



# State of Alaska Electric Vehicle Infrastructure Implementation Plan



ALASKA  
ENERGY  
AUTHORITY





# Plan Development

This plan was developed by the Alaska Energy Authority, Alaska Department of Transportation and Public Facilities, electric vehicle stakeholders, utilities, communities, and residents, with the assistance of Michael Baker International.

## Executive Oversight

Curtis Thayer, Executive Director, AEA

James Marks, Director of Planning & Program Development, Alaska DOT&PF

## Staff

Audrey Alstrom, PE, Director of Alternative Energy and Energy Efficiency Programs, AEA

Josi Hartley, Project Manager, AEA

Daniel Aicher, Project Manager, AEA

Taylor Asher, Project Manager, AEA

Philana Miles, Project Manager, DOT&PF

Rashaud Joseph, Civil Rights Office Manager & Compliance Officer, DOT&PF

Aaron Nickols, OJT Program Manager, DOT&PF

Chrissy McNally, Transportation Planner, DOT&PF

Randi Bailey, Transportation Planner, DOT&PF

## Support

Jeff Kupko, PE, PTOE, Consultant Project Manager, Michael Baker International

Karin McGillivray, Public Engagement Manager, Michael Baker International

Jennifer Gross, GIT Supervisor, Michael Baker International

Caitlin Frye, Communications Specialist, Michael Baker International

*Cover photo of electric vehicle traveling in the winter, courtesy of Mark Kelliher*



## Acronyms

AATCA	Alaska Apprenticeship Training Coordinators Association
ABC	Associated Builders and Contractors
AEA	Alaska Energy Authority
AFC	Alternative Fuel Corridor
AGC	Alaska General Contractors
AKEVA	Alaska Electric Vehicle Association
AKEVWG	Alaska EV Working Group
AMHS	Alaska Marine Highway System
API	Application Programming Interface
ATV	All-Terrain Vehicles
AUCP	Alaska Unified Certification Program
AWP	Alaska Works Partnership
BIL	Bipartisan Infrastructure Law
CCS	Combined Charging System
CHAdE MO	CHARGE de MOve Protocol
CISA	Cybersecurity and Infrastructure Security Agency
DAC	Disadvantaged Community
DBE	Disadvantaged Business Enterprise
DCFC	Direct Current Fast Charging
DEC	Department of Environmental Conservation
DNR	Department of Natural Resources
DOT&PF	Department of Transportation & Public Facilities
EEO	Equal Opportunity Employer
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
EVITP	Electric Vehicle Infrastructure Training Program
FHWA	Federal Highway Administration
GIS	Geographic Information System
GPS	Global Positioning System
IBEW	International Brotherhood of Electrical Workers
ICE	Internal Combustion Engine
kW	Kilowatt
kWh	Kilowatt-hour
LIUNA	Laborers' International Union of North America
LRTP	Long Range Transportation Plan
MOA	Memorandum of Agreement



MOU	Memorandum of Understanding
MPO	Municipal Planning Organization
MW	Megawatt
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEVI	National Electric Vehicle Infrastructure
NHS	National Highway System
NPRM	Notice of Proposed Rulemaking
OEM	Original Equipment Manufacturer
OPN	Online Public Notice
P3	Public-Private Partnership
PCI	Payment Card Industry
PII	Personally Identifiable Information
RCA	Regulatory Commission of Alaska
RFI	Request for Information
RFQ	Request for Qualifications
RPS	Renewable Portfolio Standard
SEP	State Energy Program
SESP	State Energy Security Plan
SUV	Sport Utility Vehicle
USDOT	United States Department of Transportation
VW	Volkswagen



## Table of Contents

<b>Introduction.....</b>	<b>1</b>
Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption .....	2
<b>State Agency Coordination .....</b>	<b>4</b>
<b>Public Engagement .....</b>	<b>7</b>
Stakeholders Involved in Plan Development.....	8
Current Stakeholders.....	8
Potential Future Stakeholders.....	9
Public Outreach.....	10
<b>Plan Vision &amp; Goals.....</b>	<b>12</b>
Plan Vision .....	12
High-Level Program Goals .....	13
Outlook for 5-year Program .....	15
Phase One, Build Out Alaska's Alternative Fuel Corridor .....	15
Phase Two, Build Out Alaska's Highway and Marine Highway System.....	16
Phase Three, Install Charging Stations in Hub Communities, as funding allows.....	16
Phase Four, Urban and "Destination" Locations, as funding allows .....	16
<b>Contracting .....</b>	<b>17</b>
Alaska State Laws on Electric Vehicle Infrastructure and Procurement .....	17
Design-Build .....	17
Grant Program .....	18
P3 .....	18
Operations and Maintenance .....	18
How Alaska will ensure contractors engage communities.....	19
Opportunities for Small Businesses .....	19
Recommended Procurement.....	19
<b>Existing &amp; Future Conditions Analysis.....</b>	<b>20</b>
State Geography, Terrain, Climate and Land Use Patterns .....	20
Alaska Climate Regions.....	21
State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs .....	22
Future State of EV Adoption in Alaska .....	24
Continued Growth Scenario .....	25
Aggressive Growth Scenario .....	25



Grid Capacity.....	25
AFC - Corridor Networks .....	26
Corridor Pending Corridors .....	26
Corridor Ready Corridors.....	26
Existing Locations of Charging Infrastructure Along AFCs .....	26
Known Risks and Challenges.....	29
Lack of development.....	29
Climate.....	30
Barriers to consumer adoption.....	31
Energy sources and costs.....	31
Private Investment.....	33
<b>EV Charging Infrastructure Deployment .....</b>	<b>34</b>
Funding Sources.....	34
Infrastructure Deployment Upgrades .....	35
Volkswagen Settlement: Homer to Healy Corridor.....	35
AFC Corridor Pending Designation to Corridor Ready Designation .....	36
Increases of Capacity/Redundancy along Existing AFC .....	36
Electric Vehicle Freight Considerations .....	37
Public Transportation Considerations.....	38
FY23-26 Infrastructure Deployments .....	39
State, Regional, and Local Policy.....	41
Public Utility Definition .....	41
State Energy Policy.....	41
State Motor Fuel Tax – Registration Fees.....	41
Volkswagen Trust Funds and State Energy Program (SEP) Funds .....	41
Alternative Fuel Vehicle Acquisition Requirement.....	41
Regional Zoning .....	41
Grassroots .....	42
<b>Implementation.....</b>	<b>44</b>
Strategies for EVSE Operations & Maintenance .....	44
Maintenance & Warranty Costs .....	44
Fees.....	45
Pricing Structures.....	45
Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners .....	45
Site Selection .....	46
Strategies for EVSE Data Collection & Sharing.....	47
Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs.....	48
Strategies to Promote Strong Labor, Safety, Training, and Installation Standards .....	49
Strategies to Support State Fleet Transition .....	49



<b>Civil Rights .....</b>	<b>51</b>
Title VI .....	51
Americans with Disabilities Act (ADA).....	52
Diverse Business Participation.....	52
<b>Equity Considerations.....</b>	<b>53</b>
Identification and Outreach to Disadvantaged Communities (DACs) in the State .....	54
Process to Identify, Quantify, and Measure Benefits to DACs.....	55
Benefits to DACs through this Plan.....	56
<b>Labor &amp; Workforce Considerations .....</b>	<b>57</b>
<b>Cybersecurity.....</b>	<b>59</b>
<b>Program Evaluation .....</b>	<b>60</b>
Monitoring .....	60
Reporting .....	60
Annual Updates.....	60
<b>Discretionary Exceptions.....</b>	<b>61</b>
Summary of Requests .....	61
Justification for Exception 1.....	61
Map of Exception .....	62
<b>Summary of Requests from AEA .....</b>	<b>63</b>
Appendix A: Public Outreach and Education Plan .....	A-1
Appendix B: Example Site Layouts.....	B-1
Appendix C: Summary of Public Comments.....	C-1
<b>Response to Public Comments.....</b>	<b>C-11</b>



## List of Figures

Figure 1. Alaska Electric Vehicle Working Group 2022 Email Newsletter Stats .....	11
Figure 2. Alaska's Highway System.....	14
Figure 3. Alaska's Average Annual Daily Traffic.....	22
Figure 4. Alaska's Transportation Systems .....	23
Figure 5. EV Registrations in Alaska by Manufacturer .....	24
Figure 6. Alaska EV Growth Scenarios .....	25
Figure 7. Alaska Alternative Fuel Corridor .....	27
Figure 8. Existing EV Chargers Within One Mile and Along Alaska Alternative Fuel Corridor .....	29
Figure 9. Utility Service Areas .....	30
Figure 10. Alaska's Current and Future EV Charging Locations.....	36
Figure 11. Freight Moved by Mode (Within, Into, and Out of Alaska).....	37
Figure 12. Spacing of Potential NEVI Host Communities .....	39
Figure 13. Distance Between Priority Sites in Alaska .....	40
Figure 14. RFI Response Word Cloud .....	45
Figure 15. Example Configuration to Accommodate EVs with Trailers .....	47
Figure 16. Alaska's Justice40 Tracts .....	54
Figure 17. Discretionary Exception 1.....	62

## List of Tables

Table 1: Current Plan Development Stakeholders.....	8
Table 2: Current Plan Development Potential Future Stakeholders.....	9
Table 3. Summary of Future Grid Loads and Capacity .....	26
Table 4. Existing Locations of EVSE Within One Mile and Along Alternative Fuel Corridor .....	28
Table 5. Proposed EV Charger Installations by Other Initiatives .....	35
Table 6. Draft Site Selection and Prioritization Criteria.....	46
Table 7. Discretionary Exception Request .....	61



# Introduction

The Bipartisan Infrastructure Law (BIL) offers a unique funding opportunity to advance a statewide electric vehicle (EV) fast charging network and community-based charging installations in urban and rural areas throughout the state. The National Electric Vehicle Infrastructure (NEVI) formula program will provide \$5 billion over five years for states to build electric vehicle service equipment (EVSE) charging stations along highway corridors. NEVI goals for the EVSE network include being reliable, affordable, equitable, and seamless between states and networks while reducing emissions and increasing clean air.

Through the BIL NEVI Formula Program, Alaska will receive more than \$50 million over five years. The Federal Highway Administration (FHWA) requires states to submit an implementation plan to be eligible for these funds. The Alaska Energy Authority (AEA or The Authority) and the Alaska Department of Transportation and Public Facilities (DOT&PF) have worked with partners and stakeholders to develop the state's Electric Vehicle Infrastructure Implementation Plan (The Plan) and will continue to gather feedback and update The Plan over the coming years. NEVI program funds will be received by DOT&PF and administered by AEA for the duration of the program.

The Plan outlines a strategy for using the NEVI formula funds to deliver EV charging infrastructure that will enable light-duty EV travel and provide confidence when commuting throughout the state for work, recreation, and tourism. The Plan was developed in coordination with DOT&PF, other state agencies, local governments, utilities, and other stakeholder groups in Alaska. This Plan supports the goals and objectives of the State's long-range transportation plan. Programs and projects funded through the NEVI Program will follow United States Department of Transportation (USDOT) and

**The NEVI formula program will provide \$5 billion over five years for states to build charging stations along highway corridors. Alaska will receive more than \$50 million of those funds.**



FHWA regulatory requirements and will be included in DOT&PF's Statewide Transportation Improvement Plan.

The Authority will strategically manage the NEVI funds to deploy publicly accessible EVSE. The guidance requires designated alternative fuel corridors of the National Highway System to be fully "built-out" and approved by FHWA with guidance coming from the US Department of Transportation/Department of Energy Joint Office of Energy and Transportation (Joint Office). Alaska currently has one pending Alternative Fuel Corridor (AFC), located between Anchorage and Fairbanks. Alaska will revisit nominating additional AFCs in subsequent years.

After the AFC is built and accepted by FHWA, the Authority plans to install Direct Current Fast Charging (DCFC) and Level 2 charging stations throughout the rest of the state as funding allows. AEA and DOT&PF will also advocate for rural charging locations through the federal discretionary grant process to meet the needs in this plan.

- Phase 1: Build Out Alaska's Alternative Fuel Corridor
- Phase 2: Build Out Alaska's Highway and Marine Highway Systems
- Phase 3: Install Charging Stations in rural Hub Communities, as funding allows
- Phase 4: Develop charging sites in Urban and "Destination" Locations, as funding allows

The expected dates of the phases identified above are as follows:

- Phase 1: 2022-2024
- Phase 2: 2024-2026
- Phase 3: 2025-2026
- Phase 4: 2026



*An EV enthusiast stands next to his EV while it charges*  
Photo courtesy of Mark Kelliher

## Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption

AEA has partnered with Michael Baker International, an engineering firm with expertise in EV Infrastructure Planning, to assist in developing the NEVI Implementation Plan. Below is a summary of activities conducted prior to and while developing The Plan:

- 2020: AEA formalized the Alaska EV Working Group (AKEVWG) to conduct public education and outreach. The AKEVWG meets quarterly.
- April 2022: AEA entered into an MOU with the Alaska DMV to receive EV registration data



- April 2022: AEA created the AEA/DOT&PF interagency advisory group
- May 2022: Request for Information (RFI) released by AEA to gather public feedback on the NEVI program and to solicit information from potential site hosts
- May 2022: RFI and outreach events advertised at the Sustainable Energy Conference
- May-July 2022: RFI and outreach events advertised on the Online Public Notices (OPN) platform
- June 2022: Hosted four virtual informational sessions
- June 2022: In-person presentations: Southeast Conference, Fairbanks FAST Planning (x3), Bradley Lake Project Management Committee
- July 2022: Implementation Plan Released for Public Comment
- July 12, 2022: Coordination meeting with utilities
- July 13, 2022: Two hybrid (in-person with virtual component) presentations/listening sessions to solicit feedback on The Plan
- July 14, 2022: Presentation to Alaska Municipal League
- July 29, 2022: Implementation Plan submitted to the Joint Office
- September 30, 2022: Expected FHWA approval

This plan is intended to be a living document as AEA collaborates with communities, laws or policies change, adoption projects alter, and additional guidance from the federal government is published. This plan is not intended to impede other DOT&PF infrastructure improvements. The document will be updated annually, and prior year progress and changes will be documented.



*Dedication of an AEA-funded EV Ultrafast Fast-Charger in Homer, Alaska  
Photo courtesy of AEA*



# State Agency Coordination

AEA is the State Energy Office and the lead agency for statewide energy policy and program development. In 2018, Alaska became a beneficiary of the Volkswagen (VW) Environmental Mitigation Trust (Trust), and the Authority was designated by the Governor's Office as the State's lead agency for EV planning and implementation. At that time, AEA adopted a secondary mission to reduce barriers to EV adoption. AEA has taken the leading role in developing and implementing the NEVI program.

DOT&PF is the responsible recipient of FHWA Title 23 funds and plays a vital role in the implementation of FHWA's Alternative Fuel Corridor designations and NEVI Program. DOT&PF oversees the funding and management of state highways, bridges, airports, ferries, and state-owned buildings throughout the state.

Since the designation of AEA as the State's lead agency for EVs by the Governor's Office, AEA has conducted public outreach and education and has worked towards reducing range anxiety by strategically installing EV chargers. In 2020, AEA facilitated the development of the AKEVWG, comprised of representatives of utilities, state and local government, researchers, EV owners, and stakeholder industries. AEA's experience administering the VW Settlement grants for DCFC in Alaska provides the agency with the background and experience needed to implement the NEVI program.

**AEA's experience administering the VW Settlement grants in Alaska provides the agency the background and experience needed to implement the NEVI program.**

A Memorandum of Agreement (MOA) was developed between Alaska DOT&PF and AEA to assign responsibilities for each agency and to define the financial and contracting processes required to implement The Plan. The purpose of the MOA is to provide a framework of collaboration between the two agencies to ensure EV charging infrastructure investments by the State are strategic, coordinated, efficient, and equitable.



The MOA acknowledges AEA as the lead agency for certain aspects of the NEVI program as directed by Governor Dunleavy.

Of note, the MOA places AEA as responsible for:

- planning and designating AFC
- creating, managing, and maintaining a public, fair, equitable, and competitive process for project selection
- developing and administering a public involvement plan that includes consultation and collaboration with Metropolitan Planning Organizations (MPOs) and other critical planning entities
- holding public project evaluation and selection processes
- awarding NEVI funds
- identifying and verifying match requirements are met
- ensuring alignment with the DOT&PF Transportation 'Family of Plans' by identifying the Goals, Objectives, Strategies, and Actions from the Long Range Transportation Plan (LRTP) are incorporated as well as evaluation of regional, area, modal and system plans to incorporate regional needs as well
- providing oversight of all AEA handled NEVI funds and being responsible for compliance with Title 23, Title 49, and 2CFR200 requirements

AEA and DOT&PF staff will meet regularly to coordinate efforts related to NEVI programs and funding. The Executive Director of AEA and the Commissioner of DOT&PF will meet at least twice a year to coordinate and plan for ongoing and new EV program initiatives.

The MOA acknowledges DOT&PF as the responsible recipient of FHWA Title 23 funds. DOT&PF will oversee Title 23 funds and requirements under 23 CFR 200. DOT&PF will also provide geospatial information services (GIS) assistance as needed and coordinate with the MPOs to ensure NEVI projects are included in their Transportation Implementation Plans.

Of note, the MOA places DOT&PF as responsible for:

And DOT&PF, of note, is responsible for:

- providing NEVI plan input and alignment with Governor and State priorities
- ensuring alignment with the DOT&PF Transportation 'Family of Plans' and working to incorporate NEVI as a system with overarching strategy into other transportation plans
- sharing information on laws, regulations, rules, and guidelines that



*AEA-funded EV charging stations in Cantwell  
Photo courtesy of AEA*



may come to bear on the process and connecting AEA with appropriate resources

- managing federal contractual agreement with FHWA
- creating a DOT&PF NEVI planning support program that includes funding in the Statewide Transportation Improvement Program
- provide funding notices to AEA annually based on federal formula and MOA agreements
- implementing NEVI as appropriate on State infrastructure in coordination with the plan
- ensuring NEVI aligns with the overall strategy of DOT&PF's Sustainable Transportation Program

The Plan is a product of close coordination between DOT&PF and AEA. An internal advisory group comprised of subject matter experts within DOT&PF and AEA and an FHWA representative was formed in April 2022 to coordinate implementation planning and development efforts. The purpose of the advisory group is to develop the state strategy for implementing the NEVI program and ensure the plan adheres to FHWA requirements. The advisory group meets and provides updates to agency directors and commissioners every two weeks.

AEA and DOT&PF will comply with the Buy America requirements issued for the NEVI program, and utilize US-produced parts, materials, and EVSE. The agencies recognize that the FHWA interprets and applies Buy America requirements on a 100% domestic content and assembly threshold for iron, steel, and protective coatings. AEA and DOT&PF are prepared to comply with FHWA Buy America requirements, however, the agencies ask for consideration of more flexible definitions of compliance, and a reasonable policy for the acceptance of waivers. The current interpretation of the FHWA Buy America requirements may cause significant project delays due to domestic supply chain constraints. If the equipment or materials are not available or meet quality standards, Alaska will seek a waiver from the Buy America requirements.



# Public Engagement

AEA and DOT&PF will partner to deliver timely and continuous public involvement opportunities consistent with 23 CFR 450.210. As part of developing Alaska's NEVI Plan, AEA and DOT&PF began conducting public outreach, which utilized various platforms and outreach tools. The public involvement objective is to *increase Alaskans' awareness of the NEVI formula funding and gather public input on the plan development and EVSE siting.*

Public involvement will provide transparency in implementation of the NEVI formula program and increase understanding of and enthusiasm for EVs, as well as break down barriers to EV adoption.

AEA hosts the AKEVWG, which meets quarterly and is comprised of EV owners, researchers, utilities, municipalities, site hosts, EV vendors, charging station site hosts and many other stakeholders. This group helps inform AEA of Alaska specific EV considerations including EVSE needs and trends and provides input on how to best identify sites for charging stations. The working group has several hundred email subscribers that are regularly engaged and



AEA conducts public outreach at the Dimond Center EV Show in Anchorage in 2021. Photo courtesy of AEA



provides an opportunity for Alaskans to stay up to date on the changing EV landscape and opportunities in the state.

AEA maintains an EV subpage<sup>1</sup> on the AEA domain that includes information about upcoming public outreach events, AKEVWG meeting minutes, and information regarding cost of EV ownership compared to Internal Combustion Engine (ICE) vehicles, as well as costs and potential benefits to owning a DCFC site. The website also links news articles and television clips in which AEA is featured. AEA's outreach team is continuing to improve and direct traffic to the website. The vision of the website is to be the go-to source for Alaska's EV enthusiasts. The website will include the latest iterations and updates of the plan and provide an opportunity for public comment. As the plan is implemented, the website will include a map with site locations and construction progress.

AEA published an RFI to collect feedback from stakeholders on the development of the plan. AEA specifically requested input on potential charging station locations and considerations in developing the EV Plan. The effort received 99 responses which helped to inform plan development. The comments received from the RFI and on the 65% draft plan are summarized in Appendix C.

## Stakeholders Involved in Plan Development

The list of organizations that have been engaged and future stakeholders are identified in Table 1 and 2 respectively. An asterisk identifies a stakeholder or community that is found within a Justice40<sup>2</sup> area identified by the USDOT.

### Current Stakeholders

*Table 1: Current Plan Development Stakeholders*

Communities & Local Governments		
Akutan*	City of Houston*	Old Harbor*
Municipality of Anchorage	Hydaburg*	Ouzinkie*
City of Anderson	City and Borough of Juneau	City of Palmer*
City of Angoon*	Kachemak*	Pelican
Coffman Cove	Kake*	Petersburg Borough
Cold Bay	Kasaan*	Port Lions*
Cordova	Kenai*	Saxman*
Craig*	Kenai Peninsula Borough*	Seldovia*
Delta Junction	City of Ketchikan*	Seward
Denali Borough	Ketchikan Gateway Borough	City and Borough of Sitka*
Eagle	King Cove*	Municipality of Skagway Borough*
City of Fairbanks	Klawok*	Soldotna*
Fairbanks North Start Borough	City of Kodiak	Tenakee Springs
False Pass*	Kodiak Island Borough*	Unalaska*
Gustavus	Matanuska-Susitna Borough*	City of Valdez
Haines Borough	City of Nenana*	Wasilla*
Homer*	North Pole	Whittier
City of Hoonah*	North Slope Borough	Yakutat

\*Indicates stakeholder or community that is found within a Justice40 area identified by the USDOT

1 <https://www.akenergyauthority.org/What-We-Do/Alternative-Energy-and-Energy-Efficiency-Programs/Electric-Vehicles>

2 <https://www.transportation.gov/equity-Justice40>



Native Organizations		
Ahtna, Inc.*	Cook Inlet Regional Corp*	Metlakatla Indian Community*
Chickaloon Native Village*	Doyon*	
Chugach Corp*	Kodiak Area Native Association*	
Utilities		
Alaska Electric Light & Power Co.	Cordova Electric	Kotzebue Electric Association
Alaska Power & Telephone	Enstar Natural Gas	Matanuska Electric Association
Alaska Power Association	Golden Valley Electric Association	Southeast Alaska Power Agency, Ket-chikan
Chugach Electric	Homer Electric Association	
Copper Valley Electric	Kodiak Electric Association	
Agencies		
Alaska DOT&PF	Bureau of Land Management	US Department of Energy
Alaska Energy Authority	Federal Highway Administration	
Alaska Housing Finance Corporation	Regulatory Commission of Alaska	
Businesses		
Adventure Denali	Loopy Lupine	Denali Chamber of Commerce
ChargePoint	Sheep Creek Lodge	Willow Chamber of Commerce
Dimond Center	Chugiak Eagle River Chamber	Three Bears Alaska
Local Organizations		
Alaska Municipal League	Easy Park	Pacific Northwest Economic Region
Alaska Center	Fairbanks Economic Development Corporation	Prince William Sound Economic Development District
Alaska Electric Vehicle Association (AKEVA)	FAST Planning	Prince William Sound Science Center
Alaska Public Interest Research Group	Haines Economic Development Corporation	ReCharge Alaska
Alaska Trails	Juneau EVA	Renewable Energy Alaska Project
Anchorage Economic Development Corporation	Kenai Peninsula Economic Development District	Sitka Conservation Society
Bering Strait Development Council	Launch Alaska	Southeast Conference*
Copper Valley Development Association	Norton Sound Health Corporation	Southwest Alaska Municipal Conference*
Education		
University of Alaska Anchroage		

\*Indicates stakeholder or community that is found within a Justice40 area identified by the USDOT

## Potential Future Stakeholders

Table 2: Current Plan Development Potential Future Stakeholders

Alaska DEC, Air Quality Division	Calista Corporation*	Laborers' Local 341
Alaska Federation of Natives*	CCI Electrical Services, LLC	Laborers' Local 942
Alaska Inter-Tribal Council*	Chugach Native Association*	Maniilaq*



Alaska Native Tribal Health Consortium*	Cook Inlet Tribal Council*	McKinley Private Investment
Alcan Electrical & Engineering, Inc.	Copper River Native Association*	NANA Regional Corporation*
Aleut Corporation*	Fairbanks Native Association*	National Park Service
Aleutian Pribilof Island Association*	Fullford Electric, Inc.	Northern Alaska Environmental Center
Alyeska Resort	Greater Fairbanks Chamber of Commerce	Sealaska Corporation*
AMATS	IBEW Local 1547	Tanana Chiefs Conference*
Arctic Slope Regional Corporation	Kawerak	Telecommunications/Internet Entities
Association of Village Council Presidents	Knik Tribe*	Tok Transportation
Bering Straights Native Corporation*	Kodiak Area Native Association*	University of Alaska Fairbanks
Bristol Bay Native Corporation*	Koniag, Incorporated*	

\*Indicates stakeholder or community that is found within a Justice40 area identified by the USDOT

## Public Outreach

AEA's EV team hosted four virtual informational sessions to inform stakeholders on the plan and solicit feedback. AEA staff traveled to several cities to present in-person on the program. AEA utilized regularly recurring meetings in order to increase attendance and sent emails, flyers, and calendar events informing stakeholders on the presentations to the working group members, 166 municipal league members, and 102 people on our active NEVI stakeholder registry.

AEA attended the Matanuska Electric Association's Annual Meeting, Chugach Electric Association's Member Appreciation Day (largest utility in Alaska) and the Alaska Sustainable Energy Conference where an EV Infrastructure Deployment Plan Flyer was distributed, and staff answered questions about The Plan.

DOT&PF Civil Rights Office staff posted flyers for public information sessions throughout the Anchorage, Wasilla, and Palmer public libraries, shopping centers, post offices, community centers, and bus stations. In conjunction with the physical outreach, the DOT&PF Civil Rights Office coordinated outreach with the Alaska Federation of Community Councils in solicit additional public involvement.

AEA posted on Facebook and LinkedIn advertising for the RFI, virtual presentations, and plan feedback. Alaska Governor Mike Dunleavy also shared a post about virtual presentation events. AEA also shared information on the NEVI Plan with the Alaska State Legislature and answered questions from legislative staff.

AEA published Public Notices on the State of Alaska website regarding all outreach events. AEA has been monitoring the open and click-through rates for the digital mailings and the open rate is trending about 77% higher than industry average.

AEA will continue to facilitate quarterly working group meetings, publish newsletters at least quarterly and as often as monthly, attend conferences to provide information on the program, and offer virtual presentations on program updates and progress on a bimonthly basis.

As part of AEA's annual outreach, AEA's Executive Director will present to the following organizations and cover information on the Plan.

- Thursday, August 4, 2022 – Juneau Chamber of Commerce
- Tuesday, September 20, 2022 – Fairbanks Chamber of Commerce
- Thursday, October 6, 2022 – Seward Chamber of Commerce



- Wednesday, October 19, 2022 – Chugiak-Eagle River of Commerce
- November 2, 2022 – Kenai and Soldotna Chamber of Commerce

AEA, in coordination Michael Baker, has also created an Outreach and Education Plan outlining outreach goals, activities and resources for the Alaska Electric Vehicle Infrastructure Plan. This outreach plan can be found in Appendix A.

## Alaska Electric Vehicle Working Group 2022 Email Newsletter Stats

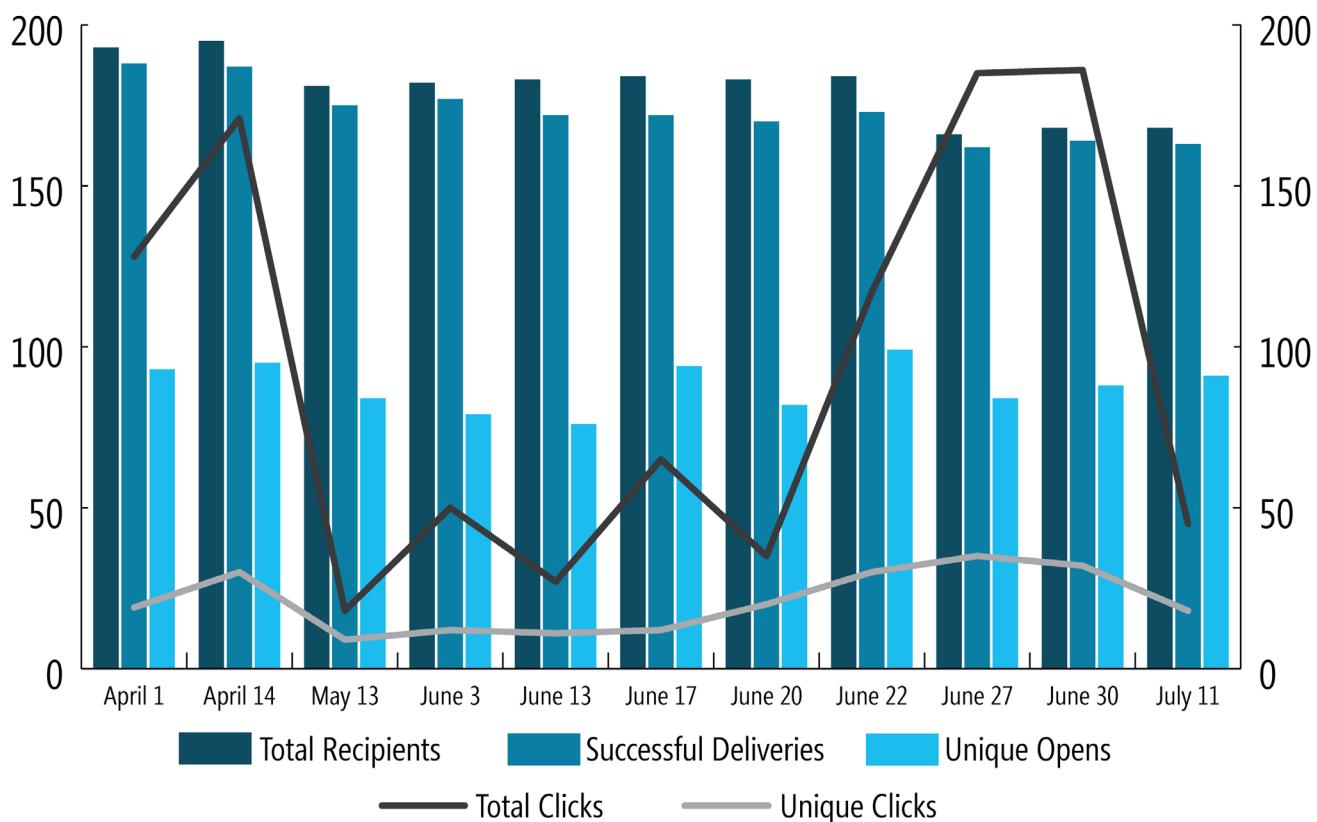


Figure 1. Alaska Electric Vehicle Working Group 2022 Email Newsletter Stats



# Plan Vision & Goals

## Plan Vision

Alaska's NEVI Vision:

***Adapting Alaska's unique infrastructure system to support reliable, equitable, and sustainable electric transportation while meeting community and economic needs.***

The primary mission of the Alaska Energy Authority is to lower the cost of energy in Alaska, and the Authority's secondary mission is to reduce barriers to EV adoption. Alaska's Electric Vehicle Infrastructure Implementation Plan is a framework for utilizing NEVI formula funds to deliver EV charging infrastructure and enable passenger EV travel throughout the state. The charging network will provide EV drivers with confidence when traveling for work, recreation, and tourism.

The primary mission of the DOT&PF is to 'Keep Alaska Moving through Service and Infrastructure'. The AEA mission and the Alaska NEVI plan are a component to the DOT&PF 'Family of Plans' and will both inform other transportation plans, as well as be informed by the State's LRTP. In this spirit of partnership, Alaska and the public at large will be able to realize the promise of the Bipartisan Infrastructure Law in general, and the NEVI program in particular. Key strategic themes of the LRTP include safety, state of good repair, economic vitality, resiliency, sustainability, and mobility. Of particular relevance is DOT&PF's Sustainable Transportation program, the goal of which is to help communities thrive through transportation investments that promote independence, efficiency, a healthy environment, and low-cost transportation. Implementation is supported through the formation of interdisciplinary and multiagency partnerships for cohesive and integrated deployment. NEVI is a core component of the Sustainable Transportation program's portfolio.

As required in FHWA's Notice of Proposed Rulemaking (NPRM) related to the use of the NEVI formula funds, charging stations will be available 24 hours a day, 7 days a week, and 365 days a year, with a minimum of 97%



uptime. In addition, each site will be required to deliver ongoing operations and maintenance activities during and after the period of the award. This will necessitate contractual requirements for each charging location to facilitate measurable data collection and evaluation. Project partners will support this program goal with data collection to inform stakeholders of the performance of EVs and efficacy of vehicle electrification in Alaska.

This program will increase access to EV charging stations for all Alaskans, including those historically underrepresented, specifically indigenous and disadvantaged populations. The Plan aims to ensure that community members are included and consulted in program decision-making and plan development. Alaska will administer the NEVI funds in a way that supports the Justice40 initiative, where at least 40% of the benefits of the program investments will be distributed to disadvantaged communities. In addition to providing an EV fast-charging network along the state's road and marine highway systems, this program will serve locations comprised of Alaska Natives, residents of multiunit housing, low-income, rural, and disadvantaged communities to ensure equitable access to EV charging infrastructure.

The implementation of transportation electrification will help to lower the cost of transportation energy for all Alaskans. Alaska suffers from some of the highest fuel costs in the nation, especially in rural Alaska. High energy burdens threaten some households' abilities to pay for energy and transportation expenses. Consequently, this forces difficult choices between paying for electricity, transportation, heating oil, food, medicine, and other essential items. High energy burdens paired with the high cost of goods in communities create challenging living conditions and, in some cases, food justice issues. Making EV charging infrastructure more accessible and equitable will ensure that Alaskans can more comfortably transition to EVs which typically have a lower total cost of ownership.

Renewable energy generation in Alaska has been on the rise for several years, with support from state and local governments. In 2010, the Alaska Legislature enacted a goal for 50% of the state's electricity to be generated from renewable energy sources by 2025. More recently, Governor Dunleavy introduced a Renewable Portfolio Standard (RPS) bill for the Railbelt. A key element of the governor's RPS was a firm commitment to transitioning to 30% sustainable power by 2030 and 80% by 2040. The RPS package was ultimately unsuccessful in the Legislature; however, the development and introduction of this package illustrates Alaskan's desire to transition to green energy. In 2020, Alaska generated about 31% of its electricity from renewable energy sources. Alaska's Railbelt grid is currently comprised of 15% renewable generation, and most of Kodiak and Southeast Alaska's energy is generated by hydropower (95-98%).

NEVI charging stations will ensure renewable energy can power vehicles and reduce energy costs for families. Increasing access to charging stations and EVs will accelerate EV adoption throughout the state and improve air quality by reducing emissions associated with ICE vehicles. This is especially important in communities with poor air quality, like the portion of the Fairbanks North Star Borough that has been designated as a nonattainment area by the Environmental Protection Agency due to particulate pollution during strong temperature inversions in the winter.

AEA will work closely with partners to maximize the public benefit by providing resources for EVSE site selection and development to partners. AEA will continue to work closely with DOT&PF to ensure site selection does not conflict with DOT&PF infrastructure improvement projects and long-term goals.

**Alaska suffers from some of the highest fuel costs in the nation, especially in rural Alaska. Making EV charging infrastructure more accessible and equitable will ensure that Alaskans can transition to EVs, which typically have a lower total cost of ownership.**

## High-Level Program Goals

### 1. Deploy EV charging stations that are reliable and accessible for work, recreation, and tourism

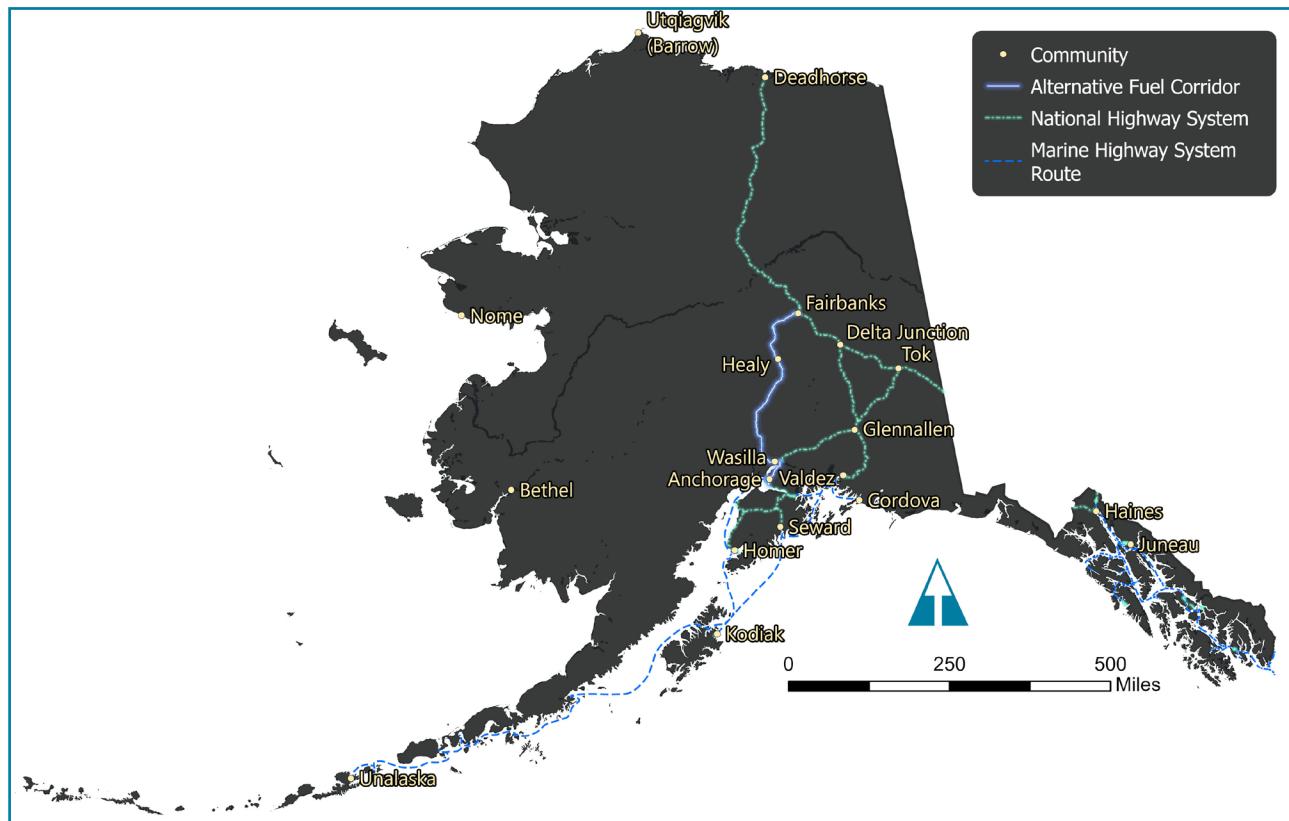


**to inspire driver confidence.** Providing infrastructure that is visible on traveled routes can greatly reduce range anxiety. DCFC stations will be located approximately 50 miles apart along the Alternative Fuel Corridor and along the road system and marine highways. The plan intends to provide EV drivers with multiple options for EV charging along their travel route. Each location will be located conveniently, no more than one mile from the AFC. The sites will provide at least four units and give consideration to pull-through spaces for vehicles pulling trailers and recreational or passenger vehicles. Locations will be easily identifiable through third-party charging station locator applications. All charging stations shall be available 24 hours a day, 7 days a week, and 365 days a year. Program partners will be required to enter into a 5-year operations and maintenance contract to ensure the station is compliant with the federal NEVI requirements. The Authority will monitor station uptime and other key metrics through vendor-reported usage data on a quarterly basis at minimum.

**2. Ensure the benefits are distributed and applied equitably for all Alaskans.** Alaska is planning for equitable EV charging capabilities throughout the state. At least 40% of the benefits of the program investments will be distributed to Justice40 communities. Justice40 communities are shown in Figure 15, as defined by the FHWA. Phases 2 and 3 of the Implementation Plan will develop charging infrastructure in communities along the Marine Highway System and in hub communities as funding allows.

**3. Support the existing and future demand for electrified transportation.** AEA aims to support the existing EVs on the road today and prepare the state for future scenarios with increased EV adoption as well as the potential for medium- and heavy-duty freight and transit electrification.

**4. Implement an outreach and education program to train, retain, and diversify the workforce in support of the electric transportation system.** AEA aims to increase knowledge and education about EVs, infrastructure, and the benefits to adoption. This program can help address frequently asked questions, common misconceptions, and act as a resource. The program will evolve to support workforce development to enhance the skills of Alaskan workers for the mobility of tomorrow.



*Figure 2. Alaska's Highway System*

**5. Collect data to measure program performance and make informed deployment decisions.**

Project partners will support this program goal with data collection and analysis to inform participants of the performance and usage of EVs and EVSE, changes in adoption, and publish charging usage and efficacy of vehicle electrification in Alaska. The data will be analyzed for the outyear deployments to aid in selecting optimal locations for EV charging deployment.

**6. Invest strategically to make Alaska's infrastructure more resilient and independent.**

The deployment of charging stations that are supported by renewable energy sources, where available, will be encouraged to reduce dependence on foreign oil and gas. Collaboration with the utility companies will occur in support of this effort.

**7. Work with international partners to connect to the continental network.** Recognizing that Alaska is removed from the lower 48 states, the movement of goods and people along the highway network crosses international borders. AEA will coordinate deployments with international partners to support logistics and mobility.

*EV performance in cold weather is currently a barrier to EV adoption for many Alaskans.  
Photo courtesy of Mark Kelliher*

## Outlook for 5-year Program

The Plan will deliver a reliable, grid connected DCFC infrastructure network from the south end of the Alaska AFC in Anchorage and 355 miles north to Fairbanks within the first two years. During this same timeframe, AEA will be conducting extensive EVSE and EV Infrastructure public outreach, continuously gathering stakeholder feedback and lessons learned. Future iterations of the plan will incorporate these findings.

### Phase One, Build Out Alaska's Alternative Fuel Corridor

- Phase one will focus on building out Alaska's Alternative Fuel Corridor to meet FHWA guidance, where practically feasible, along the AFC from Anchorage to Fairbanks.
- Plan activities will include site selection, public outreach, meetings with Alaska boroughs, Alaska Native corporations and tribes, and other private landholders, city planners, small Alaskan communities, and all other key stakeholders identified in Section 3 – Public Engagement & Outreach.



- Outreach and coordination will continue with DOT&PF, Alaska Department of Natural Resources (DNR), Department of Environmental Conservation (DEC), the Regulatory Commission of Alaska (RCA), and electrical utilities that provide power to the communities to be served by the NEVI-funded stations.
- Due to the seasonality of Alaska's climate, public and private contracting for initial design and construction projects is expected to extend over two construction seasons.
- Several 50 kW DCFC locations have been recently commissioned or are under construction along the AFC. These stations were funded with VW Settlement grants in the summer of 2021. These stations do not meet the NEVI requirements as currently designed.

## Phase Two, Build Out Alaska's Highway and Marine Highway System

- AEA and DOT&PF will coordinate to develop DCFC infrastructure along Alaska's non-AFC highways and the Alaska Marine Highway System (AMHS) to enable passenger EV travel throughout the state. This phase of the program will focus on connecting small urban areas, rural communities on the road system, Alaska's road system to Canada and Southeast Alaskan communities located on the AMHS.
- A review of communities and travel patterns along the Seward Highway, Glenn Highway, Sterling Highway, and Richardson Highway will be completed prior to completion of Phase 1 to determine potential locations for DCFC in support of long-distance mobility within the state in Phase 2.
- The communities along the AMHS will be key stakeholders to identify where charging locations would suit mobility that is paired with the ferry system. Early coordination with communities such as Juneau, Cordova, Ketchikan, Sitka, Seward, and Valdez will indicate opportunities for community partnerships to deploy infrastructure.
- This phase of the program will endeavor to meet NEVI requirements for DCFC where practically feasible. Engagement with stakeholders and communities along the AMHS will further refine the locations and phased deployment.
- Some isolated communities may not require or have the generation infrastructure to support 150 kW charging or four charging ports. These circumstances will be evaluated on a case-by-case basis and AEA is requesting input into reducing the requirements of DCFC sites located away from the AFC.

## Phase Three, Install Charging Stations in Hub Communities, as funding allows

- Install community-based charging stations in EV-ready communities throughout regional hubs in rural Alaska.
- Rural communities are generally not connected by road or transmission. Each community self-generates its power through a small local utility. Average loads in rural communities range from 100 kW to 1 MW. In many communities, NEVI compliant DCFC equipment may not be feasible, therefore Level 2 charging stations are preferred. This will be evaluated against community needs.
- Early engagement has occurred with Nome and Kotzebue and site options for this phase of engagement have been compiled.
- Beyond the NEVI formula funding, AEA intends to coordinate with DOT&PF to apply for competitive and discretionary grants for Rural Alaska.

## Phase Four, Urban and "Destination" Locations, as funding allows

- AEA and DOT&PF will identify and develop strategic charging sites in urban and "destination" locations. These charging sites will utilize a combination of DCFC and Level 2 charging infrastructure and will provide a reliable charging safety net for unexpected charging needs and provide "destination charging" for overnight trips.



# Contracting

AEA has conducted a review of relevant statutes to determine contracting mechanisms available to deploy the infrastructure. This section summarizes that review and recommends the preferred method.

## Alaska State Laws on Electric Vehicle Infrastructure and Procurement

While the traditional design-bid-build project process could be successful to deliver the planned network, it would likely extend the timeline to complete projects and could result in not delivering the entire program within the required window. Therefore, a review of the contracting options was completed to give AEA a sense of how the charging stations could be procured and deployed throughout the state.

### Design-Build

Implementation under a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product has been used by Alaska DOT&PF previously. Design-Build projects are beneficial because they cut out the "middleman" and assign design and construction to a single entity. The client provides one contract to the entity, expediting both the design and construction phases of projects. An expedited process could help the infrastructure be deployed in a timely fashion. If the process is applied to the right project, with the right controls in place, the public gets a quality product in a shorter time. The challenge could be grouping sites into an economic model with one provider, given that multiple site hosts are expected along the corridor.



## Grant Program

Grant-style programs have been used in Alaska for EV charging, as the Volkswagen mitigation funds were deployed through a grant program. This program type requires the management and monitoring of grant applications and administration. Consideration should be given to the reimbursement schedule, as site hosts may struggle carrying the cost of the entire project if the reimbursement occurs at closeout. Initial funds and/or progress payments may ease this burden.

## P3

Public-private partnerships (P3s) are authorized in Alaska for projects pertaining to transportation infrastructure, municipal facilities (public works infrastructure), and environmental projects. P3s are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of projects. In transportation projects, this participation typically involves the private sector taking on additional project risks such as design, construction, finance, long-term operation, and traffic revenue. The P3 approach may prove particularly effective in Alaska due to the long travel distances, however, private parties could strategically monopolize locate EV infrastructure. While this strategy would assuredly prove profitable for the private parties, the utility for EV users, and the reputation of public authorities should not be sacrificed.

## Operations and Maintenance

There are no restrictions to include operations and maintenance plans with the above allowable procurement methodologies. Guaranteed operations and maintenance through the life of the NEVI deployment period can be included in the upfront construction cost so it is accounted for in the deployment.



*Alaska Governor Mike Dunleavy attends a dedication ceremony for Juneau's electric bus.  
Photo courtesy of Capital Transit*



## How Alaska will ensure contractors engage communities

Every contract for the installation and hosting of charging station infrastructure will include a requirement to prominently display at least one sign on site that is visible to drivers from the roadway. The sign will clearly state that the site is an EV charging station. This is to supplement areas where cell phone coverage may not exist, so using navigation and other apps may be affected. Charging company vendors may be asked to provide materials to site hosts and government agencies that they can use to increase community awareness about the charging station including flyers and social media graphics. Each contractor and site host will also be supported by the comprehensive public engagement plan included in this document, which includes earning media coverage across the state, social media outreach, and participating in community events.

AEA and DOT&PF have a broad network of strong ties to the Alaska construction contracting community. DOT&PF's work with industry organizations like the Associated General Contractors of Alaska (AGC), and Alaska Builders and Contractors (ABC) Inc., will ensure that contractors building Alaska's EV infrastructure engage in meaningful public involvement. Many of the large general contractors throughout the state have long working histories in Alaska and are already active participants in their respective regions and communities. AEA and DOT&PF will work with contractors and the trades unions to drive workforce participation and public investment in the development, construction, maintenance, and public use of the Alaska EV infrastructure.

## Opportunities for Small Businesses

In accordance with Title 23 of U.S.C. 304, the Alaska Electric Vehicle Infrastructure Implementation Plan will provide contracting opportunities for small businesses in the implementation and deployment of EV infrastructure. In compliance with this code, Alaska NEVI planning efforts will consult with entities on small business contracting, including community-based organizations, environmental justice and environmental protection organizations, small business associations, chambers of commerce, labor organizations, and private entities.

Throughout Alaska, and especially in rural and disadvantaged areas of the state, small businesses are a nexus for opportunity. DOT&PF and AEA will work with business partners and community leadership to ensure that these vital small business entities participate in the Alaska NEVI process. Additional specific initiatives for small businesses are included within the Civil Rights and Equity Considerations chapters.

## Recommended Procurement

AEA is proposing to utilize a grant-style program. This methodology will build on the experience and lessons learned from the administration of the Volkswagen settlement funding deployments. Relationships have been forged with potential site hosts through this effort, and AEA believes this will be the most effective and successful way to deploy the infrastructure due to the continued interest of the VW site hosts and new interest from other entities. The process will be an open and competitive selection, and AEA has experience administering a similar program in the past.

In recognizing the swiftly tilting world of infrastructure investment that exists today, funding flexibility will be maximized. In this regard, and within the rule of law in working with FHWA and the Joint Office, AEA and DOT&PF will work to achieve maximum flexibility in identifying and selecting infrastructure projects. This might include investment on State infrastructure, such as the international airports and the AMHS, as the needs of the public may present.



# Existing & Future Conditions Analysis

To evaluate the statewide network and set a baseline for future evaluation, an inventory of traffic, EV registrations and adoption, existing infrastructure, and planned near-term installations must be inventoried.

## State Geography, Terrain, Climate and Land Use Patterns

Spanning over 665,400 square miles, Alaska is the largest state in the country and represents about one-fifth the total size of the contiguous United States. In terms of size, Alaska stretches 2,000 miles from east to west and 1,100 miles north to south. This includes hundreds of islands that make up the Aleutian Island chain. The sheer size of the state results in a wide range of temperatures and terrains. While Alaska is geographically large, the relatively small population of the state results in a low population density with clusters around the major urban areas of Anchorage, Fairbanks, and Juneau. Alaska is bordered by 6,640 miles of coastline, including coasts of the Pacific and Arctic Oceans, and 1,538 miles of international border with Canada.

With the least-dense population in the country, many Alaskans reside along the state's road system and the remaining population resides in small, rural villages and towns accessible by water or air. The largest city, Anchorage, contains two-thirds of the state's population at just under 300,000 residents, followed by Juneau

**Of the state's 17,690 centerline miles of road, 82% are considered rural and 65% are unpaved. Less than 1% of the state's land is under private ownership.**



and Fairbanks, each with a population of about 30,000 residents.

Alaska's transportation network is relatively undeveloped compared to its national peers. Of the state's 17,690 centerline miles of road, 82% are considered rural and 65% is unpaved. Less than 1% of the state's land is under private ownership. Of the public lands, 65% is owned by the federal government and 25% by the state. Despite its size, Alaska does not have any signed interstates. Alaska shares a border to the west with Canada and some travel routes across Alaska traverse Canada, adding complexity to supporting state-wide EV movements that will require international coordination.

Alaska's terrain and ecosystem varies tremendously and includes the flat and treeless tundra of the North Slope, subarctic boreal forests, permafrost and marshlands, numerous mountain ranges including the highest peak in North America, and temperate coastal rainforest. Its climate is as diverse as its terrain with long, cold winters and cool summers in the far north and northwestern coast, extreme cold in winter and extreme heat in summer across the Interior, a warmer and snowier climate in Southcentral, and an even warmer and rainier climate in Southeast Alaska.

The state is renowned for its cold winters where temperatures frequently drop to -50° F without a wind chill and will regularly climb into the 90s during the summer. Based on the temperature and precipitation averages, Alaska is divided into five climate regions.

## Alaska Climate Regions

The Arctic Region consists of the area north of the Brooks Range to the Arctic Ocean and is entirely north of the Arctic Circle. Average temperatures here are well below freezing with long, cold, and dark winters. Precipitation in this area is light, falling mostly in the summertime.

This region is situated above the tree line and consists of predominately tundra, high winds are typical in this area for most of the year.

The Interior Region consists of the area between the Brooks Range to the north and the Alaska Range to the south. It comprises the largest area of the state and has high temperature variability. Summers are typically warm and sunny with an average temperature in the 60s, and winters are cold with average temperatures below zero. The north end of the AFC, Fairbanks, is located in the Interior region.



*An EV sits under the Northern Lights. Photo courtesy of Mark Kelliher*

The Western Region spans a wide area including the Aleutian Islands. The climate in this area is heavily impacted by the Pacific Ocean and experiences frequent storms during the winter and fall. This area extends hundreds of miles into the Bering Sea and has a maritime climate that is typically above freezing with less variability.

The Bristol Bay and Cook Inlet areas consist of Southcentral Alaska and are home to most of the state's population. This area is buffeted by multiple mountain ranges, and the climate is not as extreme as the Aleutian chain. Southcentral has a more temperate climate with mild summers and winters relative to the climate zones to the north and west. Anchorage, the south end of the AFC is located in this region.



The Southeast Alaska area borders the Gulf of Alaska and has a strong maritime influence. While the temperatures can be moderate, there is high annual precipitation in the form of snow and rain. The impact of the mountain terrain in the area contributes to weather conditions that can vary substantially. Alaska's Marine Highway is located in Southeast Alaska.

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

The vast and diverse natural geography of Alaska makes it a challenging setting for transportation – natural barriers throughout the region create a unique environment for aviation and marine transportation. While most interstate travel can be achieved on the road network, Alaska provides a unique set of challenges as many communities cannot be accessed by the road network. These communities are located off the road system and are only accessible by plane or through the AMHS. The AMHS extends across 3,500 miles of coastline and provides service to 35 communities. The Alaska Department of Transportation and Public Facilities maintains and operates 235 airports throughout Alaska to support 82% of communities that depend on aviation for year-round access.

According to the Transportation Assessment for the Alaska Moves 2050 Long Range Transportation Plan, 251 communities in Alaska are served exclusively by air, with distances between some airports comparable to the distance between Minneapolis and Orlando. Ferries also support an important section of transportation in the state, with the Alaska Marine Highway System serving over 3,500 miles of coastline and 35 communities, many of which rely on ferry for travel and goods.

Remoteness is the theme when discussing the travel patterns in Alaska. Not only is that reflected in the importance of the marine and aviation system, but on the connected road network as well. The two major cities on the road system are separated by over 300 miles of road. Smaller towns are dispersed along the road system, but many have reduced services. With few full-service locations spread out over a wide

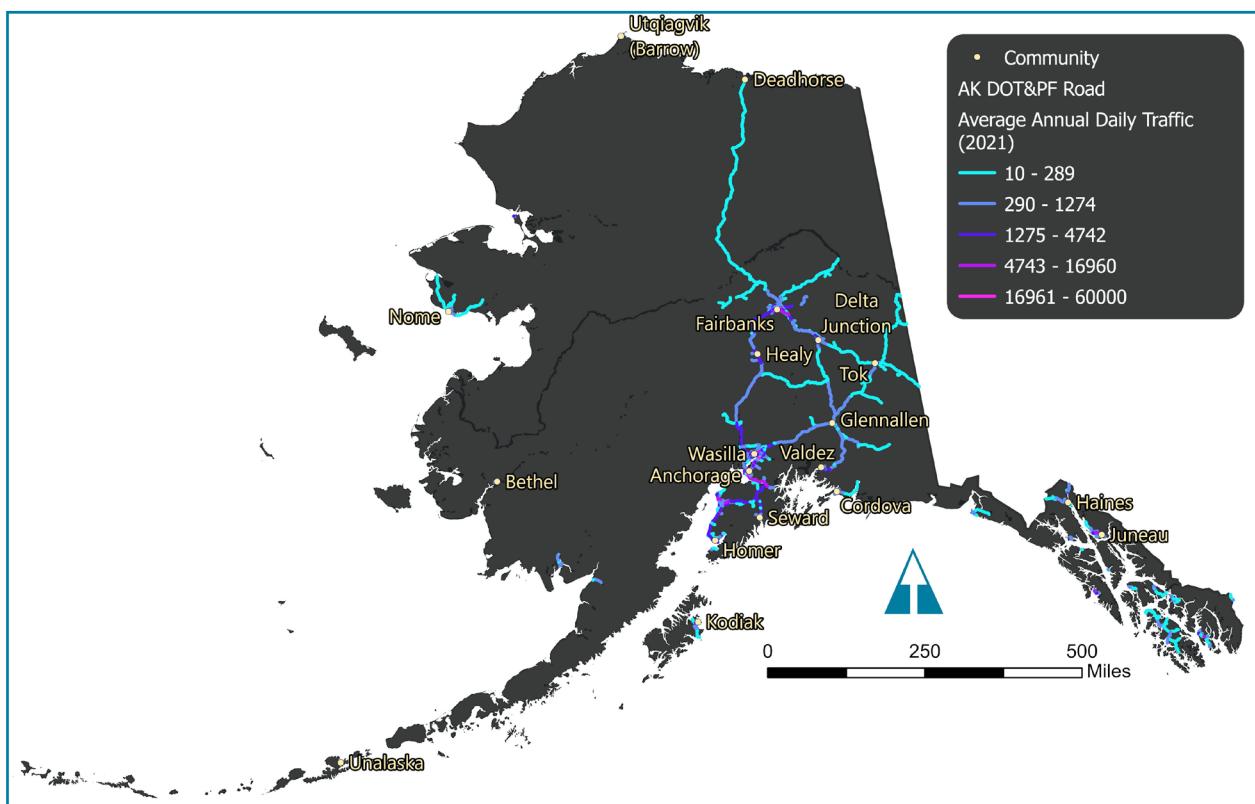


Figure 3. Alaska's Average Annual Daily Traffic

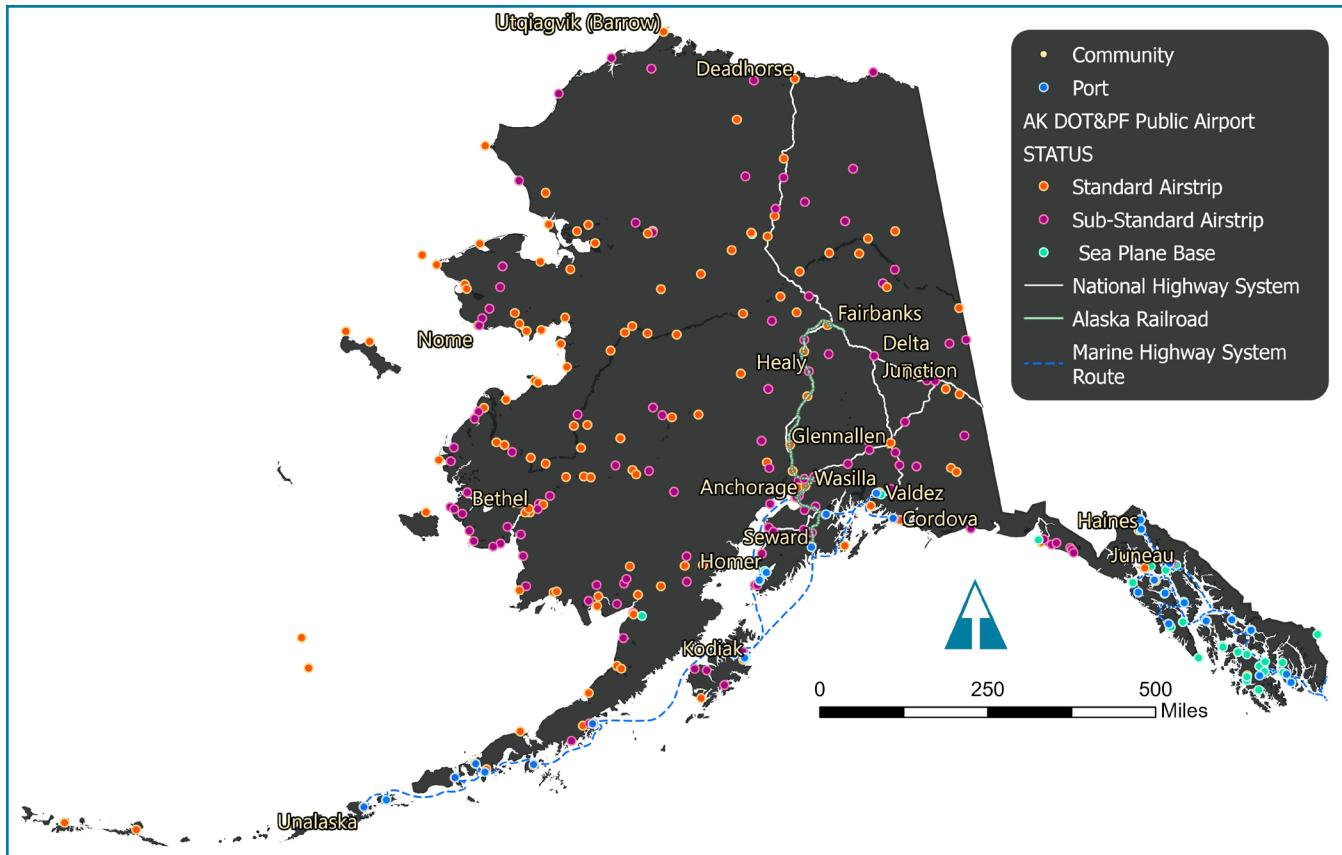


Figure 4. Alaska's Transportation Systems

geographic area, the structure of Alaskan highways presents a challenge to wide-spread EV usage as it relates to the ability to charge vehicles. This would increase the need for fast charging stations throughout the state to enable users the ability to reach their destination.

The State of Alaska has 17,690 total centerline miles. A vast section of the Alaska road network is unpaved, the breakdown of total miles by road surface type is 11,520 unpaved and 6,169 paved. All 1,080 miles of the functionally classified Interstate roads and 920 of the 939 miles of the Principal Arterial- Other roads are paved. Most vehicular travel occurs in the southcentral population centers along interstates A-1 from Anchorage to the Canadian border, A-2 from Tok to Fairbanks, A-3 from Soldotna to Anchorage, and A-4 from Gateway to Fairbanks. The Alaska National Highway System is unlike most in the continental United States. It includes six-lane urban freeway segments with volumes up to 68,000 a day (2019), and the Dalton Highway – 400 miles of the mostly-unpaved road with segments seeing as little traffic as 105 vehicles a day (2019).

Based on travel pattern data, key locations for automotive transportation occur in more populated areas including Anchorage, Fairbanks, Knik-Fairview and Wasilla in the central region, and Juneau, Ketchikan, and Sitka in southeast Alaska.

Vehicular transportation is also limited in the state of Alaska by seasonal weather, with certain roads closed for a portion of the year due to snow cover and ice. In addition to more concentrated traffic and car ownership in these population corridors, transit plays a big role in connecting Alaskan businesses with their workforce across a range of industries. According to the American Community Survey Public Use Microdata Sample, approximately 5,600 workers in Alaska use transit to get to work, collectively earning \$203 million in wages annually<sup>1</sup>. Key cities with federally funded public transportation programs include:

<sup>1</sup> [https://dot.alaska.gov/stwdplng/transit/pub/AKEconomicStudy\\_EBP\\_05262022\\_2.pdf](https://dot.alaska.gov/stwdplng/transit/pub/AKEconomicStudy_EBP_05262022_2.pdf)



- Anchorage – People Mover and AnchorRIDES
- Bethel Transit Bus System
- Central Kenai Peninsula – Central Area Rural Transit (CARTS)
- Fairbanks – Metropolitan Area Commuter System (MACS) and Van Tran
- Girdwood – Glacier Valley Transit (GVT)
- Gulkana – Soaring Eagle Transit (SET)
- Hollis – The Inter-Island Ferry Authority (IFA)
- Juneau – Capital Transit
- Ketchikan – Ketchikan Gateway Borough Transit (The Bus)
- Kodiak – Kodiak Area Transit System (KATS)
- Wasilla – Valley Transit
- Sitka – The Ride
- Talkeetna – Sunshine Transit
- Tok – Interior Alaska Bus Line (IABL)

## Alaska EV Registration by Manufacturer

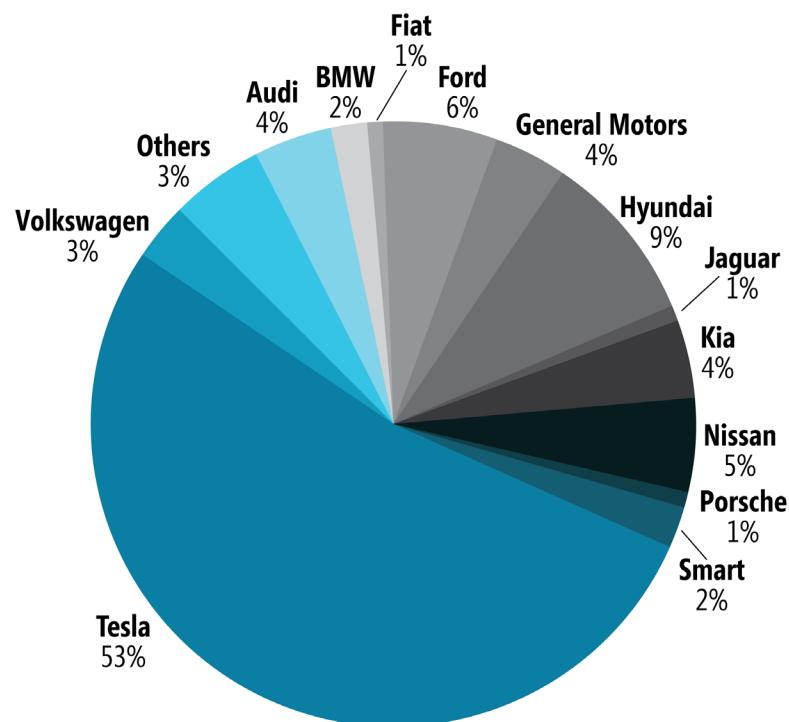


Figure 5. EV Registrations in Alaska by Manufacturer

Access to more remote areas of the state occurs most frequently by aviation and ferries (along the southern coast). \$1 billion of funding from the Infrastructure Investment and Jobs Act is dedicated to the AMHS to establish an essential ferry service supporting rural communities.

Aviation is also a vital component of the regional transportation system, connecting all communities to the rest of the state and beyond. The aviation system in Alaska not only serves the transportation needs of residents, but also supports the movement of material goods and critical medical services as well as the regional economy. According to the Alaska DOT&PF, nearly 82% of Alaska communities are inaccessible by road making airstrips and airports essential to Alaskan communities.

## Future State of EV Adoption in Alaska

As of December 2021, there were 1,250 EVs registered in Alaska. The EV adoption in Alaska is trending upward and the global markets saw a significant jump in the second half of 2021 with over 300 EVs added to the registration database. Sport Utility Vehicles (SUVs) and pick-up trucks account for 80% of new vehicles purchased in Alaska.<sup>2</sup> Due to this vehicle preference trend, it is expected that EV market share in Alaska will increase once battery electric pick-ups trucks are readily available to Alaska consumers.

The future state of EVs in Alaska was evaluated to determine if the deployed capacity along the AFC related to the NEVI requirements would be satisfactory to the expected number of EVs on the road at the end of

<sup>2</sup> White Paper - Electric Vehicles and Infrastructure in Alaska: <https://www.akenergyauthority.org/Portals/0/2020.12.09%20AEA%20Board%20Meeting%20Documents/9B.%202020.12.09%20EV%20EVinfrastructure%20WhitePaper.pdf?ver=2020-12-03-164813-090&ver=2020-12-03-164813-090>



the program. To assist in the development of future EV registrations, two growth scenarios were developed. It's important to recognize that there are a variety of factors that can affect EV adoption, including access to charging infrastructure, availability of models, price points and comparability to ICE models, and willingness to make the transition.

## Continued Growth Scenario

The continued growth scenario projects that EV adoptions continue the 2020 to 2021 growth of 42.05% throughout the five-year period. The results are that the state would realize about 4,000 EV sales per year on average, adding about 20,000 new EV registrations in the five-year period. The penetration rate of EVs in Alaska in 2026 would be 1.01% of all registered vehicles in the state, up from the existing 0.20% in 2021 for light-duty vehicles.

## Aggressive Growth Scenario

The aggressive growth scenario increases the 2020 to 2021 growth by a factor of 1.5 resulting in a 63% growth rate. This scenario addresses the expected increase in registration due to the new battery electric pick-up truck models coming to market and expanded offerings for SUVs. The results are that the state would realize about 6,800 EV sales per year on average, adding about 34,000 new EV registrations over the 5-year period. The penetration rate for EVs in Alaska under this scenario would be 2.02%, up from the existing 0.20% in 2021 for light-duty vehicles.

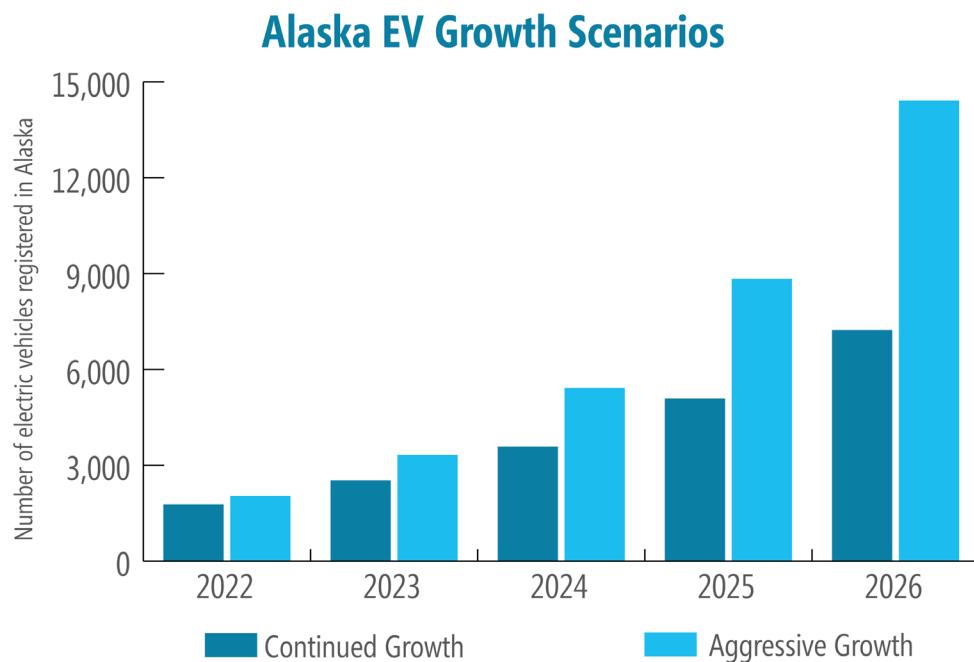


Figure 6. Alaska EV Growth Scenarios

## Grid Capacity

A review of the peak loads combined with historical growth of the electrical loads on the Railbelt Utilities was performed to determine the impact of DCFC stations on the grid in the region. The future capacity projections factored in the decommission of the Healy #2 generation plant in 2024 but did not account for any additional added capacity from renewable sources as a conservative estimate. Based on the projected loads, there is more than adequate capacity for the proposed NEVI-compliant DCFC stations along the AFC detailed in this study.



Table 3. Summary of Future Grid Loads and Capacity

	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Firm Peak Load (MW)	809.2	849.6	892.0	936.6	983.4
Total Capacity (MW)	1569.8	1569.8	1519.8	1519.8	1519.8
Reserve Margin (MW)	760.6	720.2	627.8	583.2	536.4
Reserve Margin (%)	94%	85%	70%	62%	55%

Additional reviews of the grid will be completed as locations outside of the AFC are identified for installations.

## AFC - Corridor Networks

Alaska does not have any designated interstates due to its isolation from the contiguous United States. However, Alaska submitted and was approved Corridor Pending status for a single Alternative Fuel Corridor in Round 4 of nominations. The nominated section of the highway is between Anchorage and Fairbanks, with a distance of 358 miles.

The corridor was submitted to FHWA as the entirety of the Parks and Glenn Highways from Anchorage to Fairbanks. As stated in the 2020, Round 4 application submitted by Alaska DOT&PF:

*"We propose the EV vehicle corridor to correspond to the National Freight Route along the [National Highway System] NHS from Anchorage to Fairbanks initially as a target for investment, with an eventual build out along the entire NHS."*

It should be noted that there is a GIS error on the AFC website that has been acknowledged by FHWA. The website omits the Glenn Highway section from Palmer to Anchorage, but is in the process of being updated.

### Corridor Pending Corridors

The route from Anchorage to Fairbanks is the only approved AFC through the initial six rounds of application.

### Corridor Ready Corridors

Alaska currently does not have any Ready Corridors. This plan intends to upgrade the corridor from Anchorage to Fairbanks to Ready in two years.

## Existing Locations of Charging Infrastructure Along AFCs

As of June 2022, there are four existing DCFC locations with six ports located within a mile of Alaska's proposed AFC along the Parks and Glenn Highways. Of the existing DCFC locations, none have connectors that meet the NEVI standards for 150kW output. The average output is 50kw for the six existing DCFC stations. Figure 8 displays the gaps in coverage for DCFC locations and highlights the longest gap that spans 170 miles from Wasilla to Cantwell. Within that span there are three Level 2 stations, but only one is open year-round. Two locations are RV campgrounds and provide access to charging only during summer months. The second longest gap in charging access is from Healy to Fairbanks a span of over 110 miles. This span also lacks Level 2 charging locations. Once into Fairbanks the nearest DCFC location is approximately 4.5 miles from the AFC. The third longest gap is the 38-mile stretch of the Glenn Highway from Anchorage to the Trunk Road exit where Level 2 charging is available at Mat-Su Regional Hospital. Neither DCFC nor Level 2 stations have yet been installed along the Glenn Highway.

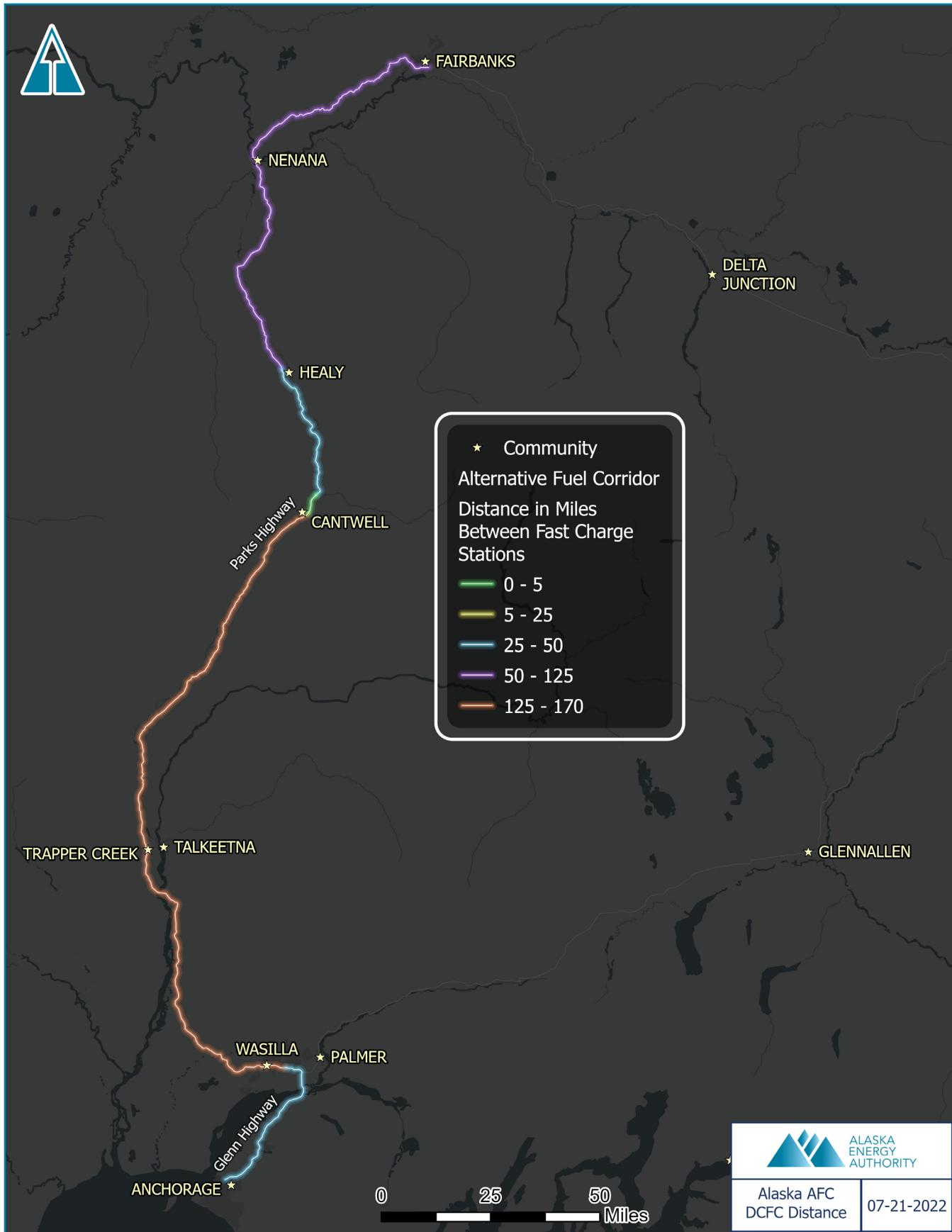


Figure 7. Alaska Alternative Fuel Corridor



Table 4. Existing Locations of EVSE Within One Mile and Along Alternative Fuel Corridor

<b>State EV Charging Location Unique ID</b>	<b>Charger Level (DCFC, L2)</b>	<b>Charger Type</b>	<b>Location</b>	<b>Number of EV Connectors</b>	<b>EV Network (if known)</b>	<b>Seasonal</b>
AK3_0.67	Level 2	NEMA 14-50	1790 S Woodworth Loop, Palmer, AK 99645	4	Non-net-worked	Year Round
AK3_4.03	DCFC, Level 2	2 J1772, (240v 50 amp Wall), CCS/SAE	3700 E Parks Hwy, Wasilla, AK 99654	4	Non-net-worked	Year Round
AK3_4.89	Level 2	J1772	2701 Mountain Village Dr, Wasilla, AK 99654	1	Non-net-worked	Year Round
AK3_12.61	Level 2	Tesla	281 S Conquest Cir, Wasilla, AK 99654	2	Non-net-worked	Year Round
AK3_60.94	Level 2	NEMA 14-50	49941 Parks Hwy, Willow, AK 99688	2	Non-net-worked	Summer Only
AK3_99.46	Level 2	NEMA 14-50	Mile 135.4 Parks Hwy, Trapper Creek, AK 99683	2	Non-net-worked	Summer Only
AK3_174.2	DCFC, Level 2	J1772, CHAdeMO, CCS/SAE	Mile 209.9 Parks Hwy, Cantwell, AK 99729	3	FLO	Year Round
AK3_179	DCFC, Level 2	2 Tesla Wall, 1 DCFC, NEMA 14-50	Mile 214.5 Parks Hwy, Cantwell, AK 99729	4	Non-net-worked	Year Round
AK3_203.06	Level 2	NEMA 14-50	Mile 238.6 Parks Hwy, Denali Nat'l Park & Preserve, AK 99755	2	Non-net-worked	Summer Only
AK3_202.91	Level 2	Tesla	Mile 238.6 Parks Hwy, Denali Park, AK 99755	2	Non-net-worked	Summer Only
AK3_212.99	DCFC	CHAdeMO, CCS/SAE	Mile 248.7 Parks Hwy, Healy, AK	2	Non-net-worked	Year Round
AK3_319.22	Level 2	NEMA 14-50	4140 Boat St, Fairbanks, AK 99709	1	Non-net-worked	Summer Only



## Known Risks and Challenges

There are several risks and challenges worth noting given the diverse and challenging terrain of Alaska paired with its size and low population density.

### Lack of development

Long distances with no development, including a 100-mile stretch along the AFC between Trapper Creek and Cantwell, pose logistical challenges for installing EV charging infrastructure and seeking hosts for sites. In these remote transportation corridors, there may be only electric transmission lines with no existing tie-in capability (along the Parks and Richardson Highways, for example) or in some areas, no electricity infrastructure at all (along the Dalton Highway, for example). Until these logistical challenges are solved, it will be difficult to combat range anxiety among potential EV adopters.

The lack of reliable internet or cell service in underdeveloped and undeveloped areas poses a challenge to keep remote stations connected to a network to provide accurate real-time reporting on energy pricing and downtime. The EV charging infrastructure may need to rely on hard-wired communication if the site has access.

Additionally, a RFI was issued by AEA in April 2022 for public comment, and to elicit feedback regarding EVs and charging infrastructure needs in Alaska. Ninety-nine responses were received with new ideas for charging locations, risks that may affect the program, and other supporting information regarding the seasonal use of EVs that will continue to inform AEA's NEVI program.

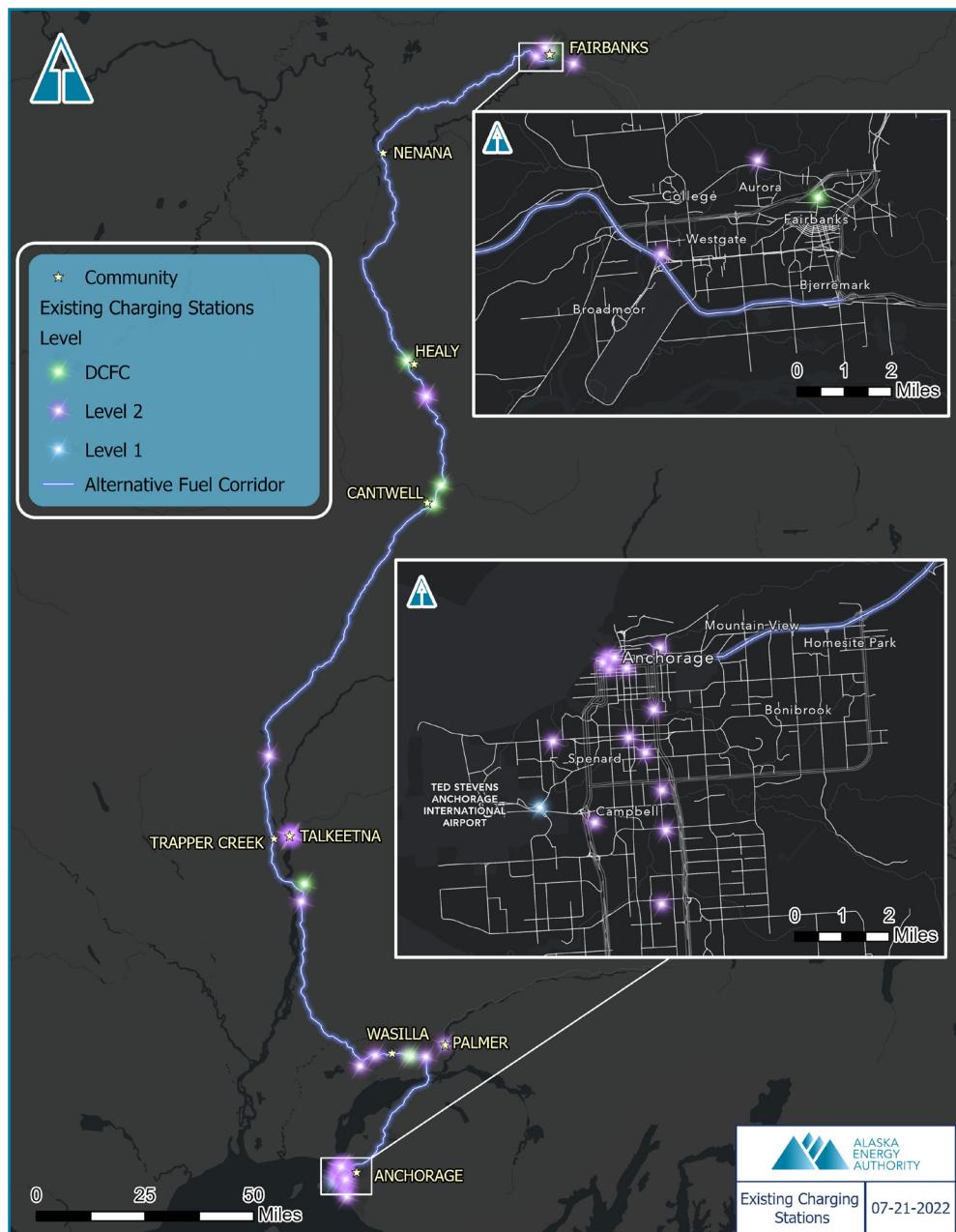


Figure 8. Existing EV Chargers Within One Mile and Along Alaska Alternative Fuel Corridor



## Climate

Along the Railbelt corridor, average low temperatures in the winter range between -20°F and 5°F, with much colder temperatures occurring frequently throughout the season. These cold temperatures can cause a range decrease of up to 50% for EVs, which will contribute to range anxiety. Colder temperatures can also increase the time required to charge the battery.

The challenges with frequent snow and ice removal at charging stations could increase station downtime. Likewise, winter driving conditions and winter storms could make travel between charging stations hazardous or impossible for brief periods. Most major highways are maintained year-round by State of Alaska maintenance crews, but conditions along some corridors (the Richardson Highway, for example) require complete road closures due to high winds or avalanches more often than others. Several corridors like the Denali Highway and Taylor Highway are not maintained in the winter, effectively closing them to car and truck traffic.

Some roadways may not be open year-round due to the lack of winter maintenance. According to the Alaska DOT&PF/511AK, the following highways are not maintained during the winter months (October – May):

- Copper River Highway (MP 18 to Million Dollar Bridge, MP 49)
- Denali Highway (Paxson, MP 0 to Cantwell, MP 130)
- Denali Park Highway
- Eureka-Rampart Road (MP 0 to MP 3)
- Taylor Highway (Tetlin, MP 0 to Eagle, MP 160)
- Top-of-the World Highway
- McCarthy Road (Copper River Bridge, MP 0 to Kenicott River by McCarthy, MP 58)
- Nome area:
  - Council Road (E. of Nome, MP 5 to Council, MP 73)
  - Kourgarok Road/ Nome-Taylor Highway (N. of

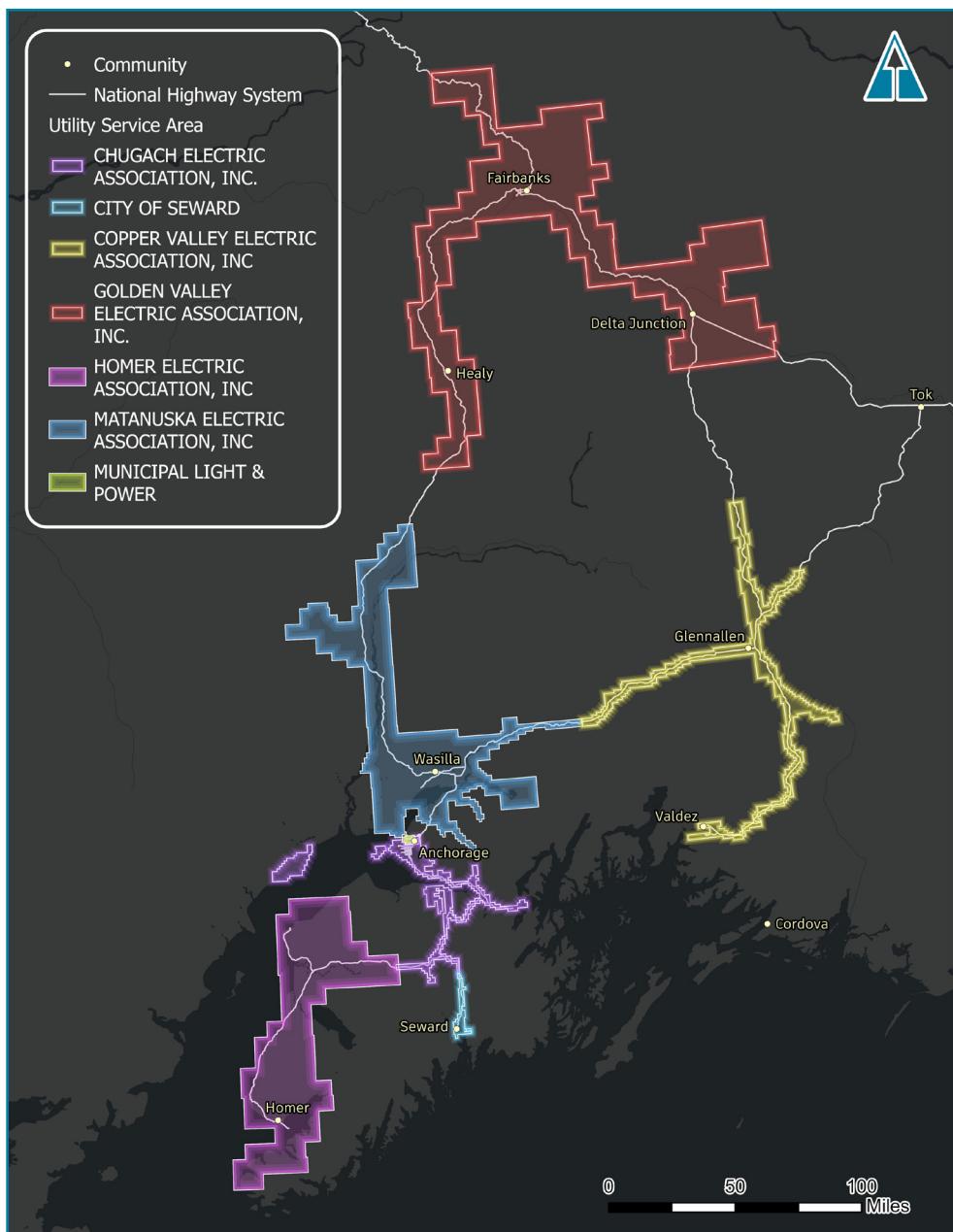


Figure 9. Utility Service Areas



Nome, MP 13 to Kougarok River, MP 86)

- Nome-Teller Highway (Snake River Bridge, MP 7 to S. of Teller, MP 68)
- St. Mary's/Mountain Village Road (St. Mary's Airport, MP 5 to Mtn. Village Airport, MP

Some of the DCFC stations in rural areas, such as the one in Healy, have been retrofitted with an enclosure that increases the temperature of the air around the station by about 30 degrees to ensure that it works in the harsh, cold climate. This could be a consideration for the charging stations installed based on the operating parameters of the available stations.

## Barriers to consumer adoption

It will be difficult to overcome skepticism about whether electric vehicles are appropriate for Alaska's geography and climate. Many Alaskans live in small communities located a great distance from developed commercial infrastructure, many of which are off the road system and accessible only by water or air. The cost, logistics, and sustainability of low-usage sites will be a challenge in reaching these users. Further, the low existing EV penetration may impact the economic viability for the return on investment of the match funding provided by site hosts or charging vendors.

## Energy sources and costs

Alaska's electricity grid is isolated from the rest of North America—it is not connected to power grids in Canada or the contiguous United States. This could leave Alaska more vulnerable to reliability issues in its electric grid. There are two distinct grid categories in the State of Alaska: Railbelt and remote. The majority of the population (70%) resides in urban areas in the Southcentral Region of the state and are serviced by the Railbelt Electric System. The remaining 30% of the population reside in isolated rural communities served by independent utilities. Petroleum and coal sources account for 28% of Alaska's electricity production, which could negate some of the positive environmental benefits of electrical vehicle use in Alaska and be a barrier to adoption for environmentally focused consumers.

Alaska's Railbelt Electric System is serviced by five electric utilities (four cooperatives and one municipal utility). Utilities include Chugach Electric Association, Golden Valley Electric Association, Homer Electric Association, Matanuska Electric Association, and Seward Electric. The "Railbelt" refers to the interconnected grid that loosely follows the route of the Alaska Railroad. The system stretches approximately 700 miles and services 70% of Alaska's population. The State of Alaska, through the AEA, owns significant transmission and generation infrastructure on the Railbelt system. The residents and businesses along the Railbelt consume approximately 80% of the state's electricity across a service area similar to the distance from West Virginia to Maine. On an annual basis, the Railbelt Electric System generates approximately 4800 GWh. Interconnection between regions is by single transmission lines. This relatively small interconnected electrical system is home to significant Department of Defense assets, tribal governments, highly diverse populations, and a remarkable variety of carbon and non-carbon energy resources.

The Railbelt is subject to several different climate zones and seasonally harsh conditions, including a sub-Arctic climate with significant seismic activity. Disruptive natural events occur often; earthquakes, wildfires, extreme cold and winter storms are experienced annually. The reliability of the Railbelt is susceptible to the effects of these natural events. Depending on their scale, they can affect service to member-consumers and service communities.

**Petroleum and coal sources account for 28% of Alaska's electricity production, which could negate some of the positive environmental benefits of EV use in Alaska and be a barrier to adoption for environmentally focused consumers.**



In the Spring of 2022, the Regulatory Commission of Alaska approved electricity rates that will be charged by regulated electric utilities to the operators of high-speed commercial electric vehicle charging stations. The previous electric rate structures imposed a demand charge based on the peak amount of electricity drawn during any 15-minute period over a billing period, and an electric vehicle using a DCFC could impact the demand charge assessed to the site. The new rates have gone into effect over a 10-year inception period. The utilities recognize that high-speed EV charging stations with imposed demand charges would likely render the charging stations uneconomic. Under an agreement with the RCA, the utilities are using a formula under which demand charges are waived for EV charging. The approved charging station rates are:

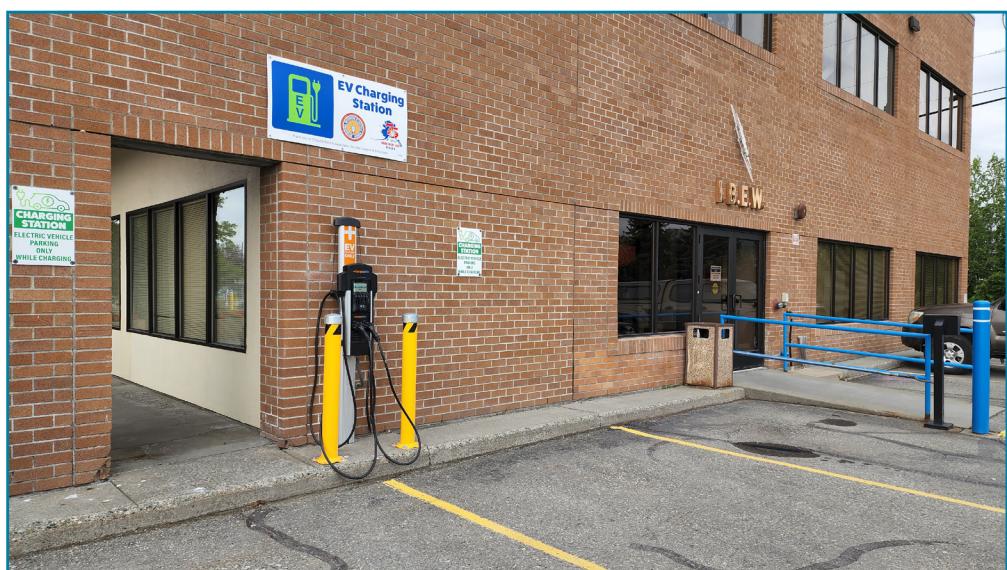
- Golden Valley Electric Association: \$0.65480/kWh
- Homer Electric Association: \$0.16441/kWh
- Matanuska Electric Association: \$0.30243/kWh
- Chugach Electric Association: \$0.15274
- Juneau Utility, Alaska Electric Light and Power Company: \$0.1383 to \$0.2489/kWh depending on class of customer and time of year

The state's AFC is located within the Railbelt service territories of Chugach Electric Association, Matanuska Electric Association and Golden Valley Electric Association. The RCA's action does not address EV rates for unregulated utilities.

The remaining 30% of the state's population resides in remote and rural communities. Alaska's 183 remote villages are primarily powered by small diesel engine generator sets. Alaska has very few roads despite being 665,000 square miles and more than twice the size of Texas — it is vastly more remote than even the most rural parts of the contiguous United States. There are no natural gas pipelines, electric transmission lines or central generation plants serving multiple villages. Engines, generators, switchgear and supporting equipment vary significantly among the 183 powerhouses dispersed across Alaska's remote communities. Each village is a stand-alone microgrid and many do not have the expected professionally trained, utility and maintenance personnel.

The cost of energy varies drastically depending on the cost of fuel. The non-subsidized cost of energy in rural Alaska ranges between \$0.30/kWh and \$1.20/kWh. The Southeast region consumes the least amount of fossil fuel for electric generation. Both Kodiak and Southeast have large, mature hydroelectric projects that provide the majority of power in their more populated communities, resulting in stable, low energy costs.

The Aleutians, Bering Straits, Bristol Bay, Lower Yukon-Kuskokwim, and Yukon-Koyukuk/Upper Tanana regions are almost entirely reliant on diesel for power generation. An increasing amount of wind power is generated in the Bering Straits, Lower Yukon-Kuskokwim, and Northwest Arctic regions. Some communities in



*EV charging station at the IBEW office in Anchorage.  
Photo courtesy of AEA*



the Bristol Bay and Aleutians regions have developed hydropower resources. The amount of hydroelectric and wind generation has been continually increasing in the last 15 years.

## Private Investment

Given the current low penetration and expected usage of the DCFC stations, some small businesses that could be site hosts may find the 20% match to be a challenging proposition. AEA is investigating solutions to reduce the burden and identifying potential site hosts to determine if match funding can be fully supported. AEA estimates that each NEVI-compliant site will cost \$1.0M - \$1.2M to construct, requiring \$200,000 - \$240,000 for a local match.

One potential mitigation for some sites would be to leverage the already selected VW Settlement sites that are about to begin construction. Three sites along the AFC have 500 kVA transformer upgrades planned. Three 150 kW chargers, plus two existing 11 kW level 2 chargers can fit within that output at full capacity. A fourth level 3 charger could still be installed and used concurrently if the total output of the chargers was below 500 kW. Effectively, three vehicles could charge at 150 kW each but if a fourth vehicle plugged in the facility would automatically throttle all four chargers down and cap their output at 125 kW. This method is used extensively in the industry.

AEA is requesting that FHWA accept this approach for these sites because if the existing funding for the VW Settlement site is allowable as match funding. This approach could reduce the risk of schedule delays and supply chain impacts for the utility equipment at certain sites, as well as reduce project costs. Ultimately, it would make it easier to find site hosts that don't require upgrades to newly installed utility equipment. With Alaska's near-term projected adoption, this scenario would provide adequate charging capabilities in the spirit of the NEVI program and allow for future upgrades as demand increases.



# EV Charging Infrastructure Deployment

The Alaska EV Infrastructure Implementation Plan identifies where and when EV charging infrastructure should be deployed with the NEVI formula funding. Considerations of consumer adoption, cost to install, return on investment, utility availability, roadway traffic, weather, and site host availability were taken into account to develop a proposed strategy to deploy infrastructure. Throughout the five-year NEVI program, the deployment plan is expected to evolve through lessons learned, data collection and analysis, and continued stakeholder engagement.

## Funding Sources

No state funding or highway gas taxes have been allocated for the construction of the infrastructure. Match funding sources will come from one or a mix of the below options. Therefore, AEA is evaluating the matching funding sources available.

- **Site hosts:** While the 20% match could be significant, some sites may be able to support the entire match. Regardless of other match funding sources, it is expected that the site may provide match funding or support the operations and maintenance throughout the five-year period.
- **Volkswagen Settlement funds:** AEA has approximately \$50,000 remaining in the trust fund that can be used to offset some of the local match funding, if allowable by court trustee.
- **Volkswagen Settlement Site:** AEA is requesting determination from FHWA if VW funds and site host matching funds can be applied as NEVI match. NEVI funding would be utilized to upgrade the existing VW sites for NEVI compliance.



- Utilities:** Utilities are permitted to support line extensions that can count as part of the overall project costs and therefore count towards match requirements.

## Infrastructure Deployment Upgrades

An inventory of EV charging stations currently being installed through other initiatives outside of NEVI was compiled for review to identify locations and determine if any of the sites would be NEVI compliant. Coordination with the other deployments could help maximize the formula funding, as well as present opportunities to engage with potential site hosts that already support EV charging.

Table 5. Proposed EV Charger Installations by Other Initiatives

State EV Charging Location Unique ID	Charger Level (DCFC, L2)	Charger Type	Location	Number of EV Connectors	EV Network (if known)	Corridor
Glenn_19.47	DCFC, Level 2	J1772, 2 CHAdeMO, 2 CCS/SAE	22211 Birchwood Loop Rd, Chugiak, AK 99567	6	Non-net-worked	AFC within one mile
AK3_79.31	DCFC	CHAdeMO, CCS/SAE	23471 S Parks Hwy, Willow, AK 99688	2	Non-net-worked	AFC within one mile
AK3_212.87	DCFC	CHAdeMO, CCS/SAE	248.5 Parks Hwy, Healy, AK 99743	2	Non-net-worked	AFC within one mile
1232_0.36	DCFC	CHAdeMO, CCS/SAE	800 E Dimond Blvd, Anchorage, AK 99515	2	Non-net-worked	Outside
1005_0.02	DCFC	CHAdeMO	19842 Hope Hwy, Hope, AK 99605		Unknown	Outside
Sterling_11.58	DCFC	CHAdeMO	18280 Sterling Hwy, Cooper Landing, AK 99572	1	Unknown	Outside
Seward_2.01	DCFC	CHAdeMO	2001 Seward Hwy, Seward, AK 99664	1	Unknown	Outside
1077_0.97	DCFC	CHAdeMO	35722 Kenai Spur Hwy, Soldotna, AK 99669	1	Unknown	Outside

## Volkswagen Settlement: Homer to Healy Corridor

In 2021, AEA spent \$1 million from the Volkswagen Settlement to fund a charging corridor from Homer and Seward on the Kenai Peninsula to Healy, south of Fairbanks. The corridor consists of nine charging stations separated by less than 100 miles, allowing drivers the ability to travel from the Kenai Peninsula to Fairbanks without fear of losing power. Seven sites are in the middle of being constructed, two are operational. Figure 11 below identifies the corridor deployment. The proposed stations will not meet NEVI requirements as all the DCFC stations will be 50 kW and at most there will be two stations per site installed.

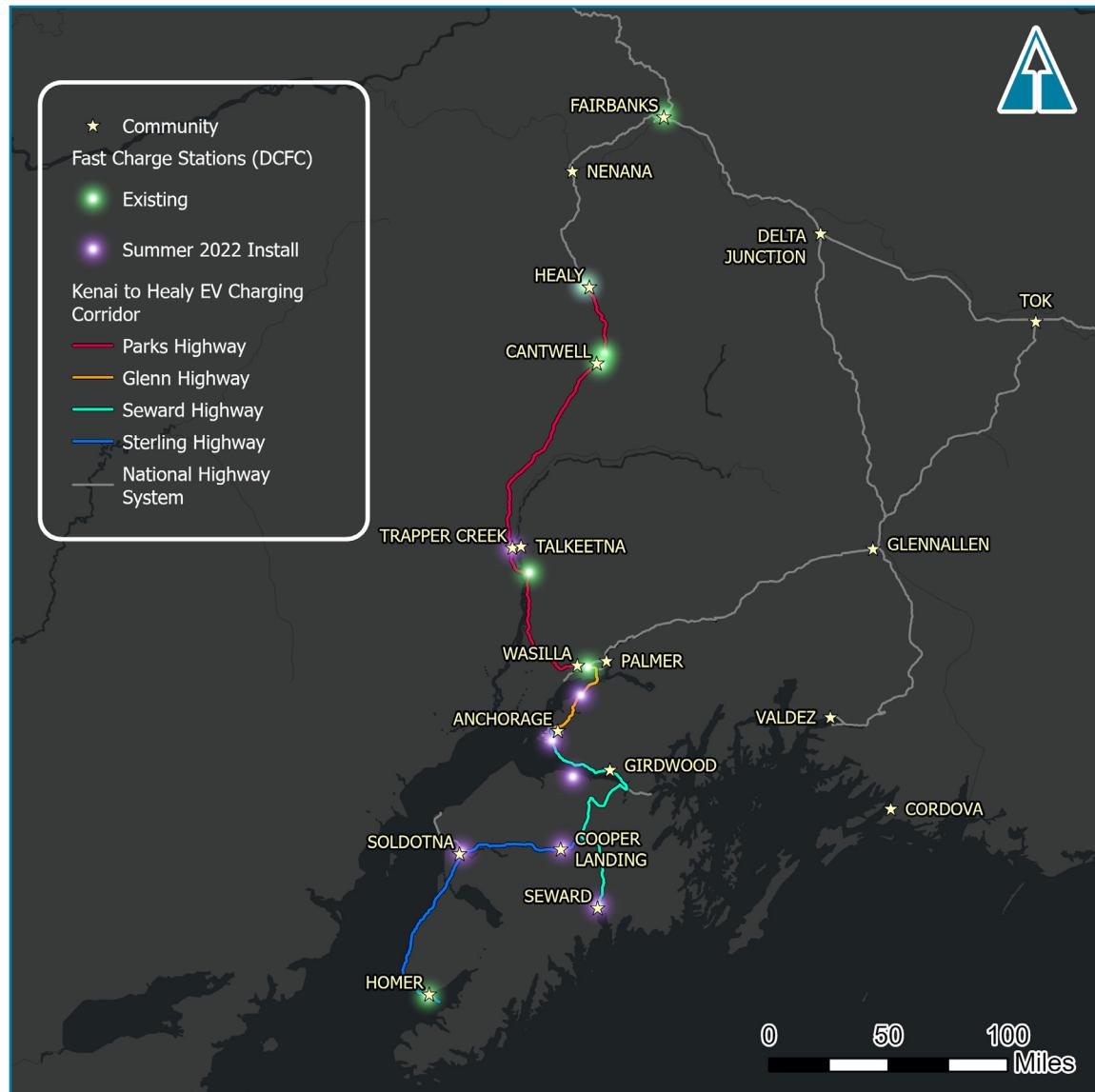


Figure 10. Alaska's Current and Future EV Charging Locations

## AFC Corridor Pending Designation to Corridor Ready Designation

AFC pending designation in Alaska as of Round 6 goes from Anchorage to Fairbanks. In order to receive the corridor ready designation and comply with NEVI requirements, the corridor will require an entire buildup of new infrastructure, as none of the existing stations meet the requirements of the NEVI program. The process to select the locations was determined by the following factors: current EV charging locations, utilities power lines and 50-mile radius.

Some locations along the corridor are not within a utility service area. Because of the power utility gaps some EV charging locations will not be within the 50-mile radius required by NEVI. The EV charging locations are optimized to be within the shortest distance of each other.

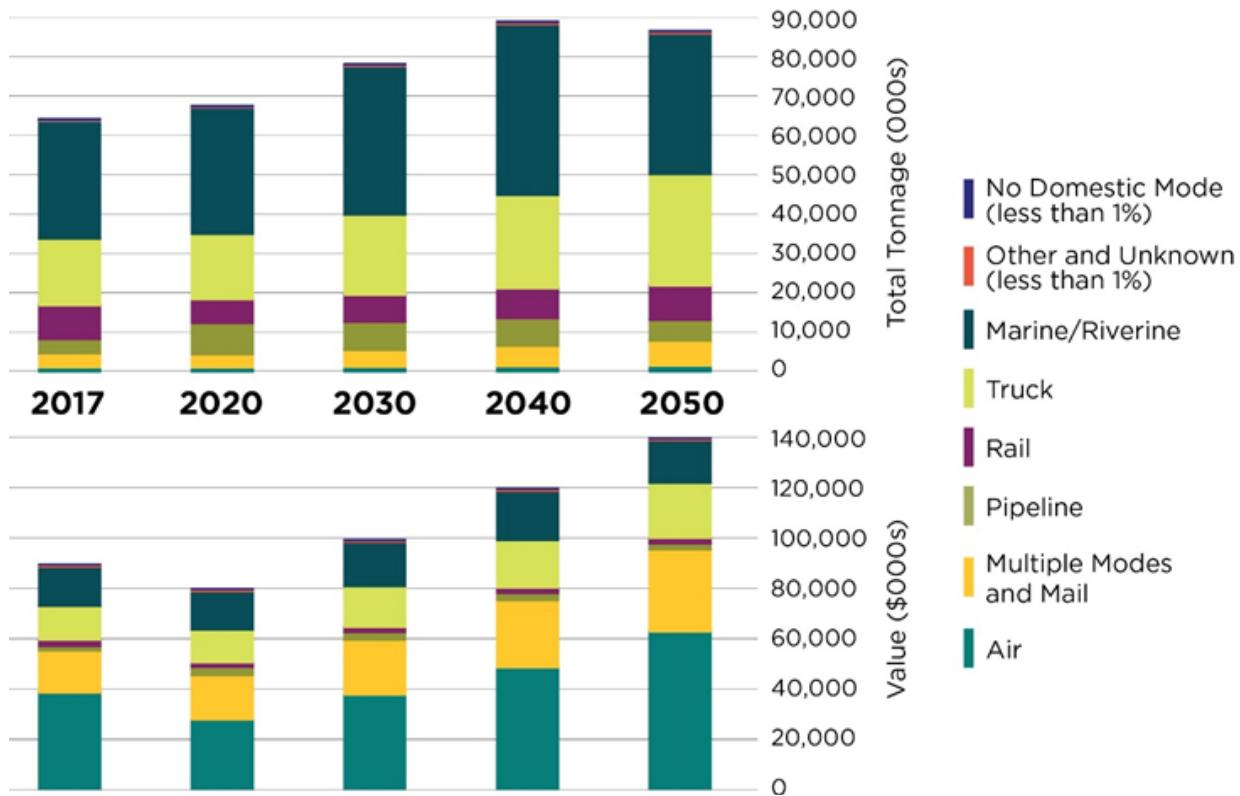
## Increases of Capacity/Redundancy along Existing AFC

AEA intends to build out the AFC to its maximum capability. It is not expected that any location will exceed the minimum number of charging stations prescribed in the NEVI guidance, as the EV penetration in Alaska is low and long-distance travel is seasonal by car.



## Electric Vehicle Freight Considerations

Nearly half of Alaska's freight by weight is transported by truck, another quarter by rail, and just under 15% by boat. The majority of trucked goods and materials are transported to the state by ship or barge, then trucked within the state to their destination. The highest volume of this truck traffic occurs between the urban centers of Anchorage and Fairbanks.



*Figure 11. Freight Moved by Mode (Within, Into, and Out of Alaska)  
Source: Alaska Moves 2050 DRAFT Statewide Freight Plan*

According to the Alaska Trucking Association, the trucking industry in Alaska is not anticipating the electrification of fleets in the foreseeable future and is not aware of any sales of electric freight vehicles in the state.

When fleet electrification does begin in the state, range and infrastructure will be two major considerations. Alaska's freight routes are more defined than freight routes in the contiguous United States because there are fewer destinations and fewer alternative routes. For example, a driver traveling between Anchorage and Fairbanks will need to travel the entire distance (approximately 360 miles) and charge at the destination. A lengthy break for charging in the middle of the route would make the trip not economically feasible. AEA will continue to monitor fleet manufacturing roadmaps to determine if battery-electric trucks become the industry preference or if another alternative fuel or hybrid powertrain becomes prominent.

A lack of electric infrastructure along some freight routes will also be a barrier to fleet electrification. For example, the oil and gas industry based on the North Slope depends on freight trucked year-round up the Elliott and Dalton Highways to Prudhoe Bay, a nearly 500-mile one-way trip, and there is no power grid available along the route.

Electrification of the state's marine fleet may be more feasible in the near-term. A research project is currently



underway, funded by Alaska DOT&PF, that is studying the feasibility of low emission and electric ferries as an option as the state replaces its aging Alaska Marine Highway System fleet<sup>1</sup>.

## Public Transportation Considerations

Two electric buses are currently in use in Alaska—one city transit bus in Juneau and one school bus in Tok.

Tok Transportation operates the state's only electric school bus, which is half-powered by solar panels and half by the local electric utility. The community of Tok is located in Interior Alaska, which experiences some of the coldest winter temperatures in the state. In the milder shoulder seasons, the bus runs between 1.4 and 1.7 kilowatts per mile. At -38°F, the bus's efficiency decreased to 3.46 kilowatts per mile. The extra energy costs are spent heating the inside of the bus to a minimum of 45 degrees. To increase efficiency, the battery is insulated, and the engine is covered.

Juneau's bus, operated by Capital Transit, has faced mechanical problems since its purchase in spring 2021, keeping it out of service for weeks at a time. Its range is also lower than expected in the summer and winter months. Although expected to have a 210-mile range (about 10 hours), in ideal conditions it can go for 170 miles (8 hours) and in colder winter months about 120 miles (5 hours). The decreased battery efficiency is primarily due to the energy needed to heat the inside of the bus. Despite the difficulties with its first bus, Capital Transit plans to purchase more electric buses for its fleet, citing improved EV technology.

In 2018, the Municipality of Anchorage leased an electric bus to test its viability, but no electric buses were purchased after that initial test. In its 2019 Climate Action Plan, the Municipality included a goal to "monitor the economic viability" of transitioning its public transit fleet to electric vehicles, although progress on that goal was not discussed in the 2019/2020 follow-up report. According to a report on the Anchorage School District website<sup>2</sup>, although the school district recognizes the future potential of electric buses, cost and performance of the buses on long routes, especially in the winter, makes them not viable.

Several smaller transit services provide transportation within rural communities (like Sunshine Transit serving communities in the upper Susitna Valley) and between rural communities and urban areas (like Soaring Eagle Transit, operated by the Gulkana Village Council, that runs between communities in the Copper River Basin and Anchorage). None of these services utilize electric vehicles but could benefit from the build-out of electric



*The City and Borough of Juneau purchased an electric bus in 2021  
Photo courtesy of AEA*

1 <https://dot.alaska.gov/comm/pressbox/arch2022/PR22-0021.shtml>

2 <https://www.asdk12.org/Page/13936>



vehicle infrastructure.

The greatest barriers to adoption of EVs in public transit appear to be initial investment costs and cold weather performance. The Anchorage School District claims electric buses can cost three to four times as much up-front and requires a capital investment of \$8-10 million to convert the current diesel fueling infrastructure to electric charging stations. Performance in cold weather is also a concern, with much of the battery power being used to heat the interior of the bus. Currently Juneau's electric bus cannot complete a full day's worth of routes in the winter without having to be switched out to charge.

AEA will continue to monitor electric bus technology improvements and agencies as they plan to purchase electric buses to determine if there are opportunities to collaborate on future infrastructure deployments outside of the designated Alternative Fuel Corridor.

## FY23-26 Infrastructure Deployments

During Phase 1, the AFC buildout, the focus will be on the priority charging sites located within the 'Priority EV Charging Sites' shaded regions of the below figure. Applications will be solicited to host the NEVI sites in each zone to maximize coverage of the corridor. With the deployment, there is an expected gap of 79.54 miles, greater than required 50-mile coverage in the NEVI program. This is due to the lack of utility service and host sites between Trapper Creek and Cantwell.

AEA estimates that it will require approximately \$14M - \$20M to fully build out the AFC to Ready designation. This would leave approximately \$30M - \$36M to be used for the other phases of deployment.

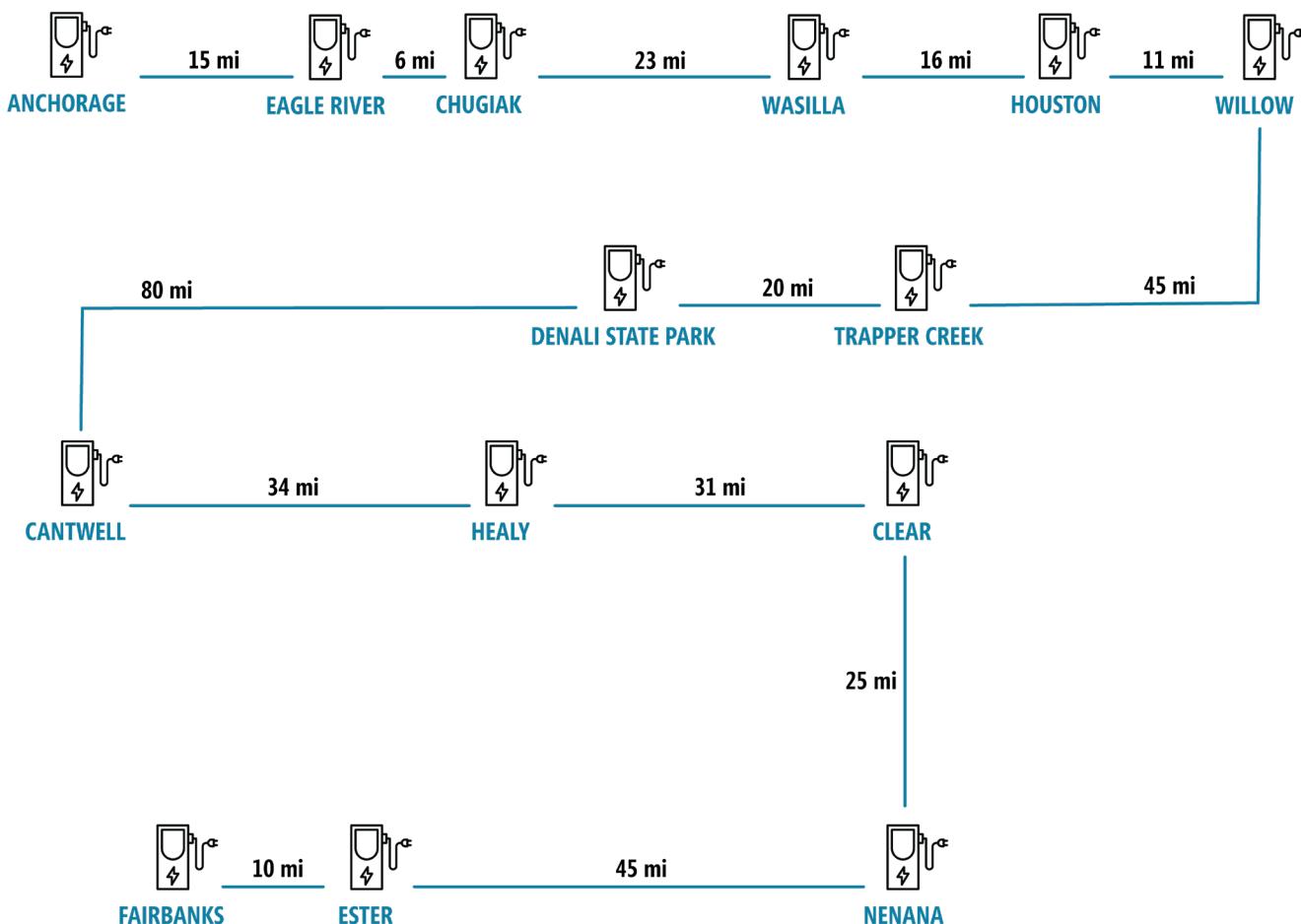


Figure 12. Spacing of Potential NEVI Host Communities

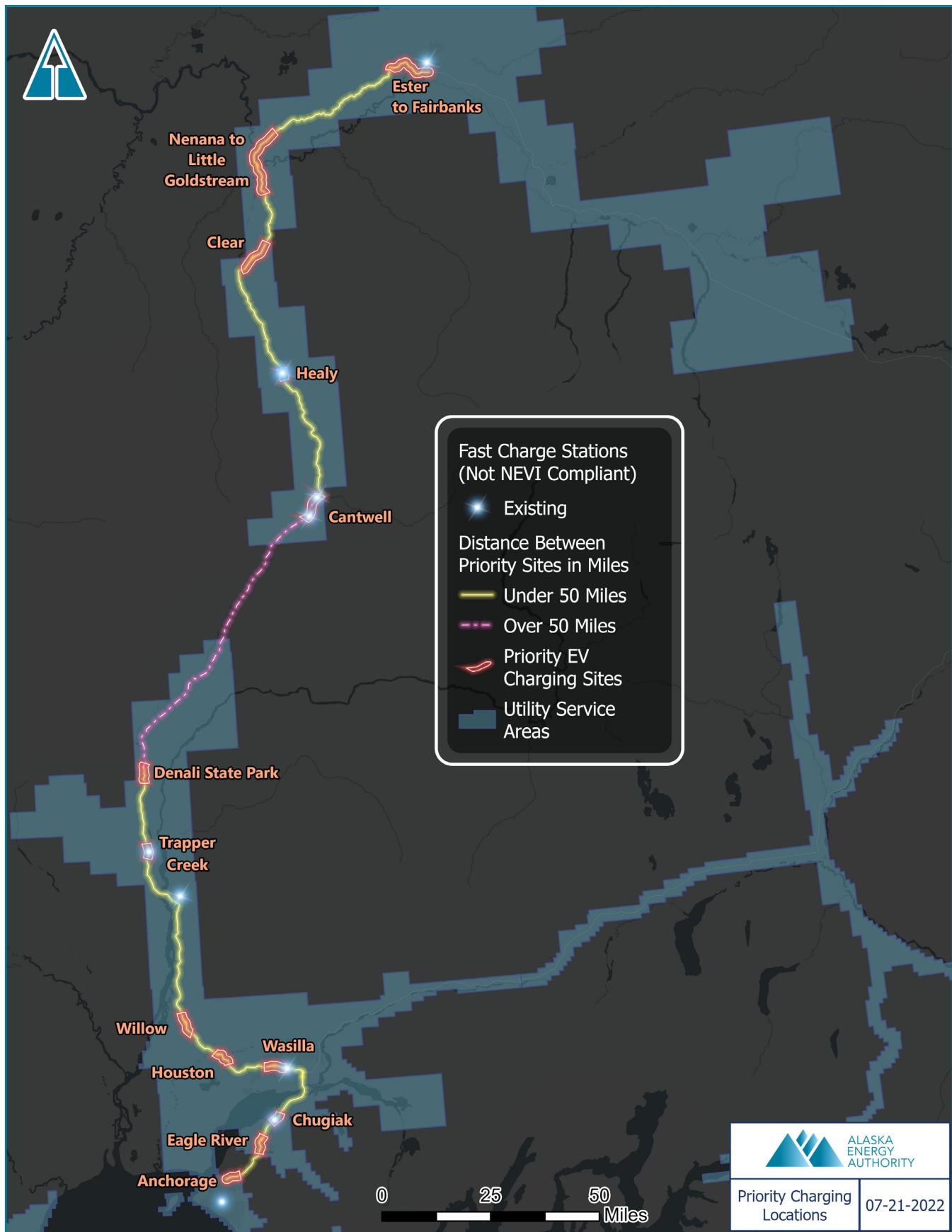


Figure 13. Distance Between Priority Sites in Alaska



# State, Regional, and Local Policy

Policies at the state, regional, and local level affect how the infrastructure can be deployed, funds collected, adoption rates and willingness to adopt EVs from the public, and how the infrastructure may be used by the public and fleet vehicles.

## Public Utility Definition

The RCA approved U-21-022 on October 25, 2021, that clarified that EV charging stations are not public utilities or subject to restrictions on the resale of electric service, so vendors and owners of charging stations could assess a fee for the provision of electricity. Previously, site hosts had to charge customers based on the amount of time spent using the EV charger since only public utilities were allowed to charge multiple different customers for electricity.<sup>3</sup>

## State Energy Policy

The State Energy Policy (Alaska Statutes 44.99.115) recognizes the importance of promoting energy efficiency in the transportation sector.<sup>4</sup>

## State Motor Fuel Tax – Registration Fees

There is a proposed bill that implements a biennial registration fee to supplement the highway fuel tax that is used for highway construction, maintenance, and operations. Electric and alternative fuel vehicles would pay \$100 and hybrid vehicles would pay \$50 under the proposal.<sup>5</sup>

## Volkswagen Trust Funds and State Energy Program (SEP) Funds

The 2016 settlement resolved claims that Volkswagen violated the Clean Air Act by selling approximately 590,000 vehicles with 2.0- and 3.0-liter diesel engines having emissions defeat devices. The settlement consisted of multiple agreements and required Volkswagen to pay \$2.9 billion to a national environmental mitigation trust fund. Beneficiaries such as the state of Alaska must use their shares to fund specific projects that reduce emissions of nitrogen oxides from vehicular sources.

Utilizing Volkswagen Trust funds, federal SEP funds as an added incentive and matching private funds from participating site hosts allows the state to embark on ambitious, sustainable infrastructure projects.<sup>6 7</sup>

## Alternative Fuel Vehicle Acquisition Requirement

Per Alaska Statute 44.42.020, every five years the Alaska DOT&PF must evaluate alternative fuel cost, efficiency, and commercial availability for automotive purposes. When practical, vehicles using alternative fuels should be purchased or vehicles should be converted to alternative fuels. To ensure the availability of alternative fuels for consumers, the department may work jointly with public or private partners.<sup>8</sup>

## Regional Zoning

Zoning ordinances are useful tools for state and local governments to indicate where EVSE is allowed

<sup>3</sup> (Poux, 2021)

<sup>4</sup> (Alaska State Government, 2020)

<sup>5</sup> (Josephson, 2021)

<sup>6</sup> (Alaska Government, 2022)

<sup>7</sup> (Missouri Department of Natural Resources, n.d.)

<sup>8</sup> (U.S. Department of Energy, n.d.)



or prohibited. Planners and other officials can utilize zoning to incentivize or require EVSE like chargers throughout a municipality's zoning districts or in specific areas.

Alaska can look to what other states and local municipalities have done to promote EV adoption. For example, in the case of Methuen, Massachusetts, an addendum to the existing zoning ordinance to permit the use of EVSE in single- and multi-family dwellings along with commercial and industrial zones. Even more radical measures include incentivizing EV supply equipment installation through parking requirement measures. In Georgia, a municipal ordinance includes an incentive program in which each designated EV space in parking facilities counts as three spaces toward meeting off-street parking requirements. The effects of this ordinance are twofold: Electric Vehicle use is incentivized, and traditional internal combustion engine vehicle use is constrained and disincentivized.

Any changes in zoning ordinances must include clear definitions and provisions to avoid unintended limitations on EVSE deployment. New York City's Department of City Planning demonstrated this best practice when it amended zoning language to define EVSE in conjunction with parking facilities as an accessory use. This action allowed EVSE to be located in any drive-in property in a commercial district, rather than only at existing fueling station locations.<sup>9</sup>

Further, state or local ordinances could restrict the parking of non-EVs or EVs not charging in parking spaces with fines and/or towing implications.

## Grassroots

Alaska Electric Vehicle Association (AKEVA) plans to set up a temporary EV charging corridor from Fairbanks to Oliktok Point to bring attention to the challenges of electrifying all communities across Alaska. Demonstration, education, advocacy, and fundraising are pivotal as AKEVA builds their platform for EV drivers, activists, and stakeholders across the state to engage. These measures accelerate the adoption of EVs and improve EV infrastructure in Alaska. Education can also be utilized to dispel public misconceptions about range anxiety,

EV performance in cold climates, and costs that prevent consumers from confidently making an EV their next vehicle purchase.<sup>10</sup>

ReCharge Alaska is a private project led by EV enthusiasts in Alaska. The group's goal is to "open up Alaska and advance the EV transformation through the deployment of DC Fast Chargers". ReCharge Alaska has deployed its own DCFC stations to support EV drivers in the state, written white papers on the subject, and researched and developed



*EV charging station in Anchorage  
Photo courtesy of AEA*

<sup>9</sup> (U.S. Department of Energy, 2015)

<sup>10</sup> (AKEVA, 2022)



solutions to deploying infrastructure in the extreme cold temperatures of Alaska. The group has voiced satisfaction with The Alaska Electric Vehicle Association's 2020 R-20-005 tariff. The Regulatory Commission of Alaska evaluated the current electrical tariffs for emerging EV market and concluded that the R-20-005 incentive for electric users to reduce their power loads from short bursts of loads to a leveled load would be easier for the electrical utilities to manage. Such cooperation between private entities and state organizations is a promising step towards popularizing EV use. In this framework, passionate citizens take the initiative further than individual EV purchase, towards bolstering the public good.<sup>11</sup>

---

11 (Hall, 2022)



# Implementation

AEA has experience in supporting the deployment of EV charging stations, so past lessons learned and understandings can be applied to the NEVI program as AEA supports its deployment. The strategies in this section will support a successful deployment and lower risk to drivers, site hosts, network companies, the federal government, and AEA.

## Strategies for EVSE Operations & Maintenance

Following the electric vehicle infrastructure installation process, there will be several operational considerations to be aware of, including electricity and maintenance costs and associated networking fees.

### Maintenance & Warranty Costs

Charging infrastructure general maintenance includes storing charging cables, checking parts, keeping the equipment clean, and some intermittent repairs to chargers. Warranties vary by manufacturer and can be packaged as fixed-term, renewable, or included with equipment costs. However, while routine maintenance can be minimal, repairing broken chargers that are no longer under warranty can be costly. It is necessary to establish responsibility for maintenance costs (site host, charging network, or installer). Maintenance contracts should include response and repair times.

The site hosts and charging vendors will be responsible for the warranty, maintenance, and operations of the sites. The five-year costs related to these activities are expected to be included in the total project cost to be factored in with the federal share and local match. Once the NEVI funds are expended, the costs will entirely transfer to the site host and vendor, where it is expected that the sites will continue to operate and will be supported by collection of charging fees.



## Fees

Charging station site hosts who want to generate revenue or recover costs may assess a fee for use of the charging infrastructure. Many charging networks will facilitate the fee transaction at the charging unit, but fees can also be collected via app, credit card, over the phone, or at a nearby establishment.

# Pricing Structures

A report released by the University of California Los Angeles Luskin Center for Innovation details important information about the factors that influence the financial viability of charging stations. Common pricing structures charge by kWh, session, length of time, or through a subscription. The Regulatory Commission of Alaska has enabled charging by the kWh – the preferred method for EV drivers – so AEA will request that the recipients of the NEVI funding assess fees per kWh.

## Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners

Through previous deployment programs, AEA has a list of nine approved program vendors. While the NEVI stations will need to be independently procured to meet the minimum requirements of the program and the federal contracting language, the engagement can begin with these vendors to generate interest in applying for proposed locations.

On May 13, AEA publicly released a RFI directed at interested site hosts and businesses of all sizes. The RFI was directly shared with local and small businesses that expressed interest in the VW Mitigation DCFC deployment. The intent was to begin a list of entities to engage as the program unfolds, generate interest in the program, and compare interested parties with identified areas for infrastructure deployment. Participants were encouraged to submit ideal locations with Global Positioning System (GPS) coordinates. This information can be used in initial outreach to gauge interest. Further, respondents were asked to provide suggestions and considerations for the plan. The word cloud in Figure 13 highlights the responses received, and the notable themes collected from the public during this phase are:

- **Equitable:** In alignment with AEA's goals and the Justice40 requirements, equity will be ensured throughout the program.
  - **Community:** The program should provide community charging. Alaskan's transportation patterns do not commonly include corridor travel.
  - **Efficient:** Providing adequate speeds of charging will allow for those using the charging stations to receive the charge needed and get back on the road.
  - **Profitable:** Host sites will need to support the installation and have a return on investment of the match funding provided.
  - **Accessible:** The stations need to be accommodating of all users and need to be placed in convenient locations for those traveling.

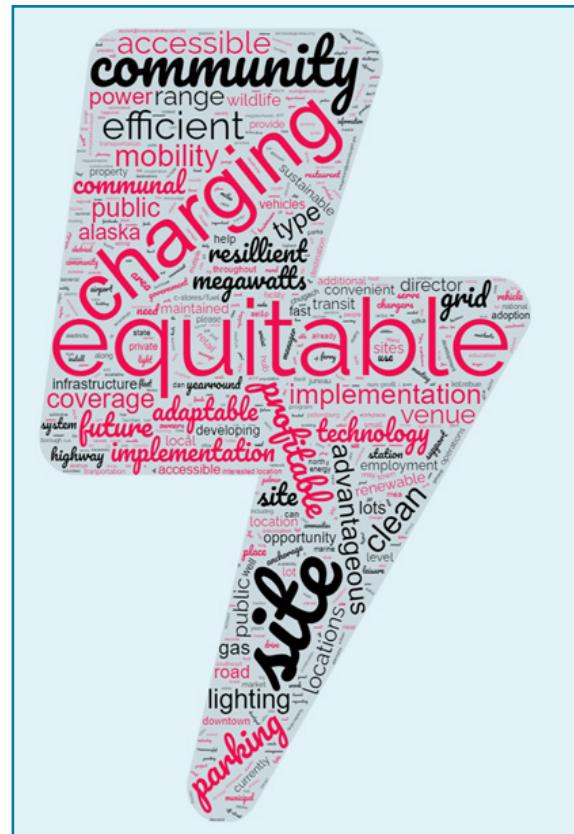


Figure 14. RFI Response Word Cloud  
Source: [www.wordclouds.com](http://www.wordclouds.com)



All procurements will be conducted through a publicly competitive process but conducting engagement activities with suppliers and site owners in advance should help bolster the number of applications received.

## Site Selection

As a competitive grant application process is the preferred procurement methodology, some initial criteria have been identified to select a site when multiple applications are received, particularly during the AFC buildout, or to set the priority for deployment. These draft criteria are expected to apply to DCFC station host sites, and selection criteria will be revisited for the rural deployment phases.

*Table 6. Draft Site Selection and Prioritization Criteria*

Criterion	Points
Site has adequate lighting Has lighting: 5 points No lighting: 0 points	5
Site is located within priority location along AFC Within gap: 20 points Within 5 miles of gap: 10 points Between 5-10 miles of gap: 5 points Outside 10 miles of gap: 0 points	20
Site is located within 1 mile of the highway Within 1 mile: 15 points 1-3 miles: 10 points 3-5 miles: 5 points Over 5 miles: 0 points	15
Site has amenities for travelers to access such as restrooms, food, and shopping	15
Site is located within a Justice40 boundary Within: 10 points Outside: 0 points	10
Site match contribution 20%: 10 points 25%: 15 points 30%: 20 points	20
Site has existing EV infrastructure: Has existing DCFC or L2: 5 points Does not have existing: 0 points	5
Site has adequate power for requirements: Has three-phase power: 10 points No three-phase power: 0 points	10
<b>Total Available Base Points</b>	<b>100</b>
Bonus Considerations	Points
Site offers pull-through charging access	5
Site offers make-ready work for additional ports in the future	5
Site offers make-ready work for increased speed (e.g., 350 kW) in the future	5
Site offers additional plug standards to be inclusive of other drivers (e.g., Tesla, CHAdeMO)	5

There are a variety of configurations for site layouts that a site host could pick based on expected usage and space or parking spaces available. Through the many public engagement actions to-date, accommodating



vehicles towing trailers has been brought up several times and could be an important consideration for the success of EV charging in Alaska as pickup trucks gain market share. Figure 14 shows an example configuration that accommodates one EV with a trailer. Additional layout examples can be found in Appendix B.

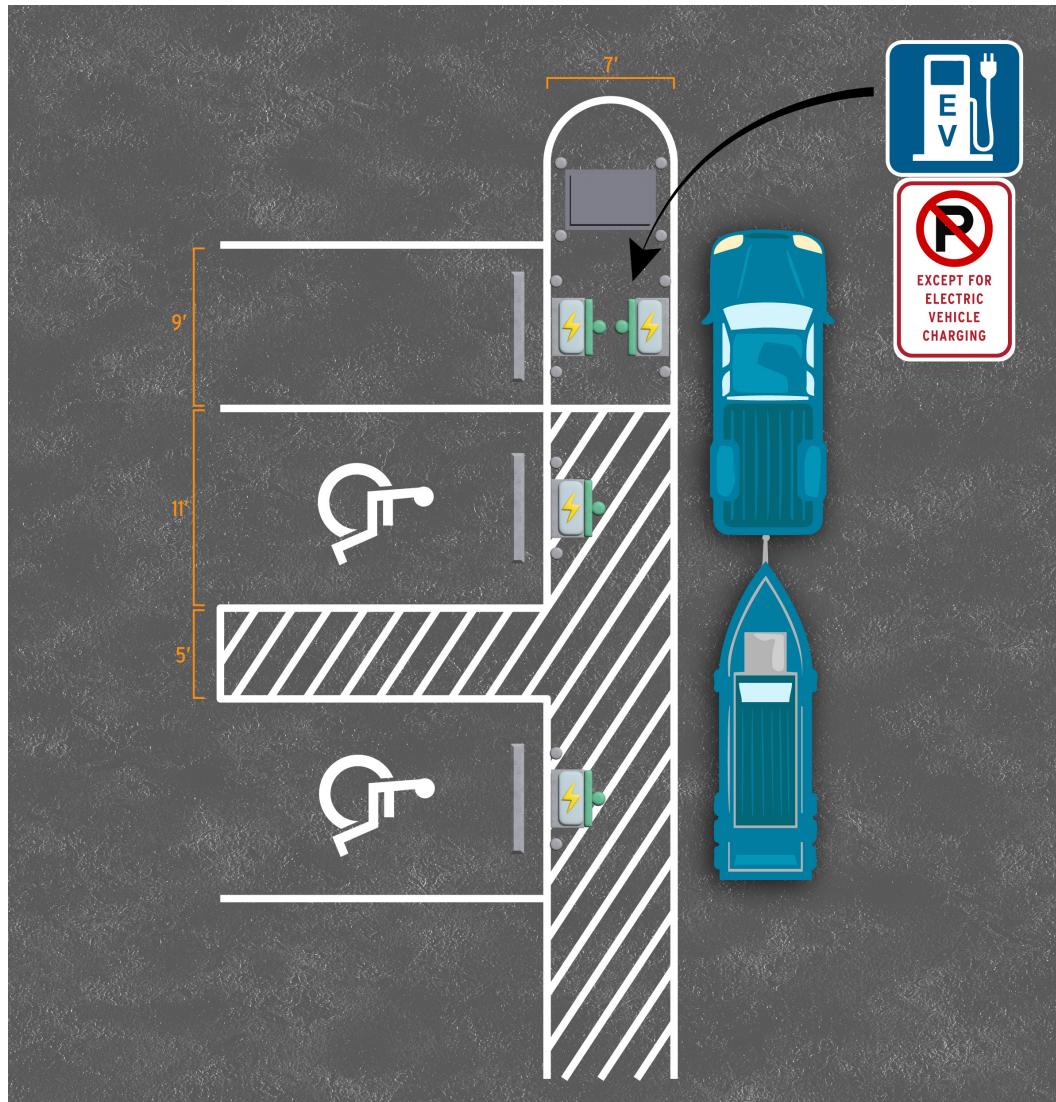


Figure 15. Example Configuration to Accommodate EVs with Trailers

AEA is also requesting guidance from the Joint Office as to if it is permissible to split the charging ports over multiple sites within a priority area. For example, two 150 kW charging stations could be installed at a site east of the AFC, and two 150 kW charging stations could be installed at a site west of the AFC. This could ease the financial burden on the site partners, lowering the cost of the match investment needed to be made. Some sites may also have sufficient utility infrastructure to accommodate a smaller site layout, reducing costs and supply chain concerns for utility equipment.

## Strategies for EVSE Data Collection & Sharing

AEA will collect data on the usage of the EV charging stations for performance measurement, planning for future deployments, and reporting to the Joint Office on the program's metrics. The minimum data to be collected will include:



- Charging station location identifier
- Charging session start time, end time, and successful session completion (yes/no) by port
- Energy (kWh) dispensed to EVs per session by port
- Peak session power (kW) by port
- Charging station uptime
- Cost of electricity to operate
- Maintenance and repair cost

These requirements will be imposed through the procurement documentation and subsequent contracts executed between AEA and the site partner and charging vendor. Further, the charging vendor will be required and responsible for sharing information through its own applications and other third-party applications. To enable data sharing with third-party entities, the vendor will be required to provide an Application Programming Interface (API) with specific static information (such as location and name) and dynamic information (such as pricing structure and availability status). The APIs will also be used to create a centralized dashboard for the public to view stats on the Alaska EV program.

The chargers will be required to display and base the price for electricity in \$/kWh. The price of charging will be displayed on the chargers and communicated via the charging network. Further, the pricing structure that is inclusive of maintenance and operation costs will be required to be explained via an application or a website. In an effort to make EV charging station location information more accessible, AEA will coordinate with the Alaska DOT&PF to add a layer to 511AK. This website garners frequent views due to the dynamic and changing conditions of Alaska's roadways. This will help inform the public of charging station locations and help ease range anxiety.



*Charging station on Northern Lights Blvd in Anchorage,  
Photo courtesy of AEA*

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

Alaska has significant risks related to earthquakes, mudslides, flooding, and avalanches. All of these – while serious and not entirely uncommon – are not as impactful as winter weather in Alaska. Certain roads are not maintained during the winter season, so that may impact the ability of the charging stations to be available and maintained year-round. Local entities have had to get creative and design an enclosure for the DCFC stations to keep them at an acceptable operating temperature during the harshest times of the year.

Site partners will be required to clear the parking spaces for the EV charging equipment, but it may take additional time to complete snow removal based on the weather conditions. These factors cannot be used against the vendor for station uptime, especially if the adjacent roadway is not traversable. Requirements for



operating temperatures and conditions will be included in the procurement and contract documents, but modifications, such as enclosures, may need to be accepted if the available equipment does not meet the specifications of the surrounding environment.

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

To ensure Alaska's workforce is prepared to install and maintain EV infrastructure, AEA will coordinate with and seek feedback from unions including the International Brotherhood of Electrical Workers (IBEW Local 1547), the National Electrical Contractors Association (NECA), and local Laborers' International Union of North America (LIUNA) affiliates like the Laborers' Local 942 in Fairbanks and the Laborers' Local 341 in Southcentral Alaska. Coordination efforts will focus on identifying challenges and risks in training Alaska's workforce to prepare for EV infrastructure and creating recommendations for certification requirements and state regulation changes, if needed.

Coordination efforts with unions will take place through the AKEVWG as outlined in the Public Involvement Plan in Appendix A. The working group includes representatives from Alaska's business community including chambers of commerce, small businesses, and potential site hosts. All recommendations related to the labor issues surrounding EV infrastructure that are discussed in technical group sessions will be presented to the larger group for consideration.

FHWA's NPRM 4910-22-P identifies the Electric Vehicle Infrastructure Training Program (EVITP) as the proposed certification program for electricians to install, maintain, and operate EV infrastructure. The EVITP website currently lists three Alaska businesses (located in Anchorage and Fairbanks) as utilizing EVITP-certified installers. The Public Involvement Plan lists each of these businesses as potential stakeholders to help inform future EV installation and maintenance standards due to their experience with the certification process. As the working group considers the best path to certification for Alaskans, it will consider the option to allow certification through a Registered Electrical Apprenticeship program that includes EVSE-specific training, as outlined in the proposed NEVI Program regulations.

**Bringing labor, business, and contracting groups into the EV conversation will have the added benefit of creating EV community advocates as workers learn more about EVs in Alaska and their economic development potential.**

Bringing labor, business, and contracting groups into the EV conversation will have the added benefit of creating EV community advocates as workers learn more about EVs in Alaska and their economic development potential.

## Strategies to Support State Fleet Transition

Alaska is interested and focused on evaluating how it can transition its fleet vehicles from internal combustion powered to battery electric powered. While the full detail of this evaluation is not included in this first draft of the NEVI Deployment Plan, Alaska is framing out the evaluation of the fleet that will occur in the 4th quarter of 2022.

The fleet vehicles will be inventoried, at a minimum, based on the following data:

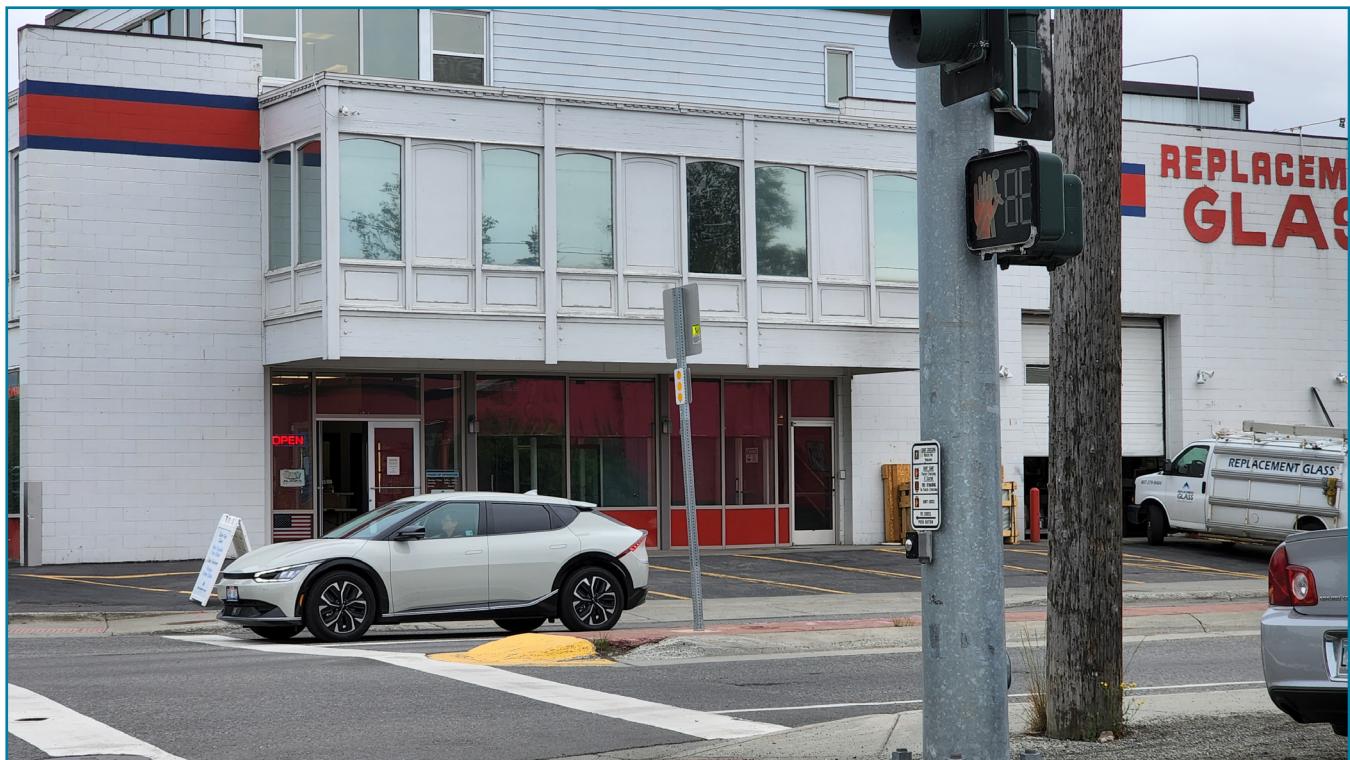
- Department owner
- Mileage
- Vehicle age
- Expected vehicle life



- Average daily miles
- 85th percentile daily mileage drive
- Maximum daily mileage driven
- Vehicle class
- Current miles-per-gallon
- Fuel type

AEA and DOT&PF will collaborate on a set of ranking criteria to determine the order of vehicle replacements, and to determine if there are any vehicles that may not be ideal for the transition at this time, be it the use case doesn't fit within electrified models or the current market models cannot meet the demand of the use case.

This transition plan is important because it will identify the vehicles and locations where the fleet will transition first and could be an opportunity for investment with future formula funds or discretionary funds. Consideration will be given to providing public access to EV charging stations wherever fleet vehicles will necessitate infrastructure installations.



An EV passes through the intersection of Fireweed Lane and Arctic Blvd in Anchorage. Photo courtesy of AEA



# Civil Rights

The Alaska DOT&PF is a recipient of Federal financial assistance. As a Federal-aid recipient, DOT&PF will ensure full compliance with Title VI of the Civil Rights Act of 1964 and related federal statutes and regulations in all DOT&PF programs and activities, including:

- 49 CFR Part 21 (Department of Transportation Regulations for the Implementation of Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987 (PL. 100.259))
- 23 CFR Part 200 (Title VI Program and Related Statutes – Implementation and Review Procedures)
- Federal-Aid Highway Act of 1973
- Section 504 of the Rehabilitation Act of 1973
- Age Discrimination Act of 1975
- Americans with Disabilities Act of 1990
- Executive Orders 12898 and 13166

## Title VI

DOT&PF Title VI Non-Discrimination Policy Statement:

*It is the policy of the Alaska Department of Transportation and Public Facilities (DOT&PF) that no one shall be subject to discrimination on the basis of race, color, national origin, sex, age, or disability.*

The Title VI Non-Discrimination policy is implemented by the Civil Rights Office Title VI Program Manager. Programs within Title VI are Environmental Justice, Limited English Proficiency, and Title VI (Non-Discrimination). To ensure DOT&PF is in compliance with these programs the Title VI Program Manager conducts Title VI program reviews of each division within DOT&PF. If an area is found to be non-compliant the



Program Manager works with staff to bring the identified non-compliant area into compliance.

The policy also applies to subrecipients, so by AEA entering into an MOA with DOT&PF and leading the procurement, AEA accepts responsibility to include the Non-Discrimination language in all procurement documentation and contract agreements.

## Americans with Disabilities Act (ADA)

DOT&PF ADA Policy Statement:

*"It is the policy of the Alaska Department of Transportation & Public Facilities (ADOT&PF) that no qualified individual with a disability shall, solely on the basis of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any of its programs, services, or activities as provided by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA). ADOT&PF further assures that every effort will be made to provide nondiscrimination in all of its programs and activities regardless of the funding source, including FTA, FAA, FHWA, and state funds."*

When addressing accessibility needs and requirements, DOT&PF 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<sup>1</sup>, it is recommended: "Provide access to a reasonable number of spaces serving EV charging stations" or use the scoping table in §208.2<sup>2</sup> 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.)"

AEA will include Title VI language and require compliance with applicable civil rights regulations and accessibility standards in procurement documents and contracts with other entities such as consultants, contractors, and vendors. AEA will also monitor for compliance and perform required reporting in accordance with USDOT regulations.

## Diverse Business Participation

DOT&PF has a strong Civil Rights programs that implement Title 49 Part 26 through the Alaska Unified Certification Program (AUCP). These programs ensure participation of Minority/Women/Disadvantaged Business Enterprise (M/W/DBE) small businesses. DOT&PF has a Disadvantaged Business Enterprise Program Plan approved by the FHWA (2019). DOT&PF Civil Rights Office administers all DOT&PF DBE<sup>3</sup> and On-the-Job Training Supportive Services Programs<sup>4</sup>. Firms certified as DBEs by the AUCP are also eligible for the DBE Business Development Program<sup>5</sup>, which gives DBE firms the opportunity to further assist in small business growth within and outside of the market for traditional DBE areas of work.

These programs have strong stakeholders and partners, including intergovernmental agencies, business, labor, and community groups. The Civil Rights Office has longstanding partnerships with the Small Business Administration, the Alaska Procurement Technical Assistance Center, Alaska Small Business Development Center, AGC, ABC, the Federation of Community Councils, the University of Alaska, the AGC of Alaska, Alaska Works Partnership (AWP), the Alaska Apprenticeship Training Coordinators Association (AATCA), various trades unions, and Chambers of Commerce throughout the state.

1 <https://www.access-board.gov/ada/guides/chapter-5-parking/#electric-vehicle-charging-stations>

2 <https://www.access-board.gov/ada/guides/chapter-5-parking/#minimum-number-of-accessible-parking-spaces>

3 23 USC 140(c) 23 CFR 230 Subpart B

4 23 CFR § 230, Appendix A to Subpart A, 23 CFR § 230, Appendix B to Subpart B, 23 CFR § 230.111, 23 CFR § 230.113, and 23 USC 140(b)

5 49 CFR 26 Appendix C



# Equity Considerations

DOT&PF and AEA employees know and understand the varying demographic communities throughout the state of Alaska as well as the importance of reaching out to all of our communities. The State is committed to not only public input and public outreach from our rural, underserved, and disadvantaged communities, but continued communication throughout the life cycle of the process and project of delivering EV charging stations within the communities and proposed corridors. Alaska has extensive rural regions and communities that range from all around the borders of the state to the interior border with Canada.

Rural communities face challenges related to location, terrain, resources, and communication capabilities. AEA will work with community leaders to provide opportunities to engage, comment, and participate in the development of the EV charging stations.

AEA will use social media, community councils, radio ads, in-person meetings, virtual meetings, partnerships with local governments/municipalities, and Tribes, to collaborate with these groups to develop local needs. Within the urban areas, community leaders will have the opportunity to attend virtual meetings and in-person meetings to provide comments from the community as well as to review site selections and project rollout.

In rural communities, social media, virtual meetings, and in-person meetings with the DOT&PF's tribal liaison, tribes, and community Elders will provide vital information as to sacred areas/burial grounds within their communities to avoid. The State understands the subsistence hunting/fishing lifestyle and times of year and will work with the tribes to avoid outreach/public participation within those time frames with the goal to re-engage with those communities at a later date.

The plan reflects that the concerns, questions, input, and ideas from the public comments/public outreach events will have had a direct effect on the corridor and EV site selection. Continued communication with communities and stakeholders throughout the life cycle of the project will allow for modifications to the plan based on public feedback from individuals within disadvantaged communities. As contractors are selected



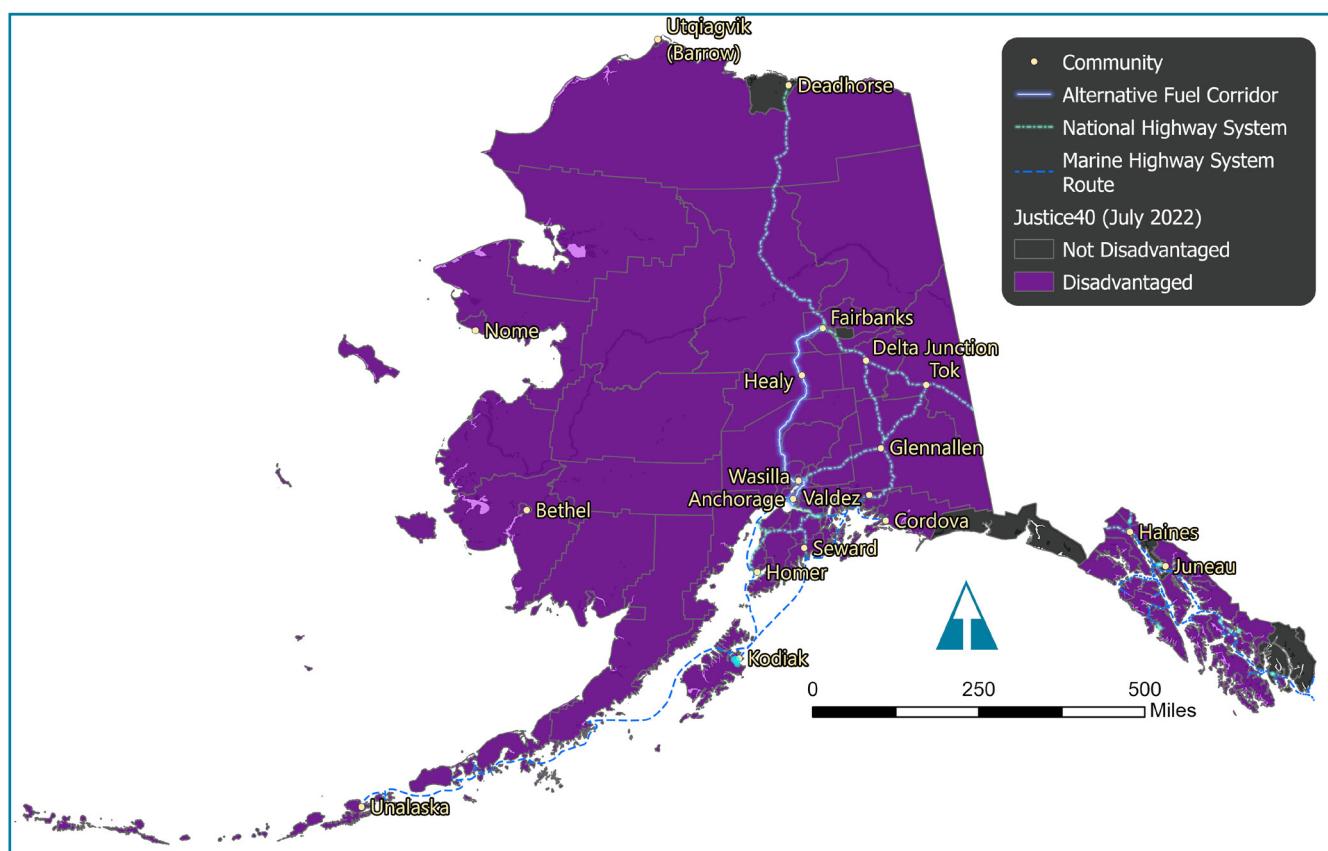
for capabilities, DOT&PF and AEA will require the selected vendor to review, evaluate, and site locations within the EV Study Area using federal requirements and guidelines made available by the Joint Office.

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

Through Executive Order 14008, the Justice40 Initiative was signed by President Biden. The Justice40 Initiative sets a goal that 40% of the overall benefits in certain Federal investments flow to DACs that are marginalized, underserved, and overburdened. Through meaningful and consistent stakeholder engagement, Justice40 will allow stakeholders and community members the opportunity to engage and provide input on project and programs decisions. Through the use of the Climate and Economic Justice Screening Tool, which is the digital tool developed with the use of U.S. Census Bureau data, AEA will identify marginalized, underserved, and overburdened communities within the project area for outreach and DAC participation.

The initial stakeholder list contains many government communities that fall within Justice40 boundaries as other DACs, including tribal councils. AEA commits to furthering outreach through promotion of efforts on social media and through newsletters so AEA can continue to foster engagement with all communities.

Large parts of the AFC lie within DACs, so initial outreach will occur in these communities for deployment, while outreach in other communities will be used to update and refine the plan for the outyears. The investments beyond the AFC will focus on the AMHS, where many of the port communities fall within Justice40 boundaries, and then community and destination charging where AEA can provide charging access in rural DACs to foster growth for EVs. The expected penetration in the early years in these communities is expected to be low, but the investment will ensure that the DACs are not left behind as the vehicle fleet shifts





*Electric vehicle charging station in Anchorage. Photo courtesy of AEA*

to electric power.

To support equitable deployments, 30 of the 54 (56%) communities and local governments in the stakeholders list lie within Justice40 boundaries. By only having one AFC, AEA will have the flexibility to disseminate investments and benefits to more communities across the state. AEA and DOT&PF are also currently reviewing the Justice40 map for discrepancies between their own records of DACs, as it appears the two datasets are not in alignment. Should discrepancies be found, AEA will request credit for the benefits of DAC deployments not located on the Justice40 map.

## **Process to Identify, Quantify, and Measure Benefits to DACs**

The initial measurement method to track the benefits to DACs will be quantifying the amount of funding invested into DACs. This process will involve identifying the infrastructure installed within Justice40 boundaries. For locations that are not within boundaries, an evaluation will be performed using GIS mapping to determine if the infrastructure is in close proximity to the boundary and along a roadway to the community. With Alaska's roadway network, terrain, and rural nature, many communities only have one access point to the roadway network, so infrastructure placed along that access but outside the boundary may still provide benefit to the DAC.

Consultant and AEA labor will be tracked for engagement activities that directly correlate to DACs as well, as education and outreach will be important to involve DACs, collect their input, and support them with the NEVI funding. AEA understands that community needs are dynamic. The current engagement plan recognizes this and will be updated accordingly throughout the NEVI program. The plan calls for meeting with DACs, engaging with their needs, providing transparency in the implementation process, and eventually gaining trust within the community.

There is an additional opportunity to integrate DACs into the clean energy job pipeline as job training related to EV infrastructure installation and general clean energy infrastructure could be provided. Such training measures would not only increase community engagement related to the clean energy transition, but also



provide additional income and job security that could provide upward mobility from DAC status. AEA will coordinate with the AWP and the AATCA, AGC, and ABC support women and minority participation in the apprenticeship programs.

## Benefits to DACs through this Plan

AEA is in the early stages of identifying and setting performance targets for the benefits to DACs. Investment in communities ensures access to EV charging infrastructure. While adoption rates may be low initially, providing access will make the transition to EVs easier as more affordable and accessible vehicles are released by Original Equipment Manufacturers (OEMs). Context sensitive approaches must be utilized in Alaska, especially as it pertains to alternative vehicles like All Terrain Vehicles (ATVs) and snowmachines. While electric versions of these vehicles are by no means low-cost capital, they are significantly more affordable than electric passenger vehicles. ATVs and snowmachines are used daily by some Alaskans, and their personal preferences must not be disregarded. Including these means of transportation in the EV transition may be a more financially viable variation for DACs in the transition to electric passenger vehicles.

While total cost of ownership is typically lower over the life of the vehicle, financial barriers to entry into the EV market can be prohibitive. Therefore, an alternative to remedy these barriers could be the popularization of transit and shared-ride vehicles for DAC. By alleviating the financial burdens of individual vehicle purchase and providing community support for transit, DACs can receive the same mobility benefits for a lower per capita price. These communally utilized modes also cut down on vehicle miles traveled in their entirety, decreasing the economic and environmental constraints of EV producers and EV users.

Such wholesale changes to travel habits would welcome air quality improvements due to increased EV adoption. Air quality improvements are pivotal as DACs are oftentimes disproportionately affected transportation emissions from internal combustion engine vehicles.



# Labor & Workforce Considerations

Alaska expects the capacity of the State's EV workforce to increase with the implementation of NEVI funds. EV adoption in Alaska is an opportunity for the development of skilled workers and job creation. As EV penetration and charging infrastructure increase, the demand for an in-state EV workforce and associated training programs will increase as well. The State of Alaska has a current EV penetration level of approximately 0.2%, with minimal supporting EV charging infrastructure in place. A significant amount of EV installation, operations and maintenance expertise currently resides out of state.

The goal of the State's NEVI Labor and Workforce plan is to develop and retain as many EV workforce opportunities as possible within the state. This can be accomplished, in part, by working with our partners at the Department of Labor, AWP, AATCA, AGC, ABC, and other vocational schools and universities to promote in-state EV training programs and opportunities.

To ensure a network of reliable and effective EV chargers, Alaska will need to implement strong labor, training and installation standards. Electricians installing EVSE and charging equipment must understand the aspects of the market to adequately address customer questions, concerns and satisfaction. A Request for Qualifications (RFQ) process will be carried out by AEA to establish a list of qualified EVSE suppliers and contractors and validate vendor qualifications. The staffing and training requirements will be developed in the RFQ based on NEVI program guidance and industry best practices. The RFQ will solicit information from vendors to ensure that electricians have received EVITP training.

Currently there are three EVITP certified contractors in Alaska, two in Anchorage and one in Fairbanks. The planned EV infrastructure investment will bring a significant amount of EV employment opportunities to the state, which could overwhelm the current in-state EVITP certified workforce capacity.



There are several apprenticeship programs offered in-state through our various partners. The addition of EVITP training and certification opportunities should be included in the curriculum of local electrical apprenticeship programs. AEA will engage trade schools in Alaska to increase awareness of the certification and training programs. With the requirement of the certification for the installation and deployment of the proposed charging stations not only in Alaska but elsewhere, there should be increased support in the curriculum to keep the graduates at the cutting edge of the industry.

The State of Alaska has a Policy on Anti-Discrimination and Equal Opportunity to protect against illegal discrimination. Alaska is one of the most racially and ethnically diverse states in the nation and is committed to promoting a workforce that is representative of all Alaskans. As an employer and service provider, the State fully supports Equal Opportunity, Equal Employment Opportunity (EEO), and Affirmative Action. The State does not condone, permit, or tolerate discrimination against its employees or applicants for State employment on the basis of race, color, national origin, religion, sex, age, physical or mental disability, marital status, changes in marital status, pregnancy or parenthood, or status as a veteran or veteran with a disability. In compliance with 49 CFR Part 26, and the Alaska DOT&PF's EEO Policy Statement, Affirmative Action Plan, and its ongoing commitment to integrating diversity, equity, and inclusion, the Alaska NEVI Plan will establish procedure to incorporate certified DBEs as either prime contractors or subcontractors. Proposals for NEVI contracts will be required to submit a DBE Performance Plan as part of a responsive proposal.



*Dedication of an AEA-funded EV charging station at the Linny Pacillo Parking Garage in Anchorage.  
Photo courtesy of AEA*



# Cybersecurity

AEA's approach to deploying infrastructure through the NEVI program is to use third-party vendors to own, operate, and maintain the EV charging stations and the data that is stored and transmitted. The data that will be publicly available will be transmitted through an API, and the data will be limited to non-sensitive material. AEA does not intend to collect, nor does it want Personally Identifiable Information (PII).

The energy sector is uniquely critical as all other infrastructure sectors depend on power and/or fuel to operate. A threat on energy infrastructure can directly affect the security and resilience within and across other critical infrastructure sectors – threatening public safety, the economy, and national security.

AEA is in the process of writing State Energy Security Plans (SESP) as an essential part of energy security planning. The SESP will describe the state's energy landscape, people, processes, and risks, and will include considerations and planning as it relates to EVSE. AEA will work with partners to develop and finalize a plan to ensure the infrastructure is safe against all physical and cybersecurity threats.

As part of the contract with the site partner and/or charging providers, language surrounding cybersecurity requirements will be included. The vendor will be responsible for meeting the latest cybersecurity requirements around PII and Payment Card Industry Data Security Standard (PCI-DSS) security standards to protect customer payment information. This vendor will be responsible for alerting AEA and the Cybersecurity and Infrastructure Security Agency (CISA) of any known or suspected network or system compromises.



# Program Evaluation

## Monitoring

AEA will work with Alaska DOT&PF to develop a public-facing dashboard that displays the data collected from the infrastructure deployed with NEVI formula funding. This dashboard will inform the community of the number of stations, their usage, and their uptime. The AEA program manager will be responsible for monitoring the deployment schedule and monitoring the progress of the installations. The dashboard will be updated as new stations come online.

## Reporting

The dashboard developed to monitor the program will also assist AEA in reports that need to be developed to submit to the Joint Office. These reports will assist in evaluating compliance for speed of charging provided as well as station uptime. Alaska will comply with the quarterly and annual reporting requirements identified in the NPRM. AEA will also provide an extract of the maps produced and provide them to DOT&PF for incorporation into the 'Family of Plans' and other transportation-related maps.

## Annual Updates

This report is intended to be a living document and will be updated annually based on data collected throughout the year. Summaries will be included to inform Alaskans and the Joint Office on the progress of the program and its usage. This data will also aid in informing out-year decisions, such as if additional capacity at certain locations is required or the type of facility that benefits the most from infrastructure installation.

While AEA has developed a roadmap for the five-year NEVI program, continued engagement with stakeholders will refine and alter the proposed method and locations for infrastructure outside the AFC.



# Discretionary Exceptions

## Summary of Requests

AEA and DOT&PF, on behalf of Alaska, are currently requesting one discretionary exception to the NEVI requirements as identified in Table 7.

*Table 7. Discretionary Exception Request*

Exception #	Type	Distance of Deviation	Included in Round 6 AFC Nomination	Reason for Exception Request
1	✓ 50 miles apart 1 mile from exit	25 miles — miles	Yes ✓ No	✓ Grid Capacity ✓ Geography Equity Extraordinary Cost

## Justification for Exception 1

The State of Alaska is requesting an exception to the requirement that EV chargers be placed no more than 50 miles apart due to the lack of electric service and infrastructure area along a 75-mile stretch of the AFC. There is currently no electric infrastructure between approximately Parks Highway mile 135 (north of Trapper Creek) and mile 210 (Cantwell).

The Matanuska Electric Association operates electric utilities south of mile 135. Its authority to regulate electric utilities extends north to approximately mile 173, although no infrastructure is currently installed north of mile 135. Golden Valley Electric Association operates electric utilities north of mile 210 and its authority to regulate electric utilities extends south to mile 199. This leaves a 26-mile gap where no electric utility has regulatory authority to install new service.



Within the area where no electric infrastructure currently exists, there are few commercial establishments and none that operate year-round, leaving limited options for utilities to recoup the costs of extending power lines. Installing power lines to EV charging stations to meet the 50-mile distance requirement would be prohibitively expensive and logically onerous, with few, if any, site stakeholders to engage to host the stations within the gap. The two utility companies on either side of this utility gap are active stakeholders in the Alaska Electric Vehicle Working Group, which will continue to work to overcome these challenges.

AEA proposes to install charging stations as close as feasible to the edges of the utility gap to minimize the EV charging infrastructure gap along the AFC. AEA will work with businesses and property owners to find suitable sites to minimize the length of this gap to the greatest extent possible.

One alternative solution considered was to install a charging station within the utility gap that utilizes diesel or solar power generation, or a combination of both. The environmental costs of diesel power generation, the feasibility of utilizing solar power during Alaska's dark winter months, and the cost of constructing and operating a NEVI-compliant charging station with these alternative power sources rule out this option.

## Map of Exception

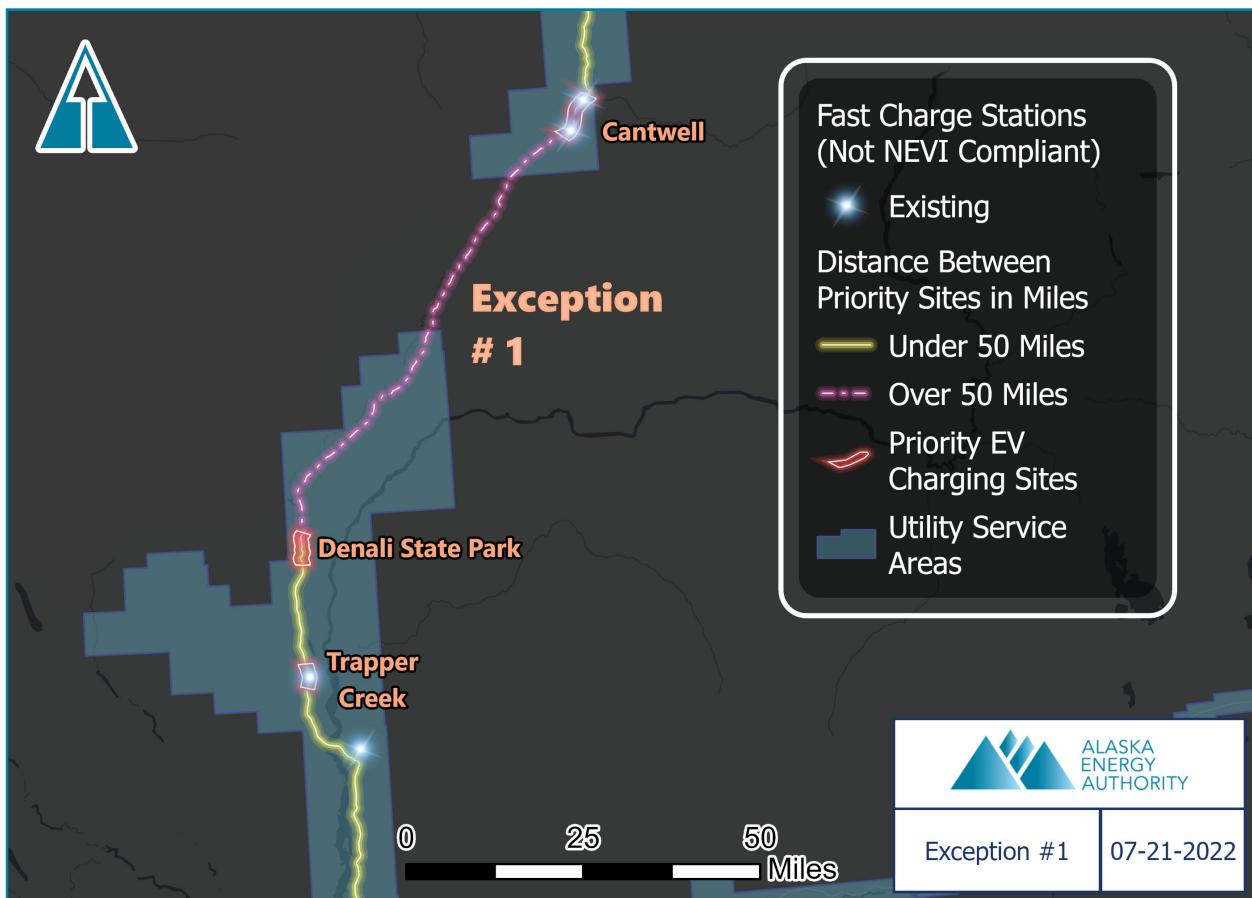


Figure 17. Discretionary Exception 1



# Summary of Requests from AEA

The list below was populated in an effort to consolidate the requests that AEA has of FHWA in this document for ease of response by FHWA:

- 1. Discretionary Exception:** AEA is requesting FHWA to approve and/or provide commentary on the discretionary exception requested in Table 7.
- 2. Throttling at Proposed VW Sites:** Three sites along the AFC have 500 kVA transformer upgrades planned with the VW Mitigation funding. Three 150 kW chargers, plus two existing 11 kW level 2 chargers can fit within that output at full capacity. A fourth level three charger could still be installed and used concurrently if the total output of the chargers was below 500 kW. Effectively, three vehicles could charge at 150 kW each but if a fourth vehicle plugged in the facility would automatically throttle all four chargers down and cap their output at 125 kW. AEA is requesting that this approach could meet a "ready" corridor designation, as this method is used extensively in the industry and could reduce costs and schedule impacts. It would be a rare occasion that this situation would occur, as all four ports would need to be engaged with near-empty EVs for maximum power draw. While these sites haven't been selected for upgrade at this time, a timely response could allow for the 150 kW DCFC equipment to be installed.
- 3. VW Funding Match:** AEA is requesting determination from FHWA that VW funds and site host matching funds can be applied as NEVI match. AEA is considering using NEVI funding to upgrade the existing VW sites for NEVI compliance but may not have site-host concurrence without the existing allocated funds counting towards the match.
- 4. Split Sites on the AFC:** AEA is requesting guidance from FHWA as to if it is permissible to split the charging ports over multiple sites within a priority area along the AFC. For example, two 150 kW charging stations could be installed at a site east of the AFC, and two 150 kW charging stations could



be installed at a site west of the AFC. This could ease the financial burden on the site partners, lowering the cost of the match investment needed to be made for each. Some sites may also have sufficient utility infrastructure to accommodate a smaller site layout, reducing costs and supply chain concerns for utility equipment.

**5. Reduced Requirements for Non-AFC DCFC Sites:** Some isolated communities may not require or have the generation infrastructure to support 150 kW charging or four charging ports. Once the corridor is built-out, AEA is requesting to evaluate sites located outside of the AFC for a reduction in the requirements of DCFC sites, not necessitating that they all be NEVI-compliant sites. This flexibility would allow Alaska to provide access to DCFC in more areas along Alaska's Highway System and AMHS.



## Appendix A: Public Outreach and Education Plan

# ALASKA ELECTRIC VEHICLE OUTREACH & EDUCATION PLAN

Prepared for:



813 W Northern Lights Blvd  
Anchorage, AK 99503

Prepared by:  
**Michael Baker International**  
3900 C Street, Suite 900  
Anchorage, AK 99503  
907-273-1600

This public outreach and education plan is a living document. It may be updated to add or remove objectives, stakeholders, strategies, or methods as needed to adapt to new and changing circumstances as project development progresses.

## **BACKGROUND & OVERVIEW**

The Infrastructure Investment and Jobs Act (IIJA) seeks to improve the United States' nationwide network of electric vehicle (EV) charging infrastructure through the new National Electric Vehicle Infrastructure (NEVI) Formula Program by creating a network of 500,000 EV chargers by 2030. This will allow reliable, affordable, convenient, and equitable charging opportunities for all EV users. The NEVI Formula Program requires each state to submit an EV Infrastructure Deployment Plan by August 1, 2022 outlining how each state intends to use its formula funds. Through the NEVI program, Alaska will receive >\$50M in formula funding over five years including approximately \$7.8 million for the fiscal year 2023.

The Alaska Energy Authority (AEA) is the lead agency in Alaska charged with reducing barriers to the adoption of EVs across the state, disbursing federal grant and program funding related to EVs, and planning for and implementing the expansion of the state's EV infrastructure. One component of this mission and a requirement of the federal funding program is to develop a public outreach and education campaign to support the expansion of EV infrastructure across the state. Our team at Michael Baker International was hired by AEA to develop the outreach and education plan and assist with its implementation.

## **GOALS AND OBJECTIVES**

We will increase Alaskans' understanding of and enthusiasm for EVs and break down barriers to EV adoption through the following objectives:

1. Increase attendance and engagement in Alaska Electric Vehicle Working Group meetings through proactive outreach to new stakeholders and engaging Alaska-focused content as measured by the following metrics:
  - a. Increase average attendance at working group meetings by 25% between July 2022 and December 2023
  - b. Bring in four Alaska-based presenters
  - c. Results of two surveys (July 2022 and December 2023) show 25% improvement in quality of content ratings
2. Increase social media coverage of EVs in Alaska as measured by the following metrics:
  - a. Ten Alaska media stories in print, radio, or television
  - b. Media coverage in each major urban market (Anchorage, Fairbanks, Juneau)
  - c. Partner with Alaska DOT&PF to post 24 EV-related messages to social media with above-average engagement metrics
  - d. Increase number of AEA social media followers by 300% to increase engagement with EV-related content
3. Increase Alaskans' understanding of and enthusiasm for EVs in Alaska as measured by the following metrics:
  - a. Change in public online survey results about EV facts in Alaska between July 2022 and December 2023

- b. Increase the number of Alaskans who say they are willing to consider purchasing an EV over the next five years by 100%

This Public Information Plan will comply with best practices in public involvement and all applicable local, state, and federal regulations including 23 CFR 450.210.

## STRATEGY

Develop high-engagement tactics across a variety of communications channels to reach Alaskans where they are. Develop messaging based on information gathered from the public through social listening and surveys, specifically targeting areas of misinformation. Utilize the EV working group as the main communication channel for stakeholders and businesses across the state.

## OUTREACH COMPONENTS

This plan has three distinct outreach components:

1. **Alaska Electric Vehicle Working Group:** AEA established this group in 2020 to solicit feedback and share information among EV stakeholders across the state. Working group meetings are generally held once per quarter and typically include about 60 attendees. Technical sessions are held 8-12 times per year to discuss specific topics with a focused group that reports back to the main group. These sessions typically host about 10-15 attendees. All meetings are open to the public.
2. **Contractor Outreach:** AEA seeks partnerships from the private sector to install, house, and operate EV charging stations. This component of the outreach campaign will include educating potential private partners about business opportunities related to the expansion of EV infrastructure in Alaska. Robust private partnerships will be essential to the success of Alaska's EV program.
3. **Public Outreach and Education:** For the expansion of EV infrastructure to succeed in our state, Alaskans need to purchase and drive EVs. This component of the campaign will focus on breaking down the barriers to EV adoption through increased education about the benefits of EV, the logistics of driving electric vehicles, and the state's plans to expand infrastructure.

## DATA COLLECTION

In order to ensure our outreach is equitable and reaches multiple and disadvantaged communities, we will collect demographic data throughout the public involvement process. We will analyze this data to identify gaps and address them with new techniques or approaches (for example, offering different meeting times, advertising through different formats, or changing venues to increase ease of access). We will enact tasks to gather participant data to include but not limited to:

- Hard copy sign in sheets
- Required registration for virtual meetings
- Demographic questions within each survey
- Email sign up form on website

## SCHEDULE



This plan runs from July 2022 through December 2023.

	2022						2023											
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Working Group Quarterly Meetings	●				●				●				●			●	●	
Working Group Technical Sessions		●		●			●	●		●		●		●	●	●	●	
Newsletters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Website Content Updates	●			●				●				●	●				●	
Public Surveys	●																	
Public Outreach	●																	

## CURRENT OUTREACH

AEA hosted public informational sessions about EVs in Alaska, the NEVI program, and how the public can contribute to and provide comments on Alaska's draft NEVI plan. The informational sessions were held virtually and in-person at the following dates and times:

- June 8, 2022, 5-6 p.m.
- June 15, 12-1 p.m.
- June 21, 12-1 p.m.
- June 23, 12-1 p.m.

## ALASKA ELECTRIC VEHICLE WORKING GROUP

This working group of EV stakeholders was established in 2020 after the State of Alaska received funding from the VW emissions settlement. The group's quarterly meetings, which are open to the public, allow stakeholders to share information, discuss EV-related projects, and learn about EV-related topics on the national and statewide level. Smaller technical committee meetings are held 8-12 times per year to focus on specific topics or issues that are shared with the larger group during quarterly meetings. The working group's newsletter keeps stakeholders and the public informed about the latest Alaska EV news and meetings.

## QUARTERLY MEETINGS

Quarterly meetings are tentatively planned for a Wednesday in July, September, December, and March. Each meeting will be hybrid with a virtual component using Zoom platform and an in-person option for attendees in Anchorage. The meetings are held from 11:30 a.m. – 1:30 p.m. Meeting minutes are recorded and posted online within one week of each meeting.

## MEETING OUTREACH ACTIVITIES

We will use the following tactics to advertise the meeting to our stakeholders and the public:

- **Email blast** to working group, including all previous attendees who have provided their email addresses
  - Michael Baker will create email content; AEA will distribute email

- Create content for posting on **Alaska Online Public Notice System** website one week and again one day prior to meeting
- Create content for **social media** posts on the Alaska Energy Authority pages, with shares by Alaska DOT&PF
- Create content for **public service announcements** sent to public media radio stations statewide
- Create content for **flyers** to be posted at local businesses and post offices, with a concentration on the Railbelt corridor

Each advertisement will include a link (and QR code on flyers) to the AEA website where all meeting information will be housed and archived including the date, time, and in-person meeting location; agenda (posted at least three days prior to each meeting); and the virtual meeting link.

## REACHING NEW STAKEHOLDERS

The working group meetings to date have had an average attendance of about 60 people. Through increased outreach to the public and individual solicitation to additional potential stakeholders across the state, we aim to increase average attendance to 75 people. Additional stakeholder groups that have not participated in the past that we will be attempting to recruit are local governments and community groups along the Railbelt corridor, boroughs governments outside the Railbelt, National Park Service (Denali National Park), non-profit environmental organizations, chambers of commerce, tour groups, native corporations, and other native organizations.

## MEETING CONTENT

Providing updates on NEVI plan progress and implementation will be a standing agenda item at each meeting. We will also solicit presentations from stakeholders to update the group on other projects, new infrastructure and business partnerships, state agencies, and the electric vehicle market in Alaska. A survey to the group in late July/ early August 2022 will solicit feedback to determine the content the group finds most useful, and another survey in December 2023 will evaluate if content was engaging and request feedback on opportunities for improvement. Due to previous feedback from the group, we will focus on Alaska-specific content over national content.

## TECHNICAL COMMITTEE MEETINGS

Technical Committee meetings are intended to consist of a smaller group of people working on a specific issue. For example, if the group wanted to make a specific policy recommendation to legislators or begin an initiative to increase participation from the business community, a technical committee meeting could be convened to draft a specific recommendation to the larger working group. These meetings will be scheduled as needed during the larger quarterly working group meetings. These meetings are also open to the public, but generally have an attendance of 10-15 people. Meeting announcements will be posted to the Alaska Online Public Notice system and the website. Meeting minutes will be posted on the website within one week of each meeting.

## MONTHLY NEWSLETTER



Coordinating with AEA, we will create content for the monthly EV newsletter, which will be sent from the AEA communications team to the working group distribution list housed by AEA. Each newsletter will have a NEVI plan update and one other topic related to EVs in Alaska. We will also include any meeting information or public comment opportunities in these monthly emails. Sample topics for the newsletter include:

- EV ownership statistics in Alaska
- Results of outreach surveys
- New EVs on the market that are equipped for winter driving
- Installation of new charging stations
- EV events (e.g., EV ride-and-drive)
- New funding opportunities or legislation that affect Alaska

## CONTRACTOR OUTREACH

Outreach to the contracting community will focus on sharing information about business opportunities related to the expansion of EV infrastructure in Alaska. This outreach will include three distinct but overlapping audiences: chambers of commerce, individual businesses along the Railbelt, and unions. We will be sharing information and soliciting information about potential opportunities and challenges with our private partners.

## CHAMBERS OF COMMERCE

We will create a business-focused presentation to present at the Alaska Chamber (statewide reach) and community-based chambers of commerce. The business-focused presentation will include private partnership opportunities, status of NEVI planning and implementation, additional grant funding opportunities, regulations surrounding EVs and EV infrastructure, the state of the EV market in Alaska, and challenges and opportunities.

We will use these presentations as an opportunity to encourage business participation in the EV working group, share contact information, and solicit feedback about the challenges and opportunities perceived by the business community in Alaska.

## INDIVIDUAL BUSINESSES

Business partnerships will be essential for finding site-hosts for future EV infrastructure. While traveling the Railbelt corridor to post flyers for EV working group meetings, we will also distribute flyers for business owners with information about site-hosting and outreach partnership opportunities. These flyers will mirror the information in the business-focused presentations.

The Electric Vehicle Infrastructure Training Program (EVITP) website lists three Alaska-based businesses as utilizing EVITP-certified installers. We will reach out to each of these businesses for feedback on proposed EV regulations, assessments of the certification process, and input on establishing Alaska-specific installation and maintenance standards.

## UNIONS

We will reach out to unions such as the International Brotherhood of Electrical Workers (IBEW Local 1547) to solicit feedback on the challenges and opportunities associated with certifying EV workers and maintaining EV



infrastructure. By encouraging union participation at the quarterly EV working group meetings, we will strive to keep these groups up-to-speed on the latest regulations, training opportunities, and certification requirements. Union representatives will also play an important role in evaluating state regulations and recommending changes, if needed. Technical Committee meetings will be used to develop specific recommendations that will be presented at the quarterly working group meetings.

We will also work to find opportunities to partner in public outreach to leverage this group's growing familiarity with the EV industry to create community advocates.

## PUBLIC OUTREACH & EDUCATION

The primary intended outcome of the public outreach and education component is to reduce the barriers to EV adoption among Alaska drivers. We expect this plan to be updated and modified throughout its lifespan in response to research, feedback, funding availability, and market developments.

### AUDIENCE

We strive to reach the broadest audience of Alaska drivers possible. This includes anyone aged 14 and older, those connected to the road system and not, urban and rural, business-owners and employees, commercial drivers and gig-workers, permanent and seasonal residents, urban and rural residents, tourists and visitors, and every other person who drives in the state.

### RESEARCH

Breaking down the barriers to EV adoption requires our team to understand the nuances of the public's misunderstandings and reservations about purchasing EVs. We will release an online survey in July 2022 to test Alaskans' understanding about EVs and gauge willingness to participate in the EV market by location and demographic. The results of this survey will drive the messaging of the first part of the public information campaign and may influence which messages are attached to which tactics.

**An example of the nuances we could find and how it would change our messaging:** We find that a group of Alaskans who live in communities powered by diesel fuel considered purchasing an EV, but didn't because there was little perceived environmental benefit. We create a brief webpage on the AEA EV site discussing power sources, what they mean for the environmental impacts of EVs, and the future of energy production in Alaska (with links to credible resources). We follow this with a targeted social media campaign that links back to our new webpage. The goal is to keep these already-engaged people engaged in our content as a credible source of information.

This survey will be repeated in December 2023 to measure progress on our goals.

Throughout the length of this campaign, we will monitor comments on the social media posts we create to identify sentiments and themes. Monitoring social media comments will help us understand more about what messages are circulating about EVs and help drive messaging to clarify and counteract it.

### MESSAGING



The goal of this campaign's messaging is to counteract misinformation and increase the willingness of Alaskans to purchase EVs. The specific messaging should be modified and targeted based on the results of the online public surveys and analysis of social media comments.

We expect to use some of the following messaging in our campaign:

- Funding is coming into the state from the infrastructure bill to build up Alaska's electric vehicle infrastructure.
- The Parks Highways between Anchorage and Fairbanks will be Alaska's first electric vehicle corridor.
- Alaska is getting ready for electric vehicles and so should you—here's what we're doing: [NEVI Plan info]
- Are you thinking about buying a plug-in electric vehicle? Alaska is getting ready for you.
- The electric vehicle market has come a long way, and now it's ready for winter. You can buy AWD and 4WD electric vehicles and drive them all year.
- Thinking about buying an electric vehicle, but not sure it's practical? Visit our website to learn all about electric vehicles in Alaska.
- We have electric vehicle charging stations every XX miles between Anchorage and Fairbanks. What's stopping you? It's road trip time.

## OUTREACH ACTIVITIES

This list of potential tactics is expected to change throughout the life of this campaign depending on budget, staff availability, and ongoing research.

- EV website on the AEA site that hosts the following information:
  - Working group and technical session meeting information
  - NEVI Plan status and implementation progress
  - Funding sources and opportunities
  - Business partners
  - Interactive maps showing EV-related data
  - Contact information and survey links
  - Information about electricity production across the state
  - Information about EV ownership by location across Alaska
- Working group meeting flyers
- Working group monthly email newsletter
- Business opportunities flyer/information sheet
- Social media content, with the potential for paid content, including the following topics:
  - Working group meeting information
  - Outreach event information
  - Misinformation clarification
  - Infrastructure expansion
  - EV battery performance in cold climates
  - EV road performance in winter conditions

- Range information
- How to access EV info
- NEVI Plan implementation status
- Scholarship opportunity for high school student with the best essay on why EVs matter for Alaska (pending available funding)
- Contest for best graphic image to display on every NEVI-installed EV charger
- Press releases for the following milestones:
  - NEVI funding is received
  - Each public charging station that goes live
  - First phase corridor implementation is complete
  - Any other notable EV news
- Individual outreach to local journalists when events are being held in their communities
- Presentations to local groups

## STAKEHOLDERS

Current stakeholders are either involved in the working group or have signed up for the monthly newsletter. We will individually reach out to all contacts on the potential stakeholder list to encourage their involvement moving forward.

### CURRENT STAKEHOLDERS

AGENCIES	BUSINESSES	UTILITIES	COMMUNITIES
Alaska DOT&PF			Akutan
Alaska Energy Authority			Municipality of Anchorage
Alaska Housing Finance Corporation			City of Anderson
Bureau of Land Management			City of Angoon
Federal Highway Administration			Coffman Cove
Regulatory Commission of Alaska			Cold Bay
US Department of Energy			Cordova
Adventure Denali			Craig
ChargePoint			Delta Junction
Dimond Center			Denali Borough
Loopy Lupine			Eagle
Sheep Creek Lodge			City of Fairbanks
Chugiak Eagle River Chamber			Fairbanks North Star Borough
Denali Chamber of Commerce			False Pass
Willow Chamber of Commerce			Gustavus
Alaska Electric Light & Power Co.			Haines Borough
Alaska Power & Telephone		Alaska Power Association	Homer
			City of Hoonah

**EDUCATION**

Chugach Electric  
Copper Valley Electric  
Cordova Electric  
Enstar Natural Gas  
Golden Valley Electric Association  
Homer Electric Association  
Kodiak Electric Association  
Kotzebue Electric Association  
Matanuska Electric Association  
Southeast Alaska Power Agency, Ketchikan  
Lower Yukon School District  
University of Alaska Anchorage

**LOCAL ORGANIZATIONS**

Alaska Municipal League  
Alaska Center  
Alaska Electric Vehicle Association (AKEVA)  
Alaska Public Interest Research Group  
Alaska Trails  
Anchorage Economic Development Corporation  
Bering Strait Development Council  
Copper Valley Development Association  
Easy Park  
Fairbanks Economic Development Corporation  
Haines Economic Development Corporation  
Juneau EVA  
Kenai Peninsula Economic Development District  
Launch Alaska  
Norton Sound Health Corporation  
Pacific Northwest Economic Region  
Prince William Sound Economic Development District

**COMMUNITIES**

City of Houston  
Hydaburg  
City and Borough of Juneau  
Kachemak  
Kake  
Kasaan  
Kenai  
Kenai Peninsula Borough  
City of Ketchikan  
Ketchikan Gateway Borough  
King Cove  
Klawok  
City of Kodiak  
Kodiak Island Borough  
Matanuska-Susitna Borough  
City of Nenana  
North Pole  
North Slope Borough  
Old Harbor  
Ouzinkie  
City of Palmer  
Pelican  
Petersburg Borough  
Port Lions  
Saxman  
Seldovia  
Seward  
City and Borough of Sitka  
Municipality of Skagway Borough  
Soldotna  
Tenakee Springs  
Unalaska  
City of Valdez

**NATIVE ORGS**

Prince William Sound Science Center	Wasilla
ReCharge Alaska	Whittier
Renewable Energy Alaska Project	Yakutat
Sitka Conservation Society	
Southeast Conference	
Southwest Alaska Municipal Conference	
Ahtna, Inc.	
Chickaloon Native Village	
Chugach Corp	
Cook Inlet Regional Corp	
Doyon	
Kodiak Area Native Association	
Metlakatla Indian Community	

**POTENTIAL FUTURE STAKEHOLDERS**

National Park Service	Three Bears Alaska
Alaska DEC – Air Quality Division	Tok Transportation
Alyeska Resort	Greater Fairbanks Chamber of Commerce
McKinley Private Investment	University of Alaska Fairbanks
Northern Alaska Environmental Center	Alaska Native Tribal Health Consortium
Fairbanks Native Association	Tanana Chiefs Conference
IBEW Local 1547	Laborers' Local 942
Laborers' Local 341	Alcan Electrical & Engineering, Inc.
Fullford Electric, Inc.	CCI Electrical Services, LLC
FAST Planning	AMATS
Arctic Slope Native Association	Kawerak
Maniilaq	Association of Village Council Presidents
Cook Inlet Tribal Council	Bristol Bay Native Corporation
Aleutian Pribilof Island Association	Chugach Native Association
Kodiak Area Native Association	Copper River Native Association
Arctic Slope Regional Corporation	Aleut Corporation
Bering Straights Native Corporation	Bristol Bay Native Corporation
Calista Corporation	Koniag, Incorporated

NANA Regional Corporation

Alaska Federation of Natives

Telecommunications/Internet Entities

Sealaska Corporation

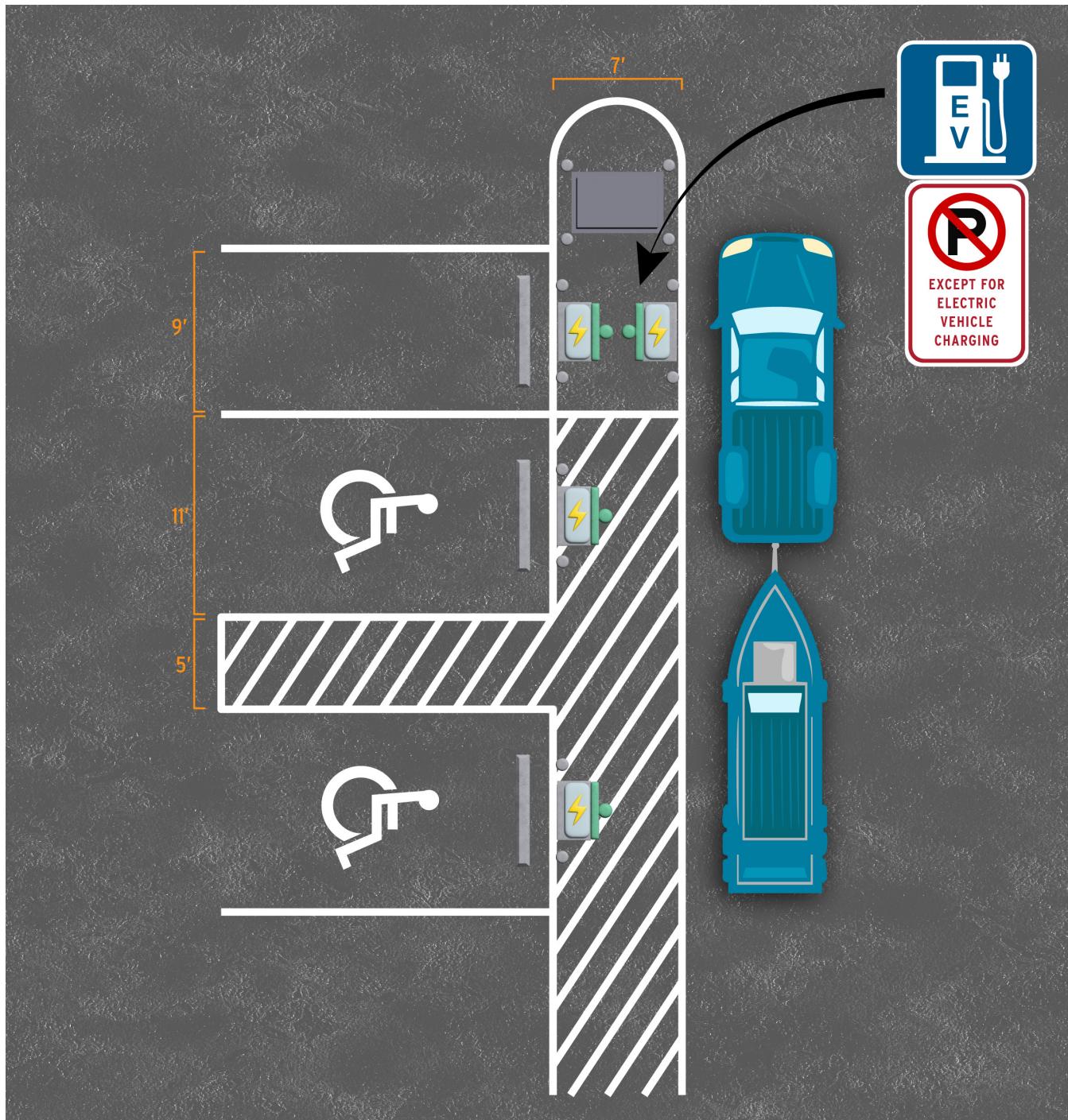
Alaska Inter-Tribal Council



## Appendix B: Example Site Layouts

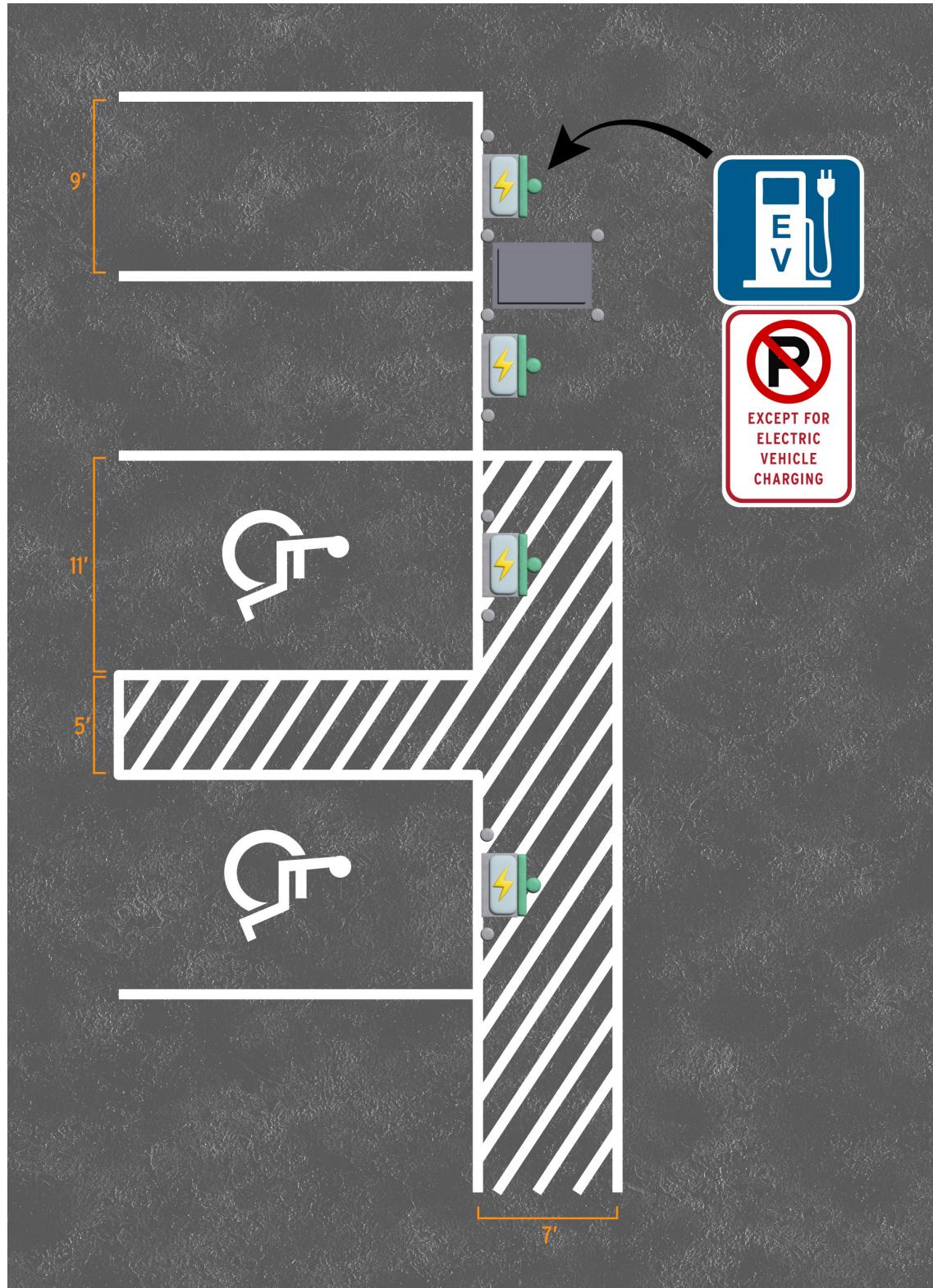


## Example One: three stalls and one pull-through station



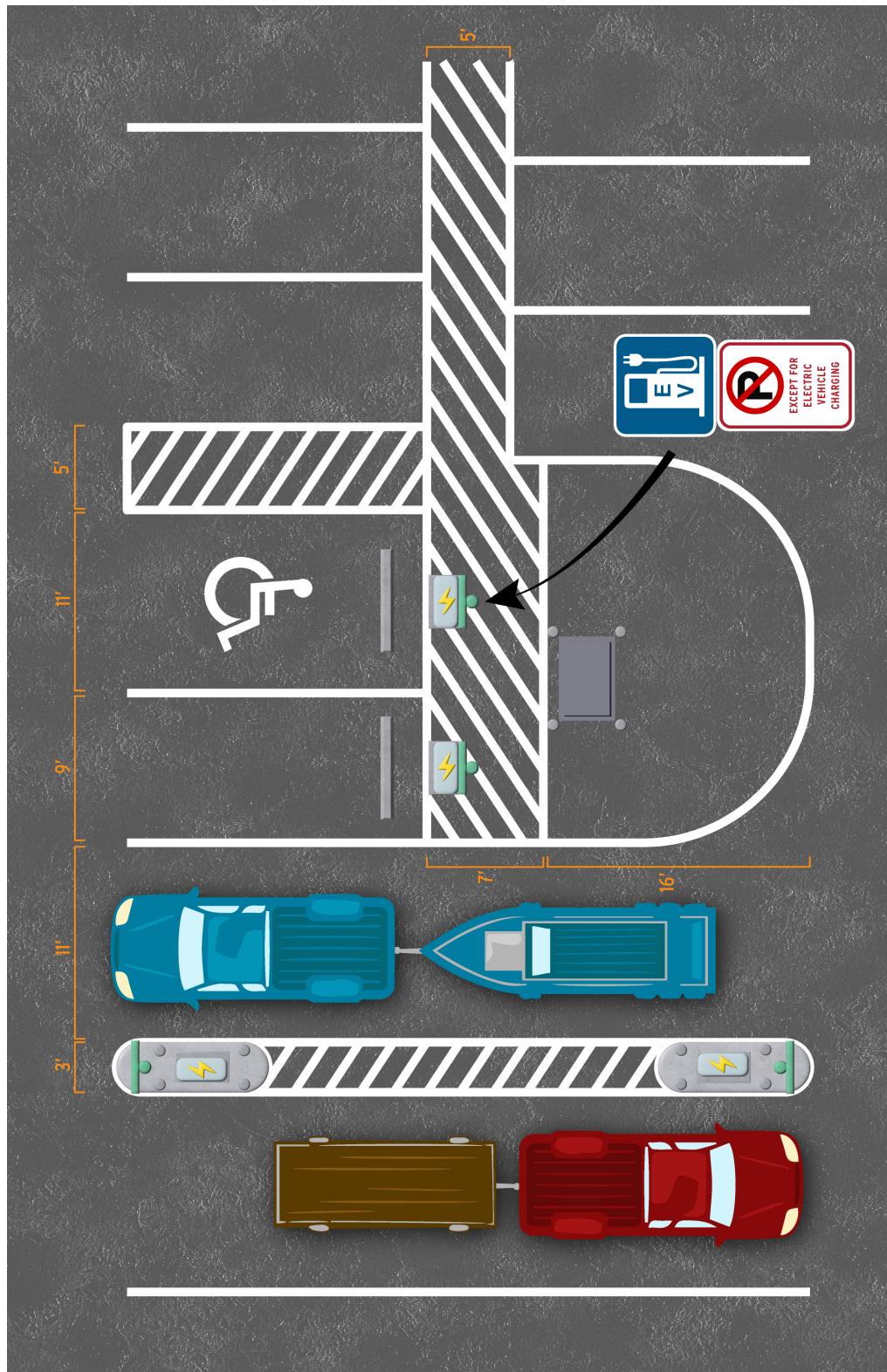


## Example Two: four stalls and no pull-through stations



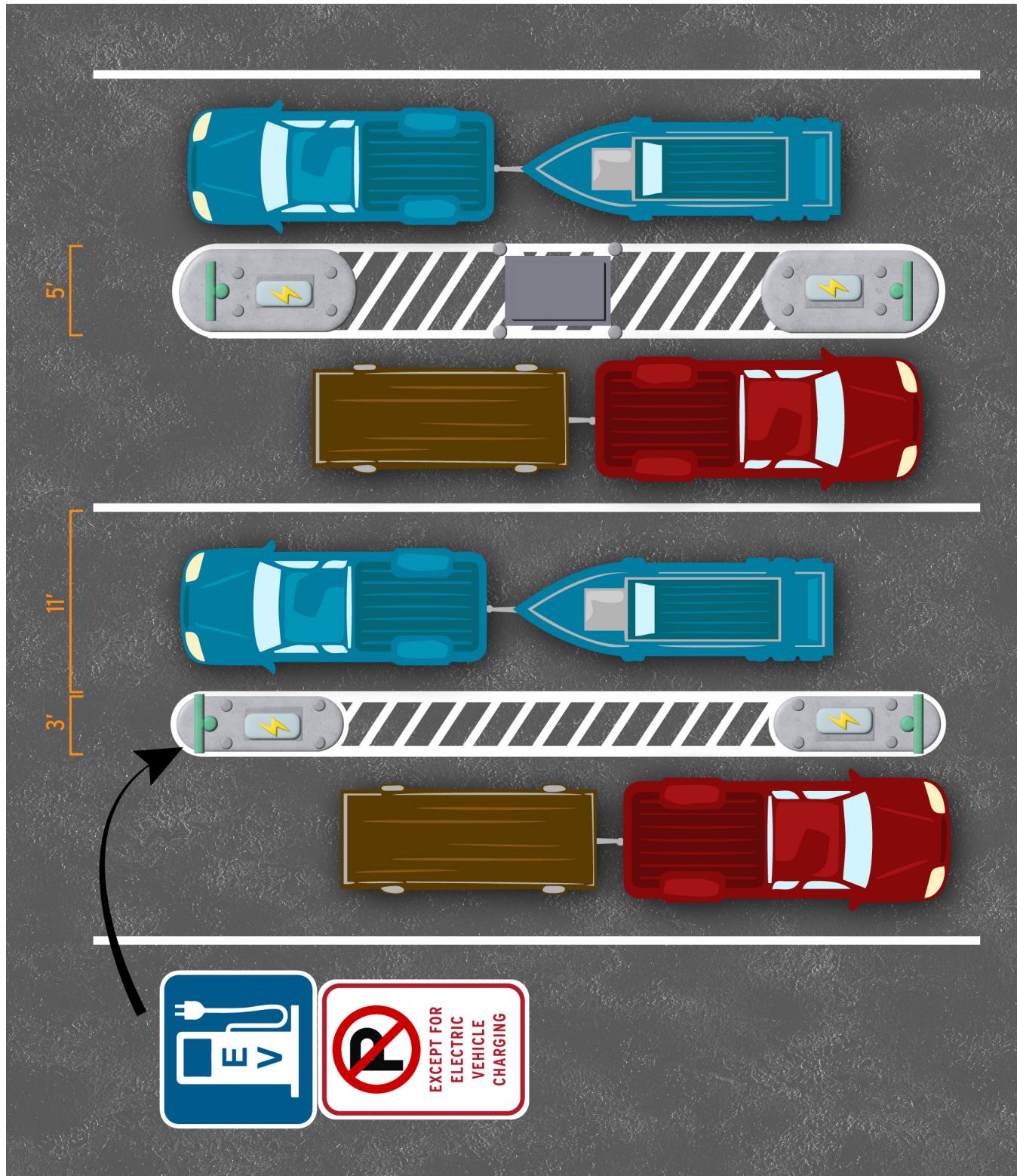


### Example Three: two stalls and two pull-through stations





### Example Three: no stalls and four pull-through stations





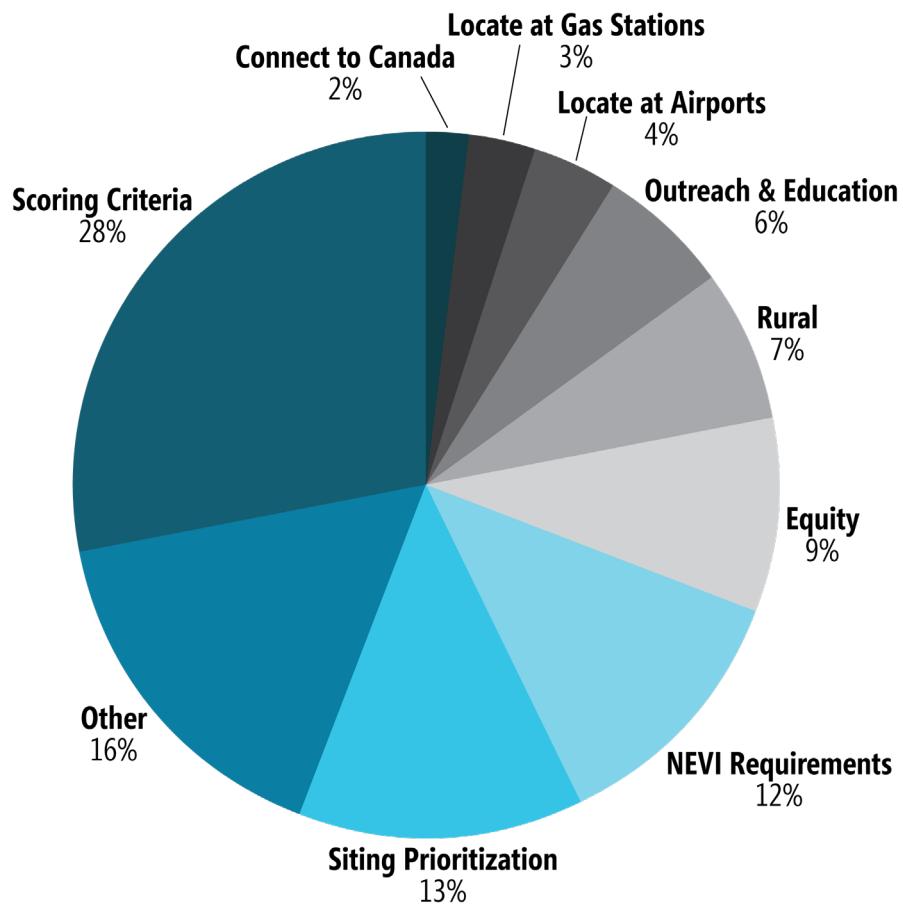
## Appendix C: Summary of Public Comments



## Summary of Public Comments

Below are the high-level comments received from June 1, 2022 to July 14, 2022 categorized by theme. Comments received after this date will be included and considered in future iterations of the plan.

### Public Comments by Category



### NEVI Requirements and Program Regulations

1. Mostly you need to be focusing on making sure regulatory agencies, and utilities aren't going to get in the way of development and deployment.
2. FLO supports the Plan's requirement for a 5-year maintenance and operations contract. We recommend further specifying that the site host must have the maintenance contract with the charging provider, as this will ensure the charger is maintained according to the provider's standards.
3. Having a vendor or other entity willing to manage public charging stations would help to encourage more businesses and facilities to host charging sites.
4. In section 5. Contracting subsection "How Alaska will ensure contractor engage communities"; signage requirements can be simplified to the DOT standard D9-11b and D9-11bp signage. This will ensure all signs are the same throughout the State.
5. Chugach is supportive of the Alternative Fuel Corridor between Anchorage and Fairbanks, as described



in AEA's RFI. We request that the terminuses in Anchorage and Fairbanks extend through and include city core to maximize the potential benefit to the community. Therefore, Chugach requests that the Alternative Fuel Corridor include the Seward Highway within the Anchorage Bowl, terminating at Potter Marsh, mile marker 115.

6. I'm not convinced they need to be every 50 miles, and we should work on the full length of the corridors with spacing at 100 miles to start with.
7. Trapper Creek to Cantwell Gap: Chugach recommends that the 75-mile gap between Trapper Creek and Cantwell be allowed as an exception to the 50-mile spacing rule.
8. I don't [think] the bill that would have changed registration fees and procedures for EVs actually passed. (HB104 in this past session?)
9. Requirements noted for the AFC (150 kW, min 4 stations) do not make sense for most of Alaska. The plan should recognize the very different needs in isolated communities, including a need for expanded availability of L2 charging.
10. Having four 150kW DCFCs is massively oversized for the current Alaska EV market. Please seek an exemption on the scale of two 50 kW or two 100 kW chargers.
11. Level 2 chargers should be counted as part of the DCFC rate structure.
12. The NEVI program requires four 150 kw level 3 charging posts at a charging facility. At best, the charging facilities working the VW settlement planned for two 150 kW charging posts sometime in the future; there are a number of methods including the VW projects being used as match or the NEVI Program accepting two 150 kW chargers through an exception.
13. Alaska should align with the NEVI guidance of 150kW minimum and four CCS ports at each site as this provides for redundancy and establishes driver confidence of available charging to meet forecasted market adoption of electric vehicle sales. If the Federal Highway Administration minimum requirements allow for additional flexibility on the 150kW requirement.
14. Ideally located every 50 miles for year-round ev and 100 miles for summer.
15. Smaller communities which qualify for a single charger may benefit from having 2 chargers with 2 charging stations each opposed to the single charger with 4 stations.
16. Allow, but do not require, nor preference, higher power levels than 150 kW. We recommend giving site hosts and charging providers flexibility to decide if deploying higher than 150 kW is desired and appropriate for the expected dwell time of drivers.
17. Provide for flexible ownership and operation structure to leverage funding.
18. Do not require charging stations to collect data, do not add additional requirements not required by the federal government.

## EV Siting Prioritizations

19. Please put EV charging stations on the Sterling and Seward Highways 50 miles apart between Sterling and Girdwood.
20. Destination charging at the place we stay at the end is the other key
21. The size of charging infrastructure described in this RFI would likely best serve as a "gas station" model, and should be placed around town at convenient locations accordingly.



22. Southeast Alaska communities, including destinations along the Marine Highway system, should be prioritized for infrastructure support in the statewide implementation plan.
23. I recommend the Red Apple grocery store or West Berlin restaurant in the Mountain View neighborhood in Anchorage.
24. Increased fast charging locations are much needed in the Anchorage area as this is the drop off point for most tourists of Alaska.
25. Put in level 2 chargers at trailheads, and continue adding chargers at grocery stores like 3 Bears.
26. Infrastructure ON ferries as cars are parked. pilot technologies to trial on State of Alaska property such as pads to roll over for charging.
27. A first of its kind in the city fast charging station would increase the usage of the Midtown Anchorage Area.
28. Expand the corridor to the Kenai as soon as possible
29. Retail and medical office when building has electrical capacity.
30. the future shipping port and the local power plants
31. Placing charging stations at ferry terminals will make the charging stations very visible to visitors that do not have a private charger to depend on while they are visiting Petersburg.
32. Placing charging stations at the airport and perhaps the AMHS ferry terminal would provide logical transportation hub support for electric vehicles that has not existed prior to the current outreach by AEA.
33. We could drive to Hope, if the campground had a charger for our car while we were there.
34. Expand the corridor to the whole State.
35. Leaning on transportation hubs in small towns makes the most sense for the first integration of charging stations in SE Alaska.
36. Having a very small independent utility with 200 kWh wind turbines installed and a funded BESS that will be installed this summer/fall, we are in an ideal position to install electric vehicles.
37. With a population of between 50-70 fulltime residents, we have 15 qualifying elders, many who struggle with four wheelers and maintaining vehicles, we also have a healthy school age population of approx. 25 and funds to sustain programs to pay youth in elder assistance programs.
38. In a zoom webinar that Transition Sitka ran, the preferred location was the RV Park at Sealing Cove. Other locations that were described with adequate power were the U.S. Post Office parking lot, the AC Lakeside grocery parking lot (part of which is owned by Halibut Point Marine Services), the municipal Harbor Master's parking lot where impounded boats are parked in front of Thomson Harbor off Katlian Street, and Old Airport Road on Japonski Island where the State had a former long term parking lot for the airport. Our zoom participants were swayed toward a location on municipal land, because of the unknown difficulty of getting approval for federal, state, or private property. All of the sites were within 1 mile of the National Highway System. Unfortunately, the power transmission lines are inadequate to support 4 simultaneous fast chargers at 150 kv each on most of Halibut Point road towards the ferry and deep cruise ship docks.

## Locate at Gas Stations



39. Locate at the local fuel stations
40. EV stations should be installed at existing gas stations, period.
41. Gas stations already have the infrastructure in place for people to shop, use a bathroom, and hang out while the car charges.
42. Give the gas station owners incentives to install EV.
43. The gas station model works... - as long as there is a meal or a hike to be had at the location while filling up!

## Locate at the Airports

44. I suggest the Ted Stevens Anchorage International Airport cell phone waiting/parking lot located next to the DOT&PF Regional Headquarters on West International Airport Road.
45. Several at airport.
46. Please put an ev charging unit at Ted Stevens airport cell phone waiting lot
47. Cell phone lots near airports would also be a good location
48. Proximity to the airport with public access for Level 3 rechargers would be very helpful to many people.
49. The airports.

## Connect to Canada

50. Would love to see the Alaska highway as the top priority!
51. Please definitely include AMHS port communities, especially Haines where we get through traffic from Alaska, the Lower 48 and Canada.
52. Electrifying Delta and the Alaska Hwy (Fairbanks to Haines) would provide a connection to Canada and the lower 48 for electric vehicle owners.

## Scoring and Siting Considerations

53. Kindly consider: Good central locations with access to food and safe walking. Broad community support. Timely site construction.
54. Publish a quantitative scoring rubric.
55. Chargers must be networked.
56. Chargers should be permitted at federal highway and interstate properties.
57. EV charging pricing should be communicated in a standards dollars/kilowatt-hour value
58. Specify additional site design requirements. Beyond a scoring rubric, it's helpful for the Authority and Department to make clear minimum site design specifications.
59. We support the Plan specifying that each station will have four pull through stations.



60. Adequate lighting, restrooms, ADA compliant.
61. Spaces marked EV only.
62. Signs recommending charging to 80%.
63. Signage directing users to charging location.
64. Require futureproofing of sites by funding the install of additional make-ready infrastructure at the same time as initial chargers are deployed.
65. Publicly funded chargers must be capable of charging at a rate of 350kW.
66. EV charging connectors should be SAE J1772 and SAE CCS connectors.
67. Chargers must accept credit cards as well as other forms of payment.
68. Allow, but do not require, nor preference, CHAdeMO connectors.
69. AEA should add a [Tesla] requirement for the NEVI funded EVSEs to provide a charging adapter on each location.
70. AEA should evaluate how to implement adapters if they choose to go this route as some Tesla adapters are not available from Tesla in North America and some adapters limit the speed of which they can pass energy.
71. AEA did not address §680.108 from 87 FR 37262. ReCharge Alaska does not recommend Plug and Charge requirements. While this simplifies the process for the EVSE user, this impacts, and complicates charging for EV Renters.
72. Co-locate Level 2 Chargers: Chugach encourages providing Level 2 chargers in addition to the minimum four 150 kW DC fast chargers at each selected location.
73. Pull-through Option: Chugach encourages AEA to seek pull-through charging solutions wherever feasible.
74. Co-locating Tesla Superchargers with the NEVI-funded CCS and CHAdeMO chargers can potentially reduce the overall cost of establishing charging stations and allows one-stop charging for all brands of EVs.
75. We should strive to provide charging from renewable energy. Charging stations could have several parking spaces covered in solar panels but the grid will have to make up the difference.
76. In its current state (the charging network), a 100% reliable communication strategy for addressing downed chargers is crucial.
77. Have reliability standards.
78. Chargers must be open 24/7
79. Chargers must have a minimum uptime requirement and offer redundancy.
80. Consider workplace and DC Fast charging first.
81. Some incentive for fleet charging will push the idea quickly.
82. Include considerations for medium and heavy duty electric vehicle charging when creating the EV implementation plan.
83. Places convenient to do something while charging



84. Positioning EV charging stations near existing small businesses.
85. Residents enjoy fast charging with lunch meals, and the Midtown Mall is right across the street.
86. Currently, one of the biggest challenges to EV adoption in Juneau is serving populations without access to off-street parking. Additional public charging infrastructure, particularly fast charging infrastructure that would service the various models of EVs now on the market, would help fill the gap to serve these populations.
87. EV Charging stations should be covered and near retail shops and good restaurants.
88. EV Charging stations should be located near retail and restaurants.
89. Covered parking near or connected to retail and restaurants.
90. Recommend a Tesla connection for future RFP along with required CCS and CHAdeMO.
91. Focus placing ev chargers at malls and in smaller community's spots where you can get food and restrooms such as gas stations.
92. Recommend/would like adapters for all types of EVs at charging stations. Tesla is the largest EV manufacturer but it doesn't appear that the stations being built support direct Tesla connections.
93. Really need 4 minimum connections at each station, if not more.
94. I would also like to see a way to sign up or monitor the line at charging stations. An app would be great to see how many people are in line, what the peak times are, and other relevant metrics.
95. Dependability. 97% is... almost acceptable. The goal should be >99%. If we cannot achieve that, then the goal of separating chargers by 50 miles is also unacceptable. They need to be spaced more closely so that if one of the planned chargers isn't working, it's still viable for us to get to the next.

## Rural Alaska Considerations

96. EVs on the North Slope
97. FLO supports the Plan's Phase 3 for rural communities. We encourage the Authority and Department to consider specifying additional details to its strategy for rural communities to ensure they have adequate charging options as well.
98. Ensure access for lower income and rural communities
99. Consider the opportunities and challenges of rural charging infrastructure.
100. Include rural communities.
101. Please consider adding sites in rural hub communities.
102. Be inclusive of smaller players. These are small rural communities, Sitka is only 9k or so residents. The place is crawling with nissan leafs but not a single public charging station.
103. Demonstration projects in rural hubs.
104. For rural siting: Charging infrastructure is not perceived to be a huge barrier by most, but the price of charging is, and availability when away from home. Warm community parking space with charging could be an amazing enabler of EVs in northern and interior Alaska if the price was affordable.



105. Vehicle electrification is ramping up and Petersburg does not want to be left behind.

106. L2 and L3 charging in rural AK communities....

## Equity

107. The plan should be centered on equity, justice, and inclusion.

108. Heat pumps are a big push in the utility industry for rural areas. This calls for research and pilots about neighborhood and community level/public charging.

109. One way to make electric vehicles more accessible to low income residents (who could benefit most from EV cost savings) is to prioritize locating DC fast chargers in neighborhoods with a high proportion of multi-family housing (rentals).

110. Allow host sites to charge for the power - or charge a "parking fee" to compensate themselves for power used. Keep the charge to a minimum - actual power used, no mark-up.

111. Target equity benefits for disadvantaged communities, reducing mobility and energy burdens while also creating jobs and supporting businesses. See Justice40 guidance.

112. Two things that were mentioned in at the National APA conference this year on [equity]; make sure to install charging stations in multi-family units.

113. Equity Considerations – I think a Statewide map of disadvantaged communities (including the locations of current EV owners) would be helpful in this Plan to visualize where these communities are located and whether or not there are any along the Alternative Fuel Corridor and/or provide justification for Phases 2, 3, and 4 outlined in the Plan.

114. The Plan needs to better outline how use of the EV Formula Funds will support Justice40 and meet the equity considerations required when using the funding.

115. Go Beyond Justice 40 and dedicate 50 percent of funds (not just benefits) to underserved communities (as listed in the Plan: Alaskan Natives, multi-family housing, rural communities, and low-income communities).

116. Allow "vandalism" as an exception to the uptime calculation. To comply with the Federal Highway Administration reliability requirement, they specify a formula to calculate uptime, allowing exclusions upstream infrastructure failures (grid, WiFi, and cellular) and vehicle interoperability issues.

117. Fairbanks and North Pole that are located within a Serious PM2.5 Non-attainment Area. These types of considerations should be used as screening criteria in the Plan for prioritizing phases of the buildout.

118. I think one of the biggest gaps so far is around concrete plans for workforce development. Jeff Libby at UAA is trying to stand up an EV maintenance program and might have thoughts on charger installation and maintenance training. I would like to see evidence of serious intention and partnership towards training an Alaskan workforce. I'd also like to see more details of the future year stages beyond the AFC, even though I know the plan will evolve. I know KEA and others would have details to contribute.

119. Require equitable, yet secure payment methos for charging transactions.

## Outreach and Education

120. Since Fairbanks is on the State's nominated Alternative Fuel Corridor, our City and Borough governments and MPO (FAST Planning) are very eager to participate and we would all appreciate more dedicated opportunities to join the discussion beyond signing up for the mailing list.



- 121. We are interested in finding out the options that the Alaska Energy Authority can provide regarding hosting electric vehicle fast charging.
- 122. Need more information on how the program will work. Who pays to install, who contracts and pays for maintenance, who pays for electricity, how hard are they to move... etc.
- 123. Who will be responsible for paying power fees for charging? Will there be a credit card terminal to swipe to pay? We are a non-profit and are willing to let others use charging stations on our site, but cannot absorb the expense of paying for power that is not used by our organization's vehicles directly.
- 124. I'd like to recommend you I vote the AKEV group who have been involved and have written similar policy to meet and discuss so it is not developed in a vacuum?
- 125. Plan Phasing –more stakeholders Statewide need to be consulted on the proposed phasing plan.
- 126. Approach other entities, specifically Chugach Electric about partnering since they are already installing Level 3 chargers to leverage funding.
- 127. Maintain neutral and flexible installation training programs.
- 128. Communicate status updates of corridor buildout.

## Other

- 129. The eCAMION solution is capable of providing high power charging in area where the infrastructure may be lacking. The solution can provide high power outputs without the related costs of grid infrastructure improvements. This is due to its power multiplying chemistry. It can also be configured a microgrid.
- 130. Work with DMV to designate and report on EVs more efficiently
- 131. Funding to increase capacity of existing power supplies.
- 132. Site improvement funding to improve access.
- 133. Like to Plan that provides for the implementation of high impact programs and successful incentives based on known environment of specific users (low income equity based rather than address only Tesla drivers) to see charging in public facilities, incentives for fleet private and public charging, or encourage utilities to do so. Mapping tool and evaluation, public outreach and education, specific partnerships to grow education. Workforce support. See cove revision for nrw construction immediately, and retrofit, looks at permitting issues. Make a reference to DOT alternative fuels coordinator and specifically discuss plans. Discuss how Rural toolkit will work. Be clear on new Federal office DOE and DOT and how we are complying!!! Thank you... ps the photo on Linked in is a European EVSE set up.. please look at photo and use real pictures not stock photos from EU. Helps a lot for education
- 134. We understand the State is receiving approximately \$52 million in Formula Funds for this Program, but there are no estimates of costs for Phase 1 (full buildout of the Alternative Fuel Corridor) and what might be leftover for Phase 2, 3, and 4 for communities Statewide.
- 135. State Match Commitment – why does the Plan state no State funding to be leveraged (match) in deployment of the infrastructure when the Federal Guidance encourages States to develop cost-share programs and/or rebates to maximize the impact of the Formula Funds and diminish the risks of half-built networks or stranded assets.
- 136. Use of State Match dollars might be critical to completing Phase 1 to ensure the highlighted gaps in the buildout (Trapper Creek to Cantwell and Healy to Fairbanks) are addressed to ensure the buildout of Phase 1 gets completed to be able to move to Phase 2, 3, and 4. Also, the Plan mentions the State's



interests in converting State Department vehicle fleets and the marine fleet to electric, so wouldn't the State pay their own match on a charging station that directly/solely benefits their fleets?

137. Eligibility of Formula Funds for Fleet Conversions – are fleet conversion charging stations at municipal/State facilities eligible using Formula Funds? Federal Guidance states that EV Formula Funds can only be used to support EV charging stations that are open to the general public for use. This should be verified before listing State fleet conversions in the Plan. Also, why does the Plan only reference State fleet conversions when many Cities, Boroughs, and other local governments have this interest as well. In Fairbanks alone both the Fairbanks North Star Borough and UAF are looking at fleet conversions, but this is not covered in the Plan (if even allowed with EV Formula Funds).
138. Definition of Electric Vehicle – the Plan should provide a definition of an “electric vehicle.” It is unclear from the Plan whether it is narrowly defined as cars, trucks, and buses, or more broadly defined to include boat motors, ATVs, snowmachines, motorcycles, scooters, and e-bikes.
139. Here is something being done in Oregon that could be considered in the Plan: <https://electrek.co/2022/05/26/electric-bike-charging-stations-installed-on-the-west-coast-electric-highway/>.
140. The phasing plan does not seem like a good strategy to deliver charging stations to locations where there is the most need or expected use. The focus on the Alaska Marine Highway System for Phase 2 example does not present very compelling justification of need or expected immediate use. The urban and destination locations for Phase 4, however, has more immediate need and expected use.
141. There is a great case for supporting all public sector fleets and other entities like ports, school districts and such.
142. Publish a predictable schedule for the solicitation’s release, the application deadline, and proposed awards. It takes significant time and resources for charging providers, especially smaller companies, to find site hosts and design projects to effectively compete in grant solicitations.
143. Release funding through multiple rounds.
144. Currently, one of the biggest challenges to EV adoption in Juneau is serving populations without access to off-street parking. These “garage orphans”, including apartment dwellers and some neighborhoods located in the downtown core, are not able to “trickle” charge at home or take advantage of the residential charging rate that AEL&P offers with rental equipment, and must find other alternatives...
145. Signage should say, “EV Parking Only” not “No parking”
146. Outreach and Education for dealership and other EV adoption
147. Consider the forthcoming discretionary grant funding from the joint office.
148. There is no entity in Alaska that has done more to block the development of an EV charging network than AEA. This is from one that was at every meeting for the first 2 years. The private sector has stood up and produced MUCH better than AEA even though AEA has the 1.2 million and a HUGE budget to administer it with. Talk Talk Talk and NO ACTION! I don’t see things changing even though most of the VW moneys have not been spent, and now AEA will administer another 10 million a year for 5 years. Alaskans are the ones hurt by this, making it harder to go EV when there is no real charging network to use. And probably the federal funds will not be spent on the jobs and chargers like could happen if there was good management. I don’t see it changing now with this..... sorry
149. Do not implement it.
150. Why waste funds on technology which requires fossil fuels for “power” and does irreparable harm to the environment making that technology available.



151. I am finding it difficult to get information. For EV auto conversion installation in Alaska.

152. Hi all this is a really bad idea. As well as a huge waste of money that could be spent better on other infrastructure.

## Response to Public Comments

Below are high-level responses to the public comments. The responses are categorized by theme. AEA will continue to respond to feedback and comments on the Plan throughout the NEVI effort.

## Regulations/Requirements Response

The Plan attempts to balance providing equitable and reliable charging that meets the needs of all Alaskans while not imposing additional requirements that may increase costs or delay installation. The program is open to a variety of ownership structures. Information on Alaska's Alternative Fuel Corridor can be found in the "Existing & Future Conditions Analysis" section of the Plan. AEA, in coordination with DOT&PF, will consider nominating additional corridors on an annual basis. We understand that placing four 150 kW chargers every 50 miles may be more than the current EV market in Alaska requires; however, it is a NEVI requirement of the program for charging stations located along the AFC. Charging stations designed with one or more pull through options for vehicles hauling trailers may be incentivized and receive additional points during the site evaluation and selection process. Chargers will be required to be networked and provide data to AEA, and which is required by the program. Data will also help inform future investment and help track impacts of the federal funds. Specific EVSE signage will be required for each site, and which will be determined later. AEA will require charging rates to be posted in a dollars per kilowatt-hour value. AEA will seek one exception in year one, see the "Discretionary Exceptions" section of the Plan.

## Locate at the Airports and Gas Stations

Multiple comments suggest siting charging stations at airports and gas stations. Currently, it is unknown who will apply to host a site, thus it is unknown whether or not chargers will be installed at these locations. Additionally, many airports are publicly funded and may face difficulties in providing the required matching funds. Gas stations have expressed interest in the past.

## Connect to Canada

It is important that EV Drivers can charge their battery when entering or exiting Alaska. Phase 2 of the Plan targets Alaska's highways and marine highway systems to try and address this need.

## Criteria

The initial scoring rubric for the preferred competitive grant application process can be found in the "Implementation" section of the Plan. The scoring criteria may change or be updated for different phases of the plan.

Charging station requirements will include spaces marked EV only, ADA compliance, credit card payment options (among others), and the requirement of stations to report downtime and maintenance issues.

Charging sites are incentivized to include amenities for travelers such as near retail, restaurants and restrooms, future proofing, pull through sites, adding additional chargers and/or plug standards. The plan does not provide additional incentives to specific groups as part of the program.



## Rural Comments

Phase 3 of the plan is to site charging stations in rural hub communities as funding allows. Many rural communities meet the Justice40 goals set out by the federal government. The IIJA also offers a community grant program specifically for rural and disadvantaged communities that will provide funding for procurement, installation, and O&M maintenance of EVSE. Guidance for this program has not yet been released, but AEA and DOT&PF plan to coordinate efforts for these additional grant funds.

## Equity

A major theme that came up in many of our public outreach sessions is to ensure that the plan is equitable and accessible for all Alaskans. The Justice40 guidance outlines goals for 40% of all federal funds to benefit disadvantaged communities. This includes rural, low income, residents of multiunit dwellings, and residents with air quality concerns, among others. The EV Plan adheres to this guidance. AEA is actively seeking opportunities to present to stakeholders and inform the public about opportunities to get involved or host a charging station. Please reach out to [electricvehicles@akenergyauthority.org](mailto:electricvehicles@akenergyauthority.org) to request a presentation to your group or in your area.

## Other

AEA plans to open a Request for Qualifications in which vendors can be vetted to ensure they meet NEVI standards. The NEVI Plan allows flexible ownership and operation structures to meet the needs of each charging station. AEA will host a dashboard on our website with the status of each charging station installation. AEA currently has a Memorandum of Understanding with the Department of Motor Vehicles to collect EV registration data in order to track the impact of the investment, and will work toward sharing that publicly. The anticipated cost for each charging site along the Alternative Fuels Corridor that has four 150 kW chargers is estimated to be between \$1-1.2million. The State has not provided any matching funds to date for the program. NEVI funding will not be available for fleet conversion. The phases of the plan follow the guidance set out by the NEVI program. AEA plans to release funding through multiple rounds and publish a timeline for the process when the Request for Qualifications and Request for Applications are released upon approval of the Plan. The dates and methods will adhere to requirements as described found in the Plan.

**State of Alaska  
Electric Vehicle Infrastructure Implementation Plan  
July 2022**

Find EV information at [akenergyauthority.org](http://akenergyauthority.org)  
Contact us at [electricvehicles@akenergyauthority.org](mailto:electricvehicles@akenergyauthority.org)

