicles. The ZEV Taskforce developed a light-duty ZEV Action plan to accomplish the goals of the MOU (2014, 2018).

Multi-State Medium- and Heavy-duty Zero Emission Vehicle MOU

- New York State is one of 19 current signatory jurisdictions to the Multi-State Medium- and Heavy-duty Zero Emission Vehicle MOU (2021/2022).⁷⁴ These jurisdictions in the United States and Canada have committed, through the Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding (MOU), to work to slash greenhouse gas emissions and air pollution by accelerating the market for zero-emission trucks, vans and buses.⁷⁵ The signatories agreed to strive towards making at least 30% of all medium- and heavy-duty vehicle sales to be ZEVs by no later than 2030. In the United States, these jurisdictions collectively represent 43 percent of the population, 50 percent of the economy and 35 percent of the nation's MHD vehicles.⁷⁶ The ZEV Taskforce is developing a Medium- and Heavy-duty ZEV Action Plan.

Supportive Laws:

Climate Leadership and Community Protection Act (CLCPA) <https://climate.ny.gov/>

- On July 18, 2019, the CLCPA was signed into law. New York State's CLCPA is among the most ambitious climate laws in the world and requires New York to reduce economy-wide greenhouse gas emissions 40 percent by 2030 and no less than 85 percent by 2050.

Zero-emission Requirements for the Sale of New Vehicles:

<https://www.nysenate.gov/legislation/bills/2021/a4302>

- Chapter 423 of the Laws of 2021 provides that 100% of in-state sales of new passenger cars and trucks shall be zero-emissions by 2035. Sales of medium-duty and heavy-duty vehicles shall be zero-emissions by 2045, where feasible. It is a further goal of New York State to transition to 100% zero-emission off-road vehicles and equipment sales by 2035.

⁷⁴ The Participating jurisdictions include: California, Colorado, Connecticut, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, District of Columbia and Quebec.

⁷⁵ See Multi-State Medium- and Heavy-Duty Zero-Emission Vehicle Memorandum of Understanding (July 2020), available at: <https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/>.

⁷⁶ Census Bureau, 2020 Population and Housing State Data (2020) available at: <https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html>; Bureau of Economic Analysis, GDP and Personal Income, available at: <https://apps.bea.gov/iTable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1> (2020 Real GDP); Atlas Public Policy, EV Hub (2020), available at: <https://www.atlasevhub.com/materials/medium-and-heavy-duty-vehicle-registrations-dashboard/#06f2a5dfc39daf9cc> (IHS market data).

Commercial Tariff for Electric Vehicle Charging

<https://www.nysenate.gov/legislation/bills/2021/s7836>

- This law signed December 31, 2021, and amended March 18, 2022, directs the Public Service Commission to commence a proceeding to establish alternatives to traditional demand-based rate structures, other operating cost relief mechanisms, or a combination thereof (collectively, “Solutions”) to facilitate faster charging for light duty, heavy duty, and fleet electric vehicles. The Legislation requires the Public Service Commission to approve or modify a proposed Solution made by the Department of Public Service by the end of 2022, taking the relative costs and benefits into consideration.

Supportive Regulations:

California Light-duty Low and Zero Emission Vehicle Regulation (Advanced Clean Cars 1 regulation) – Adopted in NY <https://www.dec.ny.gov/chemical/8575.html#Light>

- The federal Clean Air Act allows New York State to adopt California's emission standards. New York State's LEV and ZEV programs are modeled after the California ACC1 program.⁷⁷ It applies to all new light-duty, on-road motor vehicles, motor vehicle engines and emission control systems delivered for sale in the State. The LEV program requires all new light-duty vehicles sold in the State to meet California emissions standards. Applicable light-duty manufacturers also have ZEV sales requirements which increase by model year (MY) from 2012-2025.

California Light-duty Low and Zero-Emission Vehicle Regulation (Advanced Clean Cars 2 regulation) – Under Development in California (Adoption, Fall 2022)⁷⁸

- Under the proposal, light-duty manufacturer will have increasing ZEV sales requirements from MY 2026-2035, leading to 100% ZEV sales in MY 2035 and beyond.

California Medium-and Heavy-duty ZEV Regulation (Advanced Clean Trucks regulation) – Adopted in NY December 29, 2021

<https://www.governor.ny.gov/news/governor-hochul-announces-adoption-regulation-transition-zero-emission-trucks>

https://www.dec.ny.gov/docs/air_pdf/proposed218.pdf

<https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>

⁷⁷ California Air Resources Board, Zero-Emission Vehicle Program, available at: <https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-program/about>.

⁷⁸ California Air Resources Board, Zero-Emission Vehicle Program, Public Workshop on Advanced Clean Cars II, Supporting Media, available at: <https://ww2.arb.ca.gov/events/public-workshop-advanced-clean-cars-ii-1>.

Appendix C: Existing NEVI Compliant Locations within 1 Mile of a NYS Designated EV Alternative Fuel Corridor

The following table lists the DCFC locations identified by the Joint Office as being NEVI compliant, as of July 13, 2022.

AFDC Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of Connectors	EV Network (if known)	CCS Ports	EV CCS 150+ kW Port Count (Beta)
152450	DCFC	NY 27	2034 Green Acres Mall, Valley Stream, NY, 11581	6	Electrify America	4	4
166207	DCFC	I-90	2500 Walden Ave, Cheektowaga, NY, 14225	5	Electrify America	4	4
166226	DCFC	I-90	655 New York 318, Waterloo, NY, 13165	5	Electrify America	4	4
168359	DCFC	I-90	10401 Bennett Road, Fredonia, NY, 14063	5	Electrify America	4	4
168489	DCFC	I-84/I-87	1201 Route 300, Newburgh, NY, 12550	5	Electrify America	4	4
169948	DCFC	I-90	141 Washington Ave. EXT, Albany, NY, 12205	7	Electrify America	6	6
170247	DCFC	NY 27	70 South Euclid Ave, Montauk, NY, 11954	5	Electrify America	4	4
170300	DCFC	I-495	2950 Horseblock Rd, Medford, NY, 11933	5	Electrify America	4	4
185374	DCFC	I-88	4968 NY-23, Oneonta, NY, 13820	6	Electrify America	4	4
192946	DCFC	I-90	3469 ERIE BLVD, Syracuse, NY, 13214	5	Electrify America	4	4
193813	DCFC	I-81	415 E Brighton Ave, Syracuse, NY, 13210	6	Electrify America	4	4
194919	DCFC	I-678	130th Place Between E & W Hangar Road, Queens, NY, 11430	20	Electrify America	10	10
199188	DCFC	I-86	2 INDUSTRIAL PARK DRIVE, Binghamton, NY, 13904	5	Electrify America	4	4

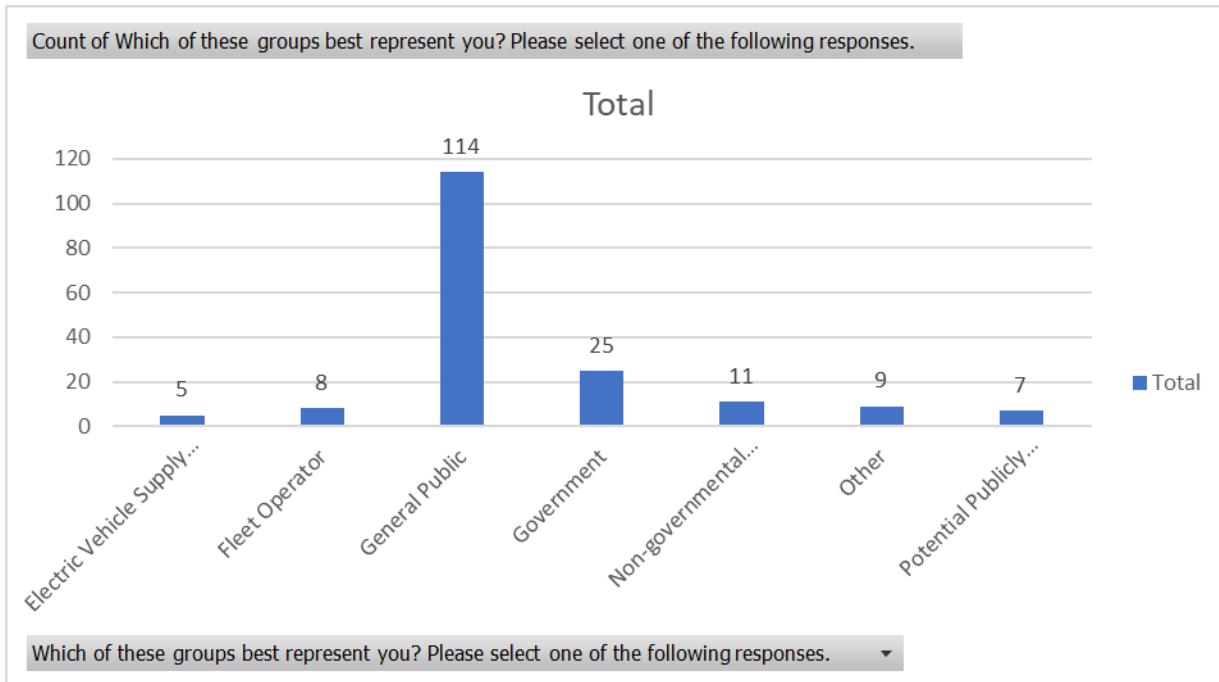
AFDC Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of Connectors	EV Network (if known)	CCS Ports	EV CCS 150+ kW Port Count (Beta)
199201	DCFC	I-495	694 Motor Pkwy, Hauppauge, NY, 11788	5	Electrify America	4	4
202274	DCFC	I-87	25 Consumer Square, Plattsburgh, NY, 12901	6	Electrify America	4	4
203023	DCFC	I-495	207-225 Glen Cove Rd, Carle Place, NY, 11514	5	Electrify America	4	4
203302	DCFC	I-81/I-86	33 South Washington, Binghamton, NY, 13903	6	Electrify America	4	4
205468	DCFC	I-190	7200 Niagara Falls Blvd, Niagara Falls, NY, 14304	6	Electrify America	4	4
207917	DCFC	NY 27	383 N Sunrise Service Rd, Manorville, NY, 11949	5	Electrify America	4	4
211861	DCFC	Out of Bounds	132-178 Fulton Ave, Hempstead, NY, 11550	5	Electrify America	4	4
212146	DCFC	NY 27	1701 Sunrise Hwy, Bayshore, NY, 11706	6	Electrify America	6	6
213986	DCFC	I-90	441 Commerce Dr, Victor, NY, 14564	6	Electrify America	4	4
219480	DCFC	I-95	77 Quaker Ridge Rd, New Rochelle, NY, 10804	4	Electrify America	4	4
221459	DCFC	I-287	45 Orangetown Road, Orangeburg, NY 10962	4	Electrify America	4	4
221460	DCFC	I-495 and NY-25	209 East Avenue, Riverhead, NY 11901	4	Electrify America	4	4
221920	DCFC	I-495 and NY-25	1820 Old Country Road, Riverhead, NY 11901	4	Electrify America	4	4
222004	DCFC	I-95	631 Midland Ave, Rye, NY 10580	4	Electrify America	4	4
223049	DCFC	I-495	656 Commack Rd, Commack, NY 11725	4	Electrify America	4	4

Source: U.S. Department of Energy, Alternative Fuels Data Center, Station Data for Alternative Fuels Corridor, New York, available at: <https://afdc.energy.gov/corridors>

Appendix D: Summary of Public Survey Responses

As of July 22nd, 2022, New York State had received 179 responses to the general survey available on its NEVI website⁷⁹. Nearly two-thirds of the respondents identified as General Public.

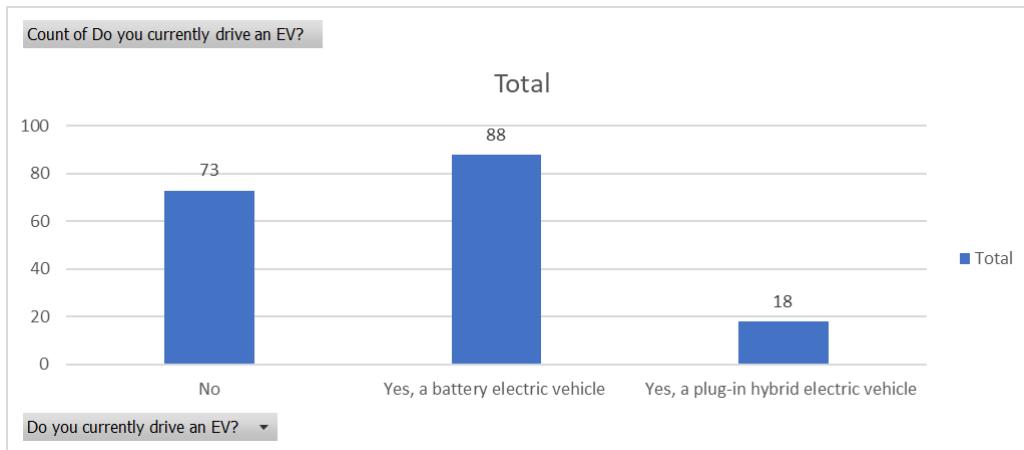
Figure D-1:Groups in the Survey Response



⁷⁹ Available at: <https://nyserda.seamlessdocs.com/f/NEVIsurvey>

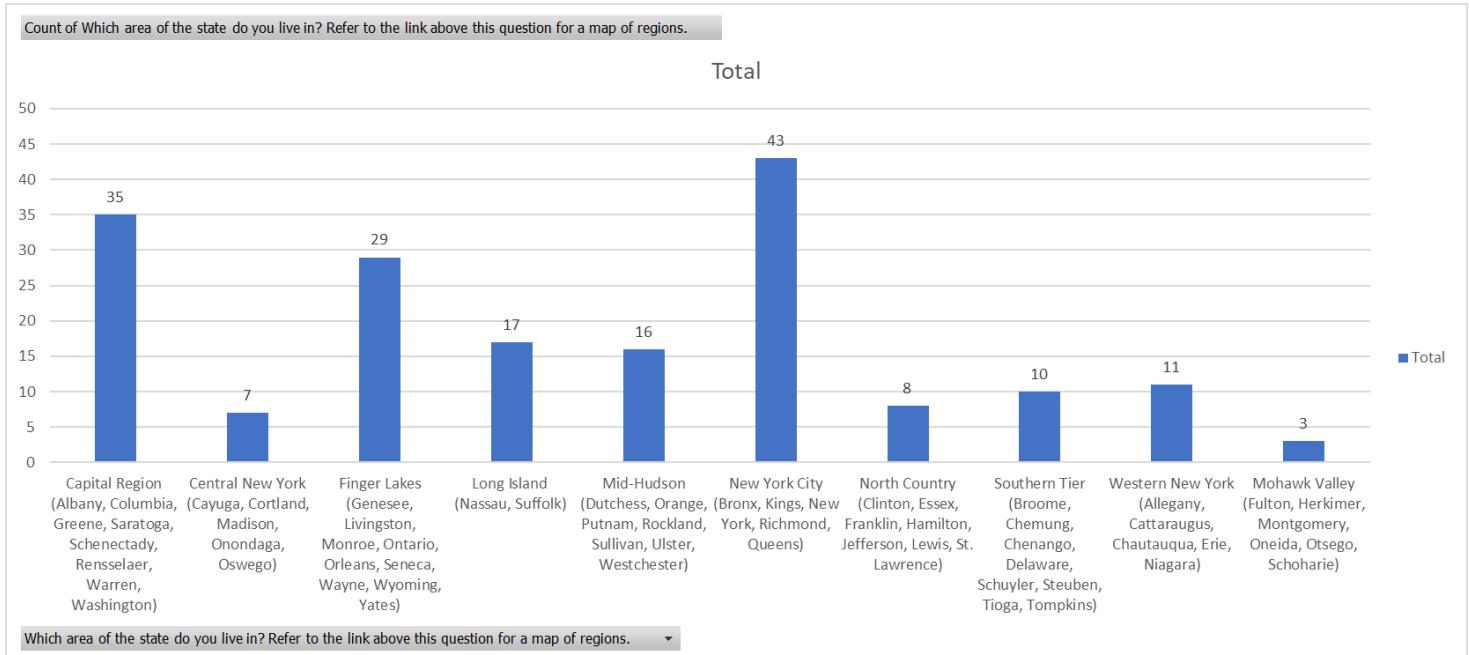
Nearly half of the respondents drive an all-electric vehicle; another 10 percent drive a plug-in hybrid electric vehicle.

Figure D-2: Distribution of Electric Vehicle Drivers/Owners



The highest participation has been from New York City and the Capital Region Economic Development Regions, although there has been participation from all regions across the State (See Figure D-3).

Figure D-3: Regional Distribution of Participants

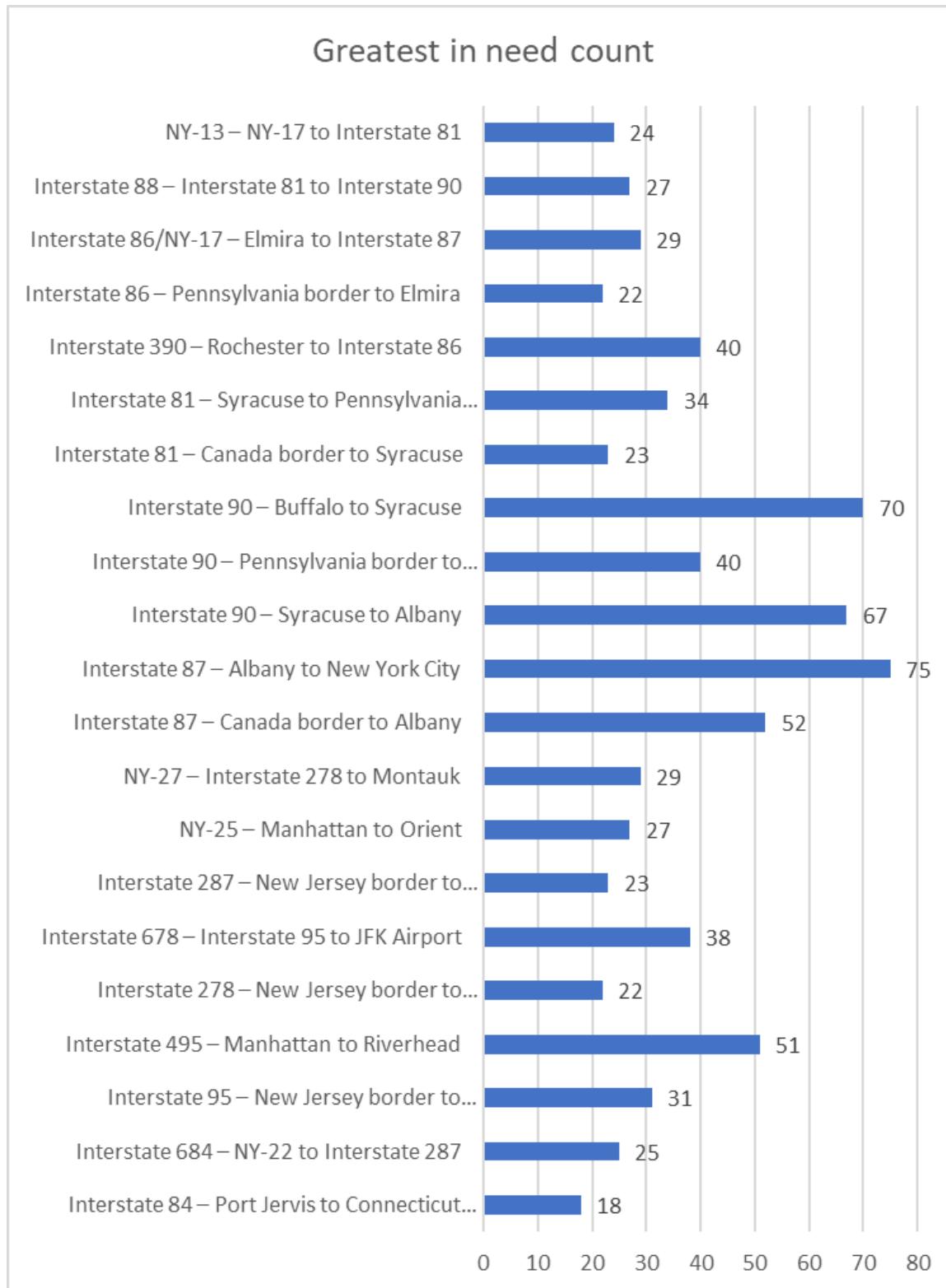


Survey respondents were asked to select up to five of the currently designated EV corridors that they felt have the greatest need for EV investment. The top five corridors identified by respondents are shown below with the count of respondents who included these in the top five:

1. Interstate 87-Albany to New York City (75)
2. Interstate 90-Buffalo to Syracuse (70)
3. Interstate 90-Syracuse to Albany (67)
4. Interstate 87-Canada border to Albany (52)
5. Interstate 496-Manhattan to Riverhead (51)

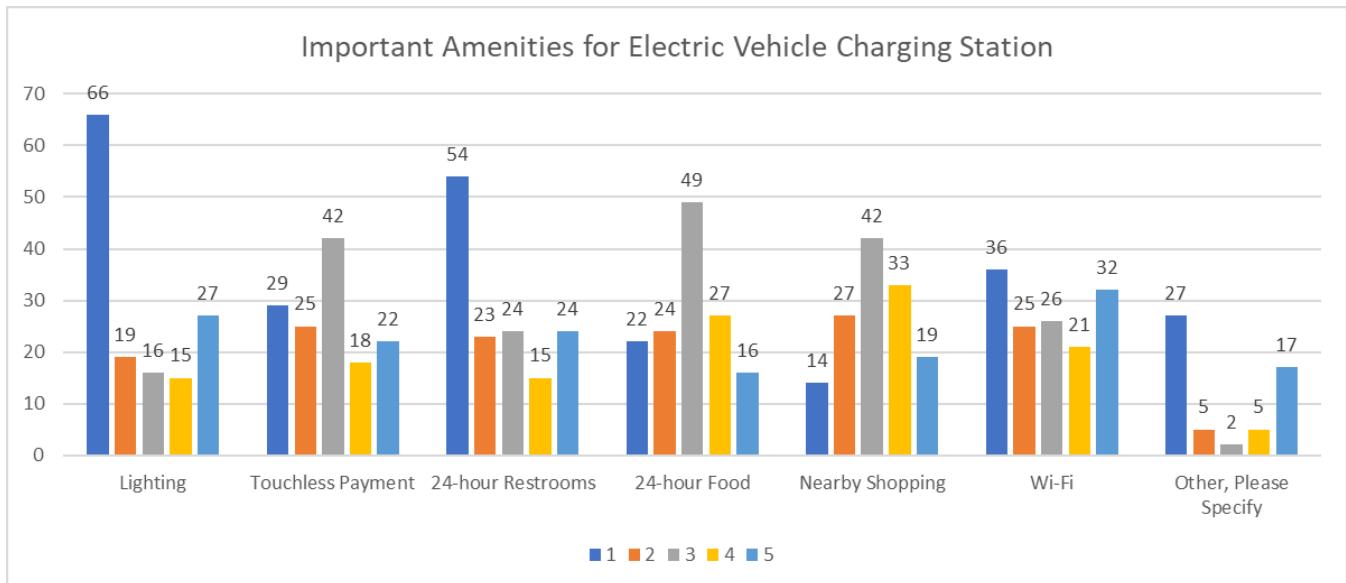
More detail is provided in Figure D-4.

Figure D-4: Corridors in Greatest Need



The survey also asked about amenities important to users at DC fast charging stations. Respondents were asked to rank these amenities from 1 (most important) to 5 (least important). Most of the participants perceive lighting at the station to be the most important, followed by 24-hour Restrooms, Wi-Fi, Touchless Payment, Other, 24-hour Food and Nearby shopping. A summary of responses is provided in Figure D-5 below.

Figure D-5: Important Amenities for Electric Vehicle Charging Stations



There was a wide range of “other” amenities identified as important. Some of the common amenities listed are:

1. Safety and Security: This includes security cameras, safety monitoring, a help button and easy location for police during emergencies.
2. Shelter and overhead canopies:
 - a. Shelter from rain, wind, and snow for the charging stations
 - b. Climate control waiting area during winter and summer
3. Accessibility from main the road, people, restaurants, malls, etc. Chargers located further from buildings with amenities is inconvenient, especially for those with toddlers and babies.
4. Pull Through Charging Stations for towing trailers
5. Outdoor seating area such as picnic tables with canopies, an area for parks to keep children and pets busy while waiting.

Appendix E: Summary of Virtual Public Meeting

On July 20, 2022, New York State held a virtual public information meeting on its NEVI Plan. More than 500 people registered to attend; 330 attended. Registrants were asked to answer a few pre-registration questions. The State also asked attendees to complete an optional post-event survey. Details are provided below, based on the 330 attendees who participated in the virtual meeting.

NYS NEVI Plan Virtual Public Information Meeting – July 20, 2022 Attendee Pre-Registration Survey Responses

ATTENDEE PRE-REGISTRATION SURVEY RESPONSES		
Which of these groups best represents you?	Total	%
Electric vehicle industry representative	63	19%
General interest in EVs/EV Owner	35	11%
Government	150	45%
Non-governmental organization (NGO) or advocate	46	14%
Potential publicly accessible EV charging station host	20	6%
Utility	16	5%
Grand Total	330	100%

Do you currently own an EV?	Total	%
No	261	79%
Yes, battery electric vehicle	56	17%
Yes, plug-in hybrid electric vehicle	13	4%
Grand Total	330	100%

Would you consider an all-electric vehicle for your next purchase or lease?	Total	%
No	43	13%
Yes, lease	70	21%
Yes, own	217	66%
Grand Total	330	100%

Have you ever used an EV direct current fast charger (DCFC) station?	Total	%
No	223	68%
Yes	107	32%
Grand Total	330	100%

Do you live in New York State?	Total	%
No	76	23%
Yes	254	77%
Grand Total	330	100%

NYS NEVI Plan Virtual Public Information Meeting – July 20, 2022

Attendee Pre-Registration Survey Responses – Summary of Pre-registration Questions

What information are you interested in learning about related to NYS's NEVI Formula Program Plan?	
Response Theme	Percent
Benefits to Disadvantaged Communities	0.6%
Eligible recipients	0.6%
Environmental Impacts	0.6%
EV Corridors	0.6%
Job Opportunities	0.6%
State EV Policy	0.6%
Safety	0.6%
Station Security	0.6%
Grid Capacity	1%
Urban Charging	1%
Host Information	2%
Timeline	3%
Medium/Heavy Duty Vehicle Charging	6%
Incentives/Funding	11%
Locations	15%
Program	18%
General Information	38%

Questions Received During NYS NEVI Plan Virtual Public Information Meeting – July 20, 2022

Q: Are additional state vehicle incentives expected to help encourage utilization of these new stations? Additionally, are there plans for additional state incentives for charging stations (outside of the planned corridors that will be included in the NEVI plan) - similar to previous Charge Ready NY and Charge to Work NY programs?

Q: Are there standards for physical safety of EV customers at stations, including lighting, cameras, an in-person attendant, etc.?

Q: Are you considering futureproofing the electric utility infrastructure for NEVI sites. I would think more than four chargers will be needed in a few years. It would be prudent to have the electric capacity available for additional charger installations in the near future.

Q: Can EV charging companies partner with sites along the corridors and qualify for funding

Q: Can you share the slides?

Q: Can you talk more about the EV Maintenance Curriculum being developed within the state? How does this fit within the workforce development components of NEVI?

Q: Could you expound on how NY's NEVI plan will prioritize reducing transportation pollution in the identified J40 and state disadvantaged communities?

Q: Could you please clarify the FHWA commercial rule and how it affects placing chargers using NEVI funds at rest areas?

Q: Could you please elaborate on what exactly is the Buy America requirement?

Q: DCFC availability has certainly lagged behind my needs and the needs of many I talk to. I'm afraid this may continue (or return) as EV adoption increases. Beyond the already mentioned future plans, what has been done to Future proof existing and planned installations so additional capacity can be added without significant work?

Q: Do the DC chargers need to be on approved vendor list

Q: Do you believe the NEVI funding will be sufficient to provide charging depots every 50 miles on the highway corridors throughout New York?

Q: Do you have examples of metrics that will be used to measure benefits towards disadvantaged communities?

Q: Do you see any benefit from having a statewide strategic plan to create a complete and comprehensive network of fast chargers along highways?

Q: Does NY have an anticipated RFP timeline?

Q: Does NY still plan to file their NEVI plan by August 1 to adhere to the Federal deadline? If so, will any portion of that plan be made available to the public prior to submitting?

Q: Does the state intend to be reaching out to potential site hosts in eligible areas (i.e., 1 mile off from a designated corridor). Or will funds be distributed through statewide / regional solicitations?

Q: Does the state plan on requesting any discretionary exceptions to the NEVI plan and the usage of the NEVI fund money?

Q: Does the state plan to apply for any of the federal discretionary grant funds that will be available for community projects and/or AFC projects? If so, what projects are priorities for these applications?

Q: Does this project contemplate the use of solar panels for the charging stations?

Q: Given much equipment has lead times approaching 1 year. What years do you anticipate having stations operable???

Q: have you heard any new info on Buy America related rules

Q: How is DOT approaching future proofing sites? Considering the states 100% EV goals, what kind of time scale are you considering for future proofing?

Q: How much of the \$175M of funding is expected to be utilized in the first phase of building out the corridors vs. the next phase?

Q: How will continued maintenance of the charging sites be addressed through this program, especially during the winter months. Would heated pavement/concrete be an allowable expense during construction?

Q: How will pricing per port be determined?

Q: How will the new bill in NYS on Buy America effect the timeline for construction. Does the NYS team see an issue with this requirement affecting State spending in a negative way in terms of creating an obstacle to competition and/or equipment availability?

Q: How will the use of the funds be prioritized throughout the state? Will spending be equal by corridor/region or by gaps?

Q: I have a CCS adapter and am excited that it makes this network available to me. But my girlfriend had trouble using CCS when we had a Bolt and doesn't have the strength for using the CCS adapter. The cables are heavy and plugs hard to plug into the car. Is there a plan to include the much easier to plug in Tesla cords/plugs?

Q: I saw Gov. Hochul's announcement about Charging Discount Programs. Have charging costs been established for this program?

Q: I see level 2 chargers not being utilized for homeowners. As an EV owner we typically charge 90% of the time at home. When traveling out of town Level 3 is the only charging system typically used. Can you comment on this relative to the NEVIP? Is there a study that would support the investment in Level 2?

Q: If NYS is installing EVSE for consumers, and NYS consumers are voting 2.4x more to drive EVs with proprietary plugs than CCS, how can NEVI and Make Ready more equitably meet consumer demand?

Q: Is the per plug incentive program available to municipalities?

Q: Is there a minimum amount of EV chargers per site needed to allow the site to count toward the overall goal of a site per 50 miles?

Q: Is there a plan to expand to Potsdam/ Canton region?

Q: Is there a traffic plan contemplated to show the impact to traffic and how we will mitigate excess traffic to the corridors?

Q: Is there an EPA approval that will be necessary for NEVI sites?

Q: On behalf of Navistar, maker of International Trucks and IC Buses, we look forward to working with New York on commercial EV charging station buildout. We will be submitting written comments but what is New York doing to address the unique needs of medium and heavy-duty vehicles like charging power and charging capacity at a site (up to 1MW is projected), and spacing needs (up to 65 ft per vehicle and need for pull through as opposed to regular parking space style locations).

Q: On the FWHA law, is it safe to say that if there is a gas station allowed a paid charger will also be allowed?

Q: How many of the hosts & panel use a BEV as their daily driver?

Q: Ref. EV charging placement, how is the one-mile travel mile distance from a corridor calculated - e.g., does it start at the beginning or end of an interstate ramp.

Q: Rereferring to the Managed Charging program PSC approved a few weeks ago.

Q: Side question: Can the whole list of today's chat and questions be saved? (We are working with Ruder and NYSERDA to write a state ZEV market development plan.)

Q: Thank you

Q: Was there a study performed that identified the lower cost of operation for using utility distribution network versus solar panels?

Q: What agency is responsible for building out the infrastructure so that K-12 public school districts will be able to comply with the 2027 EV school bus mandate?

Q: What if there's already DC chargers along such corridors

Q: What is funding breakdown between upstate and downstate projects?

Q: What is the timeline for implementing systems to support heavy-duty and commercial vehicle areas?

Q: What is the timeline for the medium and heavy-duty vehicle engagement?

Q: What plans are there for drive through charging?

Q: What will be the method of payment for new NEVI compliant chargers? For example, will there be an electronic card reader at the chargers?

Q: Who will be administering the NEVI program?

Q: Will a draft NEVI plan be made available for review prior to August 1?

Q: Will a NEVI suitable location need to be 50 miles from a current NYPA Evolve site?

Q: Will CR48 or SR25 along the north fork of long island in Suffolk County be considered as well?

Q: Will non major travel corridors, such as EV charging deserts in the North Country become available for NYEV funds in the future?

Q: Will the aggregated NYSERDA NEVI-input survey results be published?

Q: Will the complete plan be available for public viewing on August 1st?

Q: Will the Electric Vehicle Infrastructure Training Program (EVITP) be required for installers of NEVI sites?

Q: Will the Electric Vehicle Infrastructure Training Program (EVITP) be required for installers of NEVI sites?

Q: Will the NEVI Plan address charging issues related to commercial vehicles of various sizes?

Q: Will the NEVI Plan address issues related to site selection and local zoning? Or suggest where information on these topics could be found?

Q: Will the new NEVI compliant chargers established in the plan be only 150 kW chargers or will the state consider higher kW DC Fast Chargers?

Q: Will utility power outages be part of the 97% reliability measurement?

Post Event Survey:

The post event survey was optional. Twenty percent of the attendees completed the survey. Of those who responded, more than two-thirds found the information very useful; 94 percent found the information somewhat or very useful. Nine attendees completed information on what they would have liked to have learned that was not covered. These areas related to wanting more information on program implementation, e.g., more specifics on the implementation process (4); specific locations for the NEVI DCFC stations (2); incentives for disadvantaged communities (1); timeline for medium/heavy duty charging (1); and treatment of charging needs for long-dwell charging visitors (1).

New York will be making its Plan available for further public comment.

Appendix F: Disadvantaged Communities

Use of the Term “Disadvantaged Communities”:⁸⁰

The Climate Act defines Disadvantaged Communities as “communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households.” The Climate Act requires that Disadvantaged Communities be identified by the Climate Justice Working Group based on geographic, public health, environmental hazard, and socioeconomic criteria, which shall include but are not limited to:

- Areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health affects;
- Areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low level of educational attainment, or members of groups that have historically experienced discrimination on the basis of race or ethnicity; and
- Areas vulnerable to the impacts of climate change such as flooding, storm surges, and urban heat island effect.

The Council recognizes, however, that this growing body of literature often uses other terms that more appropriately describe these populations, such as “frontline communities,” “overburdened communities,” and “environmental justice communities,” among others. This draft Scoping Plan often uses these terms to describe communities that have been disproportionately impacted by historical environmental policy and the effects of climate change and uses Disadvantaged Communities when referring directly to actions or requirements that are contained in the Climate Act. Furthermore, at the time of writing, the Climate Justice Working Group is in the process of establishing criteria to identify “Disadvantaged Communities.”

⁸⁰ See: New York State Climate Action Council Draft Scoping Plan, December 30, 2021, p. 5, available at: <https://climate.ny.gov/Draft-Scoping-Plan>

Appendix G: Identification of Gap Areas

The preliminary gap areas have been categorized as follows:

- “Corridor gap areas” are those where there is more than 50 miles between NEVI compliant charger locations along a corridor.
- “Anchor gaps” are gaps between a NEVI compliant site and the end of a designated corridor. These gaps may be less than 50 miles.
- “Border gaps” are shown along Alternative Fuel Corridors at state/international border.

Figure G-1: Alternative Fuel Corridors and Gap Areas North of I-84, 2022 Detail

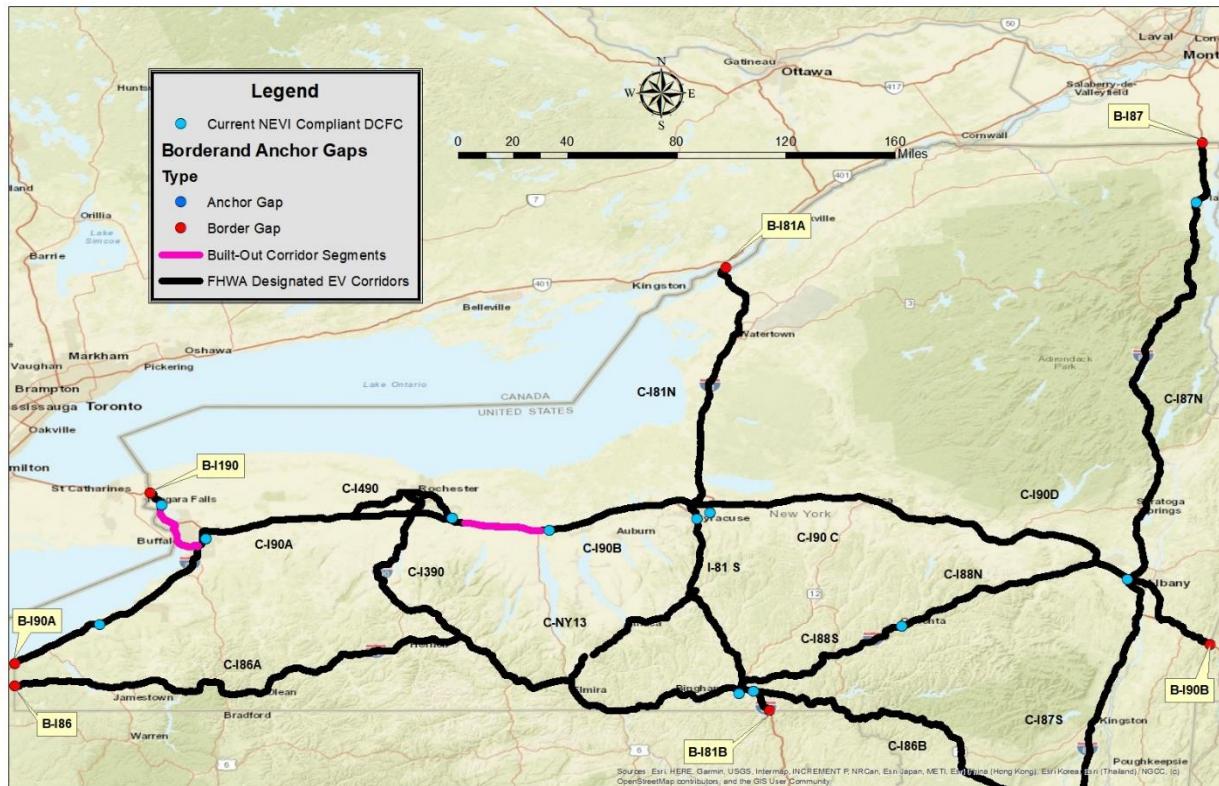
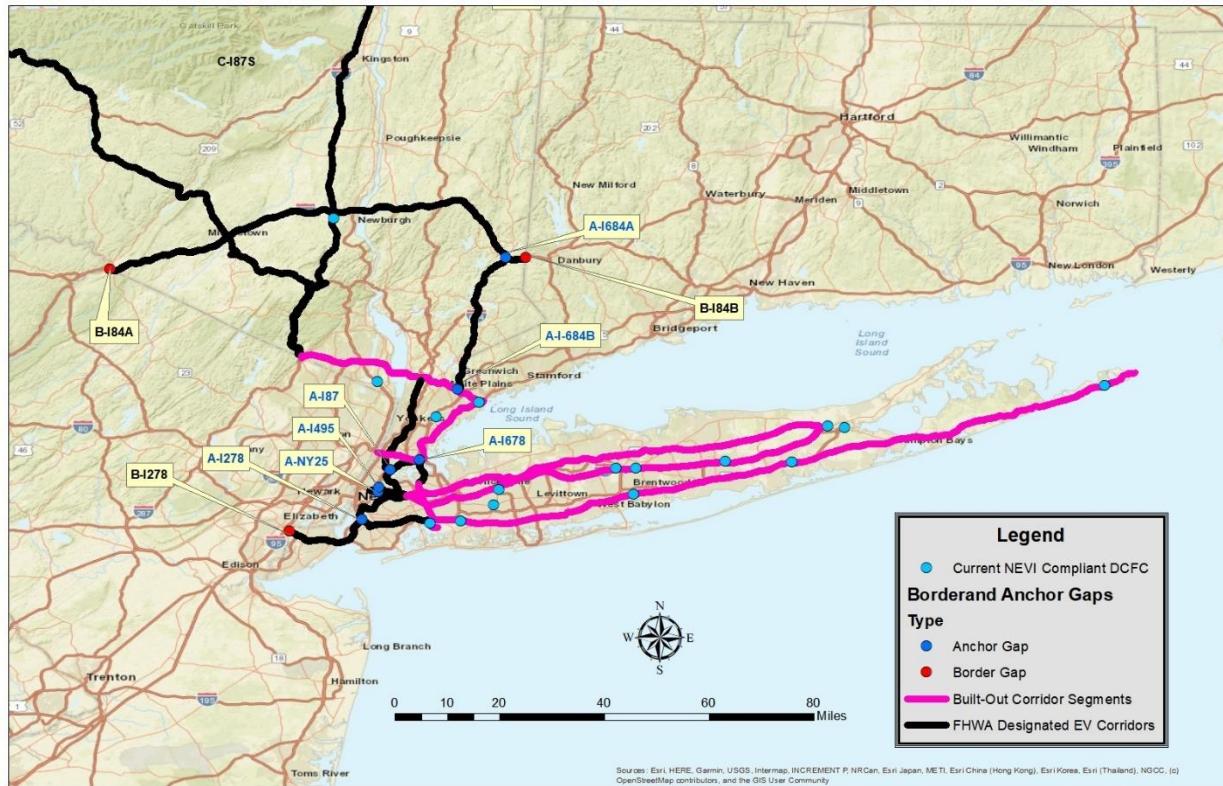


Figure G-2: Gap Areas I-84 and Points South, 2022 Detail

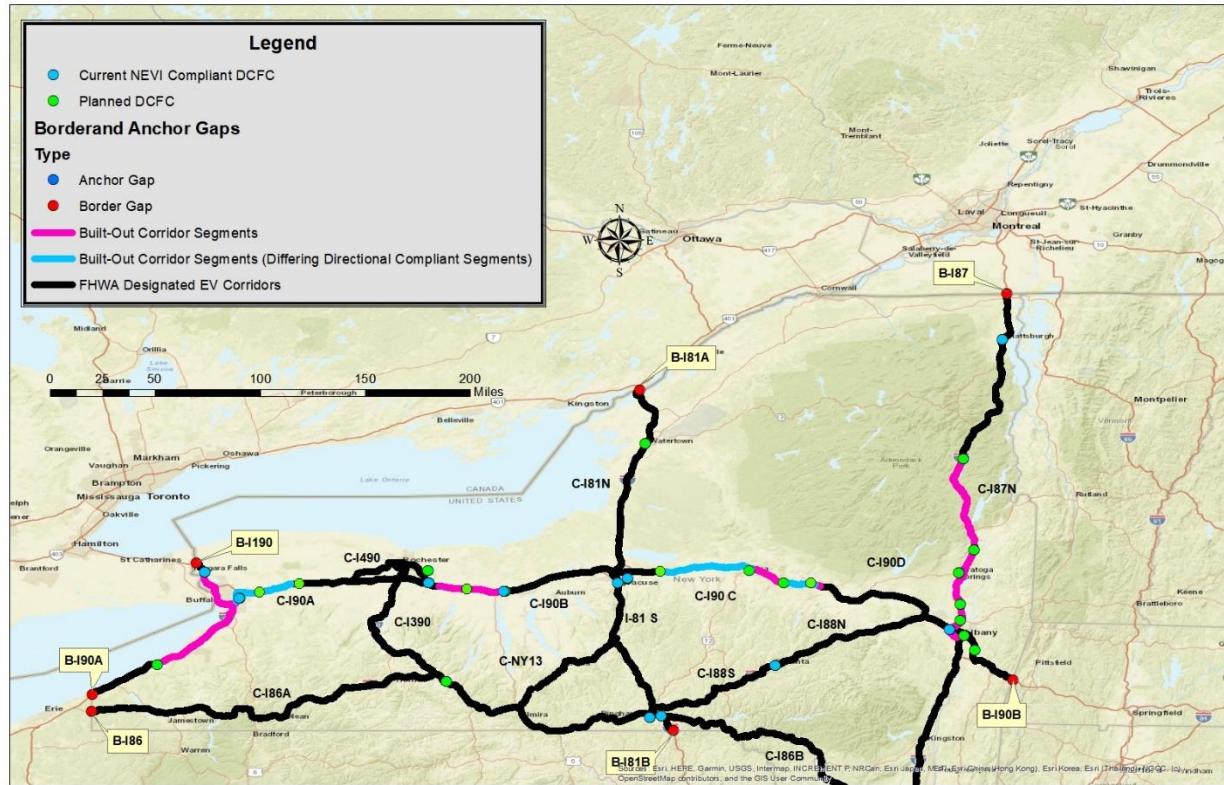


Gap Descriptions as of August 2022

Type of Gap	Designated EV Corridor	NEVI GAP ID Number	Start DCFC Name	End DCFC Name	Critical Exits*	Length
Corridor Gap	I-81	C-I81N	Syracuse South	Watertown	Exits 33 through 40	71.1
	I-86	C-I86A	Exit 6	Salamanca	Exit 7 through 19	49.9
	I-86	C-186B	Olean	Bath	Exits 30 through 33	75.1
	I-87	C-I87N	Schroon Lake	Plattsburgh	Exits 30 through 33	65.6
	I-87	C-I87S	Albany	Ramapo	Exits 23 Through 15A	112
	I-88	C-I88N	Binghamton	Oneonta	Exits 4 through 12	60.9
	I-88	C-I88S	Oneonta	Schenectady	Exits 18 Through 23	63.8
	I-90	C-I90A	Cheektowaga	Victor	Exits 45 Through 52	75
	I-90	C-I90B	Syracuse	Herkimer	Exits 34a Through 30	68.8
	I-90	C-I90C	Herkimer	Albany	Exits 29 Through 27	74
	I-90	C-I90D	Albany	Mass Border	Exis 6a through B2	32.1
	I-390	C-I390	Rochester	Avoca	Exits 6 through 8	77.9
	NY-13	C-NY13	Elmira	Cortland		56.6

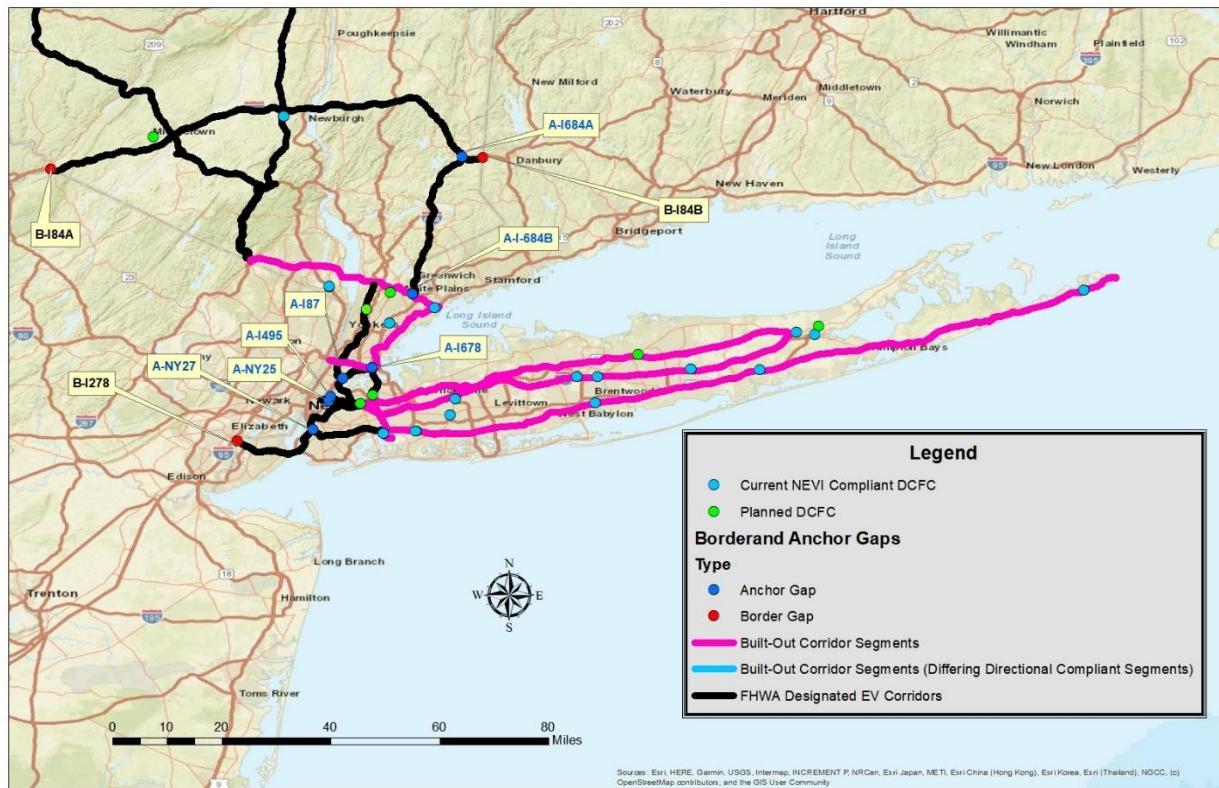
Type of Gap	Designated EV Corridor	NEVI GAP ID Number	Start DCFC Name	End DCFC Name	Critical Exits*	Length
Anchor Gaps (In State)	I-87	A-I87	Interchange with I-278 In the Bronx	Yonkers	Exits 2 and 3	
	I-278	A-I278	I-95/I278/I-295/I-678 Interchange	NYS/NJ Border	I-95/I278/I-295/I-678 Interchange	39.1
	I-495	A-I495A	Queens Mid-town Tunnel Approach	Hauppauge	14	NA
	I-678	A-I678	I-95/I278/I-295/I-678 Interchange	JFK	I-95/I278/I-295/I-678 Interchange	NA
	I-684	A-I684A	Exit 9E (I-84)		Exit 9E	NA
	I-684	A-I684B	Exit 1 (I-287)		Exit 1	
	NY 25	A-NY25A	I-495 Exit for Queens Blvd	Carle Place	I-495 Exit for Queens Blvd	NA
	NY 27	A-NY27	I-278 Exit 24, Brooklyn	JFK	I-278 Exit 24, Brooklyn	NA
Border Gaps	I-81	B-I81A	Watertown	Canadian Border	Exit 52	31.4
	I-81	B-I81B	Binghamton	Pennsylvania Border		
	I-84	B-I84A	Newburgh	PA/NJ Border	Exit 1	38.7
	I-84	B-I84B	Newburgh	Connecticut Border	Exit 69	36.1
	I-86	B-I86	Erie Pennsylvania	Exit 6	NY Exits 4 and 6; PA I-90	49.7
	I-87	B-I87	Plattsburgh	Canadian Border	Exit 43	24.5
	I-90	B-I90A	Erie Pennsylvania	Freedonia	PA Exit 27 Through NY Exit 59	51.3
	I-90	B-I90B	Schodack	Chicopee Mass	NY B2, MA 3, 10	73.6
	I-190	B-I190	Niagara Falls	Canadian Border	Exit 25A	6.4
	I-278	B-I278	Elizabeth, NJ	NY Border	Exit 3	5.2

Figure G-3: Alternative Fuel Corridors and Gap Areas Considering Planned DCFC Investments North of I-84, 2023*



* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction expected to be completed by the end of the third quarter, 2023 with adequate power to meet NEVI requirements.

Figure G-4: I-84 and Points South, 2023*



* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction anticipated by the end of the third quarter, 2023.

Anticipated Gap Descriptions: End of Third Quarter 2023

Type of Gap	Designated EV Corridor	NEVI GAP ID Number	Start DCFC Name	End DCFC Name	Critical Exits*	Length
Corridor Gap	I-81	C-I81N	Syracuse South	Watertown	Exits 33 through 40	71.1
	I-86	C-I86A	Exit 6	Bath	Exit 7 through 33	140.7
	I-86	C-186B	Bath	I-87	Exits 33 through 130	231
	I-87	C-I87N	Schroon Lake	Plattsburgh	Exits 30 through 33	65.6
	I-87	C-I87S	Albany	Ramapo	Exits 23 Through 15A	112
	I-88	C-I88N	Binghamton	Oneonta	Exits 4 through 12	60.9
	I-88	C-I88S	Oneonta	Schenectady	Exits 18 Through 23	63.8
	I-90	C-I90AW	Clarence Travel Plaza	Pembroke Travel Plaza		

Type of Gap	Designated EV Corridor	NEVI GAP ID Number	Start DCFC Name	End DCFC Name	Critical Exits*	Length
	I-90	C-I90BW	Waterloo	Clifton Springs Travel Plaza		
	I-90	C-I90CW1	Chittenango	Utica		
	I-90	C-I90CW2	Herkimer	Indian Castle Travel Plaza		
	I-390	C-I390	Rochester	Avoca	Exits 6 through 8	77.9
	N13	C-N13	Elmira	Cortland		56.6
Anchor Gaps (In State)	I-87	A-I87	Bronx, I-87/I-278 Interchange			NA
	I-278	A-I278	I-95/I278/I-295/I-678 Interchange	NYS/NJ Border	I-95/I278/I-295/I-678 Interchange	39.1
	I-495	A-I495A	Queens Mid-town Tunnel Approach	Elmhurst, 90-15 Queens Blvd	14	NA
	I-678	A-I678	I-95/I278/I-295/I-678 Interchange	Flushing, 40-24 College Point Blvd	I-95/I278/I-295/I-678 Interchange	NA
	I-684	A-I684A	Exit 9E (I-84)		Exit 9E	NA
	I-684	A-I684B	Exit 1 (I-287)		Exit 1	
	NY 25	A-NY25A	I-495 Exit for Queens Blvd	Elmhurst, 90-15 Queens Blvd	I-495 Exit for Queens Blvd	NA
	NY 27	A-NY27	I-278 Exit 24, Brooklyn	JFK	I-278 Exit 24, Brooklyn	NA
Border Gaps	I-81	B-I81A	Watertown	Canadian Border	Exit 52	31.4
	I-81	B-I81B	Binghamton	Pennsylvania Border		
	I-84	B-I84A	Newburgh	PA/NJ Border	Exit 1	38.7
	I-84	B-I84B	Newburgh	Connecticut Border	Exit 69	36.1
	I-86	B-I86	Erie Pennsylvania	Exit 6	NY Exits 4 and 6; PA I-90	49.7
	I-87	B-I87	Plattsburgh	Canadian Border	Exit 43	24.5
	I-90	B-I90A	Erie Pennsylvania	Cheektowaga		94.7

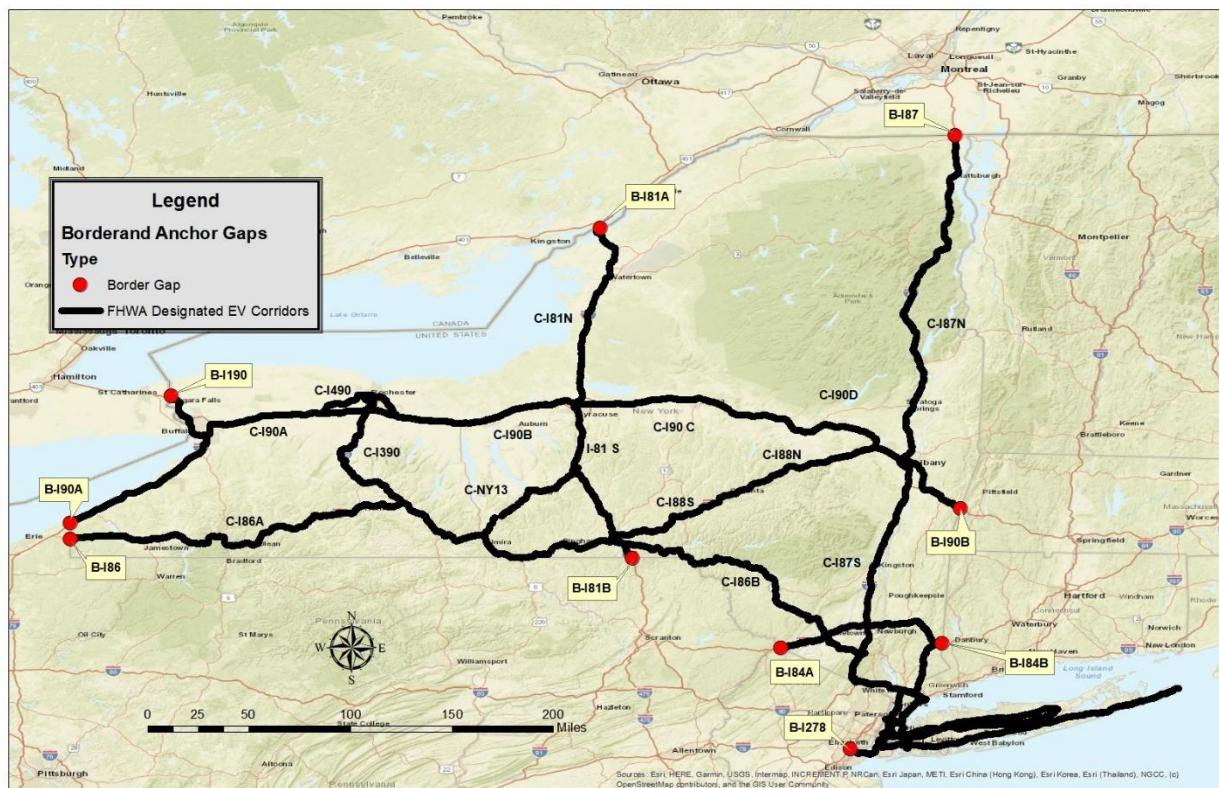
Type of Gap	Designated EV Corridor	NEVI GAP ID Number	Start DCFC Name	End DCFC Name	Critical Exits*	Length
	I-90	B-I90B	Schodack	Chicopee Mass	NY B2, MA 3, 10	73.6
	I-190	B-I190	Niagara Falls	Canadian Border	Exit 25A	6.4
	I-278	BG-I278	Elizabeth, NJ	NY Border	Exit 3	5.2

* Planned investments include: plans for EVolve NY sites (NYPA program) with signed agreements for specific site locations and New York State Thruway Authority service area locations with construction anticipated by the end of the third quarter, 2023.

Potential Gap Areas Around State/International Borders

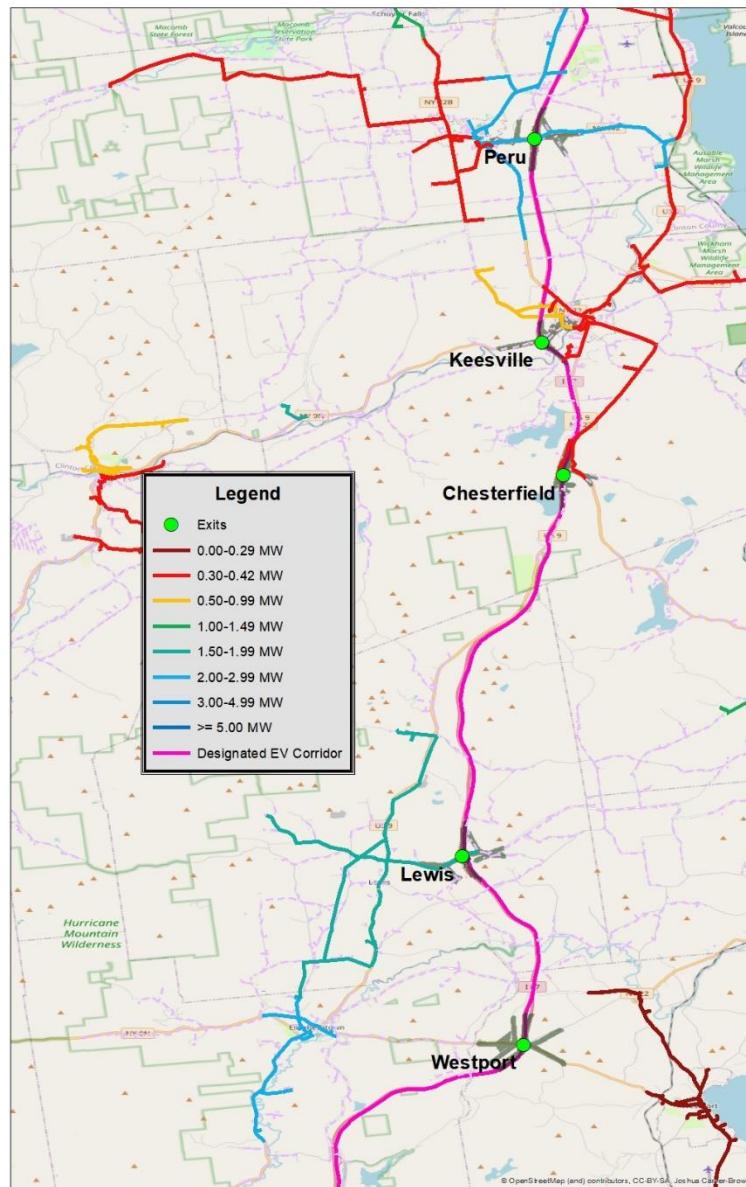
The figure below shows New York State border areas with surrounding states and Canadian provinces. New York State has currently identified border gaps where there are no existing NEVI compliant sites within 50 miles of the border within the adjacent state or Canada, as identified by the <https://afdc.energy.gov/corridors>. Once we confirm the plans for DCFC sites in adjacent states and in Canada, we will update the Plan to reflect these specific sites.

Figure G-5: Border Gaps



Appendix H: Gap Analysis Example

Figure H-1: Gap Analysis Example



The map shows the gap area along I-87 between Schroon Lake and Plattsburgh. Portions of this route pass through the Adirondack Park, a “forever wild” area that has restrictions on commercial and residential development. The map shows the five exits to I-87 (the Designated EV Corridor) that are within the gap along with the location of three-phase electric power lines and their capacities. NEVI compliant charger locations require a minimum of 600 KW (aka 0.6 MW) which means that only power lines that are colored yellow, green or blue currently have the ability to power a NEVI compliant charger station. The yellow-colored power lines have capacities that span 0.5 to 0.99 MW, so it is possible that yellow colored power lines may not

have sufficient power. Data available through the publicly available GIS files for these maps provide more exact data on the capacity of given power lines at a particular location.

In looking at the map, not all the exits are served by three-phase power lines that have at least a minimum 0.6 MW capacity. The exit for Westport has no three-phase power at all, and the exits for Chesterfield and Keesville, while they are served with three-phase power, the service that is available is not sufficient to meet the 0.6 MW threshold for a compliant charging station. Only the exits for Lewis and Peru are served with sufficient three-phase power, hence there is a limitation on the areas that currently would be developable as NEVI compliant charger stations within this corridor gap.

On the map, the short grey lines that surround each of the exit areas delineate the one-mile travel distance along local roads from each exit, the region where NEVI compliant charger stations are to be located. In this map, both exits at Lewis and Peru show that the three-phase power lines serve the areas within the one-mile travel areas. However, they only partially serve the one-mile travel areas and hence the availability of potential host sites at these exits is further limited to those portions of the one-mile travel areas that are also served by sufficient three-phase power. As these are rural areas with low traffic volumes and low populations, the number of businesses that have appropriate amenities (e.g., convenience stores, gas stations, restaurants, grocery stores, shopping centers) may be very limited and, in some cases do not currently exist even when the area is served by sufficient three-phase power.

Figure H-2: Utility Territories in New York State

