Interagency Collaborations: FAST Act Section 1413- Alternative Fuels Corridor Designations

2019 HYDROGEN & FUEL CELLS PROGRAM ANNUAL MERIT REVIEW

APRIL 30, 2019

ARLINGTON, VA

MIKE SCARPINO | U.S. DEPARTMENT OF TRANSPORTATION- VOLPE CENTER

U.S. Department of Transportation Volpe Center

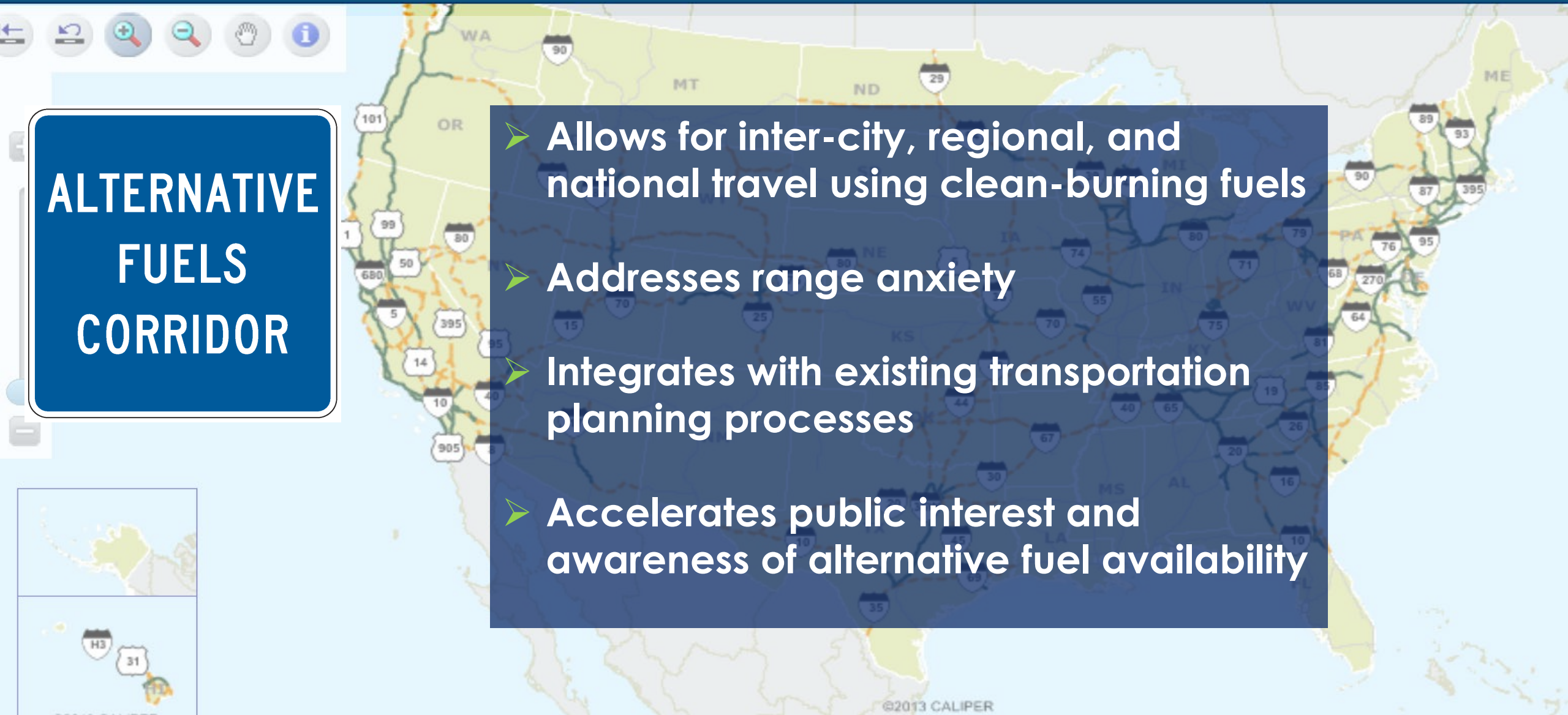
U.S. Department of Transportation Federal Highway Administration

National Alternative Fuel Corridors

To improve the mobility of alternative fuel vehicles, the U.S. Department of Transportation (DOT) has designated national corridors in strategic locations along major highways for:

- Plug-in electric vehicle charging
- Hydrogen fueling
- Propane (LPG) fueling
- Natural gas (CNG, LNG) fueling

Benefits of a National System



ALTERNATIVE FUELS CORRIDOR

- Allows for inter-city, regional, and national travel using clean-burning fuels
- Addresses range anxiety
- Integrates with existing transportation planning processes
- Accelerates public interest and awareness of alternative fuel availability

Corridor-Ready Criteria

EV	CNG	LNG	Hydrogen	Propane
DCFC only	150 miles between stations	200 miles between stations	100 miles between stations	150 miles between stations
50 miles between stations	5 miles from highway	5 miles from highway	5 miles from highway	5 miles from highway
5 miles from highway	Public stations only	Public stations only	Public stations only	Public stations only
Public stations only *(no Tesla)*	Fast fill, 3,600 psi			Primary stations only

Highway Signage

- **MUTCD Memorandum – Signing for Designated Corridors**
  - ✓ Provides guidance to State DOTs
  - ✓ First corridor signs installed on I-94 and I-26
  - ✓ FHWA developed FAQs to address commonly asked questions (see AFC website)

I-26 (South Carolina)

I-94 (Minnesota)

Pictured from left, Louisiana Department of Natural Resources Secretary Tom Harris, Louisiana Department of Transportation and Development (DOTD) Secretary Shawn Wilson, Gov. John Bel Edwards and #LDEQ Secretary Chuck Carr Brown.

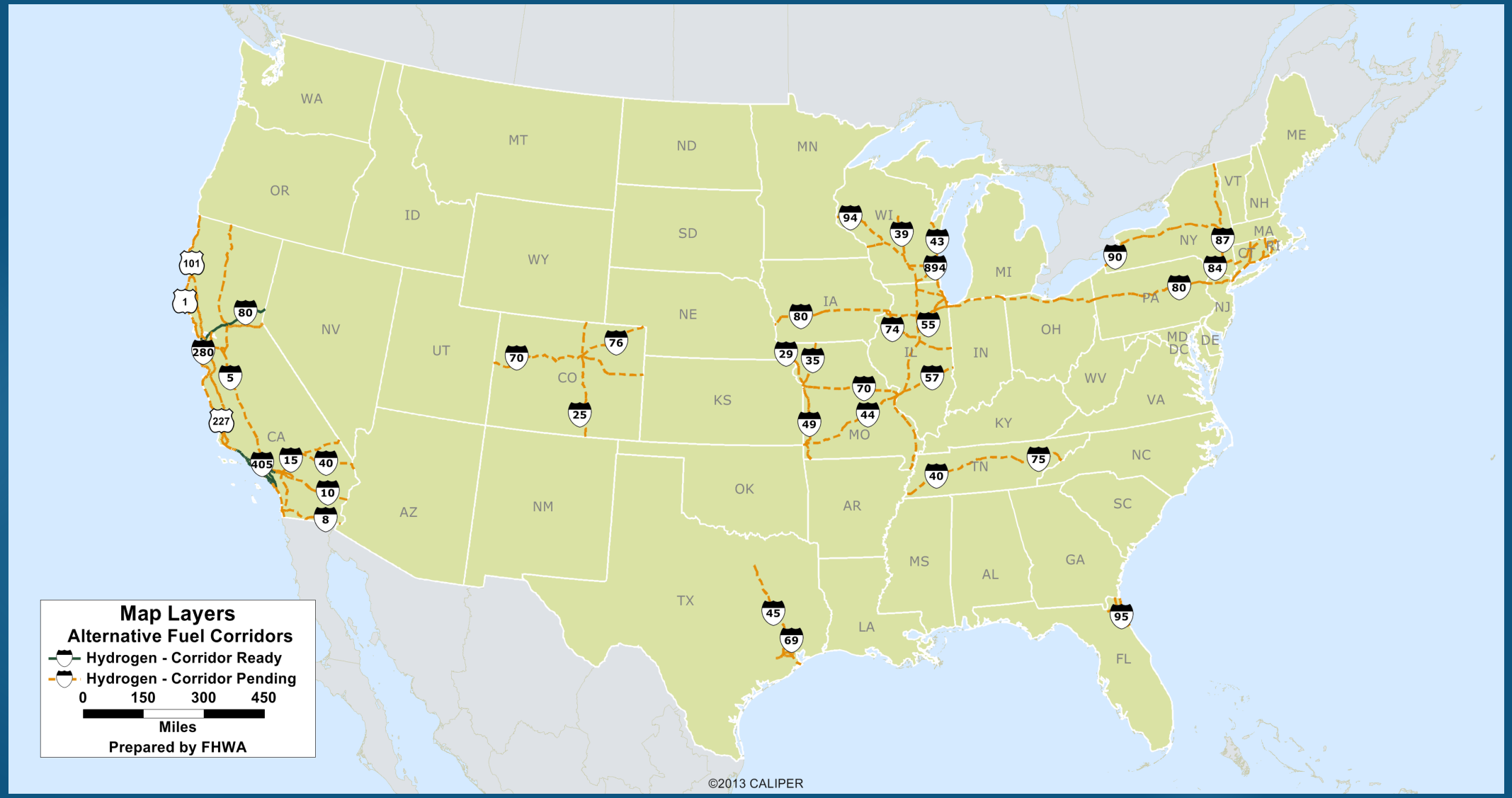
Combined Results Rounds 1&2

- Designations….
  - ✓ **58** nominations
  - ✓ Includes portions/segments of **84** Interstates, along with **43** US highways/state roads
  - ✓ Comprise **44 states plus D.C.**
  - ✓ Covers **over 100,000** miles of the National Highway System (all fuels combined)

FY 2018 Request for Nominations

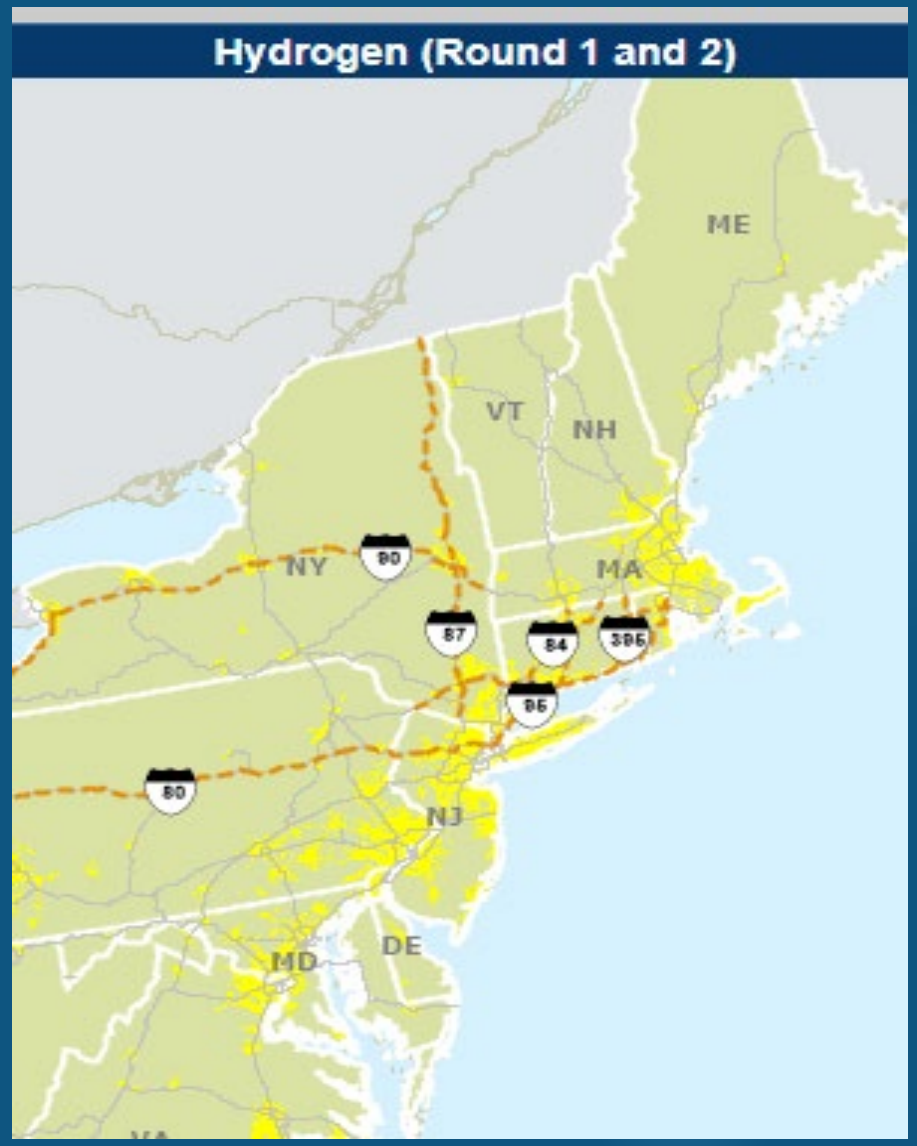
- Round 3 request for nominations - October 2018
- Distributed through FHWA Division Offices
- Nominations due the end of January 2019
- Designations made in spring 2019
- No change in designation criteria
- Some changes in shapefile submissions

Alternative Fuel National Corridors – *Hydrogen Round 1 & 2*



Alternative Fuel National Corridors – Round 1 & 2

Hydrogen Maps – California and Northeast

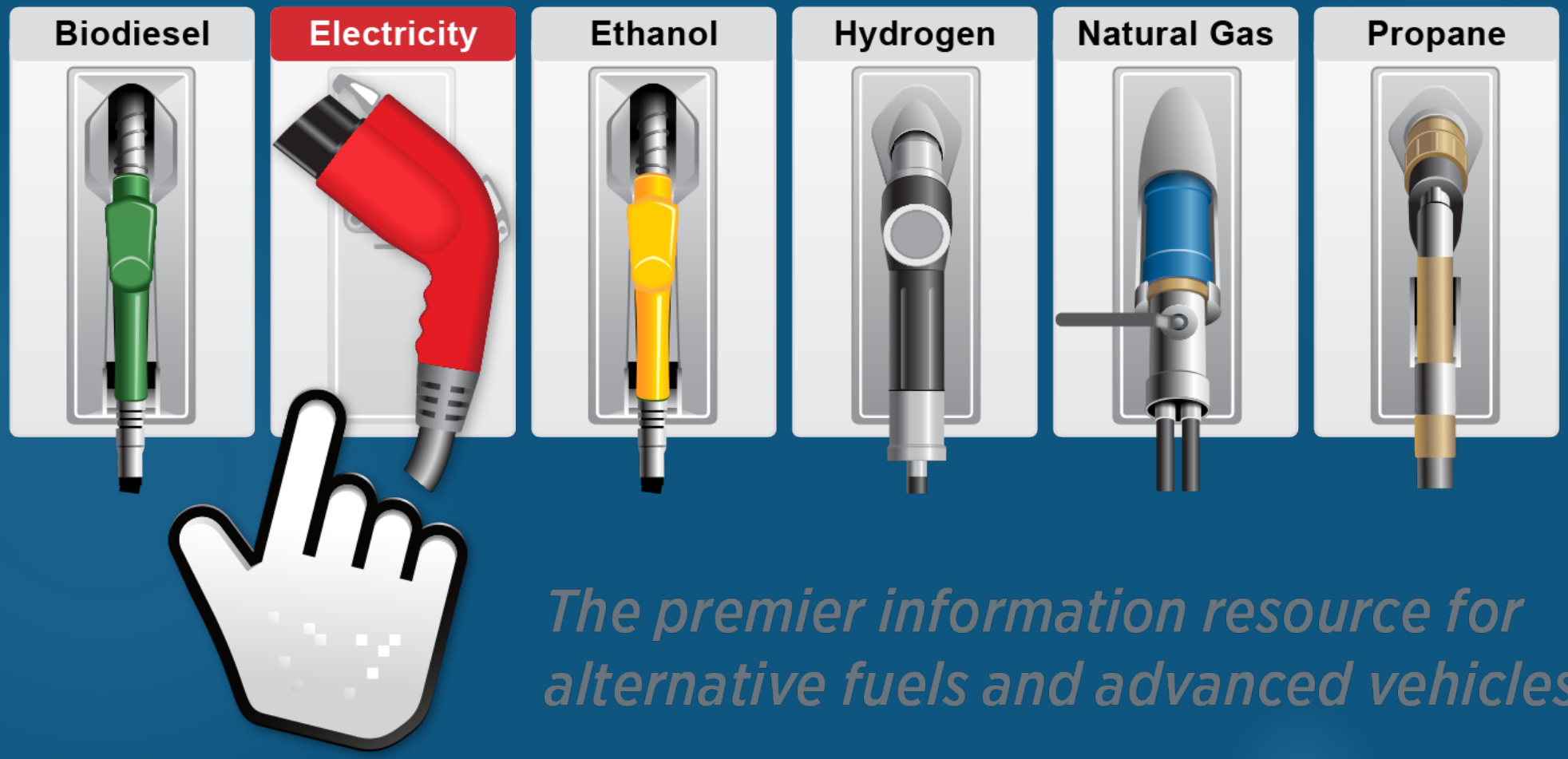


Partnering/Collaborations with Department of Energy

- Vehicle Technologies Office/Clean Cities:
  - Technical/Program support
  - Fund Clean Cities coalition support
  - Motorweek
- National Renewable Energy Lab
  - Maintains database of fueling stations
  - Develop corridor specific tools & resources
- Fuel Cells Technologies Office
  - Coordinating station deployment/ corridor efforts on West Coast and Northeast

Alternative Fuels Data Center

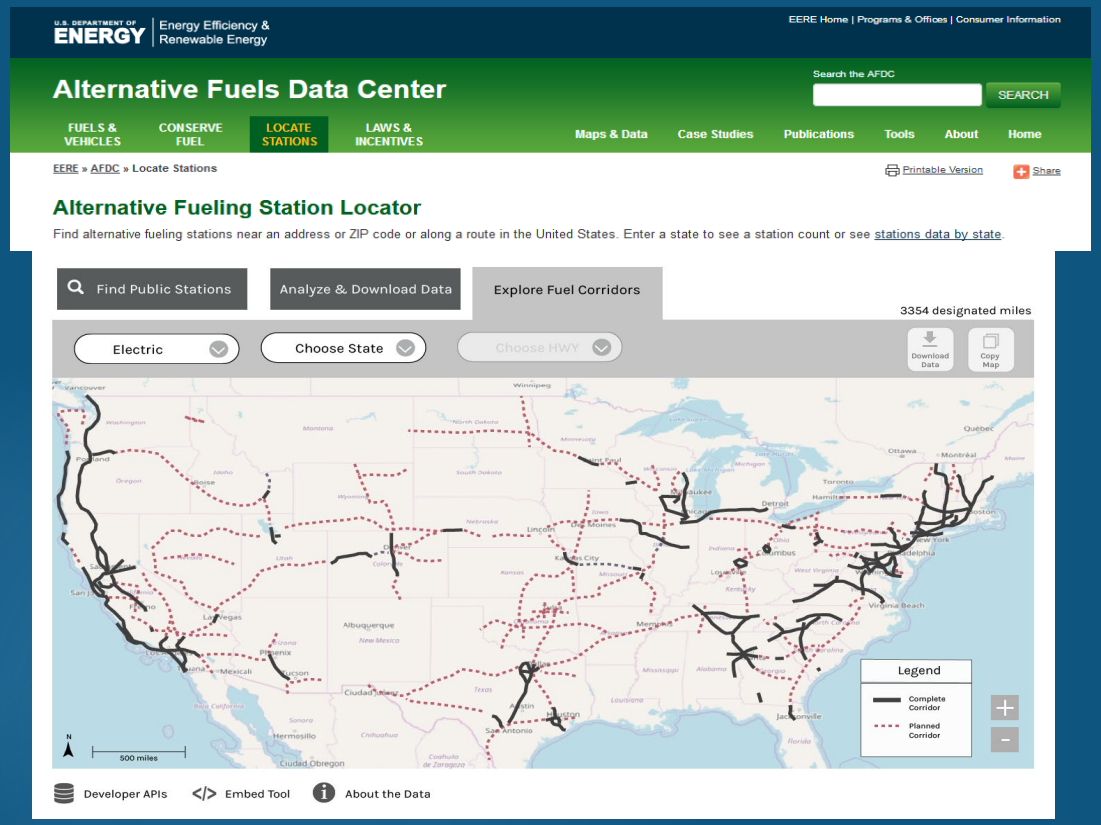
afdc.energy.gov

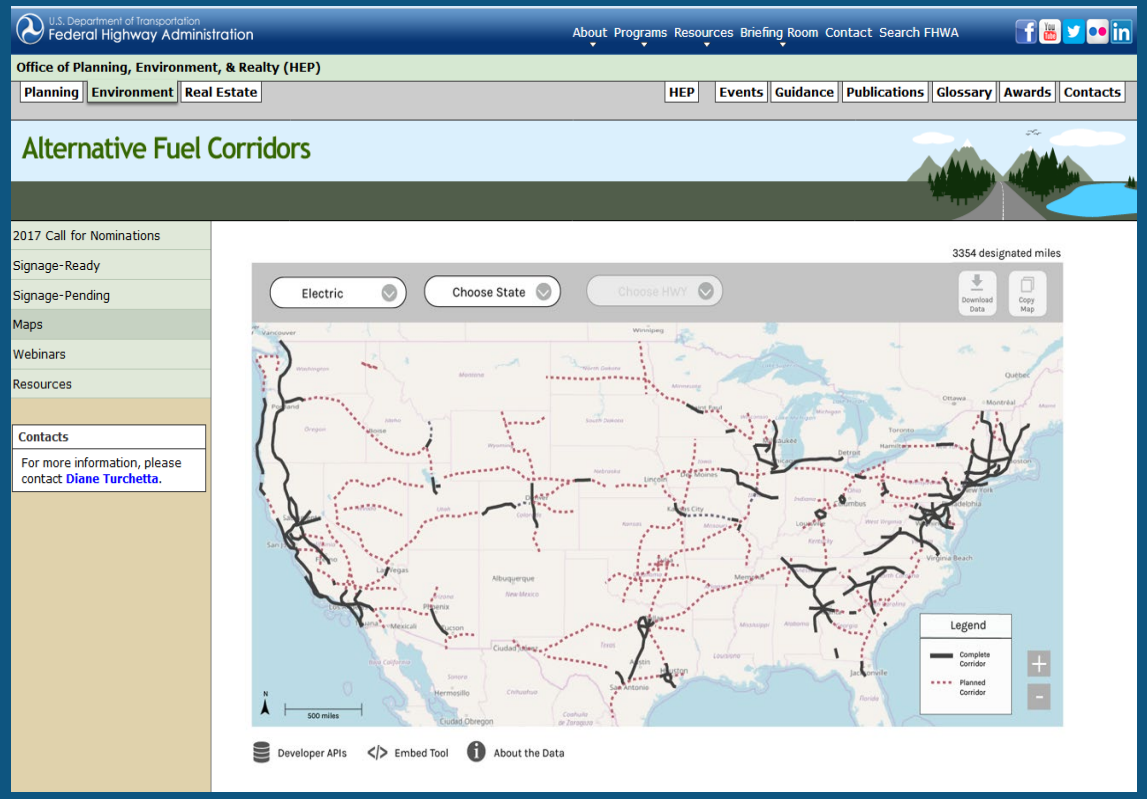


The premier information resource for alternative fuels and advanced vehicles

Embeddable Application

afdc.energy.gov/corridors





1 Alternative Fuels Data Center

The corridor mapping tool will be available as a third tab on the Alternative Fueling Station Locator.

2 Federal Highway Administration

The corridor mapping tool can be embedded as a standalone application on the FHWA website or any other website.

Resources for Nominating Corridors

afdc.energy.gov/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

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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

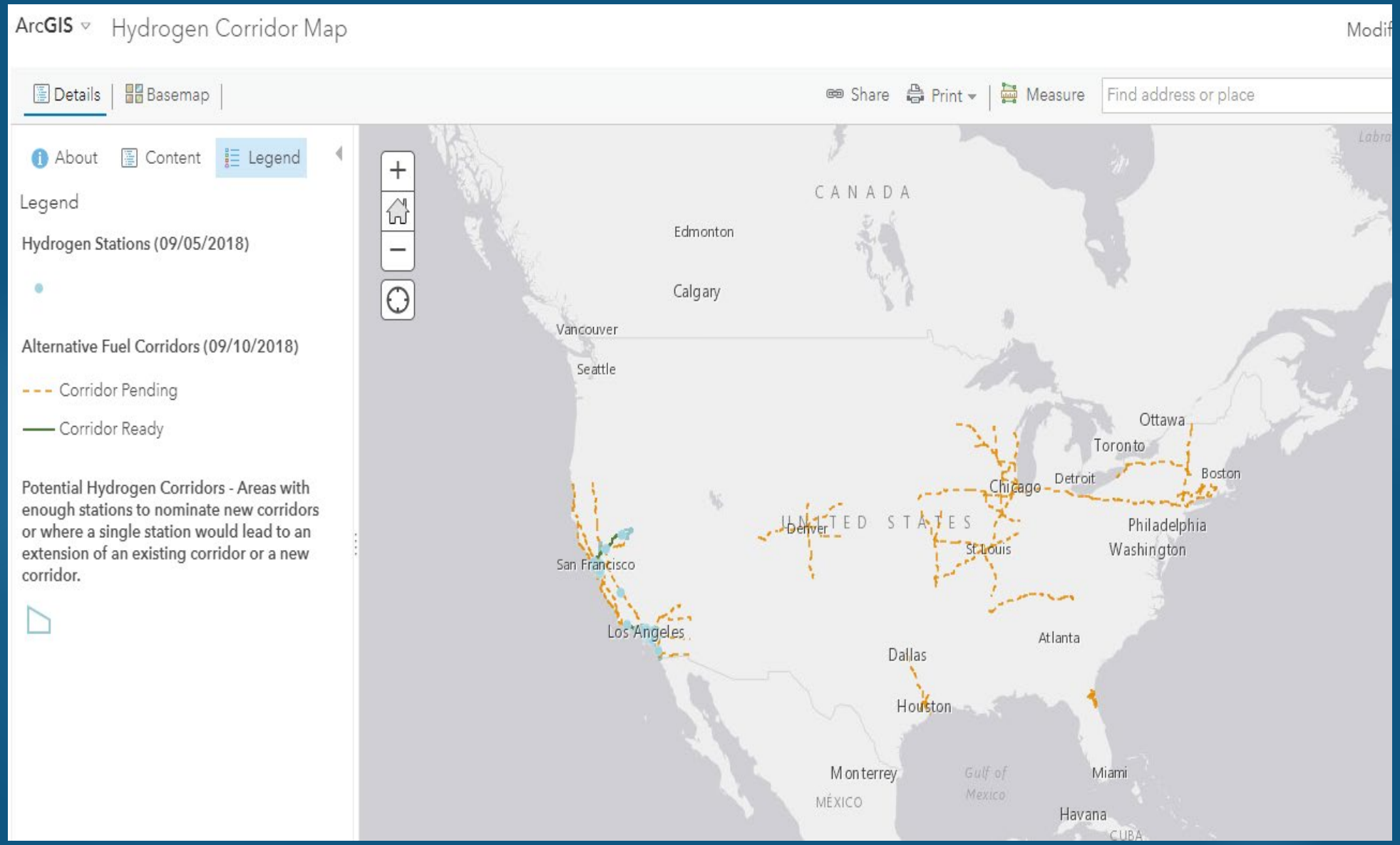
Stations by State and Fuel Type

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

- Shapefiles
- Interactive maps
- CSV downloads

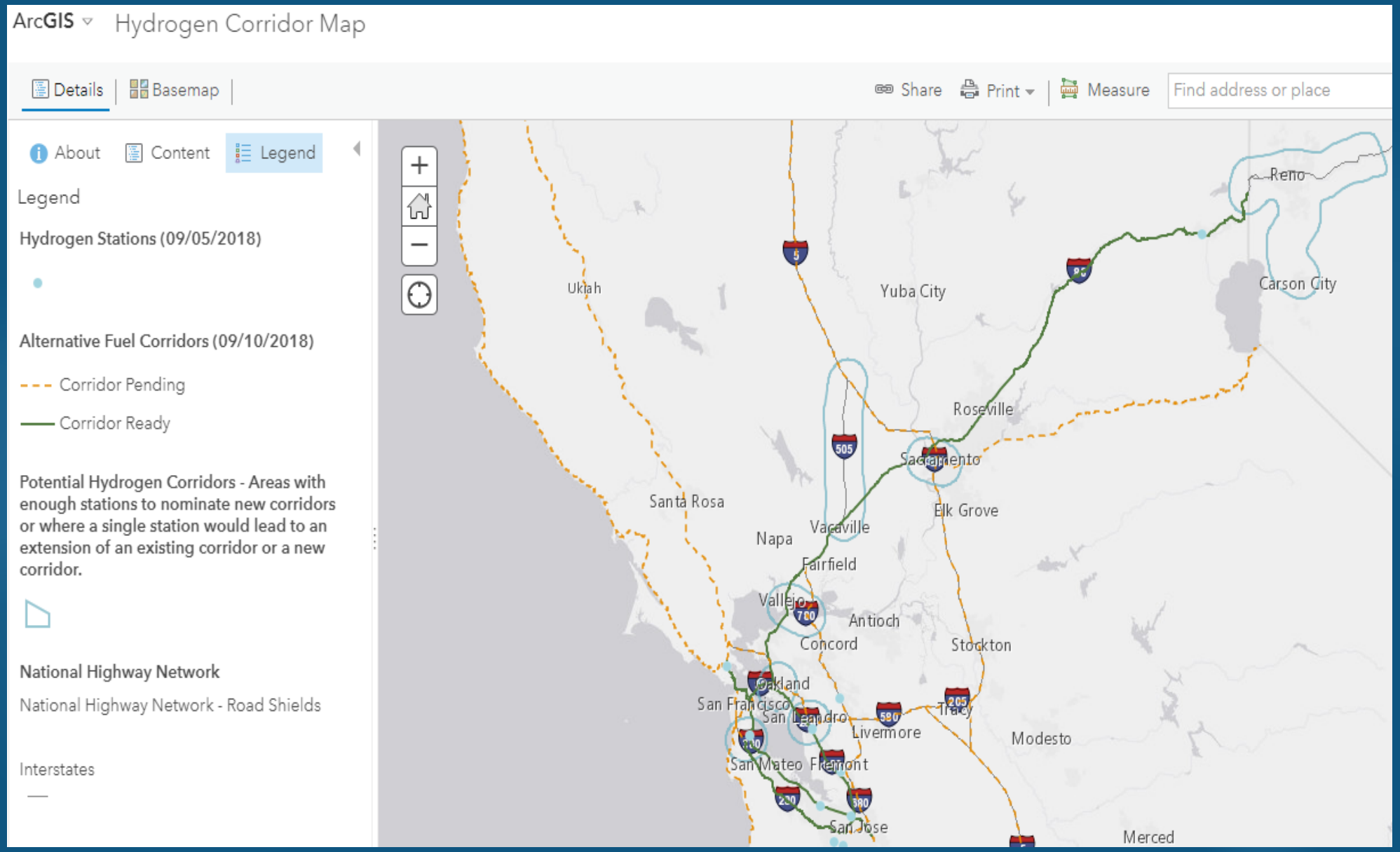
Interactive Map

afdc.energy.gov/corridors



Stations Layer - CA

afdc.energy.gov/corridors



U.S. EPA Diesel Collaboratives Advancing
Alternative Fuel Corridors

ALTERNATIVE FUELS CORRIDOR

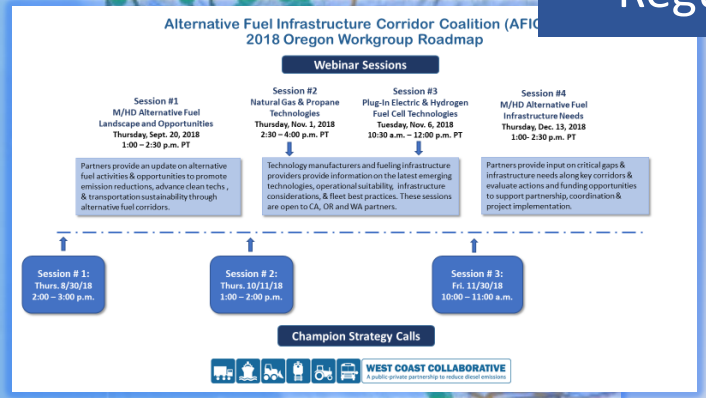
Northeast, Southeast, & West Coast Diesel Collaboratives are promoting corridors for Medium – and Heavy-Duty Alternative Fuel Vehicles

- Regional Multistate Public and Private Partnerships
- Discuss Regional Air Quality & Transportation Priorities
- Facilitate Educational Webinars on Advanced Techs
- Evaluate Opportunities for Infrastructure Development
- Explore State, Federal and Private Funding Sources
- Develop Roadmaps to "Fill in the Infrastructure Gap"
- Regularly Convene Partners to Evaluate Progress

www.westcoastcollaborative.org

WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions

NORTHEAST DIESEL COLLABORATIVE
FOR SUSTAINABLE TRANSPORTATION, GOODS MOVEMENT AND CONSTRUCTION



2017 NEDC Partners Meeting
Newark, NJ
Clean Corridor Congress Part 2

Southeast Diesel Collaborative

FHWA Designated EV Corridors

Federal Highway Administration Regional Alternative Fuel Corridor Convenings

- Team to hold 5 regional convenings:
  - To Date: Midwest (MN), Southeast (SC), South Central (TX)
  - Next Up: Northeast/Mid-Atlantic (RI) and REV West (Salt Lake City)
- Strengthen coordination b/w states, public and private partners
- Evaluate regional priorities & needs, programs, and resources to expand corridors
- Identify critical infrastructure gaps
- Discuss a regional strategy to promote clean vehicle adoption and corridor growth
- Foster partnership development

2018 Regional Convenings

Midwest AFC
St. Paul, MN
June 12, 2018

Southeast AFC
Charleston, SC
September 25, 2018

Future of AFC Program

- Request for Nominations on an annual basis under life of FAST Act
- Possible inclusion in the next transportation reauthorization bill or other legislation
- Enhanced coordination efforts with Clean Cities Program/NREL and other Federal/State agencies
- Enhanced collaboration with stakeholders including industry

For More Information

DOT Alternative Fuel Corridor Team Contact Information

Diane Turchetta
U.S. Department of Transportation
Federal Highway Administration
202-493-0158
diane.turchetta@dot.gov

Mike Scarpino
U.S. Department of Transportation
Volpe Center
617-494-3373
michael.scarpino@dot.gov

Stephen Costa
U.S. Department of Transportation
Volpe Center
617-494-3852
stephen.costa@dot.gov

Resources

FHWA Alternative Fuel Corridor website:
http://www.fhwa.dot.gov/environment/alternative_fuel_corridors/

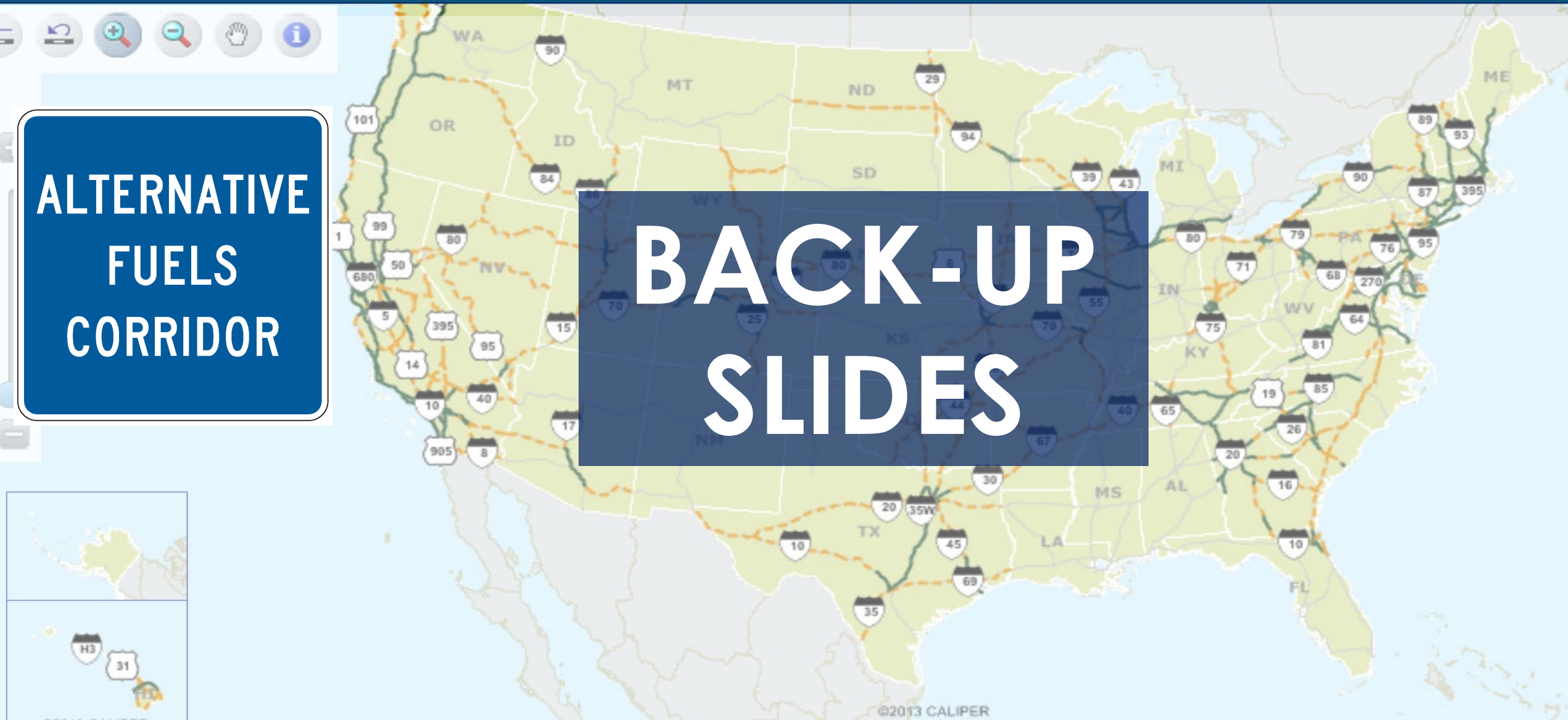
MUTCD Memorandum – Signing for Designated Alternative Fuel Corridors:
https://mutcd.fhwa.dot.gov/resources/policy/alt_fuel_corridors/index.htm

DOE/NREL Alternative Fueling Station Locator & Corridor Tools:
https://afdc.energy.gov/stations/
https://afdc.energy.gov/corridors

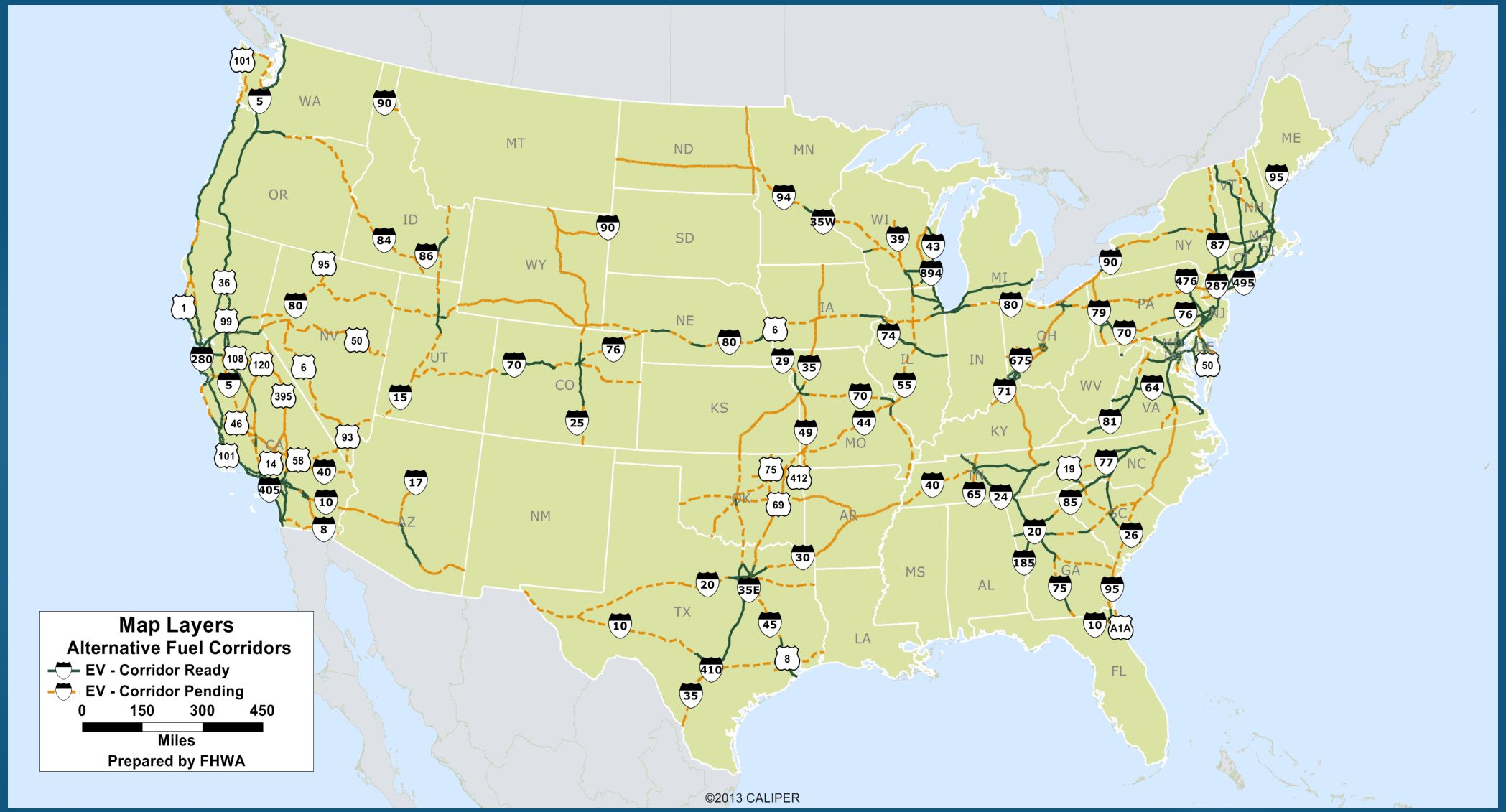
Motorweek Video Segment on Corridors:
https://www.youtube.com/watch?v=QZhLFqTXb-g

ALTERNATIVE FUELS CORRIDOR

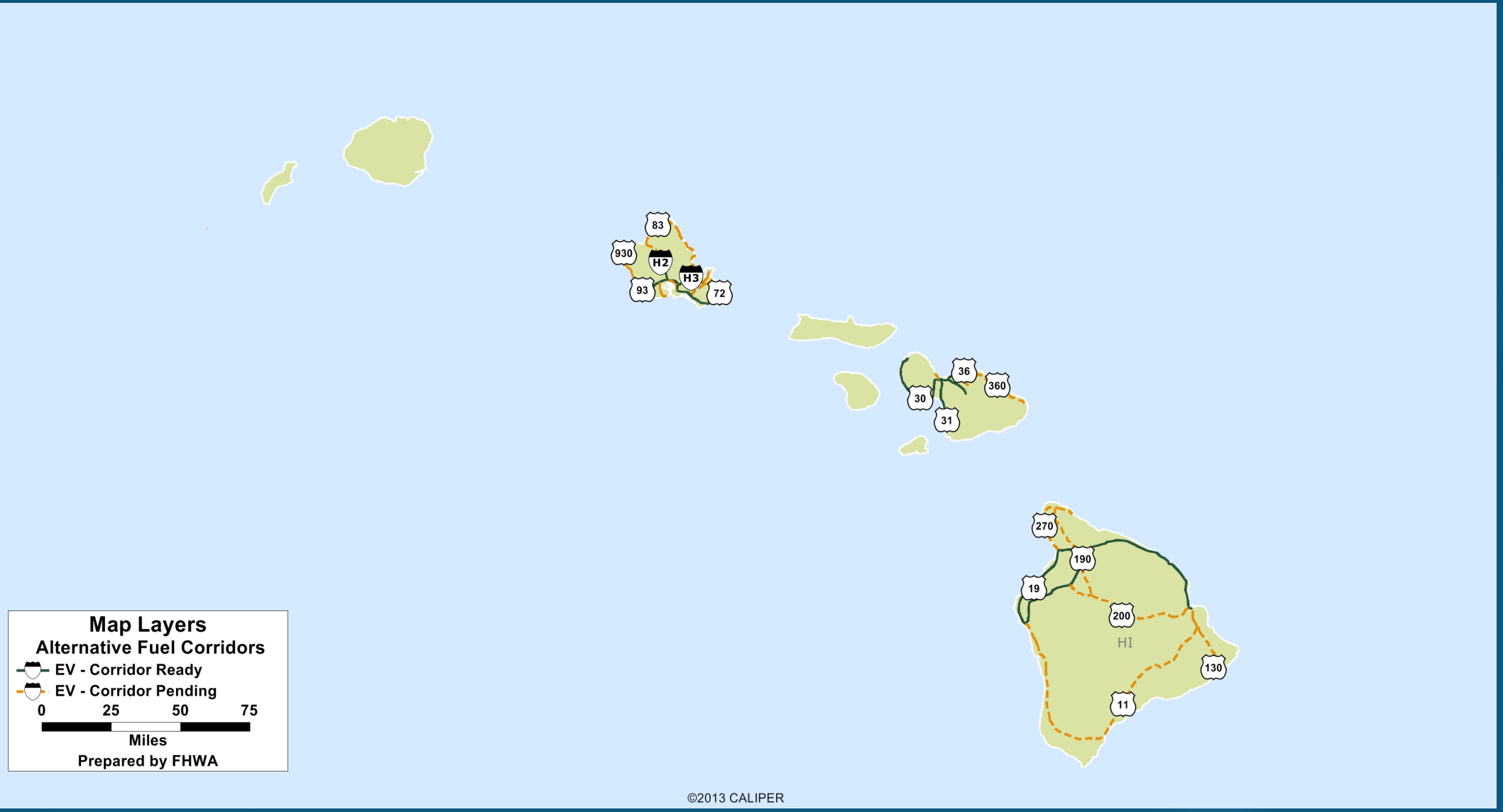
BACK-UP SLIDES



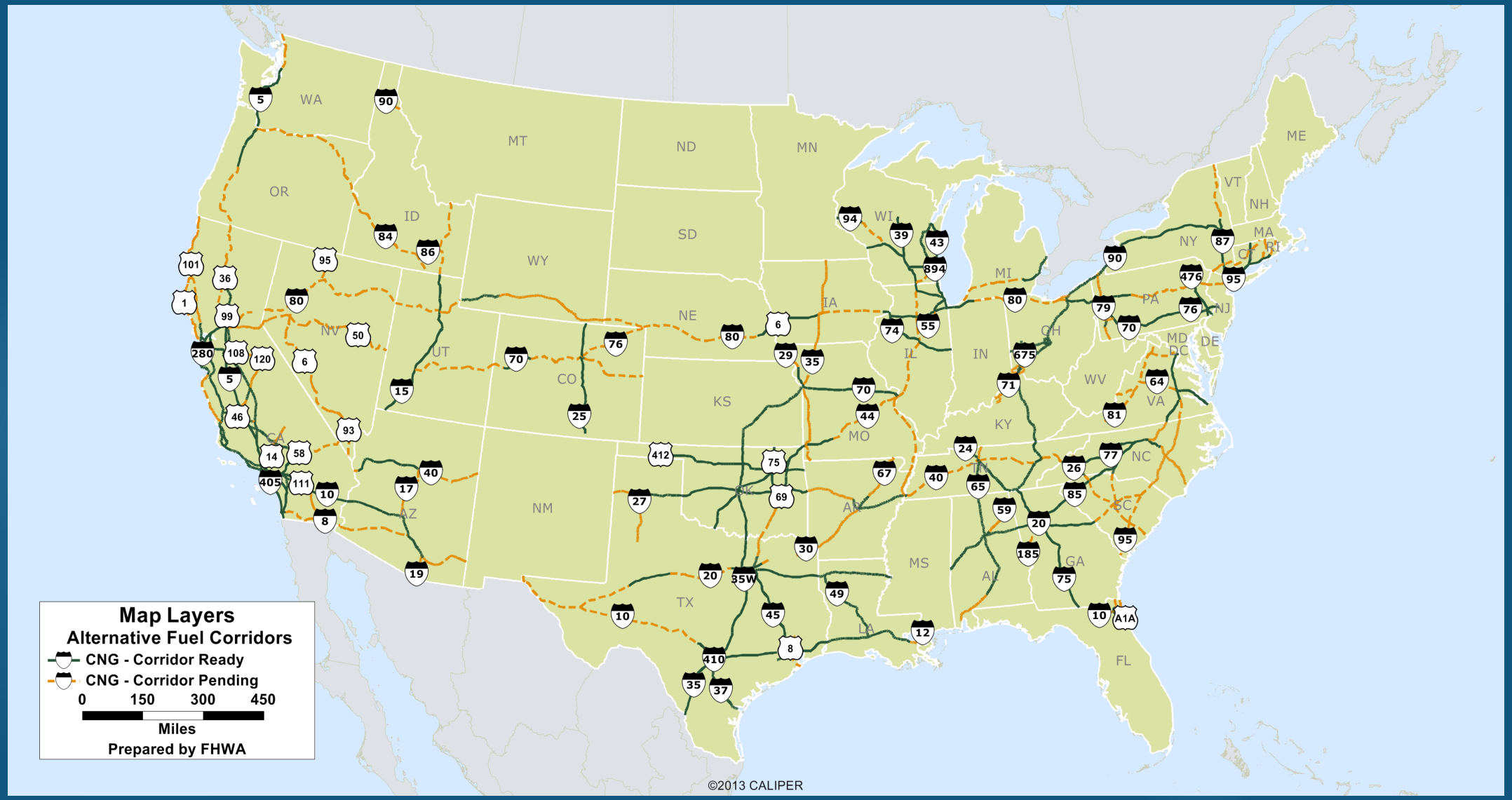
Rounds 1 & 2 EV Map – Corridor Ready and Pending



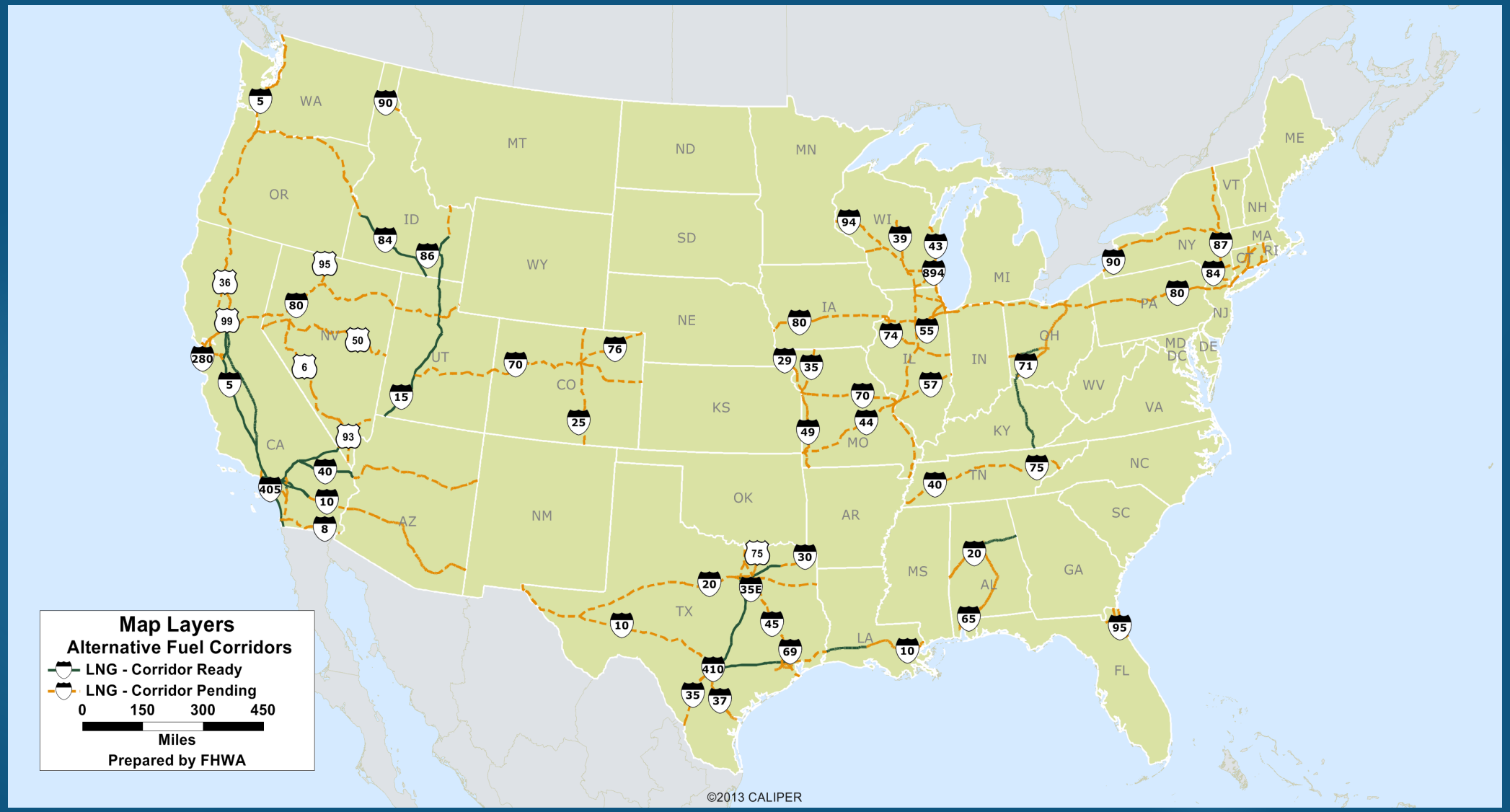
Rounds 1 & 2 EV Map for HI - Corridor Ready and Pending



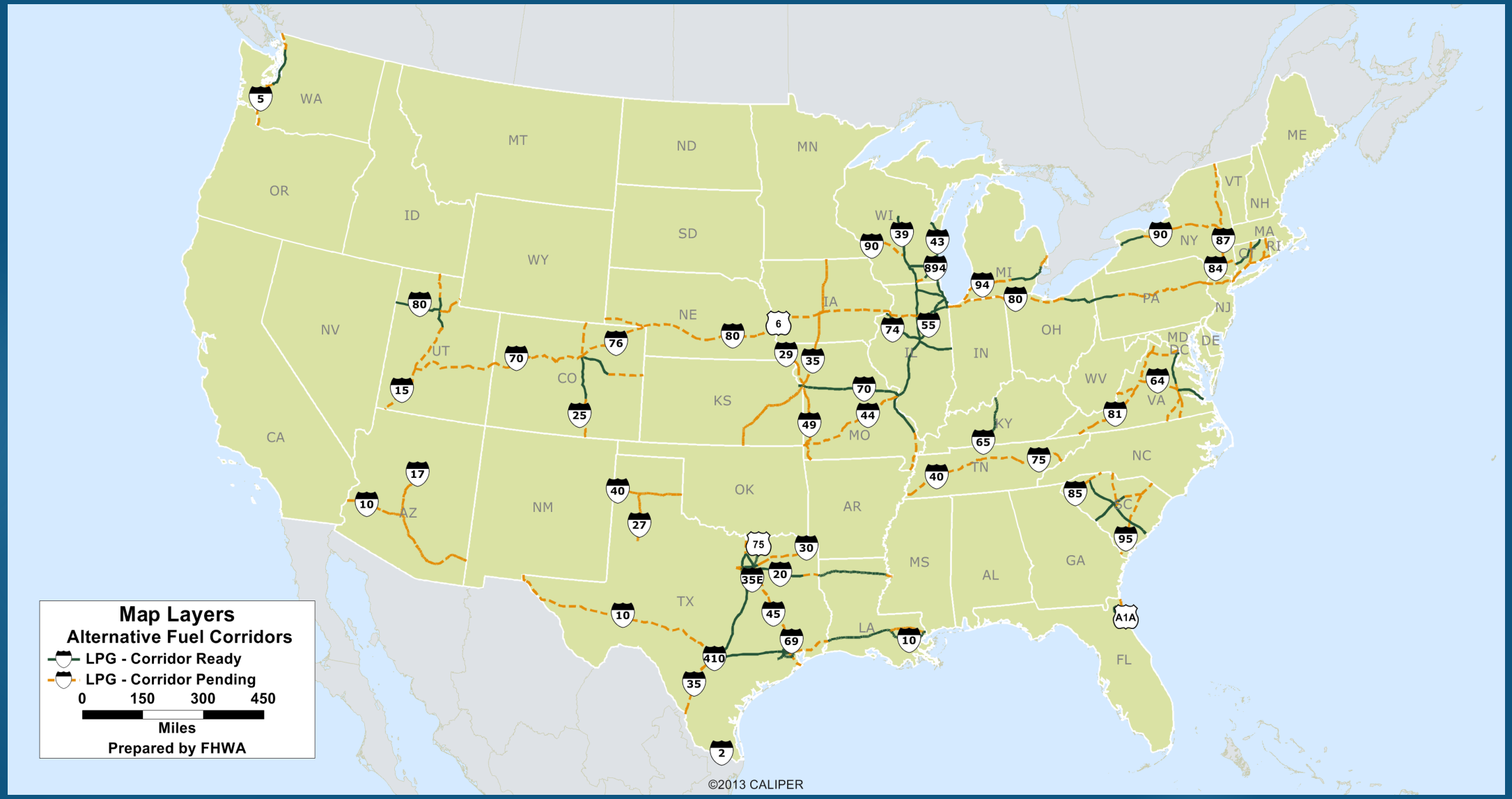
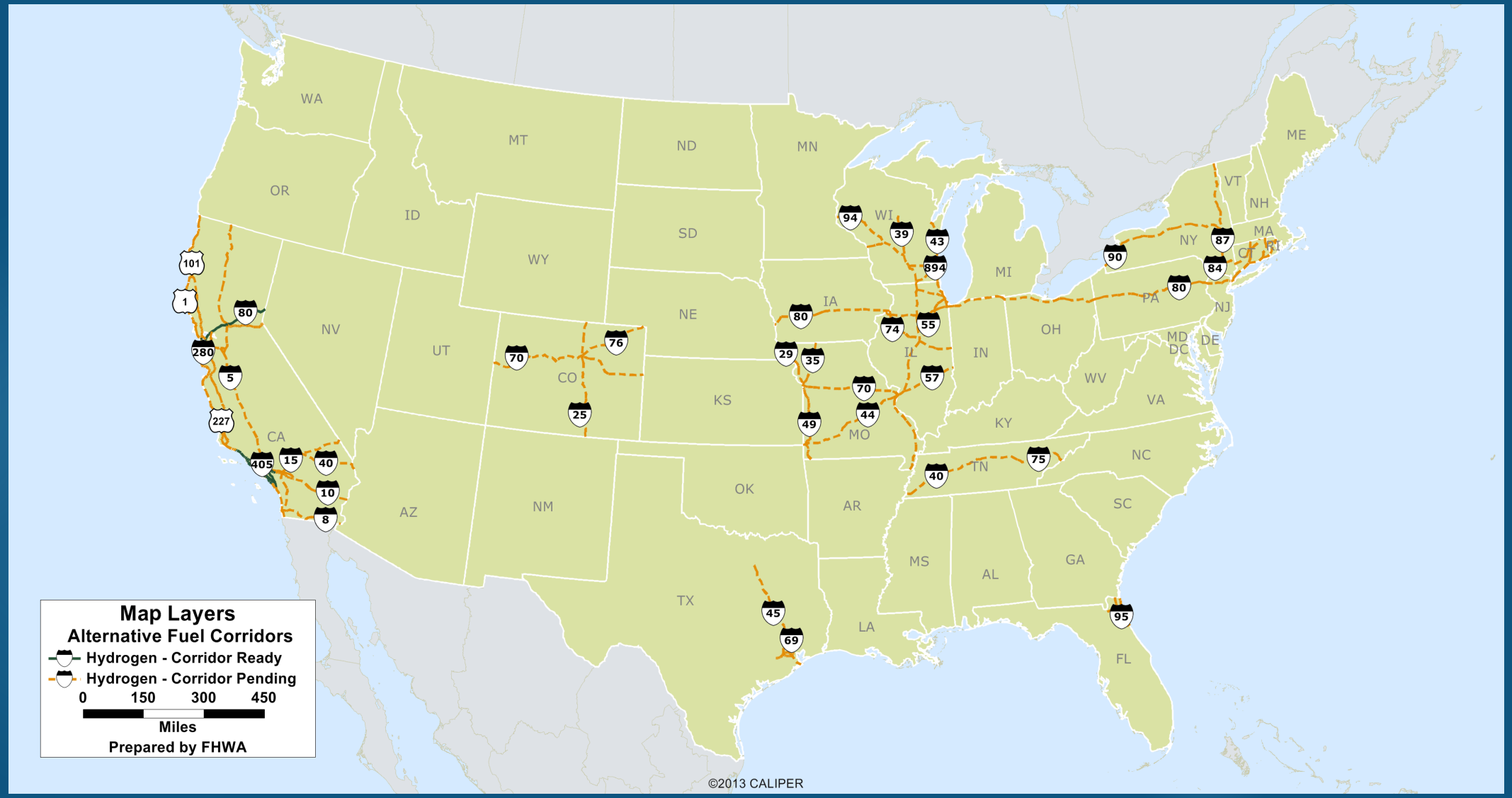
Rounds 1 & 2 CNG Map – Corridor Ready and Pending



Rounds 1 & 2 LNG Map – Corridor Ready and Pending



Rounds 1 & 2 LPG Map – Corridor Ready and Pending



Rounds 1 & 2 HYD Map – Corridor Ready and Pending