

# 2021 HOCTC Electric Vehicle Charging Station Plan



Anthony J. Picente Jr. County Executive Vincent J. Bono Chairman Herkimer County Legislature

## **Table of Contents**

1

2

2

2

4

Executive Summary
-------------------

Overview

- Objective
- Background

State & Federal Electric Vehicle Incentives 3

Current Electric Vehicle Landscape

Electric Vehicle Inventory	4
Electric Vehicle Station Inventory	6
Electric Vehicle Plan Analysis	7
Conclusion	12
Resources	15

# **Executive Summary**



This Electric Vehicle Charging Station Plan (EV Plan) assesses the Herkimer-Oneida Counties Transportation Council (HOCTC) Metropolitan Planning Area's (MPA) current readiness and support for electric vehicles (EVs), often referred to as its EV-readiness. The EV Plan also provides recommendations for locations to create a more comprehensive charging network that supports EV drivers and to eliminate EV-related concerns for individuals considering owning an EV.

EVs can save money and reduce air pollution in New York State. EVs are energy efficient and cost 50-70% less to operate per mile than a gas-powered engine. Much of New York's electricity grid is powered by clean low-carbon energy sources allowing EVs to reduce greenhouse gas emissions and pollutants that cause smog and acid rain. New York State has prioritized EV market development support through several initiatives aimed at reducing the costs for an EV or EV infrastructure for the consumer.

Several plug-in hybrid electric vehicle (PHEV) and battery electric vehicle (BEV) models are available in New York State due to its participation in California's zero-emission vehicle (ZEV) mandate. The ZEV mandate requires all major car manufacturers to sell increasing percentages of ZEVs. Both PHEVs and BEVs displace petroleum fuel by charging their batteries from the electrical grid. BEVs typically have a larger battery pack for more electric miles but have no option when the battery is depleted. PHEVs have a smaller electric range, but also have a small gasoline engine that can power the vehicle if needed. Today, high-end BEV and PHEV models can travel the same range as vehicles utilizing petroleum fuel.

EVs replenish their batteries by connecting to charging stations at home, work, or public locations. Various charging levels provide different rates of charge from as little as 3 minutes to 12 hours, with faster chargers being considerably more expensive to install and operate.

In 2021, there were 854 EVs registered in the Mohawk Valley. 251 were BEVs and 603 were PHEVs.<sup>1</sup> These represent a very small but growing fraction of all registered vehicles. 32 public charging stations are located primarily in the City of Rome, City of Utica, and Village of Herkimer, and extend into more rural areas including the Town of Verona, Town of Webb, Town of Kirkland, and Town of Paris. To help create a more comprehensive charging network that supports current and future EV drivers, charging station installations are recommended for three key municipalities due to their distance away from existing EV infrastructure:



Additional charging station installations are recommended for the following municipalities to meet the growing demand for EV infrastructure and to complement local economic development initiatives:



Finally, the Town of Forestport, Town of Frankfort, Village of Cold Brook, Village of Ilion, Village of Westernville, Village of Herkimer, Hamlet of McKeever, and various canal trail access points should be considered for installation of more charging stations due to their recreational value and value as a geographical connection point.

## Overview

#### **Objective**

The objective of the EV Plan is to recommend strategies for supporting current and future EV drivers traveling within the region, and between NYS regions. The range of EVs continues to improve year over year and is quickly approaching that of a conventional internal combustion engine (ICE) vehicle that uses petroleum fuel. However, there remains a critical need for additional charging stations to facilitate longer distance travel, support inter-county commutes, and provide access to charging opportunities for more moderate-income households and owners of earlier generations of EVs.

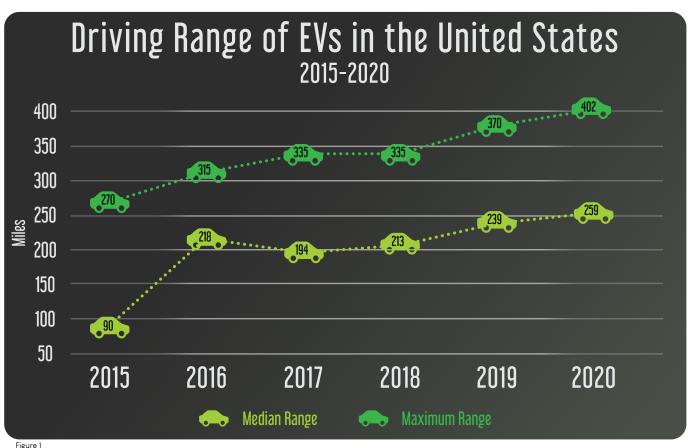
This plan identifies gaps where public infrastructure is not currently available in the region to support EV drivers and recommends charging station installations at key locations to establish a comprehensive charging network. Additionally, this plan identifies various socioeconomic, geographical, and educational resource barriers that may contribute to a hesitancy towards making the switch from an ICE vehicle to an EV.

#### Background

A complete regional inventory of EVs and EV charging stations was last recorded in the 2015 Mohawk Valley EV Charging Station Plan. At the time that this plan was written, there were approximately 18 public EV Level 2 charging stations in the Mohawk Valley and 1 Tesla DC fast charging station. Over 50% (10) of these charging stations were located inside the HOCTC MPA, within the City of Rome, and the City of Utica. At the time, these charging stations supported approximately 252 EVs in the Mohawk Valley, 145 of which were located within the HOCTC MPA.<sup>2</sup> Approximately 10% of EVs registered within the HOCTC MPA before 2016 were battery electric vehicles (BEV), and the vast majority still utilized petroleum fuel to some extent.<sup>3</sup>

Since the development of the 2015 Mohawk Valley EV Charging Station Plan, considerable advancements in EV technology have been made. The variety and availability of EVs in the global

market have increased dramatically, from just 86 EV models in 2015 to over 360 models being sold in 2020. The new models of EVs are also capable of going further on a single charge than ever before. Between 2015 and 2020, the maximum range of EVs has increased from 270 miles to 402 miles, a 28% increase. Throughout the same period, the median range of EVs increased from just 90 miles to 259 miles, a 187% increase.<sup>4</sup> These figures indicate that the overall distance that an EV can cover continues to improve and that these improvements are not isolated to only top-of-the-line vehicles, but all EVs with varying levels of affordability.



Source: U.S. Department of Energy

EV charging station technology has also experienced improvements to meet the demand associated with longer-ranged EVs and the need for faster charging times. In September 2021, ABB, an EV charging infrastructure manufacturer, announced that they are releasing an EV charging station capable of charging 100 miles of energy in just three minutes.<sup>5</sup> Other companies, such as BEAM Global, are manufacturing EV charging stations that operate completely on solar energy, and do not require permitting, construction, and the electrical work that comes with installing traditional EV public charging stations.<sup>6</sup> EVs and EV charging stations have not yet closed the efficiency gap related to the range and refuel time associated with ICE vehicles. However, this gap continues to get be minimized year after year, with a notable positive environmental impact. As the technology continues to improve, various state and federal incentives are making sure that the price gap between EVs and ICE vehicles remains low.

#### **State and Federal EV Incentives**

Since 2015, New York State has implemented additional programs and bolstered existing initiatives designed to incentivize drivers to make the switch over to EVs. These programs have taken the form of rebates and discounts and providing drivers with educational resources that encourage them to make the switch to driving an EV based on the incentives and infrastructure already existing.

The majority of New York State's EV incentives are provided directly to the consumer and are aimed at lowering the cost of an EV to become comparable to that of their ICE counterpart. In 2006, the New York State Thruway Authority began offering drivers a 10% E-Z Pass discount, referred to as the Green Pass Discount Plan, for vehicles that maintain a fuel economy rating of 45 miles per gallon or more. This standard is attainable for all BEVs and nearly all PHEVs on the market. In addition to the discount, drivers enrolled in the Green Pass Discount Plan are also entitled to access HOV lanes, regardless of vehicle occupancy, which will provide time savings for peak-period commuters. Currently, there are 81 program eligible vehicles listed on the New York State Department of Transportation (NYSDOT) website.<sup>7</sup> The NYS Green Pass Discount Plan could offer marginal savings for individuals residing in the HOCTC MPA who commute to major metropolitan areas such as Syracuse, Schenectady, or Albany.

More recently, in 2017, NYSERDA implemented the Drive Clean Rebate program. The NYSERDA Drive Clean Rebate offers up to \$2,000 in the form of a rebate for individuals who purchase or lease a new hybrid electric vehicle (HEV) or BEV in New York State. The rebate amount depends on the range of the vehicle, based on more than 60 eligible vehicles, in which vehicles with a higher mile range receive a larger rebate.<sup>8</sup>

Rebates are also available for EV hardware, such as publicly and privately available EV charging stations. NYSERDA's Charge Ready NY program offers rebates to public and private organizations that install Level 2 EV charging stations at public parking facilities, workplaces, and multifamily apartment buildings. Under this program, eligible equipment owners received up to \$4,000 per charging port (minimum of two ports per location), with an additional \$500 incentive if the port is placed in a disadvantaged community. A total of \$17 million was made available in 2020 to fund this program, all of which has since been exhausted.<sup>9</sup> However, additional funding for charging station infrastructure was made available through the Joint Utilities of New York under the EV Make Ready Program. The EV Make Ready Program covers up to 100% of EV infrastructure installation costs for Level 2 and Direct Current Fast Charger (DCFS) stations in publicly available locations and disadvantaged communities.<sup>10</sup>

In addition to statewide incentives, prospective EV drivers can also benefit from the Qualified Plug-In Electric Vehicle (PEV) Tax Credit. Since 2009, this federal tax credit provided between \$2,500 and \$7,500 for the purchase of a new qualified BEV.<sup>11</sup> Unlike the NYS Drive Clean Rebate, this tax credit is only offered with the purchase of a BEV, and not when leasing. However, the federal tax credit, when combined with the various NYS incentives, discounts, and access to low-cost publicly available charging stations, creates a much more competitive price comparison between EVs and ICE vehicles.

## **Current EV Landscape**

#### **EV Vehicle Inventory**

There are currently 854 EVs actively registered within the MPA, which is an increase of over 580% since the 2015 Mohawk Valley EV Charging Station Plan. The portion of EVs on the road that relies completely on battery, as opposed to PHEVs, has also steadily climbed over the years from 10% of registered EVs in 2015 to now just under 30%. The increase in EVs that are entirely battery reliant is a strong indicator that the need for additional EV infrastructure is no longer a convenience, but more so necessary to facilitate regular commuting and traveling among a growing number of drivers.

Drivers within the MPA are registering a more diverse range of electric vehicles than ever before. Figure 2 shows the breakdown of each registered EV in Oneida and Herkimer County by the manufacturer. Overall, 18 brands of EVs and approximately 56 different models are actively registered. Among these, Toyota maintains the most popular lineup of EVs with the Toyota Prius Prime, followed by Tesla, Hyundai, and Chevrolet. Tesla maintains the largest share of BEVs, while Toyota vehicles are primarily PHEVs.

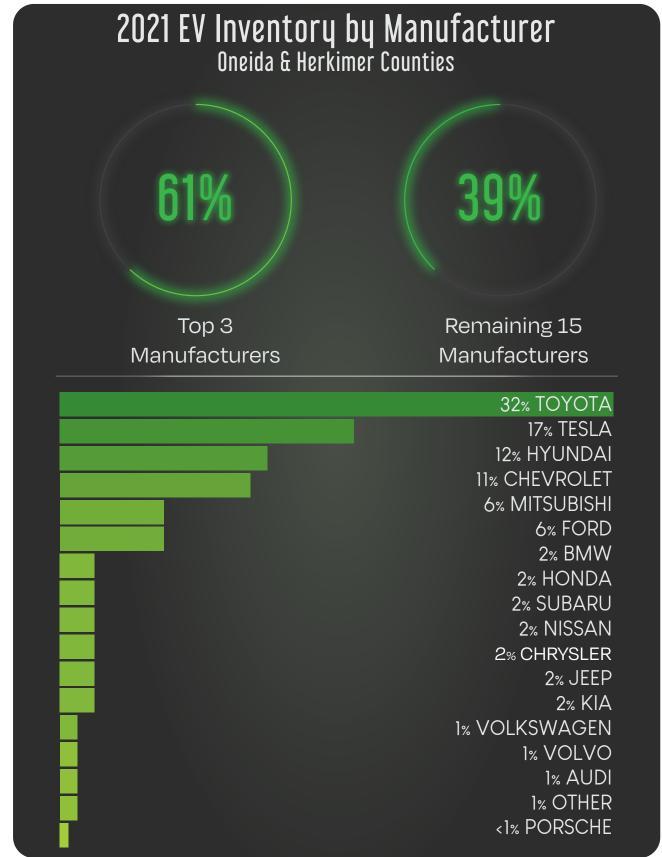


Figure 2: 2021 EV Inventory for Oneida and Herkimer Counties by Manufacturer Source: NYSERDA

### **EV Vehicle Inventory**

There are currently 32 EV charging stations located within the HOCTC MPA that contain a total of 129 charging ports. Six of the EV charging stations are located in Herkimer County and the remaining 26 are located in Oneida County. The majority of the charging stations are located in highly urbanized areas adjacent to Interstate 90 and include the City of Rome (9), the City of Utica (6), and the Village of Herkimer (4). Since 2015, the placement of EV charging stations has expanded geographically to include additional suburban areas and seasonally popular areas such as in the Town of Whitestown, Village of Sylvan Beach, Town of New Hartford, Town of Verona, and in the Town of Web (hamlet of Old Forge). Figure 3 depicts the location of all operational charging stations within the MPA.

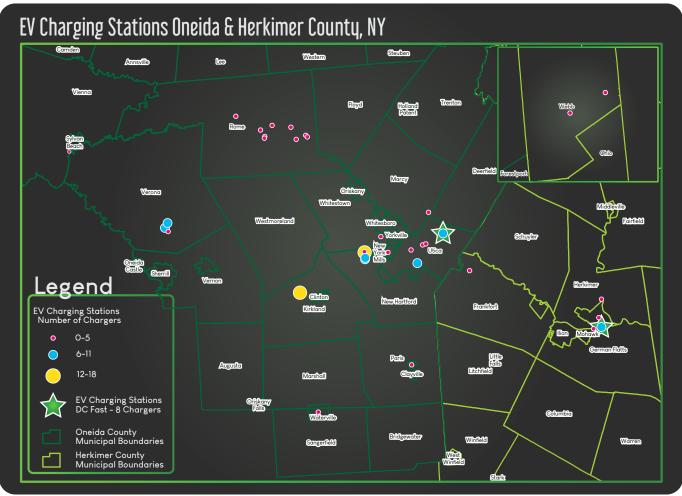


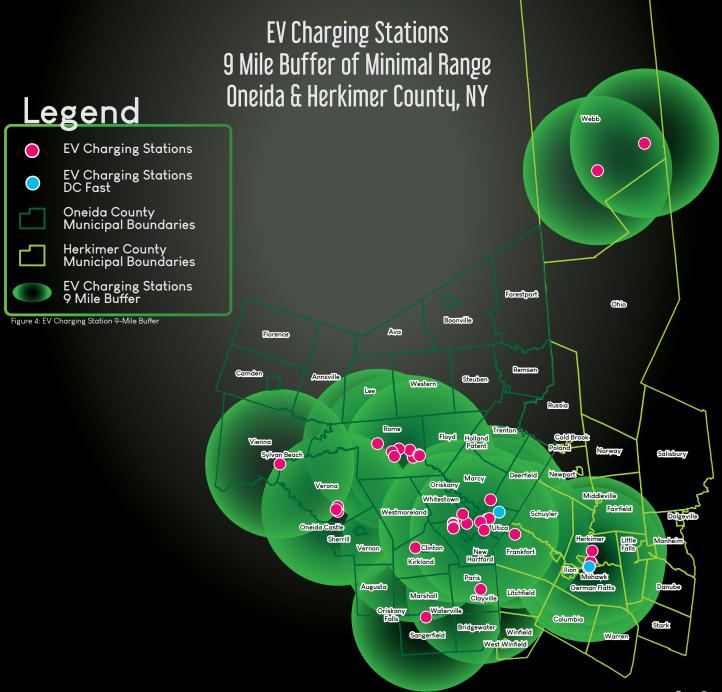
Figure 3: EV Charging Stations in Herkimer and Oneida Counties Source: HOCTC

Three barriers that may prevent an EV driver from accessing a charging station are cost, public accessibility, and EV charger compatibility. In the vast majority of cases, EV charging stations located in the MPA are both free and widely available to the public. Approximately 78% of the identified charging stations are free to use, and 75% of the charging stations are publicly available. Finally, over 81% of EV charging stations are compatible with all models of EVs, while the remaining percentage of charging stations are exclusively accessible to Tesla EVs.

The speed at which EVs become fully charged is determined by whether the EV charger is a Level 1, Level 2, or DC Fast Charger. 94% of EV charging stations within the MPA are Level 2, which means that the station is capable of charging approximately 20 miles of range per hour. The remaining EV charging stations are DC Fast Charging stations and are capable of charging over 30 miles of range per 10 minutes of charging.<sup>12</sup> The DC Fast Charging stations are located adjacent to NYS I-90 in the North Utica Shopping Plaza and on Marginal Road in the Village of Herkimer, both of which are densely commercialized areas.

# **EV Plan Analysis**

Publicly available EV charging stations have the greatest value to individuals who would not otherwise have charging infrastructure available at their home, and those who intend to take a longdistance trip. In most cases, homeowners are capable of utilizing a standard wall outlet to charge at a speed comparable to a Level 1 charging station, as well as have the option to purchase a Level 2 charging station adapter. In this given scenario, a driver would be able to charge their vehicle up to a range of 18 to 160 miles over nine hours overnight in the convenience of their own home. For many renter-occupied households, access to a home charging station, or EV-friendly apartment, is much less common. Therefore, areas that have a high percentage of renter-occupied households, as well as areas that exceed an 18-mile round trip threshold are at the greatest disadvantage when required to regularly charge their electric vehicle, such as for a daily commute. The locations where these populations reside are depicted in Figures 4,5 and 6.



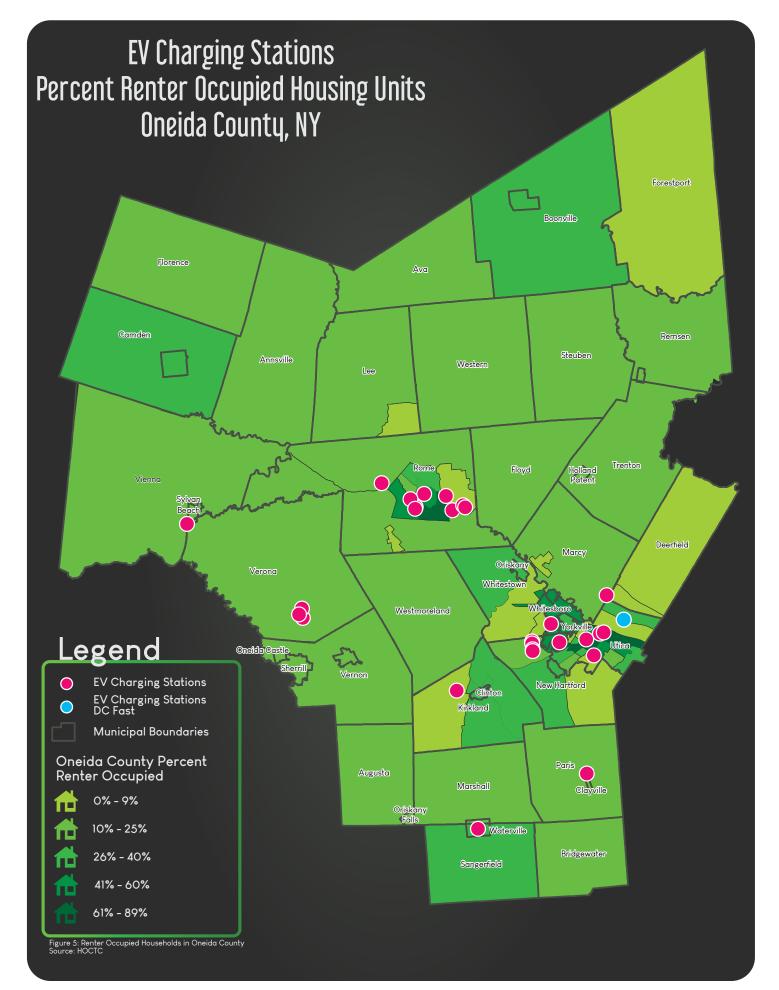
Publicly available EV charging stations have the greatest value to individuals who would not otherwise have charging infrastructure available at their home, and those who intend to take a longdistance trip. In most cases, homeowners are capable of utilizing a standard wall outlet to charge at a speed comparable to a Level 1 charging station, as well as have the option to purchase a Level 2 charging station adapter. In this given scenario, a driver would be able to charge their vehicle up to a range of 18 to 160 miles over nine hours overnight in the convenience of their own home. For many renter-occupied households, access to a home charging station, or EV-friendly apartment, is much less common. Therefore, areas that have a high percentage of renter-occupied households, as well as areas that exceed an 18-mile round trip threshold are at the greatest disadvantage when required to regularly charge their electric vehicle, such as for a daily commute. The locations where these populations reside are depicted in Figure 4,5 and 6.

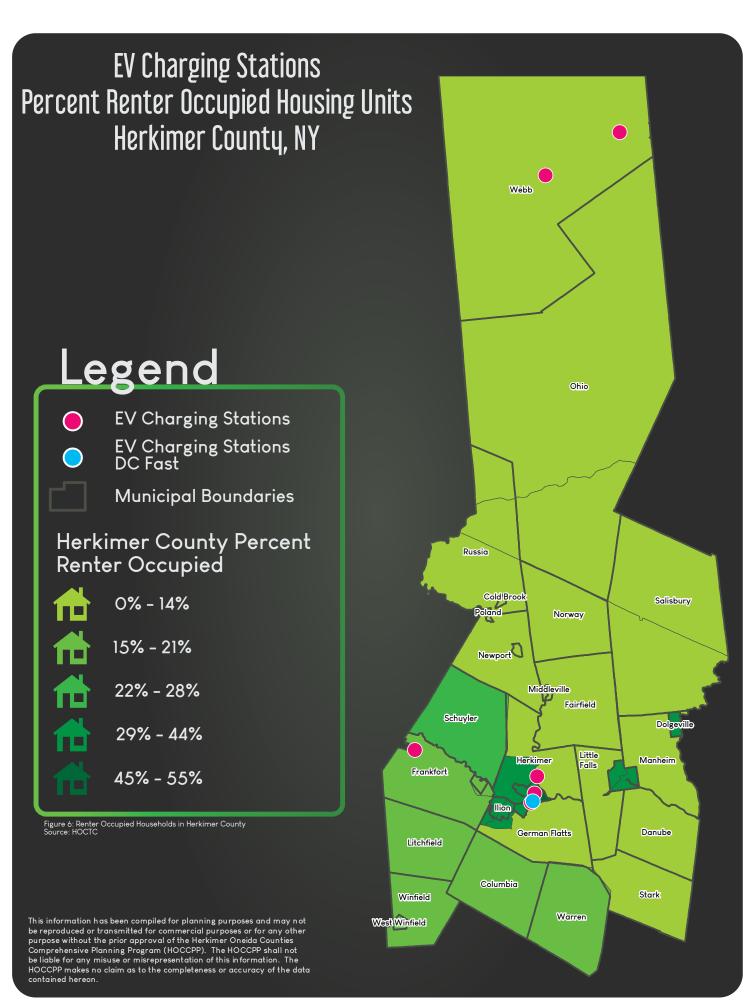
Company / Organization	Total Full-Time Employees
County of Oneida (Rome & Utica Office)*	1,700
Resource Center for Independent Living*	1,250
Air Force Research Lab	1,164
Utica National Insurance Group*	1,149
Defense Finance & Accounting Service	1,100
The Masonic Care Community of NY	900
BNY Mellon*	840
City of Rome*	814
Wal-Mart Stores Distribution Center	775
Bank of America*	700

Table 1: Top 10 Largest Employers without an EV Charging Station \*Located within one mile of an EV Charging Station

Figures 5 and 6 identifies towns and villages in the MPA where renter-occupied households are most prevalent. The locations with the greatest percentage of renter-occupied households are in the most urbanized areas surrounding and within the City of Utica, City of Rome, and Village of Herkimer. Existing EV charging stations in the general vicinity supports these areas; however, additional stations will be necessary for the future to ensure that the rapidly growing demand for EV charging does not exceed the supply of publicly available charging stations.

Several municipalities have a moderate to high percentage of renter-occupied households but have zero charging stations available in the vicinity. This includes the Town and Village of Boonville, Town, and Village of Camden, the City of Little Falls, and a collection of towns in the southernmost part of Herkimer County. The Villages of Boonville and Camden both field a high percentage of renter-occupied households and exist outside of the 9-mile buffer zone and thus are especially disadvantaged locations that need additional EV charging infrastructure. Special consideration should also be made for the City of Little Falls due to it having one of the highest renter-occupied rates in Herkimer County, it being an access point for the Erie Canal Trail, and it not having a single publicly available EV charging station within its municipal boundaries.





Since 2015, several major economic and infrastructure projects have been completed or are nearing completion. The projects listed in Table 2 are anticipated to generate large employment opportunities for the area, and/or encourage tourism from outside of the two counties. The increased traffic to and from these locations, in addition to the increased parking capacity required to sustain short-to-medium term visits, make these ideal areas to install additional EV charging stations.

Project Name	Municipality/County
Wynn Hospital of the Mohawk Valley Health System	City of Utica, Oneida County
Nexus Center	City of Utica, Oneida County
Orgill Distribution Center	City of Rome, Oneida County
Innovare Advancement Center	City of Rome, Oneida County
Wolfspeed-Marcy Nanocenter	Town of Marcy, Oneida County

Table 2: Anticipated Major Economic Projects inside the MPA

EV drivers are also expected to travel to locations that are not part of their daily commute or that address their day-to-day needs. Residents of Oneida and Herkimer Counties often frequent recreational locations, such as public parks, forests, and trails throughout the region. These areas are oftentimes located in more remote areas and may not be close to existing EV charging stations, which poses a challenge to EV drivers and is a concern for potential EV buyers. Providing additional EV charging stations at recreational areas within the two counties will address these concerns.

EV charging stations within these remote areas will also connect different communities that may not otherwise be comfortably accessible to EV drivers, such as between the Village of Herkimer and Old Forge, or between two locations in entirely different counties. Long distance trips such as these would be greatly supported by DC Fast Charging stations that are strategically placed between two popular locations along identified transportation corridors. Table 3 and Table 4 identify outdoor recreational locations and strategic connection points where the installation of EV charging stations would have the greatest benefit to EV drivers.

Recreational Location Name	Municipality/County
White Lake	Town of Forestport, Oneida County
Delta Lake State Park	Village of Westernville, Oneida County
Erie Canalway Trail	Various Municipalities,
(12 Parking / Trailhead Area)	Oneida County
Philip A. Rayhill Memorial Trail	Towns of Whitestown & New Hartford,
(5 Parking / Trailhead Area)	Oneida County
Chenango Canal Trail	Various Municipalities,
(4 Parking / Trailhead Area)	Oneida County
Mohawk River Tail	Various Municipalities,
(4 Parking / Trailhead Area)	Oneida County

Table 3: Potential Recreational and/or EV Connection Points for Oneida County

<b>Recreational Location Name</b>	Municipality/County
Hinckley Day Use Area	Village of Cold Brook, Herkimer County
Woodhull Mountain	Hamlet of McKeever, Herkimer County
Erie Canalway Trail (5 Parking / Trailhead Area)	Little Falls / East Frankfort, Herkimer County
Black Creek State Forest	Village of Cold Brook, Herkimer County
Russell Park / Village of Ilion Marina	Village of Ilion, Herkimer County
Tobie Trail (6 Parking / Trailhead Area)	Various Municipalities, Herkimer County

Table 4: Potential Recreational and/or EV Connection Points for Herkimer County

## Conclusion



The EV landscape has changed considerably since HOCTC issued the preceding Mohawk Valley EV Charging Station Plan. In 2015, nearly six times fewer EVs were registered in the MPA than are present today. At that time, limited varieties of low-range EVs, most of which were suitable for urban drivers in relatively mild climates, catered to high-income consumers. For rural residents, who on average spend more on vehicle fuel and maintenance than their urban counterparts, EVs were neither practical nor affordable. Compounding these concerns was the fact that EV charging technology was simply not advanced nor abundant enough to make consumers comfortable with traveling long distances. EV stations were slow charging and nearly non-existent in rural settings.

Today, EVs continue to make up a greater share of the overall vehicle market in Herkimer and Oneida Counties. This is in response to performance improvements to EVs that have made it possible to travel further, more conveniently, and at a more affordable price than ever before. The number of EV models available on the marketplace has multiplied over the years. Options appropriate for rural settings and hazardous weather conditions have spurred adoption, especially since the safety and practicality of EVs are now comparable to traditional ICE vehicles. The technology required to fuel this trend has been improving so that charging one's vehicle now takes minutes as opposed to hours. EV charging stations are increasingly common in both rural and urban areas of the MPA. In the context of broader trends toward expanding state and national EV networks, residents of Herkimer and Oneida counties are becoming increasingly connected to businesses, recreational activities, and destinations both within and outside of the region.

Looking to the future, HOCTC seeks to establish working relationships with businesses, local communities, and state and federal partners to identify sites for future EV charging stations. Site selection will address challenges associated with introducing EV infrastructure to rural and low-income populations. The analyses included in this plan provide empirical support by identifying priority areas for the buildout of EV infrastructure. These include places with high renter occupancy and geographic gaps in the network. Opportunities to support recreational access and economic development will also play a role when filling gaps in the network. To support the rapid expansion of EV infrastructure, HOCTC will be pursuing a variety of state and federal funding opportunities from agencies including,

but not limited to USDOT, NYSDOT, OST, FHWA, FTA, USDA, EPA, and DOE. A comprehensive breakdown of steps to achieve a robust regional EV network is identified in Table 5

<ul> <li>Oper PERPS</li> <li>a. Individual state holders (Parther agencies, local businesses, comunity leaders, National Orid, etc.)</li> <li>a. Individual state on the residents and non-residents to easily locate to charging stations throughout the MPA.</li> <li>a. Individual state on the residents and non-residents to easily locate to charging stations throughout the MPA.</li> <li>a. Individual state on the residents and non-residents to easily locate to charging stations throughout the MPA.</li> <li>a. Individual state on the residents and non-residents to easily locate to charging stations throughout the MPA.</li> <li>a. Individual state on the residents and prove states to the state on the state of the state state on the state of the defendence of the state state on the state state of the state state state of the state state of the state states and states s</li></ul>		IMPLEMENTATION TIMELINE	
<ul> <li>community leaders, National Grid, etc.)</li> <li>Pevelop a platform for residents and non-residents to easily locate by charging stations throughout the MPA.</li> <li>Establish an EV charging station ownership/continuity model</li> <li>Develop an approved listing of EV charging station sites based on stakeholder discussions.</li> <li>Commence site-level planning</li> <li>Select charging station equipment provider</li> <li>Determine funding needs, timelines, and permit requirements based on the scope of approved projects.</li> <li>Identify and apply for federal and state funding for EV infrastructure</li> <li>Install EV charging stations for approved sites</li> <li>Matcheholder discussions.</li> <li>Install EV charging stations for approved sites</li> <li>Stakeholder discussions.</li> <li>Install EV charging stations for approved sites.</li> <li>Seletal EV charging stations for approved sites.</li> <li>Seletal EV charging stations for approved sites.</li> <li>Install EV charging stations corridors.</li> <li>Install Signage and visibility improvements related to EV charging stations along major transportations corridors.</li> </ul>		0-2 YEARS	
<ul> <li>Performance of the proved listing of EV charging station sites based on stakeholder discussions</li> <li>Performance site-level planning</li> <li>Performance site-level planning</li> <li>Performance site station equipment provider</li> <li>Performance site station equipment provider</li> <li>Performance site station equipment provider</li> <li>Performance site station equipment proved sites</li> <li>Performance site stations for approved sites</li> <li>Performance stations for approved sites</li> <li>Performance stations stations set station sites based on stations along major transportations corridors</li> <li>Performance stations set stations set station sites based on stations along major transportations corridors</li> </ul>	1		
<ul> <li>Stablish an EV charging station ownership/continuity model</li> <li>Develop an approved listing of EV charging station sites based on stakeholder discussions</li> <li>Commence site-level planning</li> <li>Sect charging station equipment provider</li> <li>Determine funding needs, timelines, and permit requirements based on the scope of approved projects</li> <li>Identify and apply for federal and state funding for EV infrastructure</li> <li>Install EV charging stations for approved sites</li> </ul>	2	Develop a platform for residents and non-residents to easily locate	
<ul> <li>stakeholder discussions</li> <li>Commence site-level planning</li> <li>Select charging station equipment provider</li> <li>Determine funding needs, timelines, and permit requirements based on the scope of approved projects</li> <li>Identify and apply for federal and state funding for EV infrastructure</li> <li>Install EV charging stations for approved sites</li> </ul> <b>2-5 YEGARS</b> <ul> <li>Install EV charging stations for approved sites</li> <li>Install Signage and visibility improvements related to EV charging stations along major transportations corridors</li> </ul>	3		
<ul> <li>Select charging station equipment provider</li> <li>Determine funding needs, timelines, and permit requirements based on the scope of approved projects</li> <li>Identify and apply for federal and state funding for EV infrastructure</li> <li>Instal EV charging stations for approved sites</li> </ul> <b>Output Output Output</b>	4		
<ul> <li>O Determine funding needs, timelines, and permit requirements based on the scope of approved projects</li> <li>O Identify and apply for federal and state funding for EV infrastructure</li> <li>O Install EV charging stations for approved sites</li> </ul> <b>O Determine funding needs</b> , timelines, and permit requirements based on the scope of approved listing of EV charging station sites based on stakeholder discussions O Install EV charging stations for approved sites O Install EV charging stations for approved sites O Install EV charging stations for approved sites O Install Signage and visibility improvements related to EV charging stations along major transportations corridors <b>Determine funding meeds</b>	5	Commence site-level planning	
<ul> <li>based on the scope of approved projects</li> <li>Identify and apply for federal and state funding for EV infrastructure</li> <li>Install EV charging stations for approved sites</li> <li><b>2-5 YEARS</b></li> <li>Update approved listing of EV charging station sites based on stakeholder discussions</li> <li>Install EV charging stations for approved sites</li> <li>Install EV charging stations for approved sites</li> <li>Install Signage and visibility improvements related to EV charging stations along major transportations corridors</li> <li><b>5+ YEARS</b></li> </ul>	6	Select charging station equipment provider	
<ul> <li>Install EV charging stations for approved sites</li> <li><b>2-5 YEARS</b></li> <li>On pddate approved listing of EV charging station sites based on stakeholder discussions</li> <li>Install EV charging stations for approved sites</li> <li>Install signage and visibility improvements related to EV charging stations along major transportations corridors</li> </ul>	0		
<ul> <li>Update approved listing of EV charging station sites based on stakeholder discussions</li> <li>Install EV charging stations for approved sites</li> <li>Install signage and visibility improvements related to EV charging stations along major transportations corridors</li> </ul>	8	Identify and apply for federal and state funding for EV infrastructure	
<ol> <li>Update approved listing of EV charging station sites based on stakeholder discussions</li> <li>Install EV charging stations for approved sites</li> <li>Install signage and visibility improvements related to EV charging stations along major transportations corridors</li> </ol> 5+YEARS	9	Install EV charging stations for approved sites	
<ul> <li>stakeholder discussions</li> <li>Install EV charging stations for approved sites</li> <li>Install signage and visibility improvements related to EV charging stations along major transportations corridors</li> </ul> 5+YEARS		2-5 YEARS	
Install signage and visibility improvements related to EV charging stations along major transportations corridors 5+ YEARS	0		
stations along major transportations corridors 5+ YEARS	2	Install EV charging stations for approved sites	
	3		
		5+ YEARS	
Reassess areas of greatest need for additional EV charging stations	(1)	Reassess areas of greatest need for additional EV charging stations	
based on existing conditions			
Identify advancements in EV charging technology to replace outdated units	2		

HOCTC is committed to creating a foundation that will support New York State's goal for all new passenger cars and trucks sold in New York State to be zero emissions by 2035.<sup>13</sup> Additionally, this foundation will support the federal government's target of 50% electric vehicle sales share by 2030 in an effort to mitigate the impacts of climate change, save consumers money, boost public health, and advance environmental justice.<sup>14</sup> The impact of these initiatives combined with the goals in HOCTC's Long-Range Transportation Plan foster connectivity and sustainability to support EV utilization to an extent not previously possible with Oneida and Herkimer Counties.

## Resources

<sup>1</sup>NYSERDA. (September 2, 2021). Charge NY Electric Vehicle Registration Map. Link: <u>https://www.nyserda.</u> <u>ny.gov/All-Programs/Programs/ChargeNY/Support-Electric/Map-of-EV-Registrations</u>

<sup>2</sup> Energetics Inc. Mohawk Valley EV Charging Station Plan. (March, 2016)

<sup>3</sup>NYSERDA. (September 2, 2021). Charge NY Electric Vehicle Registration Map. Link: <u>https://www.nyserda.</u> <u>ny.gov/All-Programs/Programs/ChargeNY/Support-Electric/Map-of-EV-Registrations</u>

<sup>4</sup>U.S. Department of Energy and U.S. Environmental Protection Agency, Fuel Economy website. Data accessed October 30, 2020. Link: <u>https://fueleconomy.gov</u>

<sup>5</sup>ABB. Terra 360, the high-power charger for everyone. Accessed October 4, 2021. Link: <u>https://new.abb.com/</u><u>ev-charging/terra-360</u>

<sup>6</sup> BEAM Global. EV ARC 2020 Sustainable EV Charging In Minutes Not Months. Accessed October 5, 2021. Link: <u>https://beamforall.com/product/ev-arc-2020/</u>

<sup>7</sup> NYSDOT. New York's Clean Pass Program. (September 4, 2019). Accessed October 4, 2021. Link: <u>https://www.dot.ny.gov/programs/clean-pass</u>

<sup>8</sup> NYSERDA. Drive Clean Rebate for Electric Cars. How the Drive Clean Rebate Works. Accessed October 4, 2021. Link: <u>https://www.nyserda.ny.gov/All-Programs/Programs/Drive-Clean-Rebate/How-it-Works</u>

<sup>°</sup>NYSERDA. Charge Ready NY. Accessed October 4, 2021. Link: <u>https://www.nyserda.ny.gov/All-Programs/</u> <u>Programs/ChargeNY/Charge-Electric/Charging-Station-Programs/Charge-Ready-NY</u>

<sup>10</sup> Joint Utilities of New York. EV Make ready Program. Accessed October 4, 2021. Link: <u>https://jointutilitiesofny.</u> <u>org/ev/make-ready</u>

"Internal Revenue Services. Plug-In Electric Drive Vehicle Credit (IRC 30D). (June 22, 2021). Accessed October 4, 2021. Link: <u>https://www.irs.gov/businesses/plug-in-electric-vehicle-credit-irc-30-and-irc-30d</u>

<sup>12</sup>NYCDOT. Electric Vehicles. Accessed October 8, 2021. Link: <u>https://www1.nyc.gov/html/dot/html/motorist/</u><u>electric-vehicles.shtml#/find/nearest</u>

<sup>13</sup>New York State Governor's Press Office. In Advance of Climate Week 2021, Governor Hochul Announces New Actions to Make New York's Transportation Sector Greener, Reduce Climate-Altering Emissions. Accessed February 11, 2022. Link: <u>https://www.governor.ny.gov/news/advance-climate-week-2021-governor-hochul-announces-new-actions-make-new-yorks-transportation</u>

<sup>14</sup> The White House. Fact Sheet: President Biden Announces Steps to Drive American Leadership Forward on Clean Cars and Trucks. Accessed February 11, 2022. Link: <u>https://www.whitehouse.gov/briefing-room/</u> <u>statements-releases/2021/08/05/fact-sheet-president-biden-announces-steps-to-drive-americanleadership-forward-on-clean-cars-and-trucks/#:~:text=Specifically%2C%20the%20President%20will%20 sign.or%20fuel%20cell%20electric%20vehicles.</u>