DriveOhio

OHIO ELECTRIC VEHICLE

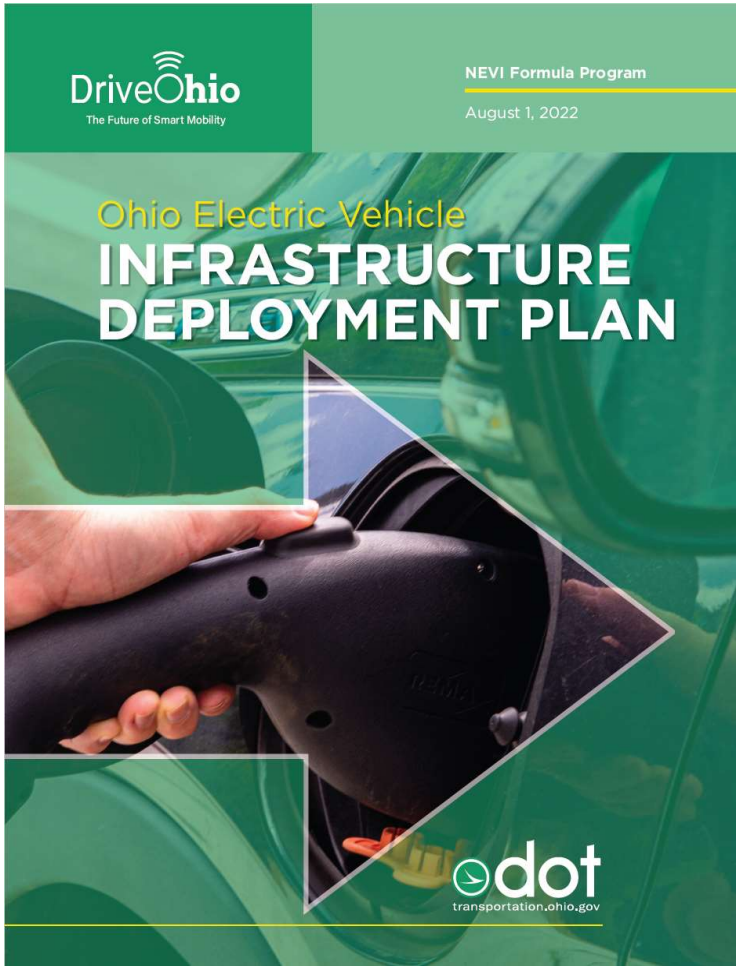
Infrastructure Deployment Plan

June 2023

odot
transportation.ohio.gov

Agenda

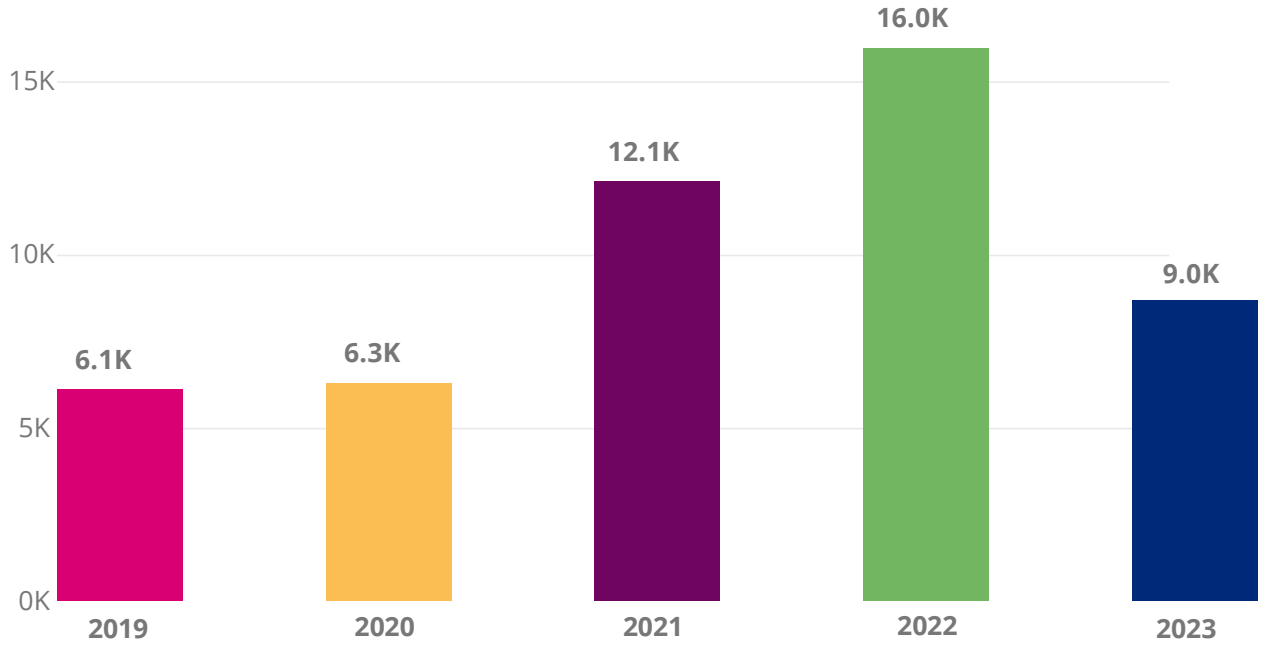
- EV Trends in Ohio
- National EV Infrastructure Program
- Federal Charging and Fueling Infrastructure Grants
- Discussion



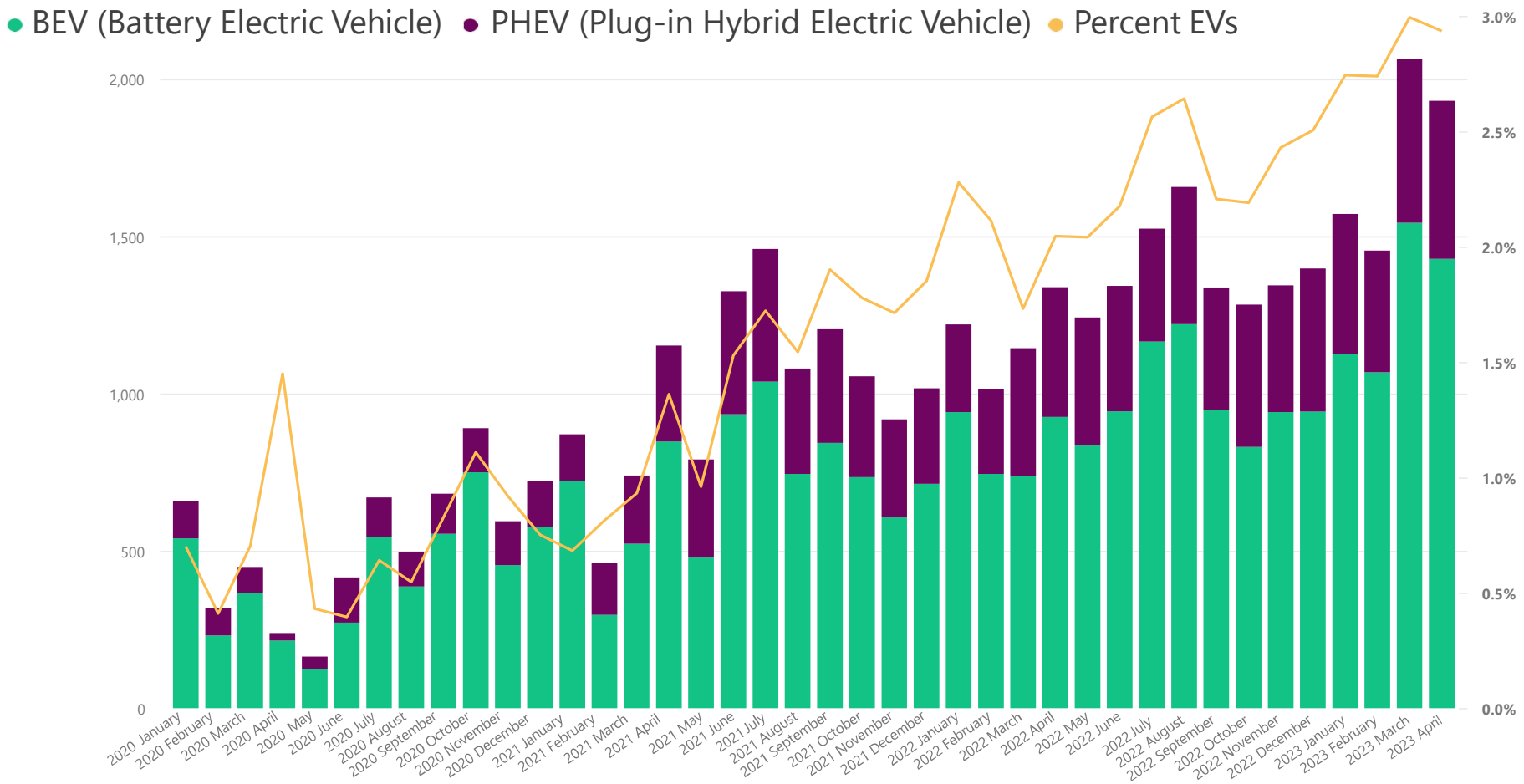
DriveOhio

Ohio EV Trends

Ohio New Alternative Fuel Vehicles Registrations by Year



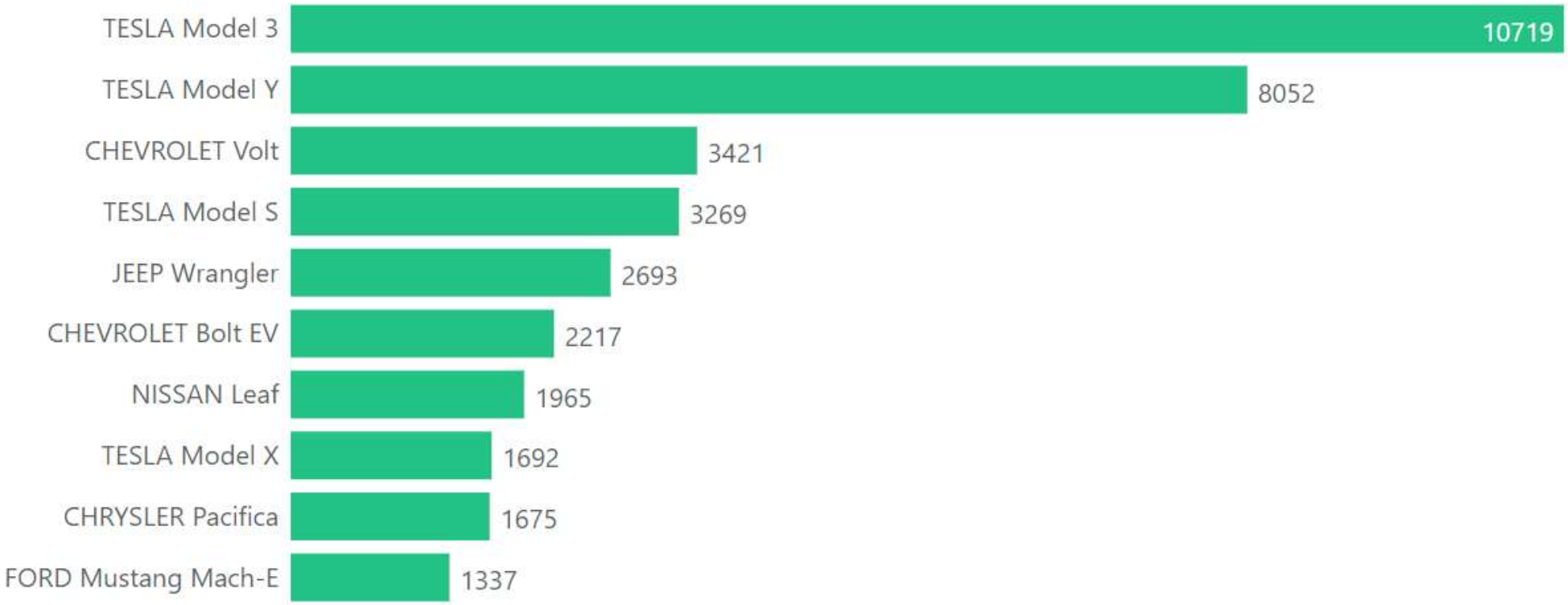
Source: Ohio Alternative Fuel Registration Dashboard. Data shown is through May 2023


BEV (Battery Electric Vehicle)
PHEV (Plug-in Hybrid Electric Vehicle)
Percent EVs
2,000
1,500
1,000
500
0
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
2020 January
2020 February
2020 March
2020 April
2020 May
2020 June
2020 July
2020 August
2020 September
2020 October
2020 November
2020 December
2021 January
2021 February
2021 March
2021 April
2021 May
2021 June
2021 July
2021 August
2021 September
2021 October
2021 November
2021 December
2022 January
2022 February
2022 March
2022 April
2022 May
2022 June
2022 July
2022 August
2022 September
2022 October
2022 November
2022 December
2023 January
2023 February
2023 March
2023 April

DriveOhio

Ohio EV Trends

Ohio's Top EV Models



DriveOhio

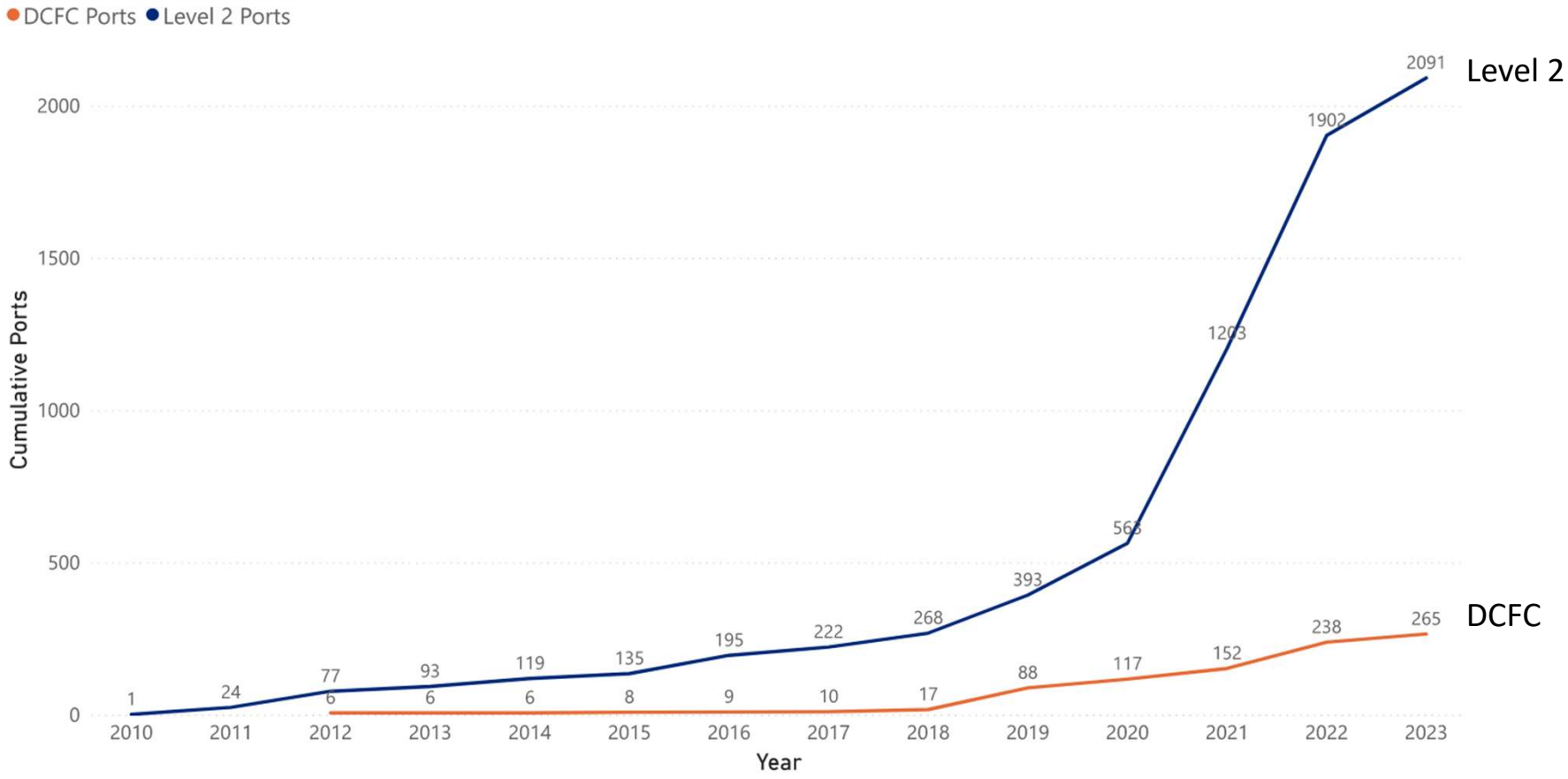
Source: Ohio Alternative Fuel Registration Dashboard. Data shown is through May 2023

Electric Vehicle Supply Equipment

LEVEL 1 (AC)	LEVEL 2 (AC)	DC FAST CHARGING		
2-5 miles/hr | 40+ hrs	10-20 miles/hr | 4-10 hrs	180-240 miles/hr | 20 mins-1 hr		
J1772	J1772	CCS1	CHAdeMO	TESLA NACS

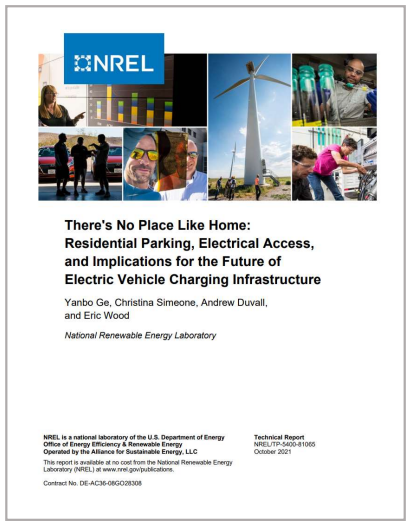
DriveOhio

Level 2 Ports, and DCFC Ports in Ohio



* Excludes Tesla ports Source: AFDC

Where do most EVs charge?


NREL

There's No Place Like Home: Residential Parking, Electrical Access, and Implications for the Future of Electric Vehicle Charging Infrastructure

Yanbo Ge, Christina Simeone, Andrew Duvall, and Eric Wood

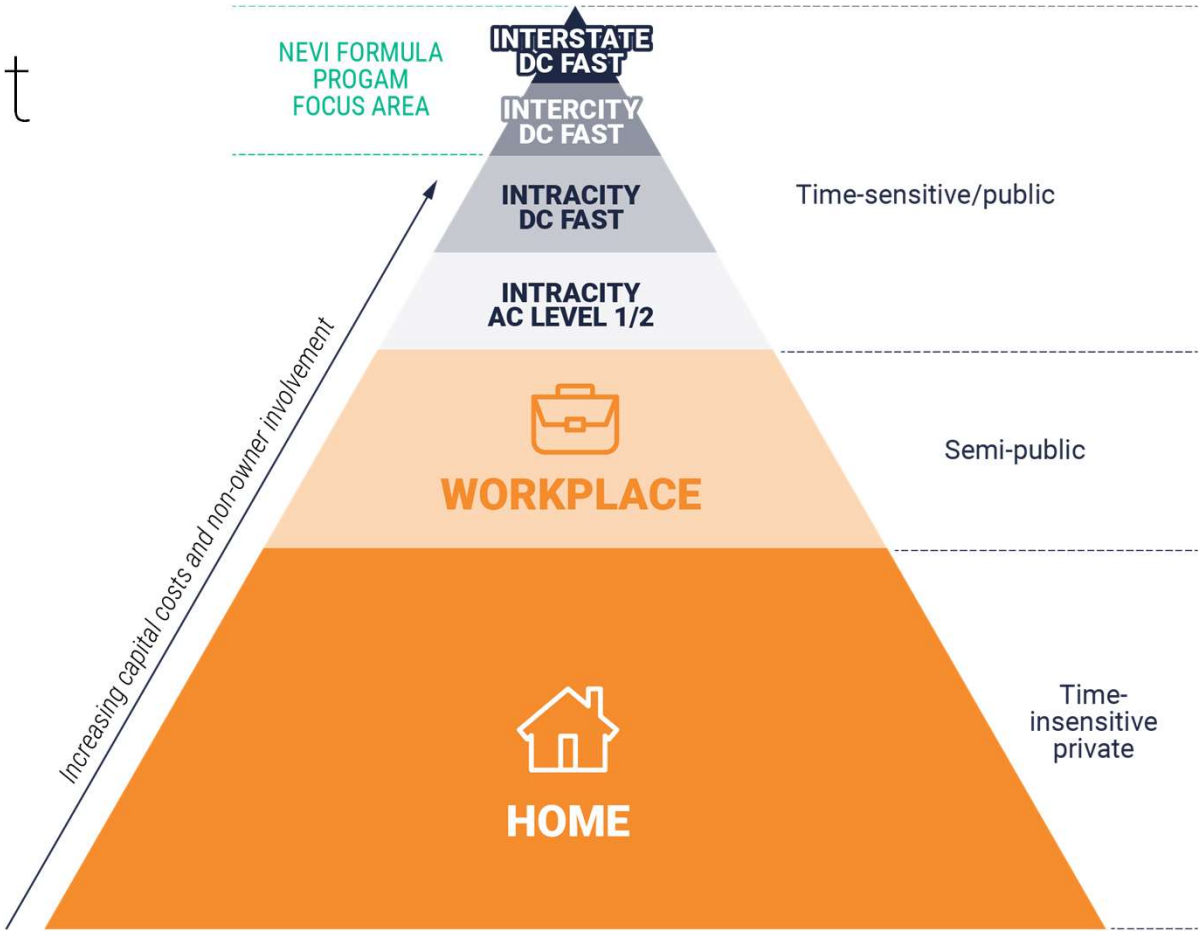
National Renewable Energy Laboratory

NREL is a national laboratory of the U.S. Department of Energy Office of Energy Efficiency & Renewable Energy Operated by the Alliance for Sustainable Energy, LLC

This report is available at no cost from the National Renewable Energy Laboratory (NREL) at www.nrel.gov/publications.

Contract No. DE-AC36-08GO28308

Technical Report
NREL/TP-5400-81065
October 2021



DriveOhio

National Electric Vehicle Infrastructure Program

DriveOhio

Federal Funding for EV Charging

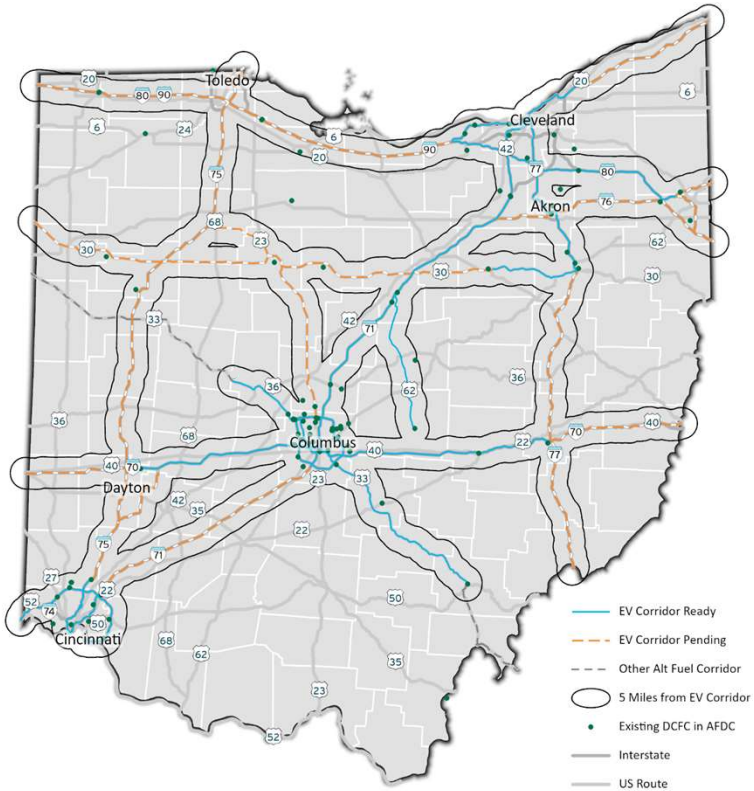
$7.5B in IIJA Funding for Charging and Fueling Infrastructure

$5B National EV Infrastructure (NEVI) Formula Program

- $140M for Ohio over 5 years
- Becomes discretionary once Alternative Fuel Corridors are fully built out
- 80/20 Funding Split (Federal Share/Awardee Share)

$2.5B for Charging and Fueling Infrastructure Program Discretionary Grants

- $1.25B for Corridor Charging/Fueling
- $1.25B for Community Charging/Fueling
- 80/20 Funding Split (Federal Share/Awardee Share)



DriveOhio

Alternative Fuel Corridors

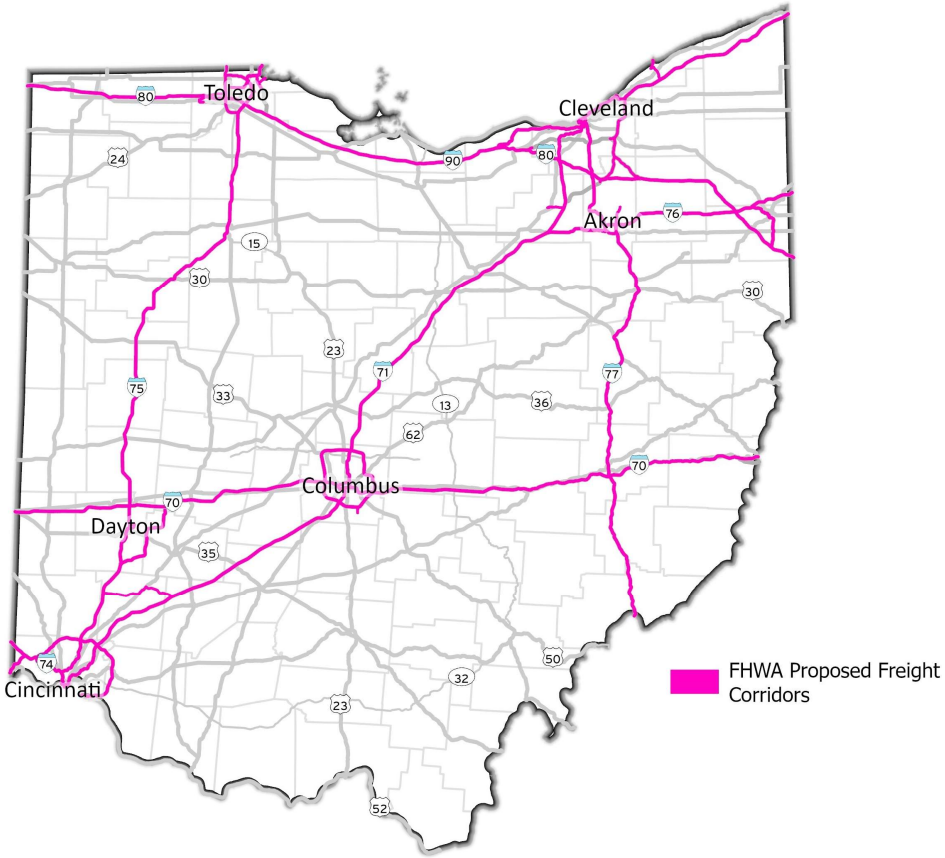
16 EV AFCs are formally designated

Ohio's Alternative Fuel Corridors

DriveOhio

Round 7 AFC Nominations are open

FHWA Proposed Freight EV Corridors



DriveOhio

National EV Infrastructure Program Criteria

charging infrastructure **every 50 miles** along the Interstate

within 1 travel mile of an Interstate exit

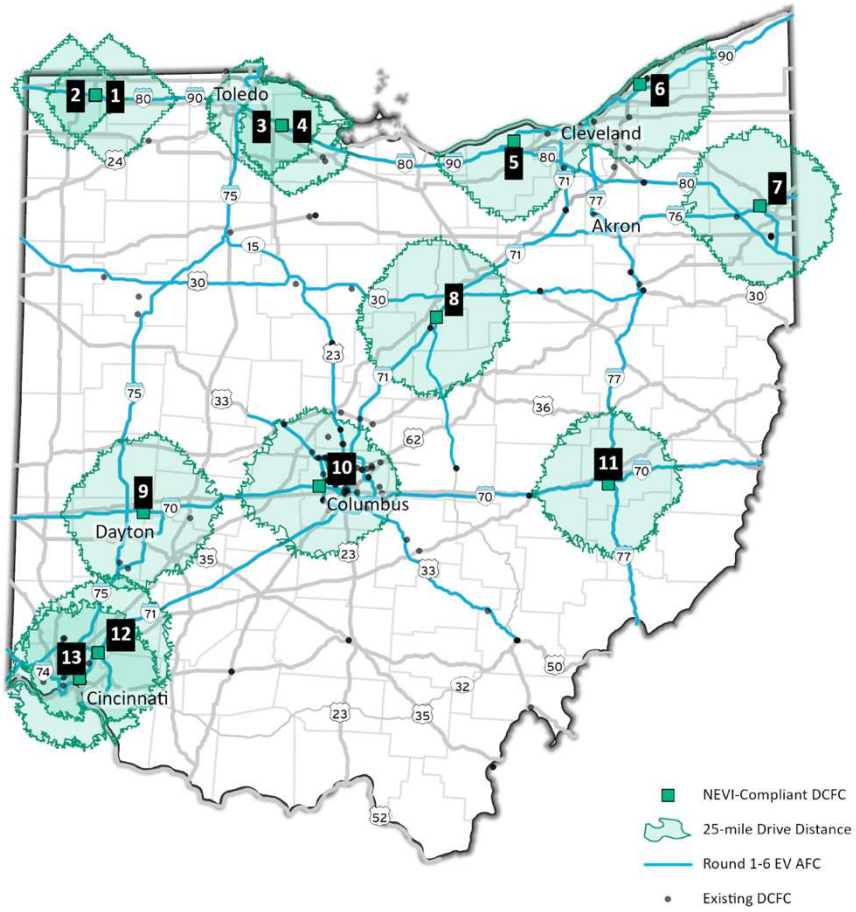
atleast **4 DC fast chargers**

charging 4 DC EVs simultaneously

atleast **150 kW** per port

minimum 600 kW station power

DriveOhio



Ohio's Existing Infrastructure

1,867 total miles of AFCs

178
Publicly available DCFC

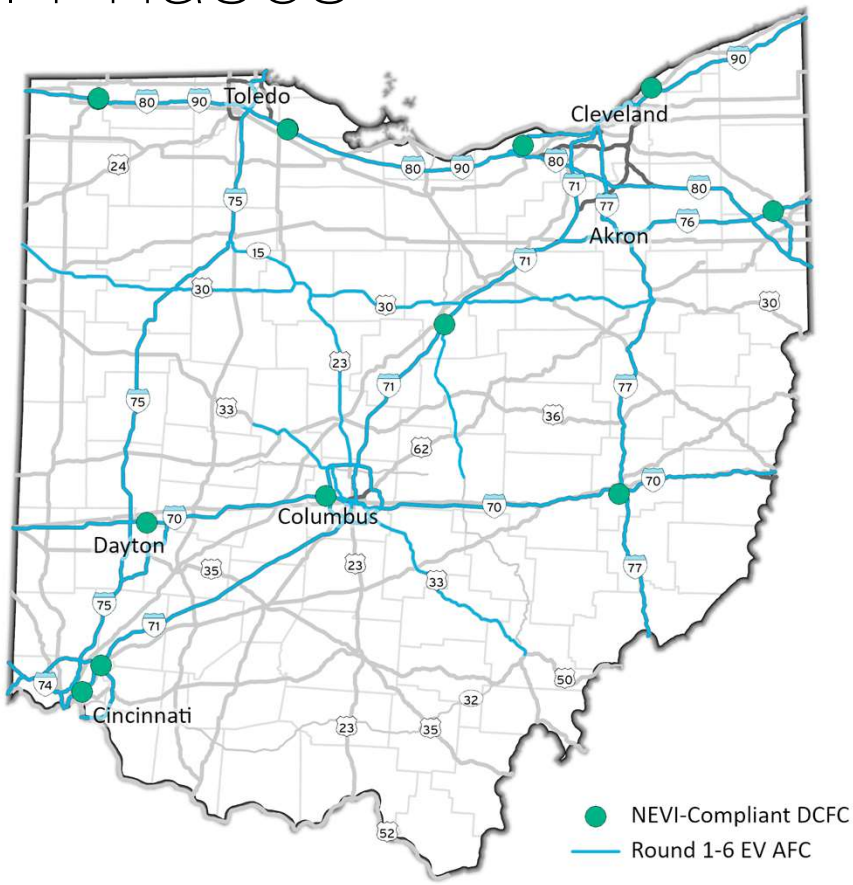
13
NEVI-compliant charging station locations

29 Tesla-only charging station locations

Source: AFDC, May 2023

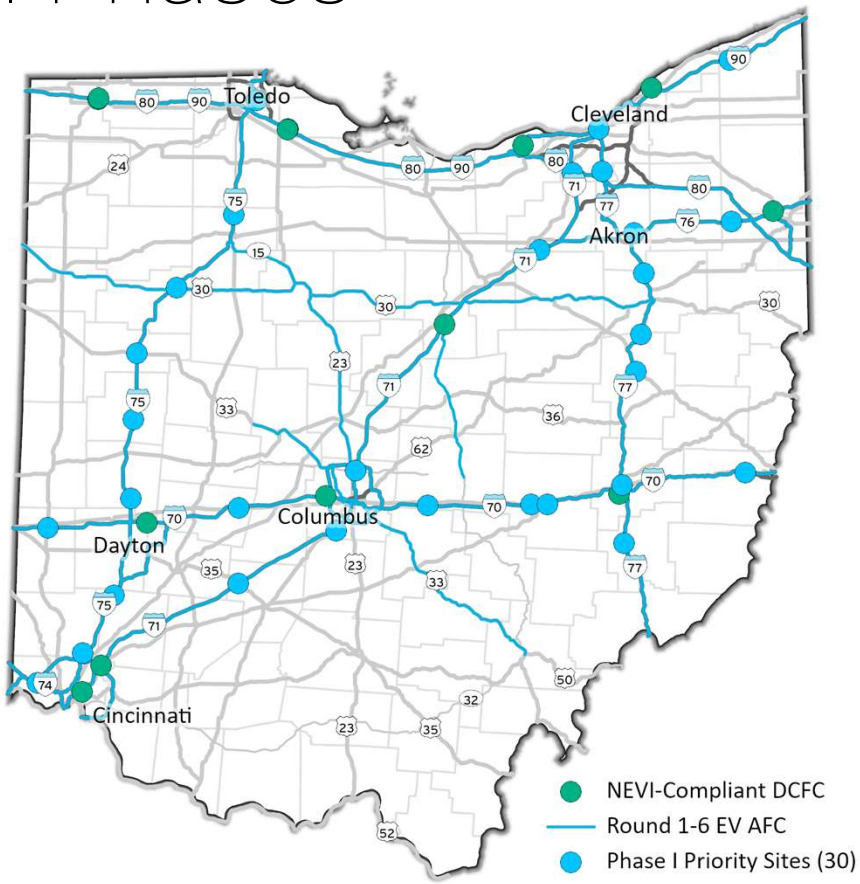
DriveOhio

Initial NEVI Phases



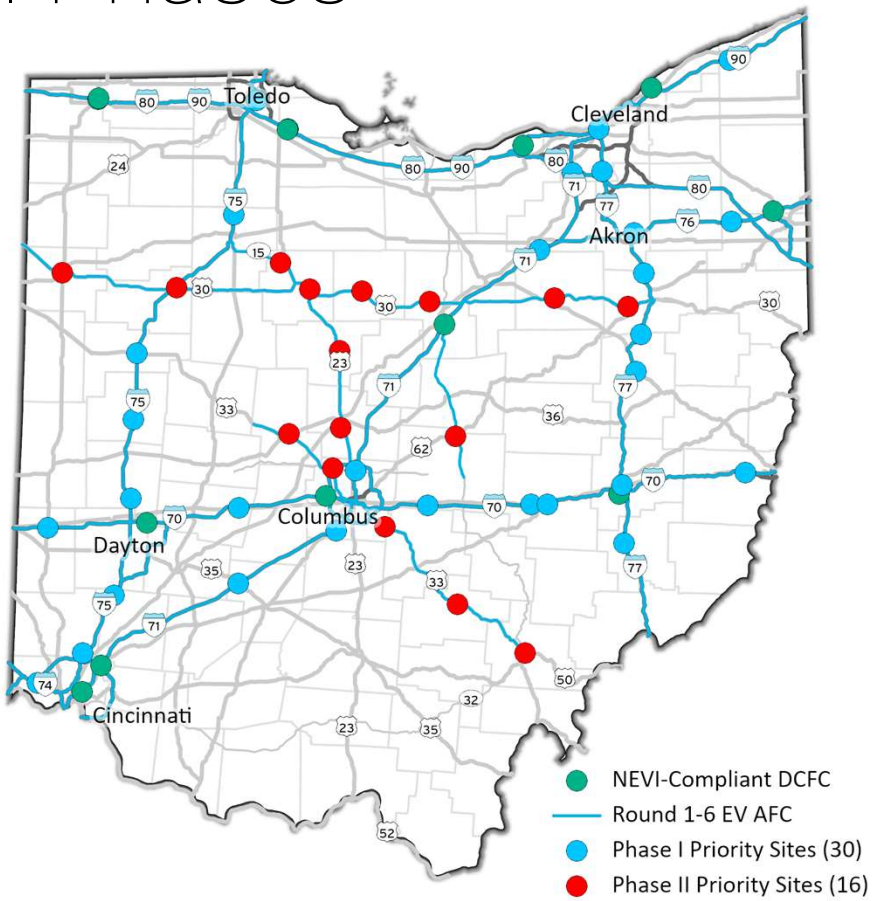
DriveOhio

Initial NEVI Phases



DriveOhio

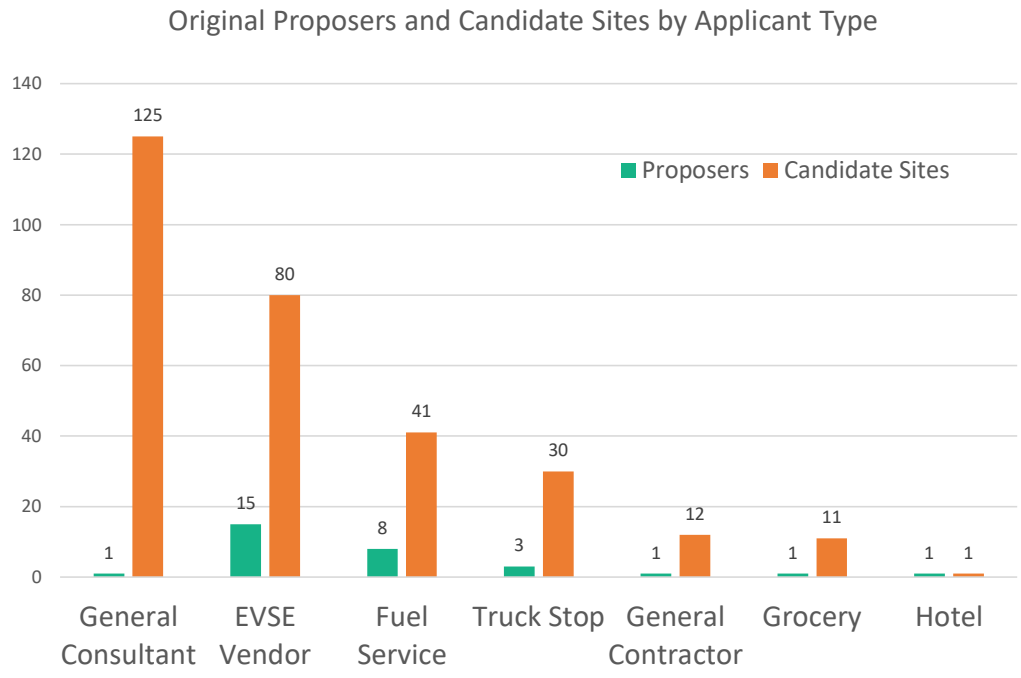
Initial NEVI Phases



DriveOhio

Phase 1 Procurement Update

- Included 30 NEVI stations
- Released RFP for ~10 weeks
- Received 300 site proposals from 30 proposers
- Contingent awards by July
- Initiate projects in Fall



DriveOhio

Phase 2 Update

- Focus on AFC buildout
- Roll over any Round 1 sites not awarded
- Will include 16 US and State Route stations
- Will follow same procurement process
  - Release RFP for ~10 weeks
- Phase 2 procurement planned for late Fall

Stakeholder Engagement

State Agencies

5 adjacent states, several state departments

Planning Partners

OARC + 10 MPOs/RTPOs meetings

Utilities

Duke, AEP, AES,

First Energy, Co-Op Assn, NOPEC, etc.

EVSE Vendors

ChargePoint, Electrada, Applegreen, Shell ReCharge, Evgo, Blink, Electrify America, etc.

Site Hosts

Sheetz, Walmart, 7-Eleven, etc.

Industry Organizations

EVITP, PowerConnect, Ohio Automotive Dealers Association, site hosts, Sierra Club, NRDC, OEC, 6 Drive Electric chapters

DriveOhio

NEVI Procurement and Planning Timeline

NEVI Phase 1 Interstate Station Procurement

1/18/2023
Deadline to submit proposal

July 2023
Anticipated Phase 1 awards

Sep 2023
Anticipated Phase 2 RFP

Q1 2024
Anticipated start of Phase 1 EVSE Installation

NEVI Final Rule
2/28/2023

CFI Discretionary Grant Program NOFO
3/14/2023

CFI Grant Due date
6/13/2023

Round 7 Nominations Due
6/21/2023

Ohio EV Plan – Annual Update due to FHWA
Aug 2023

NEVI Planning

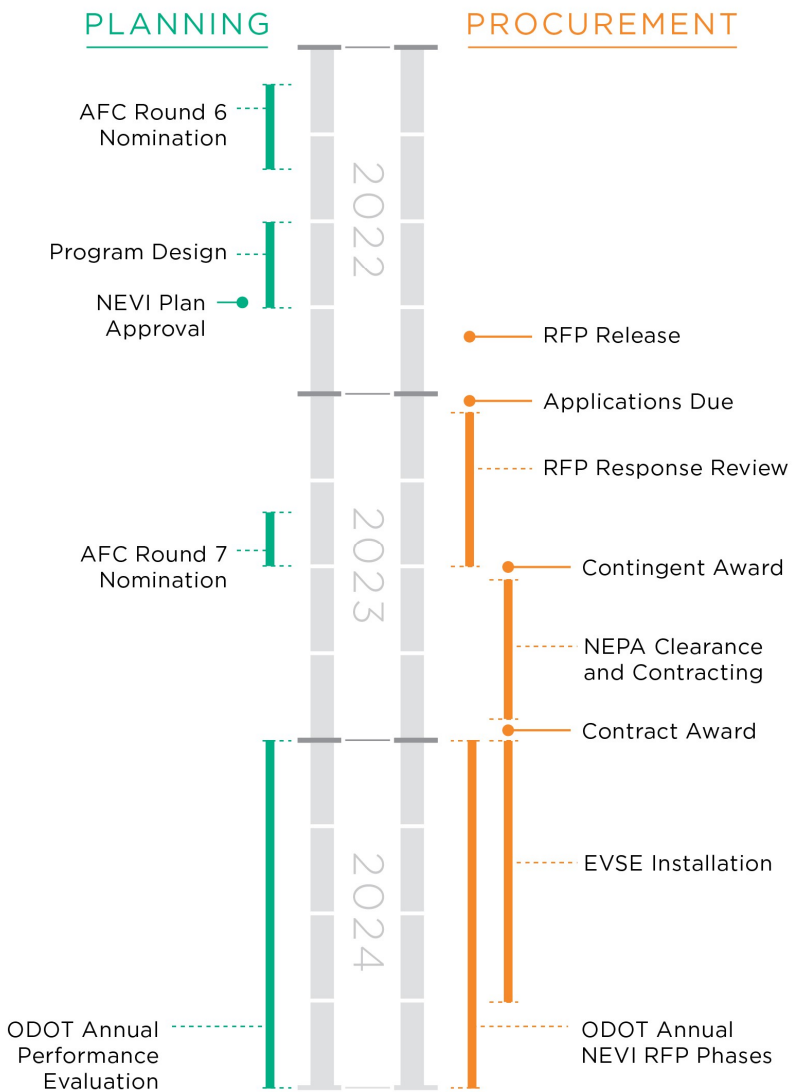
DriveOhio

Anticipated Deployment Timeline

Phase 1: Build out highway AFCs by 2024

Phase 2: US & State Routes build out from 2024 – 2026

Phases 3-4: Use remaining formula funds based on 2020 charging study and additional EVSE priorities



DriveOhio

Charging & Fueling Infrastructure Program Overview

Two funding streams over 5 years

$2.5B
IN AVAILABLE GRANTS

COMMUNITY CHARGING AND FUELING GRANTS

Strategically deploy electric charging and alternative fuel infrastructure located on public roads or in other publicly accessible locations.

ALTERNATIVE FUEL CORRIDOR (AFC) GRANTS

Strategically deploy electric charging and alternative fuel infrastructure located along designated alternative fuel corridors (AFCs).

DriveOhio

Resources Available on the DriveOhio **Website**

ChargeX Consortium

MISSION

Bring together EV charging industry members, national laboratories, consumer advocates, and other stakeholders to measure and significantly improve public charging reliability and usability **within 24 months (by June 2025)**.

WORKING GROUPS

1. Defining the Charging Experience
2. Triage Charging Reliability and Usability
3. Develop Solutions for Scaling Reliability

41
EV Industry Stakeholders

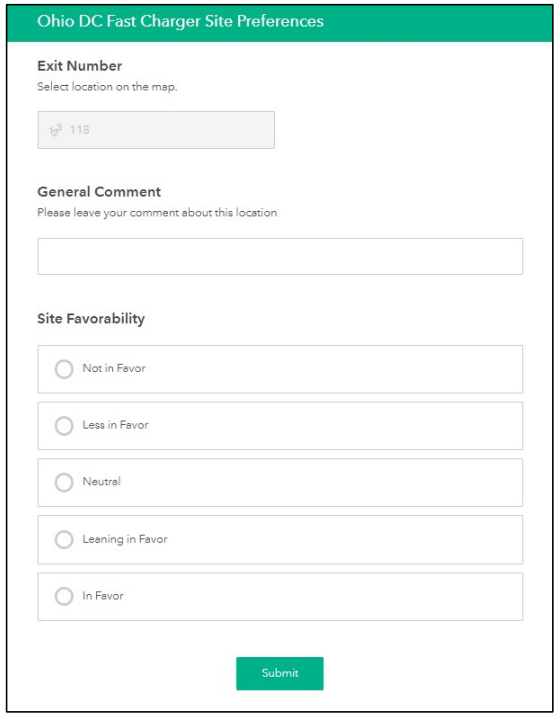
Kickoff
June 1, 2023

More Information Available at https://inl.gov/chargex/

DriveOhio

Call to Action

- Feedback on the Ohio Infrastructure Deployment Plan Update – email comments to NEVI@drive.ohio.gov
- Feedback on the draft Phase II locations on the interactive map: https://experience.arcgis.com/experience/50b624b7aa4042aea9a1a8fbdc03da0c
- Consider community CFI grant opportunities
- Subscribe for updates: https://public.govdelivery.com/accounts/OHDOT/signup/10260



DriveOhio

Contacts

Julie Brogan
Senior Project Manager
Julia.Brogan@dot.ohio.gov

Santos Ramos, EIT
Project Manager
Santos.Ramos@dot.ohio.gov

DriveOhio

Preeti Choudhary, PE
DriveOhio Executive Director
preeti.choudhary@dot.ohio.gov