

REV WEST

Regional Electric Vehicle Plan for the West Progress Report



The REV West partnership has prepared this report to update the Governors of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming, as well as the general public, on progress toward building electric vehicle charging corridors throughout the Intermountain West region.

The REV West partnership is made possible by the leadership and staff from all eight states, through their Governors, departments of energy or the environment, departments of transportation, and collaboration with various other state agencies. The work of the National Association of State Energy Officials (NASEO) to provide administrative, facilitation, and analytical support has also been instrumental in making the REV West partnership a success. Finally, the willing engagement of Clean Cities Coalitions, federal agencies, national labs, private sector partners, and other stakeholders has bolstered this partnership and helped advance the REV West Memorandum of Understanding (MOU) goals.

In 2021, the REV West partnership continued our work to facilitate the widespread deployment of electric vehicle (EV) fast-charging infrastructure in the Intermountain West. Since the last REV West Progress Report was released in December 2020, our partnership has:

- Achieved the infrastructure construction goal of 75 new direct current fast charging (DCFC) stations this year;
- Built partnerships with neighboring states through the Western Governors Association Memorandum of Understanding process focused on regional EV infrastructure;
- Expanded the reach of REV West by incorporating Alaska, Kansas, and Oklahoma as observer states;
- Worked on the CORWest Grant Project:
 - Distributing stakeholder surveys on key barriers and needs;
 - Developed a Needs Assessment with tailored state-by-state suggestions;
 - Authored a report analyzing electric bill rates and fast-charging;
 - Engaged with state park and tourism agencies in each state
 - Participated in a branding exercise, to be completed in early 2022

Finally, our team has positioned REV West states to efficiently and effectively deploy upcoming federal funds for EV infrastructure included in the Infrastructure Investment and Jobs Act (IIJA) of 2021. The primary programs stemming from this bill will include funding through each state's department of transportation (DOTs), and will support infrastructure along federally designated Alternative Fuel Corridors. Over the last several years, our team has expanded to engage most DOTs in the region as partners in this process and submitted successful designations for thousands of miles of highway in the region as Electric Corridor-Ready or Pending (see below).

2016

2021

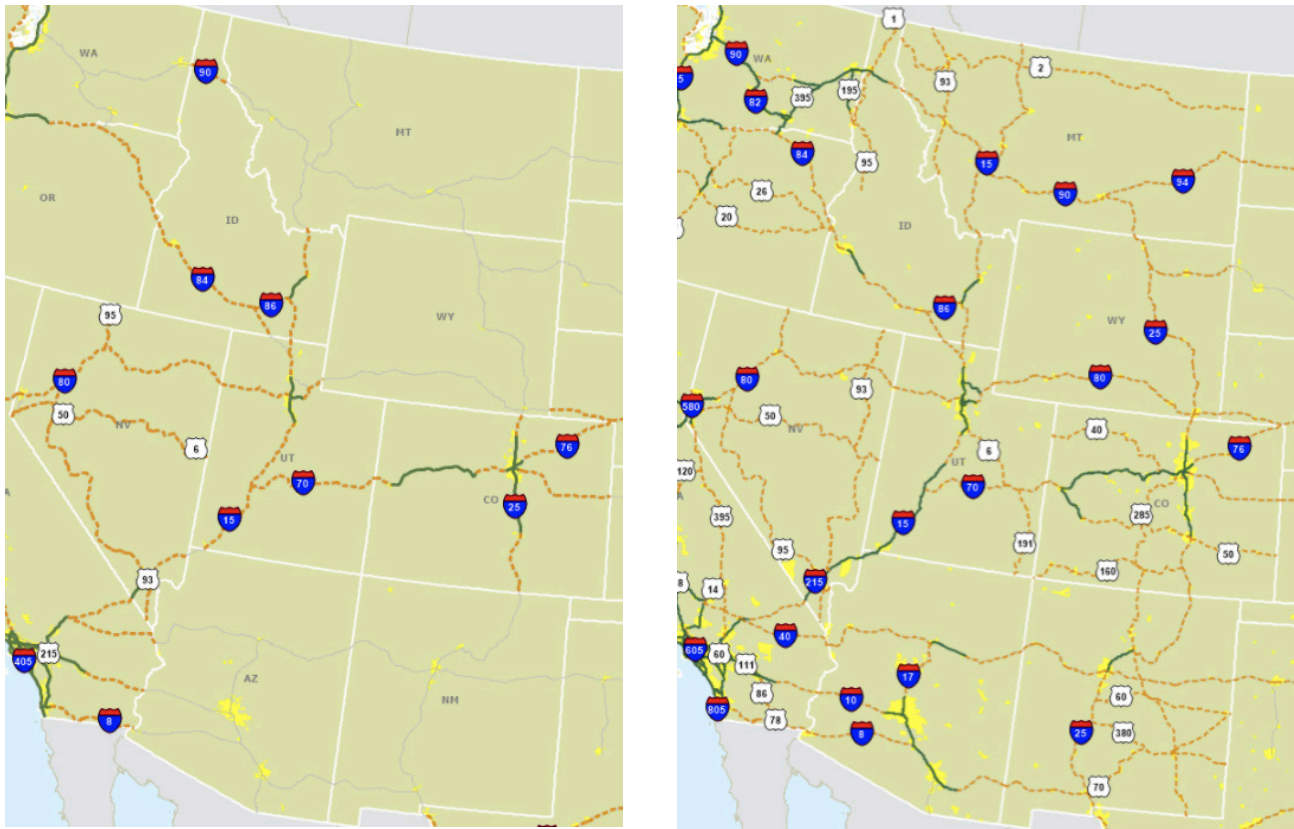


Figure 1: Designated Electric Corridors in REV West states, 2016 compared to 2021.
Green represents Corridor-Ready, and Orange represents Corridor-Pending.
Source: U.S. Department of Transportation, Federal Highway Administration.

Moving forward, we expect 2022 to be an important year for our partnership. Among the eight states, we expect over 150 new DCFC stations to be installed next year. As the electric corridors become more robust in the region, we will also be working with state tourism and parks agencies and Clean Cities Coalitions to roll out our regional EV corridor brand, and other public education materials supported through CORWest. Finally, as the EV programs of the IIJA take shape, each of our states will be working to develop infrastructure plans to deploy formula funds, and coordinate on competitive opportunities for additional funding.

This report will provide additional background on the REV West partnership and an update on each of the seven key activities defined in the 2019 REV West MOU.

In October 2017, the Governors of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming signed a MOU to establish a Regional Electric Vehicle Plan for the West (“REV West Plan”). Under the REV West Plan, the signatory states are working together to create an interconnected Intermountain West Electric Vehicle (EV) Corridor that will make it possible to seamlessly drive an EV across the western states’ major transportation corridors.

In 2019, all eight Governors recommitted to the partnership and updated the founding MOU to expand the scope of the partnership to include new interstate highway routes and defined seven activities for state collaboration. Additionally, the MOU included an annual progress report to update each Governor, and the general public, on REV West’s progress to date. The First Annual REV West Progress Report is [available here](#), summarizing the group’s progress and accomplishments from inception through the end of 2020.

The group has also prioritized building strong relationships with partners in the region. Starting in 2018, the State Energy Offices (SEOs) began involving DOTs through a working group to encourage regular communications. Soon after, this working group was dissolved, as DOTs became regular participants invited to all REV West calls. The group is now co-chaired by SEO and DOT representatives.

The CORWest Project has also served as a great resource to engage new partners. This project is funded by a U.S. Department of Energy grant, and involves every Clean Cities Coalition in the region. The Needs Assessment completed in early 2021 allowed states to cast a wide net of stakeholders to identify key barriers and needs for supporting vehicle electrification. Through the CORWest report, Demand Charges and Electric Vehicle Fast-Charging, states were able to engage with electric service providers with key data about electric bills for DCFC station hosts, and begin to discuss case studies which enable affordable charging options. Finally, through the CORWest branding initiative, we engaged our state tourism and parks agencies to help in the development of a regional brand for EV charging (similar to the West Coast Electric Highway’s brand supported by the Pacific Coast Collaborative). That branding process is underway, with the goal of releasing an interstate brand with associated promotional materials and usage guidelines in advance of the summer tourism season.

Finally, most REV West members participated in the Western Governor’s Association EV Special Initiative, helping build connections between states in the Intermountain West, West Coast, and Western Great Plains. Through this process, several states expressed interest in learning from the REV West team. Now state agency representatives from Alaska, Kansas, and Oklahoma have begun to join group calls, and leverage public resources developed by the REV West team to advance electrification in neighboring states.

Activity 1: Educate consumers and fleet owners to raise awareness of electric vehicles, reduce concerns related to “range anxiety,” and increase electric vehicle adoption.

With the ongoing COVID-19 pandemic, many public awareness activities have relied on increased social media presence and online resources from REV West member agencies. Additionally, REV West members have leveraged their stakeholder partnerships with Clean Cities Coalitions, municipal governments, and recreation departments to spread awareness of EV technology.

State Highlights:

Colorado: The ReCharge Colorado Team hosted 61 events around the state to coach fleet owners and educate the public on EVs and charging infrastructure. Additionally, the Colorado Energy Office undertook a market assessment study to better understand Colorado drivers and tailor EV messaging to reach new audiences.

New Mexico: The New Mexico Energy Office partnered with the City of Albuquerque and the Land of Enchantment Clean Cities to host an EV display at the 2021 State Fair. A rotation of different electric vehicles and trucks were brought in to showcase the technology to the public .

Wyoming and Montana: Both states partnered with Yellowstone-Teton Clean Cities to host a ribbon-cutting ceremony for two new DCFC stations, a webinar series on the benefits of EVs, and a Ride-and-Drive event.

Activity 2: Coordinate on electric vehicle charging station locations to avoid redundancy and to ensure stations are sited at a frequency and location so as to optimize utilization and a consistent user experience between charging infrastructure in each state.

The REV West team has continued to update and leverage our shared GIS map, including key data on highway, electric, and DCFC infrastructure. Also, during the nomination process for new Alternative Fuel Corridors, the group has collaborated to nominate complementary interstates and routes. For example, I-15 was nominated across five states, to create a pending corridor that stretches from Las Vegas to Canada.

Finally, as discussed in more depth below, the REV West team supported an assessment of demand charges and DCFC site-host electric bills. These findings have helped our team engage electric service providers on rate design to support a more consistent and affordable DCFC experience.

State Highlights:

Wyoming conducted two key studies to support a consumer-friendly buildout of DCFC stations. First, WYDOT received the final version of their Interconnected Electric Vehicle Network Study. This was commissioned to help direct Volkswagen (VW) Environmental Mitigation Trust Funds for the state focused on EV charging, and to identify the key locations for a statewide network. The Wyoming Energy Authority also conducted a statewide survey to help assess public goals and priorities for EV infrastructure.

Activity 3: Use and, where appropriate, promote the REV West Voluntary Minimum Standards for electric vehicle charging stations, released in 2019, and explore opportunities for championing and implementing the standards in the signatory states; identify opportunities for signatory states to adopt, and where appropriate, promote the stretch, tiered standards included within the Voluntary Minimum Standards, as well as go above and beyond the tiered standards, if of interest

REV West signatory states have incorporated the Voluntary Minimum Standards for DCFC stations into state funding programs and other projects. These standards address concerns such as station siting, safe and accessible locations, infrastructure functionality, and signage to foster the development of convenient, reliable, and safe charging experiences for EV drivers. The MOU acknowledges that there may be some conditions at certain locations that limit the application of all the Voluntary Minimum Standards, but states are encouraged to develop charging options that meet as many of the minimum standards as possible. Current state programs to help support electric vehicle charging stations include Montana's Fast Charge Your Ride program, Colorado's *EV Fast-Charging Corridors program*, the *Nevada Electric Highway program*, and Idaho's EVSE program using VW Settlement funds. Each of these programs has incorporated the Voluntary Minimum Standards into their best practices and eligibility criteria for DCFC stations. Future programs for building out fast charging infrastructure being developed in other REV West states are likewise seeking to incorporate the Voluntary Minimum Standards into their plans and criteria.

In addition to the Voluntary Minimum Standards, REV West states also developed Additional Stretch Standards that go above and beyond the minimum and can be promoted by states that elect to do so. These standards include operational and future-proofing standards that help ensure reliability, consistency, and keeping pace with advancing technology. Several of the states have incorporated at least some of these stretch standards into their fast charging stations and programs.

State Highlights:

In early 2021, **Montana's** Fast Charge Your Ride grant program solicited applications for infrastructure at 17 key locations statewide to be funded in part with Volkswagen Settlement dollars. The REV West Voluntary Minimum Standards were used to determine location, technical requirements, and equipment funding eligibility for DC-fast charging stations, while the additional stretch standards such as future-proofing and renewable energy integration were used as secondary selection criteria. Award announcements are anticipated in 2022.

State Highlights (continued):

In **Colorado**, stakeholder feedback led to an assessment of how to ensure that both DCFC and Level 2 charging is designed and built for greater accessibility to those with physical disabilities. As a result, the Colorado Energy Office has developed guidance and compiled resources that will be shared alongside the REV West additional stretch standards that are already a part of all state grant programs.

Activity 4: Identify and develop opportunities to incorporate electric vehicle charging station infrastructure into planning and development processes, such as building codes, metering policies, and renewable energy generation projects.

Incorporating vehicle electrification into residential and commercial building codes is beginning to gain traction nationally. In 2021, at the International Energy Conservation Code (IECC) Council meeting, two thirds of the members voted to include EV-ready provisions in the model building code. While the executive committee over-ruled that vote, the EV-ready model code examples and language can be adopted by states and local jurisdictions. In the REV West region, many states are “home-rule” states for building codes, so the state has little authority over building codes for local jurisdictions. This makes it challenging for states to adopt EV-ready building codes that would apply statewide. In May, the REV West states heard an update on EV-ready codes from NASEO as well as the Nevada Energy Office, which is considering including the EV-readiness codes as an appendix to their adopted codes to assist localities who may be interested.

State Highlights:

New Mexico: The Sustainable Building Tax Credit House Bill 15 passed in 2021 promotes the electrification of transportation while promoting equity. A residential or commercial building is eligible for a Sustainable Building Tax Credit when a dedicated electric circuit is installed for a future EV charging station making it electric vehicle ready; dedicated circuits in affordable and low-income housing receive twice the credit amount.

Activity 5: Encourage electric vehicle manufacturers to stock and market a wide variety of electric vehicles within the signatory states

The availability of a broad variety of EVs that satisfy varying consumer preferences for cost, make, model and vehicle features are important for helping consumers to imagine “going electric” without sacrificing the performance they require in often challenging landscapes and climates. Automobile manufacturers may be more inclined to direct available EVs to bigger EV markets in more densely populated areas, leaving states with smaller populations that are further from the primary U.S. EV

markets unable to guarantee a sufficient and varied stock of EVs for consumers. Eventually, many more EV makes and models will be available across the entire US, but in the short-term, additional measures may be required to ensure that they are stocked in the REV West region.

State Highlights:

Colorado adopted the Zero Emission Vehicle (ZEV) standard in 2019 and Nevada adopted its own Clean Cars Nevada regulation on October 22nd, 2021. New Mexico is currently undertaking a rulemaking process to assess the potential adoption of its own Clean Cars New Mexico regulation, scheduled for hearing in 2022. At the same time, New Mexico is pursuing a Clean Fuels Standard in the 2022 legislative session which, if passed, would help to grow the electric vehicle infrastructure and car market in the state.

Other REV West states are taking alternative, non-regulatory approaches to increasing electric vehicle stock in their states. In Montana, the Department of Environmental Quality (DEQ) has collaborated with dealerships to fund and install charging infrastructure, thereby allowing it to stock new EV models in the Bozeman area. In Wyoming, Falcon Car Company is planning to open an EV assembly plant to produce pickup trucks and shuttle buses in the Sheridan area.

Activity 6: Continue to identify, respond to, and where possible, collaborate on funding opportunities to support the development of the REV West Plan.

The REV West team continued to collaborate on activities for the multi-year CORWest grant from the U.S. Department of Energy and led by Utah Clean Cities. Additionally, states continued to share information regarding potential federal funding for electric vehicle charging stations contained in the Bipartisan Infrastructure Bill. Several state Energy Offices and Departments of Transportation collaborated to submit nominations to the Federal Highways Administration for interstates and highways that cross state borders to be designated as “electric vehicle corridor pending.” Designated corridors will likely be prioritized for charging infrastructure funding coming through the federal infrastructure bill.

State Highlights:

Wyoming: The state supported a Yellowstone-Teton Clean Cities submission for Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Low Greenhouse Gas (GHG) Vehicle Technologies Research, Development, Demonstration and Deployment Funding Opportunity Announcement (FOA) grant. If awarded, this grant will be combined with VW settlement funds set aside to create a DC fast charger rebate program.

New Mexico is using VW settlement funds to expand the DCFC network to areas of the state not serviced by an interstate highway. New Mexico’s Department of Transportation and the Energy Minerals and Natural Resources Division have formed a strong partnership to bridge charging

State Highlights (continued):

state's VW funding to develop new DCFC stations.

The Utah DOT is working to develop a state EV infrastructure plan in collaboration with key stakeholders to identify and address remaining EVSE infrastructure gaps and consumer barriers. Utah's various state-funded workplace EVSE programs have installed over 170 Level 2 chargers and eight DCFC stations across the state. These programs have strengthened partnerships across government agencies, utilities, and private businesses. Utah's largest investor-owned electric utility, Rocky Mountain Power, worked with the State of Utah to enhance state-funded EVSE programs by offering additional EVSE incentives to reduce the cost burden to site hosts. Rocky Mountain Power has taken strides to enhance EV charging by building out DCFC infrastructure along major corridors such as I-15, I-70, and I-80 across their service territory which extends into Idaho and Wyoming.

Activity 7: Support the expeditious build-out of fast charging stations along the corridors identified in the vision and purpose of this memorandum, through direct state investment, partnerships with utilities, partnerships with local governments, public-private partnerships, or other mechanisms that are appropriate for the individual states.

Across the Intermountain West, there have been a number of state-led DCFC programs and investments, particularly with support from the VW Environmental Mitigation funds. These programs have resulted in strategic partnerships that have further grown the number of charging stations in each state. Some of these key intrastate partnerships have included state government agencies, local governments, private industry, and utilities. Larger utility companies helped advance state-specific programs while also evaluating complementary utility-based incentives and grants to encourage EV adoption on a broader scale.

Additionally, as discussed above, the group has worked to nominate thousands of miles of highway corridors into the federal Alternative Fuels Corridor program, which will make those regions eligible to receive billions of dollars in IIJA highway funds for DCFC stations. The group will be closely monitoring Federal Highway Administration guidance and program announcements regarding those resources.

State Highlights:

The **Montana** Department of Environmental Quality worked with site hosts across the state to match investment funds and deploy DCFC and Level 2 charging through the Fast Charge Your Ride program.

Colorado has built out DCFC stations at 17 corridor locations around the state, working with a variety of site hosts, such as private businesses or local governments. Colorado anticipated building another 17 locations by the end of 2022, as well as several DCFC plazas to serve large

State Highlights (continued):

numbers of EVs. Additionally, Colorado has now electrified eight of the state's 24 Scenic & Historic Byways to support regional travel and surrounding rural communities.

In addition to all the work carried out by individual states, key regional priorities were advanced by the CORWest Project, a partnership between REV West and all the Clean Cities Coalitions in the region. The project, led by Utah Clean Cities, was awarded through a competitive process, and has enabled additional research and outreach activities to support vehicle electrification.

Three key activities were carried out through the CORWest project in 2021:

- The report “[Electric Vehicle Charging Needs Assessment: Identifying Needs and Opportunities for Electric Vehicle Fast Charging in the Rural and Underserved Areas of the Intermountain West](#),” was released in the spring of 2021. To conduct this needs assessment our team reached out to over 500 stakeholders in the region to solicit input on the region’s key needs and barriers to electrification. With over 200 responses, this report provided information on how to address potential obstacles and enhance regional infrastructure and support private sector development.
- In October, the report “[Demand Charges & Electric Vehicle Fast-Charging: An Intermountain West Assessment](#),” was released. The assessment examines rate structures from 41 electric service providers, representing investor-owned utilities, cooperatives, and municipal utilities, and applies nine different fast-charging scenarios. The goal was to illustrate what an electric bill might look like for DCFC station hosts under current rate structures, and to better inform state energy officials, Clean Cities Coalitions, and their partners about the true cost of EV charging under existing rates. The report also examines case studies of service providers that offer rates that enable affordable charging at electric vehicle fast-charging stations.
- Finally, the REV West group has been undertaking a branding exercise, in coordination with state tourism agencies in each state. For this exercise, REV West members coordinated with local tourism and parks agencies, to develop key elements of a regional electric vehicle corridor brand. The group participated in several workshops to refine ideas around a shared brand. An outside brand management consultant is now using the information from those workshops to present several brand options to the group, which will be rolled out in 2022 in partnership with state tourism agencies and Clean Cities Coalitions throughout the region.

Next Steps and Conclusion

Work through the CORWest Project has allowed the REV West group to take a deeper look into key issues, foster stakeholder relationships throughout the region, and moving forward will help share this information to facilitate increased EV adoption and private sector investments into EV charging infrastructure. CORWest is set to run through the Spring of 2023, and will begin to focus on public-facing resources to spread awareness and alleviate uncertainty around this new technology. Key milestones for next year will be the launch of the regional brand, an assessment of low/off-grid charging options, and a website to act as a resource for EV drivers, electric service providers, potential site hosts, and state and local governments.

In 2022, the group will accelerate efforts to deploy DCFC stations throughout the region and support vehicle electrification. Collectively, nearly 200 new DCFC stations are expected to be installed in 2022, which would double the availability of fast-charging in the region.

Additionally, the group has positioned itself to leverage funds in the Infrastructure Investment and Jobs Act of 2021. Over the last several years, the REV West group has nominated thousands of miles of highway corridors to the Alternative Fuels Corridor Program through the U.S. Department of Transportation. \$7.5 billion in new funding is made available through this legislation, dedicated to supporting charging along these designated corridors. There are also additional opportunities to support charging through medium and heavy-duty electrification, port and freight infrastructure, and community charging hubs. Our group will look to augment existing buildout plans leveraging these new funds.