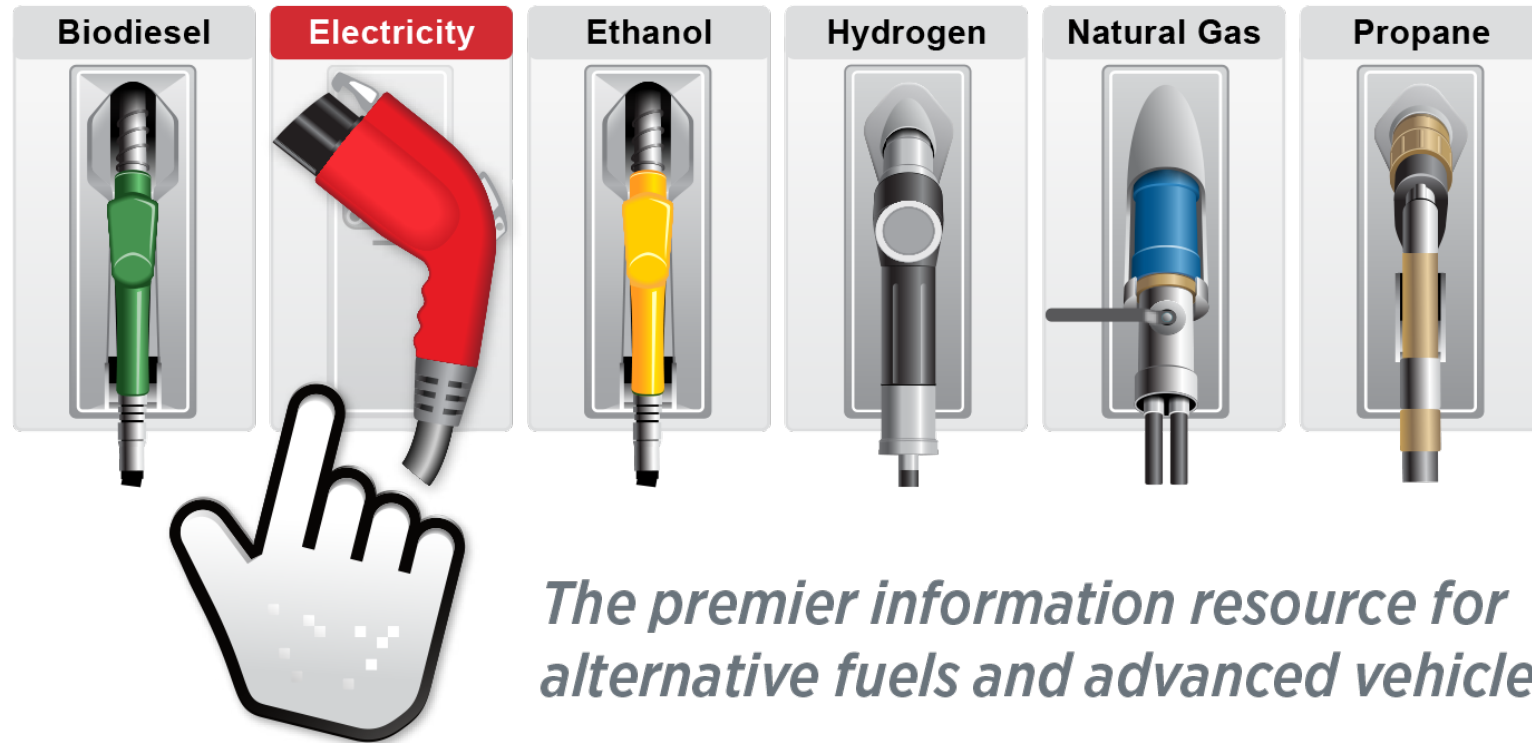




Alternative Fuels Data Center Station Locator and Corridor Tools

Matt Rahill and Johanna Levene
July 10, 2019

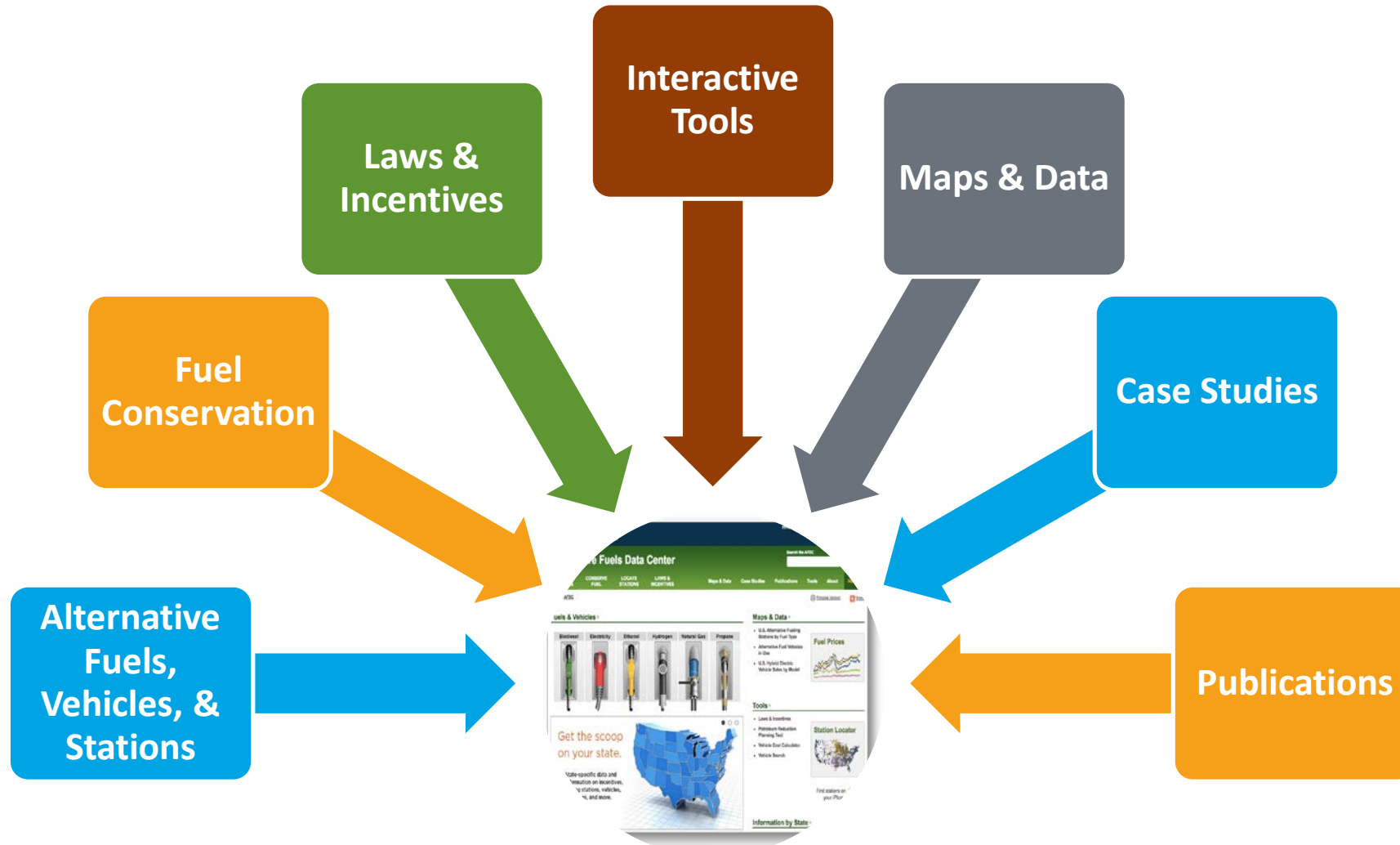
Alternative Fuels Data Center



*The premier information resource for
alternative fuels and advanced vehicles*

afdc.energy.gov

What does the AFDC provide?



Alternative Fuel Stations

afdc.energy.gov/stations

The screenshot displays the U.S. Department of Energy's Alternative Fuels Data Center (AFDC) website. At the top, the U.S. Department of Energy logo is visible, along with the text "Energy Efficiency & Renewable Energy". The main heading is "Alternative Fuels Data Center". A search bar is located in the top right corner with the text "Search the AFDC" and a "SEARCH" button. Below the search bar, there are navigation tabs: "FUELS & VEHICLES", "CONSERVE FUEL", "LOCATE STATIONS" (which is highlighted), "LAWS & INCENTIVES", "Maps & Data", "Case Studies", "Publications", "Tools", "About", and "Home".

The main content area is titled "Alternative Fueling Station Locator". Below the title, there is a sub-header: "Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#)." Below this, there are two buttons: "Public Stations" and "Advanced Filters" (which is highlighted with a blue box). To the right of these buttons, it says "29,060 results in" followed by a dropdown menu set to "U.S. and Canada".

Below the buttons, there is a search bar with the text "Enter location" and a search icon, and a dropdown menu set to "All Fuels". To the right of the search bar is a "Map a Route" button. The main part of the page is a map of North America showing the locations of alternative fueling stations. The map is populated with numerous colored dots representing different fuel types. A legend in the bottom right corner of the map identifies the fuel types: Biodiesel (red dot), CNG (blue dot), Electric (green dot), Ethanol (yellow dot), Hydrogen (light blue dot), LNG (dark green dot), and Propane (purple dot). The map also shows the borders of the United States, Canada, and Mexico, with labels for "CANADA" and "MEXICO". Major cities like "Mexico City" and "Hudson Bay" are also labeled. At the bottom of the map, there are zoom in (+) and zoom out (-) buttons.

At the bottom of the page, there is a footer with several links: "iPhone App for U.S. stations", "Android App for U.S. stations", "Developer APIs", "Embed Tool", "Submit New Station", and "About the Data". The footer also includes the text "Powered by Esri | Esri, HERE, Garmin, NGA, USGS".

Alternative Fuel Stations

Alternative Fueling Station Locator

Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#).

Public Stations **Advanced Filters** 2,246 results in United States

Enter location Electric Level 1 Level 2 DC Fast Charging CHAdeMO CCS Tesla

iPhone App
for U.S. stations

Android App
for U.S. stations

Developer APIs

Embed Tool

Submit New Station

About the Data

Alternative Fuel Stations

Alternative Fueling Station Locator

Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#).

Public Stations | Advanced Filters

Location | Fuel | Station

Filter by Fuel Type

- All Fuels
- Biodiesel (B20 and above)
- Compressed Natural Gas (CNG)
- Electric
- Ethanol (E85)
- Hydrogen
- Liquefied Natural Gas
- Propane (LPG)

Charger types: DC Fast

Connectors: CHAdeMO, SAE CCS

Networks: All

- All
- AddÉnergie
- Blink
- ChargePoint
- Electrify America
- EV Connect

[clear all filters](#)

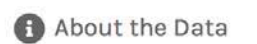
Map Results

65 stations
145 charging outlets

Filters chosen:

- New York
- Electric
Types: DC Fast
Connectors/outlets: CHAdeMO, SAE CCS
- Access: Public

[Download Results](#)



Alternative Fuel Stations

Alternative Fueling Station Locator

Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#).

The screenshot shows the 'Alternative Fueling Station Locator' web application. At the top, there are two tabs: 'Public Stations' (selected) and 'Advanced Filters'. Below the tabs are three filter categories: 'Location' (represented by a map icon), 'Fuel' (represented by a drop icon), and 'Station' (represented by a gas pump icon). The 'Station' category is highlighted in orange.

The main section is titled 'Filter by Station Details' and contains several filter options:

- Access:** Public, Private
- Status:** Available, Planned, Temporarily Unavailable
- Owner:** A dropdown menu currently showing 'All'.
- Payment:** A dropdown menu is open, showing a list of payment methods: All, American Express, Debit, Discover, MasterCard, Visa, Cash, Check, ARI, Clean Energy, Comdata, Commercial Fueling Network, EFS, Fleet One, Fuelman, GASCARD, Pacific Pride, PHH, Proprietor Fleet Card, Speedway, TCH, and T-Chek T-Card.

On the right side, there is a 'Map Results' section showing '65 stations' and '145 charging outlets'. Below this, it lists 'Filters chosen:' and shows 'New York' selected under the 'Location' filter. Under the 'Fuel' filter, it shows 'Electric' with 'Types: DC Fast' and 'Connectors/outlets: CHAdeMO, SAE CCS'. Under the 'Station' filter, it shows 'Access: Public'. At the bottom right of this section is a 'Download Results' button.

At the bottom of the page, there are links for 'iPhone App for U.S. stations', 'Android App for U.S. stations', and 'Data'. On the far right, there are links for 'Add New Station' and 'About the Data'.

Alternative Fuel Stations

Alternative Fueling Station Locator

Find alternative fueling stations in the United States and Canada. For U.S. stations, see [data by state](#). For Canadian stations in French, see [Natural Resources Canada](#).

Public Stations | Advanced Filters

65 stations
145 charging outlets

Filters chosen:

- New York
- Electric
Types: DC Fast
Connectors/outlets: CHAdeMO, SAE CCS
- Access: Public

Download Results

iPhone App
for U.S. stations

Android App
for U.S. stations

Developer APIs

Embed Tool

Submit New Station

About the Data

Alternative Fuel Stations

Alternative Fuels Data Center

FUELS & VEHICLES

CONSERVE FUEL

LOCATE STATIONS

LAWS & INCENTIVES

Maps & Data

Case Studies

EERE » AFDC » Tools

Data Downloads

To download data related to alternative fuels and advanced vehicles, follow the steps below.

Step 1. Choose data to download

Choose the dataset and file format you want to download.

Dataset: Alternative fuel stations

File Format: CSV (opens in Excel)

Read descriptions of the [data included in the alternative fuel stations download](#).

Data updated monthly. Last updated: 07/03/2019

Just looking for the closest alternative fuel station? Use our [Alternative Fueling Station Locator](#) to find nearby stations.

Download Options

Fuel type: Compressed Natural Gas

Access: Public

Status: Open

Step 2. Share your information

Provide the following contact and use information to download the data.

* First Name: Matt

* Last Name: Rahill

* E-mail Address: matt.rahill@nrel.gov

Alternative Fuel Stations

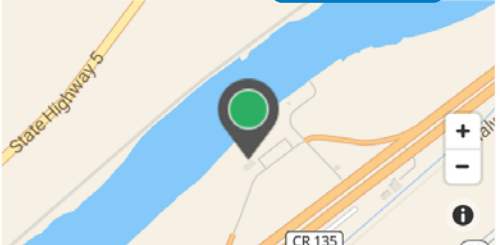
Public Stations | Advanced Filters

Mohawk Valley Welcome Center

I-90 W Milepost 187
Fultonville, NY 12072

518-922-6367

[Directions](#)



Report a change

Electric Vehicle Charging

Type	Outlets	Connectors
DC Fast	3	CHAdEMO

Public

24 hours daily

Last confirmed: April 2019

Station details are subject to change. We recommend calling the station to verify location, hours of operation, and access.

Public Stations | Advanced Filters | U.S. and Canada

Enter location | All Fuels | Map a Route

Submit New Station

Use this form to suggest adding a station.

* Required field

Your Contact Information

* First Name * Last Name
 * Email * Phone

Station Information

* Available Fuel(s)

- Biodiesel (B20 and above)
- Compressed Natural Gas (CNG)
- Electric
- Ethanol (E85)
- Hydrogen
- Liquefied Natural Gas (LNG)
- Propane

Legend: Biodiesel, CNG, Electric, Ethanol, Hydrogen, LNG, Propane

Submit New Station

Alternative Fuel Stations

Query our database of alternative fuel stations.

This includes biodiesel, compressed natural gas, ethanol, electric charging, hydrogen, liquefied natural gas, and propane station locations.

All Stations (GET /api/alt-fuel-stations/v1)

Return a full list of alternative fuel stations that match your query.

Get Station by ID (GET /api/alt-fuel-stations/v1/:id)

Fetch the details of a specific alternative fuel station given the station's ID.

Last Updated Date (GET /api/alt-fuel-stations/v1/last-updated)

Retrieve the date when the alternative fuel stations data were last updated.

Nearest Stations (GET /api/alt-fuel-stations/v1/nearest)

Return the nearest alternative fuel stations within a distance of a given location.

Stations Nearby Route (GET|POST /api/alt-fuel-stations/v1/nearby-route)

Find alternative fuel stations within a distance of a driving route.

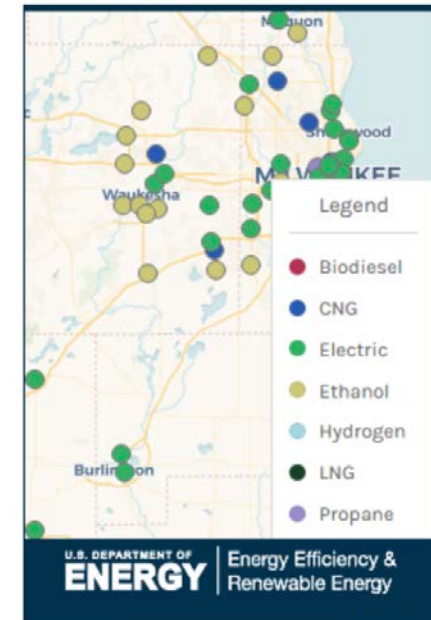
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developer.nrel.gov/docs/transportation/alt-fuel-stations-v1

Alternative Fuel Stations



GET WIDGET CODE

afdc.energy.gov/widgets

Resources for Nominating Corridors

Alternative Fuels Data Center

Search the AFDC [SEARCH](#)

[FUELS & VEHICLES](#) [CONSERVE FUEL](#) [LOCATE STATIONS](#) [LAWS & INCENTIVES](#) [Maps & Data](#) [Case Studies](#) [Publications](#) [Tools](#) [About](#) [Home](#)

[EERE](#) » [AFDC](#) » [Tools](#) [Printable Version](#) [Share](#)

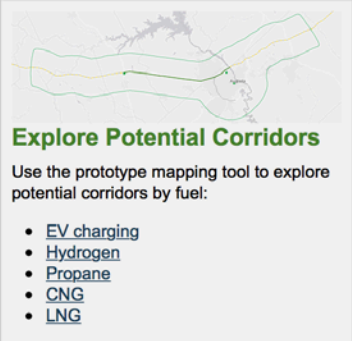
Station Data for Nominating Alternative Fuel Corridors

The table below provides station data and shapefiles by state and fuel type. These datasets include public stations with the following filters applied to meet the criteria for nominating alternative fuel corridors:

- **EV charging** – only DC fast electric vehicle (EV) charging stations, excluding Tesla
- **Hydrogen** – only retail stations (Non-retail stations may be used in corridor nominations if the stations are compliant with SAE J2601 standards and meet all of the criteria for a hydrogen corridor.)
- **Propane** – only "primary" liquefied petroleum gas (LPG) stations, which have fuel for vehicles and vehicle-specific fueling services that are consistently offered during business hours
- **CNG** – only fast-fill compressed natural gas (CNG) stations that offer a fill pressure of 3,600 psi
- **LNG** – all liquefied natural gas (LNG) stations

The data downloads are CSVs with current station data pulled automatically from the [Alternative Fueling Station Locator](#). The shapefiles are ZIP downloads with a static snapshot of the stations as of Sept. 5, 2018, including stations outside state borders within 25 miles.

Learn more about corridor designations from the [Federal Highway Administration](#).






































Explore Potential Corridors

Use the prototype mapping tool to explore potential corridors by fuel:

- [EV charging](#)
- [Hydrogen](#)
- [Propane](#)
- [CNG](#)
- [LNG](#)

- CSV downloads
- Shapefiles
- Interactive maps

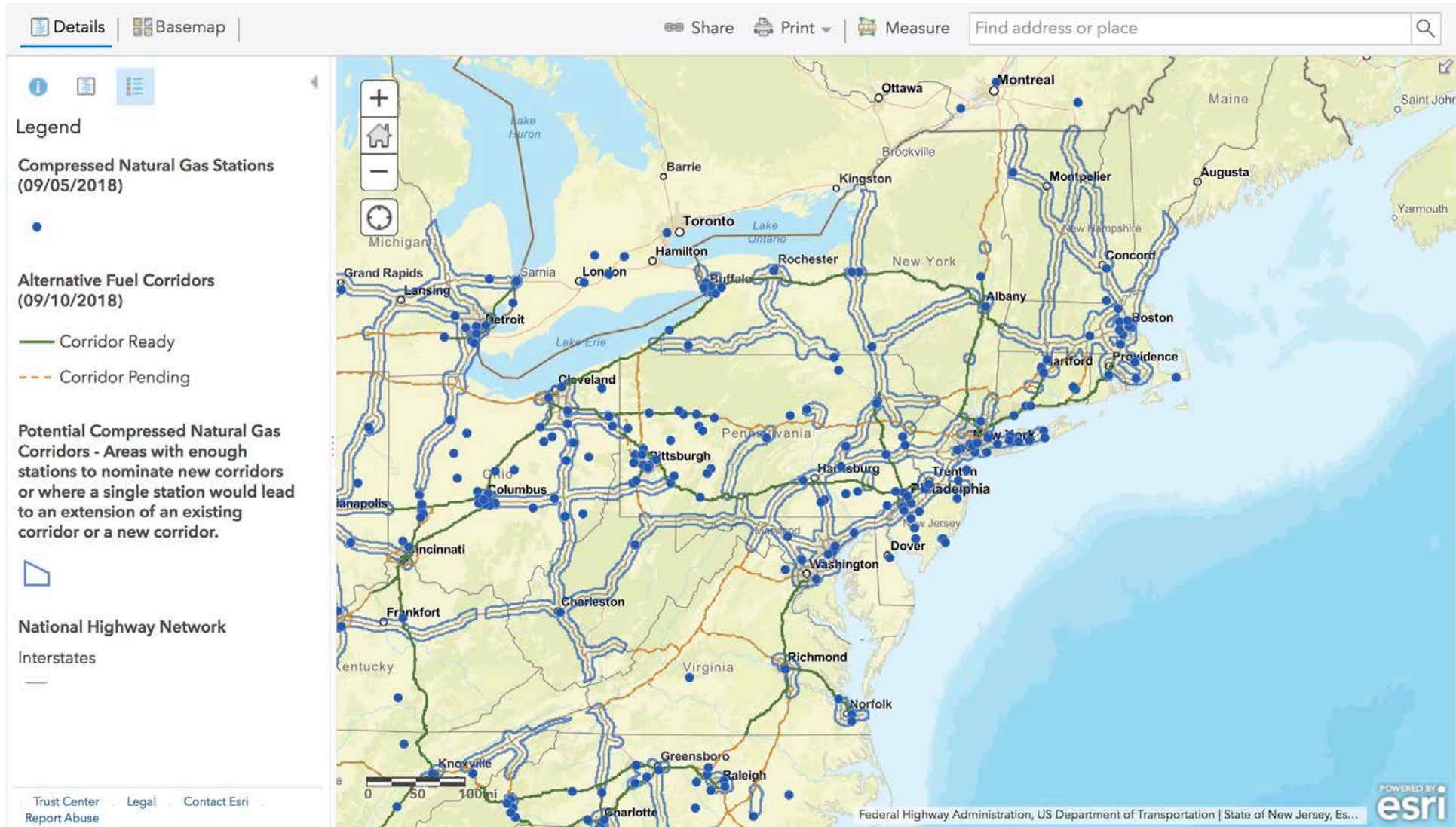
afdc.energy.gov/corridors

Stations by State and Fuel Type					
State	EV Charging	Hydrogen	Propane	CNG	LNG
Alabama	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
Alaska	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
Arizona	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
Arkansas	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
California	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
Colorado	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile
Connecticut	 data shapefile	 data shapefile	 data shapefile	 data shapefile	 data shapefile

Interactive Maps for Nominating Corridors

ArcGIS ▾ Compressed Natural Gas (CNG) Corridor Map

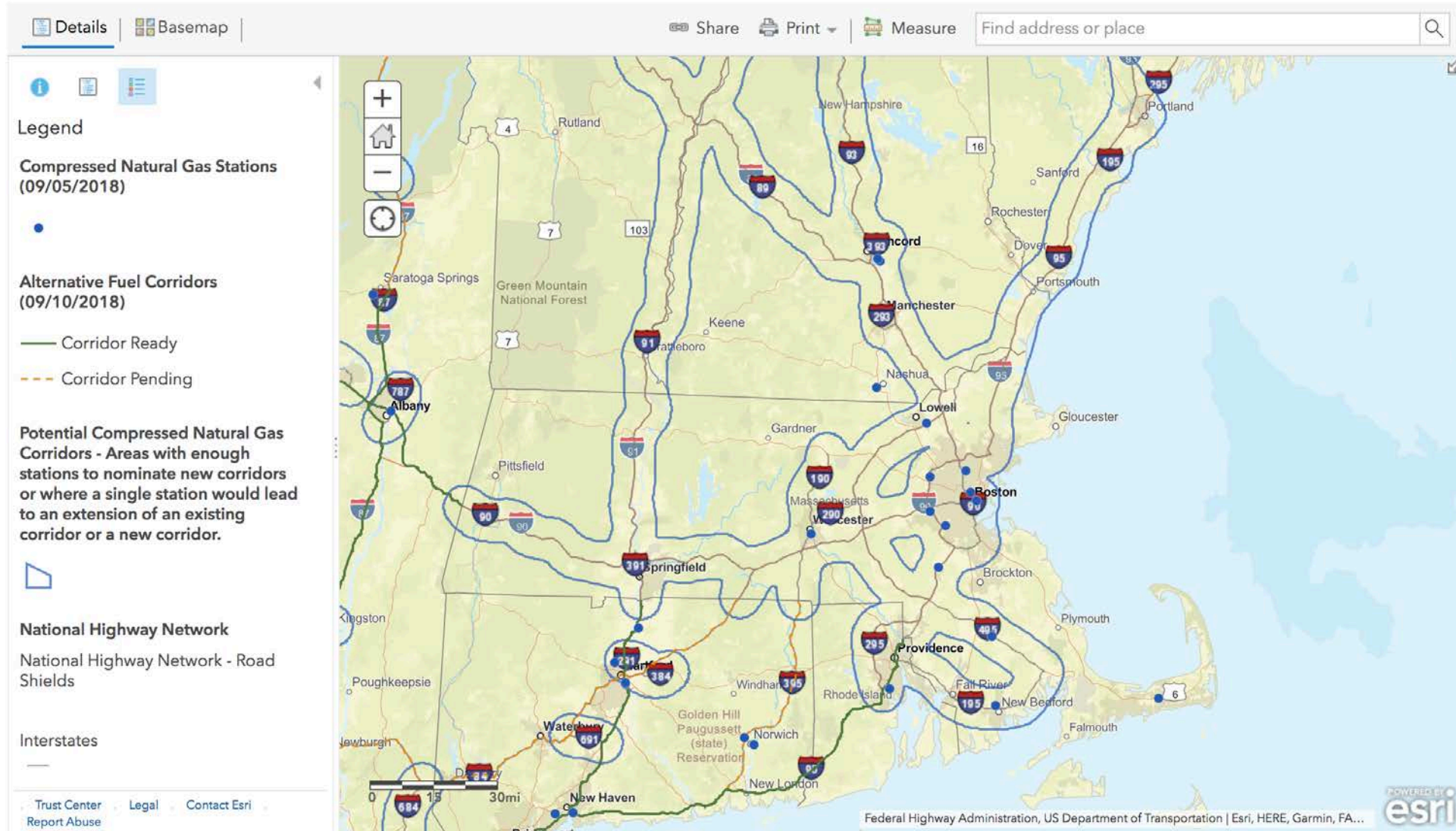
Modify Map  Sign In



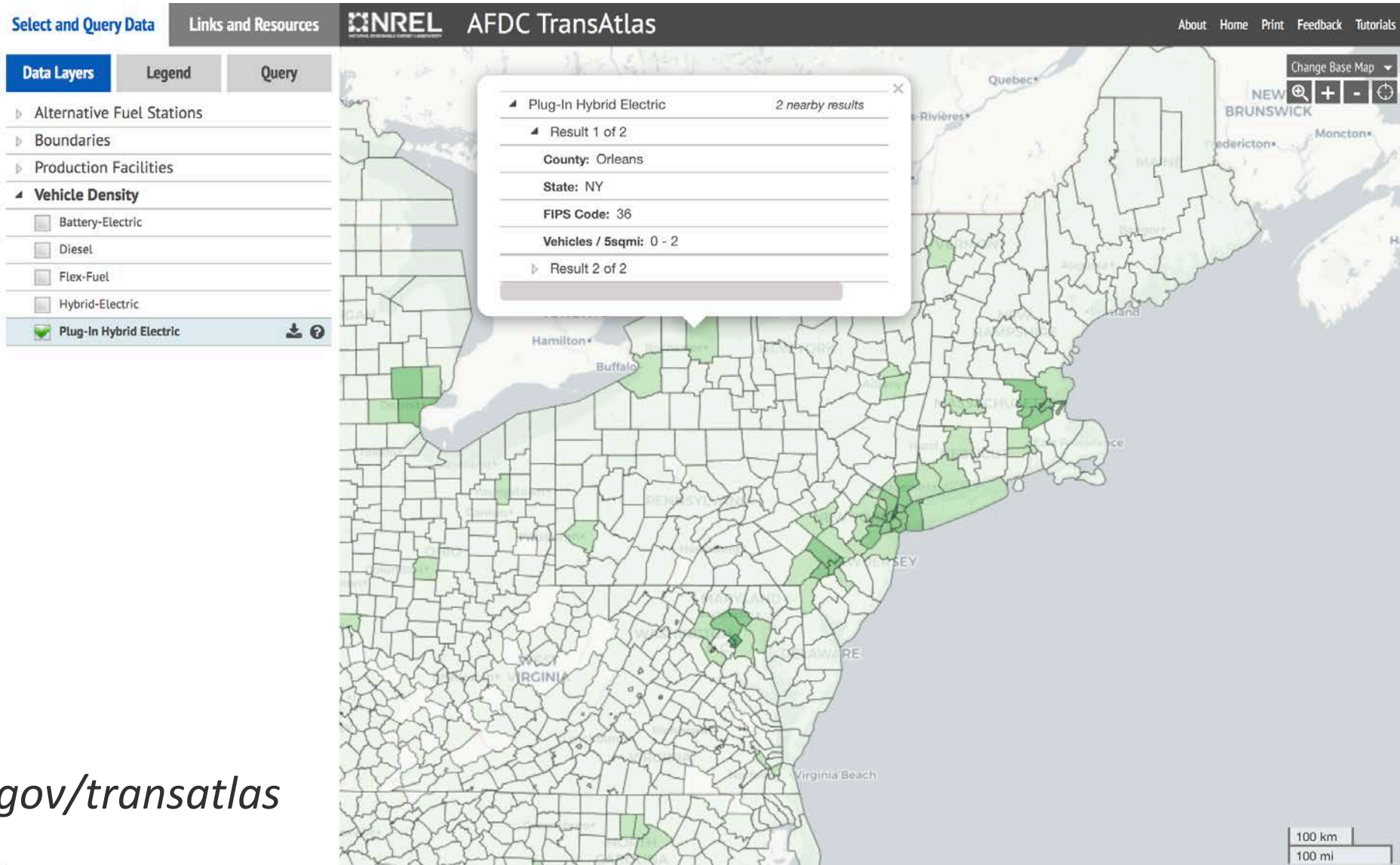
Interactive Maps for Nominating Corridors

ArcGIS ▾ Compressed Natural Gas (CNG) Corridor Map

Modify Map  Sign In



TransAtlas



maps.nrel.gov/transatlas

Alternative Fuels Data Center

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EERE > AFDC > Laws & Incentives > State

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Search

Federal

State

Local Examples

Summary Tables

Maryland Laws and Incentives

Listed below are incentives, laws, and regulations related to alternative fuels and advanced vehicles for Maryland. For more information, contact your Clean Cities regional project manager or other agencies through the [points of contact](#) section.

Laws and Incentives

[VIEW ALL](#) [SEARCH](#)

Information in this list is updated annually after Maryland's [legislative session](#) ends. *Last Updated April 2019*

State Incentives

- [Electric Vehicle Supply Equipment \(EVSE\) Rebate Program](#)
- [Plug-In Electric Vehicle \(PEV\) and Fuel Cell Electric Vehicle \(FCEV\) Tax Credit](#) updated 5/8/2019
- [Plug-In Electric Vehicle \(PEV\) High Occupancy Vehicle \(HOV\) Lane Exemption](#) updated 5/8/2019
- [Alternative Fuel Infrastructure Grants](#)
- [Alternative Fuel Vehicle \(AFV\) Voucher Program](#)
- [Zero Emission School Bus Grant Program and Study](#) added 6/7/2019
- [Idle Reduction Weight Exemption](#)

Utility/Private Incentives

- [Plug-In Electric Vehicle \(PEV\) Charging Rate - BGE](#)
- [Electric Vehicle Supply Equipment \(EVSE\) Rebate - BGE](#) added 6/28/2019
- [Electric Vehicle Supply Equipment \(EVSE\) Rebate - Delmarva Power](#) added 6/28/2019
- [Plug-In Electric Vehicle \(PEV\) Charging Rate Incentive - Pepco](#)
- [Electric Vehicle Supply Equipment \(EVSE\) Rebate - Pepco](#) added 6/28/2019
- [Electric Vehicle Supply Equipment \(EVSE\) Lease Pilot Program - FirstEnergy](#)

Laws and Regulations

- [Electric Vehicle Supply Equipment \(EVSE\) Regulation Exemption](#)
- [Plug-In Electric Vehicle \(PEV\) Information Disclosure](#)
- [Zero Emission Vehicle \(ZEV\) State Fleet Goal](#)
- [Plug-in Electric Vehicle \(PEV\) Infrastructure Promotion](#) updated 5/8/2019
- [Zero Emission Vehicle \(ZEV\) Deployment Support](#)
- [Alternative Fuel Use Requirement](#)
- [Alternative Fuel Vehicle \(AFV\) Access to Tunnels](#)
- [Idle Reduction Requirement](#)
- [Zero Emission Vehicle \(ZEV\) Sales Requirements and Low Emission Vehicle \(LEV\)](#)
- [Aftermarket Alternative Fuel Vehicle \(AFV\) Conversion Requirements](#)
- [Low-Speed Vehicle Access to Roadways](#)
- [Limited Speed Vehicle Access to Roadways](#)

Expired, Repealed, and Archived Laws and Incentives

View a list of [expired, repealed, and archived laws and incentives](#) in Maryland.

Points of Contact

Get [contact information](#) for Clean Cities coalitions or agencies that can help you with opportunities in Maryland.

Legislative Session Information

The Maryland Legislature meets annually from early January to early April. The governor must sign or veto legislation within six days of transmittal or the legislation becomes law without signature. During the last seven days of the session or after adjournment, the governor must sign or veto legislation within 30 days of transmittal, or the legislation becomes law without signature. Legislation must be transmitted to the governor within 20 days of the session adjournment.



Maryland Information

Find information about alternative fuels and advanced vehicles in Maryland.

Search Federal and State Laws and Incentives

Search incentives and laws related to alternative fuels and advanced vehicles. You can search by keyword, category, or both.

Keyword Search

Category Search

Jurisdiction	Technology/Fuel	Incentive/Regulation	User
<input type="checkbox"/> Nevada	<input type="checkbox"/> Ethanol	<input type="checkbox"/> All	<input type="checkbox"/> All
<input checked="" type="checkbox"/> New Hampshire	<input checked="" type="checkbox"/> Natural Gas	<input type="checkbox"/> Acquisition or Fuel Use	<input type="checkbox"/> Private Business
<input checked="" type="checkbox"/> New Jersey	<input type="checkbox"/> Propane (LPG)	<input type="checkbox"/> Grants	<input type="checkbox"/> Government Entity
<input type="checkbox"/> New Mexico	<input type="checkbox"/> Hydrogen Fuel Cells	<input type="checkbox"/> Driving or Idling	<input type="checkbox"/> Personal Vehicle Owner or Driver
<input checked="" type="checkbox"/> New York	<input checked="" type="checkbox"/> EVs	<input type="checkbox"/> Tax Incentives	<input type="checkbox"/> Alternative Fuel Infrastructure
<input type="checkbox"/> North Carolina	<input type="checkbox"/> HEVs	<input type="checkbox"/> Registration or	<input type="checkbox"/> Other

[SEARCH](#) [CLEAR](#)

49 results for:
Jurisdiction: NH, NJ, NY
Technology/Fuel: Natural Gas, EVs

Search Results | 49 laws and incentives

[VIEW ALL](#) [DOWNLOAD CSV](#)

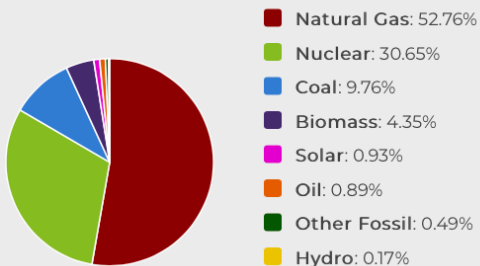
afdc.energy.gov/laws

The source of your electricity has an effect on the emissions of your electric vehicle.

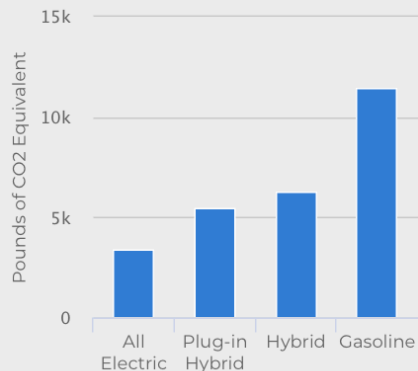
Choose a State

State Averages for Virginia

Electricity Sources

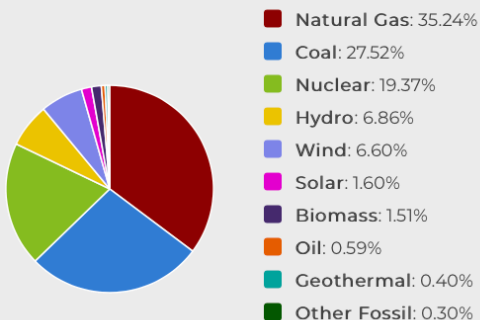


Annual Emissions per Vehicle

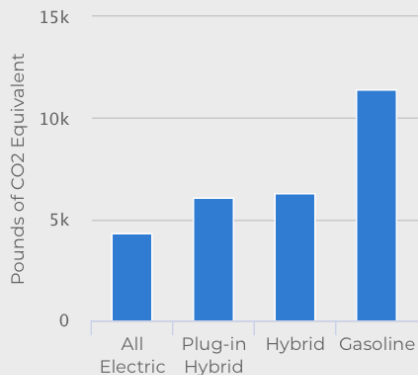


National Averages

Electricity Sources



Annual Emissions per Vehicle



ASSUMPTIONS

Electricity Sources & Emissions

afdc.energy.gov/vehicles/electric_emissions.html

Alternative Fuels Data Center

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Pennsylvania Transportation Data for Alternative Fuels and Vehicles

Find transportation data and information about alternative fuels and advanced vehicles in Pennsylvania, including laws and incentives, fueling stations, fuel prices, and more.

Pennsylvania

Laws and Incentives

22 laws and incentives in Pennsylvania related to alternative fuels and advanced vehicles

Recent Additions and Updates

[Electric Vehicle Supply Equipment \(EVSE\) Lease Pilot Program - FirstEnergy](#) added 5/22/2019

[Plug-In Electric Vehicle \(PEV\) Credit – Duquesne Light Company \(DLC\)](#) added 4/23/2019

[Commercial Electric Vehicle Supply Equipment \(EVSE\) Incentive Program – Duquesne Light Company \(DLC\)](#) added 4/9/2019

[State Plug-In Electric Vehicle \(PEV\) Acquisition Requirements](#)

Fueling Stations

1,521 stations in Pennsylvania with alternative fuels

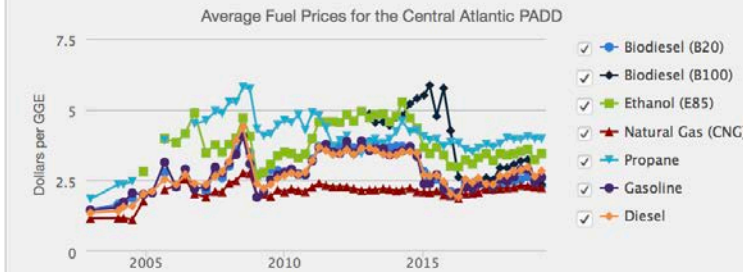
Fuel	Public
Biodiesel (B20 and above)	2
Compressed Natural Gas (CNG)	50
Electric (charging outlets)	1,067
Ethanol (E85)	124
Hydrogen	0
Liquefied Natural Gas (LNG)	2
Propane (LPG)	74

Data Download >

Clean Cities Coalitions

Clean Cities builds partnerships to advance

Regional Fuel Prices



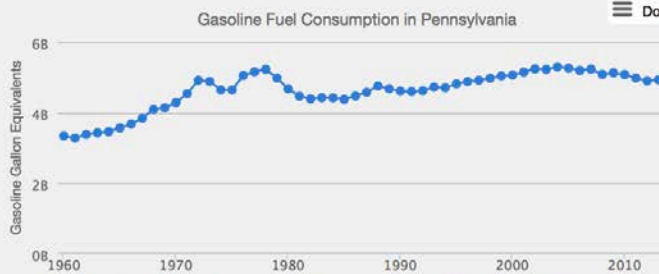
Bioenergy Production and Infrastructure

Ethanol Plants	1
Total Ethanol Capacity (million gallons/year)	110.0
Biodiesel Plants	4
Total Biodiesel Capacity (million gallons/year)	62.1
Biopower Plants	29
Biopower Plant Capacity (nameplate, MW)	722.8

Source: [BioFuels Atlas](#) from the National Renewable Energy Laboratory

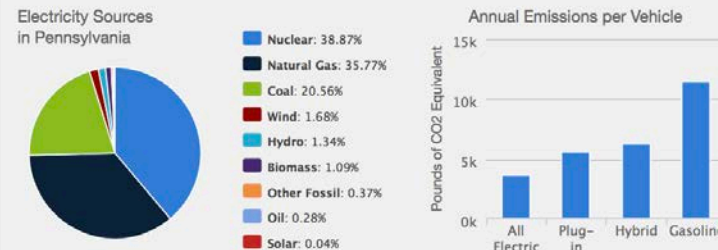
Transportation Fuel Consumption

Gasoline



Source: [State Energy Data System](#) based on [beta data](#) converted to [gasoline gallon equivalents](#) of petroleum for the [transportation sector](#) (which includes more than highway vehicles) from the U.S. Energy Information Administration

Electricity Sources and Vehicle Emissions



Transportation Projects

Development of a National Liquid Propane (Autogas) Refueling Network, Clean School Bus/Vehicle Incentive, and Green Jobs Outreach Program >

Drones, delivery robots, driverless cars, and intelligent curbs for increasing energy productivity of first/last mile goods movement >

Independence National Historical Park >

Initiative for Resiliency in Energy through Vehicles (IREV) >

Maryland Hybrid Truck Goods Movement Initiative >

New Jersey Compressed Natural Gas Refuse Trucks, Shuttle Buses and Infrastructure >

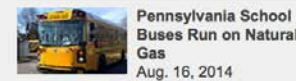
Case Studies



Pennsylvania's Ethanol Corridor Project Surpasses 1 Million Gallons
April 1, 2011

[More Case Studies >](#)

Videos



afdc.energy.gov/states

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Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite

This tool provides a simple way to estimate how much electric vehicle charging you might need at a city- and state-level.

How Much Electric Vehicle Charging Do I Need in My Area?



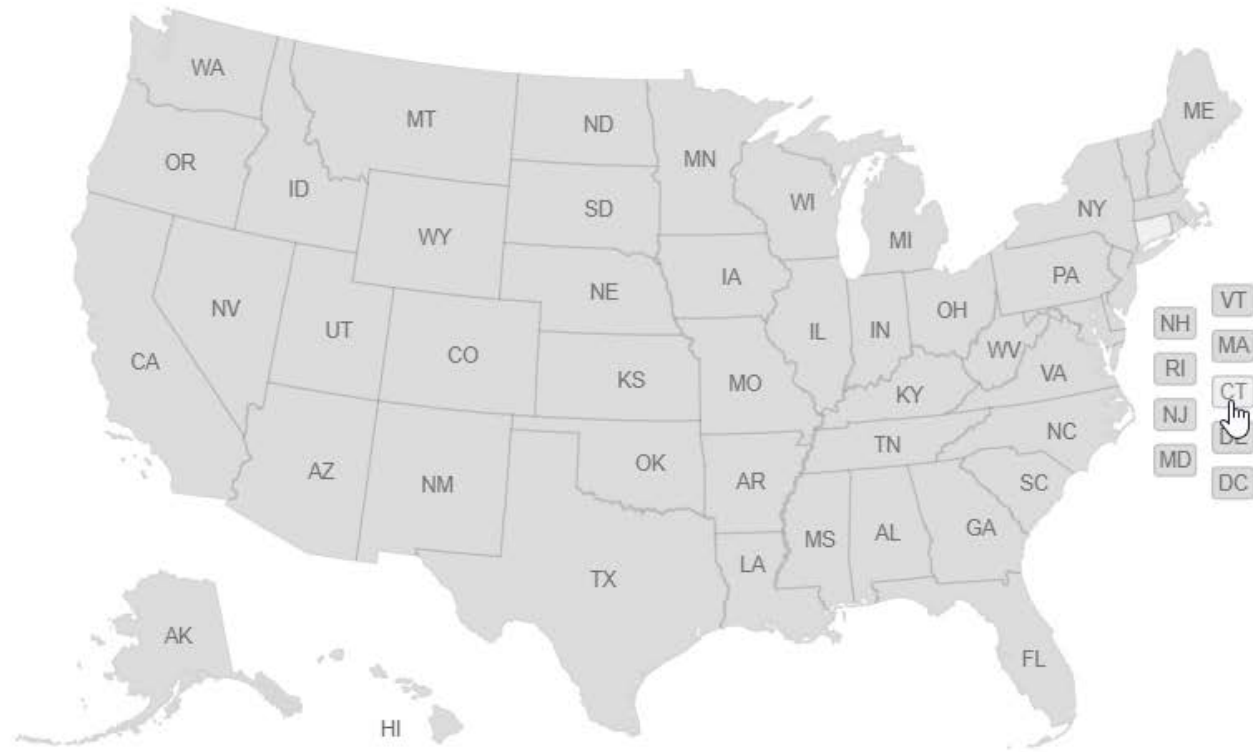
A tool to provide a simple way to estimate how much electric vehicle charging you might need at a city- and state-level.

EVI-Pro Lite

afdc.energy.gov/evi-pro-lite

Choose a State

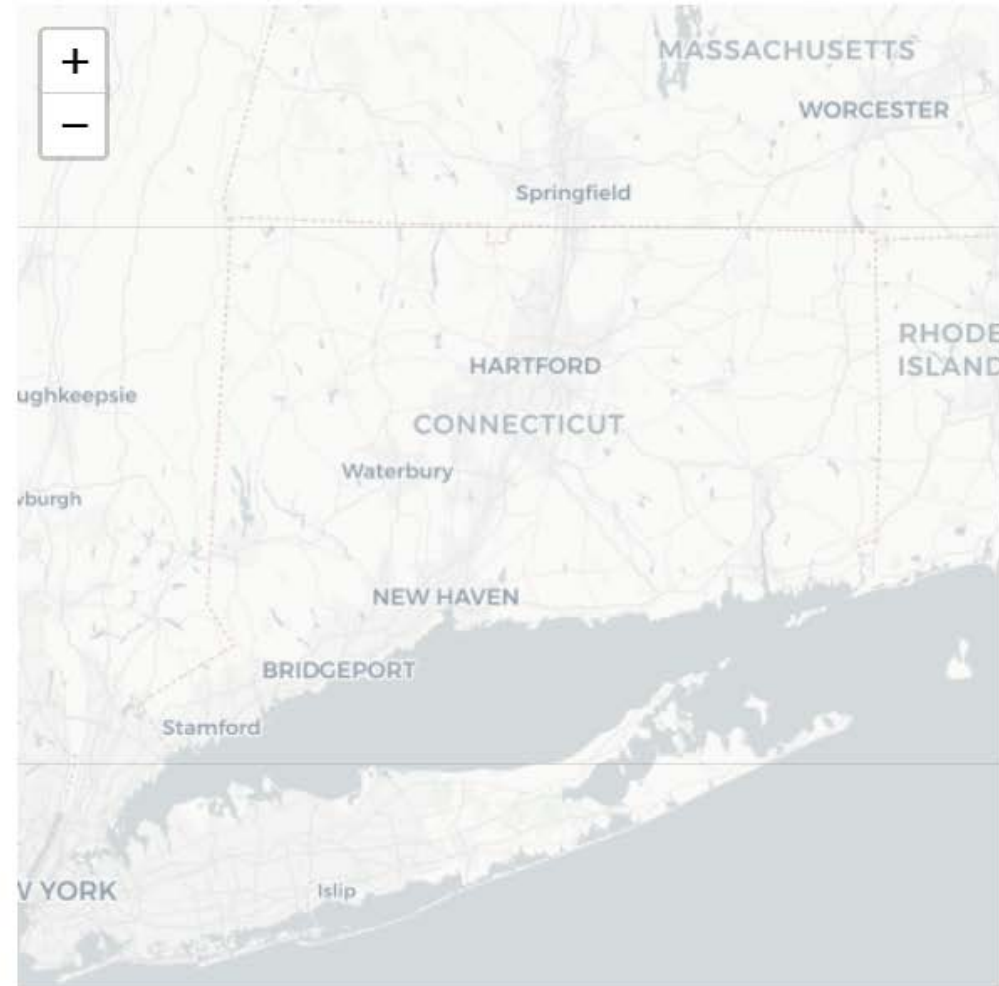
Select State ▼



How many plug-in electric vehicles would you like to support in Connecticut?

For reference, there were 3,006,700 light-duty vehicles on the road in Connecticut as of the end of 2016 and 4,500 of those were plug-in electric vehicles.

Calculate



Your Results

In Connecticut, to support 15,000 plug-in electric vehicles you would need:

371 Workplace Level 2 Charging Plugs

294 Public Level 2 Charging Plugs

There are currently 635 plugs with an average of 2.1 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

55 Public DC Fast Charging Plugs

There are currently 160 plugs with an average of 3.6 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

Where Do I Start?

Planners may want to prioritize installation of fast charging infrastructure above Level 2 charging.

Build DC Fast First: Establishing fast charging networks that enable long-distance travel, serve as charging safety nets, and provide charging for drivers without home charging is critical to support all-electric vehicles that have no other alternative for quickly extending their driving range.

Build Level 2 Second: EVI-Pro typically simulates the majority of Level 2 charging demand coming from plug-in hybrid electric vehicles, which have the ability to use gasoline as necessary for quickly extending driving range.

Change Assumptions

Plug-in Electric Vehicles (as of 2016): 4,500

Light Duty Vehicles (as of 2016): 3,006,700

Number of vehicles to support

Vehicle Mix		
Plug-in Hybrids 20-mile electric range	<input type="text" value="15"/>	%
Plug-in Hybrids 50-mile electric range	<input type="text" value="35"/>	%
All-Electric Vehicles 100-mile electric range	<input type="text" value="15"/>	%
All-Electric Vehicles 250-mile electric range	<input type="text" value="35"/>	%
Total		100%

How much support do you want to provide for plug-in hybrid electric vehicles (PHEVs)?

- Full Support**
Most PHEV drivers wouldn't need to use gasoline on a typical day.
- Partial Support**
Calculate using half of full support assumption.
- Do not count PHEVs in charging demand estimates.**

Percent of drivers with access to home charging %

Recalculate

[See all assumptions.](#)

What's Next?

Armed with an estimate of how much electric vehicle charging you might need, you may still have some questions.



Where do I put stations?

A good place to start is mapping where they already exist using the [Alternative Fuels Data Center Station Locator](#). Also, review this National Renewable Energy Laboratory report to learn about how the detailed version of EVI-Pro was used to determine candidate sites in [Columbus, Ohio](#).



How much does a station cost?

Recent studies by the National Renewable Energy Laboratory and Idaho National Laboratory have examined capital costs of current and future charging stations.

- [Costs Associated with Non-Residential Electric Vehicle Supply Equipment](#)
- [National Economic Value Assessment of Plug-In Electric Vehicles](#)
- [Considerations for Corridor and Community DC Fast Charging Complex System Design](#)



What are the projections for plug-in electric vehicle growth?

The U.S. Energy Information Administration's [Annual Energy Outlook](#) is one resource for vehicle sales projections. Additional projections are made by private consulting firms.



What are some site-specific considerations?

Find more information about charging at these sites.

- [Charging at home](#)
- [Multi-Unit dwelling charging](#)
- [Charging in public](#)
- [Workplace charging](#)



Still have questions?

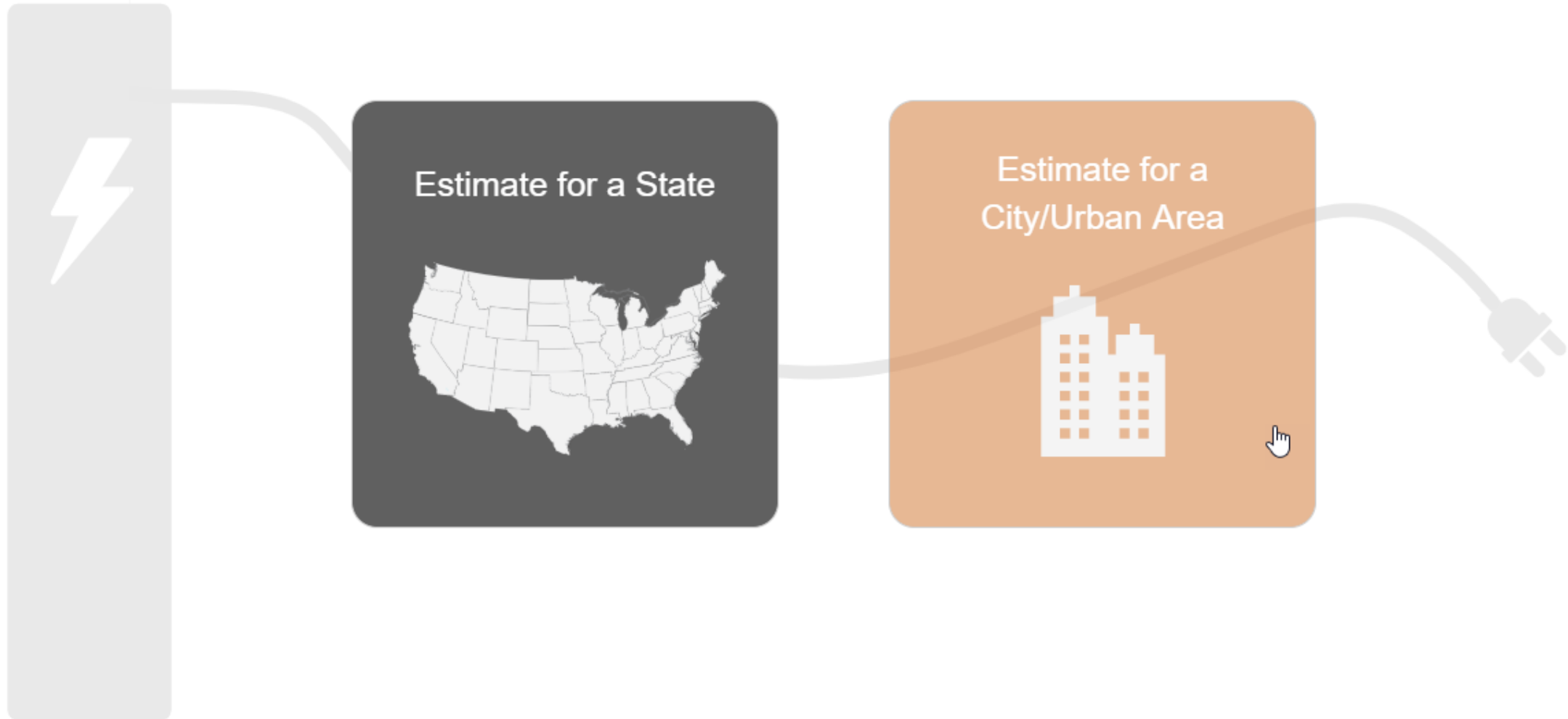
If you need technical assistance or have questions about EV infrastructure contact your local [Clean Cities coalition](#). For questions about the EVI Pro model, contact [webmaster](#).



Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite

This tool provides a simple way to estimate how much electric vehicle charging you might need at a city- and state-level.

How Much Electric Vehicle Charging Do I Need in My Area?





State



City/Area



Vehicles

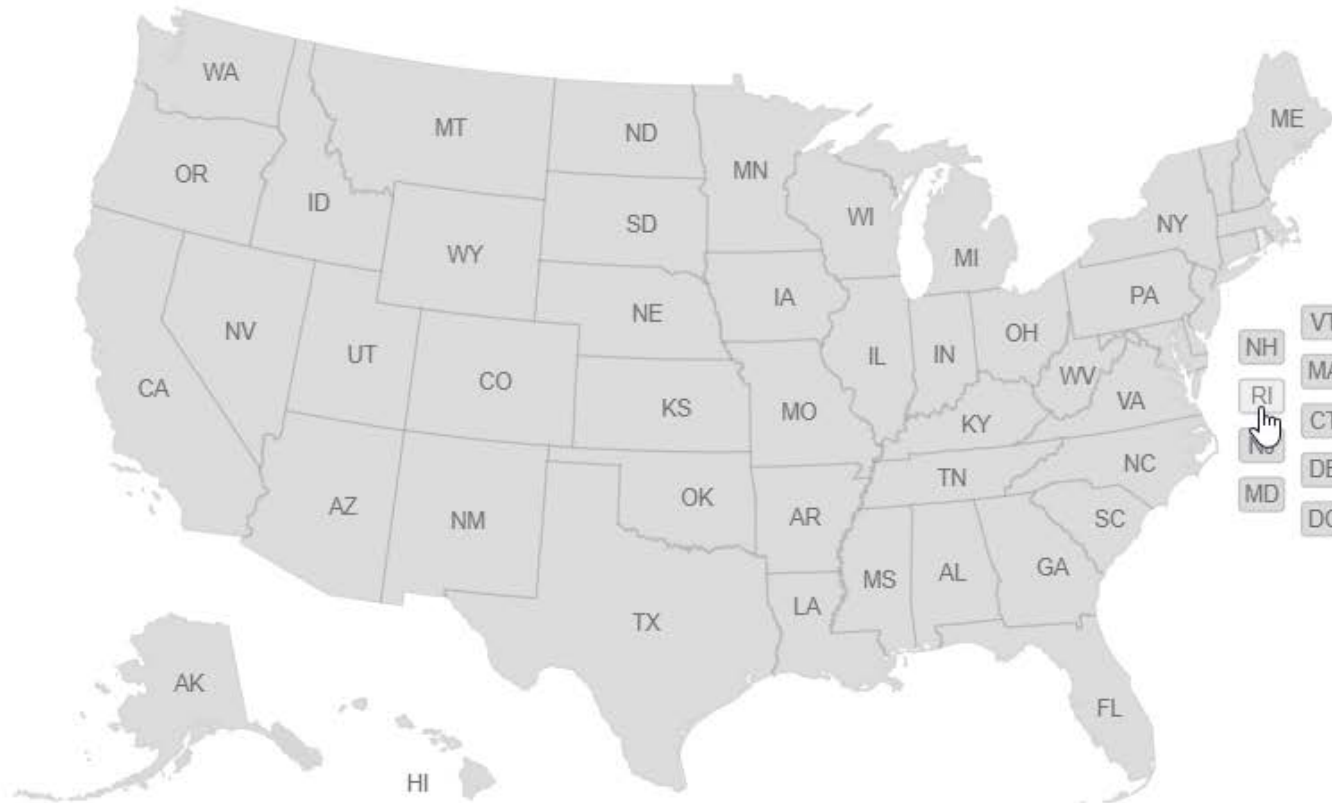


Results

Start Over

Choose a State

Select State ▼

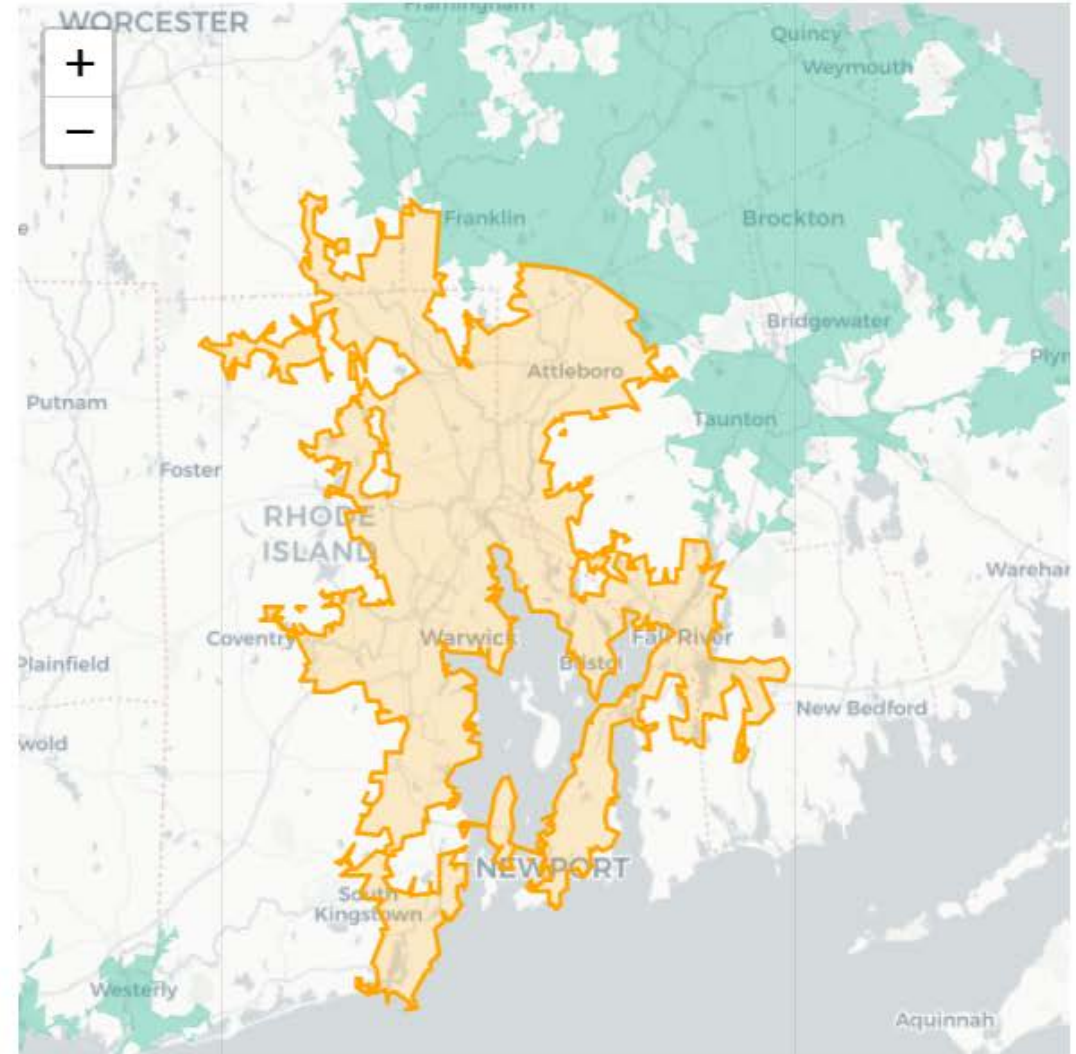


Choose a major urban area in Rhode Island

Boston

Norwich–New London

Providence





State



City/Area



Vehicles



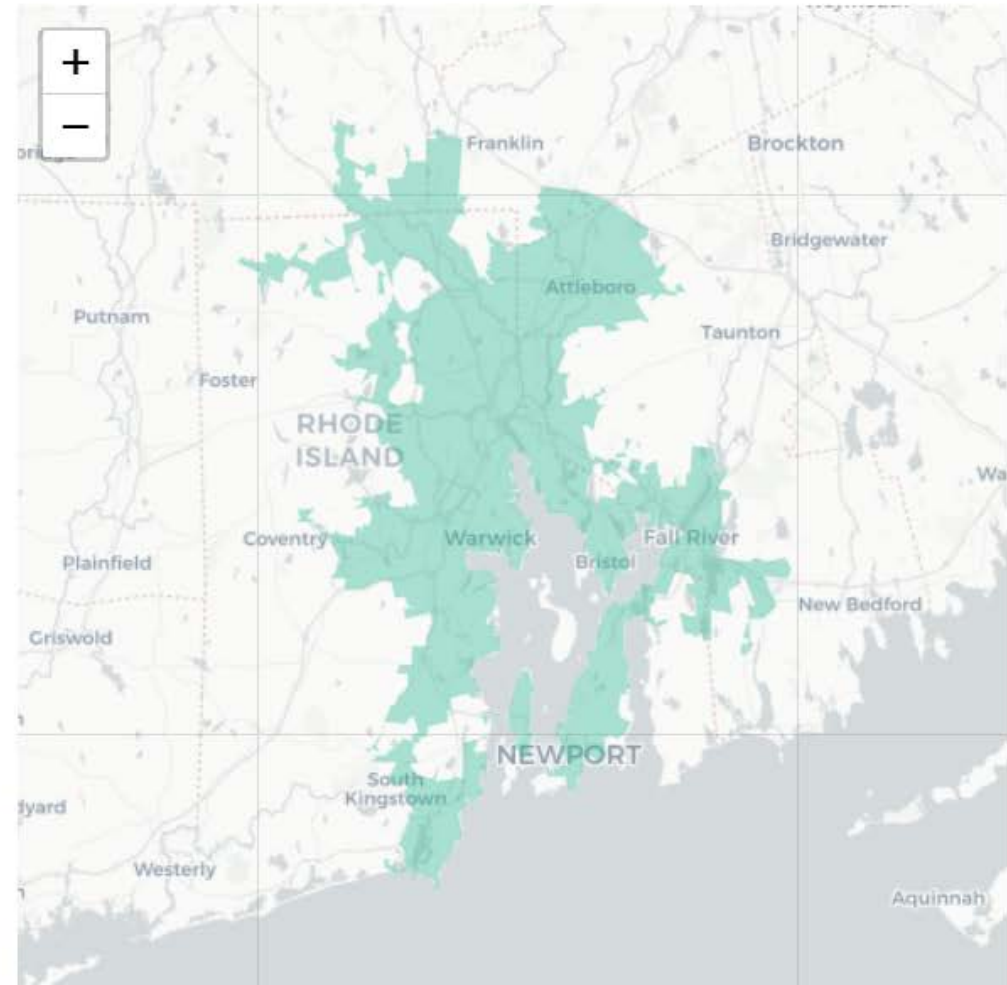
Results

Start Over

How many plug-in electric vehicles would you like to support in Providence?

For reference, there were 1,155,400 light-duty vehicles on the road in the Providence area as of the end of 2016 and 1,100 of those were plug-in electric vehicles.

Calculate



Your Results

In the Providence area, to support 5,500 plug-in electric vehicles you would need:

133 Workplace Level 2 Charging Plugs

104 Public Level 2 Charging Plugs

There are currently 201 plugs with an average of 2.6 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

20 Public DC Fast Charging Plugs

There are currently 23 plugs with an average of 2.6 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

Where Do I Start?

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Build Level 2 Second: EVI-Pro typically simulates the majority of Level 2 charging demand coming from plug-in hybrid electric vehicles, which have the ability to use gasoline as necessary for quickly extending driving range.

Change Assumptions

Plug-in Electric Vehicles (as of 2016): 1,100

Light Duty Vehicles (as of 2016): 1,155,400

Number of vehicles to support

Vehicle Mix		
	Plug-in Hybrids 20-mile electric range	<input type="text" value="15"/> %
	Plug-in Hybrids 50-mile electric range	<input type="text" value="35"/> %
	All-Electric Vehicles 100-mile electric range	<input type="text" value="15"/> %
	All-Electric Vehicles 250-mile electric range	<input type="text" value="35"/> %
	Total	100%

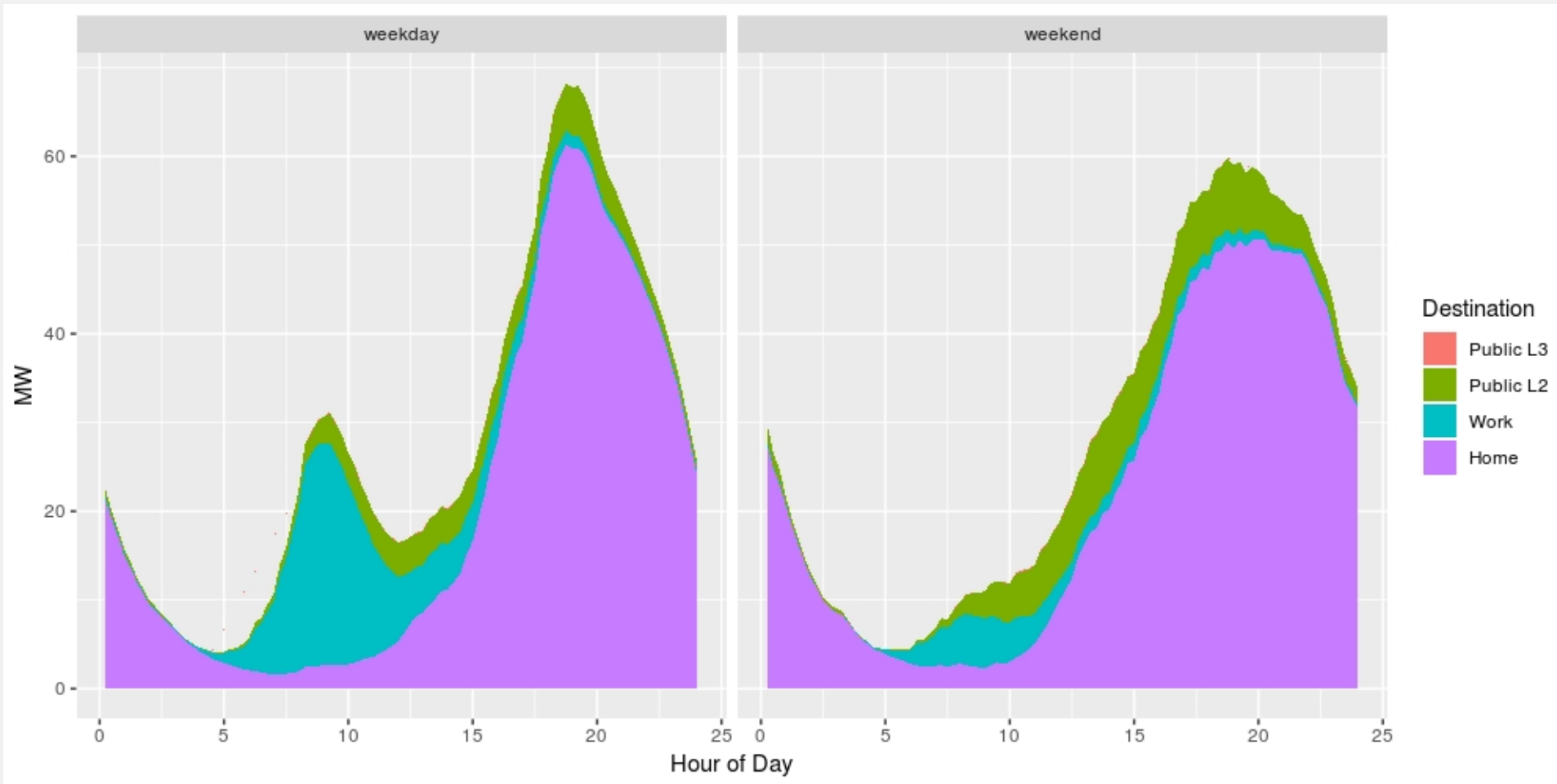
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- Do not count PHEVs in charging demand estimates.

Percent of drivers with access to home charging %

Recalculate

[See all assumptions.](#)



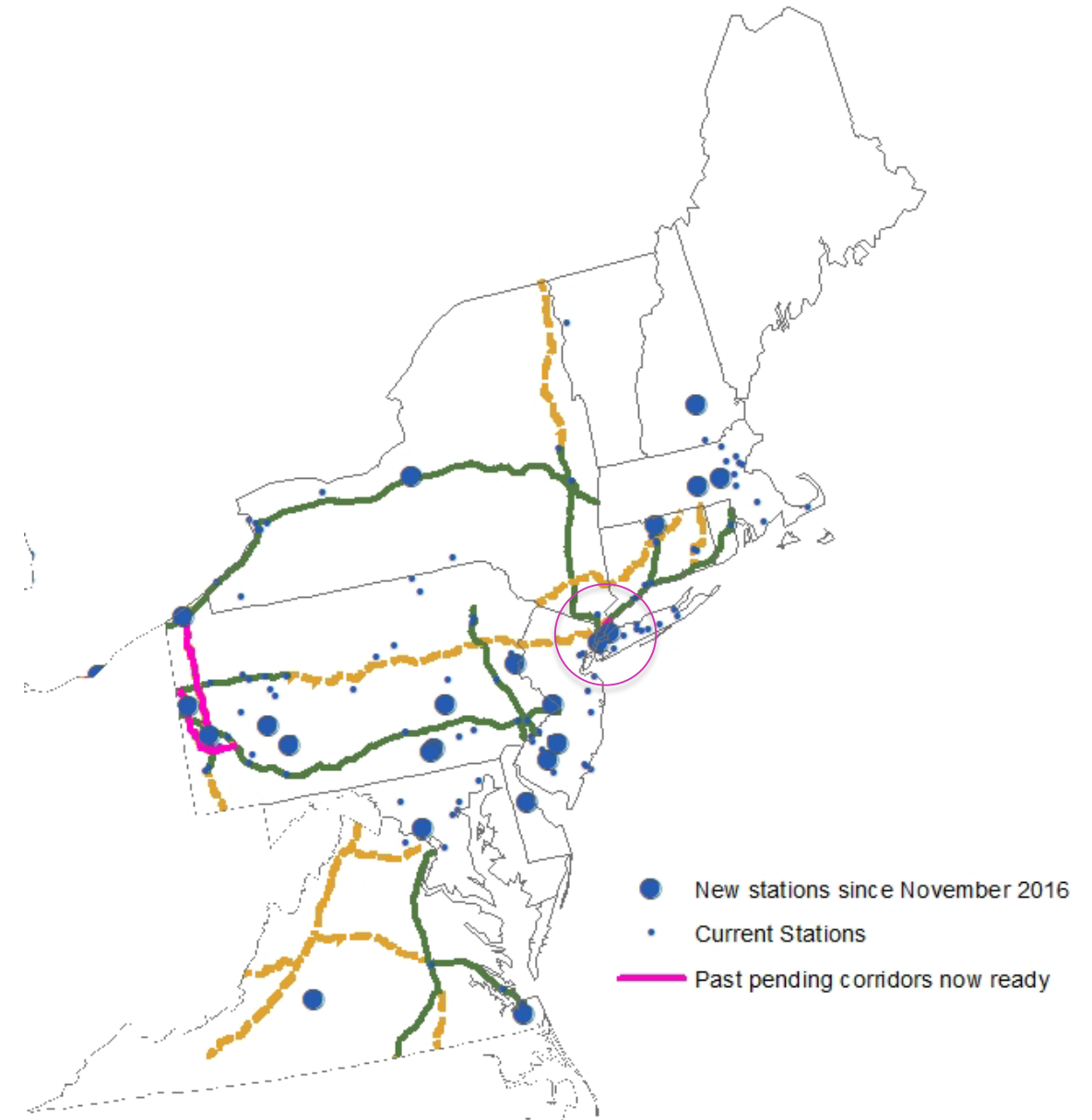
Coming September 2019, the EVI-Pro Lite tool will also estimate load profiles for EV charging.

Coming in 2020, more discreet city/town areas can be evaluated.

Future Enhancement – Load Profile & Discreet Geographies

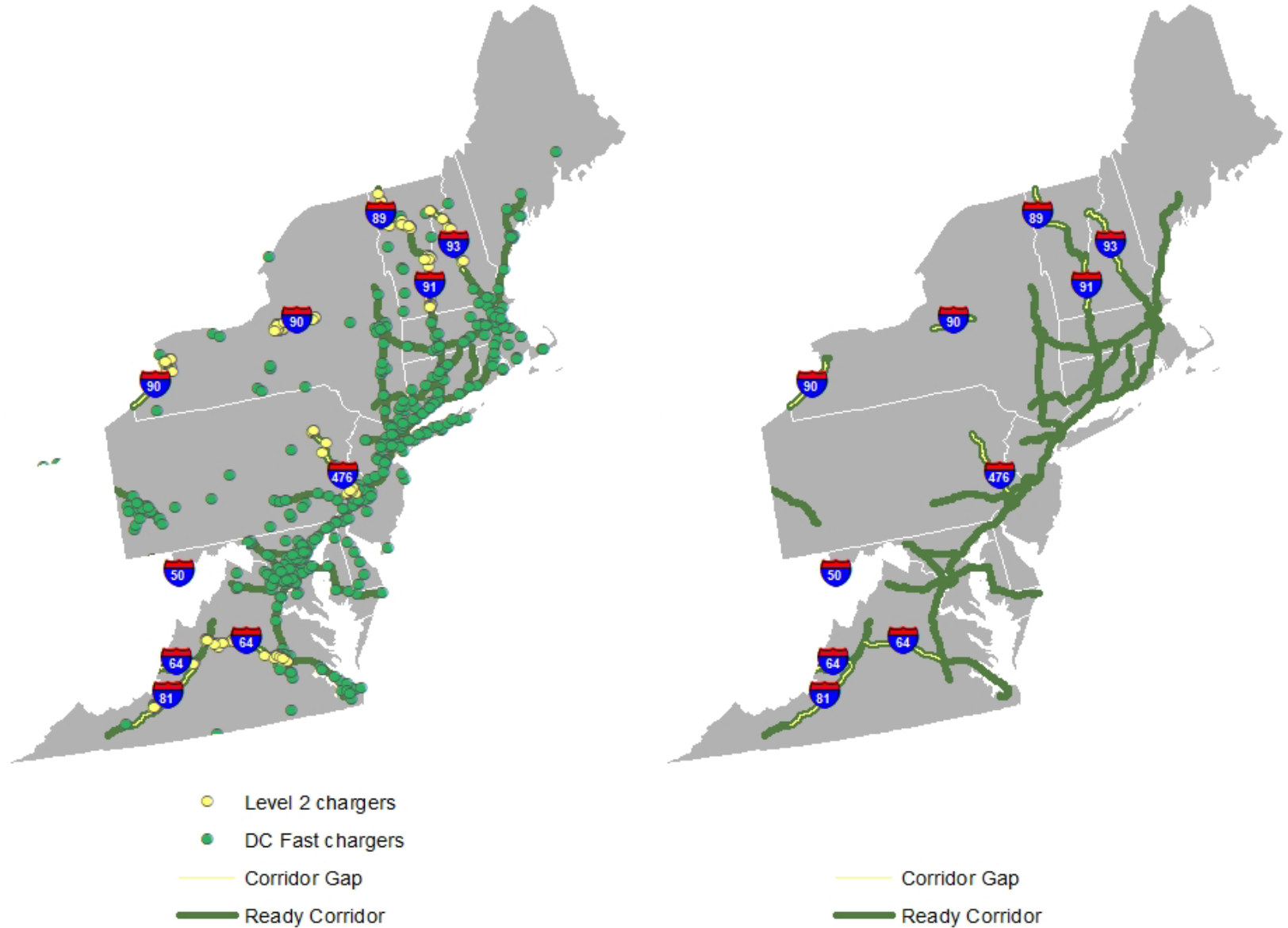
Round 1 and 2 Corridor Refresh – CNG Example

- Corridors designated as pending in rounds 1 and 2 are being reevaluated to determine if criteria are met for ready status.
- Methodologies are being developed to evaluate pending corridors.
- Example: Find CNG stations opened since round 1 nominations and evaluate pending corridors near those stations.



Round 1 Electric Corridor Resiliency Evaluation

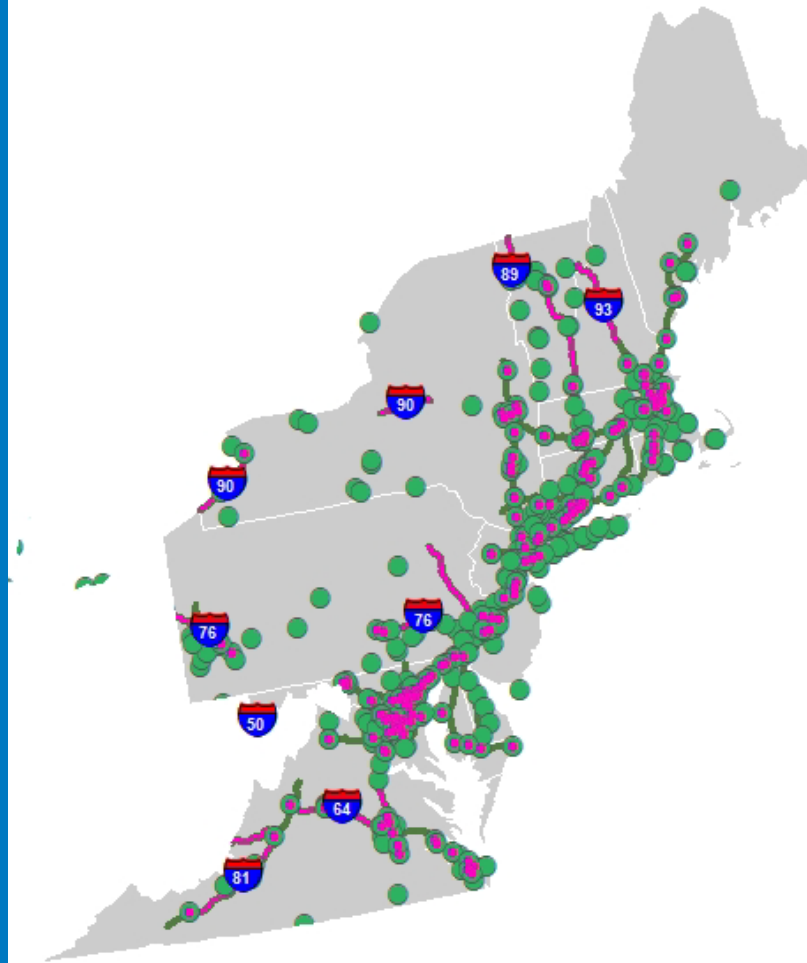
Highway sections, shown in yellow, were awarded corridor status in Round 1 with Level 2 chargers, but need additional DC Fast installations for future designation.



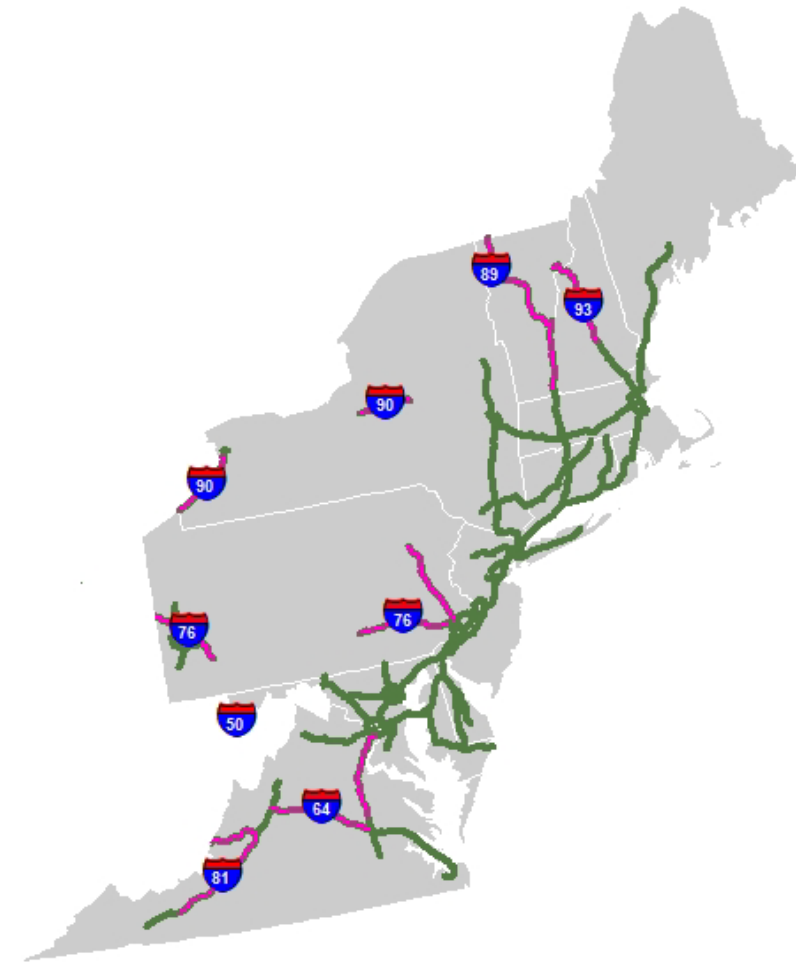
Future Electric Corridor Considerations – DC Fast Charger Types

Electric vehicles charge using a specific connector. A CCS connector vehicle would have gaps charging along corridor segments shown in pink.

Note, some gaps are due to level 2 chargers.



- CCS connector - corridor station
- DC Fast Stations
- CCS connector gap
- Ready Corridor

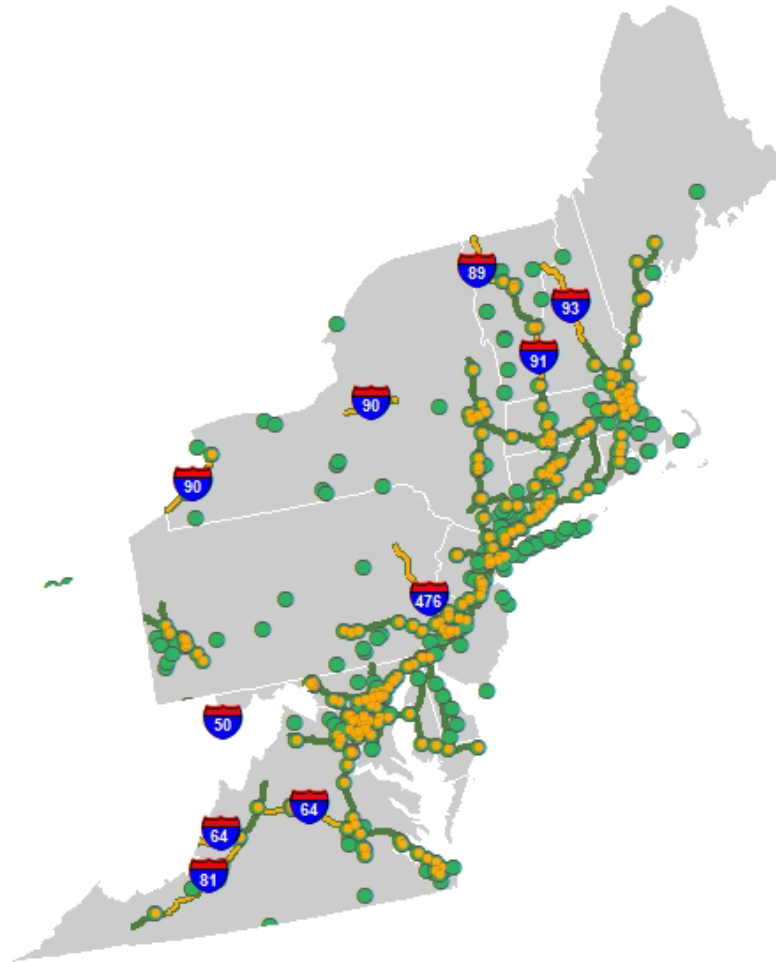


- CCS connector gap
- Ready Corridor

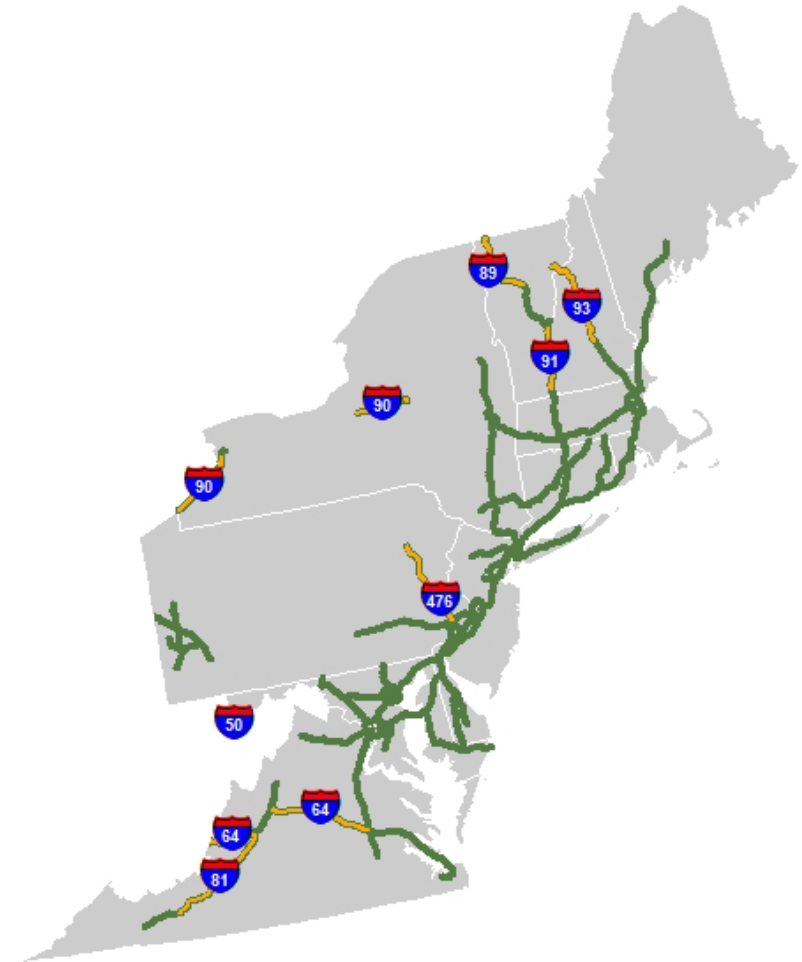
Future Electric Corridor Considerations – DC Fast Charger Types

Electric vehicles charge using a specific connector. A CHAdeMO connector vehicle would have gaps charging along corridor segments shown in gold.

Note, some gaps are due to level 2 chargers.



- CHAdeMO charger
- DC Fast chargers
- CHAdeMO charging gap
- Ready Corridor



- CHAdeMO charging gap
- Ready Corridor

Thank You

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