

The ABCs of EVs: Electric Vehicles 101

The Role of Regional and Local Planning

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CAPE COD COMMISSION

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The Cape Cod Commission

...is the regional land use planning,
economic development, and
regulatory agency created in 1990
to serve the citizens and 15 towns
of Barnstable County,
Massachusetts



MISSION

...To protect the unique values and quality of life on Cape Cod by coordinating a balanced relationship between environmental protection and economic progress.

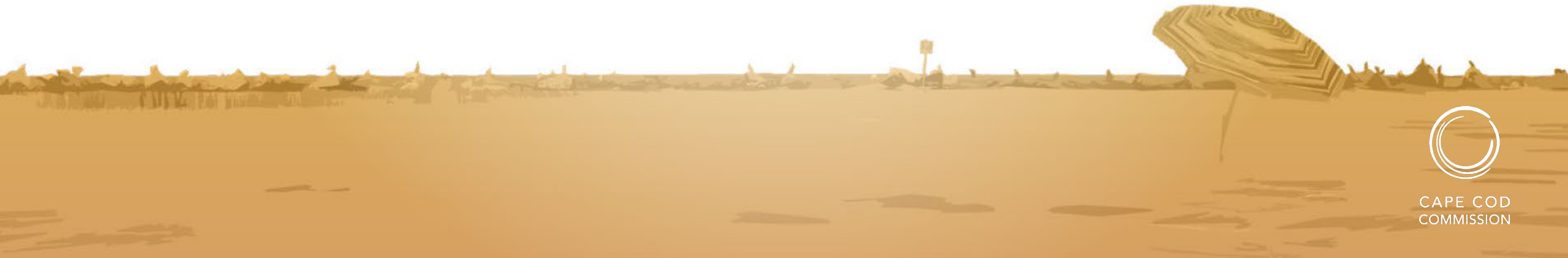


15
INDIVIDUAL
TOWNS

Climate Action Plan



C A P E C O D



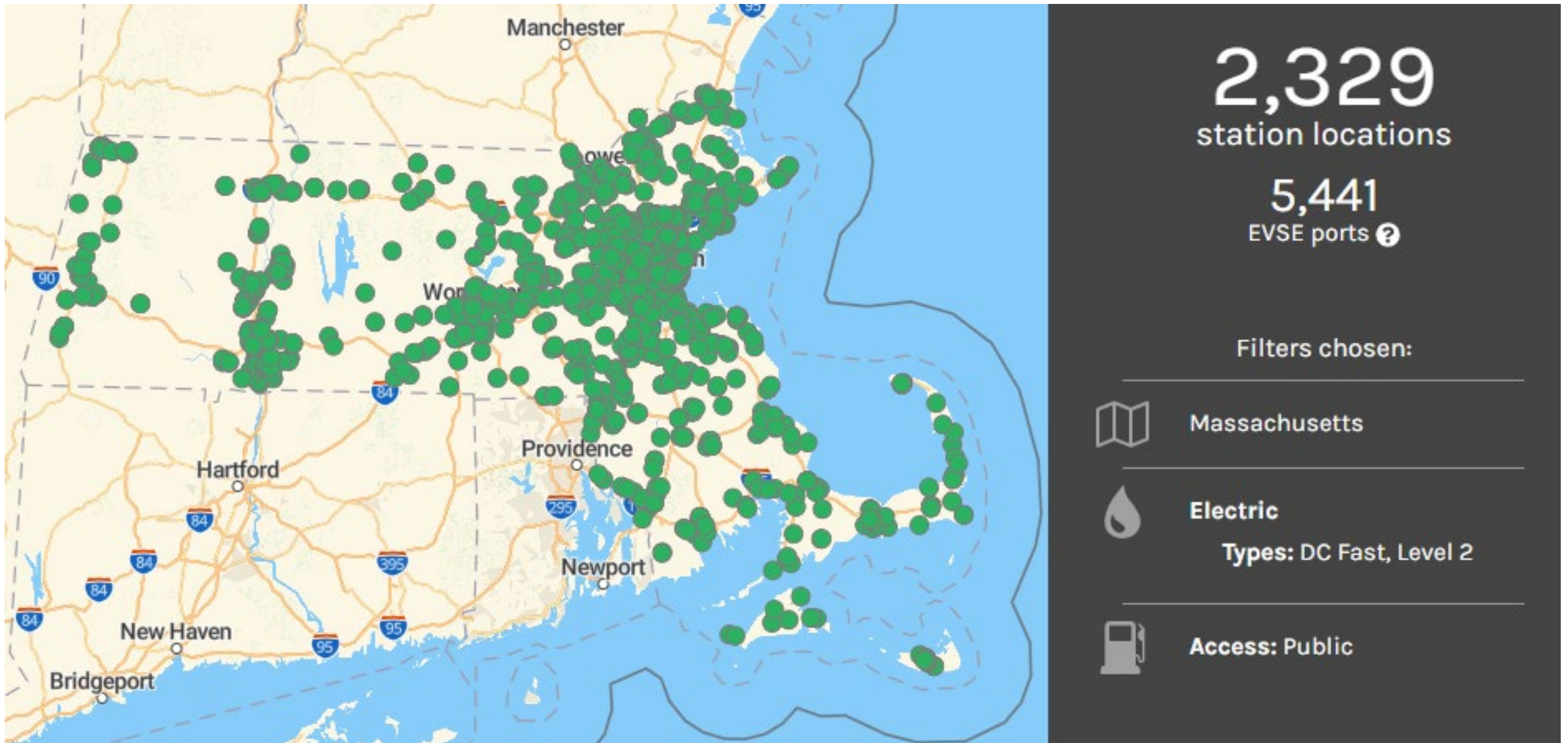
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DE ELECTRIC NOW





DOER ALTERNATIVE FUELS DATA CENTER **CHARGING STATION LOCATIONS MAP**



Siting Electric Vehicle Charging Stations on Cape Cod

Cape Cod Commission

<https://capecodcommission.org/ev-siting-analysis>

CHARGING AN EV

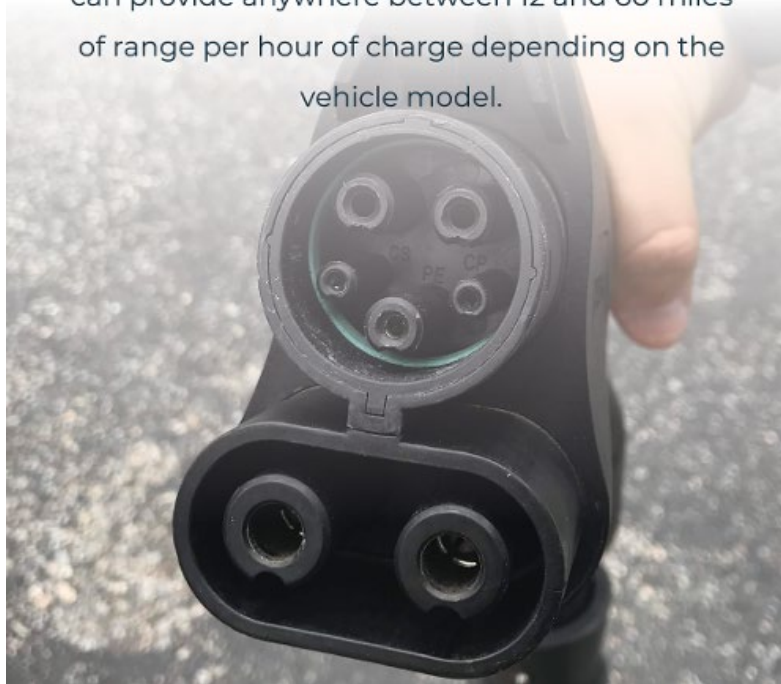
LEVEL 1 CHARGING

Level 1 charging draws electricity from standard 120V outlets and generally provide about 5 miles of range per hour charge. Charging could be through a Level 1 charging unit or a standard household outlet, where drivers can charge their car overnight.



LEVEL 2 CHARGING

These chargers take a higher voltage supply and can provide anywhere between 12 and 60 miles of range per hour of charge depending on the vehicle model.



LEVEL 3 CHARGING (DC FAST)

Most vehicles will only need to charge for 30 minutes to reach 80% battery level or higher when using a DC Fast charger, making them ideal for quick public charging.

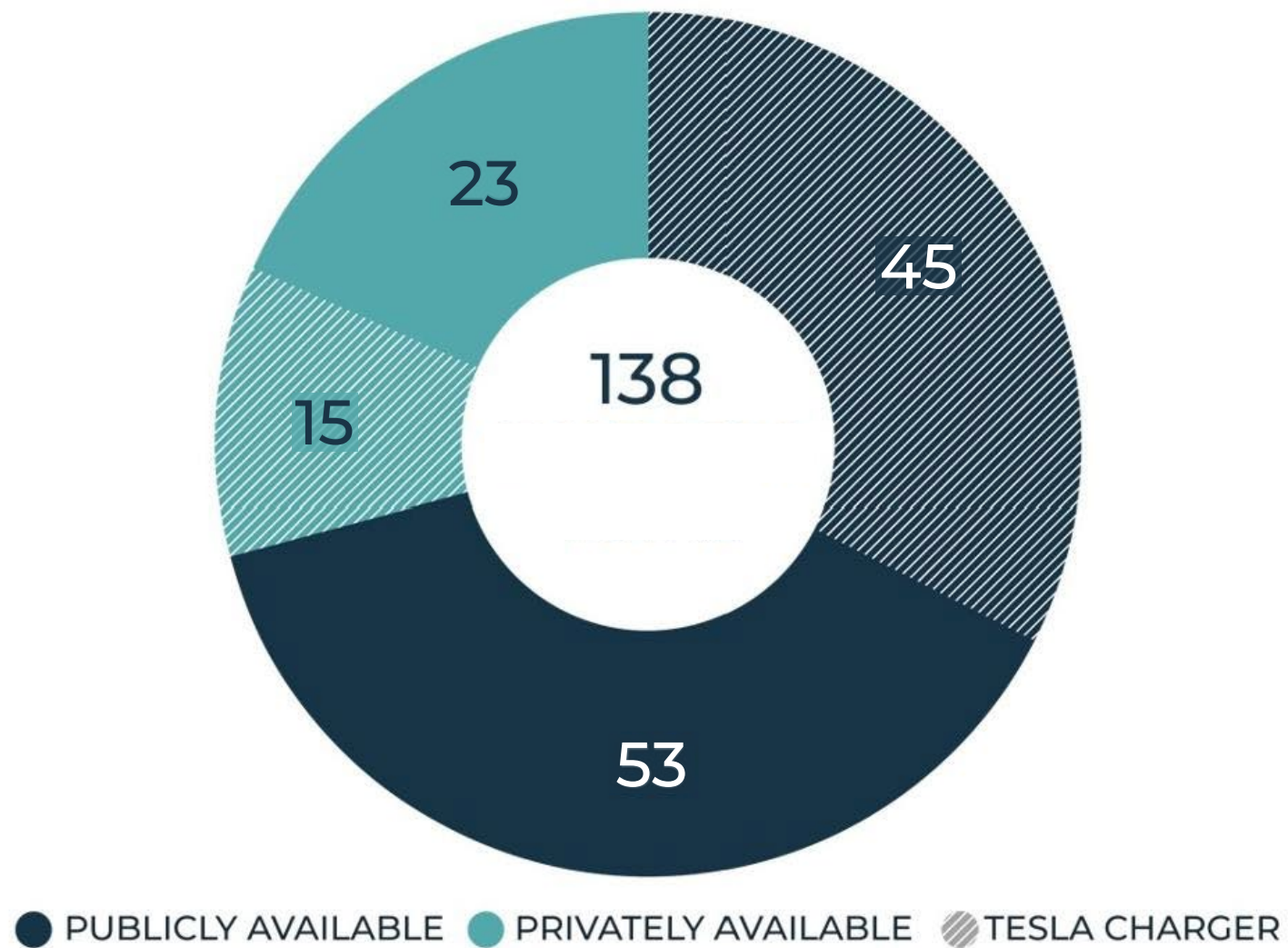




ANALYSIS APPROACH

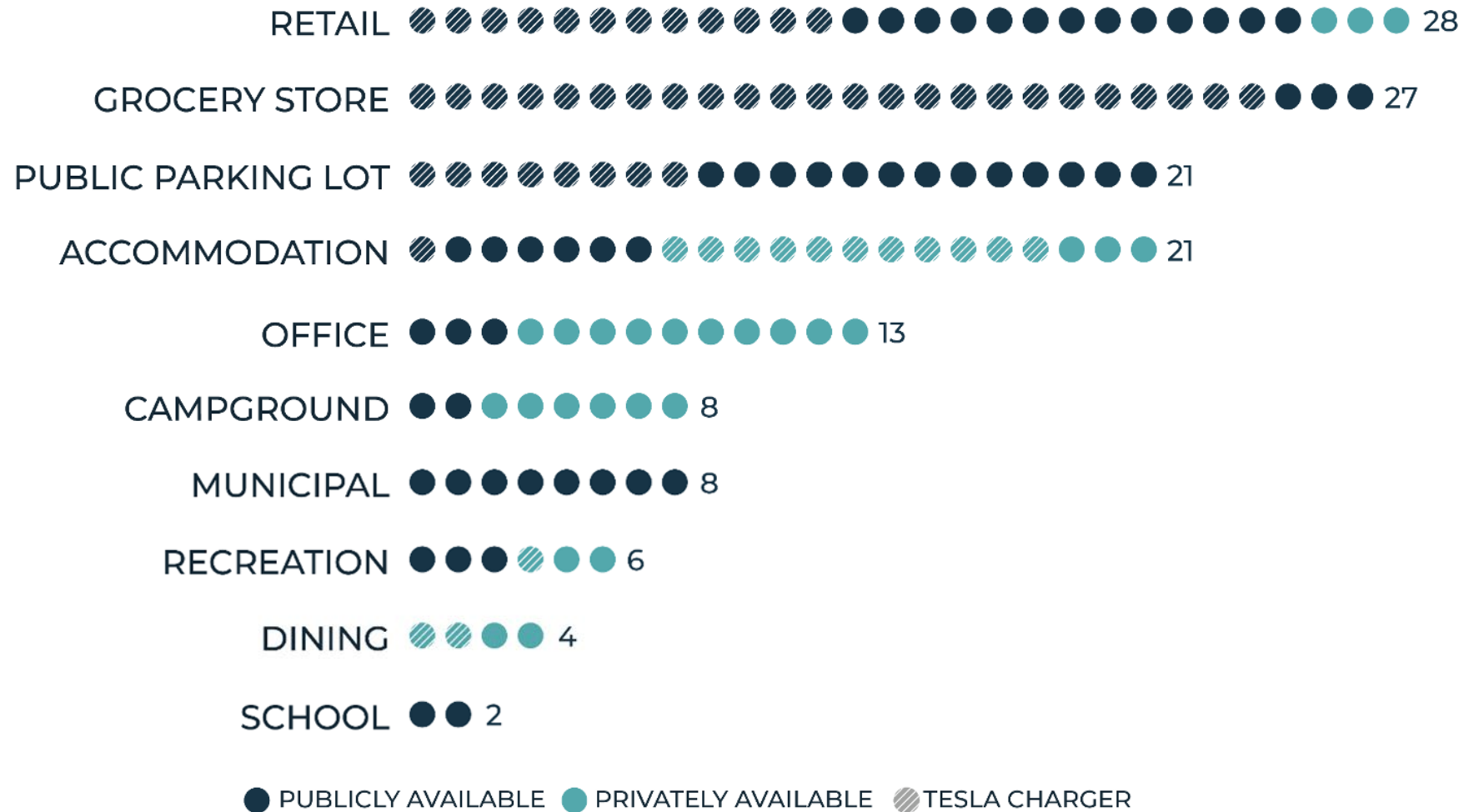
- Began with inventory of existing stations
- Focused on public stations
 - Compliments home and workplace charging
 - Key for visitors to the region
- Identified areas well-suited for additional charging stations based on anticipated demand
- Do not want to discourage opportunistic installations

2019 EV STATION SITING CAPE COD'S CHARGING STATIONS



*As of 2020; data update underway

2019 EV STATION SITING CAPE COD'S CHARGING STATIONS BY LOCATION



*As of 2020; data update underway



Key Data Inputs



Locations of current EV charging stations

Activity Centers

(areas with a concentration of business activity, community activity, and a compact built environment)

Community Activity Sites

(e.g., municipal buildings, schools, and libraries)

Dense Business Areas

Parking Lots With at Least 100 Spaces

Key Data Inputs



Locations of current EV charging stations

Activity Centers

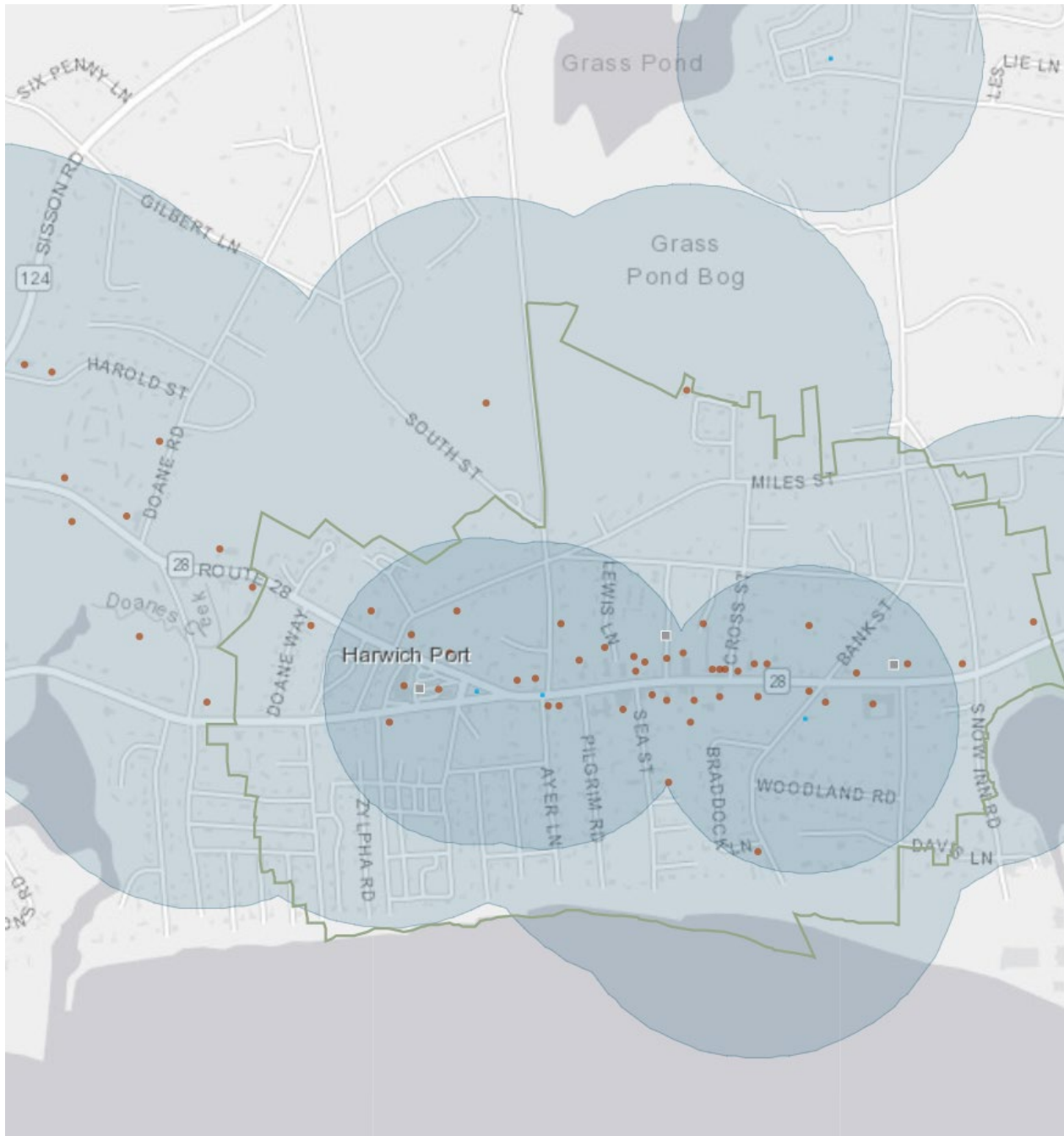
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OTHER CONSIDERATIONS



Ownership

Station Provider

Property Owner

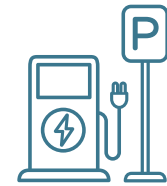
Third Party



Costs

Equipment and Installation

Electricity



Design

Siting and Layout

Parking Management

Zoning and Permitting

NEXT STEPS



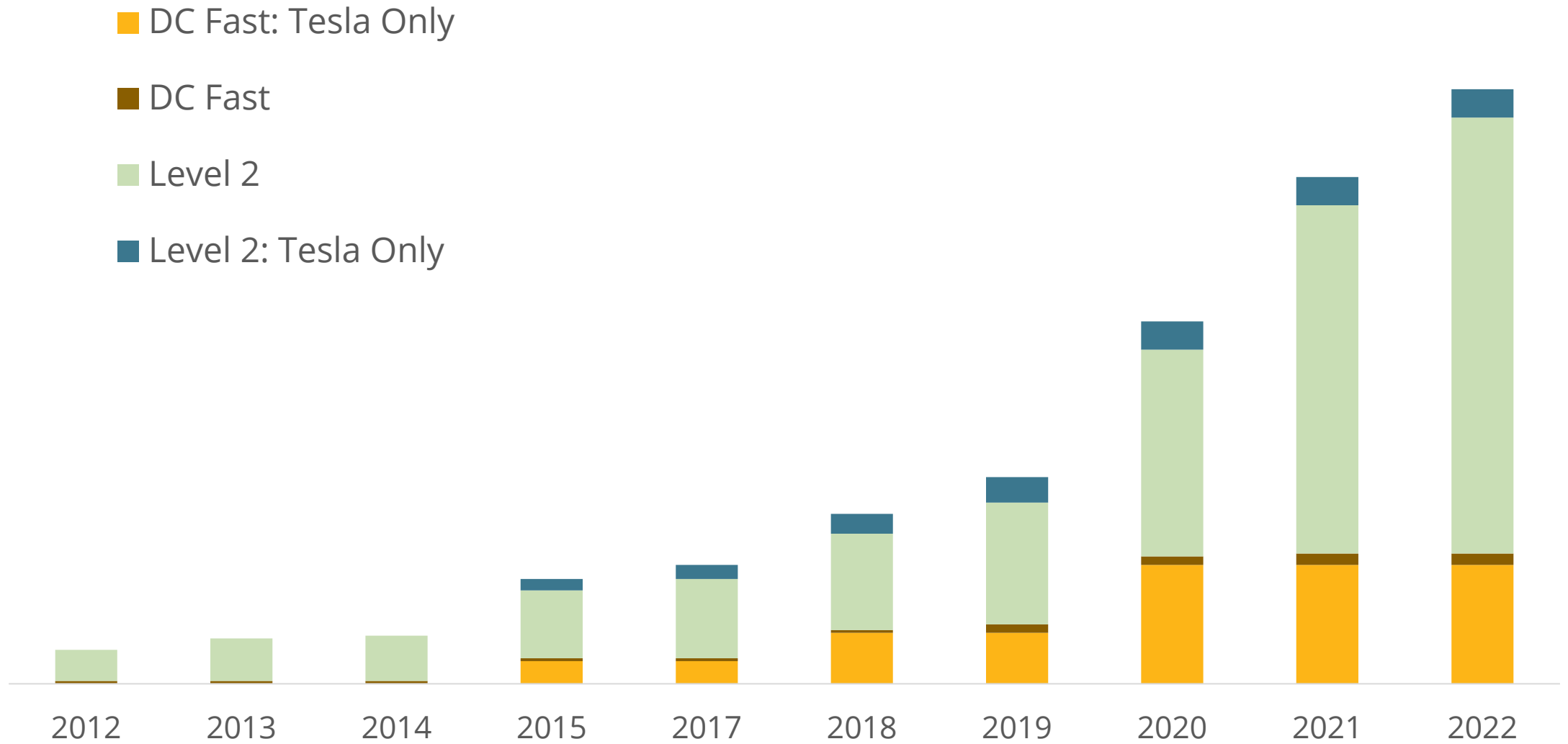
Data Updates



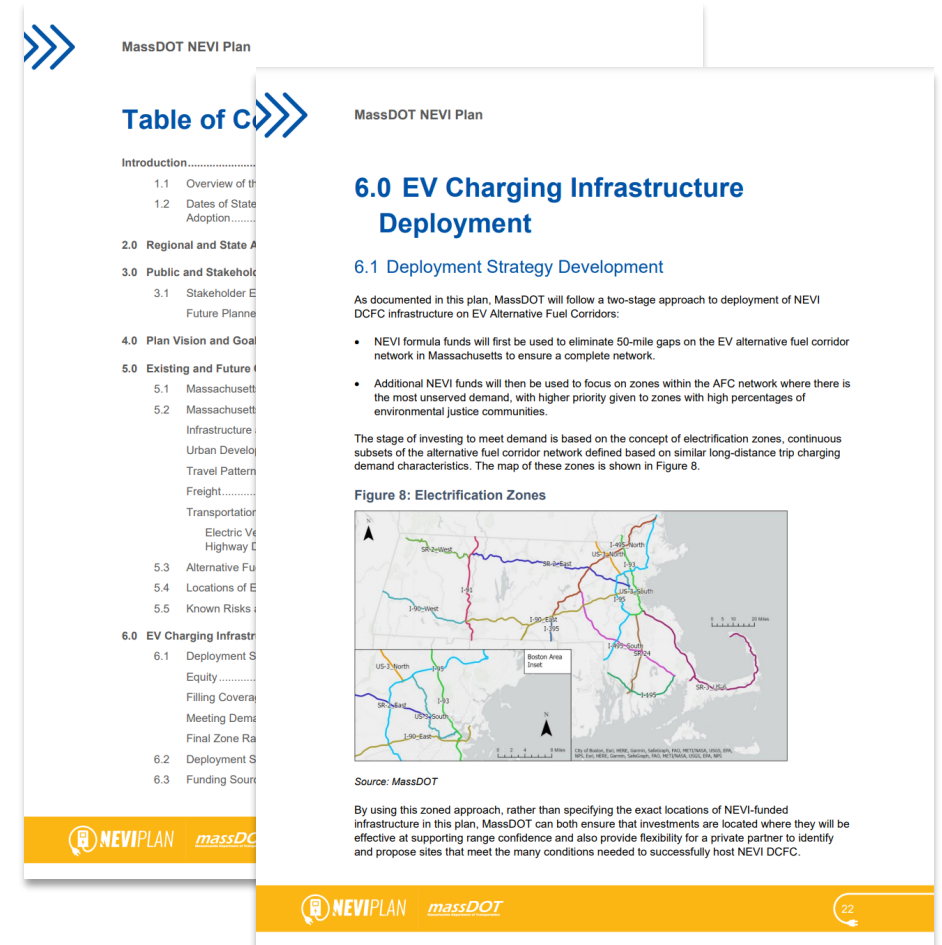
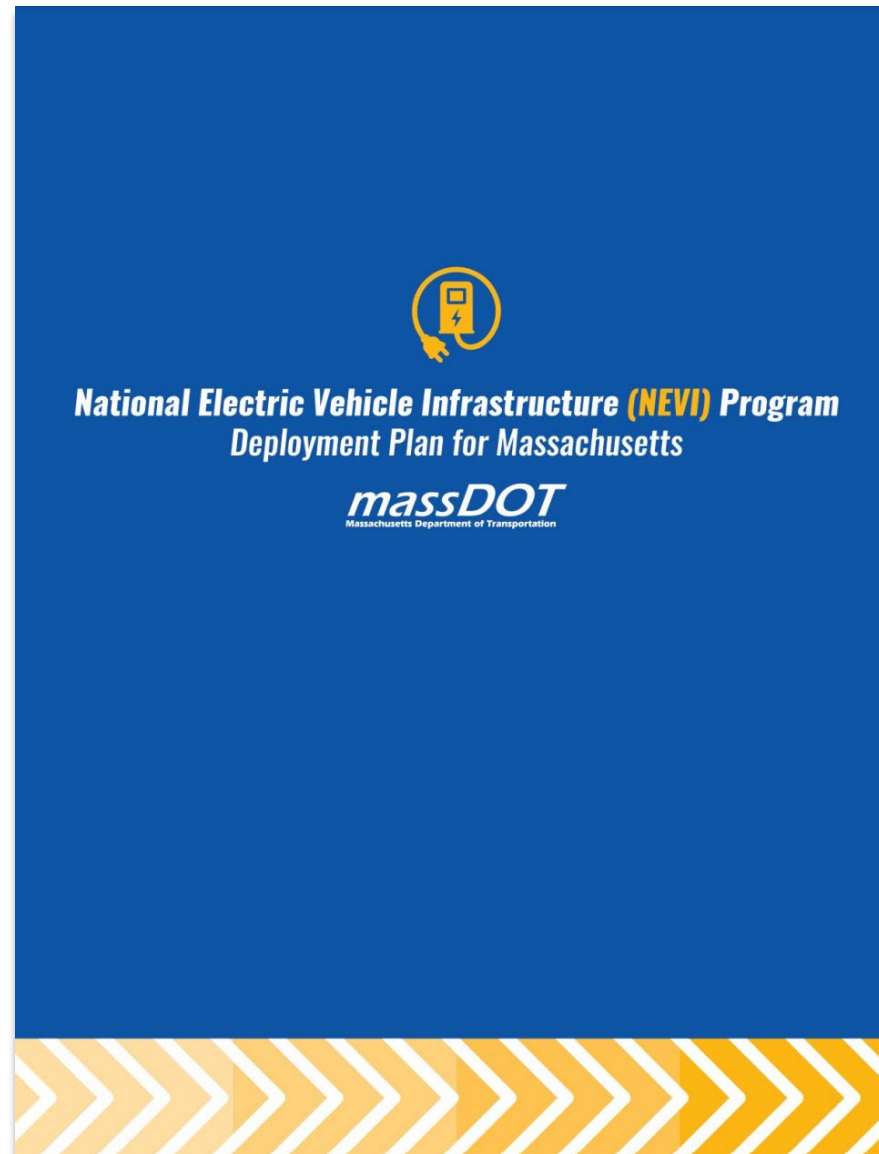
**Integration of
Equity
Considerations**



**Assist with
Implementation/
Funding
Opportunities**

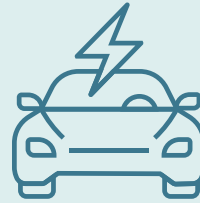


Effectively prioritizing local actions requires understanding the available funding programs as well as statewide implementation priorities.





A new Electric Vehicle (EV) Model By-Law will support municipalities to encourage the strategic siting and installation of EV charging infrastructure.



Electric Vehicle (EV) Model By-Law

Achieving emissions reduction goals will require addressing barriers to transportation electrification, including access to charging infrastructure. With consultant support, the Commission developed the model municipal electric vehicle bylaw to encourage the installation of EV charging infrastructure during residential and commercial development and redevelopment, as well as ensuring readiness for future charger installation.



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