

**Wyoming Department of Transportation
Cheyenne, Wyoming
National Electric Vehicle Infrastructure (NEVI)
Deployment Plan**



Updated Final – September 19, 2022



Final Year One Plan

Contents

EXECUTIVE SUMMARY	5
ACRONYMS	9
DEFINITIONS	9
INTRODUCTION	10
Assumptions	11
Dates of State Plan Deployment Development and Adoption	12
STATE AGENCY COORDINATION	13
PUBLIC ENGAGEMENT	14
Stakeholders Involved in Plan Development	15
Wyoming Interconnected Electric Vehicle Networks Study	15
State Electric Vehicle Survey	15
Zero Emission Vehicle Infrastructure Request for Information	15
Public Service Commission EV Charging Station Technical Conference	15
ZEV Strategy and NEVI Plan Rollout	16
Self-Designated Interested Stakeholders	17
Local and State Officials	17
Utilities	18
DCFC Manufacturers, Businesses, and Installers	18
Additional Stakeholders	19
PUBLIC OUTREACH	19
Public Comments	20
Materials and Media	21
Outreach Team	21
Website	21
Press Releases	22
Videos	22
Social Media	22
511 Travel Information	22
Supporting Material	22
Potential for Future Outreach	23
PLAN VISION AND GOALS	24
Vision	24
Goals	24

Data Collection and Network Reliability	24
Equitable Access.....	25
CONTRACTING.....	25
EXISTING AND FUTURE CONDITIONS ANALYSIS.....	26
State Geography, Terrain, Climate and Land Use Patterns.....	26
State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs ..	27
Travel Patterns – Heavy Trucks	27
Travel Patterns – Light Duty Vehicles	28
Public Transportation	29
Freight and Other Supply Chain Needs.....	29
AFC – CORRIDOR NETWORKS.....	30
Existing Locations of Charging Infrastructure Along AFCs	31
Tesla Supercharger Stations	32
Planned Electrify America Stations.....	32
Known Risks and Challenges.....	33
Station Visits.....	33
Estimated Station Visits Per Day	35
Capital Expenditures.....	36
Operational Expenditures	36
EV CHARGING INFRASTRUCTURE DEPLOYMENT.....	37
Funding Sources.....	37
2022 Infrastructure Deployments/Upgrades	37
Upgrades of Corridor Pending Designations to Corridor Ready Designations.....	39
Increases of Capacity/Redundancy along Existing AFC.....	39
Electric Vehicle Freight Considerations.....	39
Public Transportation Considerations	40
FY23-26 Infrastructure Deployments.....	40
State, Regional, and Local Policy	41
Demand Charges.....	41
User Taxation	41
IMPLEMENTATION.....	42
Strategies for EVSE Operations & Maintenance	42
Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners	42
Strategies for EVSE Data Collection & Sharing.....	42

Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs ...	43
Strategies to Promote Strong Labor, Safety, Training, and Installation Standards.....	43
CIVIL RIGHTS	43
EQUITY CONSIDERATIONS	44
Identification and Outreach to Disadvantaged Communities (DACs) in the State.....	44
Process to Identify, Quantify, and Measure Benefits to DACs.....	44
Benefits to DACs through this Plan	45
LABOR AND WORKFORCE CONSIDERATIONS.....	45
CYBERSECURITY	46
PROGRAM EVALUATION	46
DISCRETIONARY EXCEPTIONS	46
Exceptions Request Justifications	48
Impact on Station Survivability	50
Mitigation Plan.....	51
Risks to Funding	51
NATIONAL PARK SERVICE SUPPORT	51
Yellowstone Park	52
Grand Teton National Park	53
ANNEX LISTING	53

EXECUTIVE SUMMARY

As the Federal Highway Administration deploys federal funds to states to build out infrastructure for electric vehicles each state is required to propose a plan describing how that money will be spent. The following is Wyoming's proposed National Electric Vehicle Infrastructure (NEVI) plan. The proposal outlines how we would allocate federal funds and the State will not proceed if our plan is not approved. The Wyoming Department of Transportation (WYDOT) used economic, environmental, infrastructure, daily vehicle miles traveled (DVMT) data, and EV market penetration analysis to produce these recommendations. The plan leverages existing Direct Current Fast Charger (DCFC) structure along the alternative fuel corridors. It seeks to create an EV charging network that facilitates user movement through and within the state, addresses user range anxiety, and establishes the conditions for the stations to be economically viable beyond the life of the NEVI appropriation. For those who choose to use electric vehicles WYDOT believes this is the most responsible means to keep drivers moving and safe.

Draft federal program guidance requires that NEVI-sized stations be no more than 50 miles apart, no farther than one mile from the exit, and capable of simultaneously charging four cars at a time at no less than 150 kWh rates. These federal requirements, if adopted, would establish conditions that, based upon WYDOT's estimates, would not allow any single NEVI-sized station to be profitable in Wyoming until the 2040s. Program requirements also do not allow the use of NEVI funds off the designation corridors until those corridors have been deemed "built out" by the US Secretary of Transportation. Wyoming has no desire to establish infrastructure that will likely fail, therefore recommends a departure from the draft federal program requirements.

Wyomingites are currently not adopting the technology in enough numbers to require NEVI program station densities. The greatest potential of users for these DCFC stations in the near and mid-term futures is out-of-state travelers. Unfortunately, Wyoming's interstates, which are also the designated alternative fuel corridors, do not get visitors to many of the state's most common and world-class destinations. This proposed plan addresses both financial viability and destination challenges. It limits the number of additional NEVI-sized stations installed along the interstates and recommends the use of remaining funds to rapidly build out other fuel corridor routes to State and National Parks. The plan creates the conditions for residents to use EVs for personal or business travel. It also facilitates movement of tourists who chose to use an EV to visit the state and protect Wyoming's second biggest industry, tourism.

Lacking some defined and final rules, the WYDOT plan makes several assumptions. If those assumptions prove incorrect, WYDOT will modify the plan. Highlights of Wyoming's NEVI Plan include:

- No state funds will be used to build or operate stations, the matching funds will be either private or from a local jurisdiction
- WYDOT will hire a consultant to provide technical matter expertise necessary to design, complete, build, monitor, and operate the stations over the NEVI appropriation life cycle

- With the assistance of the NEVI consultant, WYDOT will issue a series of Requests for Proposal (RFP) to bid out construction, maintenance, and operation of stations along an alternative fuel corridor or routes and where applicable individual stations that serve a local requirement
- Will seek to maximize the 80% federal capital and operational funding allowances to create the best opportunity for a station owner / operator to keep the station in service
- Designates Pine Bluffs, Douglas, Buffalo, and Sundance to host one NEVI-sized station to complete build out of the alternative fuel corridor network – existing and planned Electrify America stations will provide adequate DCFC stations in other communities along the interstates
- Adds NEVI-sized stations in Sheridan, Laramie, and Wheatland if Tesla does not make their stations public facing by the end of fiscal year 2023
- Acceptance of site specific waiver requests to the 50-mile station location rule as supported by the FY 2023 House Appropriations bill (HR 8294), which states that the Joint Office of Energy and Transportation, “When implementing funding from the national electric vehicle infrastructure formula program...should consider the capacity of electricity distribution at proposed charging locations and the inclusion of one or more charging station locations where the distance between two adjacent stations is greater than 50 miles, ***especially in areas with a population density of 50 or fewer persons per square mile of land area based on the most recent decennial census*** [emphasis added].” Acceptance of such waiver requests for the following sites would reduce station competition and provide better conditions for station financial stability in the future:
 - I-80:
 - Cheyenne
 - between Laramie and Rawlins
 - between Rawlins and Rock Springs
 - between Rock Springs and Evanston
 - I-25:
 - Cheyenne
 - Chugwater
 - between Wheatland and Douglas
 - between Casper and Buffalo
 - I-90:
 - between Sundance and Gillette
 - between Gillette and Buffalo
- Requests site specific exceptions to the one-mile station location from the exit rule to reduce station redundancy in communities already served by a NEVI-sized station and reduce financial stress on stations already operating:

- I-80:
 - Cheyenne has an Electrify America station opening soon that is 4.8 miles from the interstate exit
 - Rawlins has a planned Electrify America station that will be roughly 1.6 miles from the interstate exit
- I-25:
 - Cheyenne has an Electrify America station that is 2.8 miles from interstate exit

If the federal draft rules were adopted as written and the federal government approves these exceptions, WYDOT will use NEVI funds to support station installation along routes to and within State and National Parks. The National Park Service endorses this plan and has included recommended station locations within the parks to serve the traveling public. Funding for these stations will only be realized, however, if the exceptions are granted.

The plan assumes local jurisdictions and businesses are best suited to determining the size, frequency, location, and capacity of stations to meet their needs. It does not require these stations to meet NEVI size and capacity criteria. However, the plan will fund larger stations if deemed appropriate by a local entity.

To mitigate range anxiety and ensure public safety along the alternative fuel corridors, the plan proposes two solutions. First, the use of NEVI funds for local service station and towing company owners to subsidize the purchase of portable emergency EV charging equipment. WYDOT would establish rules to keep charges for these services reasonable during the life of the NEVI appropriation. Second, WYDOT must be allowed to provide NEVI funds for smaller DCFC stations along the corridors after the corridors are deemed built out. These smaller stations will provide additional corridor coverage to mitigate range anxiety and provide financial flexibility that enables corridor movement without jeopardizing long-term system viability. Possible locations include a location between Laramie and Rawlins, Rawlins and Rock Springs and Rock Springs and Evanston along I-80, a location between Wheatland and Douglas and Casper / Evansville and Buffalo along I-25, and a location between Sundance and Gillette along I-90. These locations cover the areas where the plan requests exceptions to the 50-mile rule. WYDOT has determined that local businesses and jurisdictions are better suited to determining the actual location and station size in the supportive corridor locations. Funding for these locations will not be included in this plan but will be set aside for a future year plan.

Wyoming does not propose a plan option to fully build an EV infrastructure to the specified NEVI program requirements. WYDOT has assessed that EV infrastructure at that scale would require at least 17 more NEVI-sized stations along the interstates – with many of those locations offering no other services to the traveling public. Further, it will expend \$17 to \$19 million of the roughly \$24 million available in NEVI funding. In the end, it would create a system that is not economically feasible for private industry, especially Wyoming-owned businesses and disadvantaged communities, two entities the program is designated to primarily support. Therefore, if the exceptions are not granted, WYDOT will only issue the RFP for the four additional stations along the interstates at Pine Bluffs, Buffalo, Douglas, and Sundance and the

three currently Tesla supported locations in Sheridan, Wheatland, and Laramie should Tesla not commit to a public facing conversion. WYDOT would then keep enough NEVI funding to subsidize the operation of those four / seven stations for five years, as allowed under NEVI program guidance. WYDOT estimates that will be approximately \$7 million to \$12 million. If this draft plan is not approved to move into the second phase WYDOT will return the remaining \$12 million to \$17 million to the Federal Highway Administration (FHWA) to manage as described in the NEVI program guidance.

NEVI draft program specifics are challenging to apply in Wyoming. The state's geography, demographics, and industries are not suited to the current NEVI guidance. Wyoming's plan is an attempt to balance long-term viability with current conditions. The state must ensure users that choose this transportation technology may travel safely and reliably within the state. WYDOT circulated this plan to a large stakeholder group and posted it for public comment. Those comments helped shape and form the plan. While any EV infrastructure will be difficult to maintain, this plan creates conditions that allow stations to remain solvent and operational while EV adoption rates grow and provides the best chance for stations to be self-sustaining in the future.

K. Luke Reiner
Director, Wyoming Department of Transportation

ACRONYMS

AFC – Alternative Fuel Corridors
BIL – Bi-Partisan Infrastructure Law
CAPEX – Capital Expenditure
DCFC – Direct Current Fast Charging / Charger
DOE – US Department of Energy
DOT – US Department of Transportation
DVMT – Daily Vehicle Miles Traveled
EV – Electric Vehicle
EVSE – Electric Vehicle Supply Equipment
FHWA – Federal Highway Administration
IIJA – Infrastructure Investment and Jobs Act
NEVI Formula Program – National Electric Vehicle Infrastructure Formula Program
OPEX – Operational Expenditure
RFP – Request for Proposal
VMT – Vehicle Miles Traveled
WYDOT – Wyoming Department of Transportation
ZEV – Zero Emission Vehicle
ZEWG – Zero Emission Vehicle Working Group

DEFINITIONS

Corridor(s) – those road systems in Wyoming designated as part of the alternative fuel corridor system. These are currently limited to Interstates 25, 80, and 90 within the state’s borders.

Routes(s) – those additional road systems the plan seeks to build out in order to support resident and visitor electric vehicle (EV) movement within the state. These routes were selected based upon three criteria identified by WYDOT and verified by the Wyoming Office of Tourism:

1. Roads that support Justice 40 county and tribal reservation designations not serviced by a corridor.
2. Roads that support movement of residents and visitors from the corridors to tourist areas including national and state parks.
3. Roads that meet the above two criteria and have the highest average daily vehicle miles traveled (DVMT) in 2021.

Joint Office – the joint Department of Energy (DOE) / Department of Transportation (DOT) office created by the Infrastructure Investment and Jobs Act (IIJA) / Bi-Partisan Infrastructure Law (BIL) to oversee and manage the NEVI program for the Federal Government.

NEVI Appropriation – the period of time from when the Federal Government makes NEVI funds available (FY 2022) to when the 5-year limit of Operational Expenditure (OPEX) support for the

last opened station expires (approximately 2032 or later).

NEVI-Sized Station – A DCFC station that requires 4 x 150 kW charging ports capable of simultaneously charging located no more than 50 miles apart and no more than 1 mile from the corridor / interstate exit.

INTRODUCTION

Wyoming has a transportation problem and not an energy problem when it comes to EV infrastructure support along the corridors. Based upon utility feedback, we do not perceive an electrical or telecom / broadband support problem in most places where a NEVI station might be required. The electrical infrastructure will support the charging network. Wyoming's challenge is to address EV user range anxiety without creating station market saturation and jeopardizing the economic viability of the whole DCFC system along the corridors. Complicating matters, the state's corridor system does not get travelers to the places projected to have the highest EV volume—the tourist areas. These base line facts heavily informed the development of the plan.

This is a holistic state plan and not just an alternative fuel corridor plan. Initial Wyoming Department of Transportation (WYDOT) economic, environmental, infrastructure, DVMT data, and EV market penetration analysis strongly suggested that NEVI program station location and size requirements would not be economically feasible for up to two decades. Factors driving the conclusion included initial capital expenditure outlays (CAPEX), ongoing operating expenses (OPEX) that become unsupported after five years of operation, corridor station saturation and resulting dilution of visits to support OPEX, and failure of the corridors to support traveler movements to tourist areas within the state. WYDOT's initial analysis suggesting a strained economic feasibility environment was circulated to DCFC companies, other states, the Joint Office, the National Park Service, and other stakeholders. WYDOT asked any interested party to confirm or refute the analysis and conclusion. Although there was some variance in CAPEX and OPEX cost estimates, the additional information supplied appears to confirm the initial theory. Stations along the corridors will struggle to receive enough visits to support operations for up to two decades. The frequency, size, and number of stations required by the NEVI program exacerbate this challenge. Additionally, estimates of cross-state EV travel utilizing only the corridors does not provide enough potential revenue to offset lack of visitor access to tourist destinations.

WYDOT did ask the Joint Office to provide data that went into the economic analysis for NEVI station size, location, and Justice 40 designation decisions. Specifically, WYDOT suggested NEVI-sized 600 kW stations located no more than 50 miles apart and no more than one mile from a corridor exit could not be financially supported nationwide during the five-year operational support timeframe. WYDOT is unable to find any justification for the NEVI station size and location requirements in either the guidance or the Joint Office website. The Justice 40 methodology description does not include an estimate of whether a NEVI station is economically feasible in that area throughout the life of the NEVI appropriation. Although the Joint Office did relate there was an economic review, they have not provided data to refute WYDOT's conclusion that these stations will experience extreme economic duress.

Available data resources confirm WYDOT’s analysis and that heavily influenced the plan recommendations. To help ensure taxpayer money does not fund a system that fails, Wyoming’s approach is to minimize NEVI station competition along corridors and when authorized by the US Secretary of Transportation utilize funds on routes to support movement from corridors to tourist areas. The plan recommends the maximization of NEVI station CAPEX and OPEX expense support throughout the five-year program allowance. It then seeks to allocate any remaining funds to smaller DCFC stations that will serve Wyoming’s largest potential user base—travelers that desire to move from a corridor to a tourist destination along the routes portrayed in the plan.

To accomplish the goals, Wyoming’s plan requests exceptions to NEVI station location requirements as supported by the FY 2023 House Appropriations bill (HR 8294), which states that the Joint Office of Energy and Transportation, “When implementing funding from the national electric vehicle infrastructure formula program...should consider the capacity of electricity distribution at proposed charging locations and the inclusion of one or more charging station locations where the distance between two adjacent stations is greater than 50 miles, ***especially in areas with a population density of 50 or fewer persons per square mile of land area based on the most recent decennial census*** [emphasis added]”. These include exceptions to both 50 miles between stations and no more than one mile from a corridor exit requirements. Only by applying exceptions that address Wyoming’s challenges can the plan create a system that has potential for long-term operational success.

Assumptions

Lack of information in the 90-day NEVI guidance, delay in publishing the 180-day NEVI guidance, and inability of the Joint Office to answer some of WYDOT’s questions required the following assumptions during plan development. These assumptions were submitted as questions to the Joint Office on April 18, 2022:

1. NEVI stations do not have to be permanently installed, meaning a technological solution that is self-contained could compete for NEVI funds. Such technologies are starting to be developed and marketed.
2. NEVI program funds may be used for the purchase of mobile EV charging solutions the plan relies upon to mitigate concerns about distances between stations on the corridors.
3. WYDOT will conduct any NEPA reviews required prior to the installation of a NEVI station along a WYDOT maintained corridor or route.
4. WYDOT will not be responsible for recouping any federal funds used in the program if a station fails.
5. Route and supplemental corridor stations will not have to be 4 x 150 kW stations and may be sized according to local traffic estimates and owner / operator funding capabilities.

Wyoming NEVI Plan – Year 1

6. WYDOT will not require any NEVI-funded stations to be co-located with a federally supported rest stop – other locations with more amenities are available.
7. NEVI funding may be used for technologies that reduce or eliminate utility demand charges even if stations that use these technologies have a higher CAPEX but lower overall ownership costs (CAPEX + OPEX) over the life of the appropriation.
8. There will be no federal permitting or zoning requirements and local / county procedures will apply.

The following additional assumptions are necessary to account for all DCFC capability within the state:

1. No additional NEVI-sized stations will be installed by a nationwide DCFC company along designated corridors at selected NEVI-site locations prior to NEVI plan implementation.
2. The US Secretary of Transportation will accept Wyoming's exception requests and allow public facing stations already planned or located along Wyoming corridors to qualify as valid NEVI stations.
3. The time from contract award for a NEVI station construction to full operation will take at least 18 months, therefore corridor designations will be made prior to stations being operable in order to facilitate the obligation of future year funds on required federal timelines.

The rest of the plan will provide more detail into the economic analysis, conclusions, and conditions that lead to the recommendations for Wyoming's EV infrastructure development.

Dates of State Plan Deployment Development and Adoption

WYDOT anticipates a rapid execution of request for proposal procedures to fund corridor stations once the plan is accepted. Critical to the program's ability to deploy is a thorough understanding of exception approval and corridor "build out" designation by the US Secretary of Transportation. Once the US Secretary of Transportation has designated corridors as built out, WYDOT will initiate actions to fund stations off corridor. This will allow WYDOT to allocate funds as quickly as possible to routes that facilitate EV traffic movement from the corridors to Wyoming's tourist areas. The following are the critical execution and decision dates:

1. NLT August 1, 2022 – Send Plan to the Joint Office for review and submission to the Federal Highway Administration (FHWA).
2. On or before September 1, 2022 – WYDOT issues a Request for Proposal (RFP) for a consultant to provide EV and DCFC technical expertise and program planning and management support.

3. On or before September 30, 2022 – FHWA approves Wyoming’s NEVI Plan.
4. On or before October 4, 2022 – Select NEVI program consultant.
5. Mid-October 2022 – Host a NEVI program workshop to explain NEVI Station RFP procedures and process.
6. On or before October 31, 2022 – Issue corridor NEVI station RFP. In addition, issue off-corridor grant application procedures for use by local jurisdictions and businesses not on an interstate to apply for VW Settlement funds to install local multiport level 2 and low power level 3 stations.
7. On or before December 31, 2022 – Select NEVI station RFP awardee(s). Be prepared to synchronize NEVI program awards with discretionary grant program applications if discretionary grant program guidance publishes as projected by November 1, 2022.
8. December 31, 2022, through June 1, 2024 – construction and installation of additional NEVI stations along corridors.
9. When NEVI stations are operational – US Secretary of Transportation certifies Wyoming corridors are built out and allows remaining funds to be used for DCFC stations along routes to tourist destinations.
10. When authorized by US Secretary of Transportation through September 30, 2026 – Issue RFPs each year for additional route build out and corridor supportive stations on a competitive basis. Set aside appropriate funding to support of NEVI stations to ensure station economic viability for up to five years after they are operational.

STATE AGENCY COORDINATION

Through June of 2021, most agency planning had taken place in three agencies: WYDOT, Wyoming Energy Authority (WEA), and Wyoming Department of Environmental Quality (WDEQ). In June 2021, the state established an intragovernmental Zero Emissions Working Group (ZEWG) to synchronize state planning and strategy development efforts. The ZEWG meets monthly and updates agency directors each quarter. The ZEWG’s charge is to develop strategy recommendations and perform associated state-level tasks. The ZEWG currently consists of agency representatives from:

- Governor’s Office
- WY Department of Transportation
- WY Energy Authority
- WY Department of Environmental Quality
- WY Public Service Commission
- WY Business Council

Wyoming NEVI Plan – Year 1

- WY Office of Tourism
- WY Department of Agriculture

ZEWG membership will adjust as new technologies and programs are developed and released.

The ZEWG's first assignment was to complete a Zero Emission Vehicle Strategy (ZEV). The strategy's purpose is to ensure the State of Wyoming establishes and effectively communicates the plan to support the development of zero emission vehicle infrastructure to serve the state's residents, businesses, and visitors. It sets forth the foundational description of how executive agencies will collaborate, synchronize, and coordinate action on tasks with each other, the legislature, businesses, residents, and other stakeholders. By extension, this NEVI plan is the first opportunity for the ZEWG to put the ZEV strategic concepts into operation.

The ZEWG is the main decision-making or policy recommendation body for the execution of ZEV infrastructure planning and execution. Although most task accomplishment for the NEVI plan will remain resident in WYDOT, the WYDOT NEVI project officer also manages the ZEWG. This arrangement facilitates ongoing coordination and synchronization of NEVI plan development and execution along with any other ZEV work across the state agencies. While WYDOT will manage NEVI program specifics and supervise the technical consultant, the ZEWG is responsible for the NEVI program RFP and corroborative VW settlement award selections to ensure appropriate agency interaction. It will also assist WYDOT in selecting the NEVI program consultant that will aid WYDOT in managing the NEVI program.

WYDOT and the ZEWG will include Buy American requirements in the NEVI consultant statement of work (SOW) and RFPs for the corridors and route(s). The NEVI program consultant SOW provisions will require technical qualification of any proposal and compliance with all applicable federal requirements. The consultant will be responsible for recommending up to the five best-qualified proposals. The secondary Buy America check will take place when the ZEWG makes the final selection decision(s).

PUBLIC ENGAGEMENT

Engaging the public about the Plan is crucial to connect interested business owners and communities with the necessary information and resources to meet their respective goals or plans, as well as to defuse any misinformation.

Since the state currently has few registered EVs and public-facing chargers, initial outreach sought to give an overview of the different types of chargers, the pros and cons of each, and potential economic considerations that should be analyzed before investing in the charger infrastructure in such a rural state. Some Wyoming residents may not ever support or adopt EV technology or any state or local plan to build out the infrastructure. However, outreach so far has shown a majority look at the technology as an inevitable evolution of transportation with possible economic value to their communities.

Wyoming's goal is not widespread acceptance or adoption, but rather the ability to allow any driver — regardless of the type of vehicle they choose to drive — to be able to travel around or

through the state efficiently and equitably. This message continues to be communicated through the state's outreach efforts, with overall agreement from stakeholders and the members of the public engaged in the process. Finally, this plan was posted on the ZEV webpage in early June and invited public comment. The final plan integrates public and stakeholder comments.

Stakeholders Involved in Plan Development

As previously stated, Wyoming assembled a ZEWG to prepare the state's long-term plan regarding Zero Emission Vehicles should funding become available. IJA quickened the pace of the ZEWG to draft a ZEV strategy plan and to begin working on the NEVI Plan. To inform ZEV strategy and NEVI plan development the following events took place:

Wyoming Interconnected Electric Vehicle Networks Study

WYDOT funded the Wyoming Interconnected Electric Vehicle Networks Study, a study specific to the challenges in the state. The purpose of the study was to get consultant recommendations on infrastructure build out costs, locations, and corridor prioritization. WYDOT commissioned the study in the fall of 2019 and received the final report in December 2020.

State Electric Vehicle Survey

In coordination with WEA, WDEQ, and Yellowstone-Teton Clean Cities, WYDOT opened an EV charging infrastructure survey from April 30, 2021, to May 12, 2021, to gauge the public interest in EV charging infrastructure. A total of 217 respondents answered the questionnaire. At that time, answers suggested there was little interest in: (1) owning and operating EV charging stations (~15%); (2) willingness to invest in the infrastructure (~50% of that 15%); or (3) willingness to contribute to investment cost in the infrastructure (~10%). See Annex A (EV Survey Results)

Zero Emission Vehicle Infrastructure Request for Information

To provide additional information to inform strategy development, the ZEWG issued a Request for Information (RFI) NO. 22-011CS Zero Emission Vehicle Infrastructure Strategic Plan. The RFI opened for comment on October 20, 2021 and closed on December 1, 2021. In total, the ZEWG received nine responses and incorporated select recommendations into the ZEV strategy and NEVI plan.

Public Service Commission EV Charging Station Technical Conference

The Public Service Commission (PSC) hosted an EV Charging Station Technical Conference on January 25, 2022, to discuss demand charge and infrastructure installation challenges associated with DCFC station build out. The conference included representatives from the DCFC industry, utilities, state agencies, and other interested stakeholders. It provided the PSC with information needed to analyze the needs and problems associated with EV infrastructure development.

ZEV Strategy and NEVI Plan Rollout

In April 2022, WYDOT and the ZEWG hosted a series of nine public meetings throughout the state to inform the public about Wyoming’s draft ZEV strategy and provide initial concepts for the NEVI program development. To address potential barriers to attending in-person meetings like work, children, or long driving distances, each meeting had a virtual option for attendance. Meeting times were staggered in the morning, afternoon, and evening to encourage participation from as many people as possible. Meeting locations were in cities and towns both on- and off-corridor, with emphasis on certain tourist locations as well as locations that are particularly rural or meet Justice 40 criteria. The locations were:

- Cheyenne (on-corridor)
- Casper (on-corridor)
- Cody (off-corridor)
- Riverton (off-corridor, located near the Wind River Indian Reservation, a Justice 40 area)
- Jackson (off-corridor)
- Rock Springs (on-corridor, a Justice 40 area)
- Rawlins (on-corridor)
- Sheridan (on-corridor)
- Gillette (on-corridor)

The presentation included NEVI program essentials, funding information, station location and size requirements, corridor and route information, and state roles, goals, and challenges. There were approximately 171 in person and 116 virtual attendees. Individuals and organizations represented at the meetings included:

- Environmental justice, equity, and other community advocacy organizations with an interest in EV charging, including Yellowstone-Teton Clean Cities, the Western Resource Advocates, the Sierra Club, and the Powder River Basin Resource Council
- The National Park Service
- Elected representatives, including mayors, commissioners, state legislators and Congressional delegates
- Freight industry groups, including the Wyoming Trucking Association
- Residents and tribal leaders from the Wind River Indian Reservation
- Utility companies based around the state, including Wyoming Rural Electric Association, Montana-Dakota Utilities Company, Black Hills Energy Corporation, Carbon Power & Light, PacifiCorp, Longboard Power, High West Energy, Niobrara Electric, Rocky Mountain Power, Amaco Reuse Agreement Joint Powers Board, Bighorn Rural Electric Company, High Plains Power, Fenton Energy, Powder River Energy Corp., and Bridger Valley Co-op
- Unions and labor organizations, including The International Brotherhood of Electrical Workers
- EV manufacturing companies, including Wyoming companies Falcon Motors and Wild West EV, and national companies
- The Wyoming Automobile Dealers Association

Wyoming NEVI Plan – Year 1

- Local businesses interested in owning or operating EV charging infrastructure of some kind, including restaurants, campgrounds, recreational vehicle parks, tourist attractions, gas stations, museums, minority- and women-based businesses or organizations, and businesses located in areas that meet Justice 40 goals
- EV owners interested in reducing range anxiety due to few non-Tesla chargers currently operational within the state
- Regional transportation planning organizations, including Jackson's Southern Teton Area Rapid Transit system and the University of Wyoming Transit Program
- School district officials

WYDOT continues to take pride in its relationships with local, private and other partners beyond the scope of the NEVI program, including local and county officials and regional transportation planning organizations. With Wyoming's rural population, such organizations are few but very much involved with WYDOT's planning efforts and informed on potential available funding.

Self-Designated Interested Stakeholders

Additionally, WYDOT created a stakeholder email group to help connect business owners and communities interested in the funding with the companies that provide the infrastructure, among other interested parties. The email group receives frequent, direct updates about funding availability, plan progress and more to keep interested parties involved in the process. As of May 23, 2022, the group consists of 102 interested parties including utility contacts, local government officials, environmental and EV advocates, National Park Service, business owners, DCFC manufacturers and suppliers, consultants, state legislators and various association executive directors and members. For a complete listing, see Annex B (EV Stakeholder Listing).

Local and State Officials

Many cities, counties, local chambers of commerce, local downtown development authorities and other economic development groups have reached out to WYDOT and the ZEWS independently of the public meetings to inquire about how to implement EV charging programs in their downtown spaces. WYDOT made presentations to:

- Wyoming Association of Municipalities (includes Justice 40 area jurisdictions) – May 3, 2022
- Joint Transportation, Highways, and Military Affairs Committee / Wyoming Legislature – May 4, 2022
- Wyoming County Commissioners Association (includes Justice 40 area jurisdictions) – May 11, 2022
- Joint Corporations, Elections and Political Subdivisions Committee / Wyoming Legislature – June 29, 2022

All groups were provided with updated NEVI plan recommendations and information. WYDOT continues to work with local leaders to ensure they understand how NEVI funding will fit in with VW settlement and future discretionary grant programs to help them achieve their local EV infrastructure development goals.

Utilities

ZEWG and WYDOT maintain open communications with various utility companies and co-ops outside of the scheduled meetings, including during an initial Request for Information stage and other information gathering sessions relating to demand charges, current infrastructure and potential needed infrastructure to meet NEVI guidance requirements. To determine the adequacy of electrical infrastructure to support NEVI-sized station requirements, the following investor-owned utilities, electric cooperatives, and municipal utilities that operate along corridors were consulted:

- I-80 – High West Energy; Black Hills Energy; Carbon Light and Power; Rocky Mountain Power; and Bridger Valley Electric
- I-90 – Powder River Energy; City of Gillette; and Montana Dakota Utilities
- I-25 – Black Hills Energy; Wheatland REA; Rocky Mountain Power; and Power River Energy

None of the utilities contacted believe there will be an electrical infrastructure supply problem for a NEVI-sized station in their service areas. WYDOT independently confirmed that telecommunications / broadband support is available at virtually all locations along the corridors.

DCFC Manufacturers, Businesses, and Installers

The Wyoming Interconnected Electric Vehicle Networks Study, especially CAPEX costs associated with a 4 x 150 kW station noted in the report, heavily influences the Wyoming plan recommendations. To update or validate CAPEX rough order of magnitude cost data and determine estimated annual OPEX obligations, WYDOT independently consulted the following companies involved with some aspects of EV charging infrastructure. Not all companies responded to the requests for information.

- Blink Charging
- Charging Cowboy
- ChargePoint
- Deloitte
- Electrify America
- EV Go
- Fenton Energy
- Go Electric
- National Car Charging
- Tesla
- Wild West EV

Many companies were helpful in validating WYDOT CAPEX and OPEX assumptions but per their request, this plan will not attribute any data to a specific business or entity.

Additional Stakeholders

Beyond the meetings, nongovernmental organizations like Yellowstone-Teton Clean Cities were involved in the planning process early on due to their background and knowledge of neighboring states' EV strategies. Other groups involved in public / informational meetings or opportunities to comment on the ZEV strategy and NEVI plan development include:

- Western Resources
- Wyoming Rural Electric Cooperative Association (includes utilities that serve Justice 40 areas)
- T-Mobile
- National Park Service
- Tri-State Generation and Transmission
- Wyoming Outdoor Council
- Antelope Butte Foundation
- Wyoming Lodging and Restaurant Association
- Associated General Contractors of Wyoming

The Wyoming Office of Homeland Security was also consulted, although is less involved in planning efforts due to low EV adoption rates and few chargers within the state. Keeping them informed helps address concerns about battery fires in crashes and other first responder safety considerations as this technology becomes a bigger part of the overall market.

All individual, businesses, and organizations listed along with any other interested stakeholders were invited to provide comments on the draft version of this plan from June 1, 2022, to June 15, 2022. The plan was updated as appropriate based upon received feedback. Response, or lack thereof, was crucial in determining the components of and requirements for the plan.

PUBLIC OUTREACH

Beyond involving and communicating with active stakeholders, outreach to the public is essential in neutralizing misinformation and disinformation. Public outreach focuses on addressing potential anxieties from technology proponents and opponents alike. To facilitate out-of-state users the program must address range anxiety issues while balancing the number of stations necessary to build an economically viable network.

The following principles will help guide the messaging strategy as well as help keep all partner agency Public Affairs Offices consistent in their messaging:

Holistic Wyoming Approach: Messaging will portray a whole of state government approach to reassure residents the state efforts are coordinated and synchronized. Initial funding suggests WYDOT is the lead agency but as programs mature, other agencies may have increased responsibilities. The state will leverage each partner agency's area of expertise to create messaging and respond to questions in a way that satisfies a variety of audience groups. Agencies will coordinate to ensure clear communication when responding to questions or feedback, delegating to relevant agencies as needed.

Simplicity and Frequency: Messaging will remain as simple as possible with information provided at an appropriate frequency so as not to overwhelm audience groups. Especially at the start, focus will strike a balance between making the public feel properly informed and updated to combat misinformation while not confusing them with complex information or frustrating them with a lack of or deluge of updates—especially since confusion can lead to more misinformation or distrust. Gauging feedback and reactions to updates should help decide future complexity and pacing of messaging.

Relevancy and Accuracy: WYDOT will ensure that information provided is not only current, but also relevant and accurate. Especially at the start of implementing the plan, when details and updates are scarce, providing accurate and relevant information will help resolve misinformation, mitigate negative reception, and build confidence among those interested in participating in the process.

WYDOT requested public comments on the ZEV strategy, but many comments also gave insight and opinions on the NEVI plan. Comments have ranged from not wanting any EV infrastructure in the state to wanting the state to adopt an EV fleet. The varied comments reveal some of the uneasiness associated with this newer technology, especially in a state so reliant on the fossil fuel industry for jobs and livelihoods.

Public Comments

As of writing this plan, WYDOT and the ZEVWG has received 74 formal public comments on the NEVI plan and 54 public comments on the state’s overall Zero Emission Vehicle Strategy via online methods, phone calls or written letters in addition to the discussions at the public meetings. Comments relating to the NEVI plan focused on the following key points:

1. Comments overwhelmingly affirm that Wyoming needs to request an exception of some kind to the 50-mile requirement as outlined in the 90-day Federal guidance. Wyoming's long distances between towns makes placing stations strategically key, and public interest was rooted in facilitating tourist travel to popular locations like Yellowstone National Park, Grand Teton National Park, and Devil's Tower National Monument, all of which are off corridor.
2. Economic considerations also played a factor in the overall agreement that the requirement is too strict to make fiscal sense in Wyoming. There were also safety concerns with extremely rural charging stations without an anchoring town or other services, especially in the winter when snowstorms could strand travelers for days.
3. Wyoming needs to give equitable attention to off-corridor and on-corridor routes when planning how to spend funds to ensure tourists do not just pass through the state on the interstates.
4. Not every location wants or needs a fast charger; slower charging in areas with shopping, museums or other attractions could help boost the economy of a community, especially during tourist seasons.

5. Roughly half of those providing comments and expressing a preference are opposed to use of funds and / or development of EV infrastructure within the state.

WYDOT also received media interest and social media interest in the plan and funding, which helped with outreach in areas outside of the public meeting locations.

Materials and Media

It is important that public outreach is proactive at each phase of the NEVI plan to keep the public and other stakeholders informed on progress, especially as it relates to funding spent, charger location identification, and construction scheduling. To ensure transparency and up-to-date information, state agencies will use a variety of messaging types, media and campaigns to inform the public about major plan milestones.

Outreach Team

An outreach team was formed in late 2021 to ensure coordinated messaging from all ZEWG agency members and other state agencies involved with EV infrastructure buildout. The team consists of public involvement departments, grants specialists and other state agency partners from ZEWG agencies who will meet as needed to coordinate messaging. Coordinated and uniform messaging across agencies can help ensure cohesiveness, transparency, and accuracy.

WYDOT Public Affairs staff currently leads the outreach team because WYDOT is serving as the pass-through agency for the majority of the EV infrastructure funding. Outreach will be shaped by different lead agencies for different phases of EV infrastructure buildout; for example, the WEA, Wyoming Office of Tourism and WDEQ will likely also play key roles in public communications and outreach as the EV charging infrastructure is installed and becomes operational.

The outreach team's primary goal is to inform both the public and EV stakeholders about project milestones, funding availability and other important information while combating potential misinformation.

Website

To maximize funding opportunities, WYDOT added a webpage dedicated to ZEV and NEVI information on its existing website. The goal of the webpage is to be a one-stop-shop for ZEV-related funding and information, regardless of who is offering the grant or opportunity provided. For example, information about the Volkswagen Settlement Funds, which WDEQ oversees, is included on the webpage. This is an easy way to provide updates about plan progression, provide links to outside funding sources and answer frequently asked questions about the program. Webpage links will be included on all materials and messaging to ensure the public and stakeholders have access to as much as possible. A link to the website has been circulated to the REV West, COR West, Yellowstone-Teton Clean Cities, American Association of State Highway and Transportation Officials (AASHTO), and the Joint DOT / DOE Office. The site URL is: https://www.dot.state.wy.us/home/planning_projects/zero-emission-vehicles.html

Press Releases

Due to existing media interest in the funding and plan, WYDOT relies primarily on earned media rather than paid media. Press releases are great tools to reach media publications around the state who would otherwise have to drive long distances to attend a press conference or similar event. Press releases were issued to notify the public about the draft ZEV strategy being available for comment and will continue to be used for milestones such as an RFP release and construction updates. Releases provide points of contact information and reminders about plan goals. WYDOT will connect interested media with appropriate subject matter experts both within the department and other state agencies to ensure the most factual information is presented to the media and, in turn, to the public.

Videos

Video news releases will be produced to highlight project milestones. Releases are shared with media outlets and posted to the WYDOT YouTube page. Additionally, videos of public meetings are posted on the website to give those who cannot attend a chance to learn and participate, a particularly important point in a state as rural as Wyoming.

Social Media

In today's internet age, social media is critical to getting information out to the public. WYDOT relies heavily on Facebook, Twitter and YouTube to share information with a wide variety of interested parties without incurring significant costs. Social media content will combine direct calls to action with curated content (such as photographs, videos, and infographics) that will create a community for the NEVI Plan. Ideal content is easily shareable, engaging, relevant, and accessible.

To date, outreach on social media has produced robust results compared to other content on the WYDOT accounts. The average Facebook analytics for ZEWG content posted shows the post with the highest reach saw 24,134 viewers, with 550 comments, 79 shares, and 4,265 engagements, all of which were organic. No advertising dollars have been spent on social media.

511 Travel Information

Currently, WYDOT's travel information software, including the travel map, highlights alternative fuel locations and other relevant travel information. As NEVI stations become operational, WYDOT will add those to the alternative fuel layer to help drivers identify potential routes based on available charging infrastructure. WYDOT encourages drivers to utilize this resource all year long, but especially during winter storms where road conditions can be hazardous. This can help EV drivers plan charging in times when range may be reduced due to Wyoming's strong winds, heavy snow or other adverse weather.

Supporting Material

To show harmony among state agencies involved in the zero emission strategies, WYDOT

created a NEVI plan logo in addition to the ZEV logo. The logo is on all materials to show unity and to ensure viewers or readers understand the message source, which can help to refute some misinformation.

WYDOT recognizes printed materials can be helpful to explain complicated processes, like grant applications, or can provide a clearer picture of plan progress, goals and timelines. However, WYDOT also recognizes that printed material has a cost, and thus strategic use is key. Printed materials will be created as needed.

Potential for Future Outreach

WYDOT will be able to maintain situational awareness of community, business, and resident preferences through the work of the ZEV Outreach Team and WYDOT Public Affairs. The webpage provides an excellent avenue to continue engagement based upon interest. Experience, however, suggests the vast majority of residents and jurisdictions are either indifferent or waiting to see how the plan progresses. The plan is informed by analysis of the work completed in community outreach which stresses the importance spending NEVI funding to get traffic from the corridors to the tourist destinations including:

1. The statewide survey in May 2021 with few respondents and even less interest in supporting EV infrastructure costs suggest there is little current or pending demand for the technology.
2. Town hall attendance during April 2022 also suggests there is little interest in the merits of the technology.
3. Consistently roughly 50% of written and verbal comments about the plan or technology are opposed to supporting the development of EV charging infrastructure.
4. Initial interest by select municipalities over receiving funding support to install and maintain DCFC stations waned once they understood the costs, size, and power requirements. Most local jurisdictions want the stations to encourage visits to their areas not through them. Unfortunately, NEVI program guidance only supports through area travel.
5. There was poor attendance at Wyoming Association of Municipalities and Wyoming County Commissioner Association briefing sessions suggesting most local jurisdictions are currently not interested in receiving the technology. Those that are, must wait until the corridor build outs are complete.
6. WYDOT and the Wyoming Business Council have sought letters of support for the plan from municipalities, especially those located in the Justice 40 areas. To date, only the City of Cody has done so (See Annex G – Cody Letter of Support).

Based upon this feedback, WYDOT perceives little demand for nor proposes any further public outreach throughout FY 2023 unless a jurisdiction specifically requests it. Favorable

consideration of the plan’s exceptions may encourage interest.

PLAN VISION AND GOALS

The NEVI plan’s vision and goals are within the Wyoming’s overarching ZEV Strategy. This ensures the State coordinates and synchronizes actions to support any ZEV technology that users wish to adopt. It also provides a unity of effort in supporting infrastructure development, operation, and advancement.

Vision

The State of Wyoming possesses the electric infrastructure needed to fully support the movement of vehicles across state transportation networks safeguarding the economic security, safety of residents and visitors and health of businesses.

Goals

1. Wyoming statutes, rules, regulations, and policies support cost-effective and affordable development, use, and maintenance of electric vehicle infrastructure.
2. Wyoming’s electric vehicle infrastructure keeps pace with changes to technological, regional, business, and personal transportation preferences / demands.
3. Wyoming manages financial programs that incentivize the development, installation, and operation of electric vehicle infrastructure.
4. Wyoming creates and maintains equitable statewide access to electric vehicle infrastructure.
5. Wyoming will identify and secure future funding to maintain and enhance electric vehicle infrastructure networks.

Data Collection and Network Reliability

Data collection efforts will focus on the station operational readiness or reliability, operational costs, and usage. This information will be used by the ZEWG to confirm or update OPEX subsidy reimbursement rates. Subsidy repayments may be contingent upon NEVI program station availability goals of 97% or better, however elimination of operational subsidies will ensure station failure. From WYDOT’s perspective the 97% availability rate will be difficult to achieve at stations that receive little use. Feedback from operators suggests that stations especially those underutilized and in remote areas are unavailable up to 30% of the time. Unless rules force WYDOT to eliminate subsidies if this metric is not achieved, WYDOT will do everything possible to keep a station operational.

The ZEWG, WEA, and WYDOT will also use collected data to maintain updated station

location, status, availability, and price data for posting on to web-based applications, the Alternative Fuel Data Center's Station Locator, and as discussed earlier, WYDOT's 511 information center. The goal is to maintain the most updated station location, status, and capability information across the entire state, not just the corridors, to facilitate movement from the corridors to the tourist destinations.

NEVI corridor stations will be required to provide networked Electric Vehicle Supply Equipment (EVSE) that provides real-time station status, application broadcast capability for phone and in car apps, maintenance monitoring and reporting, payment processing, and remote troubleshooting to ensure 24 / 7 customer support. WEA will be the state agency responsible for monitoring station statistics and reporting readiness back to the ZEWG and must have access to cloud-based station information.

Equitable Access

As recommended, this plan is an equitable access plan. Strictly applying the NEVI program and Justice 40 requirements does not create equity within the state—it prevents it. It forces station corridor saturation that will require all or nearly all of Wyoming's appropriation to build out and support but creates a system that will likely not economically survive. Funding that might remain being used in off-corridor locations creates a like situation in those selected counties. The Justice 40 designated areas that are not served by a corridor include Wyoming's least populated counties. It established a condition whereby every licensed driver in the counties could purchase an EV and still there would not be enough daily visits to support a NEVI-sized station.

Likewise, the size and expense of a 4 x 150 port NEVI station creates conditions that actually hinder Wyoming businesses and disadvantaged communities from being able or wanting to host the stations. WYDOT's analysis suggests that only large DCFC companies with national networks will be able to afford to operate and maintain the stations by subsidizing losses in the state with profits elsewhere. Oddly, NEVI program requirements actually hinder equitable access goals. Station location, size specifications, and inability to use NEVI funds off corridor or build smaller supplemental stations on corridor reduces or eliminates the ability of disadvantaged parties to obtain benefits from the funds.

Instead, WYDOT is submitting a holistic state plan that reduces corridor station saturation to a realistically manageable amount, creates infrastructure in Justice 40 areas not along a corridor, and routes travelers through those Justice 40 areas as they move through corridors to tourist destinations. It does this by reducing the number of NEVI stations on the corridor and using remaining funds on smaller stations that meet local requirements and assist in contributing to disadvantaged area access and economies.

CONTRACTING

The NEVI consultant selection will be a formal competitive procurement process and a qualification-based selection. The selection process will be a two-step selection beginning with a solicitation for Letters of Interest (LOI) and, secondly, issuing Requests for Proposals (RFPs).

Consultants that have submitted Statements of Interest (SOI) to the WYDOT Engineering Services Office will be solicited directly and there will be a public advertisement posted on WYDOT's webpage for any potential consulting firms not already registered. A selection committee will determine a short list of firms based on reviews of the LOIs and SOIs. If enough firms respond to the solicitation, a minimum of five firms will be selected and will receive an RFP. The ZEWG will evaluate and rank the proposals based on qualifications leading to a selection. In the case of a NEVI station award, the NEVI consultant will technically qualify up to five competitors. The ZEWG will then evaluate those proposals and make the final decision. The NEVI consultant statement of work (SOW) will require the selected contractor to comply with all NEVI program guidance requirements, applicable Federal Acquisition Regulations, and provide technical supervision and management of proposals for station build out and operation. The NEVI consultant will also be required to qualify station proposals to meet NEVI and other applicable federal requirements.

The NEVI consultant will provide technical staff support to the ZEWG outreach team and agency staff during community outreach. Most community outreach tasks will be performed by state agency representatives or the ZEWG outreach team.

EXISTING AND FUTURE CONDITIONS ANALYSIS

Wyoming's geography, demographics, weather, size, and population density make application of NEVI program requirements especially challenging. According to the University of Wyoming Student Atlas, Wyoming is the 10th largest state in land mass, but has the smallest population, and the second smallest population density behind Alaska. Elevations range from 3,100 feet at Belle Fouché River to 13,809 feet at Gannett Peak. The average annual temperature is 44.8 degrees F, average annual rainfall is 15.45 inches, and wind speed is 10.1 mph.¹

Wyoming EV Registration statistics as of March 2022:

- Wyoming has one of the lowest EV adoption rates in the country
- There are 456 cars and light trucks and 11 motorcycles or multi-purpose electric vehicles in Wyoming – 0.1% of total vehicles registered
- Tesla has the most registered electric cars in Wyoming at 361 and have their own charging network
- There was less than 100 EV vehicle registration increase from 2021 to 2022
- Teton County has the most registered EVs at 158, followed by Laramie County (102) and Albany County (41)

State Geography, Terrain, Climate and Land Use Patterns

Due to its continental location, size, and elevation Wyoming experiences everything from flash flooding, tornados, and drought to early fall and late spring blizzards. According to the EPA's Snapshot EPA 430-F-16-052, "In the past century, most of the state has warmed by one to three

¹ Jeffrey D. Hamerlinck, Ph.D., Gerald R. Webster, *Wyoming Student Atlas*, University of Wyoming, available from <http://www.uwyo.edu/wga/wyoming-student-atlas-project/Wyoming%20Student%20Atlas%20sample%20pages.pdf>, accessed on May 24, 2022.

degrees (F)...In the coming decades, the changing climate is likely to decrease the availability of water..., affect agricultural yields, and further increase the risk of wildfires...less water is likely to be available in the Green River Basin, because precipitation is unlikely to increase enough to make up for the additional water lost to evaporation. In other parts of the state, annual rainfall is likely to increase on average, but soils are likely to become drier, and periods without rain may become longer, making droughts more severe. In southeastern Wyoming, drier soils could lead farmers to withdraw more water from the High Plains Aquifer, which is already being depleted in other parts of the Great Plains. The decline in snowpack could further limit the supply of water.”

According to Ruckelshaus Institute,

[W]ide range of economic, cultural, and environmental drivers combine to influence land use in Wyoming. Some of these drivers are national or regional in origin, while others operate predominantly at the state and local level. Economic drivers may be policy-based or the result of market activities, while cultural and environmental drivers are closely tied to Wyoming’s western image, reflecting values placed on both the aesthetics of its landscapes and abundant natural resources.

Public land policy—concerning oil, gas, and mineral extraction, forestry, grazing, water, and wildlife—heavily influences land-use activities on both public and private lands. Federal land ownership and government mineral rights provide the mechanism by which government policy can dictate land use in major parts of Wyoming.”

Wyoming has limited urban areas with the two largest cities, Casper, and Cheyenne, each being roughly 60,000 in population. Most larger towns are located along corridors and routes identified in the plan. Since the terrain is high plain or mountainous, land use is confined to small built-up urban areas followed by long stretches of range land, quasi-desert, or mountains. Prevailing winds and wind speed, elevation changes along corridors and routes, and temperature extremes may have a significant impact on EV ranges.

State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs

Travel Patterns – Heavy Trucks

On I-80, pass-through trucks traveling from border to border without picking up or delivering goods in Wyoming make up the highest percentage of trucks on that route, estimated to exceed 75% of all trucks (draft WYDOT Freight Plan). The draft Freight Plan forecasts pass-through freight to increase to 80% by 2045. Since many of these trucks are originating from or are destined for California, EV needs should be expected to increase as we approach 2045, the year that California’s mandate for all electric trucks goes into effect, however this timeline will have limited or no effect on EV station visits during the lifetime of the NEVI appropriation. Lacking a specific demand signal from the industry, Wyoming will address heavy truck use of DCFC stations by requiring consideration of their needs in station design criteria.

Federal Highway Administration’s Freight Analysis Framework (FAF) suggests that the annual growth rates of freight movement by truck in Wyoming will increase approximately 2% annually. That is over a 20% increase by 2032 and nearly 50% increase by 2042. Most trucks are expected to use internal combustion engines through 2040.

The WYDOT Freight Resilience Analysis identified the southern tier of Wyoming counties as approaching EPA air quality non-exceedance standards for ozone. Ozone is produced from vehicle emissions. Since I-80 carries the largest number of vehicles and the largest number of trucks in Wyoming, the higher ozone levels are likely caused by these vehicles. If Wyoming were to exceed ozone limits in these counties, the EPA could restrict the types of highway projects WYDOT could implement in these locations. EV adoption along I-80 could reduce the potential that the southern tier of counties would exceed EPA standards and impact EV truck adoption rates if the technology is readily available.

Travel Patterns – Light Duty Vehicles

WYDOT estimates roughly 85% of light duty vehicle movement on Wyoming roads is resident and 15% is out-of-state traffic. Sales data suggests that in 2021, roughly 1.73% of the vehicles on the road are EVs. It is widely reported that Tesla accounts for roughly 79% of registered EVs. The Tesla charging network is robust consisting of 11 Supercharging stations, 9 of which are located on or near the corridors. There are a great deal more level 2 Tesla charges. Therefore, until Tesla becomes a public facing DCFC system, the NEVI program market potential is likely limited to the remaining 21% of the registered EV fleet and that associated DVMT.

Based upon the number above and using 2021 Vehicle Mileage Data, WYDOT estimates there are 392,912 Class 2 (cars /sedans) out-of-state DVMT along the corridors. Tesla mileage is accounted for based upon market share and potential non-Tesla DVMT mileage indicated in the table below. This analysis provided the basis for WYDOT’s estimates for NEVI station visits / day. Station visits / day are the main factor in predicting whether a station will be able to feasibly provide an acceptable return on investment. For a more detailed explanation of this table and the factors used to derive the estimates, see Annex C (NEVI Station Use Estimate)

		I-80	I-25	I-90	Combined
DVMT		1,154,609	864,521	600,282	2,619,411
In-State	85%	981,418	734,842	510,239	2,226,499
Out-of-State	15%	173,191	129,678	90,042	392,912
Out-of-State DVMT		173,191	129,678	90,042	392,912
All EVs	1.73%	2996	2243	1558	6797
Non-Tesla	21%	629	471	327	1427

Table 1EV DVMT Estimates

It was also crucial to understand potential non-corridor movements that might impact EV usage. Operating under the assumption that there was significant visitor traffic to tourist areas, WYDOT worked with the National Park Service who provided an estimate of DVMT for Yellowstone National Park. Interpolating from there, WYDOT concluded that Yellowstone had non-Tesla traffic potential DVMT of 1,903 miles exceeding all potential EV miles for the entire Wyoming

corridor system which is roughly 1,500 miles per day. The Wyoming plan should focus on movements from the corridors to and from the tourist areas. (For a more detailed analysis of Yellowstone DVMT estimates see Annex D – Yellowstone DCFC Station Use Estimate))

Public Transportation

Currently, Southern Teton Area Rapid Transit (START) in Jackson Hole is the only Local Government Coordination Transit Program subrecipient that has electric vehicles. At this time WYDOT is not aware of any future EV needs, although Yellowstone-Teton Clean Cities reports that Teton Village Association and City of Laramie are considering electric buses.

Freight and Other Supply Chain Needs

Several logistic hubs and large warehouses were built in Wyoming during the last several years to take advantage of the easily accessed transportation system and tax structures that are lower than neighboring states. These include the Casper Logistics Hub, Salt Creek Heights Business Park, Swan Ranch Rail Park, Lowes Regional Distribution Center, Walmart Regional Distribution Center, and Sierra Trading Post Fulfillment Center. These new industrial developments increase truck traffic along the corridors that serve them. These activities usually increase truck traffic growth faster than the normal traffic growth in the State, putting pressure on WYDOT to make higher than average investments in infrastructure along these routes.

The WYDOT draft 2021 Freight Plan shows that trucks in Wyoming carry just under 40% of the total value of goods in the State. From 2012 to 2018, the truck share in value of goods hauled increased by approximately 7%.

The lack of truck parking availability rates high as a concern for truck drivers. Truck drivers must abide by various in-service limitations that restrict their consecutive driving hours and are forced to seek safe parking when they reach those limits. Often this causes overcrowded truck parking areas leaving some trucks to park on urban streets and along busy highway rights-of-way, resulting in unsafe conditions and issues with residents. Road closures also greatly increase truck-parking needs.

The location of truck parking areas in conjunction with EV facilities that can serve trucks becomes much more important during road closures. While fossil fuel powered trucks often have several available fueling locations, EV trucks may be excluded from reaching recharging facilities if the facilities are not properly placed. WYDOT will account for the potential of future EV truck traffic in station design and location standards in NEVI station RFPs.

The I-80 Corridor Study recommends 29 private, 7 rest area and 19 truck turnout parking sites based on commonly occurring road closure locations. Several hundred trucks can queue up at these locations during road closures causing safety and snow removal issues. WYDOT currently may recommend the installation of connected vehicle technology and other ITS infrastructure to serve any new truck parking areas and improve traffic performance at these locations. As EV adoption grows, and stations can support themselves with user visits, these areas may be candidates for DCFC stations in the future. WYDOT does not project these uses will be

economically viable throughout the life of the NEVI appropriation.

Parking challenges aside, WYDOT is not aware of pending interest by the trucking industry in using EV technology to traverse Wyoming's roadway systems. As such, near and mid-term market potential for electric trucks to use NEVI stations is even more limited than light duty vehicles. This suggests they will not have a positive economic impact during the life of the NEVI appropriation and are not heavily considered in the plan, however, RFP station design characteristics will include consideration for current and future heavy truck traffic.

AFC – CORRIDOR NETWORKS

Wyoming has zero corridor ready and three corridor pending designated road systems, I-80, I-90, and I-25. Since the NEVI program station size, power, and location requirements are so extreme, WYDOT has made the decision not to nominate any additional routes into the program. The robust infrastructure that exists along the interstates is not prevalent among other routes. Routes also face more significant geographic, weather, and telecommunications / broadband challenges. The following map portrays pending corridors and recommended routes.

As pictured, routes start at traditional jump off locations and end near the national parks. If the plan exceptions are approved, WYDOT will extend the routes from those towns (Cody, Jackson, Sundance) to the national park gateways (as pictured) and provide NEVI funds to individuals / businesses that wish to host DCFC stations near the park entrances or inside the parks themselves. If exceptions are not approved, routes end at towns (Cody, Jackson, Sundance).

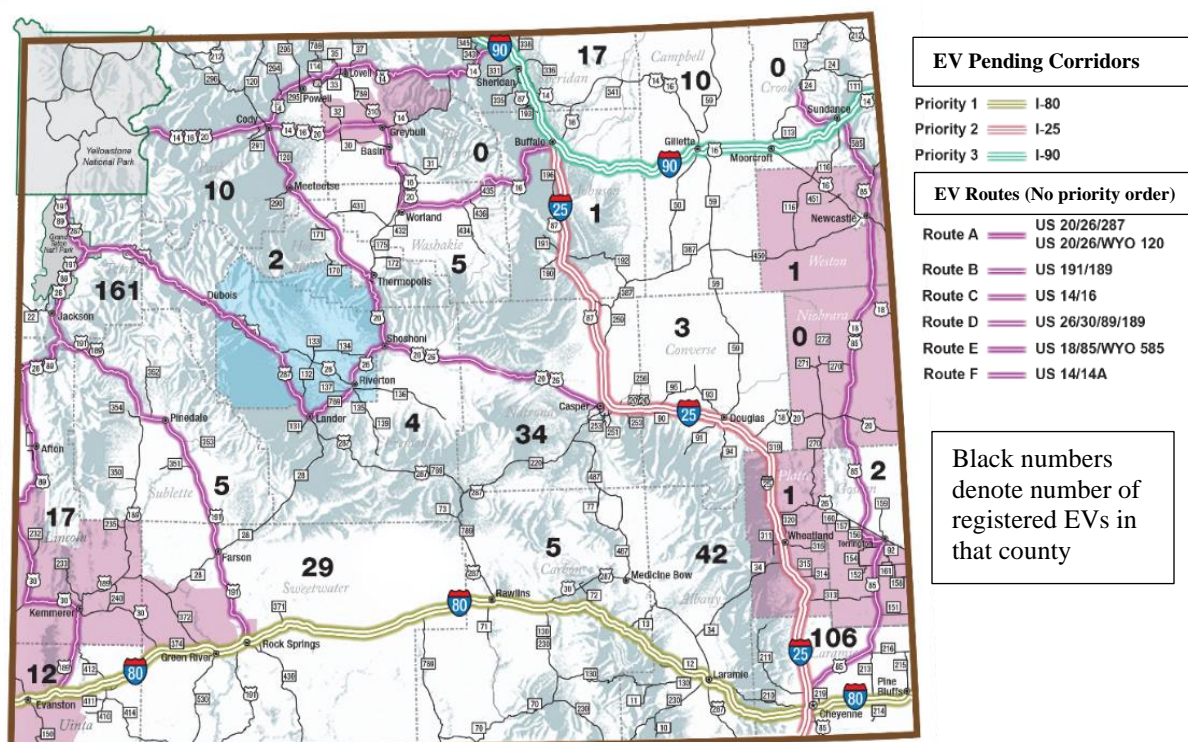


Figure 1 Wyoming Corridor / Route Structure with Exceptions

Existing Locations of Charging Infrastructure Along AFCs

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
61487	DCFC	I-90	Gillette, WY	4	Electrify America
61488	DCFC	I-80	Evanston, WY	8	Electrify America
11100050	L2	I-80/25	Cheyenne, WY	2	Non-Networked
11100052	L2	I-80/25	Cheyenne, WY	1	Non-Networked
11100067	L2	I-25/90	Sheridan, WY	1	ChargePoint
11100068	L2	I-25	Casper, WY	3	Tesla Destination
11100069	L2	I-25	Douglas, WY	3	Tesla Destination
11100076	L2	I-80	Rock Springs, WY	3	Tesla Destination
11100077	L2		Sheridan, WY	2	Tesla Destination
11100079	L2	I-25	Wheatland, WY	4	Tesla Destination
11100086	L2	I-80	Rock Springs, WY	2	Non-Networked
11100089	L2	I-25/90	Buffalo, WY	2	Tesla Destination
11100092	L2	I-80/25	Cheyenne, WY	2	SemaCharge
11100093	L2	I-80	Laramie, WY	2	ChargePoint
11100094	L2	I-25	Casper, WY	1	ChargePoint
11100095	L2	I-25	Casper, WY	1	ChargePoint

As of May 25, 2022

There are additional Tesla Supercharger stations in Lusk and Jackson, neither of which is near a corridor. Tesla successfully supports its 79% EV market share with 11 total superchargers, 9 of which are on a corridor and 6 are within a mile of a corridor and meet NEVI size and location requirements but are not public facing. NEVI guidance entails WYDOT adding upwards of 17 more stations that targets the remaining 21% of the EV market. If Tesla makes its stations public facing, it has the potential to significantly impact use of non-Tesla stations as non-Tesla vehicles will have access to that existing network. The following is a list of all existing Tesla or planned Electrify America stations that may have future impact along the corridors within the state.

Tesla Supercharger Stations

**1673 Centennial Drive
Laramie, WY 82070**

- 8 x 150 kW
- NEVI compliant when public

**2370 E Cedar St.
Rawlins, WY 82301**

- 8 x 150 kW
- 1.1 miles from I-80
- NEVI compliance – No / distance

**2441 Foothill Blvd
Rock Springs, 82901**

- 8 x 150 kW
- NEVI compliant when public

**612 North Main Street
Sheridan, WY 82801**

- 4 x 150 kW
- 1.4 miles from I-90
- NEVI compliance – No / distance

**1556 Sherard Road
Wheatland, WY 82201**

- 8 x 150 kW
- NEVI compliant when public

**1400 Dell Range Blvd.
Cheyenne, WY 82009**

- 2.5 miles to I-25
- 5.1 miles from I-80
- 4 x 150 kW
- NEVI Compliance – No / distance

**101 Wasatch Rd
Evanston, WY 82930**

- 8 x 150 kW
- NEVI compliant when public

**6985 Nugget Street
Evansville, WY 82636**

- 8 x 250 kW
- NEVI compliant when public

**211 Decker Court
Gillette, WY 82716**

- 4 x 150 kW
- NEVI compliant when public

Planned Electrify America Stations

**401 SE Wyoming Blvd
Casper, WY**

- Not Open – Ports unknown
- Slightly more than 1 mile
- NEVI Compliance – No / distance

**602 N. Higley Blvd
Rawlins, WY**

- Not Open – Ports unknown
- 1.5 to 1.8 miles from I-80
- NEVI Compliance – No / distance

**1708 Dell Range
Cheyenne, WY**

- Not Open – Port unknown
- 2.8 miles from I-25
- 4.8 miles from I-80
- NEVI Compliance – No / distance

**2531 Foothills Blvd
Rock Springs, WY**

- Not Open
- 2 x 350 kW / 4 x 150 kW
- Will be NEVI compliant

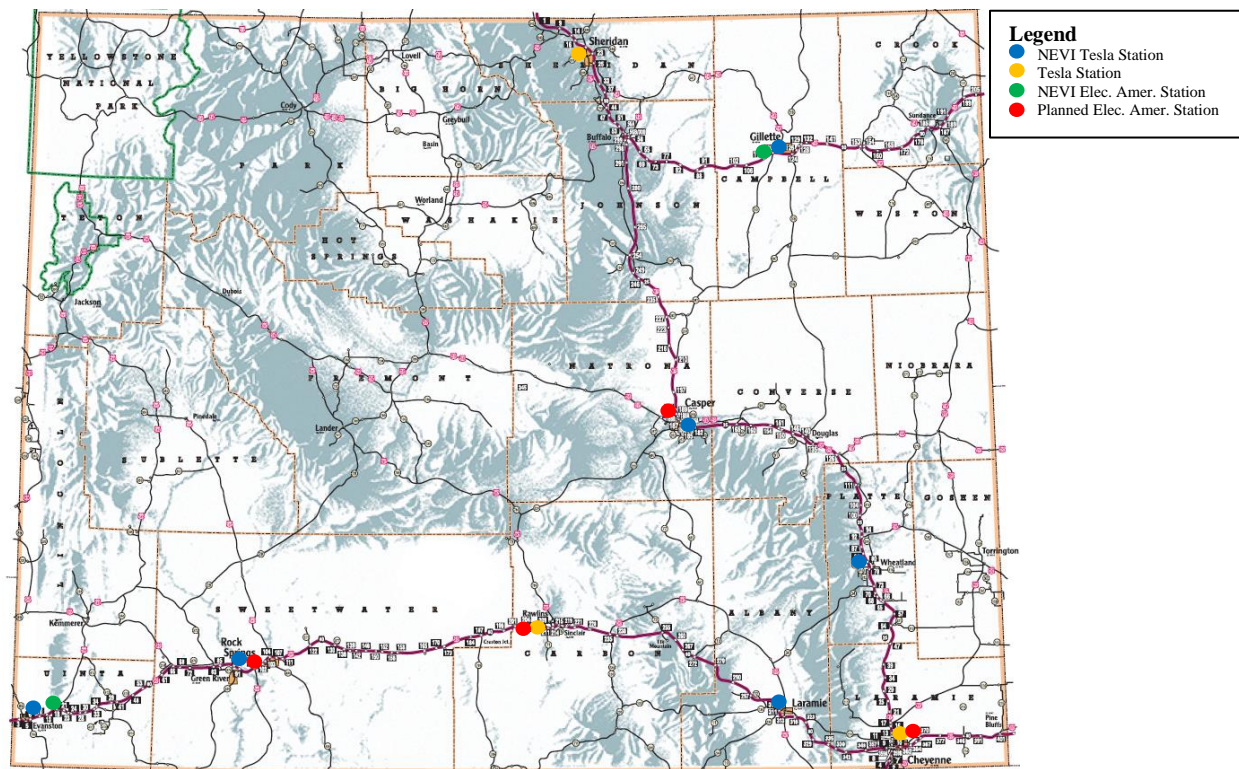


Figure 2 AFC Stations

Known Risks and Challenges

Station Visits

Station density without enough traffic to provide revenue to offset remaining CAPEX and cover OPEX is the greatest risk and challenge to the entire corridor NEVI system. As figure 2 indicates, once Tesla becomes public facing, it will compete with existing or planned NEVI and Electrify America stations in Gillette, Evansville / Casper, Wheatland, Laramie, Rock Springs, and Evanston. Electrify America stations in Evanston and Gillette and the planned station in Rock Springs meet NEVI requirements.

Three additional Tesla stations exist along the corridors but do not comply with NEVI requirements due to distance from the exit. Distance non-compliance ranges from 0.1 miles in Rawlins to 0.4 miles in Sheridan to 5.1 miles from I-80 in Cheyenne. In the case of Rawlins, Cheyenne, and Cody, the planned Electrify America stations will also not meet distance from the corridor requirements.

In two locations, Rawlins and Cheyenne, both Tesla and Electrify America have or plan to have stations, but none are within one mile of a corridor exit. This creates a condition whereby NEVI will require a third station in the same area and create even greater pressure on the station to remain economically viable.

Annex E (Station Maps) provides a visual depiction of the existing NEVI requirements and

recommended Wyoming NEVI plan station locations. Slide 2 indicates where additional stations must be placed to meet NEVI requirements in addition to the Tesla / Electrify America stations that already exist. This is where the NEVI requirement become problematic. Including the Tesla and Electrify America stations at or near the corridors, strict adherence to the NEVI program will require WYDOT, and the taxpayer, to fund up to 17 more stations. That creates up to 31 NEVI-sized stations along the corridors. There are two more off-corridor Tesla NEVI-sized stations in Jackson and Lusk bringing the statewide total to 33. The Joint Office DCFC planning tool recommends that based upon EV registrations, Wyoming should only need two stations for the entire state.

The Joint Office provided data and pointed to a Great Plains Institute Study released in July 2019. Referencing that study, the Joint Office Response via [REDACTED] at NREL was,

“I’ve thankfully found a great source for this question, a whitepaper from 2019. In it, they analyze the profitability of stations under different utility tariffs & across many power levels. I would point Jesse to this document: https://betterenergy.org/wp-content/uploads/2019/08/GPI_DCFC-Analysis.pdf and Figure 10 and Table 2 specifically.

Break even costs are a function of \$/kWh and \$/kW. The charges per day (CPD) to meet costs thus vary (Figure 10). However, in Table 2, they find that for a representative case, 9 charges are needed per day per 150kW charger to break even excluding capital costs. For 4 ports @ 150kW, this is 36 charge events per day, 252 per week, 1008 per 4 weeks. Even in high penetration markets, this is a challenging/aggressive scenario in the near term.”²

A consultant analysis of the Rocky Mountain Institute study completed for the Colorado Department of Energy in 2020 concluded that DCFC station utilization rates had to achieve 30% (or approximately 7.5 hours / day) for the station to operate profitably.³ The study evaluated 50 kW, 100 kW, and 150 kW stations. Using an estimate of 25 minutes needed for a typical EV to achieve a usable range, suggests a 150-kW charger would need up to 18 visits. According to this analysis, a four 150-kW port NEVI station could need up to 72 visits to achieve profitability.

If Wyoming’s interstates (AFC Corridors) are built to standard, it will require 10 stations along I-80, 8 along I-25, and 4 along I-90. No location is double counted. For instance, Cheyenne is near I-80 and I-25 but only counts for I-80 since one location can apply to two corridors. WYDOT analyzed the expected number of visits for each station if the corridors were built out to NEVI standards. If each station needs at least 36 visits (based upon the studies referenced previously) it was important to know when that would occur so the plan could estimate how long a station would need operational subsidies. Station subsidies will impact the amount of NEVI funds

² Dane McFarlane, Matt Prorok, Brendan Jordan, Tam Kemabonta, *Analytical White Paper: Overcoming Barriers to Expanding Fast Charging Infrastructure in the Midcontinent Region*, Great Plains Institute, July 2019. Email referred to received March 23, 2022, from DOT/DOE Joint Office Technical Assistance, [REDACTED] and quoted answer from [REDACTED], NREL who supplied the answer.

³ Garrett Fitzgerald and Chris Nelder, *DCFC Rate Design Study for the Colorado Energy Office*, Rocky Mountain Institute, February 2020, page 13.

Wyoming NEVI Plan – Year 1

available to build off-corridor stations that would facilitate user movement from the corridors to the tourist destinations.

Using projected EV mileage data noted in Table 1 on page 23 and the NEVI station use estimates available in Annex C (NEVI Station Use Estimate) and Annex D (Yellowstone DCFC Station Use Estimate) the following chart projects how long it will take a NEVI station along a Wyoming corridor to achieve 36 and 72 visits as suggested by the studies. To compare corridor potential to tourist area visit potential, estimates also include Yellowstone. The results of that analysis are not encouraging except for the Yellowstone area. Put another way, Wyoming corridors have about 1,500 miles a day in non-Teala out-of-state traffic. That number needs to increase 100-fold to roughly 150,000 miles a day for NEVI stations along the interstates to receive enough potential visits to cover costs if built out at the no more than 50-mile frequency.

Estimated Station Visits Per Day

	I-80	I-25	I-90	Yellowstone
Year	10 Stations	8 Stations	4 Stations	2 Stations
2023	0.32	0.30	0.41	4.83
2024	0.42	0.39	0.53	6.28
2025	0.54	0.51	0.69	8.16
2026	0.70	0.66	0.90	11
2027	0.91	0.86	1.17	14
2028	1.19	1.11	1.52	18
2029	1.54	1.45	1.98	23
2030	2.01	1.88	2.57	30
2031	2.61	2.45	3.34	39
2032	3.39	3.18	4.35	51
2033	4.41	4.14	5.65	67
2034	5.73	5.38	7.35	87
2035	7.46	6.99	9.55	113
2036	9.69	9.09	12	146
2037	13	12	16	190
2038	16	15	21	247
2039	21	20	27	321
2040	28	26	35	418
2041	36	34	46	543
2042	47	44	60	706
2043	61	57	78	918
2044	79	74	101	1193

Figure 3 Station Visit Predictions without Exceptions

This graph assumes a 30% increase in DCFC station visits consistent with DCFC company projections of EV traffic growth provided to WYDOT. Other growth projections are much lower. The US Energy Information Administration projected light duty EV growth from less than 1% in 2021 to a little over 7% in 2050 suggesting this estimation is generous in its station visit estimate. That analysis is available at <https://www.eia.gov/outlooks/aeo/narrative/electricity/sub-topic-01.php>.

Capital Expenditures

Complicating visit challenges are CAPEX costs associated with purchase, construction, and installation of the stations themselves. WYDOT asked DCFC companies to update station cost estimates included in the *Wyoming Interconnected Electric Vehicle Networks Study* completed in December 2020. That study estimated that a 4 x 150 kW port station with minor electrical upgrades (not including installing 480 3-phase supply) would cost between \$478,000 and \$725,000.⁴ WYDOT received responses from six companies. All confirmed the estimate as valid. One suggested the high price might be low now, one suggested the low price might be a little high. Additional information supplied by one company indicated their analysis suggested a station owner in Wyoming would have between \$587,000 and \$837,000 in negative CAPEX and OPEX costs after a decade. That information also projected only 10 station visits / day at the end of the same period.

Given these challenging fiscal pictures, WYDOT projects that most of the ~\$24 million in remaining NEVI funds will be required by corridor stations leaving little funds for the routes that show the most potential for use. Slide 2 in Annex E (Station Maps) portrays what the corridor network would look like if WYDOT must build it to NEVI requirements. The NEVI program would fund 17 – 19 additional stations depending upon placement. 8 of those stations would be in remote locations where they may be the only infrastructure in the area. 4 will be near cities that have one or more other stations that will not qualify since they are more than 1 mile from the interstate exit.

Operational Expenditures

Assuming a \$600,000 average station cost and the maximum 80% match, each NEVI station will require \$480,000 in CAPEX support. Multiplied by 17 stations, which would be roughly \$8,160,000. OPEX costs are more difficult to evaluate and estimate since, to this point, no one other than Tesla has any history of operational costs of station of this size. The two Electrify America stations just opened in the last year. Information supplied by some installers and operators suggested that stations of this size could expect operations expenses of between \$120,000 to \$240,000 / year or \$10,000 and \$20,000 per month.

The most comprehensive analysis showed that over a 10-year span, an operator in Wyoming could expect OPEX costs to rise from roughly \$56,000 the first year to \$130,000 by year 10 or from \$5,000 / month to more than \$10,000 / month. NEVI stations will likely be funded and sequenced over two or more fiscal years. Most DCFC companies contacted said it would take

⁴ Evia, *Wyoming Interconnected Electric Vehicle Network Study*, December 2020, page 46.

roughly 18 months for a station to become fully operational from start to finish. Using these planning figures, WYDOT estimates that the average station will incur roughly \$86,000 / year or \$7,000 / month in OPEX. Again assuming an 80% matching rate for 17 stations over 5 years suggests approximately \$9,137,500.

WYDOT's analysis concludes that if the corridors are built to the NEVI standards at least \$17,297,500 will be used to keep the stations operable for five years. Unfortunately, based upon station visit projections, it is likely these locations will not be profitable for another decade. This establishes the conditions for an EV Infrastructure system failure.

EV CHARGING INFRASTRUCTURE DEPLOYMENT

The best way to prevent the system from financial collapse and meet the overall strategic goal to enable EV movement through the state is to develop and fund a network that can survive while traffic is limited. This is best accomplished by limiting the number of and competition between stations by putting stations where there is the highest potential for use. In Wyoming, that means strategically limiting the number of corridor stations to address range anxiety but not prevent one another from financial viability. It also requires getting off-corridor stations built as quickly as possible to encourage out-of-state visits to areas that are frequented by travelers—the tourist destinations. Wyoming's plan does just that and provides the best chance for the system to remain solvent.

Funding Sources

All non-federal funding sources for the NEVI plan will come from private companies, entities, businesses, or local jurisdictions. No state funds are or will be allocated to this project.

2022 Infrastructure Deployments/Upgrades

As discussed earlier in the plan, there are not predicted major utility upgrades necessary along the corridors to support a NEVI-sized station. The plan does not require 4 x 150 kW station along off-corridor routes. No current station along the corridors require upgrade to meet the 4 x 150 kW requirement. The following chart indicates the stations WYDOT proposes to fund along corridors. Figure 4 shows where they are located. The discussion and specifics of the discretionary exceptions are included in that section at the end of the plan.

State EV Charging Location Unique ID*	Route (note AFC)	Location	Anticipate d EV Network (if known)	Utility Territories	Anticipated Station Ownership ** (if known)	FY22 Funding Amount	FY23- FY26 Funding Amount (Optional)
61489	I-90	Sundance		Powder River Energy	P	\$460,000	\$344,000

Wyoming NEVI Plan – Year 1

State EV Charging Location Unique ID*	Route (note AFC)	Location	Anticipate d EV Network (if known)	Utility Territories	Anticipated Station Ownership ** (if known)	FY22 Funding Amount	FY23- FY26 Funding Amount (Optional)
61490	I-90/I-25	Buffalo		Powder River Energy	P	\$460,000	\$344,000
61491	I-25	Douglas		Rocky Mountain Power	P	\$460,000	\$344,000
61492	I-80	Pine Bluffs		High West Energy	P	\$460,000	\$344,000
61493	I-25	Sheridan		Montana Dakota Utilities	P	\$460,000	\$344,000
61494	I-25	Wheatland		Wheatland REA or Town of Wheatland	P	\$460,000	\$344,000
61495	I-80	Laramie		Rocky Mountain Power	P	\$460,000	\$344,000

*Defined by the State – this should match the unique ID in the State’s applicable GIS databases. It should be clear that the unique IDs correspond to general locations for proposed installations rather than pinpoint geocoordinates.

**Federal Government Owned (FG), Jointly Owned (J), Local/Municipal Government Owned (LG), Privately Owned (P), State/Provincial Government Owned (SG), or Utility Owned (T)

Wyoming NEVI Plan – Year 1

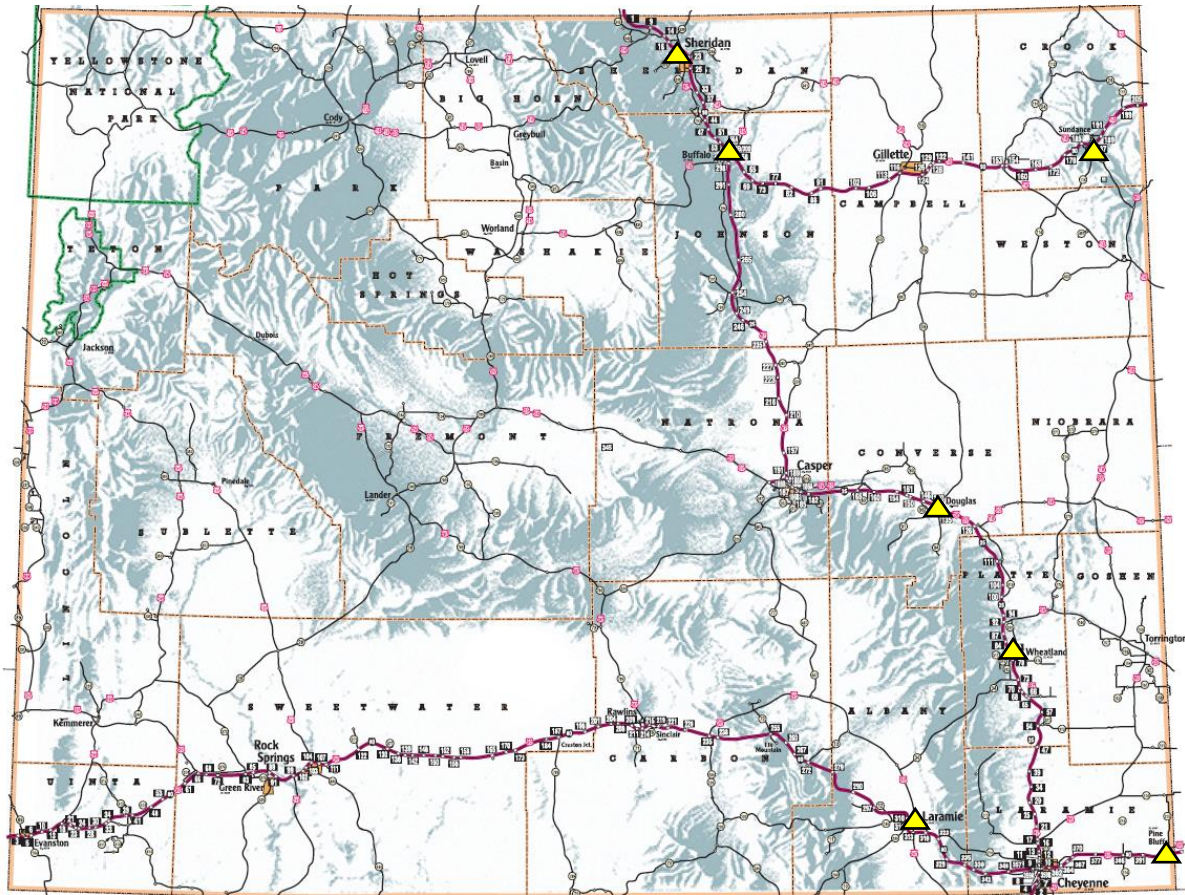


Figure 4 FY 22 / 23 NEVI Station Plan

Upgrades of Corridor Pending Designations to Corridor Ready Designations

If Wyoming's plan is approved, WYDOT will request upgrade of all corridors from Corridor Pending to Corridor Ready when funded NEVI stations are installed and operational so the State may begin building out subsequent route infrastructure with remaining NEVI funds. Some FY 2024 – 2026 funds will be set aside to provide OPEX support to the seven NEVI-sized stations built on the corridors with FY 2022 funds.

Increases of Capacity/Redundancy along Existing AFC

Figure 2 provides a visual of the redundancies along the corridors in Wyoming. Figure 4 provides a visual of the capacity increase. If Wyoming's exceptions are approved, this plan reduces existing redundancy and eliminates future redundancies.

Electric Vehicle Freight Considerations

See State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs section pages 27 – 28.

Public Transportation Considerations

See Public Transportation section page 29.

FY23-26 Infrastructure Deployments

Approval of the plan and its required exceptions will likely fund an entire EV infrastructure support network that will meet residential, truck, and visitor requirements for at least the next decade. It is possible an expanded network will not be necessary for up to two decades.

1. See Annex E (Station Maps) slide 1 for the overall visual of the WYDOT recommended EV infrastructure including off-corridor station locations that support visitor destinations. After awarding the four recommended NEVI corridor stations, WYDOT will issue RFPs for:
 - a. Route build outs (noted by the red triangles) that facilitates movement of traffic from corridors to tourist destinations.
 - b. Additional corridor DCFC stations (noted by blue triangles) that may meet a local business EV volume conditions. WYDOT will not require these stations to meet NEVI size, location, and port requirements but be tailored by local jurisdictions and business owners to achieve their local EV support goals at other points along the corridors.
 - c. Blue and red triangle locations are for visual reference only, actual locations will be determined by local jurisdictions and businesses based upon their analysis. Additional route build out information (such as station size, port, capacity, and costs) will not be available until WYDOT can confirm NEVI funds will be available for off-corridor and non-NEVI size on-corridor station support.
 - d. WYDOT currently has one request for a route build out from I-25 to Cody. Estimated cost for that route is \$2.1 million suggesting that route build out will be significantly less expensive than corridor build out.
2. See Annex E (Station Maps) slide 2 for a visual depiction of the plan if exceptions are not granted and the corridors are not designated as ready. Please note that if exceptions are not approved, WYDOT does not propose to fund any additional stations with NEVI funds and will return those unused to the FHWA for distribution. WYDOT will not put in additional NEVI-sized stations on the corridors beyond the ones noted in the plan.
3. See Annex E (Station Maps) slide 3 for a visual depiction of a fully NEVI compliant corridor network (not recommended and not proposed).
4. See Annex E (Station Maps) slide 4 for a visual depiction of a fully NEVI compliant AFC system and route build out. This would fulfill all NEVI requirements and support travel to tourist destinations. We assess this as not economically feasible and do not

propose to build out this system.

5. See Annex E (Station Maps slide 5) for a visual depiction of the current and planned NEVI-Sized stations located in Wyoming.
6. Annex E slides 6 – 10 provide greater fidelity at the district level for existing and recommended stations locations at the corridor exit or town.

State, Regional, and Local Policy

Demand Charges

The Wyoming Public Service Commission (WPSC) supports this plan for EV Charging Infrastructure Deployment as it adequately addresses the development of infrastructure for EV charging stations in a manner that minimizes demand charges by concentrating potential EV charger use in high-use locations rather than proposing charging stations in remote locations that are likely to receive little use. In addition, the plan as submitted allows strategic placement of charging stations along secondary corridors supporting travel to Wyoming’s most visited tourist attractions such as Devils Tower, Yellowstone National Park, and the Grand Tetons, among other locations frequently visited by out-of-state travelers.

The WPSC does not have jurisdiction to address demand charge rates of electric cooperatives or municipalities. However, with respect to jurisdictional utilities, the WPSC is committed to exploring potential demand charge mitigation through consideration of alternatives such as virtual meter pooling and time of use rates (TOU). It is worth noting, the WPSC is aware that some Jurisdictional public utilities currently have TOU options that may result in more desirable rates but has not included such rates in its analysis due to the uncertainty of their actual impact on demand charges. The WPSC is committed to considering demand charge reduction consistent with Jurisdictional public utility tariff, its authority and Wyoming law.

For a full WPSC analysis of demand charge rates along the corridors, see Annex F (WPSC EV Station Demand Charge Analysis). Although the Wyoming Legislature may not choose to address demand charges, it did pass Senate File 35 during the 2022 Budget Session. That legislation exempted DCFC operators / stations from being treated as utilities. That exemption combined with our assumption technologies that eliminate or reduce demand charges will be acceptable expenses provides opportunity to better control some OPEX challenges.

User Taxation

Wyoming Fuel Tax Statutes currently allow for the taxation of electricity used to propel a motor vehicle over public roads. Considering this, rules & regulations as well as policies and procedures are currently being developed and refined in preparation of collecting the fuel tax on all current and future electric charging stations in the State of Wyoming. The Wyoming Fuel Tax Administration is developing the rules and regulations that governs existing charging stations, licensing, and tax collections based on the existing statutory language.

The proposed, yet to be formally approved plan, are taxation rates on every level of public EV charging station (approximately 114 level 1,2 and 3 public charging stations in Wyoming) and partial private charging stations (fleet charging and workplace charging stations for employees). The “fuel or road maintenance” tax will be levied based on the gasoline gallon equivalent identified in Wyoming Statute and approved by the legislature.

The Wyoming Fuel Tax Administration will coordinate with the Weights & Measures Program within the Wyoming Department of Agriculture at the appropriate time in the process to ensure that the kilowatt hours are measured accurately at each charging station. WYDOT will ensure appropriate signage and rates required by law or agreed to as a REV West signatory are present.

IMPLEMENTATION

WYDOT will hire a technical consultant to provide technical design, installation, maintenance, and supervisory assistance over the life of the appropriation. WYDOT will issue a single RFP for the four NEVI stations required in the plan. WYDOT will accept either location, corridor, or system-based proposals. WYDOT will prioritize location-based proposals over corridor and system-based proposals if enough proposals are received to cover the seven outstanding corridor locations. If all locations are not covered by proposals, WYDOT will evaluate corridor or system-based proposals. This procedure will provide Wyoming businesses the opportunity to access NEVI funds without competing on a system-wide basis and supports one of the goals of the NEVI program. RFP development, issuance and award processes have been discussed throughout the plan. The timeline is communicated in the dates portion of the plan.

Strategies for EVSE Operations & Maintenance

The EVSE is rapidly developing solutions tailored to specific installation challenges, and some of the approaches described above, along with emerging and new innovations will be helpful as Wyoming connects its more remote corridors. The environmental extremes prevalent within the state suggest no centralized requirement will be applicable. The NEVI consultant will be responsible for developing and supervising site-specific requirements and applying those requirements in the technical descriptions of the RFPs.

Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners

This will be completed through an RFP process explained in detail throughout the plan. The pre-RFP release seminar will facilitate DCFC company, local jurisdiction / business, and utility coordination that may establish a wide range of proposals for location, corridor, or corridor system build out.

Strategies for EVSE Data Collection & Sharing

Data collection and sharing requirements will be communicated in RFPs and be managed among WYDOT, the ZEWS, WEA, and the NEVI consultant as described throughout the plan.

Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

Since Wyoming’s plan relies upon placement of stations in existing infrastructure locations, no additional requirements have been identified. The plan does not propose to place standalone EV infrastructure anywhere, not even along the routes. Route RFPs will require stations be co-located with the appropriate amenities desired by the traveling public.

Strategies to Promote Strong Labor, Safety, Training, and Installation Standards

Requirements to comply with applicable federal and state labor, safety, training, and installation standards will be communicated in the associated RFPs. The NEVI consultant, in coordination with WYDOT, will qualify proposals and supervise execution during construction, operation, and maintenance throughout the life of the program.

CIVIL RIGHTS

WYDOT assures that no person shall on the grounds of race, color, national origin, sex, age, disability, low income and LEP (Limited English proficiency), as provided by Title VI of the Civil Rights Act of 1964, and the Civil Rights Restoration Act of 1987, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. WYDOT further assures every effort will be made to ensure nondiscrimination in all of its programs and activities, whether those programs and activities are federally funded or not.

In the event WYDOT distributes federal aid funds to another governmental entity, WYDOT will include Title VI language in all written agreements and will monitor for compliance. WYDOT’s Civil Rights Program is responsible for initiating and monitoring Title VI activities, preparing required reports and other WYDOT responsibilities as required by 23 Code of Federal Regulation (CFR) 200 and 49 Code of Federal Regulation 21, and 49 Code of Federal Regulation (CFR) part 303.

When addressing accessibility needs and requirements, WYDOT is committed to making reasonable modifications in policies, practices, procedures, and programs that deny equal access to individuals with disabilities unless a fundamental alteration in the program would result. Under chapter 5 of the U.S. Access Boards “Guide to the ADA Accessibility Standards” Electric Vehicle Charging Stations (<https://www.access-board.gov/ada/guides/chapter-5-parking/#electric-vehicle-charging-stations>), it is recommended: “Provide access to a reasonable number of spaces serving EV charging stations or use the scoping table in §208.2 <https://www.access-board.gov/ada/guides/chapter-5-parking/#minimum-number-of-accessible-parking-spaces>) to determine an appropriate number. (The number of accessible spaces serving EV charging stations must be determined separately from the required number of car and van parking spaces.)”

The Civil Rights Program web page for approved plans can be accessed at:
https://www.dot.state.wy.us/home/business_with_wydot/civil_rights.html

All RFPs associated with NEVI program funding will require compliance with appropriate civil rights regulations and ADA Accessibility Standards.

EQUITY CONSIDERATIONS

Wyoming will improve affordable, clean transportation access through strategic and thoughtful corridor buildouts that prioritize equitable distribution of EV charging access statewide. Because the entire state of Wyoming is rural, Wyoming’s strategic plan to use NEVI formula funds will easily achieve and surpass the Justice 40 initiative to deliver at least 40% of project benefits to underserved, rural, and disadvantaged areas—if the exceptions are approved. The identified off-corridor routes prioritize dispersion of EV infrastructure to Justice 40 identified areas that are not located along the corridors to serve both local populations and pass-through travelers.

Specifically, concerning equitable distribution to underserved and disadvantaged populations, all additional routes were selected based upon serving Justice 40 areas including Highway 287 and Highway 26 that serve the Wind River Reservation near the center of the state. These routes also provide opportunities to install EV infrastructure that enables movement through disadvantaged areas as visitors travel from the corridors to tourist destinations. This will encourage continued movement through these areas and facilitate use of traveler funds in the community but only if off-corridor stations are not required to be NEVI-sized.

Identification and Outreach to Disadvantaged Communities (DACs) in the State

As highlighted in Wyoming’s Strategic Communications Plan for implementing Wyoming’s NEVI formula funds, and described earlier in the plan, WYDOT has already engaged a diverse range of stakeholders and communities statewide—all of which represent rural areas. Access to the ZEV and NEVI webpage is universal. Of the public meetings already conducted, those in Rock Springs and Riverton specifically targeted identified Justice 40 regions.

In addition, specific information and feedback sessions were held for the Wyoming Association of Municipalities and Wyoming County Commissioners Association both of which members include Justice 40 designated areas. WYDOT established a voluntary EV Stakeholder list to provide interested parties immediate access and notification to webpage posting and other one-on-one discussion opportunities with regards to the plan. Unfortunately, through a number of public meetings, association meetings, public comment opportunities and department media releases, there appears to be limited interest from the DAC community to pursue this technology and infrastructure. WYDOT remains committed to supporting efforts to provide DACs access to the technology should they show interest. Unfortunately, NEVI program rules will inhibit off corridor DACs from receiving funding if the exceptions are not approved and the assumption that off-corridor stations do not have to be 4 x 150 kW is invalidated. These unknowns might be negatively impacting DAC interest in pursuing funding.

Process to Identify, Quantify, and Measure Benefits to DACs

If exceptions are not approved and WYDOT is not allowed to fund stations smaller than 4 x 150 kW off corridor and in supplemental on corridor locations, there is no mechanism in this plan to

identify and measure benefits to DACs since no funding will be executed beyond the corridors. Justice 40 areas served by corridors will receive little discernable benefit since those areas are already able to support EV travel due to existing stations.

As identified earlier in the plan, the Justice 40 designations in Wyoming lacked an economic feasibility component. As such, Wyoming is applying the notion of benefits universally since the challenge to disadvantaged communities applies statewide. In Wyoming's case, keeping the station operable and solvent are the most measurable benefits regardless of location. Lack of current and predicted traffic for up to 20 years suggests any increase in visitors using EVs would not offset costs associated with installing the technology. To address that challenge, the State's plan proposes to use NEVI funds in these areas without requiring the stations meet NEVI requirements. Likewise, elimination of station frequency and redundancy along the corridors in the Justice 40 designated areas potentially increases overall economic benefit in the area. At the very least, it will reduce the cost of getting the infrastructure in place in and near towns such as Wheatland, Rock Springs, Green River, and Evanston.

Benefits to DACs through this Plan

As previously discussed, Wyoming's plan benefits DACs as it moves more funding for affordable EV structure to off-corridor Justice 40 areas more quickly in the life of the program.

LABOR AND WORKFORCE CONSIDERATIONS

The RFP will address contractor staffing and qualifications. The consultant will help develop the proper staffing, qualifications, and training requirements as it relates to the services set forth in the RFP and NEVI program guidance. The RFP will describe the specific skills needed from the proposer. Along with this, the RFP will describe the educational, years of experience and certification requirements for all key personnel.

The RFP will also have the proposer submit background, experience, resumes, and references. This information will be used as part of the evaluation criteria. As the technical expert, the consultant will provide supervision and technical evaluation services to ensure contractor safety, training, and installation standards meet applicable federal, state, local, and industry regulations.

WYDOT will also ensure the following:

1. Disadvantaged businesses enterprise (DBE) will be solicited for construction opportunities as outlined in WYDOT's currently approved DBE program plan. Our current DBE goal is 5.29%
2. Required ADA Guidelines will be followed for construction of all charging stations.
3. Small business utilization will be a continued focus. Currently, WYDOT awards a significant amount of their contracts to small businesses. Based on our prequalification data collection process, about 47% of all construction contracts that are awarded go to small business firms.

CYBERSECURITY

The NEVI consultant, station awardee (including the construction firm(s)) will be required to have cyber liability insurance that shall be sufficiently broad to cover all duties and obligations undertaken by the successful proposer. This will include, but is not limited to, claims involving infringement of intellectual property, copyright, trademark, trade dress, privacy, information theft, damage to or destruction of electronic information, alteration of electronic information, extortion and network security.

Solutions must be designed in accordance with NIST 800 series standards and must also be adaptable to support any future developed industry standards or guidelines.

(<https://csrc.nist.gov/publications/sp800>)

The NEVI consultant, in coordination with the State's IT personnel, will ensure compliance with cyber security standards before, during, and after completion of NEVI station construction. WYDOT will not issue cyber or physical security requirements as that is beyond the scope of the department's authority and capability. Instead, the RFPs will direct proposals to address federal security requirements.

PROGRAM EVALUATION

WYDOT, aided by the ZEWG, will supervise the NEVI plan throughout the life of the program. The NEVI consultant will be required to provide monthly updates to the ZEWG and quarterly updates to the state agency directors. The consultant will monitor station installation progress and report installation completion, maintenance status, connectivity issues, and operational statistics at monthly reviews. The NEVI consultant will be responsible for submitting an annual report describing the progress of the program and providing recommendations for station subsidies or route build out procedures. The main evaluation criteria will be the financial stability of each funded station and the network as additional stations come online.

DISCRETIONARY EXCEPTIONS

Exception # ¹	Type ²	Distance of Deviation ³	Included in Round 6 AFC Nomination	Reason for Exception Request ⁴
1	<input type="checkbox"/> 50 miles apart <input checked="" type="checkbox"/> 1 mile from exit	4.8 miles 2.8 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
2	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	50 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
3	<input checked="" type="checkbox"/> 50 miles	54 miles	<input type="checkbox"/> Yes	<input type="checkbox"/> Grid Capacity

Wyoming NEVI Plan – Year 1

Exception # ¹	Type ²	Distance of Deviation ³	Included in Round 6 AFC Nomination	Reason for Exception Request ⁴
	<input type="checkbox"/> apart <input type="checkbox"/> 1 mile from exit		<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
4	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	50 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
5	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	26 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
6	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	12 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
7	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	64 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
8	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	17 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
9	<input checked="" type="checkbox"/> 50 miles apart <input type="checkbox"/> 1 mile from exit	26 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Grid Capacity <input checked="" type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost
10	<input type="checkbox"/> 50 miles apart <input checked="" type="checkbox"/> 1 mile from exit	0.1 miles	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Grid Capacity <input type="checkbox"/> Geography <input checked="" type="checkbox"/> Equity <input checked="" type="checkbox"/> Extraordinary Cost

1. Indicate the number for this specific exception request that corresponds to the same number located on the map provided below.
2. Select 50-mile and/or 1-mile distance exception or both
3. Note the distance of the exception request. For example, if the exception request is for a deviation of 5 miles from the 50-mile requirement, indicate 5-miles

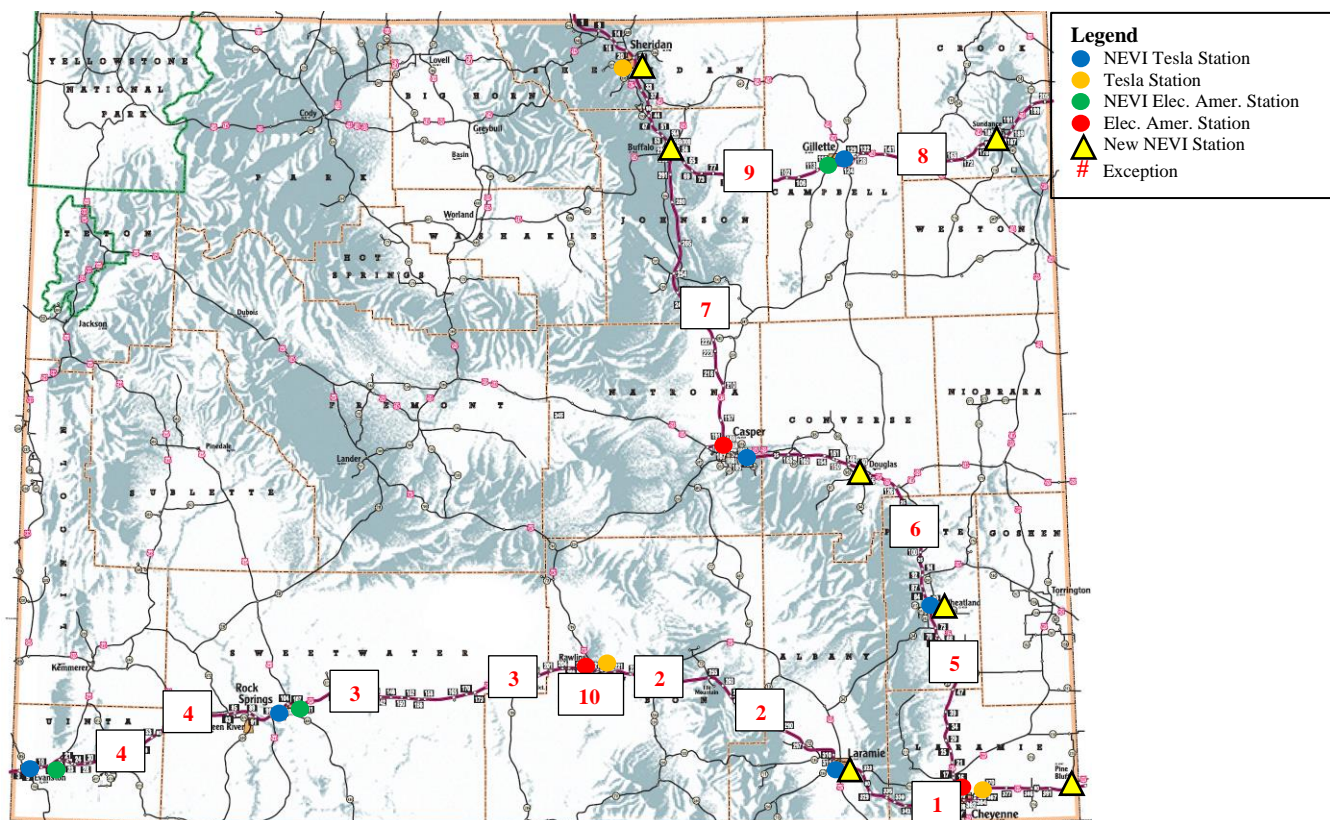


Figure 5 Exceptions Map

Exceptions Request Justifications

These exceptions seek to support our understanding of the Administrations Strategic intent of encouraging EV use. They work to wisely steward the fiscal resources available and as described, implement a statewide (versus corridor) solution. Data was not available from the Joint Office to refute the assumptions and / or data we used in the development of the plan. As a result, Wyoming is requesting multiple exceptions. The longest distance between two stations in the plan is between Casper and Buffalo which could be up to 114 miles depending upon the Buffalo site selected for a station. According to a recent evaluation of EV traffic conducted by Edmunds available at <https://www.edmunds.com/car-news/electric-car-range-and-consumption-epa-vs-edmunds.html>, only two recent models achieve less than 150-mile range. Although some older versions of EV also cannot achieve 100-mile ranges, it seems economically irresponsible to build an entire system to enable such a small portion of the possible traveling public in Wyoming. In addition, as the technology evolves ranges will get better, not worse, as is evident by so few current models achieving under 200 miles (only 3 of the 42 evaluated) in range.

1. Cheyenne is 42 miles from the proposed NEVI funded station in Pine Bluffs and 48 miles from a proposed NEVI-sized station in Laramie. It will have one Electrify America station opening soon (4.8 miles from I-80 and 2.8 miles from I-25). Requiring another station closer to the interstate will produce a significant amount of economic pressure on all stations to survive. Cheyenne is 12 miles from Colorado border and 32 miles from the station in Wellington, Colorado. Requiring another station closer to the interstate will produce a significant amount of economic pressure on all stations to survive. Cheyenne

also has an operable a Tesla stations that will limit Tesla owner visits to another NEVI station.

2. One or two stations between the station in Laramie and the stations in Rawlins. It is approximately 100 miles between the proposed NEVI station in Laramie and the planned Electrify America stations in Rawlins. No infrastructure or amenities exist at the 50-mile point between Laramie and Rawlins. Location of any station along that route would still leave one leg at greater than 50 miles requiring two stations between the towns. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
3. Two stations between the stations in Rawlins and the station in Rock Springs. It is approximately 104 miles between the planned Electrify America stations in Rawlins and planned station in Rock Springs. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
4. One or two stations between the station in Rock Springs and the stations in Evanston. It is approximately 100 miles between the planned Electrify America station in Rock Springs and the Electrify America station in Evanston. Nothing exists at the 50-mile point between Rock Springs and Evanston. Location of any station along that route would likely still leave one leg at greater than 50 miles requiring two stations between the towns. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
5. Chugwater is 27 miles from Cheyenne and 49 miles from the proposed NEVI station in Wheatland. The population is not large enough and there is not enough predicted traffic to support a NEVI-sized station for the next decade or more.
6. One station between Wheatland and Douglas. It is 62 miles between the proposed NEVI station in Wheatland and the proposed NEVI station in Douglas. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
7. One station between Casper and Buffalo. Depending upon the site selected for the Buffalo station it could be up to approximately to 114 miles between the planned Electrify America station in Casper and the proposed station in Buffalo. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
8. One station between the proposed station in Sundance and the Electrify America stations in Gillette. It is approximately 67 miles between the proposed station in Sundance and the station in Gillette. There are no significant population centers in the stretch between the two towns that could support a NEVI-sized station based upon traffic projections.
9. One station between Gillette and the proposed station in Buffalo. It is approximately 76

miles between the Electrify America stations in Gillette and the proposed station in Buffalo. There is no infrastructure that could support a station between these two locations except a federally supported rest area. This area is the only area along Wyoming corridors that may not be able to support a 600-kW power supply.

10. Rawlins – The planned Electrify America station will be roughly 1.6 miles from the exit. Rawlins EV traffic is likely not large enough to support this station plus the Tesla station and a third NEVI station and will struggle to recover costs.

Impact on Station Survivability

Granting these exceptions has some impact on individual station visit projections, therefore, survivability. In the case of Rawlins, Casper, and Cheyenne, it prevents additional stations from competing for very limited revenue. Across all corridors, it reduces the total number of stations / locations and reduces the predicted time where they may become profitable by two to three years. Most importantly, however, it allows WYDOT to shift funds away from the lower potential corridors to the higher potential routes to tourist destinations thus enhancing EV adoption. In all cases it only improves NEVI station viability by a few years, however.

	I-80	I-25	I-90	Yellowstone
Year	6 Stations	5 Stations	3 Stations	2 Stations
2023	0.53	0.47	0.55	4.83
2024	0.69	0.61	0.72	6.28
2025	0.90	0.79	0.93	8.16
2026	1.16	1.03	1.21	11
2027	1.51	1.34	1.57	14
2028	1.97	1.75	2.04	18
2029	2.56	2.27	2.65	23
2030	3.33	2.95	3.45	30
2031	4.32	3.83	4.49	39
2032	5.62	4.98	5.83	51
2033	7.31	6.48	7.58	67
2034	9.50	8.42	9.86	87
2035	12.35	10.95	12.81	113
2036	16.05	14.24	17	146
2037	21	19	22	190
2038	27	24	28	247
2039	35	31	37	321
2040	46	41	48	418
2041	60	53	62	543
2042	77	69	80	706
2043	101	89	105	918
2044	131	116	136	1193

Figure 6 Station Visit Predictions with Exceptions

Mitigation Plan

To mitigate concerns about distances between stations associated with this plan, WYDOT proposes to use remaining NEVI funds to support the purchase of mobile charging capabilities. Once NEVI stations are built, WYDOT will issue an RFP to fund such capabilities. This technology is currently available in the form of battery boosters transportable in a small vehicle or in van-installed versions. The most likely candidates for this technology would probably be service stations or towing companies. WYDOT will implement procedures to control the cost of the emergency services for at least the period of the NEVI appropriation.

In the RFP, WYDOT will require mobile charger awardees to report response statistics throughout the life of the appropriation. WYDOT will utilize data supplied by responders to validate the positioning, size, and use of stations in remote areas. If warranted, additional stations along corridors or routes will be funded to service unanticipated EV traffic growth.

WYDOT's proposed plan for seven NEVI-sized stations at an estimated cost of ~\$12 million over the life of the appropriation is executable in the first two years. This allows substantial flexibility over the remaining three years if traffic estimates, or assumptions prove incorrect. WYDOT and the ZEWG will monitor the rapidly changing market for EVs and AFCs. Adjustments will be made as appropriate based on Wyoming-specific dynamics and evolving EV project economics to reduce user range anxiety while keeping financial viability as positive as possible.

Additional corridor station locations that meet local traffic requirements may supplement NEVI-sized stations without the significant CAPEX and OPEX outlays (See blue triangles on slide 1 Annex E (Station Maps)). These smaller stations will provide additional corridor coverage and some financial flexibility that enables corridor movement without jeopardizing long-term system viability.

Risks to Funding

Initial outlay for the seven NEVI-sized along the corridors is expected to be ~ \$4.2 million during FY 22 / 23. Actual available funding, however, is expected to be ~ \$ 9 million. That means it is possible for WYDOT to fund all stations at 80% and \$4.8 million of unobligated funds will remain available. This assumes the NEVI-funding stations do not become operational in FY23 and are not expending NEVI funds to cover OPEX. The only mitigation for probable unobligated funds is to grant corridor build out status as soon as proposals are accepted and allow WYDOT to shift funds to non-NEVI sized station support along proposed off-corridor routes to the tourist destinations.

NATIONAL PARK SERVICE SUPPORT

The National Park Service supports the exception request as they may become a significant beneficiary of using NEVI funds to facilitate tourism. During a meeting with WYDOT, FHWA,

and NPS officials on June 28, 2022, there was agreement in principle that Wyoming NEVI funds could be used to support station development on park service lands in Wyoming. If the exceptions are granted and WYDOT can use NEVI funds to support smaller than NEVI-sized station, finances should be available to assist NPS put stations in Yellowstone and Grand Teton National Parks. The parks have provided the following locations where stations might be located. These stations will also be privately owned and operated. See Annex H for the NPS Letter of Support for WYDOT Exception requests.

Yellowstone Park

See Annex I (Yellowstone Station Plan) for map of proposed locations.

Priority 1 (if Yellowstone only had one or two fast charge EV stations)

- Service Station at Fishing Bridge. If there were only one location for a fast charge station in Yellowstone this could provide a stop on US-14 and 191 between Cody (77miles) and Jackson (99 miles).
- Service Station at Old Faithful. Old Faithful is a popular destination for most visitors traveling the Wyoming routes through Yellowstone and visitors are likely to take side trips to the various geyser basins from here. The developed area with service station and other visitor services would be an ideal location.

Priority 2 (best support of the Wyoming corridors)

- Canyon Junction Service Station. Canyon Junction is one of the busies areas in Yellowstone and is a short trip north for visitors traveling from Cody or Jackson; they may well travel the lower Grand Loop Road through Norris to Canyon Junction.
- Grant Village Service Station. Grant Village serves as great convenience stop for visitors traveling between Grand Teton and Yellowstone National Parks. It is 24 miles from Fishing Bridge, 100 miles from Cody and 77 miles from Jackson.
- Pahaska Tepee Service Station. This small resort is outside the East Gate of Yellowstone surrounded by Forest Service Land. YNP has not approached this community but believes it would be the perfect location, supported by a private business for an EV charging Station at Yellowstone's East Gate. There are no concessioners at the East Entrance itself therefore Yellowstone could not accommodate EV charging inside the park in this location.
- Flag Ranch Service Station. Flag Ranch is just south of Yellowstone's South Gate and the John D. Rockefeller Jr. Memorial Parkway which is managed by Grand Teton National Park. Similarly this location is a convenient stop for visitors traveling between the two parks.

Priority 3 (focuses on supporting the Grand Loop Road and through links for visitors traveling

western circuits coming from or going to Montana and Idaho).

- Mammoth Hot Springs Service Station. Mammoth is a well visited destination on the northern loop of Yellowstone's Grand Loop Road.
- Tower Junction Service Station. Tower Junction use has increased with the popularity of Lamar Valley and is a good location for services for visitors coming from Cody through the Northeast Entrance.
- Madison Junction. Madison Junction would be ideal for visitors traveling the Grand Loop Road. West Entrance visitors would more likely find charging in the town of West Yellowstone.

Grand Teton National Park

Proposed locations include Flagg Ranch, Lizard Creek Campground, Colter Bay Cabins, Jackson Lake Lodge, Signal Mountain Lodge, Jenny Lake Lodge, TX Ranch, Moose HQ (would require a public facing component) and GVCC (would require a public facing component). See Annex J (Grand Teton Station Plan) for proposed locations.

As with other off-corridor route locations, these plans will only be executable if WYDOT receives the authority to fund non-NEVI sized stations including Level 2 chargers for overnight guests.

ANNEX LISTING

Annex A – EV Survey Results

Annex B – EV Stakeholder Listing

Annex C – NEVI Station Use Estimate (See attached spreadsheet)

Annex D – Yellowstone DCFC Station Use Estimate (See attached spreadsheet)

Annex E – Station Maps

Annex F – WPSC EV Station Demand Charge Analysis

Annex G – City of Cody Letter of Support

Annex H – NPS Letter of Support

Annex I – Yellowstone EV Station Plan

Annex J – Grand Teton EV Station Plan