

The webinar meeting will begin shortly...

- Please mute your computer microphone or phone speaker whenever you are not speaking
- If you need assistance please type in chat box to All - Audience

Arizona Interstate/Infrastructure Collaborative Advisory Group Meeting

I-10 Alternative Fuels Corridor Deployment Plan

August 14, 2020

Dustin Fitzpatrick

Air Quality Planning Coordinator



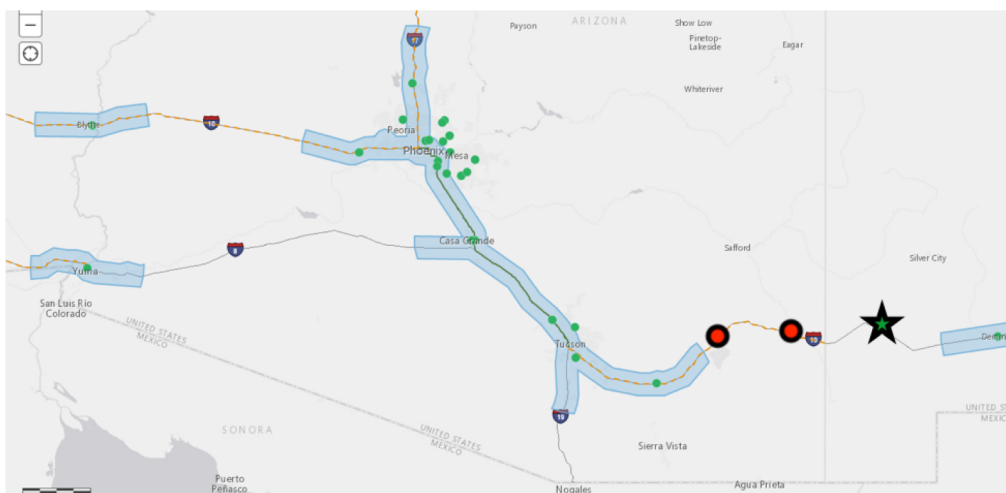
FHWA AFCDP Grant Partners:

- Pima Association of Governments (PAG), Arizona Department of Transportation (ADOT), Valley of the Sun Clean Cities Coalition (VSCCC)

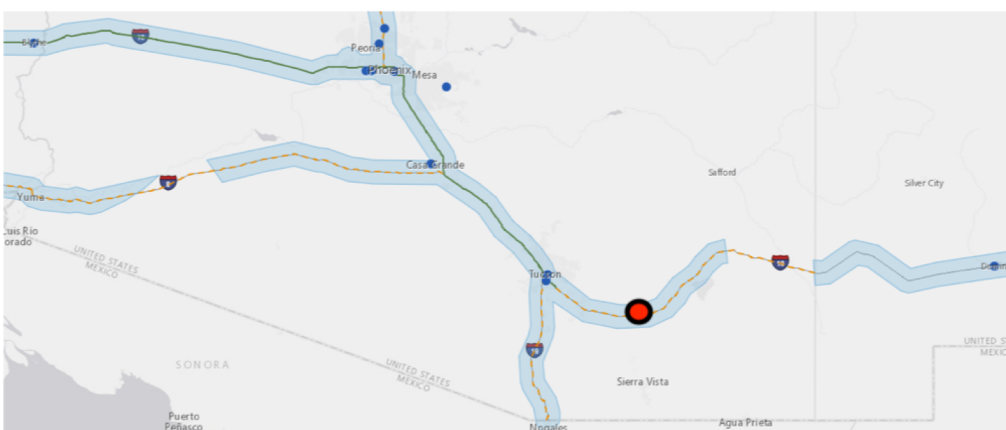
AIIC Advisory Group Invited Partners:

- Sulphur Springs Valley Electric Cooperative (SSVEC), Arizona Electric Power Cooperative (AEPC), Tucson Electric Power Company (TEP), Arizona Public Service (APS), Salt River Project (SRP), Southwest Gas Corporation (SWG), ChargePoint, Electrify America, Greenlots, Trillium CNG, CNG Services of Arizona, Willcox Truck Stop Plaza, TA Travel Centers of America, 4K Truck Stop (Petroleum Wholesale), Pilot Company, Nikola Motor Company, Arizona Trucking Association (ATA), Arizona State University (ASU), Arizona Department of Environmental Quality (ADEQ), Arizona Department of Administration (ADOA) - Arizona Governor's Office, FHWA - AZ Division

Electric Vehicle (DCFC) Charging

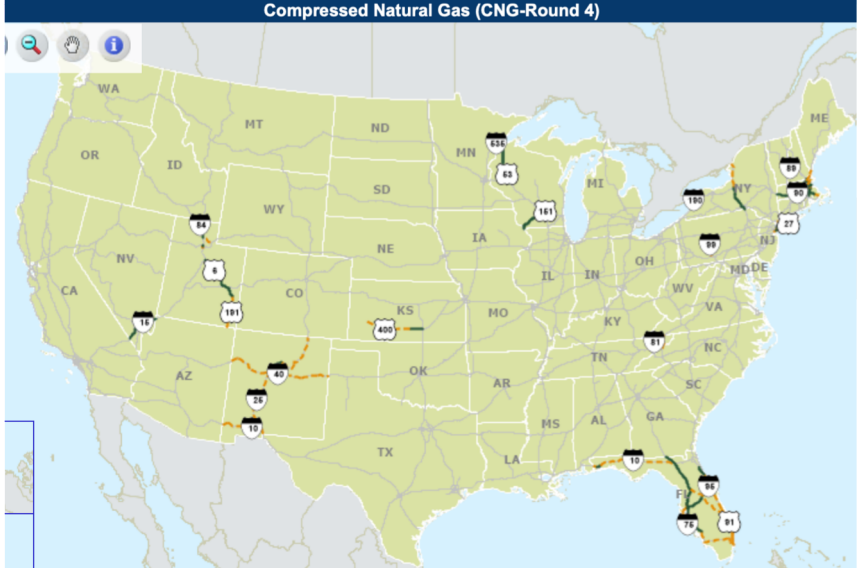
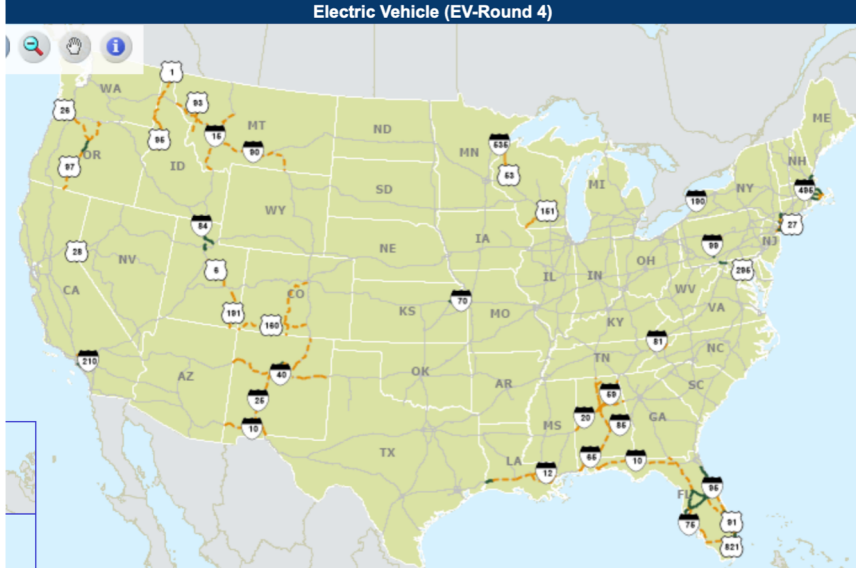
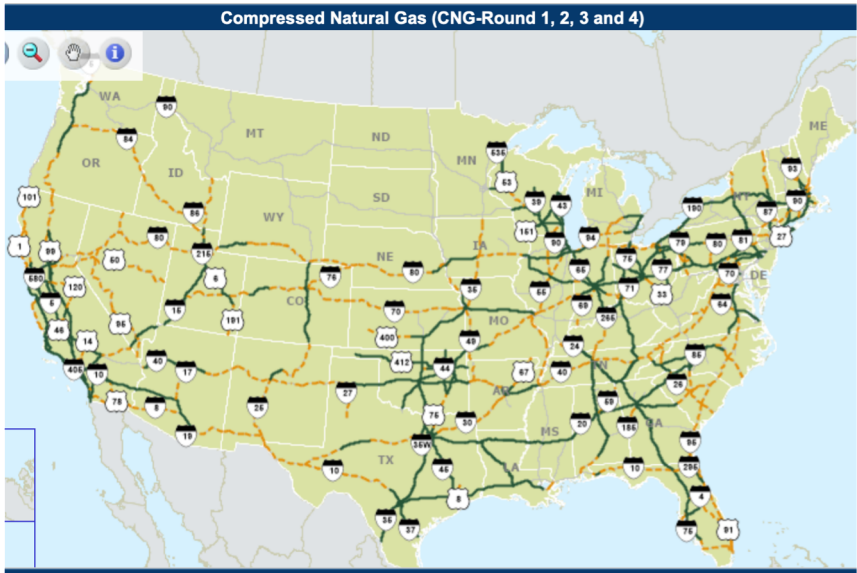
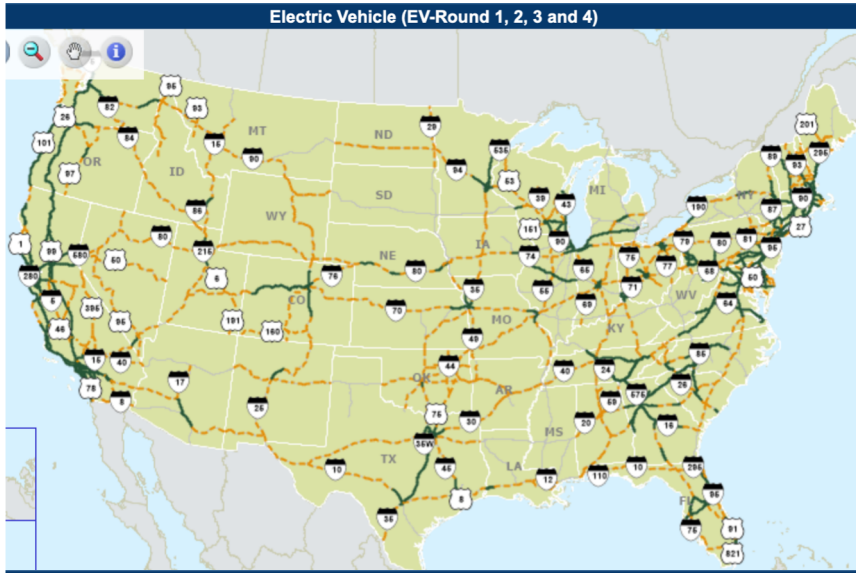


Compressed Natural Gas (CNG) Fueling



I-10 Arizona AFCDP Goals & Objectives:

- Transition Phoenix to California section from EV Pending to EV Ready with 2 additional DCFC sites
- Transition Tucson to New Mexico section from EV Pending to EV Ready with 2 additional DCFC sites
- Transition Tucson to New Mexico section from CNG Pending to CNG Ready with 1 additional fast fill site
- Consider REVWEST voluntary minimum station standards for the Intermountain West EV Corridor
- Develop Final Deployment Plan by November 30, 2020





Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite

This tool provides a simple way to estimate how much electric vehicle charging you might need at a city- and state-level.

How Much Electric
Vehicle Charging Do I
Need in My Area?



State



Vehicles



Results

Start Over

Your Results

In Arizona, to support 570,000 plug-in electric vehicles you would need:

18,478 Workplace Level 2 Charging Plugs

12,194 Public Level 2 Charging Plugs
There are currently 1,108 plugs with an average of 2.6 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

2,387 Public DC Fast Charging Plugs
There are currently 326 plugs with an average of 4.9 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

Where Do I Start?

Planners may want to prioritize installation of fast charging infrastructure above Level 2 charging.

Build DC Fast First: Establishing fast charging networks that enable long-distance travel, serve as charging safety nets, and provide charging for drivers without home charging is critical to support all-electric vehicles that have no other alternative for quickly extending their driving range.

Build Level 2 Second: EVI-Pro typically simulates the majority of Level 2 charging demand coming from plug-in hybrid electric vehicles, which have the ability to use gasoline as necessary for quickly extending driving range.

Change Assumptions

Plug-in Electric Vehicles (as of 2016): 9,000

Light Duty Vehicles (as of 2016): 5,768,500

Number of vehicles to support

Vehicle Mix

Plug-in Hybrids
20-mile electric range %

Plug-in Hybrids
50-mile electric range %

All-Electric Vehicles
100-mile electric range %

All-Electric Vehicles
250-mile electric range %

Total 100%

How much support do you want to provide for plug-in hybrid electric vehicles (PHEVs)?

- ☐ **Full Support**
Most PHEV drivers wouldn't need to use gasoline on a typical day.
- ☒ **Partial Support**
Calculate using half of full support assumption.
- ☐ **Do not count PHEVs in charging demand estimates.**

Percent of drivers with
access to home charging %

Recalculate

[See all assumptions.](#)





America's Transportation Infrastructure Act

America's Transportation Infrastructure Act of 2019 is the largest amount of funding provided for highway reauthorization legislation in history. The bill authorizes \$287 billion from the Highway Trust Fund over five years in investments to maintain and repair America's roads and bridges and to keep our economy moving. The legislation includes provisions to improve road safety, accelerate project delivery, improve resiliency to disasters, reduce highway emissions, and grow the economy. Below are a few of the highlights of the bill.

Competitive Grants for Alternative Fuel Infrastructure

In preparation for the expected increase of alternative fuel vehicles, the bill establishes a competitive grant program funded at \$1 billion over 5 years, for states and localities to build hydrogen, natural gas, and electric vehicle fueling infrastructure along designated highway corridors, which lack such infrastructure.

THE INVEST IN AMERICA ACT

FOR THE PEOPLE

Fact Sheet

The Investing in a New Vision for the Environment and Surface Transportation in America (INVEST in America) Act is a 5-year, \$494 billion investment to get our existing infrastructure working again and fund new, transformative projects that will create millions of jobs and support American manufacturing and ingenuity while reducing carbon pollution, dramatically improving safety, and spurring economic activity. It's investing in infrastructure that is **smarter, safer, and made to last.**

Highways Investments: \$319 Billion

- Dramatically increases funding for development of charging stations and other alternative fueling options for electric and zero-emissions vehicles.



July 31, 2020

General Motors and EVgo Aim to Accelerate Widespread EV Adoption by Adding Fast Chargers Nationwide

More than 2,700 new EV charging plugs will triple the size of the nation's largest public fast charging network

DETROIT and **LOS ANGELES** – General Motors and EVgo plan to triple the size of the nation's largest public fast charging network by adding more than 2,700 new fast chargers over the next five years, a move set to help accelerate widespread electric vehicle adoption.



Our investment plan



Project Development for Cycles 3 Through 4

As noted above, Electrify America will establish ZEV Investment Plans for two additional 30-month cycles. Developing new investment plans offers the opportunity to revisit past assumptions, update analytical models, monitor new technology and public policy developments, and consider evolving consumer expectations. Electrify America is a data-driven company and will use all available information to identify the ZEV investments most likely to assure economic sustainability.

To submit a comment, idea, or suggestion, please go [here](#).



Nissan

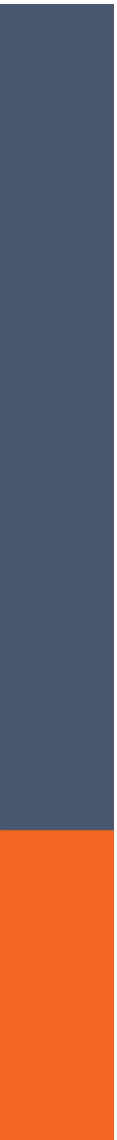
Cheerio, CHAdeMO: Nissan adopts CCS fast-charging with new Ariya electric SUV

The CHAdeMO fast charging protocol suffers a major hit with Nissan choosing a competing standard for its new electric SUV in the US and Europe.

EV Charging Sites Discussion:

SSVEC, TEP, AEPC, ChargePoint, Electrify America, Greenlots

- Arizona Transportation Electrification Plan
- EV market share: current; projected
- Charging site annual utilization: current; projected
- DCFC EVSE power levels / # chargers, types / upgradability
- Onsite energy storage (ES) option / capacity



CNG Fueling Site Discussion:

SWG, Trillium, CNG Services of Arizona

- Arizona Gas Tariff funding assistance (G-50)
- Fleet needs / prospects
- Operational logistics: diesel lane replacement, CNG lane addition



Site Host Discussion:

**TA Travel Centers, Willcox Truck Stop Plaza,
4K Truck Stop- Petroleum Wholesale, Loves,
Arizona Trucking Association**

- Costs / benefits
- Owning / leasing contracts
- Parking spaces / logistics
- Other considerations



Roundtable – Questions/Input

Next Meeting:

GoToWebinar - October 16, 2020

10:00 am – 11:00 pm MST

Email correspondence to: Dfitzpatrick@PAGregion.com

