

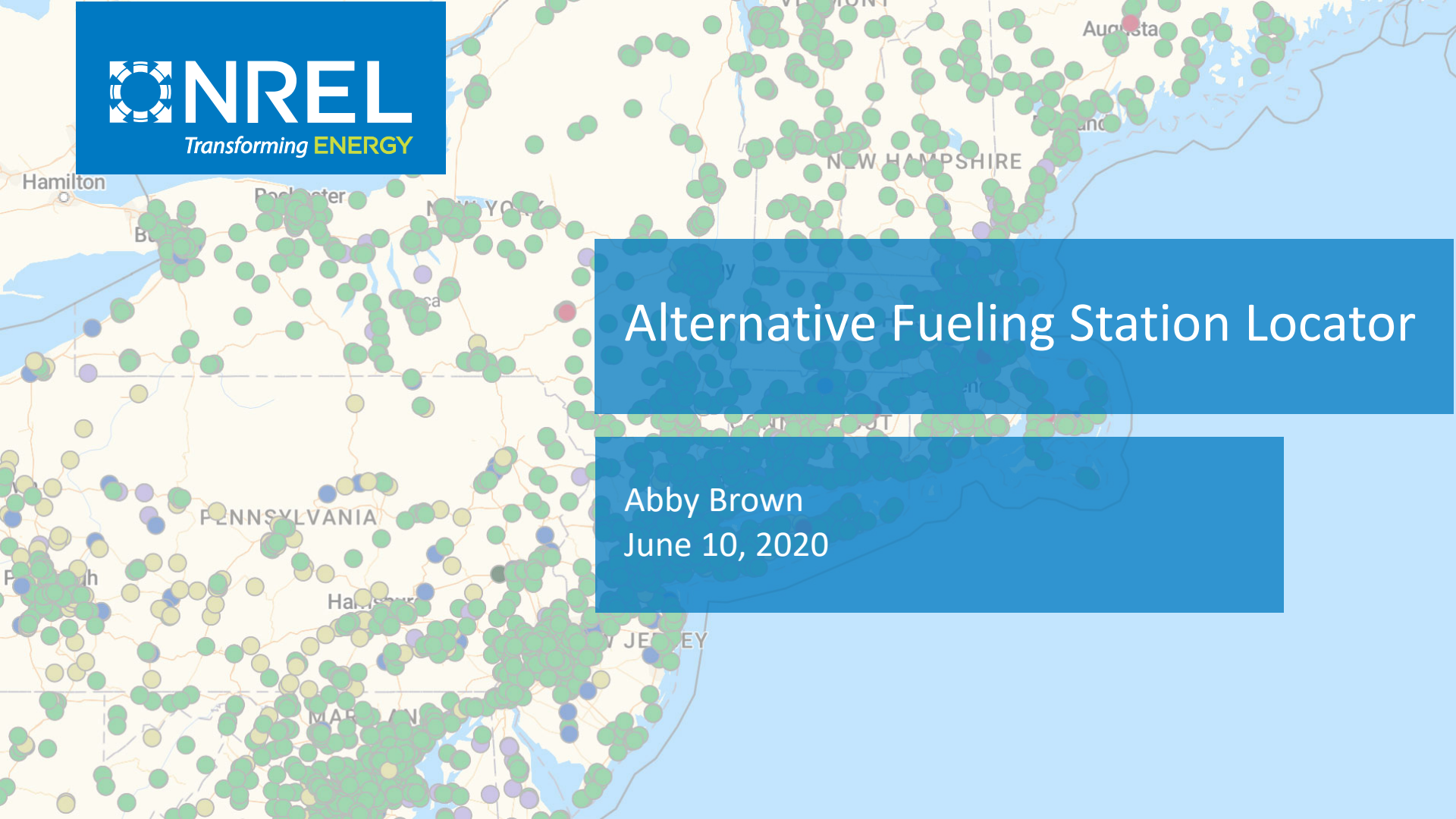
DOCKETED

Docket Number:	20-TRAN-03
Project Title:	Counting Electric Vehicle Chargers in California
TN #:	233394
Document Title:	Presentation - Alternative Fueling Station Locator - NREL
Description:	Powerpoint presentation from NREL
Filer:	Tami Haas
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	6/9/2020 5:19:51 PM
Docketed Date:	6/10/2020



Alternative Fueling Station Locator

Abby Brown
June 10, 2020





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303-384-7911

NREL at a Glance

2,307

Employees,
plus more than

460

early-career researchers
and visiting scientists



World-class

facilities, renowned
technology experts

about
900

Partnerships

with industry,
academia, and
government



Campus

operates as a
living laboratory

NREL Science Drives Innovation



Renewable Power

Solar
Wind
Water
Geothermal



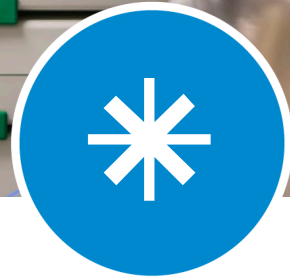
Sustainable Transportation

Bioenergy
Vehicle Technologies
Hydrogen



Energy Efficiency

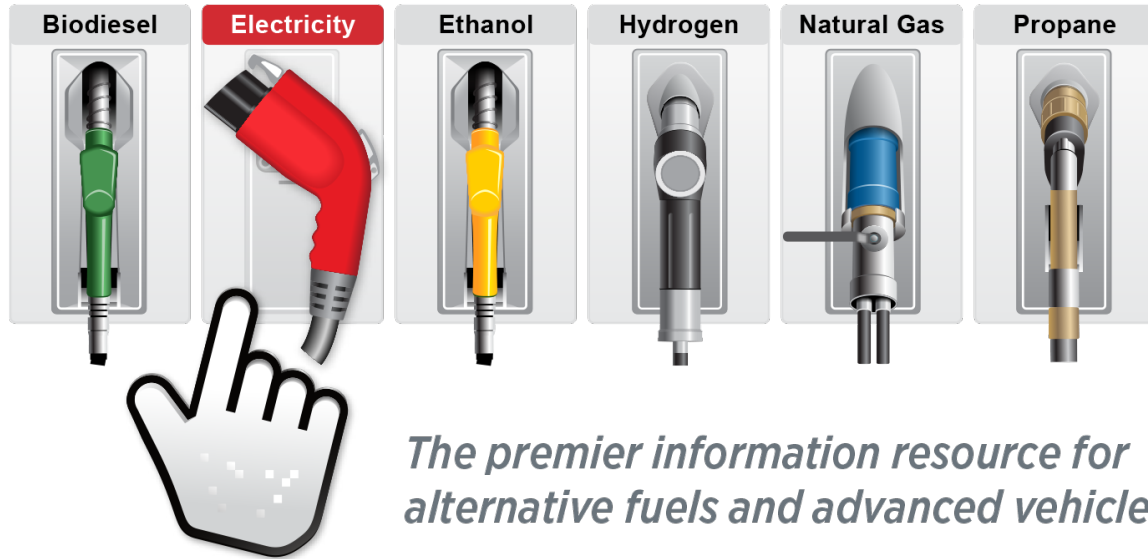
Buildings
Advanced Manufacturing
Government Energy
Management



Energy Systems Integration

Grid Integration
Hybrid Systems

Alternative Fuels Data Center



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

afdc.energy.gov

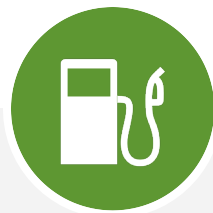
Who uses the AFDC?



Fleet
managers



Transportation
planners



Fuel
providers



Utilities



Clean Cities
coalitions

2 million
users annually

20 million
station searches annually

Station Locator

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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 [Printable Version](#)

Fuels & Vehicles >

Biodiesel Electricity Ethanol Hydrogen Natural Gas Propane



Information by State >

select a state

Information by Fuel Type >

Delivery Services
Public Transportation


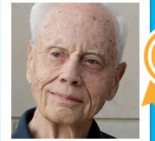
Maps & Data >

- U.S. Alternative Fueling Stations by Fuel Type
- U.S. Hybrid Electric Vehicle Sales by Model
- Light-Duty Alternative Vehicle Registrations

Tools >

- Laws & Incentives
- Electricity Sources & Emissions
- Vehicle Cost Calculator
- Vehicle Search

Coalition Leaders Inducted into Clean Cities Hall of Fame

 Shebie McConnellogue  Bill Sheaffer

The Information Source for Alternative Fuels and Advanced Vehicles

The Alternative Fuels Data Center (AFDC) provides information, data, and tools to help fleets and other transportation decision makers find ways to reach their energy and economic goals through the use of alternative and renewable fuels, advanced vehicles, and other fuel-saving measures.

afdc.energy.gov/stations

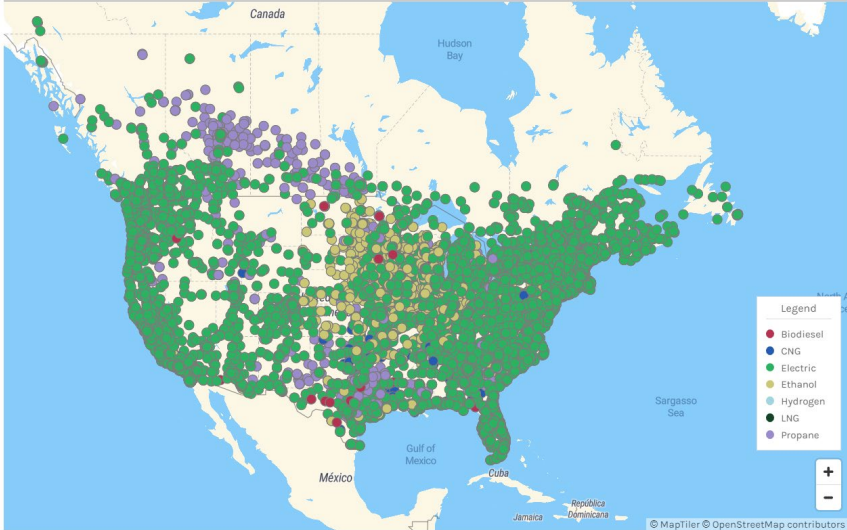
Alternative Fueling Station Locator

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](#).

36,195 results in U.S. and Canada

Public Stations | Advanced Filters | Corridor Measurement

Enter location All Fuels Map a Route



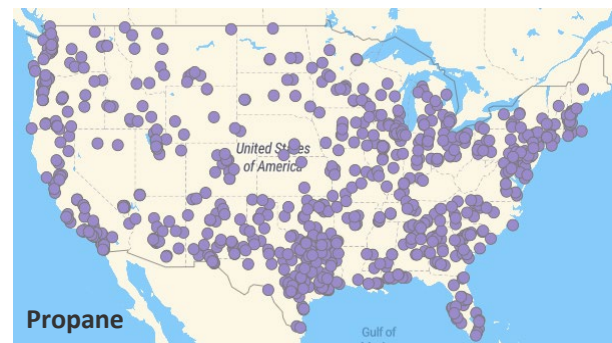
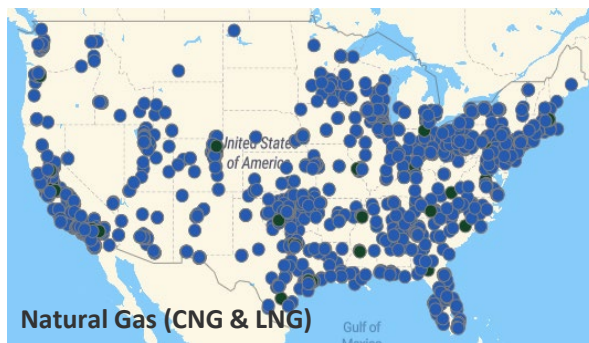
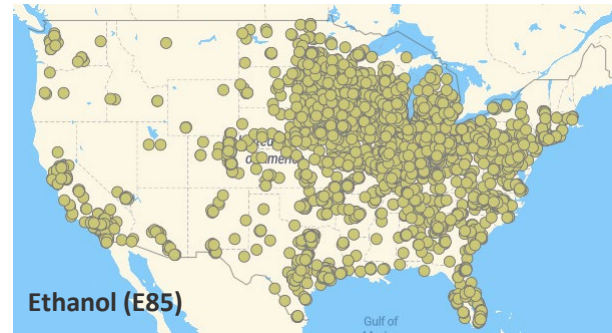
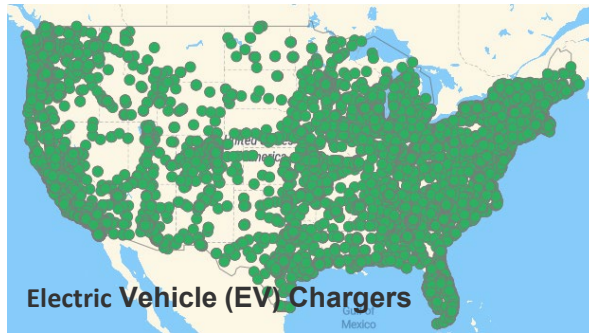
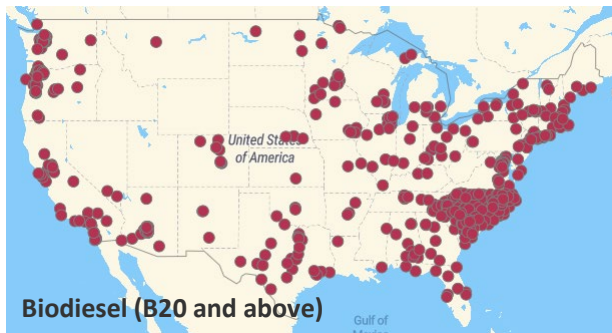
Legend

- Biodiesel
- CNG
- Electric
- Ethanol
- Hydrogen
- LNG
- Propane

© MapTiler © OpenStreetMap contributors

iPhone App for U.S. stations | Android App for U.S. stations | Developer APIs | Embed Tool | Submit New Station | About the Data

Station Locator Fuel Types



Station Locator Station Types

Includes:

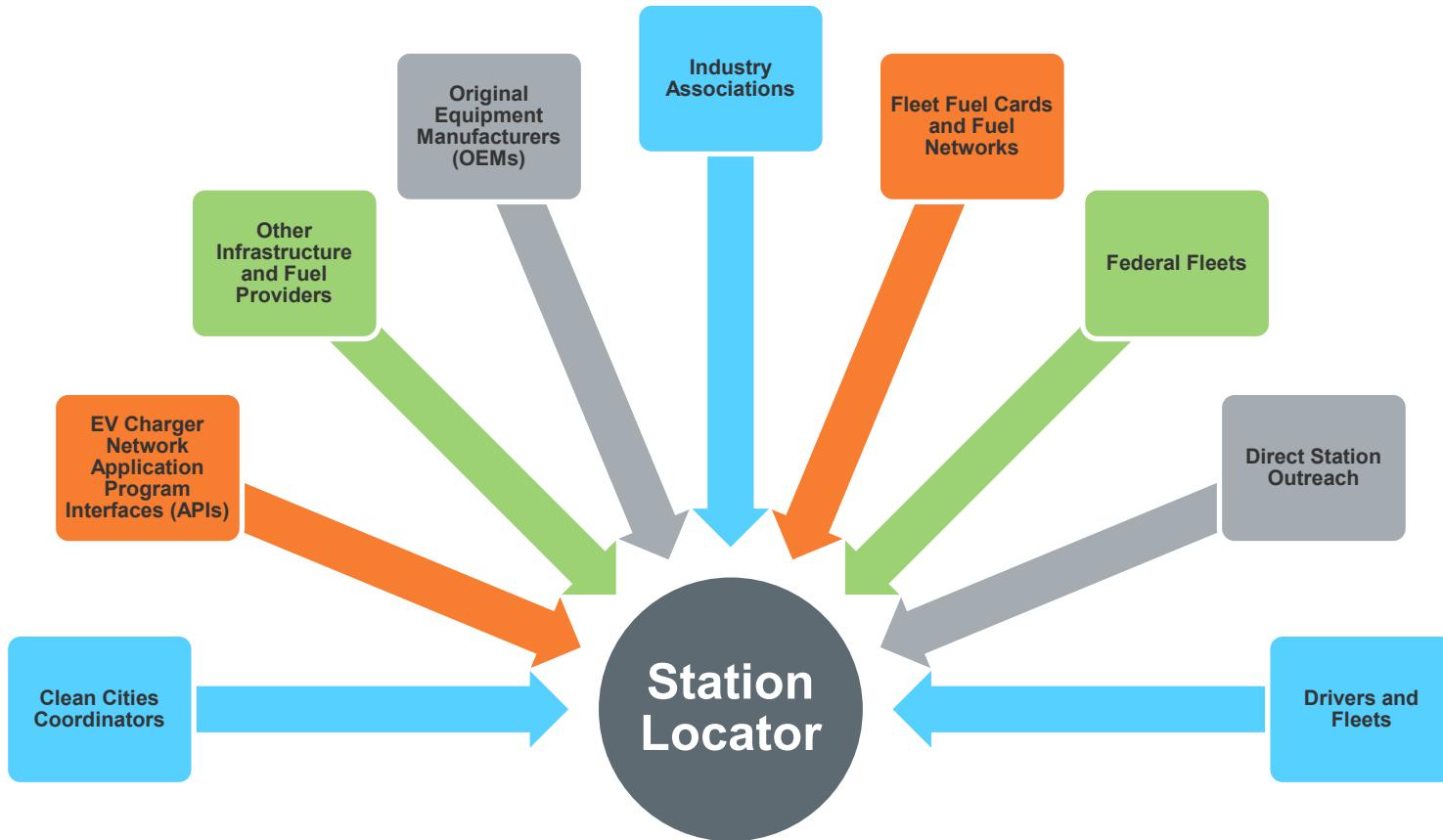
- ✓ Public stations
- ✓ Private stations
- ✓ Fleet fueling sites and EV chargers
- ✓ Workplace EV chargers
- ✓ Planned stations
- ✓ Temporarily out of service stations

Does Not Include:

- ✗ Off-road vehicle stations
- ✗ Residential fueling sites
- ✗ Private multi-unit dwelling (MUD, also known as multi-family building) EV chargers

Note: We do collect private MUD data!

Data Collection Methodology



Private Data Collection

- X Do not receive private data from charging networks
- ✓ Have the capabilities to collect private data under NDA
 - Would allow the Station Locator to house all private data (networked and non-networked)
 - Private data under NDA would not be shared with the public

EV Charging Infrastructure Terminology

- **Station:** a collection of one or more EVSE at an address.
 - **EVSE:** controls the power supply to a single PEV in a single session, also called a port. An EVSE cannot charge more than one PEV at a time.
 - ❖ **Connector:** the socket or cable available for a PEV to use. A single EVSE may have multiple connectors and connector types, but only one of them may be in use at a time.

Station Locator Data Fields

EV Chargers

- Charging network**
- Charging level**
- Number of EVSE**
- Connector number and type**
- Manufacturer
- Power output
- Pricing+
- Workplace charging
- On-site renewable source+

Station Locator Data

U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

Alternative Fuels Data Center

FUELS & VEHICLES CONSERVE FUEL LOCATE STATIONS LAWS & INCENTIVES Maps & Data

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:

File Format:

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

Data updated monthly. Last updated: 05/11/2020

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

Download Options

* Fuel type:

* Access:

* Status:

Public Stations Advanced Filters Corridor Measurement

Filter by Location

Country:

State/Province/Territory Specific Address

[clear all filters](#)

Location Fuel Station

Map Results

35,602

stations

Filters chosen:

- U.S. and Canada
- All Fuels
- Access: Public

[Download Results](#)

afdc.energy.gov/data_download

Developer Network



[HOME](#) [DOCUMENTATION](#) [COMMUNITY](#)

[Documentation](#) » [Transportation](#) » [Alternative Fuel Stations](#)

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.

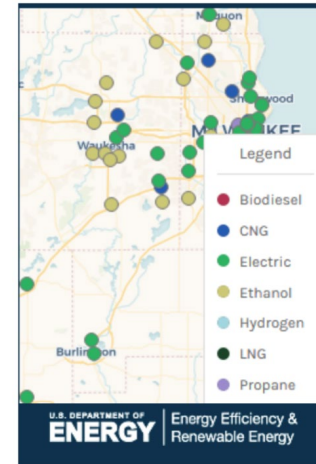
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developer.nrel.gov/docs/transportation/alt-fuel-stations-v1

API and Widget



GET WIDGET CODE

afdc.energy.gov/widgets