Joint Office of
Energy and
Transportation

Building a Future Where Everyone Can Ride and Drive Electric

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Deputy Director of the Joint Office of Energy and Transportation
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driveelectric.gov

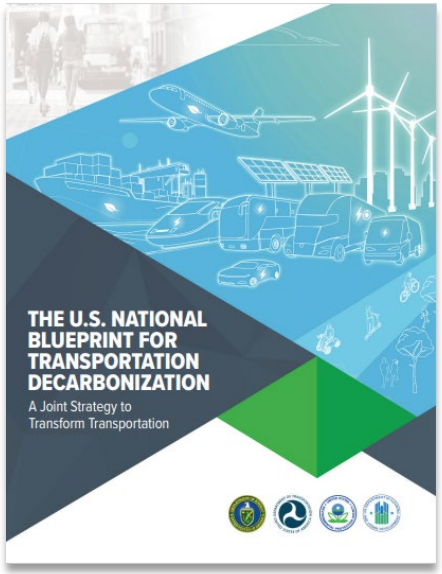
Agenda

- Joint Office **Overview and Priorities**
- **Alternative Fuel Corridors** Status
- **National Zero-Emission Freight Corridor Strategy**

U.S. National Blueprint for Transportation Decarbonization

Goal:

- Reduce greenhouse gas emissions associated with the transportation sector by 2050 and ensure resilient and accessible mobility options for all Americans



Partners:

Background on Joint Office of Energy and Transportation

Established in the **Bipartisan Infrastructure Law** to address areas of joint interest to the **Departments of Energy and Transportation**

$300M

in FY22 funds to DOT
with transfer authority to DOE

9

major areas of emphasis

Areas of emphasis (summarized)

1) technical assistance of vehicle charging
2) data sharing
3) performance of a national and regionalized study vehicle charging
4) training and certification programs
5) a program to promote renewable energy generation, storage, and grid integration
6) transmission pilots in the rights-of-way
7) research, strategies, and actions to mitigate the effects of climate change
8) development of a streamlined utility accommodations policy for transmission in the transportation right-of-way
9) any other issues that the Secretary of Transportation and the Secretary of Energy identify as issues of joint interest

Mission and Vision

JOINT OFFICE OF
Energy and
Transportation

Mission

To accelerate an electrified transportation system that is affordable, convenient, equitable, reliable, and safe.

Vision

A future where everyone can ride and drive electric.

Alternative Fuel Corridor Status Update

Alternative Fuel Corridors

View AFCs by Fuel Type

Electric Vehicle (AFC Rounds 1-7)

Explore

Hydrogen (AFC Rounds 1-7)

Explore

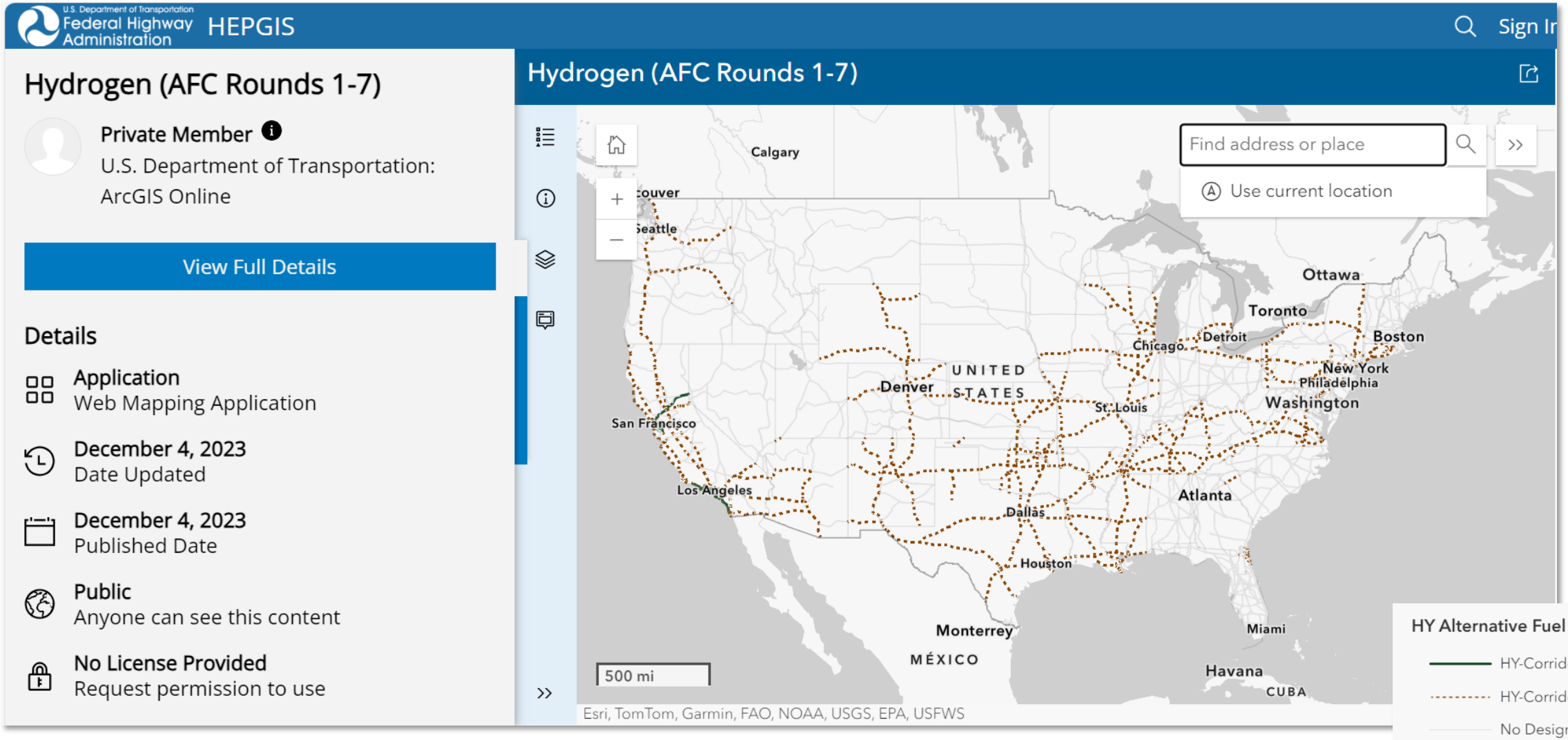
Liquefied Natural Gas (AFC Rounds 1-7)

Explore

Liquefied Petroleum Gas (AFC Rounds 1-7)

Explore

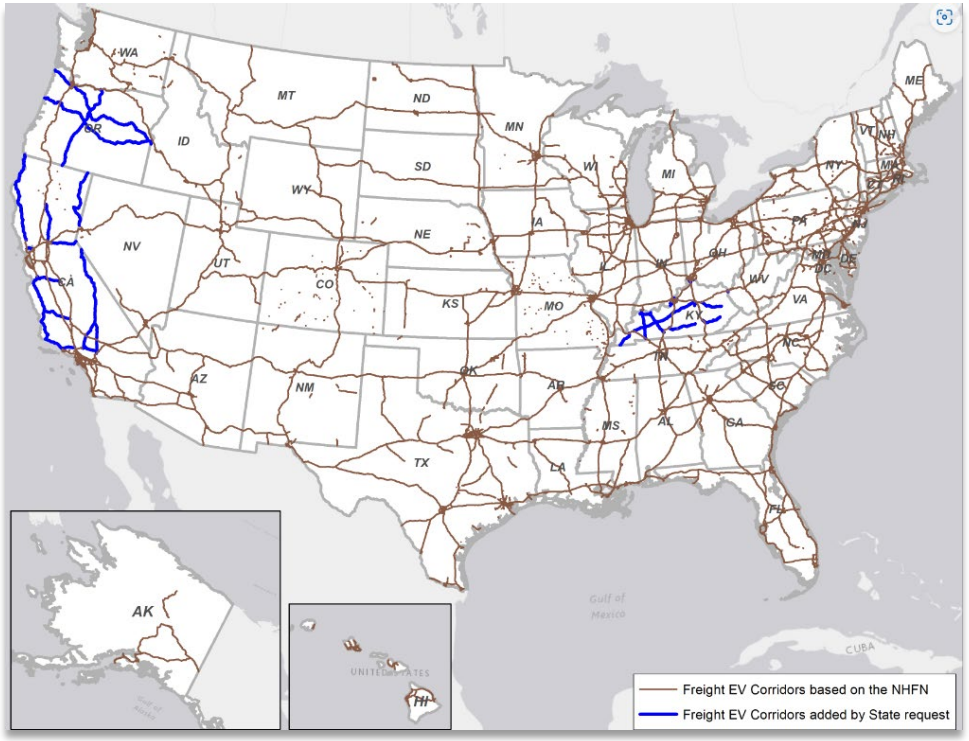
Alternative Fuel Corridors | HEPGIS (arcgis.com)



FHWA EV Freight Corridor Designations

In alignment with the Joint Office's National Zero-Emission Freight Corridor Strategy, the **Federal Highway Administration announced the designation of National EV Freight Corridors** along the National Highway Freight Network and other key roadways.

The designations, which are required by the Bipartisan Infrastructure Law (BIL), are a critical part of the Biden-Harris Administration's strategy for **building out a convenient, reliable, and made-in-America national EV charging network that supports individual drivers and commercial needs**

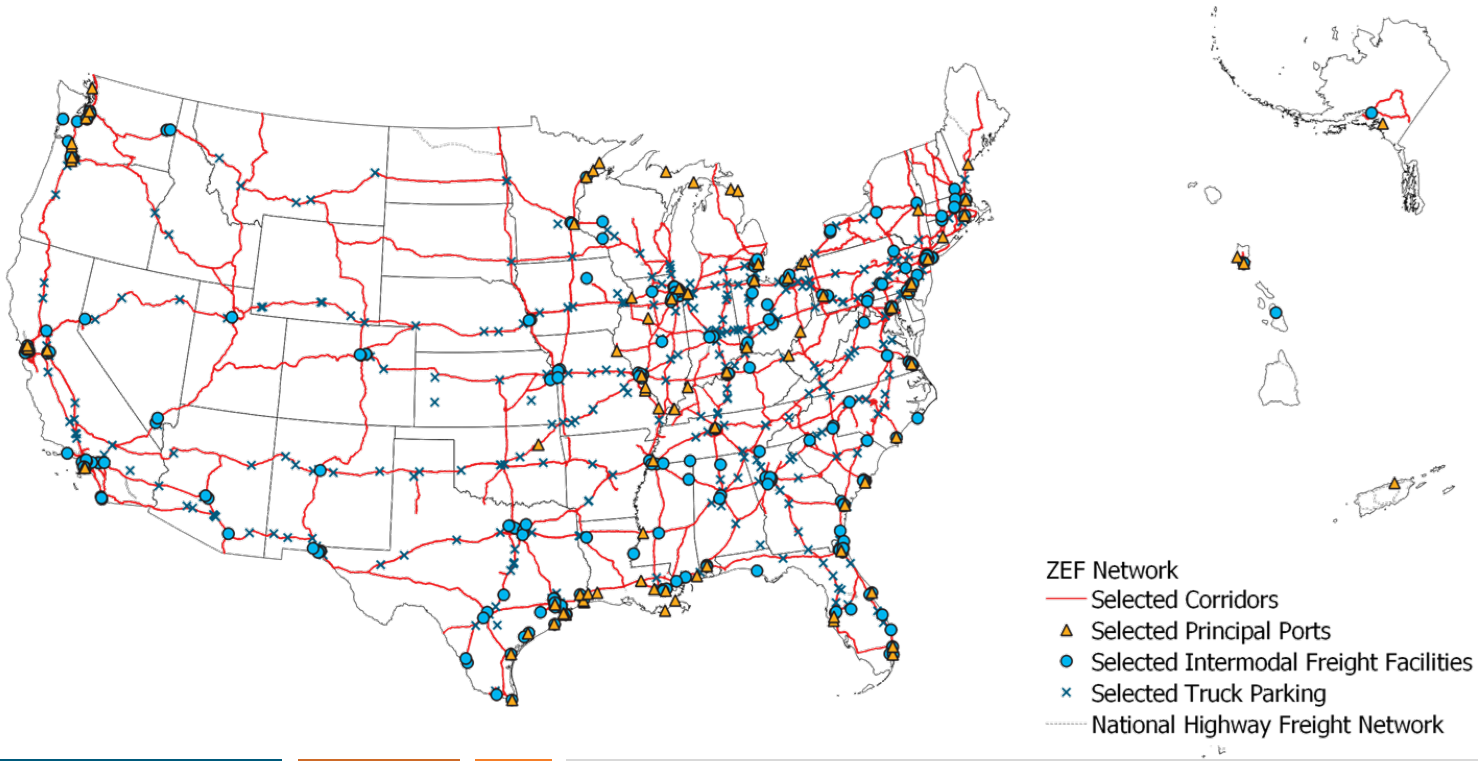


Freight EV Corridors - Alternative Fuel Corridors - Environment - FHWA (dot.gov)

National Zero-Emission Freight Corridor Strategy

Goal

The ***National Zero-Emission Freight Corridor Strategy*** seeks to **align and accelerate cross-sector investments** in zero-emission medium- and heavy-duty vehicle (ZE-MHDV) infrastructure and **clearly signal the need to bolster electric grid and hydrogen planning** to achieve a zero-emission freight network by **2040**.



A Four-Phased Strategy for a National ZEF Network

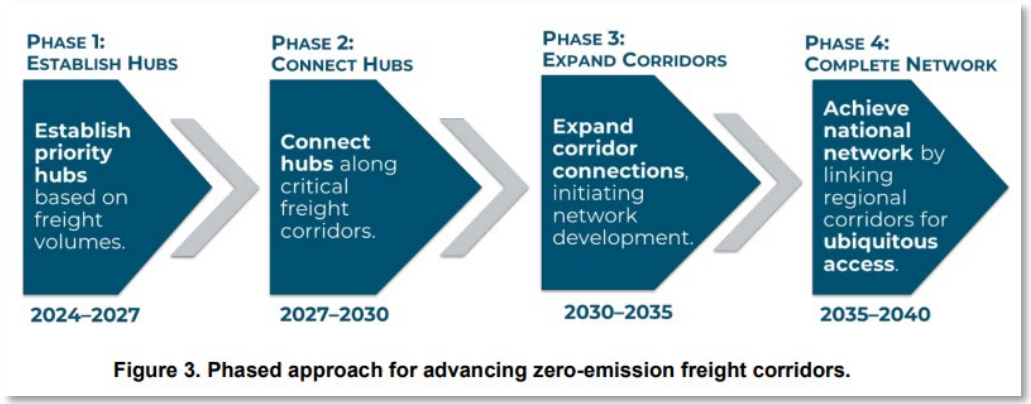
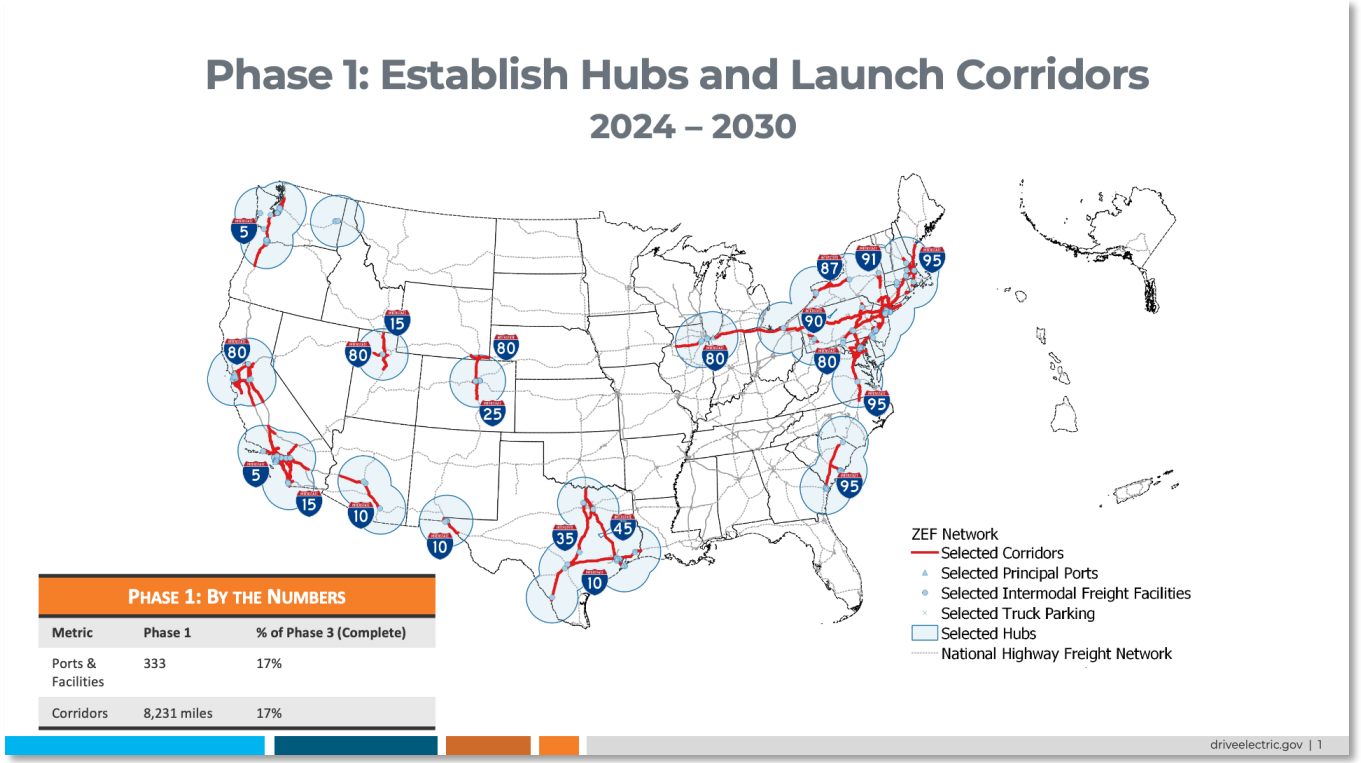


Figure 3. Phased approach for advancing zero-emission freight corridors.



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Thank You!

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Numerous strategies and solutions are required to tackle transportation emissions

1 icon represents limited long-term opportunity 2 icons represents large long-term opportunity 3 icons represents greatest long-term opportunity	BATTERY/ELECTRIC	HYDROGEN	SUSTAINABLE LIQUID FUELS
Light Duty Vehicles (49%)*		–	TBD
Medium, Short-Haul Heavy Trucks & Buses (~14%)			
Long-Haul Heavy Trucks (~7%)			
Off-road (10%)			
Rail (2%)			
Maritime (3%)		†	
Aviation (11%)			
Pipelines (4%)		TBD	TBD
Additional Opportunities	• Stationary battery use • Grid support (managed EV charging)	• Heavy industries • Grid support • Feedstock for chemicals and fuels	• Decarbonize plastics/chemicals • Bio-products
RD&D Priorities	• National battery strategy • Charging infrastructure • Grid integration • Battery recycling	• Electrolyzer costs • Fuel cell durability and cost • Clean hydrogen infrastructure	• Multiple cost-effective drop-in sustainable fuels • Reduce ethanol carbon intensity • Bioenergy scale-up

* All emissions shares are for 2019

† Includes hydrogen for ammonia and methanol

Figure 7. Summary of vehicle improvement strategies and technology solutions for different travel modes that are needed to reach a net-zero economy in 2050 (more details provided in Section 5).

Source: U.S. National Blueprint for Transportation Decarbonization

Deployment Factors to Identify Priority ZEF Corridors

1. Segments of the NHFN with highest freight volumes.

2. Highest percentage of ports by annual tonnage, all intermodal freight facilities, and key truck service & parking.

3. Areas that bear disproportionate environmental and air quality burden from MHDV emissions.

4. States with policies that enable zero-emission vehicle deployment.

5. Areas projected to demonstrate better total cost of ownership for ZE-MHDV compared to ICE.

6. “On-the-ground” planning through Department of Energy commercial zero-emission vehicle corridor planning grants.