



ELECTRIC VEHICLE CHARGING POINT SOLUTIONS

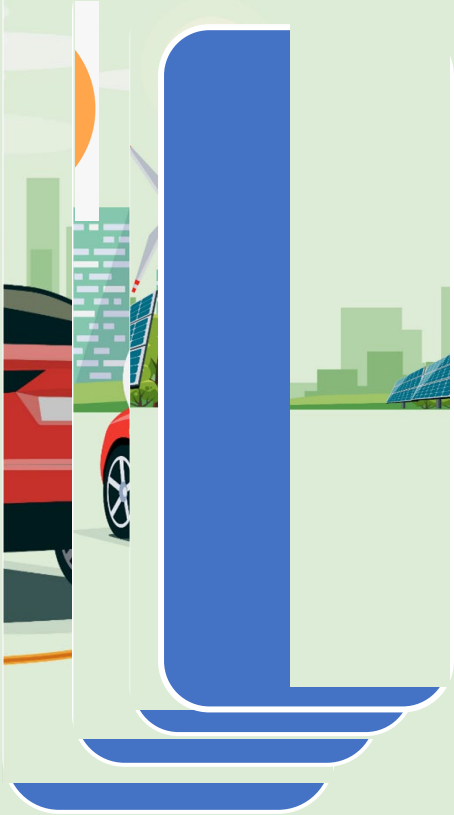


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AGENDA





Team Green aims to incentivize and increase the use of electric vehicles in Broome County by improving the infrastructure of charging stations as well as creating an informational website and brochure.



- Proposed Problem
 - Lack of Charging Stations in Broome County
 - Lack of Charging Stations in Ideal Locations
- Proposed Solution
 - Optimal Locations
 - E-Drive Tool Analysis
 - Site Suitability Analysis
 - ENVI 431 - EIS
 - Website
 - Extensive Research



- Growing Demand for EV Charging
 - EV sales up 60% in 2021
 - 1 in every 20 cars sold
- Electrical Vehicle Charging Point Infrastructure
 - Enhance infrastructure
 - Encourage EV ownership
- Dissipation of Information about EV Charging
 - Resource containing all important information
 - Ease of access



- Optimal Locations
 - Extensive analysis
 - Perspective of resident and traveler
- Website
 - Detailed information on EV charging stations
 - Acquisition, maintenance, ownership...
- Brochure
 - Informative summary of website
 - Distributed to prospective charger owners



1. Oakdale Mall
2. Town Square Mall
3. Vestal High School
4. Binghamton University
5. State Theater (Deposit)
6. Mobil Gas Station (Whitney Point)
7. Broome County Regional Farmers Market
8. TBD on Survey



Welcome to E-DRIVE | E-DRIVE Directions | New England | Middle Atlantic | South Atlantic | East South Central | East North Central

Analysis Parameters

Select State(s): New York

Select Metro Area(s): Binghamton, NY

Select County(ies): Broome

Proximity to EV Corridors: (All)

DCFC Plug Types Considered: All (SAE, CHAdeMO, & Tesla)

Equity Considerations

Tracts w/in Opportunity Zones (QOZ)? (All)

EPA EJSCREEN EJ Index Percentiles

State % of Demographic Index: 0 100

State % of Ozone Index: 0 100

State % of NATA Resp. Hazard Index: 0 100

Metric Weighting

Enter values to define the relative weight or importance of each metric (must sum to 100)

DCFC Proximity Metrics		Demand Metrics		Demographic Metrics		Total
Distance	Port Density	Traffic Volume	Nearby Activity	Vehicle Density	Home Access	(must=100)
15	15	30	30	5	5	100

Results

Census Tract Rank (1=high suitability)

1 10,062 55

Filter by Tract Rank

Highlight Census Tract

Ranked Tracts

(click "Rank" and select "Sort Census Tracts ascending..." to sort by rank)

Census Tract	Rank
Broome, NY (Tract 1..	2
Broome, NY (Tract 1..	2
Broome, NY (Tract 1..	1
Broome, NY (Tract 1..	5
Broome, NY (Tract 1..	4
Broome, NY (Tract 1..	9
Broome, NY (Tract 1..	6
Broome, NY (Tract 1..	10
Broome, NY (Tract 5)	8
Broome, NY (Tract 3)	7
Broome, NY (Tract 1..	20

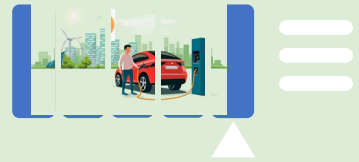
Note: Final tract rankings are relative and specific to the geographic scope, parameters, and metric weighting defined in the active scenario only

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+ a b l e a u



Parking Lot Accross from State Theatre (Deposit, NY)			
1			
2	2. Does Broome County own, is it a public or private parking lot where the EV charging station will be installed?		Public
3	3. Does Broome County either own or lease the building where electricity will be drawn for the EV charging station?		N/A
4	4. What is the predominant land use for the EV charging station site?		Parking Lot
5	5. Which venue best describes the proposed EV charging station location?		Resturant/Theater Parking Lot
6	6. How long do drivers typically park their vehicles at this location?		30 min - 3 hours
7	7. Is this location used for any special event parking?		Potentially
8	7B. Approximately how many special events per year?		Not Many
9	8. How far is this location from a busy road used to travel between cities (typically an interstate, US highway, or State route)?		Directly off major state highway
10	9. Which potential EV drivers are expected to use the charging station?		All
11	10. Would an EV driver require a permit, sticker, or card to access the parking lot where the charging station is located?		No
12	11. Is there a fee to access the parking lot where the charging station would be located or would there be a fee to use the charging station?		Pontential fee to use charger
13	12. Would the charging station be located in a parking lot or garage with limited hours of operation?		No
14	13. How many parking spaces are in the lot or garage?		25 - 40
15	14. Typically, how full is the parking lot or garage?		15%
16	15. Is there fluctuation in parking lot use by season?		Minimal fluctuation
17	16. Is there fluctuation in parking lot use by day of the week?		Minimal fluctuation
18	17. Would the EV charging station be mounted on the wall of a building where the cord could run to the EV and not interfere with a pedestrian walkway?		Not on a wall, but not crossing a walkway
19	18. Is the parking lot paved?		Yes
20	19. Is the parking lot prone to flooding or other events that might damage a charging station or plugged-in EV?		No
21	20. Would the EV charging station be located in a covered parking space?		No
22	21. Would the EV charging station need to be placed where it would obstruct plowing or in a location where snow is stored in the winter?		No
23	22. Would the EV charging station be in a preferred parking space?		Yes
24	23. Are there lights illuminating the parking lot at night?		Yes
25	24. Would the EV charging station and parking space be visible from the road or entrance to the parking lot or garage?		Yes
26	25. Does the existing electrical panel have 4 extra slots and 80 amps of available capacity for a dual port Level 2 charging station?		N/A
27	26. How recently has major electrical work been performed at this location?		N/A
28	27. How far is the electrical panel from the point of the building closest to where the charging station would be located?		N/A
29	Highest Scoring Answer	Lowest Scoring Answer	Mid-range Scoring Answer



- Based off Broome County Website
 - Charging Station & Network Options
 - Energy Cost for Charging Station
 - Rate of Charging By Station Type
 - Charging Adaptor Options
 - Installation Cost
 - Methods to Acquire a Charging Station
 - Professional Installation Services
 - Incentives Available
 - Aspects of an Ideal Location
 - Benefits of Having a Charging Station



Electric Vehicle Charging Point Solutions

Intro Text...

 Select Language: ▼

Heading 1

Topic 1 Text...

Topic 1 Text 2...

Example List

- ...
- ...
- ...

Contact Information

Building Name
 Floor
 Street Address
 PO Box ###
 Binghamton, NY 13902

PHONE: ###.###.####
 FAX: ###.###.####
 EMAIL: ContactEmail@Email.com
 Hours: #-## AM - #-## PM

Directory

- [Charging Station & Network Options](#)
- [Energy Cost for Charging Station](#)
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- [Aspects of an Ideal Location](#)
- [Benefits of Having a Charging Station](#)

Charging Station & Network Options

Choosing the charging station type that is best for your needs is important, as the type of charging station can vary in charge rate, energy usage, and price. There are three types of electric vehicle charging stations: type 1, type 2, and type 3.

Type 1



A type 1 charging station is a standard outlet adapter. A portable charging cord can supply an electric car with standard AC current at 120V. The cord plugs into a standard three-prong outlet and on average provides 2.5 miles of electric range for each hour of charging.

Type 1 chargers only require a standard plug to be placed where the electric car is to be charged. This is the least costly, yet slowest charging of the three charging station types.

Some Use Cases:

- Residential home use
- Locations where electric car owners can plug in all day or night

Type 2



CONCLUSION

- Growing EV Charging Needs
- Charging Infrastructure Plan
- Easily Accessible Website for EV Charging Information
- Streamline Learning and Procurement Process
- Incentivize EV Use



The background of the slide is a stylized landscape. It features dark blue and black silhouettes of mountains and a dense forest of trees. A bright orange crescent moon is positioned in the upper left, partially overlapping the word 'CONCLUSION'. A single bird is shown in flight on the right side of the image.

CONCLUSION



QUESTIONS?

REFERENCES

- E-Drive Tool
 - [E-DRIVE: Evaluation & Development of Regional Infrastructure for Vehicle Electrification \(sustainability.com\)](https://www.sustainability.com)
- Tompkins County Site Suitability Document
 - [Tompkins EVSE Site Suitability FINAL.pdf \(tompkinscountyny.gov\)](https://www.tompkinscountyny.gov)
- Broome County Electric Vehicle Initiative - ENVI 413: Environmental Impact Statements
 - <https://docs.google.com/document/d/1yrnzvNbXdPT0rVTQTVEnUBhNfNOq17jEDi63J-43M9Y/edit>
- NY Charger Type Information
 - <https://www.nyserda.ny.gov/All-Programs/Programs/ChargeNY/Charge-Electric/Charging-Station-Programs/Charge-Ready-NY/Installing-a-Charging-Station>
- New York State Energy Research and Development Authority
 - <https://www.nyserda.ny.gov/>
- NYS Charger Incentives
 - <https://www.nyserda.ny.gov/All-Programs/ChargeNY/Charge-Electric/Charging-Station-Programs?msclkid=c745d420c13211ec9e3d987d8e0162e6>