Delivering the Charge: A Recharge Maine Corridor Project Maine Department of Transportation

Charging and Fueling Infrastructure (CFI) Discretionary Grant Program Round 2

U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA)

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Table of Contents

Project Narrative	1
Budget Information	12
Merit Criteria	13
Project Readiness and Environmental Risk	23
Supplemental Materials	26

PROJECT NARRATIVE

The *Delivering the Charge: A Recharge Maine Corridor Project* ("Project") consists of deploying **80 electric vehicle (EV) charging ports** across **20 station locations** along Maine's Federally designated Alternative Fuel Corridors (AFCs). All locations will support light-duty vehicles (LDV), and four locations will include capacity to serve medium- and heavy-duty vehicles (MHDV). Maine Department of Transportation (MaineDOT) is the Project applicant. The Project is supported by the Efficiency Maine Trust ("Efficiency Maine"). The MaineDOT and Efficiency Maine collaboration—referred to herein as the "Partnership"—is experienced in efficiently deploying Federal- and State-funded electric vehicle supply equipment (EVSE).

The State of Maine ("State") is steadily embracing electric vehicles (EVs) as part of its commitment to energy independence. However, the current charging infrastructure does not adequately meet the growing demand among residents, visitors, and the freight industry. The Partnership is committed to advancing Maine's important electrification efforts and to completing the full build-out of the Pine Tree State's AFCs.

The \$25 million Project, which includes a \$5 million match from MaineDOT and private operators, supports the *Recharge Maine* State EV charging network (Figure 1). This statewide initiative is expanding the availability of charging infrastructure for EVs on Maine's highways and in communities. The focus will make the charging network convenient, reliable, and accessible, especially along Maine's most traveled roads and highways. The Project builds upon already successful planning and deployments made possible by National Electric Vehicle

Infrastructure (NEVI) Formula Program funding and Charging and Fueling Infrastructure (CFI) Discretionary Grant Program Round 1 funding.

The Project will:

- Complete build-out of the state's AFCs for light-duty vehicles;
- Reduce EV range anxiety for residents and visitors;
- Ensure residents living in severe weatherprone areas can charge their EVs prior to an evacuation order;
- Expand the zero-emission freight network for medium- and heavy-duty vehicles;
- Strengthen Maine and the region's economies by reducing drivers' fuel costs and ensuring charging ease for visitors;
- Advance Maine's progress toward reducing harmful emissions from vehicles; and
- Help Maine meet its overarching goals to decrease greenhouse gas emissions 45 percent by 2030, 80 percent by 2050, and achieve carbon neutrality by 2045.



Figure 1. All existing, awarded, and proposed DCFC sites in Maine as of August 2024.

Complete build-out of the state's AFCs means that EV drivers utilizing Maine's interstates and priority roads will never be more than 50 miles from a Direct Current Fast Charger (DC Fast Charger or DCFC) charging station with at least four ports available. The Partnership is committed to ensuring Project chargers are accessible and reliable for all users and comply with the NEVI Formula Program Guidance and the NEVI Standards and Requirements (Title 23 of the Code of Federal Regulations 680 [23 CFR 680]), effective March 2023. All infrastructure will be designed to accommodate diverse EV models and consider emerging technologies.

Background

The Project is led by MaineDOT and supported by Efficiency Maine. Efficiency Maine is a quasi-state agency established to administer statewide energy conservation measures and greenhouse gas (GHG) emissions reduction programs. <u>Their efforts include</u> implementing EV rebates and developing a statewide network of EV chargers. Efficiency Maine and MaineDOT have been formal partners since 2018 and most recently collaborated to align EV-related programming to Federal and State policies and plans. The Project aligns with several State initiatives focused on preserving and improving the environment—one of Maine's most critical resources.

Maine Won't Wait

In 2019, Governor Janet Mills and the State legislature recognized climate change as the most pressing concern facing the state and laid out a bold set of strategies to combat the threat. As a result, the State created the Maine Climate Council ("Council," MCC) composed of scientists, business leaders, bipartisan state and local lawmakers, and concerned citizens. The Council collaborated and developed the State's Climate Action Plan ("Plan") titled <u>Maine Won't Wait</u>. The comprehensive Plan details aggressive but achievable goals to combat climate change—as well as eight overarching strategies to achieve them.

First among the strategies is for the state to "Embrace the Future of Transportation in Maine," which recognizes and addresses the transportation sector's impact on the climate. Transportation is responsible for 49 percent of Maine's annual greenhouse gas emissions, according to the <u>Maine Department of Environmental Protection's ("MaineDEP") Bureau of Air Quality</u>.¹ The strategy calls for reducing the transportation-related emissions by:

- (1) accelerating Maine's transition to electric vehicles,
- (2) increasing fuel efficiency and alternative fuels, and
- (3) reducing vehicle miles traveled.

The Project aligns directly with these action steps and will build upon results realized thus far through implementation of the Plan. In their <u>2023 Annual Report</u>, the Council reported double the amount of EV charging stations since 2019 (459 stations in 2023, up from 235 in 2019) and triple the amount of EVs on Maine roads since 2020 (12,369 EVs in 2023 up from 4,268 in 2020).² These figures continue to rise quarterly.

Maine Clean Transportation Roadmap

Developed as an action initiative under *Maine Won't Wait*, the <u>Maine Clean Transportation</u> <u>Roadmap</u> ("Roadmap") identifies the policies, programs, and regulatory changes needed to meet the State's EV and transportation emissions reduction goals. EVs represent the largest focus of

¹ Page 2

² Pages 5, 8

the Roadmap. It cites an analysis of existing charging infrastructure as well as Maine's priority areas for expanding charger access. The Roadmap includes expanding the charging network through a Public DCFC Incentive and/or Ownership program. These initiatives contribute to the goals of the Project as there is a demonstrated positive relationship between DCFC access and EV sales. Expanding the DCFC network will help the State achieve the Plan's emission reduction goals.³

Maine PEVID

To comply with NEVI Formula Program funds requirements, MaineDOT submits an updated plan, *Plan for Electric Vehicle Infrastructure Deployment* (PEVID), annually to the Federal Highway Administration (FHWA). The most recent PEVID, published in August 2023, complies with 23 CFR 680. The plan includes strategies for Level 2 and DCFC deployment and considers several funding sources such as the NEVI, CFI, and Maine Jobs and Recovery Plan (MJRP) programs.

The original plan, approved by FHWA in 2022, proposed a staged approach to EVSE deployment. The staged approach would have achieved full coverage of AFCs within the NEVI funding period and fully built-out status as demand grew and additional funding became available. When the 2023 plan was updated to comply with the 23 CFR 680, the cost to build the charging stations to the NEVI standards exceeded expected NEVI funding. This application for Round 2 CFI discretionary funding allows the Partnership to bridge the funding gap and achieve complete—or nearly complete—AFC build-out under the updated standards and requirements.

Maine's PEVID also describes how the various State agencies coordinate public engagement efforts and EV charging infrastructure deployment. PEVID is part of a larger effort, *Recharge Maine*, which represents the State's effort to expand EV charging infrastructure across Maine.

Recharge Maine

Maine recognized the need to build a reputation of reliability for EV charging infrastructure. Thus, in 2022 the *Recharge Maine* brand was born to represent the State's effort to build a convenient, reliable, affordable, and equitable charging network statewide. The initiative receives support from MaineDOT, Efficiency Maine, the Governor's Office of Policy Innovation and the Future (GOPIF), the Governor's Energy Office (GEO), and MaineDEP, ensuring a coordinated approach to build out EV charging infrastructure. *Recharge Maine* is guided by strategies and priorities outlined in Maine's PEVID.

The *Recharge Maine* initiative guides and coordinates projects utilizing NEVI, CFI, American Recovery Plan Act (ARPA), and New England Clean Energy Connect (NECEC) settlement funding. *Recharge Maine* creates cohesion between each of the related projects which maximizes EV network deployment efficiency. The Project allows the Partnership to fully build out the EV charging network on the most heavily traveled corridors in the state, directly supporting *Recharge Maine* goals. Progress on the initiative—including both EV registrations and charger distribution—is updated frequently on the <u>Recharge Maine</u> dashboard.

Related Projects and Funding

Through its collaboration, the Partnership has completed numerous projects that contribute to the

³ Hardman, S. (2019). "Understanding the impact of reoccurring and non-financial incentives on plug-in electric vehicle adoption – A review." *Transportation Research Part A: Policy and Practice, 119*, 1-14. https://escholarship.org/uc/item/7v13w987

state's growing EV charging network. The Project relates to these Partnership projects as well as several energy efficiency initiatives.

In 2023, Efficiency Maine announced planned awards of more than \$5 million in NEVI Program funds authorized by the Federal Bipartisan Infrastructure Law (BIL). The awards fund new DCFC ports throughout the state. In <u>April 2024</u>, the first of these NEVI-funded stations in the country opened in Rockland where the Partnership installed eight charging ports—five of which were funded with NEVI funds (Figure 2). The Rockland charging station supports U.S. Route 1 which is one of Maine's



Figure 2. FHWA Administrator Bhatt speaking at the opening of the first NEVI-funded EV charging station in Maine. The Project complements NEVI formula funds and CFI Round 1 discretionary funds to buildout the State's AFCs.

AFCs serving the communities on the Atlantic coastline.

The achievement made Maine just the fifth state to open NEVI-funded chargers and the first to have an operational NEVI-funded charging location open in conjunction with Tesla. Because of their efficient deployment of NEVI-funded chargers, Maine has been identified as a member of the *Cheetah Team*—the designation given to the five states which have quickly activated NEVI-funded chargers in their respective states. This status indicates the Partnership's readiness and capability to continue implementing related projects expeditiously.

The Partnership has <u>awarded additional funds</u> from the MJRP, ARPA, and the NECEC Settlement programs to develop DCFC stations throughout the state.

The Partnership received a \$15 million award from Round 1 CFI funding for the <u>Recharge</u> <u>Maine Project</u>. Requests for Proposals (RFP) for the <u>Recharge Maine Project</u> are currently published on the Efficiency Maine website and receiving bids. The project includes installing Corridor and Community charging ports throughout Maine that support AFCs, regional service centers, multifamily buildings in disadvantaged areas, community locations, and large workplaces. The focus of the <u>Recharge Maine Project</u> is to target gaps in the existing EV charging network. The Project proposed in this application for Round 2 CFI funding closes the remaining gaps not addressed by NEVI, MJRP, NECEC, or Round 1 CFI funds.

In addition to this Corridor program application, MaineDOT has submitted a related application under the Community program, *Chargers to Promote Resilience: A Recharge Maine Community Project*, which also advances the expansion of the *Recharge Maine* EV network.

Beyond expanding the *Recharge Maine* EV network, Efficiency Maine also provides marketing, education, training, rebates, loans, and many other initiatives supporting energy efficiency for homes and businesses. Related programs include heat pump and weatherization incentives, energy-efficient appliance rebates, and income-eligible home energy loans.

Location

Maine's geography features a diverse landscape of forests, mountains, lakes, rivers, and coastline. Forests cover approximately seven million acres—or 90 percent—of the state's land area, making it the most forested state in the U.S. (by percent). Maine's coastline stretches

approximately 3,500 miles due to numerous inlets, bays, and estuaries.⁴

Maine is a largely rural state with few concentrated population clusters. Despite its land area, Maine has only three Census-Designated Urban Areas with populations that exceed 50,000—Bangor (UACE 04951), Lewiston (UACE 49339), and Portland (UACE 71263). Other municipalities are Urban Areas, per the 2020 Census definition, but fall below the 50,000-population threshold.

The state has a higher percentage of state-owned highway miles than the national average. There are more than 21,000 miles of public highways in Maine, exceeding the total mileage of any other New England state. Maine has eight designated <u>Alternative</u> <u>Fuel Corridors</u> (AFC). The AFCs include 240 miles of EV Corridor Ready roads and 290 miles of EV Corridor Pending roads, <u>as of July 2024</u>.

The Project consists of installing 80 DCFC ports across 20 locations along AFCs (Figure 3, Attachment A). Each site will host four ports—16 sites will be built to support LDVs with 150 kW ports while the four remaining sites will be built with two



Figure 3. Project map with proposed municipality and hospital locations. Also included as Attachment A.

150 kW ports and two 350 kW ports to serve MHDVs. Each LDV site will be built with a total power capability of no less than 600 kW as well as other requirements to meet the standards outlined in 23 CFR 680. Sites with both LDV and MHDV chargers will have increased capacity to accommodate the 350 kW ports. The plan for 350 kW DCFC ports exceeds the Federal minimum requirements but enables MHDV fleet electrification and helps Maine's charging infrastructure keep pace with automaker advancements in charging power.

The Partnership will issue RFPs for the locations listed in Tables 1 and 2. RFPs will ask bidders to propose sites within these locations that are also within the CFI-required distance of five miles of the AFC with priority given to proposed sites within one mile of the AFC, in line with NEVI requirements. Many of these corridor locations are also along key storm evacuation routes.

For the purposes of this application, the Partnership selected Census Tracts based on their proximity to the AFC to illustrate the disadvantaged status of the Project areas. As such, the following Census Tracts noted with an asterisk (*) denote tracts that are *likely* to host Project chargers but other AFC-adjacent tracts in the same municipality may be selected. Due to the nature of the Project, charger users from outside the Census Tract are likely—possibly more likely—to utilize the chargers than those within the Census Tract. Locations used for this analysis are visible on the <u>dynamic Project Map</u>.

⁴ <u>https://www.maine.gov/legis/general/facts/facts.htm</u>

Table 1. LDV Charger Locations					
LDV Charger Location	Corridor Served	Urban/Rural	Disadvantaged Status ⁵		
Biddeford*	I-95/ U.S. Route 1		Adjacent to HDC		
Portland/Westbrook*	I-95	Urban	Adjacent to HDC		
Scarborough*	I-95/U.S. Route 1	UACE 71263, Portland, ME (pop.	N/A		
South Portland*	I-295/U.S. Route 1	205,356)	N/A		
Yarmouth*	I-295/U.S. Route 1		N/A		
Brewer*	U.S. Route 1A/Route 3	Urban UACE 04951, Bangor, ME (pop. 61,539)	HDC (final placement may be adjacent)		
Kittery*	I-95/U.S. Route 1	Urban UACE 71506, Portsmouth, NH—ME (pop. 95,090)	N/A		
Lewiston*	I-95	Urban UACE 49339, Lewiston, ME (pop. 60,743)	Adjacent to HDC APP (Tract 106)		
Fairfield*	I-95/U.S. Route 201	Rural UACE 92782, Waterville, ME (pop.	HDC APP (Tract 9668.01)		
Waterville*	I-95	25,529)	Adjacent to HDC		
Freeport*	I-295/U.S. Route 1	Rural	N/A		
Gray	I-95	Rural	N/A		
Houlton*	I-95	Rural UACE 40348, Houlton, ME (pop. 4,281)	HDC APP (Tract 9524)		
Island Falls	I-95	Rural	HDC		
Medway	I-95	Rural	HDC APP (Tract 265)		
Mexico	U.S. Route 2	Rural UACE 76690, Rumford, ME (pop. 5,585)	HDC		

The Partnership will install MHDV chargers at three Maine Turnpike Authority Service Plazas and an additional location on an AFC:

Table 2. MHDV Charger Locations					
MHDV Charger Location	Corridor Served	Urban/Rural	Disadvantaged Status	Geospatial Data	
Auburn	I-95	Urban UACE 49339, Lewiston, ME (pop. 60,743)	APP (Tract 106)	TBD	
Kennebunk South	I-95	Urban UACE 71506, Portsmouth, NH—ME (pop. 95,090)	N/A	43.41040, -70.55879	
Kennebunk North	I-95	Rural Outside of UACE 71506, Portsmouth, NH— ME (pop. 95,090)	N/A	43.41063, -70.55654	
West Gardiner	I-95/I-295	Rural Outside of UACE 04195, Augusta, ME (pop. 24,005)	N/A	44.20755, -69.82727	

As described in the *Equity, Community Engagement, and Justice40* section of the Merit Criteria, the Partnership conducted a thorough equity assessment using the Climate and Economic Justice Screening Tool (CEJST), Census maps, and Equitable Transportation Community (ETC) Explorer and evaluated whether the locations were Urban or Rural, in a Historically Disadvantaged Community (HDC),⁶ or in an Area of Persistent Poverty (APP).⁷ Tables 1 and 2 demonstrate that, of the 20 locations, ten are in rural areas,⁸ six are in an HDC (with four others adjacent to an HDC), and five are in an APP.

Safety

Safety is the foundation of every infrastructure project the Partnership undertakes. Maine is very experienced in designing infrastructure, guided by the <u>Maine Department of Transportation</u>

⁵ Historically Disadvantaged Community, according to CEJST and/or Area of Persistent Poverty, as defined by BIL

⁶ As designated by CEJST: https://screeningtool.geoplatform.gov/en/#3/

⁷ As designated by BIL definitions: https://www.transportation.gov/RAISEgrants/raise-app-hdc

⁸ As defined in the NOFO as locations outside of Urbanized Areas (UZA) with populations of less than 50,000

<u>Standard Specifications</u> which incorporates Federal adherence measures. As with all previously built charging locations statewide, the Project will fully comply with FHWA guidelines and the Americans with Disabilities Act (ADA) standards. The Partnership also consults with the <u>National Roadway Safety Strategy</u> (NRSS) website extensively to incorporate USDOT safety measures and ensure the Project is designed to prevent roadway deaths through the Safe Systems Approach. Charger installation plans will include all traffic and safety measures required by Federal and State governments.

The Partnership will work with utility providers and contracted entities to evaluate final site determinations. Each competitively selected charging site will undergo a thorough safety assessment prior to a successful applicant receiving funding. The Partnership will mitigate safety risks by ensuring each site has safe ingress and egress with adequate signage and lighting; marked pedestrian facilities; ADA compliant parking spots; a safe, open space void of visual obstructions; and safe, comfortable, and convenient amenities to use while charging.

All Corridor ports will be publicly accessible. RFPs will ask bidders to address location, nearby amenities, and other factors that are likely to affect the successful operation of the charging stations in terms of reliability and convenience. The Partnership will consider the availability and proximity of onsite amenities such as restrooms, food, and cellular service when selecting award sites.

Public Accessibility

The Project consists of funding 80 DCFC ports and associated demand charge incentives at 20 locations along AFCs not scheduled to be completed with NEVI or Round 1 CFI funding. These locations are all along EV Corridor Pending or EV Corridor Ready routes that will need additional charging capacity to either meet FHWA's requirements to be considered fully built-out or additional charging capacity to meet the high demand for charging. Ten of the locations are in Census-designated rural areas, as outlined in Tables 1 and 2.

Project funding, which will be used to contract with private entities who successfully respond to RFPs, is necessary to serve two critical needs: (1) creating charging locations to fill gaps along Maine's AFCs and (2) adding additional ports in current AFC locations with existing high-utilization DCFCs. Additionally, the funding will support MHDV charging demand at four freight-heavy locations.

The Partnership is actively working toward a full build-out of all Maine's AFCs using an equitable approach given the current funds available. Round 2 CFI funding, when combined with Round 1 and NEVI funding, will allow full build-out of Maine's AFCs. This includes corridors which serve rural residents and are important connecting corridors to neighboring New Hampshire, Quebec, and New Brunswick. The Project puts Maine on track to be one of the first states to achieve full AFC build-out.

DCFC installation in Medway, Island Falls, and Houlton leads to complete build-out in the northernmost segment of the Interstate 95 (I-95) AFC. These rural towns serve residents far from metropolitan areas including members of the Penobscot Nation, Passamaquoddy Tribe, Mi'kmaq Nation, and the Houlton Band of the Maliseet Indians.

Recent storms in December 2023 and January and April 2024 resulted in evacuation orders from coastal and riverside communities and took evacuees on AFCs and to regional service hubs. Recognizing the increased likelihood of severe weather events with climate change, the Project will ensure EV owners can power their vehicles to prepare for evacuation orders.

The Partnership will build on experience gained over the past four years when issuing Project RFPs and awards. Efficiency Maine has updated <u>all RFPs</u> utilizing NEVI and CFI funds to ensure compliance with 23 CFR 680. RFP specification compliance includes the technical aspects of chargers, such as connector types, power levels, minimum number of charging ports per station, minimum uptime (reliability standards), and payment methods; data submittal requirements; workforce requirements for installation, operation, or maintenance by qualified technicians; interoperability of EV charging infrastructure; traffic control devices and signage; network connectivity; and publicly available information.

Several EV manufacturers have announced that they will adopt Tesla's North American Charging Standard (NACS) technology and charging ports starting in 2025. Maine will continue to follow 23 CFR 680 requirements for Combined Charging System (CCS) connectors on all NEVI and CFI funded chargers and encourage vendors to consider an additional connector or adapter for NACS compatibility, while ensuring the sites meet other requirements, such as cybersecurity.

Collaborative Engagement

The Partnership continues to encourage private investment that expands the *Recharge Maine* network. Private investment from Electrify America, EVgo, Tesla, auto dealerships, and others are contributing to additional capacity along AFCs. This is creating welcome charger redundancy and complementing publicly funded ports.

Maine will continue to use competitive bidding, with multiple contracting/ownership options, as its primary procurement strategy. Efficiency Maine has working relationships with several charging infrastructure service providers and property owners who participate in stakeholder discussions around EVs and charging. Maine will use its contracting websites to publicize RFPs. The Partnership is committed to contracting with interested and capable charging site hosts. To inform interested bidders, Efficiency Maine conducts numerous in-person and online webinars and information sessions.

Cybersecurity

As with physical safety risks, the State takes cybersecurity threats seriously. The Partnership works closely with Federal agencies to ensure cybersecurity systems are in place and considers security when designing and constructing infrastructure that could be vulnerable to physical or cyber-attack. The RFP requires that station operators provide a secure payment method that collects, processes, and retains only the personal information strictly necessary to provide the charging service to a consumer. Operators are required to take reasonable measures to safeguard consumer data. Additionally, chargers and networks should be compliant with appropriate Payment Card Industry Data Security Standards for the processing, transmission, and storage of cardholder data. The Partnership will reference the Joint Office of Energy and Transportation's <u>Cybersecurity Procurement Language Clauses for RFPs and EVSP Contracts</u> when developing RFPs.

Workforce Availability

Several initiatives are currently underway to build Maine's clean energy workforce. These include the Clean Energy Partnership, a public-private partnership focused on preparing the state's residents for jobs in the growing clean energy and energy efficiency fields. To support EV-related careers, the State is helping expand skilled trade schools that will ready a larger workforce for EV jobs that pay family wages. Community colleges in Maine and nearby New Hampshire offer EV-related programs, as described in the *Workforce Development, Job Quality, and Wealth Creation* section of the Merit Criteria.

Site Considerations

The Partnership identified general locations along AFCs when developing the PEVID and the Recharge Maine initiative. Siting also considers Maine's designated evacuation routes. These plans include NEVI-funded locations as well as locations that would exceed NEVI funding availability. The remaining sites are the locations the Partnership selected for CFI funding in both Round 1 and Round 2. Because the Partnership selects CFI-funded sites through the lens of the larger *Recharge Maine* initiative, efforts are not duplicative. Rather, the Partnership utilizes a coordinated effort to ensure the entire EV charging network will achieve appropriate and equitable charger distribution via the various funding opportunities.

The Project consists of installing seventy-two (72) 150 kW DCFC ports at 20 locations for LDVs and eight (8) 350 kW DCFC ports at four of the locations for MHDVs. The 20 selected locations are on AFCs and are not scheduled to be completed with NEVI or Round 1 CFI funding. These locations are all along EV Corridor Pending or EV Corridor Ready routes that will need additional charging capacity to either meet FHWA's requirements to be considered fully built-out or additional charging capacity to meet the high demand for charging.

The Partnership will work with utility providers and contracted entities to evaluate final site determinations. Each competitively selected charging site will undergo a thorough safety and planning assessment prior to a successful applicant receiving funding. The Partnership will evaluate height and charging capacity at each site, with added attention to the MHDV locations to ensure adequate clearance is available.

Responsiveness to Technology Advancements

Maine considers and plans for future technological advancements that may impact charging stations. The Partnership employs a "dig once" approach at all *Recharge Maine* stations. The Partnership equips each location with the appropriate electrical infrastructure *today* so it is ready for future expansion and technological advancements. The Partnership's plan to install two 350 kW DCFC ports for MHDV at four sites exceeds the Federal minimum requirements but will help Maine's charging infrastructure keep pace with automaker advancements in charging power.

As previously stated, the Partnership's RFPs note the required connector types that are consistent with Federal regulations. To keep Project chargers in demand, the Partnership is encouraging operators to include NACS compatibility while ensuring the sites meet Federal requirements.

The Partnership's RFP specifically requires successful applicants to adhere to all Buy America requirements set forth in 23 U.S.C. §313. All chargers will provide information to the public in real time and payment methods will be secure, convenient, fair, and equitable for all to access. All chargers will accept credit and debit card payments to equitably serve individuals who may

not have access to traditional banking.

Ongoing Maintenance and Operation

The Partnership's RFP requires the recipient to operate and maintain each EV charger for at least five years. Responsibilities include maintaining the minimum average annual uptime of 97 percent or greater; ensuring all primary and ancillary equipment, shelters, and display kiosks receive all needed repairs; and keeping equipment safe and presentable.

Given the state's harsh winter climate, utility companies are experienced in strengthening grid infrastructure, responding to emergencies, and restoring power safely and quickly. Utilities typically install electrical components underground, if possible, to aid in resiliency and insulate infrastructure from snow and severe weather. The Partnership requests bidders to identify a plan for snow removal that ensures charging areas are prioritized.

Per the RFP, the recipient must provide customer support services such as ensuring customers have a mechanism to support outages, malfunctions, and other issues with charging infrastructure in multiple languages; be available 24/7 via a toll-free phone number posted at the charger; provide customer service for the duration of the contract; and be able to resolve customer issues over the phone.

The Partnership's RFPs detail specific Federally guided regulations for data capture and reporting requirements. Recipients must collect and report data as outlined by the Partnership consistent with reporting requirements based on those found in 23 CFR 680 at § 680.112 and § 680.116(c). Recipients may also be required to report this information directly to the <u>Joint Office of Energy and Transportation's EV Charging Analytics and Reporting Tool (EV-ChART)</u>.

Emissions Reduction

The urgency to meet climate goals is a primary reason the state and nation are investing heavily in EV infrastructure. The Partnership utilized the <u>Alternative Fuel Life-Cycle Environmental and</u> <u>Economic Transportation (AFLEET) CFI Emissions Tool</u> to estimate reduced emissions for the Project. The Project is expected to result in 2,995 fewer short tons of GHG emissions. The AFLEET calculations are detailed in the <u>Climate Change, Resilience, and Sustainability</u> section of the Merit Criteria and also included as Attachment B.

AFC Improvements

Maine is committed to supporting ongoing, equitable EV adoption. The State has offered incentives for new EV purchases since 2019, with a total of \$9,134,500 applied to 5,120 rebates as of June 30, 2024. Efficiency Maine continues to offer State EV incentives and has taken steps to increase low- and moderate-income participation. Despite the State's efforts to incentivize EV purchases, range anxiety remains a significant barrier to EV adoption, as are concerns about battery capacity in cold weather. Maine believes continued, deliberate investments along the state's AFCs will promote wider EV adoption and increase demand.

Corridor Pending to Corridor Ready

Maine currently has <u>eight designated AFCs</u>. The AFCs include 240 miles of EV Corridor Ready segments and 290 miles of EV Corridor Pending segments, <u>as of July 2024</u>. The Partnership has issued <u>multiple RFPs</u> for related projects, both NEVI and CFI Round 1 funding, that will convert many of the Corridor Pending segments to Corridor Ready segments; however, gaps will still remain after that funding is expended. The Project proposed in this funding request will fill the

remaining gaps along the AFCs, add capacity at locations that currently experience higher demand, and increase public charging opportunities for MHDV users.



Recharge Maine

Figure 4. Original EV registration rates in Maine are increasing. Year-to-date for 2024 demonstrates registrations are expected to rise for the year.

EV Adoption

Demand for EVs in Maine—and the respective charging infrastructure—is steadily increasing (Figure 4). As of July 2024, Maine has approximately 16,000 EVs on the road. The state is on pace to exceed 5,000 original EV registrations in 2024. Year-todate EV registrations (2024 Q1 and Q2) have totaled 2,732 original registrations. From 2021 to 2023, *annual* EV registrations ranged from 4,150 to 4,390. Although EVs account for only 1.35 percent of LDVs on the road in Maine, light-duty EV registrations represented 6.3 percent of original registrations in Quarter 2 of 2024. EVs on Maine roads increased more than 10 percent between April and July of this year.

As of July 2024, the *Recharge Maine* network has 816 public Level 2 and 255 DCFC ports (Figure 5). The chargers span 17 public EV Charging Networks, including ChargePoint, Tesla, Blink, EVgo, and others. It is estimated that there are 19.54 EVs per Level 2 port in Maine.

Tourism

Maine's abundant natural resources, including Acadia



Figure 5. Map of existing Recharge Maine network (Level 2 and DCFC) and awarded State-supported EV charging sites, not including chargers proposed for Round 2 CFI funding.

2024. Data as of 5/3

National Park which hosts four million visitors annually—seventh most of all National Parks make the state an attractive tourist destination. The state is less than a 12-hour drive from major metropolitan areas such as Philadelphia, New York, and Boston in the Northeast and welcomes visitors from Canadian provinces, including Quebec and New Brunswick, where EV adoption rates are higher than in Maine. As a result, a significant share of Vehicle Miles Traveled (VMT) in Maine comes from visitor vehicles registered in other states and Canada. This out-of-state EV charging demand increases the urgency in providing accessible charging opportunities, especially on routes and in areas reliant on tourism income.

Charging Demand

In developing the <u>*Clean Transportation Roadmap</u>*, data and listening session feedback demonstrated public charging availability will grow in importance in the future as more EV</u>

owners, especially those in multi-unit dwellings, may not have access to home charging options.⁹ In an Efficiency Maine EV Rebate survey of 250 EV owners, 12 percent stated they primarily relied on public charging locations.¹⁰ Since 2019, charging sessions at existing DCFCs in Maine have doubled every year.

CFI Program Focus Areas

The Project is not duplicative of NEVI funds or Round 1 CFI funds. The Partnership selected charger locations for Round 2 CFI funding based on the remaining gaps along AFCs that could not be addressed by NEVI or previous CFI funding. Additional details about both Focus Areas are included in the <u>CFI Program Vision</u> section of the Merit Criteria.

Demonstrate buildouts of AFCs

The Partnership relies on the State's PEVID when selecting charger locations. To prepare the PEVID, Maine carefully examined locations of existing DCFC charging locations, distance from designated AFC corridor, number of ports per station, available kilowatts, distance between locations, and other characteristics indicative of meeting the minimum standards for EV charging infrastructure under 23 CFR 680. Maine then considered whether upgrades could be made to each of these sites so that they would be compliant with the minimum standards. Lastly, Maine identified how many additional stations were needed to fill the gaps between existing chargers to space the chargers no more than 50 miles apart.

Zero-emission corridors for MHDV

Because the State has been aggressively deploying LDV chargers on AFCs with previous funding, the Round 2 CFI funding opportunity allows the Partnership to begin the next step in reducing transportation GHG emissions by supporting zero-emission freight movements and installing MHDV charging stations.

The four MHDV charging sites serve I-95 which is on the National Highway Freight Network. The interstate is designated as a Primary Highway Freight System (PHFS), meaning it is "identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data."¹¹ The Kennebunk MHDV sites are along I-95 in York County—a Phase 1 Zero-Emission Freight Corridor in the Zero-Emission Freight (ZEF) Corridor Strategy.¹² The Project positions the Partnership to pilot MHDV stations, gauge demand on frequently traveled freight routes, and welcome commitments from EV fleets looking to expand in Maine that are encouraged by the State's MHDV charging investments.

BUDGET INFORMATION

The Partnership is requesting \$20,000,000 in CFI program funding (80 percent) for Corridor Project chargers. CFI funding is matched by \$5,000,000 (20 percent) in State and private funds. The total Project cost is \$25,000,000. There are no other Federal funds allocated for the Project. MaineDOT has included a match commitment letter with this application (Attachment C).

The Project budget includes costs for procuring and installing 80 ports (\$17,625,000) as well as \$6,000,000 in demand charge incentives. These incentives are calculated using a model that

⁹ Clean Transportation Roadmap, Pages 31-32

¹⁰ Clean Transportation Roadmap, Page 67

¹¹ FHWA, Freight Management and Operations. Source: https://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm

¹² Page 95

inputs current utility demand rates, expected charger usage, and projected demand profiles for each site depending on the number and power level of chargers installed. The budget includes \$375,000 to fund RFP and contracting activities. Contingencies are included in these cost estimates and are reflected in the detailed budget (Attachment D).

The Project also includes \$1,000,000 to support Workforce Development. The Maine Department of Labor is working with the Partnership to coordinate activities and opportunities the award will fund.

MaineDOT has a Memorandum of Understanding ("MOU") with Efficiency Maine covering the financial responsibilities of private entities and will amend or create another specifically for Round 2 CFI funding. The Partnership will ensure private entities are responsible for the match portion of costs as required under the Corridor Program.

The Partnership is not currently requesting funding from any other grant program to cover costs for this Project. The Partnership's competitive RFP process allows the marketplace to equitably compete for available funding. The Partnership has an extensive track record of administering fair and successful competitive bidding opportunities.

Task	Task Name/ Project Component	Pre-/Post- NEPA	Responsible Entity (For Match)	Cost	Percent of Total Cost
1	Workforce Development	Pre-NEPA	MaineDOT/Partnership	\$1,000,000	4.0%
2	Project Administration (RFP, Contracting, Contingencies)	Pre-NEPA	MaineDOT/Partnership	\$375,000	1.5%
	Final Design/Equipment/Construction (Procurement, Installation, Contingencies)	Post-NEPA	Selected Private Entities through RFP	\$17,625,000	70.5%
4	Operation Costs (Demand Charge Incentives, Contingencies)	Post-NEPA	Selected Private Entities through RFP	\$6,000,000	24%
Total Project Cost \$25,000,000 100%					

Table 3. Project Component Costs and Percentages

Table 4. Source and Percentage of Funds					
Source of Funds	Amount	Percent of Total Cost	Detailed Source of Funds		
CFI Program Funding Request	\$20,000,000	80%	CFI Program		
Other Federal Funding	\$0	0%	N/A		
Non-Federal Funding (State)	\$275,000	1%	MaineDOT		
Non-Federal Funding (Local)	\$0	0%	N/A		
Non-Federal Funding (Private Sector)	\$4,725,000	19%	Selected entities through		
			RFPs		
Total	\$25,000,000	100%			

Project Scalability

Full Project implementation is best suited to meet NEVI and CFI objectives. Receiving a portion of the CFI grant funding requested would delay build-out of AFC corridors. However, the Project is scalable should full funding not be granted and a portion of the Project need to be completed at a later time. If the Partnership were to receive a portion of funding, prioritization would be given to sites that fill gaps on AFCs to comply with 23 CFR 680.

MERIT CRITERIA

Safety

Safety is the foundation of every infrastructure project the Partnership undertakes. The Partnership follows FHWA guidelines and employs the <u>Americans with Disabilities Act (ADA)</u> <u>Standards Adopted by the U.S. Department of Justice (2010) and the U.S. Department of</u> <u>*Transportation (2006)*</u> to ensure all projects follow all safety requirements and comply with national standards.

Each competitively selected charging site will undergo a thorough safety assessment prior to a successful applicant receiving funding. The Partnership will mitigate safety risks by ensuring each site has safe ingress and egress, dusk-to-dawn lighting, parking spots of adequate size that are ADA compliant, safe and open space void of visual obstructions as well as safe, comfortable, and convenient businesses/amenities to visit while charging.

NRSS actions and goals are integrated into all Project plans—ensuring the Project leads to zero roadway deaths through the <u>Safe Systems Approach</u>. The Partnership selects locations following a proactive approach to safety and will continue to do so. MaineDOT is guided by a <u>Complete</u> <u>Streets Policy</u>, recognizing that pedestrian and bicycle infrastructure such as sidewalks, bicycle lanes, separated facilities, transit stops, ADA-accessible routes, and travel lanes are embedded elements of the transportation system and must be addressed during all aspects of a project. To the extent the Project interacts with active transportation modes, the Partnership will be diligent to ensure safety for all.

Climate Change, Resilience, and Sustainability

The urgency to meet climate goals is the primary reason the state and nation are investing heavily in EV infrastructure. MaineDOT, using data from MaineDEP, concludes that a typical gasoline vehicle in Maine emits approximately 5.5 metric tons of CO₂ per year while an EV emits only 1.12 metric tons of CO₂ annually.

Increasing EV adoption rates is critical in addressing climate change in Maine. As of July 2024, Maine has 15,925 EVs on the road. Publicly available charging ports are in demand—the *Recharge Maine* network has only 816 Level 2 and 255 DCFC ports available. The *Clean Transportation Roadmap* estimates that expanding public DCFCs by 15 percent by 2030 will boost EV sales by 7 percent. According to the *Recharge Maine* dashboard, EV registrations are currently outpacing that prediction—in 2024 Quarter 2, the State opened 16 new DCFC ports—a 7 percent increase—but experienced a 10 percent increase in EV registrations. The Project represents a 29 percent increase in the number of publicly available DCFC chargers available in Maine today. The Partnership views the Project in direct correlation with future EV adoption rates as drivers become more confident in the charging network available to them.

AFLEET

The Partnership utilized the *AFLEET CFI Emissions Tool* (Attachment B) to estimate reduced emissions for the Project's 72 LDV chargers and eight MHDV chargers.

AFV Fueling	GHGs (short	CO (lb)	NOx (lb)	PM10	PM2.5	VOC	Sox	Fuel	Fuel
Infrastructure	tons)			(lb)	(lb)	(lb)	(lb)	Dispensed	Unit
								(fuel unit)	
Level 2 EVSE									kWh
DCFC EVSE	2,994.9	23,305.7	4,160.5	106.4	75.9	2,128.6	10.4	2,984,000	kWh
Hydrogen									kg
Propane									gal
CNG									GGE
LNG									gal
Fueling	2,994.9	23,305.7	4,160.5	106.4	75.9	2,128.6	10.4		
Infrastructure									
Total									

Table 5. Annual CFI Tool – Emissions Reductions

The Project is expected to result in 2,995 short tons fewer of GHG emissions. For the purposes of this analysis, LDV stations are assumed to be 50 percent Medium and 50 percent High Utilization. MHDV charging stations are expected to see Low Utilization until electrified freight movements become more prominent in the state. This contributed to the Partnership's decision to install only two 350 kW chargers each at four sites with the capacity to support LDVs with two 150 kW chargers.

As State officials consider the long-term benefits of EVs, they also study and monitor the source of electricity for EVs. The vehicle and origin of electricity must work in concert to benefit the environment. Electricity must be generated from low-emissions power sources to enable the state to reach climate goals. Fortunately, Maine relies heavily on hydroelectric and wind energy to generate electricity. According to the <u>U.S. Energy Information Administration</u>, renewable sources generated 64 percent of Maine's electricity in 2022. Maine's share of wind generation is the largest in New England, while its share of power from wood biomass and municipal waste is the largest in the U.S. The State's forward-thinking approach to how electricity is generated ensures environmental tradeoffs between vehicle and power source are minimized.

Maine has 3,500 miles of coastline and 2,300 square miles of inland water area. As a coastal state, Maine leaders recognize the importance of sea level rise and its connection to a warming climate, as described in *Maine Won't Wait*. Maine has increasingly faced significant storm events and natural disasters both on the coast and inland. Hurricanes that move up the Atlantic coast are maintaining their intensity longer and impacting the state. According to the <u>Maine Energy Sector Risk Profile</u> from the U.S. Department of Energy, flooding was the natural hazard contributing to the greatest overall property loss between 2009 and 2019, followed by thunderstorms. As a result, chargers will not be located in areas where they would be vulnerable to high water even in cities and towns near the coastline. Maine receives the fourth-highest annual snowfall in the U.S. behind Alaska and neighboring New Hampshire and Vermont. The state is experienced combating winter weather and snow removal. Project infrastructure will be built with resiliency in mind—to withstand high winds, treacherous rainfall, ice storms, and large snowfalls.

As part of a changing global climate, frequent extreme low temperatures in Maine present challenges for EVs, including reduced range and longer charging times. Cold weather impacts EV battery performance especially when a vehicle is parked outside and unplugged. Cold temperatures will also result in rapid battery drain while a car's cabin is being heated. A study by <u>Recurrent</u> found EVs can lose 30 percent or more of their EPA-rated range in freezing conditions. A Norwegian study estimated that winter fast charging lowers average charging power by 24 percent compared to summer charging "because the onboard battery management system limits the charging rate in cold conditions to avoid detrimental effects on the battery cells."¹³ The Maine PEVID encourages bidders to locate DCFCs closer than the required 50-mile increments where possible and to target state priority corridors in addition to AFCs. The Project helps the Partnership achieve this goal and ensure users of EVs have more regular charging opportunities. The Partnership continues to monitor advances in technology that will help EVs sustain performance in cold temperatures.

MaineDOT's Environmental Office has conducted an initial environmental screening and has

¹³ Maine Clean Transportation Roadmap, Page 23. Source: <u>https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/Maine%20Clean%20Transportation%20Roadmap.pdf</u>

determined that the Project will not create additional adverse environmental impacts to landscape, wetlands, or endangered species because most charging stations will be located in existing parking areas. All charging infrastructure is expected to be built on already developed land or known sites. At locations with existing parking, the Partnership will ensure any electrical grid-to-charger upgrade work will carefully consider the environment and leave the landscape in the same condition that it was found.

Equity, Community Engagement, and Justice40

Maine's climate change mitigation strategies have a strong base in broad public representation and engagement to ensure *all* Mainers have equitable access and say in a project's result. Like all Federally funded transportation projects in Maine, the Project aligns with long-standing Federal and State policies regarding equity, community engagement, and Justice40.

Equity

Maine has developed extensive policies, which it frequently updates, to ensure all decisions are guided by a far-reaching focus on equity. In 2022, GOPIF developed a public policy titled <u>An Act</u> <u>To Require Consideration of Climate Impacts by the Public Utilities Commission and to</u> <u>Incorporate Equity Considerations in Decision Making by State Agencies</u>. The policy required a report detailing recommendations to State agencies regarding how to incorporate equity considerations overseen by MaineDEP and the Maine Public Utilities Commission and to ensure that environmental justice is a required consideration in the development and implementation of all State programs and infrastructure plans.

In line with this policy, the Partnership conducted a thorough equity assessment using the CEJST, Census maps, and ETC Explorer. The equity assessment found that 14 of the 20 selected locations meet the parameters for "disadvantaged communities" as defined in the NOFO (E.1.iv.b). Project locations include ten areas that are in or adjacent to a Historically Disadvantaged Community (HDC) and ten areas that are outside of Census-Designated Urbanized Areas (with a population that exceeds 50,000). Six locations are both Rural and in an HDC. Additionally, five areas are in or adjacent to Areas of Persistent Poverty, as defined by the BIL. Although no chargers will be placed within a Tribal community, DCFC installations in Medway, Island Falls, and Houlton support members of the nearby Penobscot Nation, Passamaquoddy Tribe, Mi'kmaq Nation, and the Houlton Band of the Maliseet Indians.

The Maine Climate Council (MCC) issued *Maine Won't Wait* in 2020—the plan included the call for an Equity Subcommittee (ESC). The ESC was formed to support ongoing planning and implementation of the State's climate strategies to ensure shared benefits across diverse populations in Maine and is co-chaired by a representative from one of Maine's tribal communities and includes a representative from the Maine Public Health Association, Maine Equal Justice, Aroostook County Community Action Program, the AARP, and the Maine Council on Aging.

The ESC discovered several reasons why disadvantaged communities face greater challenges related to transportation, including:

- Vehicles in rural areas tend to be older, less efficient, less reliable, and more expensive to operate than vehicles in urban areas
- The upfront costs of high-efficiency vehicles can be cost-prohibitive for Maine drivers with low or moderate incomes

Combating these barriers to EV adoption requires significant investment and outreach. Perhaps the most important recommendation the MCC made to increase EV adoption was launched by Efficiency Maine in 2019—an EV rebate program. Today, that EV rebate program reflects several design elements to encourage equitable outcomes, such as:

- Offering higher tiers of rebate amounts for low-income and moderate-income applicants
- Excluding the most expensive vehicles (cars/SUVs costing more than \$55,000; trucks/vans costing more than \$80,000) so funding can be directed to more affordable vehicles
- Offering rebates on used EVs eligible for low-income applicants
- Granting instant rebates at the point-of-sale (overcoming a participation barrier identified in *Maine Won't Wait*)

The cost of incentives issued since that time totals \$9.1 million, applied to more than 5,120 EVs, an average of about \$1,800 per vehicle. The Project expands the *Recharge Maine* network at a time when EV adoption rates are increasing due to the benefits of the rebate program as well as the confidence that Mainers will have a place to charge their EV when traveling on AFCs.

MaineDOT's Title VI assurances can be found online in the *<u>Title VI/Nondiscrimination Guide</u>*. These assurances are updated annually and signed by the MaineDOT Commissioner. MaineDOT also strictly adheres to the *<u>Complete Streets Policy</u>*, as noted previously.

The Project fully complies with the Americans with Disabilities Act guidelines as do all State infrastructure projects. The Partnership ensures all charging stations and parking are accessible to individuals with disabilities by requiring that at least one parking space fully comply with the U.S. Access Board's *Design Recommendations for Accessible Electric Vehicle Charging Stations*. MaineDOT has an extensive website outlining its plans and actions. The site includes the 2019 *Americans with Disabilities Act (ADA) Title II Transition Plan*, a comprehensive written commitment to ADA deliverables. MaineDOT also has an *ADA Compliance Policy for Construction and Maintenance* which states, "Newly constructed, reconstructed, or rehabilitated pedestrian facilities will fully meet current ADA accessibility standards. MaineDOT will maintain its design guides to ensure all elements of current ADA compliance are incorporated into roadway improvements as required by this policy." MaineDOT is also guided by the *U.S. Access Board Technical Guidance for Parking Spaces*.

Community Engagement

The Partnership engages the community and State agencies extensively through webinars, notices, and meetings to ensure that equity- and inclusion-focused planning are a part of charging infrastructure. There are 16 committees the Partnership reaches out to for public comment on the <u>Maine PEVID</u>, eight environmentally focused committees and the remaining half more specifically focused on EV transportation.¹⁴ The Partnership has a comprehensive <u>public</u> education and outreach plan targeted at potential EV buyers, including multiple YouTube videos.

MaineDOT reports their NEVI-related public engagement efforts in the PEVID annually. These ongoing public engagement efforts have guided the decisions and planning for this Project since it aligns with the State's plan to build-out AFCs, as required under NEVI. Since the State's PEVID was published in July 2022, Maine has hosted and participated in more than 25 public

¹⁴ Page 4

events that have engaged more than 120,000 members of Maine's general public. The events range from presentations and booths for general EV engagement and test drives to informational sessions for project bidders.

The Partnership considers public comments from these events when developing plans and projects throughout the state. One commenter stated, "As climate change worsens and extreme weather conditions increase in frequency, electric vehicles can provide another layer of resiliency to our grid through their batteries." Some Mainers have expressed cold weather as a limiting factor for personal or commercial EV adoption, especially in rural communities. Public comments include positive recognition from Mainers on the State's work to expand EV charging availability on pace with EV adoption growth and interest in technologies such as bi-directional charging and improved cold weather capacity.

In August 2024, the Partnership launched the <u>Virtual Public Involvement (VPI) website</u> <u>presentation</u> specific to this Project. The Partnership notified more than 1,000 stakeholders, towns, counties, and residents that the VPI forum was open for comment. As of August 20, 2024, the Partnership has received more than 25 public comments. Select comments include:

- "Please make sure public parking stations can accommodate large vehicle like school buses. Alot of the stations so far don't have parking spaces large enough for school buses."
- "We own an EV but can't drive far from home, especially during cold winter days, because of the lack of DC fast chargers. I support the plan to install more DC fast chargers downeast and northern maine. Because we are elderly, we needed to purchase an ICE sedan to make road trips. If there were DC fast chargers we wouldn't need two cars."
- "I appreciate the multi-faceted approach trying to address heavy traffic areas as well as rural communities. Living in Aroostook County, it will be critical to have DC fast charging stations in Fort Kent, Presque Isle and Houlton to ensure that EVs can travel throughout the extensive county without having to worry about charging opportunities. The DC charger in [Medway] is also critical for the long stretch between Bangor and Houlton. I currently have 1 EV and would like to expand but will need to wait until the additional chargers identified for the County are in place. Thank you!"

Additional public engagement comments are included in this application as Attachment E.

Justice40

Consistent with NEVI Formula Program guidance and CFI grant requirements, the Project will exceed the goal to deliver at least 40 percent of EV charging investments in disadvantaged communities. At least 56 ports of the total 80 ports to be installed, 70 percent, will be located in, or immediately adjacent to, disadvantaged communities, as defined by the Justice40 Initiative.

The Partnership recognizes, as the Federal government does, that climate change disproportionally affects disadvantaged communities. The U.S. Department of Energy published <u>*The U.S. National Blueprint for Transportation Decarbonization*</u> which states, "Particular attention and investment will be needed...to ensure these benefits extend to disadvantaged communities. These actions will be critical for overburdened communities looking to increase

access to and adoption of EVs."¹⁵ That is why the Partnership is taking a thoughtful approach to locate EV infrastructure where all will benefit from access to EVs and the resulting air quality improvements as more individuals purchase EVs.

The Partnership considered Maine's designated evacuation routes when selecting Project locations. As climate-change related weather events, such as flooding, impact Mainers more frequently, reliable evacuation routes to safely move people and emergency supplies are vital. Disadvantaged areas, especially rural coastal communities on Maine's many peninsulas, are disproportionately affected by severe weather events and are often faced with evacuations that utilize the state's AFCs. The Project allows residents to have a reliable power source away from home during already worrisome evacuations.

Workforce Development, Job Quality, and Wealth Creation

Charging infrastructure projects are and will continue to create new, high-paying job opportunities for workers in electrical and other trades while also creating opportunities for the skilled incumbent workforce. The State is focused on job training to prepare for the rapidly changing labor market and needed shift in skills.

Several initiatives are currently underway to build Maine's clean energy workforce. These include the Clean Energy Partnership, a public-private partnership that awards grants to clean energy employers, educational institutions, industry associations, and nonprofit organizations to develop new curricula, provide technical training and experiential learning, deploy new job placement services, and perform other activities related to workforce development and training.

The Clean Energy Partnership complements an initiative set forth by Governor Mills to create 30,000 clean energy and energy efficiency jobs by 2030. The MCC includes representation from the Maine AFL-CIO and Maine-based installers of charging infrastructure. In their <u>2020 report</u>, the Transportation Working Group of the MCC recognized the EV revolution as transformational as traditional automotive-based jobs shift to EV-related careers.¹⁶ According to the <u>2021 Maine</u> <u>Clean Energy Industry Report</u>, between 2016 and 2019, clean energy jobs grew by 11 percent—the second fastest growing segment of the state's economy.¹⁷

To support EV-related careers, the State is helping expand skilled trade schools that will ready a larger workforce for EV jobs that pay family wages. Southern Maine Community College recently launched an <u>Electric Vehicle Repair Certification program</u>, and Kennebec Valley Community College was awarded a <u>Clean Energy Partnership grant</u> in 2022 to deliver new Electric Vehicle Technician and NABCEP-Certified Solar Photovoltaic Installer trainings for two cohorts of learners. The White Mountains Community College in neighboring New Hampshire offers an <u>Electric Vehicle Technician certificate.</u>

Consistent with Maine's fair and equitable hiring practices, companies involved in charging station infrastructure must provide hiring practices, diversity measures, résumés, and workforce development backgrounds. These requirements ensure workers have the appropriate certifications and training required and that installation companies and their employees meet or exceed State guidelines and Federal government requirements outlined in NEVI and CFI Program guidance. The Partnership encourages company owners and workers of

¹⁵ Page 50-51

¹⁶ Expand Electrification of Vehicles section, page 9 of 14

¹⁷ Page 2

underrepresented groups including Disadvantaged Business Enterprises, Minority-owned Businesses, and Women-owned Businesses to apply for all available opportunities. All State EV projects comply with <u>Davis-Bacon Act</u> wage requirements.

Maine ranks near the middle of the U.S. for states with employees who are members of a union workforce across all industries. MaineDOT is supportive of a worker's choice to join a union. Maine is not a right-to-work state.

Strengthening Maine's workforce of electricians is critical to installing, operating, and maintaining the proposed EVSE. Representing one of the state's most <u>in-demand occupations</u>, as measured by annual job openings, Maine's electrician apprentices benefit from robust job quality, earning a median income of \$69,710 two years after completing their program—far exceeding the state's median income across all occupations. Moreover, strengthening electrician pathways presents an opportunity to create quality jobs for underrepresented communities, ensuring that they benefit from investment in Maine's EVSE infrastructure.

To accomplish these goals, MaineDOT, in partnership with the Maine Department of Labor, proposes to train up to 143 new and upskilled EVSE apprentices through several workforce strategies. The strategy that aligns with the Project includes administering a request for applications (RFA) process to invest in certified pre-apprenticeship and registered apprenticeship programs that will build a diverse pipeline of electricians. These apprenticeships would train EVSE technicians on how to perform high voltage installations, including Level 2 and DCFC equipment, and include charger-specific training, such as the Electric Vehicle Infrastructure Training Program (EVITP) certification. These programs would be supported by dedicated sector expertise on the Maine Apprenticeship Program to create new programs aligned with registered apprenticeship and certified apprenticeship standards and support successful implementation. The RFA will place specific emphasis on creating women in trades pre-apprenticeship cohorts and dedicated outreach initiatives to increase the representation of women in construction, advancing Governor Mills' Executive Order. Previously, the Maine Apprenticeship Program has awarded \$12 million in ARPA funds to 14 grantees to expand apprenticeship and preapprenticeship statewide, and they have successfully created 51 new apprenticeship programs and doubled the number of active apprentices. These programs expand access to electrician pathways by partnering with re-entry centers, Workforce Innovation and Opportunity Act participants, Adult Education centers, and Vocational Rehabilitation programs to recruit underrepresented communities into the field, with a focus on women, the re-entry community, and immigrants and refugees.

CFI Program Vision

CFI funding will significantly help the Partnership cover the cost of installing EV chargers in areas without adequate charging infrastructure *and* fill voids between active chargers. Following cost studies to build new stations and update existing DCFC stations on current AFCs up to NEVI standards, Maine concluded that doing so would drain virtually all charging infrastructure funding that can reliably be expected and would not lead to acceptable results, especially for disadvantaged and rural communities.

With costs rising, the Partnership has determined NEVI and Round 1 CFI funding will not be enough to fully complete all AFC routes at 50-mile intervals. Round 2 CFI funding allows the Partnership to accelerate charging infrastructure construction on the AFCs where existing funding cannot meet the demand and helps complete build-out of the state's AFCs. Project locations are in gaps along the AFCs that do not yet meet NEVI requirements for being fully built-out or in locations that have demonstrated demand that exceeds the capacity of existing infrastructure. Table 6 outlines the selected locations, number and type of ports, and the selection criteria for the 20 sites proposed in this application

LDV Charger Location	# of Ports	Site Selection Criteria Impact to AFC
A	2 LDV	Filling 50-mile gap
Aubum	2 MHDV	Upgrade to 23 CFR 680 (Existing Phase 3 site is only 2 DCFC, not 150 kW)
Kennebunk South	2 LDV	Add capacity
Kennebunk South	2 MHDV	Upgrade to 23 CFR 680 (Existing Phase 1 site 4 ports not all 150 kW)
Kennebunk North	2 LDV	Add capacity
	2 MHDV	Upgrade to 23 CFR 680 (Existing Phase 1 site 4 ports not all 150 kW)
West Gardiner	2 LDV	Add capacity
	2 MHDV	Upgrade to 23 CFR 680 (Existing Phase 1 site 4 ports not all 150 kW)
Biddeford	4 LDV	Add capacity
		Mid-point between 50 miles
Brewer	4 LDV	Add capacity
		Corridor terminus/mid-point between 50 miles
F : C 11	41.01/	Add capacity
Fairfield	4 LDV	Corridor terminus/mid-point between 50 miles
Fragment		Add consolity/raciliancy
Gray	4 LDV	Add capacity/resiliency
Olay	4 LD V	Add capacity
Houlton	ALDV	Aut capacity Corridor terminus/mid point between 50 miles
Houton	4 LD V	Ungrade to 23 CFR 680 (Existing Phase 4-2 site 4 ports not all 150 kW)
		Add capacity
Island Falls 4 LDV		Mid-point between 50 miles
		Add capacity
Kittery	4 LDV	Corridor terminus/Mid-point between 50 miles.
Lewiston	4 LDV	Add capacity
Medway	4 LDV	Upgrade to 23 CFR 680 (Existing Phase 4-2 site 4 ports not all 150 kW)
Mexico	4 LDV	Resiliency
	41.01/	Add capacity
Portland/Westbrook	4 LDV	Mid-point between 50 miles.
Scarborough	4 LDV	Add capacity/resiliency
South Portland	4 LDV	Add capacity/resiliency
W-+	ALDV	Add capacity
waterville	4 LDV	Mid-point between 50 miles.
Yarmouth	4 LDV	Add capacity/resiliency
	72 LDV Ports	
1 0tal	8 MHDV Ports	

Table 6. Charger Locations and Quantities

As outlined in the *Project Description*, the Project addresses two Focus Areas: *Demonstrate Build out of AFCs* and *Zero-Emission Corridors for MHDV*.

Demonstrate buildouts of AFCs

The Partnership relies on the State's PEVID when selecting charger locations. To prepare the PEVID, Maine carefully examined locations of existing DCFC charging locations, distance from an AFC corridor, number of ports per station, available kilowatts, and other characteristics indicative of meeting the minimum standards for EV charging infrastructure under 23 CFR 680. Maine then considered whether upgrades could be made to each of these sites so that they would be compliant with the minimum standards. And lastly, Maine identified how many additional stations were needed to fill the gaps between existing chargers to space the chargers no more than 50 miles apart.

The Partnership selected LDV sites due to the remaining gaps on AFCs and also to increase

capacity in corridor segments with higher demand for EV charging. The Partnership strategically selected four locations to support MHDV charging based on freight demand. These sites will also be designed with adequate clearance for MHDVs and larger LDVs, such as those towing trailers.

Zero-emission corridors for MHDV

Because the State has been aggressive in deploying LDV chargers on AFCs with previous funding, the Round 2 CFI funding opportunity allows the Partnership to begin the next step in reducing transportation GHG emissions by supporting zero-emission freight movements and installing MHDV charging stations.

MHDV fleets represent an important segment of the state's vehicles. Among other sectors, Maine's economically important fishing, forestry, and agriculture industries all rely on MHDVs for moving supplies and products. However, while innovations in Medium-/Heavy-Duty (MHD)



Figure 6. An electric bus at the Kennebunk Northbound rest area utilizing a 62.5 kW charger demonstrating the need for MHDV chargers with pull-through capabilities.

Zero-Emission Vehicles (ZEVs) are progressing rapidly, adoption has been slowed by the comparatively high costs of both vehicles and charging infrastructure to serve their unique operational needs. While MHDVs are responsible for 27 percent of the state's GHG emissions associated with transportation, only 21 total MHD ZEVs are registered in Maine, including 17 school buses and four transit buses, as of December 2023.

In 2020, Maine joined 16 other states and the District of Columbia in signing the Northeast States for Coordinated Air Use Management (NESCAUM) MHD Vehicle MOU, adopting goals and committing to developing an action plan to make at least 30 percent of new MHDV sales zero emissions by 2030, and 100 percent of sales zero emissions by no later than 2050. The development of a *Clean Transportation Roadmap* ("Roadmap") for the MHDV sector in Maine (to be published in November 2024) will analyze those factors relevant to Maine from the NESCAUM MHDV action plan. Maine is also participating in the National Grid-led Northeast Freight Corridors Charging Plan. The Northeast Freight Corridors Charging Plan is a two-yearlong study and Regional MHDV Charging Plan funded by the U.S. Department of Energy Vehicle Technologies Office. The Project will inform the Partnership as it considers MHDV charging demand, future electric load forecasts, vehicle and infrastructure incentives, expanded deployment strategies.

The four MHDV charging sites proposed in this application serve I-95 which is on the National Highway Freight Network. I-95 is a <u>PHFS</u>—the Partnership selected locations on this route because of its importance as a state freight corridor. Electric busses already utilize this corridor and the existing, lower capacity charging stations at the Kennebunk rest areas. However, the current charger capacities and clearances mean electric busses block access to surrounding chargers for longer periods of time, due to the slower charging speeds (Figure 6). The Kennebunk MHDV sites in York County are a Phase 1 Zero-Emission Freight Corridor in the

<u>ZEF Corridor Strategy</u>.¹⁸ The Project positions the Partnership to pilot MHDV stations, gauge demand on the most frequently traveled freight routes, and welcome commitments from EV fleets looking to expand in Maine that are encouraged by the State's MHDV charging investments.

PROJECT READINESS AND ENVIRONMENTAL RISK

Statement of Work

A detailed Statement of Work is included with this application as Attachment F. The document outlines the process the Partnership will take to publish RFPs, receive bids, and award contracts to the selected contractors.

If awarded, CFI funds will come to MaineDOT then be transferred to Efficiency Maine upon reimbursement requests from private operators. Efficiency Maine will administer the RFP and disburse funds as charging infrastructure projects are completed. The Partnership has more than three years of experience operating in this way. MaineDOT and Efficiency Maine are wellversed in Federal procurement and Buy America rules and are prepared to ensure compliance with them in administering CFI program and NEVI Formula Program funds, consistent with available guidance. Contracts with the EV charging station installers/owners will be consistent with Build America/Buy America Regulations.

The Partnership will distribute CFI Program funds through multiple RFPs. It is experienced issuing and administering RFPs through a market-based competitive process as well as overseeing project implementation in a fair and equitable manner. The RFPs detail the numerous requirements potential organizations *must* meet to be eligible to provide charging construction and services; each requirement listed follows strict State and Federal standards.

Utility Engagement

Efficiency Maine and utility companies work closely together to plan and deliver sufficient electrical capacity to serve EV charging stations. Most existing and proposed DCFCs on AFCs and other priority corridors are within the territory of the state's two largest utility companies. The Partnership is in close communication with all affected utilities regarding planned charging investments associated with this Project, as with all previous charger installations. The Partnership confers with utilities when selecting charger sites to avoid needing costly electrical grid upgrades. This ensures successful RFP applicants obtain utility cost estimates that are expeditious and accurate.

The Partnership is exploring strategies to reduce the impact on MHDV site operators while this market segment develops. Options such as allowing larger LDVs, such as those towing trailers, to use available MHDV chargers is one such cost-effective strategy the Partnership is considering.

Transportation Plans

MaineDOT communicates thoroughly with the public about the details of all State projects. The Project will be amended to Maine's *Statewide Transportation Improvement Program* (STIP) for 2024–2027 and will be detailed in the 2025 Edition of *MaineDOT's Three-Year Work Plan* once awarded. The Project is consistent with the statewide EV plan which details EV infrastructure

¹⁸ Page 95

deployment. It is also consistent with MCC directives and <u>Maine's Long-Range Transportation</u> <u>Plan</u>.

Partnership Experience

MaineDOT is an accomplished, experienced, and responsible recipient of previous successful FASTLANE, TIGER, INFRA, RAISE, BUILD, and CFI grants and can be relied upon to fully fund and commence the Project well in advance of the obligation date and to complete the Project well in advance of the completion date requirement without risk. The Partnership is proud to be recognized as a *Cheetah State* for its expeditious deployment of NEVI-funding chargers. RFPs for Round 1 CFI funding are already published and receiving bids. There is little risk in awarding the Partnership Round 2 CFI funds.

Environmental Risk/Required Approvals

The Partnership recognizes that assuring the sustainability of habitats, ecosystems, and transportation infrastructure can occur together for the mutual benefit of all. MaineDOT exercises reasonable stewardship over natural resources and transportation infrastructure through its commitment to addressing aquatic organisms and wildlife habitat in cooperation with natural resource agencies.

Environmental Risk

Sites selected for use of discretionary funds to support improvements to charging infrastructure in Maine are expected to have minimal environmental risk (Table 7). For example, charging infrastructure is typically expected to be adjacent to existing development and parking areas with limited site disturbance, minimal or no property rights needed, and in areas that avoid natural resources areas and floodplains. The MaineDOT Environmental Office will work with the project team and grant recipients to ensure that the Project goals and community needs can be met while avoiding, minimizing, and mitigating potential environmental impacts.

Table 7. Risks and Mitigations

Project Risks	Mitigations
Review of Individual Project components to ensure compliance with	MaineDOT Environmental Office will screen Project components for
FHWA NEPA requirements	potential environmental impacts and for eligibility under the ACHP
	Exemption for EVSE and compliance with FHWA NEPA
	requirements

Required Approvals

MaineDOT expects the Project to require several approvals. For all required approvals, MaineDOT expects the Project will have *no* or *minimal impact* or will qualify for *exemptions* The MaineDOT Environmental Office has conducted an initial analysis for the Project and has determined the following *Required Approvals* will be necessary:

- National Environmental Policy Act (NEPA)
- Historic and Archeological
- Section 4(f) of the Department of Transportation Act
- Endangered Species Act (ESA) and Essential Fisheries Habitat (EFH):
- Section 404 Clean Water Act Permit (U.S. Army Corps of Engineers):
- Natural Resources Protection Act (Maine Department of Environmental Protection):
- Stormwater (Maine Department of Environmental Protection):
- Floodway/Floodplains

Detailed descriptions for each of the Required Approvals are included with this application as

Attachment G.

Anticipated Project Schedule

The anticipated date of NEPA completion is August 15, 2025, when all site-specific NEPA and utilities reviews are complete.

Table 8. Anticipated Project Schedule

Activity	Date	Responsible Party
Submit application	08/28/2024	MaineDOT
Anticipated award announcement by FHWA	12/31/2024	FHWA
Award agreement initiated	03/31/2025	MaineDOT/FHWA
Project RFP issued	04/30/2025	Efficiency Maine
RFP Webinar #1	05/13/2025	MaineDOT/Efficiency Maine
RFP Webinar #2	06/10/2025	MaineDOT/Efficiency Maine
RFP response proposal deadline	07/28/2025	Potential Subrecipients
Site-specific NEPA & utilities review	08/15/2025	MaineDOT/Efficiency Maine
Anticipated subrecipient award Date	08/29/2025	MaineDOT/Efficiency Maine
Subrecipient award agreement initiated/Project commencement	10/02/2025	Potential Subrecipients/MaineDOT/Efficiency Maine
Project completion	12/31/2027	Subrecipients/Efficiency Maine

Programmatic Agreements

The parties involved in this grant application are also applying an innovative means with respect to NEPA and permitting for this Project through Programmatic Agreements to ensure timely and consistent reviews and accelerate Project delivery.

MaineDOT and various other State and Federal departments have executed agreements to expeditiously but thoroughly review environmental impacts from projects. MaineDOT will take advantage of the several agreements, where applicable, to streamline the environmental review and approval process. The agreements are included with this application as Attachment H.

MaineDOT's Federal Guidelines Commitment

MaineDOT adheres to all Federal and State guidelines, policies, and laws for all Federally funded projects. MaineDOT's statements and commitments to the following are included with this application as Attachment I:

- Climate Change and Environmental Justice Impact Consideration
- Racial Equity and Barriers to Opportunity
- Labor and Work
- Critical Infrastructure Security and Resilience
- Domestic Preference Requirements
- Civil Rights and Title VI
- Federal Contract Compliance
- Compliance with Section 508 of the Rehabilitation Act of 1973

Project Support

In addition to a high level of readiness, the Project also has support from numerous public and private entities. The application includes numerous letters of support (Attachment J) from a wide range of municipalities, lawmakers, civic organizations, and more, that see the transformational value the Project will bring to the state.

SUPPLEMENTAL MATERIALS

- A. Project Maps
- B. AFLEET Emissions Tool
- C. Funding Commitment Letter
- D. Project Budget
- E. Public Engagement Comments
- F. Statement of Work
- G. Required Environmental Approvals
- H. Programmatic Agreements
- I. Federal Guidelines Commitment
- J. Letters of Support