



# **MaineDOT**

## **MAINE PLAN FOR ELECTRIC VEHICLE INFRASTRUCTURE DEPLOYMENT (MAINE PEVID)**

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Administration July 2022*

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# Introduction

The State of Maine welcomes the historic investments in electric vehicle (EV) charging infrastructure that will come through National Electric Vehicle Infrastructure Deployment (NEVI) Formula Funds. These funds will enable Maine to accelerate its current electrification efforts and thus support the federal goal of “a convenient, reliable, affordable and equitable charging experience for all users.”<sup>1</sup>

These funds align well with Maine’s efforts to address climate change. In 2019, Governor Janet Mills, through LD1679, formed the Maine Climate Council (MCC). The MCC convened in June 2019 and, by September 2019, had formed seven working groups, including a Transportation Working Group that continues to meet regularly and an Equity Subcommittee. The overall *Maine Won’t Wait*<sup>2</sup> report, published in 2020, addresses reducing emissions from the transportation sector, Maine’s largest sector source of emissions.

Upon completion of *Maine Won’t Wait*, Governor Mills signed an Executive Order in 2021, *An Order to Advance Clean Transportation Solutions for Maine*<sup>3</sup>, which required the Governor’s office and others to develop a Clean Transportation Roadmap to 2050. The state engaged with Cadmus to research and write the Maine Clean Transportation Roadmap<sup>4</sup>, which was published at the end of 2021. As noted in the *Maine Clean Transportation Roadmap*, released in December 2021:

*The State of Maine is leading on climate action among peer states. In its 2020 Maine Won’t Wait Climate Action Plan, the state lays out a bold set of strategies to reduce greenhouse gas (GHG) emissions by 45% by 2030 and 80% by 2050 and achieve carbon neutrality by 2045, and progress toward achieving these goals is real. For example, since 2019, the number of battery-electric and plug-in hybrid electric vehicles increased by 90% to 5,577 vehicles, and the number of public charging stations increased by 62% to 265 stations. The electricity that powers these vehicles continues to be cleaner as the state makes progress toward achieving its requirement of 80% renewable energy by 2030. Further, the state and regional partners continue to explore new approaches for providing public transportation efficiently and effectively, including innovative solutions in rural Maine, and in 2021 spent \$11.55 per capita on public transit. <sup>5</sup>*

The Efficiency Maine Trust (Efficiency Maine), a quasi-state agency that administers statewide energy conservation and greenhouse gas reduction programs, has been issuing and administering RFPs for Electric Vehicle Supply Equipment (EVSE) since 2018. Part of the funding for this work came through the VW Settlement funds administered by MaineDOT, which also participated in the process. MaineDOT and Efficiency Maine signed a formal agreement related to administering these and other charging infrastructure-related funding sources. To date, Efficiency Maine has awarded funds for 236 charging plugs at 72 locations throughout Maine. That includes 34 DC fast charge plugs on the state’s Alternative Fuel Corridors and 202 Level 2 (L2) publicly accessible “community” plugs at businesses, municipalities, state agencies, multi-unit dwellings, and other public properties.

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<sup>1</sup>[https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/nominations/90d\\_nevi\\_formula\\_program\\_guidance.pdf](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf)

<sup>2</sup>[https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait\\_December2020.pdf](https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MaineWontWait_December2020.pdf)

<sup>3</sup><https://www.maine.gov/governor/mills/sites/maine.gov.governor.mills/files/inline-files/EO%2094%2036.pdf>

<sup>4</sup><https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/Maine%20Clean%20Transportation%20Roadmap.pdf>

<sup>5</sup><https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/Maine%20Clean%20Transportation%20Roadmap.pdf>, Footnotes omitted

Maine's process already has identified electrification for transportation as a key component for addressing climate change:

- 54% of Maine GHG are from the Transportation sector.<sup>6</sup>
- The first Strategy listed in *Maine Won't Wait* to reduce GHG in transportation is "Accelerate Maine's Transition to Electric Vehicles." It sets ambitious targets for light-duty electric vehicle (LDEV) adoption by 2030 and 2050 and calls for developing a statewide EV roadmap to address charging infrastructure and other aspects of electrification.<sup>7</sup>
- *The Maine Clean Transportation Roadmap*, released in December 2021, cited an analysis of existing charging infrastructure and the State of Maine and Efficiency Maine's priority areas for expansion. The Roadmap examines three scenarios for EV adoption, then models the charging infrastructure needed to support each one. This is followed by a detailed analysis of charging infrastructure economics and estimates of funding needs through FY 2025 for public charging infrastructure.<sup>8</sup>
- The Transportation Working Group modeled 2030 and 2050 GHG reduction results for three different combinations of LDEV adoption, MHDEV adoption, and Vehicle Miles Traveled (VMT) reductions.
- The Roadmap recognizes range anxiety as a key barrier to transportation electrification.<sup>9</sup>

Maine's plan for NEVI formula funds includes completing DCFC on the interstate and other Alternative Fuel Corridors (AFC). The plan proposes a staged approach, which would achieve full coverage of the AFCs within the NEVI funding period, and fully built-out status as demand grows and additional funding is available. Using other funding sources (not NEVI formula funds), the plan also includes targeted DCFC near multi-unit dwellings (MUDs) and at select tourist destinations not on AFCs. With concurrently available American Recovery Plan Act (ARPA) funds, Maine will pursue DCFC and L2 charging in two remote and rural regions: Aroostook County (north of the interstate) and Downeast Maine (eastern coastal region). These do not include AFCs, but nevertheless are important to meeting Maine's goal of supporting EV travel from south to north and east to west with high-speed chargers at 50-mile increments.

Maine also proposes in-depth planning activities during the FY 2022-2026 period covered by NEVI funding. (See Plan Vision and Goals section.) The results of this planning work will help determine the most efficient use of NEVI funds later in the years.

Maine plans to pursue one or more discretionary grants for EV charging investments not covered by the NEVI formula program. Maine's plan for NEVI Discretionary Funds will focus on Level 2 charging to serve multi-unit dwelling (MUD) residents and other community-based charging using a combination of L2 and DC fast chargers and DC fast charging in rural areas.

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<sup>6</sup>*Maine Won't Wait*

<sup>7</sup>*Maine Won't Wait*

<sup>8</sup>*Maine Clean Transportation Roadmap (Roadmap)*

<sup>9</sup>*Roadmap*

## State Agency Coordination

Maine already has significant experience with coordination between agencies. The Maine Climate Council (MCC) and Transportation Working Group (TWG) include, among many others, representatives from Maine's Department of Transportation (MaineDOT) and Department of Environmental Protection (DEP), the Governor's Energy Office (GEO), the Governor's Office for Policy Innovation and the Future (GOPIF), and Efficiency Maine.

The process to be followed for final approval of this Maine PEVID, before submitting it to FHWA, will mainly involve: MaineDOT, the GEO, GOPIF, and Efficiency Maine. Those groups will review feedback received from the public engagement process and incorporate it into the Maine Plan for EV Infrastructure Deployment (PEVID) as needed.

NEVI formula (and discretionary, if awarded) funds will come to MaineDOT, then be transferred to Efficiency Maine, who will administer the RFP/grant process and disburse funds as charging infrastructure projects are completed. Maine already has over three years of experience operating in this way. (As described in the Introduction, MaineDOT, the GEO, and Efficiency Maine will sign an agreement to formalize this working relationship.) MaineDOT, Maine DEP, Efficiency Maine, GEO, and GOPIF will work as a team that will continue to set policy for EV charging funds. The signed agreement will formalize the structure and responsibilities of this inter-agency team. The contacts each agency brings will be useful in outreach while developing the Maine PEVID and implementing it. Regular meetings will allow for sharing expertise and experience, improving the results attained.

MaineDOT and Efficiency Maine are well-versed in federal procurement and BuyAmerica rules and are prepared to ensure compliance with them in administering the NEVI formula funds, consistent with available guidance.

# Public Engagement

Maine’s climate change work all along has included broad representation and public engagement. **The Equity Subcommittee formed by the MCC is co-chaired by a representative from Maine’s tribes, who also serves on the Maine Climate Council (MCC). Representatives from the Maine State Housing Authority, AARP, and Organized Labor also serve on the MCC. (Please see Appendix A for complete membership lists for each group involved.) In addition, each working group formed has kept equity considerations in view. The following table summarizes public engagement completed/planned so far.<sup>10</sup>**

Please see **Appendix A** for a complete membership list for each group named.

**Graphic 1: Summary of Maine’s Public Outreach: from overall Climate Change focusing down to EV Charging Infrastructure**

Group	Convened	Ended	Scope	Report Issued	Date	Notes on Public Engagement
MCC	Sep-19	ongoing	Climate Change	<i>Maine Won't Wait</i>	Dec-20	* All meetings open to public viewing * Received thousands of comments * Public attendees may be invited to comment at the end of meetings
TWG	Sep-22	ongoing	Transp in CC	Recommend-ations	Jun-20	* All meetings open to public viewing * Public attendees may be invited to comment at the end of meetings
				Roadmap	Dec-21	
(other Working Groups)						
Mitchell Center	Apr-20		Equity (related to CC)	Assessing Impacts	Sep-20	
Equity Subcommittee	Feb-21	ongoing	Equity (related to CC)	Initial Report	Feb-22	Went out to meet with groups (see pp. 8-9 in Initial Report). Final report due late 2022.
Roadmap Steering Committee	late 2020		Role of Transportation in Climate Change			
Roadmap Advisory Committee	late 2020		Clean Transportation	<i>Maine Clean Transportation Roadmap</i>	Dec-21	Held 19 listening sessions in Sept 2021.
The Nature Conservancy	Mar-21		Drivers from rural areas in ME, NH and VT			Range anxiety is a major concern
Maine Connectivity Authority	Early 2022	ongoing	Broadband service throughout Maine			The EV Charging Infrastructure group will work with MCA to identify synergies between their work and ours.
EV Charging Infrastructure	ongoing		Charging Infrastructure (including Maine PEVID)	EV Charging Infrastructure Plan		This plan, which started as "EVSE 1.0" has been guiding Maine's charging infrastructure actions since 2018. The Maine PEVID is based on this plan.
Drive Electric Maine	5/5/2022		" " " " " "			Convened by Efficiency Maine&Greater Portland Council of Governments
TWG	5/5/2022		" " " " " "			
LIAG (EMT)	5/12/2022	ongoing	" " " " " "	n/a		Convened by Efficiency Maine
Maine State Chamber of Commerce, Energy Summit	5/13/2022		" " " " " "			
Maine Transportation Innovation Council (related to Maine STIC)	6/6/2022		" " " " " "			A representative from the Houlton Band of Maliseets asked about the Route 1 Calais to Houlton Corridor, which connects two large tribal communities.
Efficiency Maine Annual Event	6/16/2022		" " " " " "			
Public Comment	5/23/2022	6/10/2022	" " " " " "	n/a		On MaineDOT Virtual Public Involvement website

<sup>10</sup> As instructed on Page 1 of the NEVI State Plan Template, sentences in the Public Engagement section related to the provisions of Justice40 are shown in bold type.

Although the *Clean Transportation Roadmap* (which, among other topics, covers charging infrastructure strategy) had robust public outreach, the infusion of NEVI funding for charging infrastructure is a significant development. **Therefore, at its regularly scheduled quarterly meeting on May 12, Efficiency Maine’s Low Income Advisory Group (LIAG) presented an overview of the EV Charging Infrastructure Plan, which is the basis for the Maine PEVID, and solicited feedback.** Targeted meetings also have been held with the TWG and with Drive Electric Maine, a stakeholder group consisting of transportation electrification advocates and members of the EV industry, as well as with the Maine State Transportation Innovation Council (STIC). In addition, MaineDOT and Efficiency Maine plan to contact stakeholders interested in charging infrastructure and to schedule meetings (targeted to this PEVID) as needed. **At a stakeholder meeting, a Maine STIC member raised the issue that the draft Plan was not showing any installations on a corridor that connects two large tribal communities. The Plan was revised to include Level 3 charging using single-phase power charging infrastructure on the Route 1 Calais to Houlton corridor. (Graphics 18-19 on pp. 27-28, and the EV Charging Infrastructure Deployment section for more detail.)**

MaineDOT also set up the EV Charging Infrastructure Plan on its Virtual Public Involvement (VPI) website, which provides an easy way for people to comment. The VPI site accepted comments from May 23, 2022 – June 10, 2022. The VPI also records brief demographic information and responses to targeted survey questions (e.g., “Do you own an EV? **Are you able to charge at home/work?** What would influence you to consider purchasing an EV?”). MaineDOT and Efficiency Maine worked with the TWG to publicize the meetings and the VPI, in order to gather comments from a broad cross-section of the public. In addition, Efficiency Maine maintains a list of over 1,600 EV stakeholders who have signed up to receive EV program updates. Efficiency Maine notified this list of the opportunity to comment on the plan. The VPI had 257 Stakeholders (people that “entered” the meeting), 95 comments, and a favorability rating of 80%.

Along with the VPI, Maine conducted a social media buy (pop-ups on Facebook, etc.). Results from the EV charging station campaign are as follows:

**Money spent:** \$1,000 **Duration:** May 24, 2022 – June 10, 2022

**Geotargeting:** State of Maine

**Impressions:** 151,466

**Reach:** 63,711

**Link Clicks:** 2,674

**Cost per click:** \$0.37

**Demographics:** Men: 62% (1,663) | Women: 37% (978)

**Click-Through Rate (CTR):** 6.55%

**Definitions:**

- Impressions = The number of times the content was displayed to any user.
- Reach = The number of unique users that saw the content.
- Link Clicks = Clicks to visit [mainedot.gov/vpi](https://mainedot.gov/vpi)
- Click Through Rate (CTR) = The percentage of users who see the ad and click on it.

**NOTE:** We always target all genders and people ages 18 and over.

Efficiency Maine, MaineDOT, and sister agencies will build on the robust public engagement process identified above to further coordinate contact with a wide range of stakeholders, matching closely with those listed in the NEVI Guidance.<sup>11</sup> Communication with stakeholders and public outreach will continue as Maine submits an updated PEVID each year during the NEVI funding period.

## Plan Vision and Goals

Maine intends to make progress toward reducing emissions of carbon dioxide from vehicles traveling Maine roads. This is in line with the federal government's vision of a national EV charging network that will: accelerate equitable adoption of EV's, including for those who cannot reliably charge at home; and help put the US on a path to net-zero emissions by no later than 2050.<sup>12</sup>

Maine's goals related to electrification are to:

- Strengthen the Maine economy by reducing Maine drivers' energy costs for transportation and by promoting tourism from neighboring provinces and states.
- Advance Maine's progress toward reducing emissions of carbon dioxide from vehicles traveling Maine roads.

Besides these economic benefits for all, Maine also sees health benefits from making a transition toward electric vehicles.<sup>13</sup>

Expanding the reach of EV charging infrastructure has played a prominent role in Maine's overall climate change strategy since 2019 and before. The *Maine Won't Wait* research and report identified transportation as the biggest contributor (54%) to GHG and recommended "long-term and large-scale electrification of our transportation systems" supplemented by efforts to reduce Vehicle Miles Traveled (VMT).<sup>14</sup>

State efforts to encourage EV adoption through the establishment of an EV rebate program and comprehensive consumer engagement have already borne fruit, with EVs now accounting for nearly 4% of all Light-Duty Sales.<sup>15</sup> Maine also has taken steps to direct state EV incentives to more low- and moderate-income (LMI) vehicle purchasers. The TWG considered both EV adoption and expansion of the charging network. Group members preferred voluntary, rather than mandatory, conversion to EVs. They also support continuing EV rebates to Maine residents.

Maine has set the following objectives related to EV infrastructure:

1. Facilitate market transformation that will, consistent with the targets of the State climate action plan, increase the use of vehicles operating on electricity and displacement of higher-carbon fuels;
2. Expand the network of DC Fast chargers available to serve EV drivers who require expedited charging while away from their home or place of business;
3. Promote deployment of Level 2 chargers to serve overnight or extended duration charging;
4. Assure equitable access to EV charging across geographic areas, sectors of the economy, and household income levels;
5. Attract and complement funding from federal, state, corporate, philanthropic, or local initiatives.

Specifically, Maine has set the following targets for the Fast Charging (DCFC) network:

1. Serve EV drivers who require expedited charging while away from their home or place of business;
2. Enable EV travel from north to south and east to west, across all significant routes, and to all major destinations;

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<sup>11</sup>NEVI Guidance

<sup>12</sup>NEVI Guidance

<sup>13</sup>Maine Won't Wait

<sup>14</sup>Maine Won't Wait

<sup>15</sup>Roadmap

3. Deliver consumer satisfaction through capacity, reliability, availability, safety, and convenience;
4. Reduce the distance between chargers to 50 miles or less; and
5. Encourage sustainable charger operations through the appropriate use of competitive bidding, market-based solutions, public-private partnerships, and public funding.

NEVI formula funds will be used for DCFC charging on AFCs, but Maine also has set objectives related to Level 2 charging. These objectives are: serve EV drivers who can accommodate extended (2 to 12 hour) charge times such as overnight; deploy lower-cost charging solutions, where practical, for EV travel throughout the state and to/from all major destinations; deliver consumer satisfaction through capacity, reliability, availability, safety, and convenience; and encourage sustainable charger operations through the appropriate use of competitive bidding, market-based solutions, public-private partnerships, and public funding.

Maine is a large state, mostly rural, with a higher percentage of state-owned highway miles than the national average. For example, Vermont has 2,628 State Highway Agency miles and 11,463 County and Town miles. Maine, with 8,340 State Highway Agency miles and 14,060 County and Town miles, is receiving roughly the same amount of NEVI formula funds as Vermont. Maine’s staged approach seeks to make the best use of the NEVI formula funds. In the first stage (NEVI funding period) Maine will provide coverage (spacing of no more than fifty miles) for currently designated and nominated AFCs. In later stages, as demand for charging grows and additional funding is available, Maine will proceed toward, and achieve, fully built-out status on all AFCs.

In March 2021 the Nature Conservancy conducted focus groups among rural populations in Maine, New Hampshire, and Vermont. These identified range anxiety as a key barrier to EV purchase, which is in line with the findings of the Clean Transportation Roadmap mentioned above. To be consistent with NEVI and Maine’s goals for equitable deployment of EV charging infrastructure, this plan places particular emphasis on rural areas, which often include disadvantaged communities, in order to increase confidence in the ability to travel to and from, and charge in, any part of the state. To that end, Maine wants to ensure that EV charging infrastructure is available on all important routes and at all major destinations. (See **Graphic 18** on p. 27.)

For the early years (FY 2022 – 2024) NEVI formula funding will be directed toward EV charging infrastructure for light-duty electric vehicles. For more detail on MHDEV, please see the Known Risks and Challenges section.

Maine is choosing to group charging infrastructure investments into three broad categories. The following three categories are not in priority or sequential order; they serve to categorize Maine’s ongoing, multi-pronged charging infrastructure work. Category 1 encompasses using NEVI formula funds to achieve full coverage on AFCs (see **Graphics 15 and 16** on p.25). Categories 2 and 3 may be funded with NEVI discretionary grants or other funding sources.

**Graphic 2: Categories of EV Charging Infrastructure Work (note that not all Categories will use NEVI Formula Funds)**

Category 1: Extending Lines and Filling Gaps w/ High-Speed Charging (DCFC)	Category 2: On-Street/Lot Parking	Category 3: Destination Charging
Serving drivers needing expedited charging while away from their home or place of business, providing full coverage across the state	Serving tenants, condos, & others lacking off-street parking	Serving day-trippers, overnight visitors, and tourists either off the main roads or where extra capacity is needed.
A. Alternative Fuel Corridors	A. DCFC - where overnight charging is not practical, esp. providing access for LMI residents	A. DCFC - very highly trafficked, short stay, or day-trippers
B. Other priority corridors	B. L2 - for overnight charging, esp. LMI residents	B. L2 - longer stay or overnight
C. Adding capacity in high-traffic areas	C. L2 - for workplace charging	

Achieving Maine’s goals depends on the staged approach proposed. The latest cost estimates suggest that current NEVI funding simply is not enough to be able to fully build out all AFC routes in 50-mile intervals. As explained in the 2022 Infrastructure Deployments/Upgrades section, Maine has several key freight corridors with relatively low Annual Average Daily Traffic (AADT), some of which are designated or nominated AFCs. Between the low AADT and the higher percentage of truck traffic, demand for EV charging is likely to be low – and to stay low for an extended period. To fully build out such corridors in the short term would divert funding from the new AFC (I-95 Bangor to Houlton) nominated in May 2022. In addition, Maine believes the challenging economics of rural sections (see “Known Risks and Challenges” section) will make it difficult to attract private investment to operate these stations.

Maine’s proposed staged approach (see **Graphics 15** and **16** on p. 25) will provide adequate capacity in all AFC locations and allow for wider coverage during the NEVI funding period, including coverage (spacing no more than 50 miles) on all AFCs. The staged plan includes a requirement for any location where NEVI formula funding is used to be “future-proofed” by establishing a 1600 amp capacity at the charging site. That will give all AFC locations the electrical capacity needed to be completely built out in the future. (Stage 2 will fully build out all seven Medium Traffic locations; Stage 3 will fully build out all AFC locations.) If the staged approach is not approved, Maine will likely need to pursue removing certain rural corridors from AFC status.

As noted in the Introduction, Maine has kept equity at the forefront throughout the discussion and development of its plans. For DCFC this includes addressing limited overnight charging (e.g., urban areas) by prioritizing concentrations of MUDs, especially near affordable housing. To extend the DCFC network to rural, less trafficked areas and complement overnight charging, Maine will prioritize rural service centers (towns where rural residents travel for employment and access to services). For Level 2 charging Maine will prioritize LMI/affordable housing MUDs for overnight/extended charging. To complement overnight L2 charging, Maine will prioritize workplaces, (especially those with an hourly workforce) and retail for additional L2 charging. Please see the Equity section for more detail. While Category 2 and 3 work will not use NEVI formula funds, it is part of Maine’s overall plan for EV charging infrastructure.

Contracts for EV charging infrastructure already installed by MaineDOT and Efficiency Maine have required that chargers are usable by the general public, without the need for proprietary apps or memberships. Contracts also have required robust data collection and reporting. These requirements will continue with contracts funded by NEVI formula funds. The NEVI working group has contacted the Maine Connectivity Authority (MCA), which was recently chartered and tasked with bringing broadband service to the whole state. Maine, in siting networked charging infrastructure in remote parts of the state, will explore synergies with MCA’s work.

Data collection will be required in all RFPs issued for EV charging infrastructure funded through NEVI formula funds. Maine will follow the EV charging infrastructure Minimum Standards, a draft of which was released in June 2022. See Strategies for Charging Infrastructure Data Collection and Sharing section for more detail.

Maine’s proposed planning efforts (allowed with NEVI formula funds)<sup>16</sup> are as follows, in rough priority/chronological order:

1. Continue to study and model the financial viability of charging infrastructure, especially DCFC, in remote rural areas.
2. Fund an energy office position or analysis to review challenges and solutions related to grid infrastructure constraints and rate design.
3. Electric grid (needed kW near charging locations, new grid capacity needed by Year XXXX, the potential for “smart-charging”/charge management, etc.). Efficiency Maine is piloting Residential Smart Charging and working with utilities to analyze system capacity and make-ready costs. The Governor’s Energy Office is following issues related to grid capacity and rates. See the 2022 Infrastructure Deployments/Upgrades section for more detail on electric utility issues.

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<sup>16</sup>NEVI Guidance

4. Medium- and Heavy-Duty Vehicles (MHDV) – Implement a Clean Transportation Roadmap recommendation to develop a dedicated roadmap for MHDV.
5. Review recommendations from Transit Electrification Study and continue to plan for furthering electrification of the transit system.

Maine has identified a need to conduct pilot initiatives related to public charging for MHDV in the later years of the NEVI Funding Period.

Outcome-oriented goal with quantified targets (for charging infrastructure for LDEV):

- Fill remaining gaps on the interstate, following staged approach (see the 2022 Infrastructure Deployments/Upgrades section), in operation by 2024.

This Maine PEVID will be updated by June 2023 (earlier if needed), and yearly thereafter during the NEVI Funding Period.

## Contracting

Efficiency Maine and MaineDOT have 4 years' experience drafting and marketing competitive solicitations, and managing contracts for EV charging infrastructure, including the following LDEV charging activities from 2018 to 2022:

- a. \$3.15 M of VW funds, \$2M of utility settlement funds (NECAC), and \$240,000 in funds awarded by the Maine Public Utilities Commission
- b. DC Fast Charging (DCFC/L3)
  - i. 14 plugs installed @ 7 sites (6 more plugs to be added in 2022)
  - ii. 14 plugs awarded @ 7 sites, under construction
  - iii. +/- 10 plugs @5 sites TBA (2022)
- c. Level 2 (L2)
  - i. 154 plugs installed at 53 locations incl. business, municipality, and state government
  - ii. 62 L2 plugs at 13 locations

For a list of projects (DCFC on AFCs) that Efficiency Maine and MaineDOT have already installed or contracted for, please see **Appendix B**.

The State of Maine already seeks to make maximal use of incentive funding from a variety of sources and has experience with a variety of solicitation types. Two rounds of DCFC grants have been awarded through a competitive bidding process. The solicitations targeted priority corridor segments and priority towns, but bidders were expected to identify and propose specific locations. One solicitation bundled multiple locations together in a single bid, the other requested separate bids for individual sites. Representatives from multiple state agencies participated in the bid review process. Efficiency Maine signed contracts with successful bidders.

So far, on projects in the higher AADT locations, financial incentives awarded through the contracts have covered up to 80% of capital costs. More recent contracts have also covered part of the documented utility demand charges: 100% in Year 1, decreasing by 20% each year and ending after Year 5.

For Level 2 charging Maine has used a similar competitive bidding process. In future rounds of funding, a mix of competitive grants and categorical eligibility grants (e.g., rebates) may be used. As with DCFC, bidders will be expected to identify and propose specific locations. Any fixed incentives (\$ per plug) have been capped at 80% of capital costs. Incentives may vary by region or sector.

In all its solicitation and contracting, Maine has sought to minimize complications for the bidders/applicants.

Existing contracts have effectively dealt with:

- Completing construction in a timely manner
- Maintaining uptime (by monitoring downtime and instituting a Service Level Agreement to withhold/deduct penalty funding when standards are not met). Maine will follow the guidance recently given to set 97% as the minimum uptime requirement.
- Maintenance issues like snow removal

The Maine PEVID is focused on EV charging infrastructure, with an initial emphasis on DCFC for the interstate. RFPs will ask bidders to address location, nearby amenities, and other factors that are likely to have a bearing on the successful operation of the charging stations, in terms of reliability and convenience.

Maine recognizes that charging stations in some remote locations may require longer-term operating support; this can be addressed through contract terms. Recent solicitations, for addressing charger needs in more remote rural areas, have included ongoing incentives related to demand charges (e.g., covering 100% of utility demand charges in Year 1, decreasing by 20% each year, and ending after 5 years). During this period of rising electricity prices in Maine and New England, there is heightened concern across all sectors of Maine's economy about adding to electricity rates. In the long term, each station will need to be financially viable. In the nearer future, it will be important to use some of the NEVI formula funding to support operating costs (including demand charges) for stations that face higher financial challenges.

Competitive solicitations will be designed to make efficient use of public funding and to attract private investment where possible. These strategies may include:

- In the highest traffic areas:
  - Offering 50-80% capital incentive with the remaining amount to come from private funds
  - Accepting bids from as wide a range of participants as possible, giving no preference towards any one type of business or ownership model
  - Not requiring that participants bid on multiple sites
- In medium and low traffic areas:
  - Bundling low traffic sites together with higher traffic sites to afford bidders greater assurance of financial viability
  - Offering 80% capital incentive with 20% to come from private funds
  - Offering partial operating support such as a declining incentive to defray a portion of the demand charges over a five-year term
- In the lowest traffic areas:
  - Offering 80-100% capital incentive and partial or full operating support during the contract term, with matching funds to come from state or other funding sources
  - In the most extreme cases, an alternative ownership strategy may be used in which Efficiency Maine or another public entity would own the equipment during an initial period, until the station receives enough use to be financially viable. Efficiency Maine is considering this strategy at certain remote sites in northern Maine (not funded by NEVI).

The Contracting section in the NEVI Guidance document<sup>17</sup> addresses the importance of contractors’ engaging with communities where charging infrastructure will be installed. Efficiency Maine, so far, has met this important consideration by ongoing, robust engagement with stakeholders such as its Low-Income Advisory Group, Drive Electric Maine, regional Councils of Governments and regional development agencies, and through discussions with community leaders and local stakeholders prior to the issuing of solicitations. Maine has found this to be a workable and effective solution, and it builds on the relationships that Efficiency Maine and MaineDOT already have with local communities.

## Existing and Future Conditions Analysis

Maine, when it receives NEVI formula funding, can build on its experience already gained in soliciting and contracting for EV charging infrastructure. In addition, Maine has been learning by doing in the realm of encouraging EV adoption, and already has taken specific steps to encourage LMI EV adoption (more on this in the Equity Considerations section, p. 36.) But Maine also faces significant challenges with its large area, small population, and below-national-average per capita income. While Maine’s climate is warming, its extreme low temperatures present additional challenges for EVs, in terms of both shortened range and longer charging times.

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

Maine covers 35,334 square miles. Terrain varies from rocky coast, to inland plains with plentiful lakes and rivers, to rugged mountains. Maine is predominately rural (see Graphic 4 below: “Maine - Three rural definitions based on Census Urban Areas”). Low population densities in rural areas can present significant challenges. The Transportation Working Group included a representative from the Northern Maine Development Commission.

Compared to other low-population states, Maine has more miles of public roads, more miles of state-responsibility roads, and a higher ratio of state miles to public miles.

**Graphic 3:** from “Public Road Length - 2020, Miles by Ownership”, Table HM-10, 10-26-2021. <sup>18</sup>This shows State-Owned Miles as a percentage of overall miles.

State	State Highway Agency	County	Town, Township, Municipal (1)	Other Jurisdictions (2)	Federal Agency (3)	State as % of (State+County+Town)
Maine	8,340	417	13,643	289	162	37%
New Hampshire	3,897	-	12,038	107	151	24%
Vermont	2,628	-	11,463	-	157	19%

<sup>17</sup>NEVI Guidance

<sup>18</sup>From “Public Road Length - 2020, Miles by Ownership”, Table HM-10, 10-26-2021.

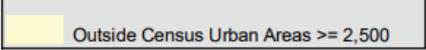
Graphic 4: This shows that, by three definitions, Maine is still overwhelmingly Rural.

# Maine

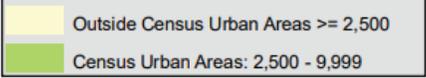
## Three rural definitions based on Census Urban Areas

Rural locations are those outside Census Urban Areas with a population...

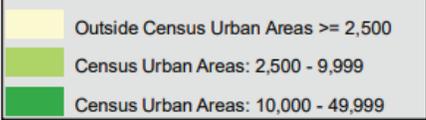
...greater than or equal to 2,500



...greater than or equal to 10,000



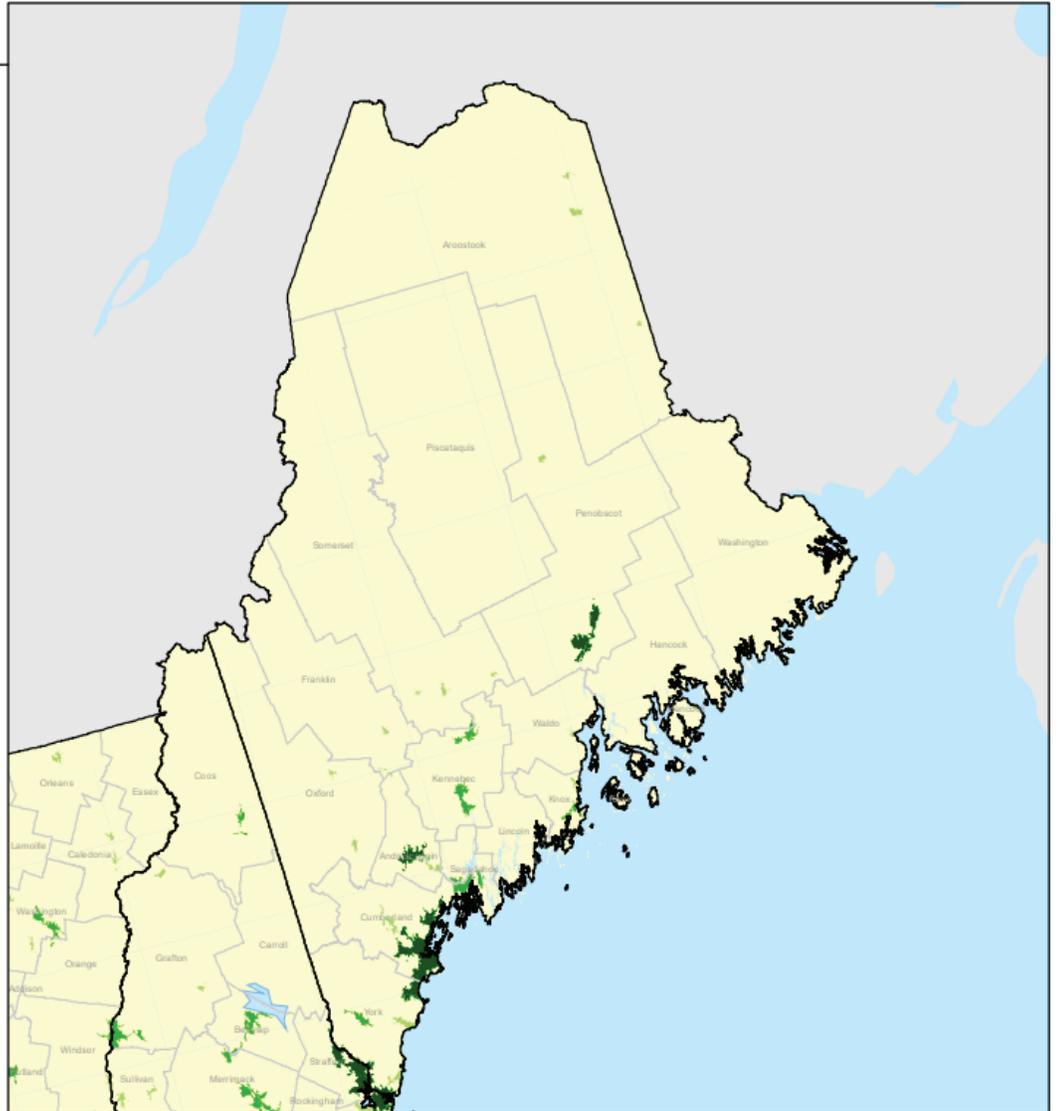
...greater than or equal to 50,000



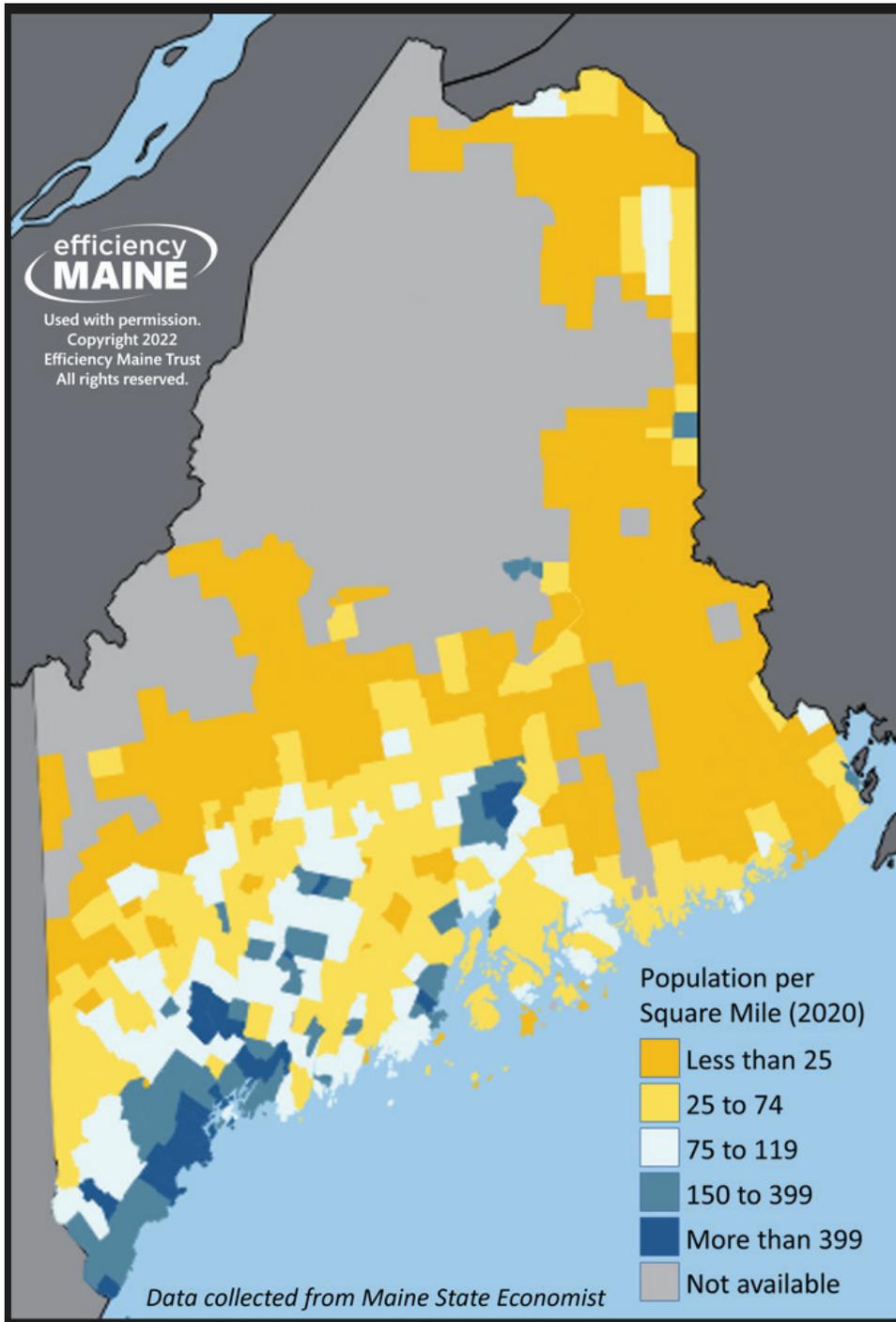
Urban locations under all three definitions:



For more information on definitions, see documentation



**Graphic 5:** This shows the small percentage of municipalities where the 2020 Population per Square Mile is greater than 150.



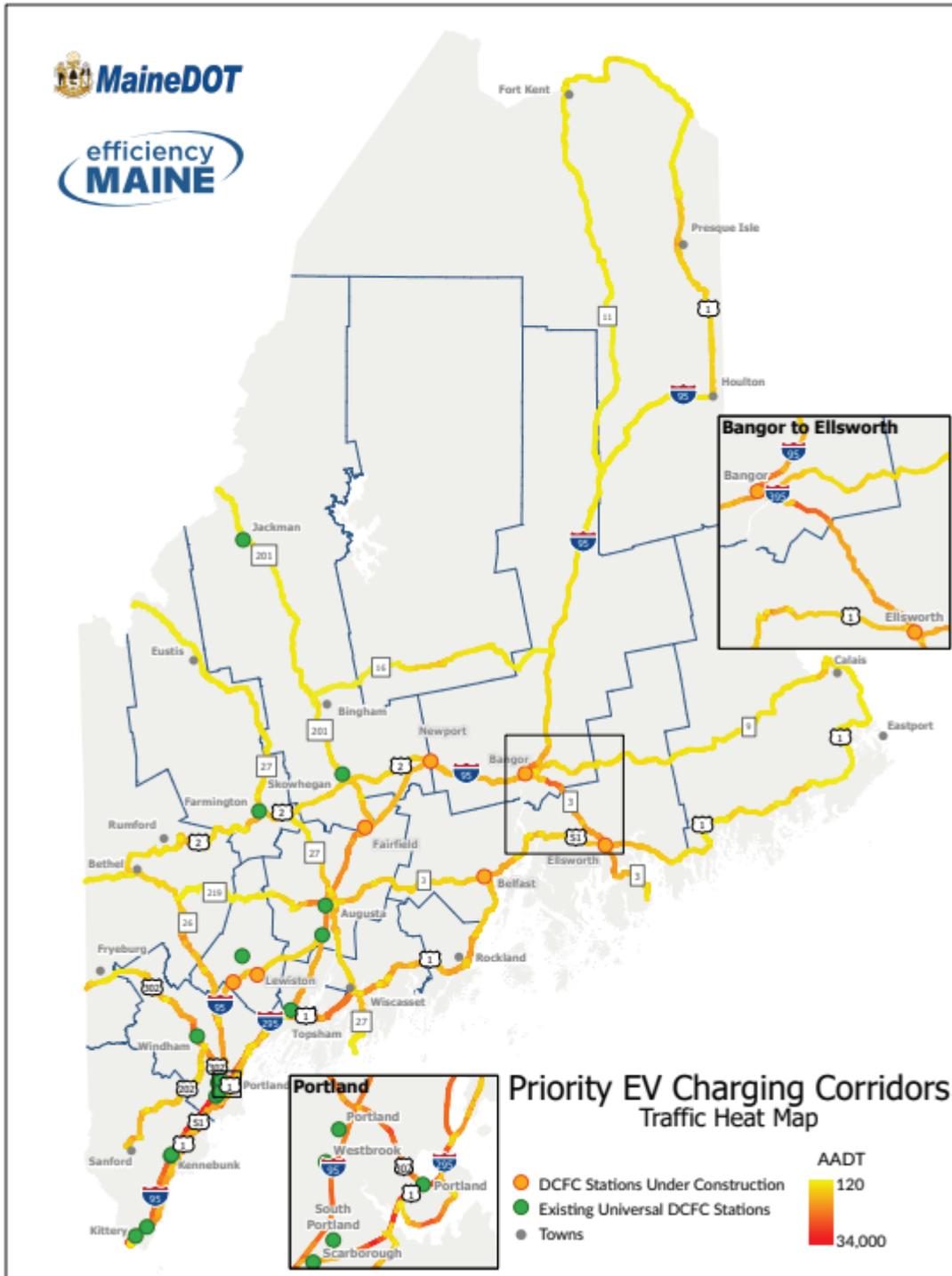
*Maine Won't Wait*<sup>19</sup> includes detailed analysis related to sea level rise, temperature rise, intensity of storms, and other climate-change phenomena that will affect different parts of the state. Maine is developing responses to these varied threats. For the five-year period of NEVI Formula funding, and the coming few decades, however, cold temperatures will remain a top challenge in relation to EV adoption and successful operation of EVSE. See the Known Risks and Challenges section below for more detail on this.

<sup>19</sup>*Maine Won't Wait*

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

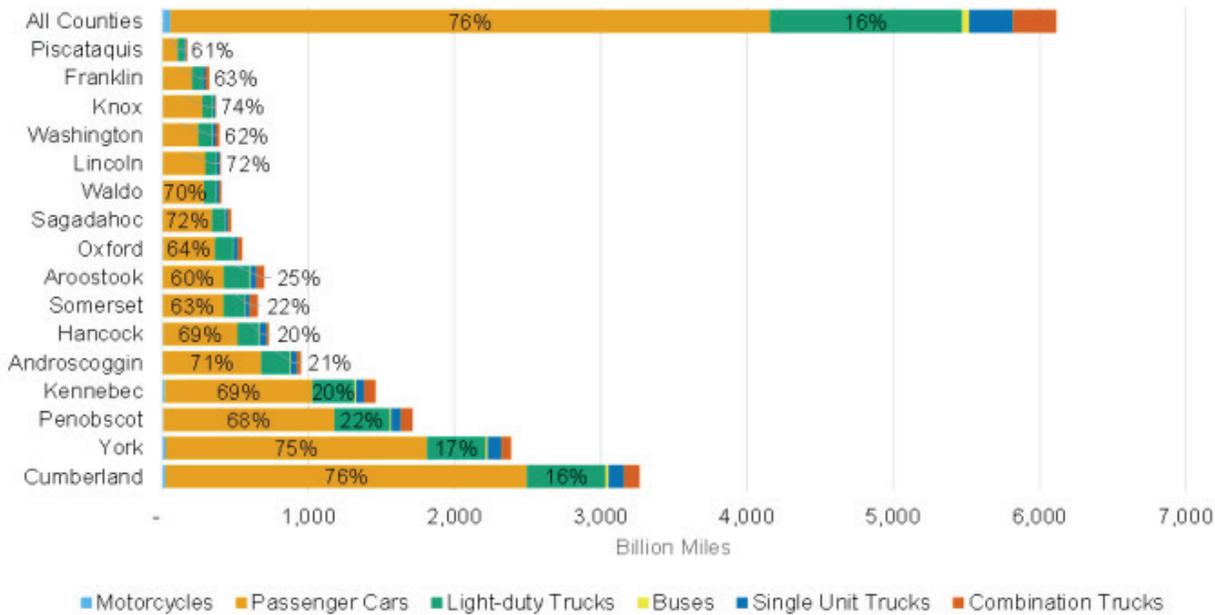
Traffic in Maine is concentrated in southern and coastal regions, as shown on the following Annual Average Daily Traffic (AADT) heat map:

Graphic 6: Annual Average Daily Traffic (vehicles per day)



Maine also has compiled data on VMT by County and Vehicle type.<sup>20</sup> The low-traffic regions will be a challenge in terms of making charging infrastructure sustainable by User Fees alone.

**Graphic 7: Vehicle Miles Traveled (VMT) by County and Vehicle Category.** Note that in most counties Passenger Cars and Light Trucks account for about 90% of VMT.



Transit: Increasing public transportation investment was identified as a key goal in the *Maine Won't Wait* plan and both the TWG and the Advisory Group for the Clean Transportation Roadmap included representatives from transit agencies.<sup>21</sup>

Several initiatives are already underway in Maine to improve public transit. MaineDOT is currently updating its Statewide Strategic Transit Plan (SSTP), with a target completion date of December 2022. MaineDOT also recently launched a study of transit bus electrification. It is studying eight transit agencies to help identify the next steps to transition to electric transit vehicles. The study will be completed in 2022.

A community action agency in rural Maine (Public Comment 22) has used grants to purchase three BEVs and install 9 L2 chargers in 4 locations. They already are seeing cost savings.

Freight and Other Supply Chain Needs: As explained more fully in the Known Risks and Challenges section, Maine is still evaluating electrification for medium- and heavy-duty vehicles. *Maine Won't Wait* recommends a modest goal of a 4% reduction in MHDV VMT by 2030.<sup>22</sup> This Maine PEVID includes a plan to reassess the state of MHDEV technology in a few years. The City of Bangor operates two plug-in hybrid electric vehicles (PHEVs) as paratransit vans. These vehicles and associated chargers were purchased using rebates from Efficiency Maine.

<sup>20</sup>Roadmap

<sup>21</sup>Roadmap

<sup>22</sup>Maine Won't Wait

## AFC – Corridor Networks

Maine has eight designated Alternative Fuel Corridors (AFC) and has requested AFC status for I-95 from Bangor to Houlton in Round 6.

**Graphic 8: Maine Alternative Fuel Corridors (tabular) as of 6-30-2022**

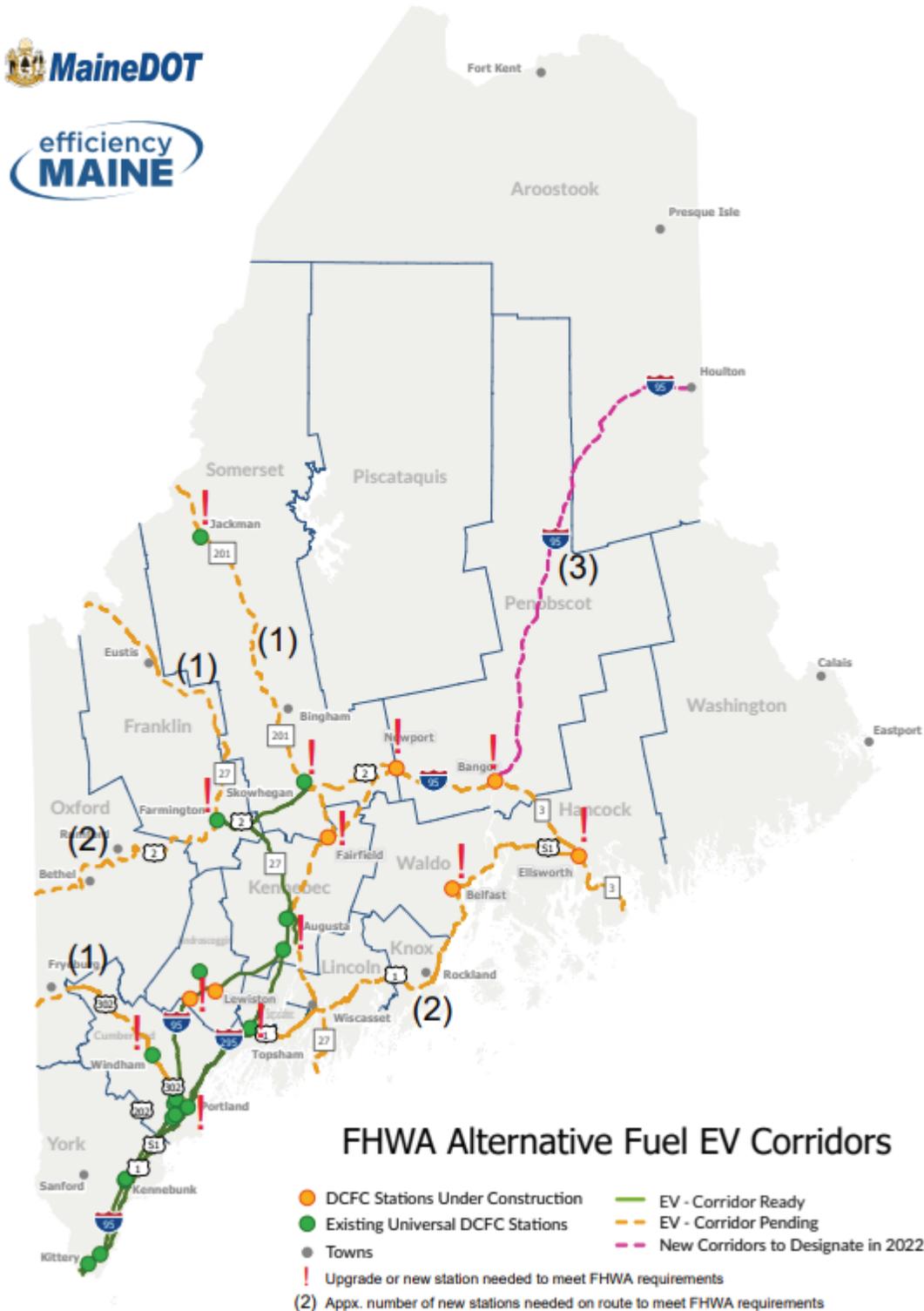
Corridor Name	EV Corridor-Pending Segment	EV Corridor-Ready Segment
27	Boothbay-Gardiner, Farmington-NH Border	Gardiner-Farmington
1	Brunswick-Ellsworth	Kittery-Brunswick
1A/3	Bangor-Bar Harbor	N/A
2	Newport-Skowhegan, Farmington-NH Border	Skowhegan-Farmington
201	Fairfield-Canada Border	N/A
302	Portland-NH Border	N/A
I-95	Augusta-Bangor*	Kittery-Augusta
I-295	N/A	South Portland-W. Gardiner
	*Bangor-Houlton nominated in Round 6 (2022)	

**Graphic 9: Maine Alternative Fuel EV Corridors as of 5-3-2022**



The following map shows that most of the existing and funded DCFC stations would require upgrades to meet the NEVI standards for being fully built-out.

**Graphic 10: Status (Corridor Ready/Corridor Pending) of Maine Alternative Fuel EV Corridors; shows where upgrades/new stations are needed.**



7 -Estimated new sites needed to complete existing Pending Corridors

13 – Estimated existing sites on Pending and Ready corridors that must be upgraded to meet FHWA requirements

20 – Total new sites and upgrades needed

New corridor to designate in 2022: I-95 from Bangor to Houlton (3 charging sites)

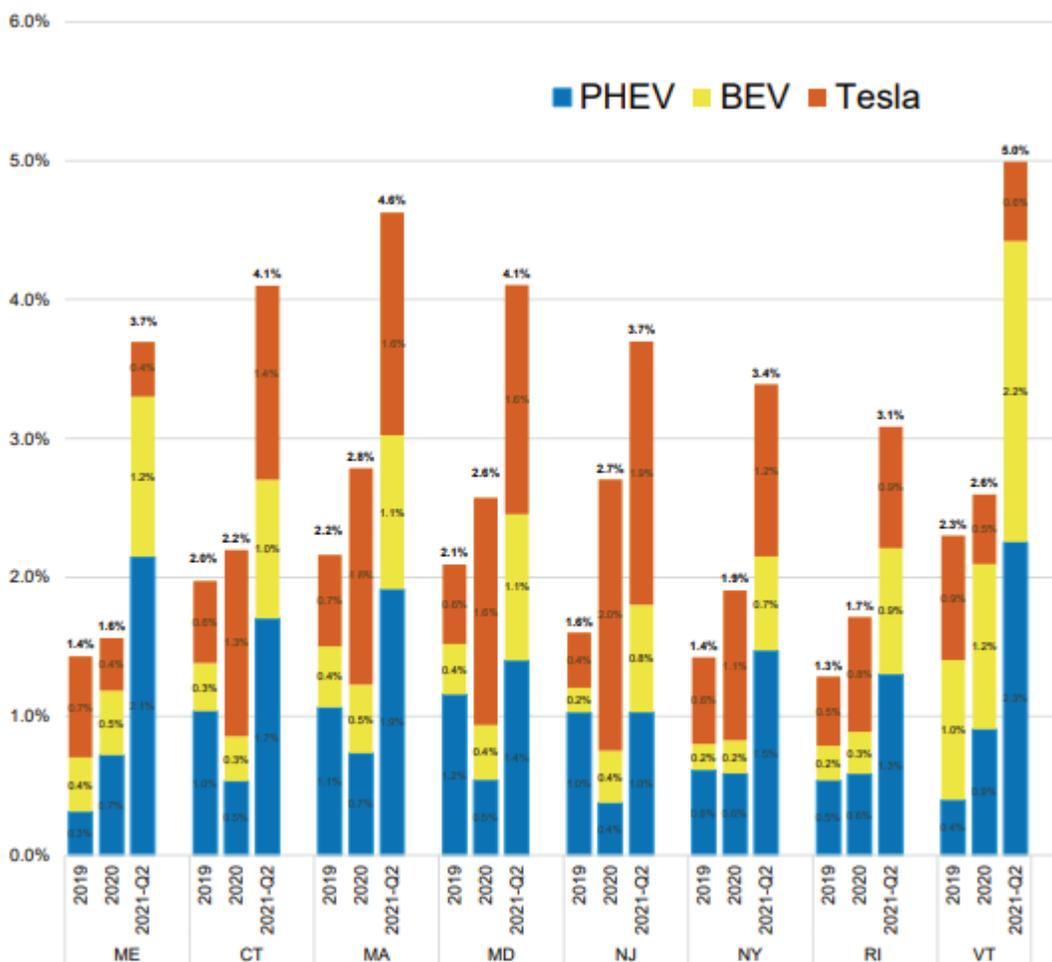
Maine is proposing a staged approach for its AFCs, so that available EV charging infrastructure funding may be distributed to provide coverage for all designated and nominated AFCs. This staged approach (related to kW and # plugs) will provide adequate capacity at all locations while allowing wider, more equitable coverage of all AFCs. Please see the 2022 Infrastructure Deployments/Upgrades section for more discussion.

### Existing Locations of Charging Infrastructure Along AFCs (EV Adoption Trends, Electric Utility Information)

For a list of projects (DCFC on AFCs) that Efficiency Maine and MaineDOT have already built or contracted for, please see Appendix B.

The following graph shows that EV sales in Maine (as a percentage of all light-duty sales) have grown steadily since 2019. The most recent data shows this at 3.7%, which is in line with percentages for other Northeast states.

**Graphic 11: EV Sales Share of ALL Light-Duty Sales (%) - Compare Maine to Northeast States**



## Breakdown of Light-Duty Vehicles in Maine<sup>23</sup>

The Roadmap includes an extensive discussion of EV adoption, including EV incentives offered through Efficiency Maine. In addition, the Roadmap also examines several reference cases for Light-Duty EV Deployment in Maine and New Registrations. The Roadmap also modeled a new charging infrastructure (kW per plug, # of plugs, by Year) that would be needed to support the different EV Adoption reference cases. Maine made use of these projections in developing this Maine PEVID, including the development of a staged approach.<sup>24</sup>

Maine has been offering incentives for EV purchases since 2019, with a total of \$4,961,500 applied to 2,715 Light Duty EVs. Efficiency Maine continues to offer state EV incentives and has taken steps to increase LMI participation (see Equity Considerations section p. 36 for more detail). Maine is committed to supporting ongoing, equitable EV adoption.

Range anxiety is a significant barrier to EV adoption. Maine expects the expansion of the EV charging network that will be made possible by NEVI funding will help to lessen this barrier. Maine is using other funding to augment very rural locations in Maine to help reach across the state.

It should be noted that a significant share of VMT in Maine is from vehicles registered in other states. Acadia National Park has 4 million visitors per year; Maine is an attractive tourist destination less than a 12-hour drive for almost all of the Northeast. Maine also sees many tourists from the Canadian provinces of Quebec and New Brunswick, where there is significant EV adoption.

Maine has two major electric utilities, Versant Power and Central Maine Power, and a handful of smaller cooperative or municipal utilities. Most of the existing and proposed DCFC on AFC and other priority corridors are within the territory of the two major utilities, with a few exceptions. Efficiency Maine works closely with the electric utilities through its work administering energy efficiency programs and planning of transmission and distribution systems. Efficiency Maine is meeting with the major utilities to gather feedback on this PEVID. Efficiency Maine will continue to coordinate with the utilities when selecting DCFC sites to avoid, where possible, selecting locations that would trigger major grid upgrades, and to develop a process and timeline by which bidders can expect to obtain interconnection cost estimates when submitting proposals for NEVI RFPs.

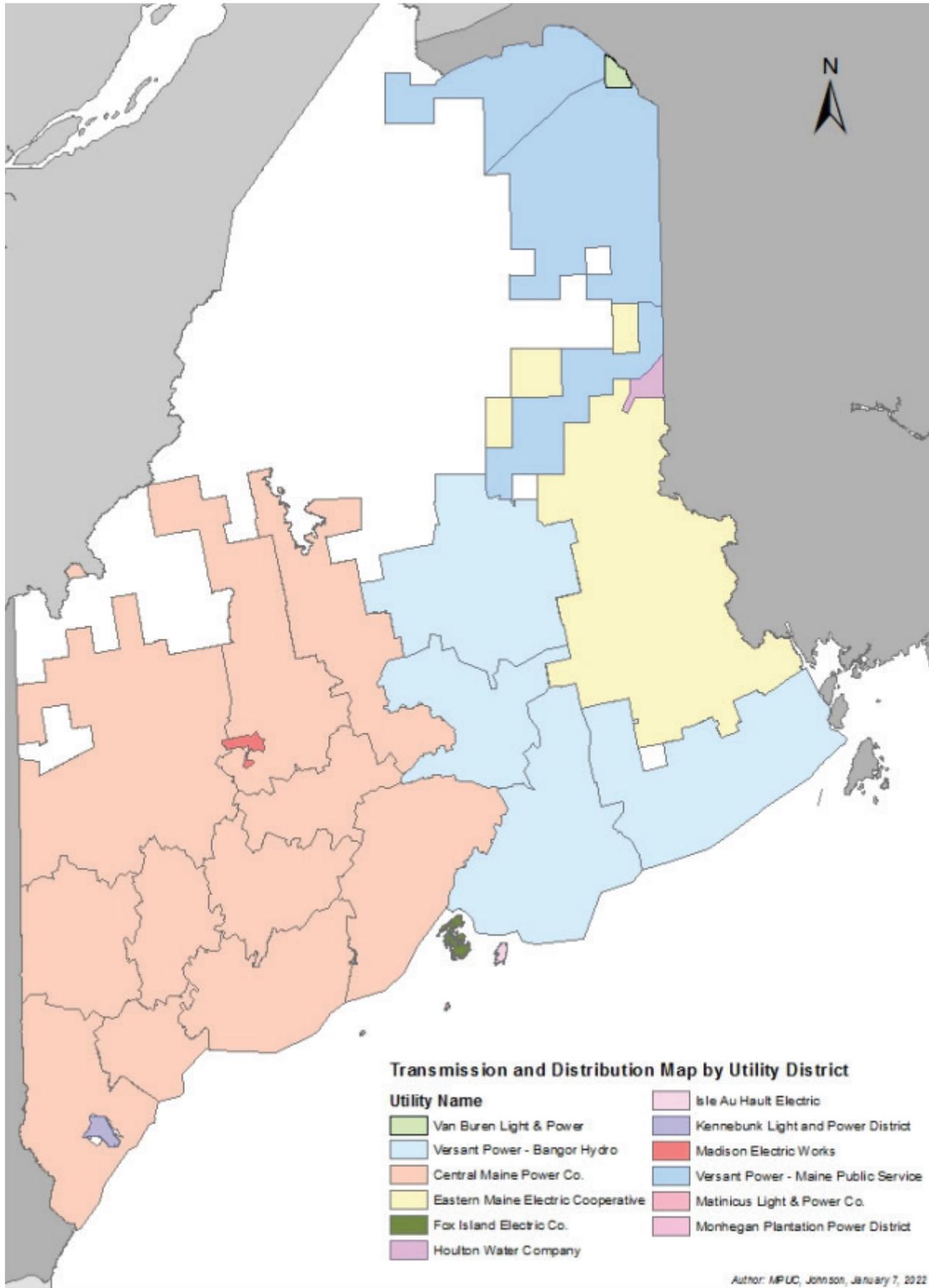
Graphic 12, on the following page, shows electric utility territories.

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<sup>23</sup>Roadmap

<sup>24</sup>Roadmap

Graphic 12: Transmission & Distribution Map by Utility District



## Known Risks and Challenges

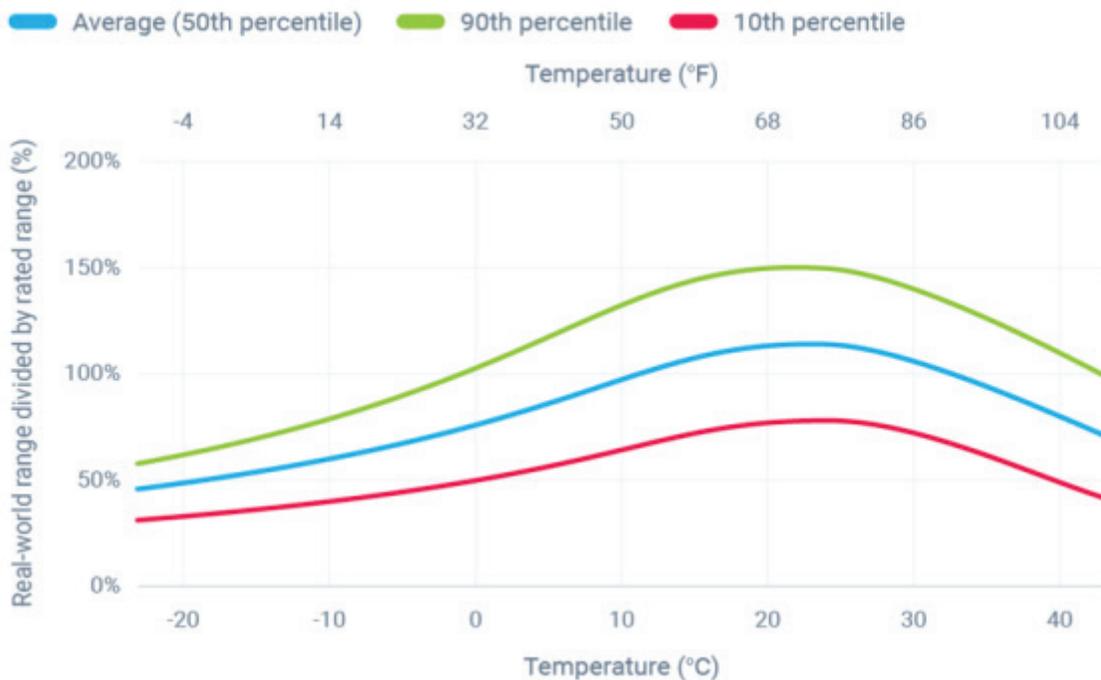
In the near term, there is a significant risk that DC fast charging will not be economically viable, particularly in rural areas that currently represent the largest gaps in Maine's EV charging network. Initial analysis suggests that some rural stations may not be profitable within ten years, due to a lack of EV usage at these rural sites. This may make it challenging to attract private investment to chargers on Maine's rural corridors, many of which are in areas classified as DACs. Maine can mitigate this risk by providing the necessary amount of capital subsidy, and by providing operational support where needed.

Longer-term, if EV adoption rates take off as projected, there will be a need for new grid capacity. This need will hit at different times in different locations because each part of the electrical grid has unique capacity constraints. See the Electric Rates, Grid Capacity subsection at the end of the 2022 Infrastructure Deployments/Upgrades (p. 31) for a more detailed discussion.

Cold weather reduces EV range and increases charging times (for both DCFC and L2). Maine's cold climate and low, widely dispersed population present significant challenges to EV adoption and to the sustainable operation of EV charging equipment. These challenges will be acute in northern and far-inland (esp. mountainous) parts of the state; these areas tend to be rural, with lower-than-average income, as well as low AADT.

The following figure shows the impacts of temperature on EV range for 4,200 real-world EVs measured by GEOTAB<sup>25</sup>

**Graphic 13:** Impacts of Temperature on EV range for 4,200 real-world EVs Measured by GEOTAB



<sup>25</sup>Roadmap

Maine is fully committed to 50-mile spacing of charging infrastructure; this will significantly mitigate the cold weather effects on the range and charging time.

Medium- and heavy-duty vehicles in Maine present particular challenges. Compared to the average of 12,000 miles per year for light-duty vehicles, busses and combination trucks average 24,500 miles per year and 78,000 miles per year respectively.<sup>26</sup> This leaves less downtime available for charging. In addition, trucks carry significantly higher payloads than light-duty vehicles, thus requiring even larger batteries (which take longer to charge). The TWG recognized that it didn't yet have the framework needed to explore the electrification of medium-heavy duty truck fleets. The TWG will develop a separate Roadmap for MHDV and a stakeholders' group is already meeting to develop this effort. This Maine PEVID includes planning work to reassess the state of MHDEV technology in a few years.

While cold weather presents significant challenges, financial viability (in rural parts of the state) remains the biggest risk. In remote locations, there is the risk that if DCFC facilities are oversized for the market demand, then operating revenue will not be able to cover costs. This could result in private vendors and/or property owners becoming disillusioned with the economic burden of owning/hosting this critical infrastructure. Facilities may fall into disrepair or be removed entirely, creating a negative case study on the transition to EVs.

## EV Charging Infrastructure Deployment

NEVI formula funding will enable Maine to continue expanding EV charging infrastructure. Maine expects by 2024 to have operational DCFC stations, generally no more than 50 miles apart, for the entire length of Maine's interstate. The proposed staged approach will do the same for all of Maine's AFCs.

Maine will use other funding (not NEVI formula funds) for targeted DCFC installations near MUD and for other priority corridors and destinations that are not on AFCs. In 2022 Maine will issue competitive solicitations for other priority corridors in Aroostook County and Downeast Maine (eastern and coastal Maine), and for a connection between the two (US Route 1 Calais to Houlton, which will connect two large tribal communities). Other corridors to be addressed in the future include Route 16 through Piscataquis County; all are shown on the map on p. 27.

Maine has studied eight destination towns, three of which are not on AFCs: Millinocket, Greenville, and Rangeley. It will be important for Maine's tourism-dependent towns to have DCFC available in these destinations, in addition to L2 installations at lodging and other locations. Maine will participate in discussions about EV travel to and from Canada and neighboring states with high rates of EV adoption.

### Funding Sources

Since the VW settlement in 2018, Maine has actively pursued funding for EV charging infrastructure and has tracked charging infrastructure investments in Maine made by others. This demonstrates the "maximal efficient use" of incentive dollars. Maine will continue this through the NEVI funding period. As shown below, Maine has identified several funding sources, in addition to the NEVI formula funds, that will be used for EV charging infrastructure.

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<sup>26</sup>Roadmap

MaineDOT and Efficiency Maine will ensure that NEVI Formula Funds “shall be apportioned as if under Chapter 1 of Title 23”.<sup>27</sup>

This Maine PEVID focuses on the use of the NEVI formula funds, but also includes other expected funding: ARPA, NECEC, NEVI discretionary, and others.

- Charging Infrastructure Plan Estimated Budget
  - \$ 35,150,000      Incentives
  - \$ 1,850,000      Admin & Delivery (5%)
- Assumed Revenues
  - \$1 million NECEC (Received)
  - \$8 million ARPA
  - \$18 million      NEVI Formula Funds
  - \$10 million      IJA Discretionary Grant – Contingent on Successful Grant Request
  - **\$37 million      Sub-total**

In addition, MaineDOT has set aside matching funds to cover the 20% local match requirement for NEVI-funded projects in parts of the state that may require additional funding to attract private investment. Match requirements may be different for each RFP/Project. Maine will make efficient use of federal funding, such that at least 20% of costs will come from state or private funds.

The following charts and maps (which apply to the full \$36M of incentive dollars expected through FY 2026) will guide selection and timing as Maine issues RFPs related to NEVI formula funds and funds from other sources.

**Graphic 14:** *Budgets for Different Categories of EV Charging Infrastructure Work (note: this includes other funding sources, besides NEVI.)*

Category	Description (see pp. for more detail)	Incentive \$
1	Extending Lines and Filling Gaps (DCFC)	\$22.3M
2	On-Street/Lot Parking (L2, DCFC)	\$ 7.5M
3	Destination Charging (L2, DCFC)	\$ 5.6M
MHDEV	Medium- and Heavy Duty EV (Study and Pilot)	\$ 1.1M
Total		\$36.5M

Maine will ensure that each competitive solicitation and funding opportunity that is issued fits with the goals and limitations of its funding source and will continue to actively pursue other charging infrastructure funding sources. ARPA funds will be targeted mostly to rural areas and will need to address areas where NEVI funds cannot be used.

Maine has noted that NEVI dollars are available until expended and will be monitoring both EV adoption and usage of charging infrastructure. Plans will be adjusted accordingly, which will prevent getting ahead of demand (for charging infrastructure) in some locations while falling behind demand in other locations.

<sup>27</sup>NEVI Guidance

## 2022 Infrastructure Deployments/Upgrades

Maine is committed to supporting a statewide charging infrastructure network that will accelerate equitable adoption of EVs, including for those who cannot reliably charge at home. At the same time, Maine faces significant challenges; these include low population density, remote stretches of important roads where limited or no electric service currently is available, a high percentage of state road mileage, and below-national-average per capita income. (See p. 7 in the Plan Vision and Goals section for more discussion.)

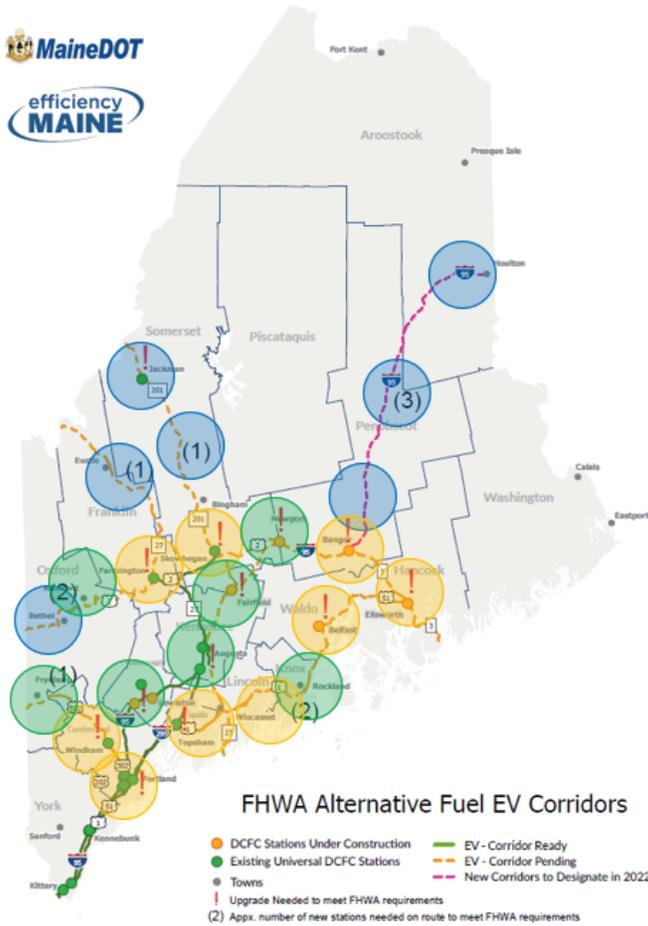
Analysis shows that expected NEVI formula funding simply is not enough to fully build out Maine's current and nominated AFCs within the NEVI funding period. The proposed staged approach will provide coverage (spacing no more than fifty miles) on currently designated and nominated AFCs. In later stages, as demand for charging grows and additional funding is available, Maine will proceed toward, and achieve, fully built-out status on all AFCs. If the staged approach is not approved, Maine would likely need to de-list several of its AFCs in remote rural areas.

Maine concurs with the emphasis that NEVI is placing on an equitable charging network. This is in line with state goals of supporting EV travel from north to south and east to west, and of making the benefits of EV ownership available to all Mainers. It will be challenging to support DCFC charging stations on corridors with AADT under 7,500.

Most of the existing DCFC stations on AFCs do not meet the NEVI requirements for being fully built out. Based on studying the costs that would be incurred to bring the existing DCFC stations on current AFCs up to the NEVI standard, Maine has concluded that doing so would spend virtually all the charging infrastructure funding that can reliably be expected and would not lead to acceptable results. It would mean not completing the northern interstate (with its connection to New Brunswick, Canada) and not completing two remote AFC corridors that connect with the province of Québec and are important for wood products and tourism.

After careful study, Maine is proposing a staged approach to cover its current and nominated AFCs. This is the best way to meet the demand for charging while still achieving equitable coverage. Maine is confident that the Low and Medium Traffic locations will be able to handle the demand for charging through the end of FY 2026 with little or no waiting time for users. Please see the FY 23-26 Infrastructure Deployments section for maps and more discussion of how Maine will move from Stage 1 through Stage 2 to Stage 3, in which all AFC corridors will be fully built out. Maine is committed to using other funds to help deploy EV charging infrastructure into very rural areas.

Graphic 15: Initial Buildout of AFC (Stage 1) (See p. 17 for a larger map.)



## Initial Buildout of AFC Stage 1: Years 1-5 (NEVI Period)

- Low traffic sites
- Medium traffic sites
- High traffic sites

Fig. 6 In the initial stage, DCFC sites are sized based on the amount of traffic they receive. High traffic sites are built to the full NEVI scope in the beginning while lower traffic sites are initially built with a smaller number of plugs and/or with power sharing to allow for a lower maximum kW per site. In all cases, the electrical service is sized to accommodate an upgrade to the full NEVI scope (min. 600kW per site) in the later stages of buildout.

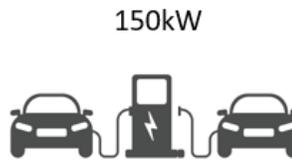
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Graphic 16: Initial Buildout of AFC Based on Traffic Volume

## Initial Buildout of AFC Based on Traffic Volume

### Low Traffic Sites

- AADT < 7,500
- 1 x 150kW shared between 2 plugs
- Can deliver 150kW to a single vehicle or 75kW each when shared
- Electrical service capable of 600kW per site (1600A)



### Medium Traffic Sites

- AADT between 7,500 and 17,500
- 2 x 150kW shared between 2 plugs
- Can deliver 150kW to 2 vehicles or 75kW to 4 vehicles
- Electrical service capable of 600kW per site (1600A)



### High Traffic Sites

- Annual Average Daily Traffic (AADT) > 17,500
- 4 x 150kW plugs
- Can deliver 150kW to 4 vehicles simultaneously
- Electrical service capable of 600kW per site (1600A)



21

The timeframe for achieving the Stage 1 coverage shown above is the NEVI funding period: FY 2021 to FY 2026. In Stage 1 Maine is committing to:

- Stations no more than 50 miles apart on all current and nominated AFCs
- Fully built out stations in high traffic areas including the southern interstate, I-295, parts of southern Route 1 from Kittery to Ellsworth, and the Bangor area. (See map for potential locations.)
- All locations (Low, Medium, or High Traffic) will have 1600 amp capacity, so that when demand for charging increases, they will already have the electrical capacity required to support 600 kW of charging.
- The middle part of the interstate, I-95 from Lewiston/Auburn to Bangor, plus the northern end of I-295, will be Medium Traffic.
- The northern part of the interstate (Bangor to Houlton), along with locations in Western Maine connecting to Québec and New Hampshire, will be Low Traffic.
- All locations will have at least two plugs in Stage 1; each plug will supply a minimum of 75 kW (150 kW if the other power-sharing plug is not in use).

This is in line with avoiding “stranded assets” (NEVI guidance page 23). It will not help electrification efforts in Maine if there are four plug stations where, for several years, at most two plugs are occupied simultaneously. Further, the funding saved by starting with two plugs at some stations will allow Maine to provide coverage for all AFC locations within the NEVI funding period.

With FY 2022 NEVI funds Maine will complete coverage of its interstate system, including a location in Augusta that will serve the Route 27 Boothbay Harbor to Augusta corridor, as detailed in this table.

**Graphic 17: 2022 NEVI Funds**

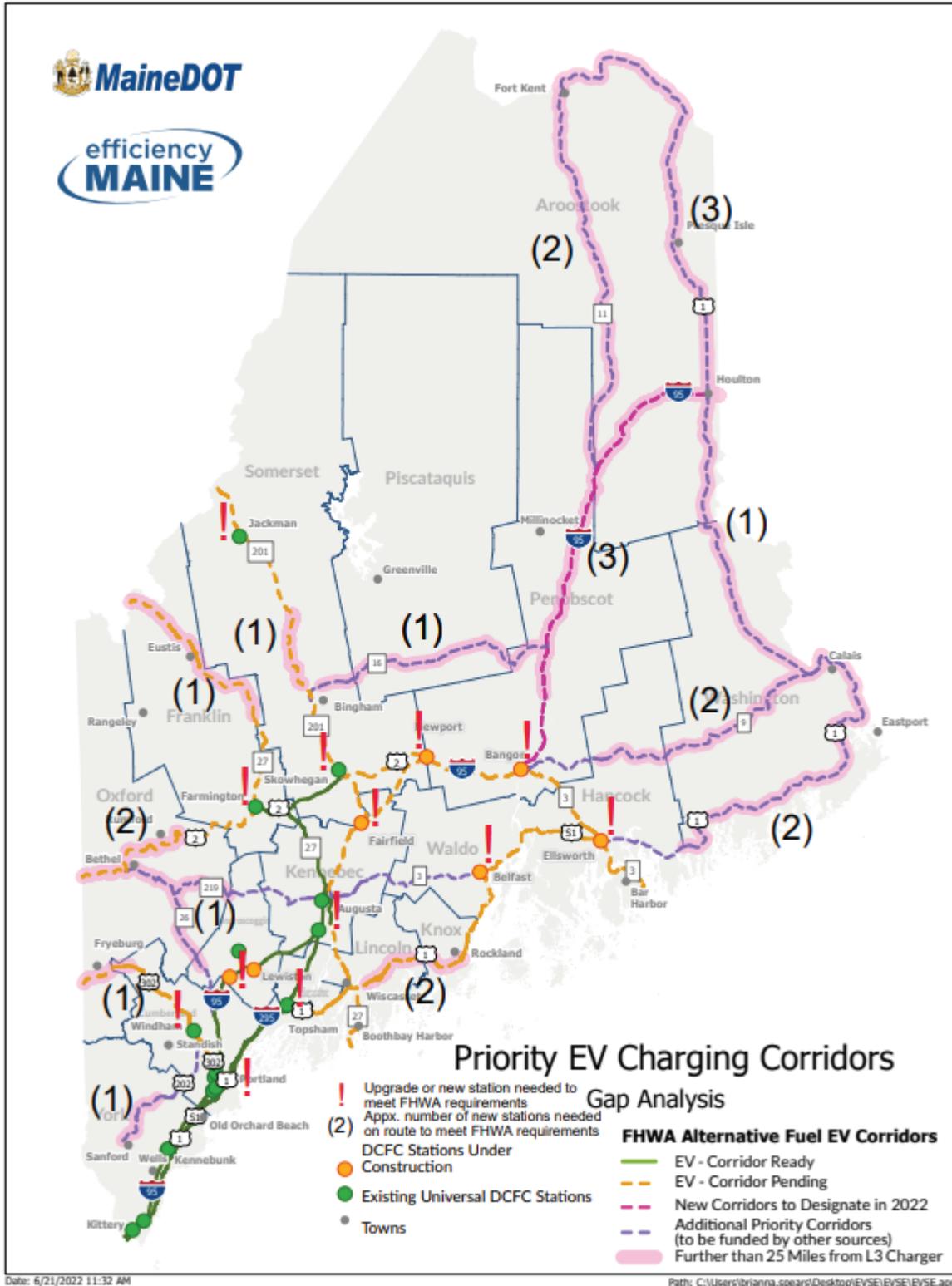
State EV Charging Location Unique ID*	Route (note AFC)	Location	Anticipated EV Network (if known)	Utility Territories	Anticipated Station Ownership** (if known)	FY22 Funding Amount
n/a	I-95	Bangor (High Traffic)	Winning Bidder	Versant	Unknown	
n/a	I-95	Bangor to Houlton (3 Low Traffic sites)	Winning Bidder	Versant or Houlton Water Co	Unknown	
n/a	SR 27	Augusta	Winning Bidder	CMP	Unknown	
<b>Total</b>						<b>\$2.8 Million</b>

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

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

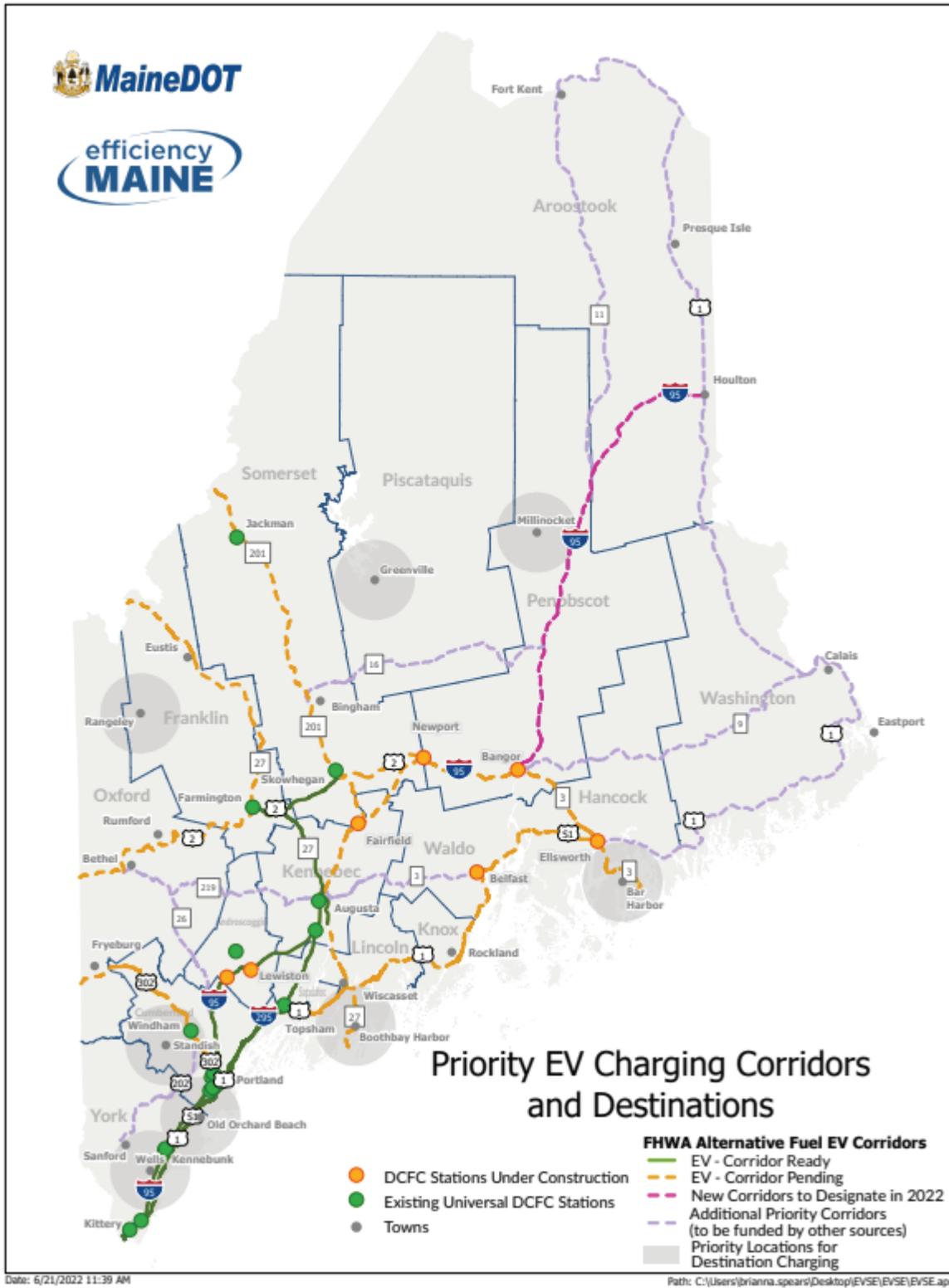
With concurrently available ARPA funds Maine will pursue DCFC and L2 charging in two remote and rural regions: Aroostook County (north of the interstate) and Downeast (eastern and coastal Maine). Maine expects to issue RFPs in 2022 for these two areas and a connection between them that will serve two large tribal communities. These do not include AFCs, but nevertheless are important to meeting Maine's goal of supporting EV travel from south to north and east to west.

Graphic 18: Gap Analysis for AFC and Other Priority Corridors



The following map shows AFCs, Additional Priority Corridors, and Destinations. Maine will be addressing all of these with NEVI and other funding sources.

Graphic 19: Priority EV Charging Corridors and Destinations



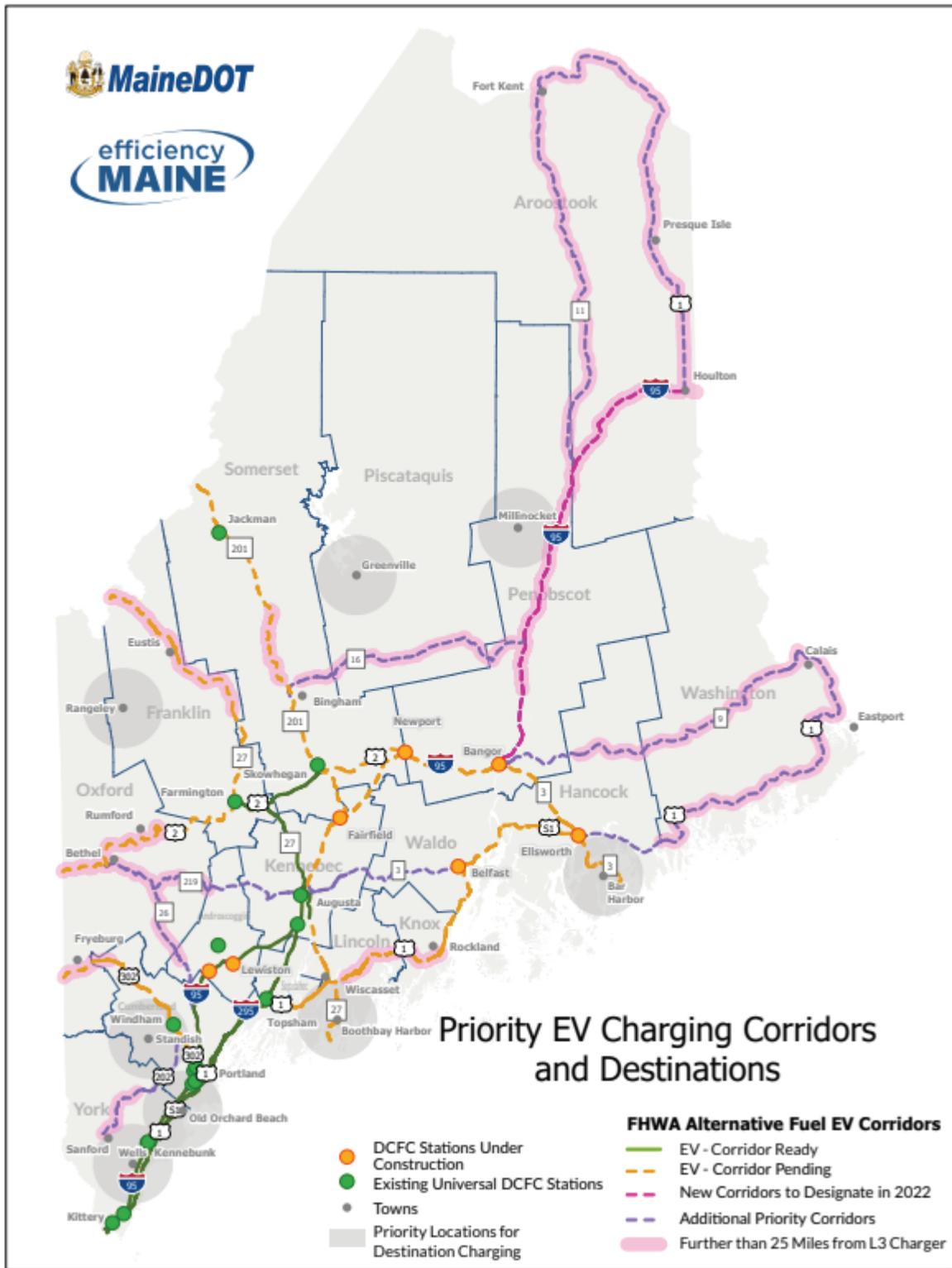
For FY 2023 Maine will address additional AFCs, as detailed in this table:

**Graphic 20: 2023 NEVI Funds**

State EV Charging Location Unique ID*	Route (note AFC)	Location	Anticipated EV Network (if known)	Utility Territories	Anticipated Station Ownership** (if known)	FY23 Funding Amount
n/a	US 1	Rockland (Medium Traffic)	Winning Bidder	CMP	Unknown	
n/a	US 1	Portland to Ellsworth (4-5 High Traffic sites)***	Winning Bidder	CMP (Versant for Ellsworth)	Unknown	
<b>Total</b>						<b>\$3.8 Million</b>

\*\*\* based on current estimates, 4 of the 5 sites could be built. Depending on bid prices a site will be added, or a site might have to be deferred.

Graphic 21:



Please see the FY 23-26 Infrastructure Deployments section below for maps and more discussion of how Maine will move from Stage 1 through Stage 2 to Stage 3, where all AFC corridors will be fully built out. In locations with an existing DCFC, those sites may be upgraded, or new stations may be added based on which solution is most cost-effective and meets the current and future need for EV infrastructure. In a few locations, it may make sense to achieve the fully-built-out status by having two locations, e.g., each with two 150 kW plugs. These pairs would be chosen such that together they meet the 4 plugs at 150 kW each requirement and still fall within the maximum 50-mile spacing and “within 1 travel mile of the Interstate” requirements.

### Electric Rates – Grid Capacity

The Roadmap already recognizes electric grid issues as a challenge. In the short term, demand charges increase the operating costs for DCFC. In the longer term, as EV adoption rates increase, particularly when combined with other electrification, there will be a need for new grid capacity in certain areas.

While the amount of energy required to charge an EV is generally less than 50 kWh, delivering that energy at remote locations and at high voltages can drive up operating costs when additional grid capacity is needed. Current charging infrastructure in Maine is concentrated in higher population areas where electric service is often more readily available. Also, certain types of host sites (e.g., grocery stores) can use existing 480 V, 3-phase power. As noted above, Efficiency Maine has offered a declining incentive to defray a sizable portion of the demand charges over a 5-year period in order to attract bidders in less heavily trafficked parts of the state.

Regulatory activities at the Maine Public Utilities Commission (MPUC) have the potential to impact the economics of EV adoption for drivers and charging hosts. As required by legislation enacted in 2021, the MPUC opened an inquiry and a subsequent investigation into electric rate designs to facilitate beneficial electrification, including residential and non-residential charging and public DCFC stations (MPUC Dockets 2021-00198 and 2021-00325). At the direction of the MPUC under that legislation, Maine’s transmission and distribution utilities have proposed delivery rate designs structured to facilitate electric vehicle charging, including rates that Efficiency Maine and the Governor’s Energy Office, among other parties, have found would be effective in reducing the operating costs for DCFC stations. The proceeding was informed by preliminary results from a pilot rate offered to public DCFC stations by Maine’s largest transmission and distribution utility, Central Maine Power (CMP), which involved a two-part coincident peak rate that CMP estimates has saved pilot participants more than 40% on delivery costs. Rate designs under consideration in the docket are expected to be finalized in the near future, although the GEO, Efficiency Maine, and other parties expect to continue engagement to iterate as needed.

MaineDOT and Efficiency Maine are aware that electric grid issues will need to be addressed as EV adoption, and use of EVSE, grows. For work contemplated with NEVI formula funds, especially in the early years, Maine will deal with specific utility infrastructure issues through the new integrated grid planning process at the Maine PUC as they arise on a case-by-case basis. Maine is aware that NEVI funds may be used for on-site renewable generation or storage and may consider this approach in targeted situations if the need arises. For more discussion of electric grid capacity, please see “Total transportation electrification load from light-duty vehicles, by scenario Outlook: management of vehicle miles traveled” discussion in the Roadmap.

As noted in the Plan Vision and Goals section, Maine will review the results of these studies to fine-tune the deployment of charging infrastructure during the later years of the NEVI formula funding period.

## Upgrades of Corridor Pending Designations to Corridor Ready Designations

Most current (and awarded) DCFC sites would require upgrades to meet the NEVI requirements for being fully built-out. Maine's proposed staged approach includes both new locations and upgrades in capacity to existing locations.

## Increases of Capacity/Redundancy along Existing AFC

Maine is not planning additional increases in capacity or redundancy along existing AFC at this point. However, private investments, including Electrify America, Tesla, EVgo, and various car dealerships, have been steadily adding capacity over the past 24 months, especially in more heavily trafficked areas, and this is having the effect of creating some redundancy along the AFC to the projects that have been (or will be) publicly funded.

## Electric Vehicle freight Considerations

As described in the Known Risks and Challenges section, further research and evolution of MHDEV technology is needed before making specific plans for the freight sector. Maine may use future NEVI funds for a study and a pilot and also is gathering stakeholders who will develop a MHDV Roadmap.

## Public Transportation Considerations

MaineDOT is developing its Statewide Strategic Transit Plan. It will be released in late 2022/early 2023. A study on electrifying eight transit agencies is underway and will be finished this year. The goal of the study is to provide next steps for the agencies to start the process of migrating to electric vehicles.

Maine sees value in siting L2 charging near transit and will look for opportunities to do this. Maine can consider using select competitive solicitations (using NEVI discretionary funds or other funding sources), which could be targeted to provide charging near transit stops and intercity bus/ train terminals.

Maine has re-invigorated its statewide ridesharing program and is considering L1 (110V) or L2 charging at Park and Ride locations.

## FY23-26 Infrastructure Deployments

As described in the 2022 Charging Infrastructure Deployment section, Maine's staged approach will begin with achieving full coverage on all AFCs during the NEVI Funding Period. (Locations that initially will be built for Low or Medium Traffic are shown in Graphics 15-16 on p. 25.) Stage 1 will be a combination of new locations and upgrades in capacity to existing locations. It is expected that Stage 1 coverage will meet the needs for charging in the Low and Medium Traffic locations through at least 2026.

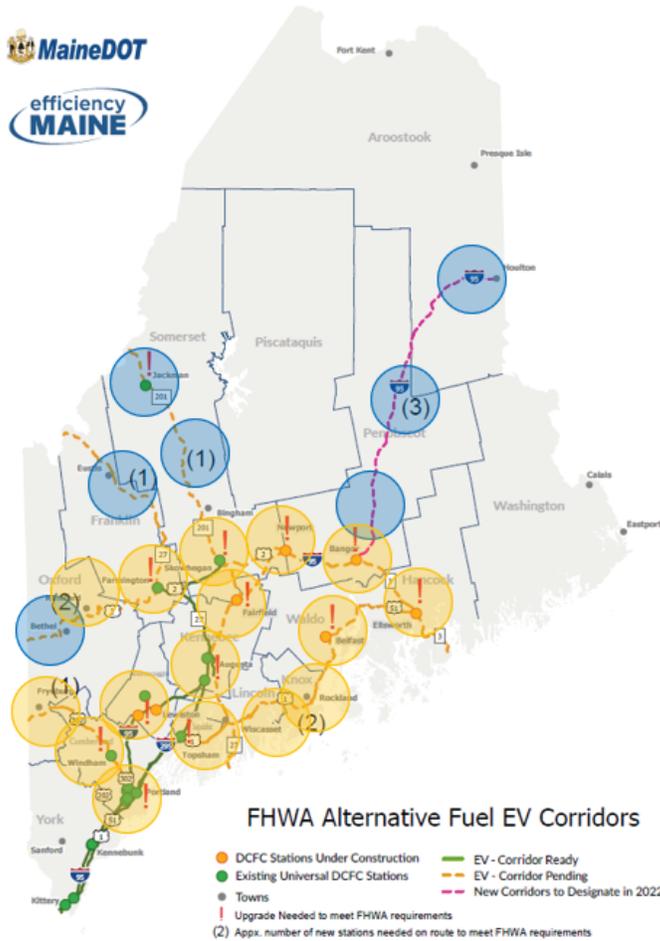
Specifically, in FY 2023, Maine expects to pursue:

- Rt. 1 from Portland to Ellsworth (5-6 sites spaced no greater than 50 miles apart)
- 4-5 High Traffic sites and 1 Medium Traffic site

**Cost:** approximately \$3.8M. See table on p. 29 for more detail.

The City of Portland has partnered with EVgo to further build out L2 and DCFC charging infrastructure in the Portland area. Maine will monitor and complement those plans as they develop.

As EV adoption and use of DCFC on AFCs increases, Maine will move into Stage 2, where all Medium Traffic sites will be upgraded to the full NEVI standard. Stage 2 will be carried out as demand for DCFC charging on AFCs grows and funding becomes available. Maine will monitor usage data to identify which Medium Traffic sites are using power-sharing or showing other indications of longer wait times. This will determine the order in which they are upgraded to the full NEVI standard. With the completion of Stage 2, all AFC locations will be fully built out except for seven Low Traffic locations.



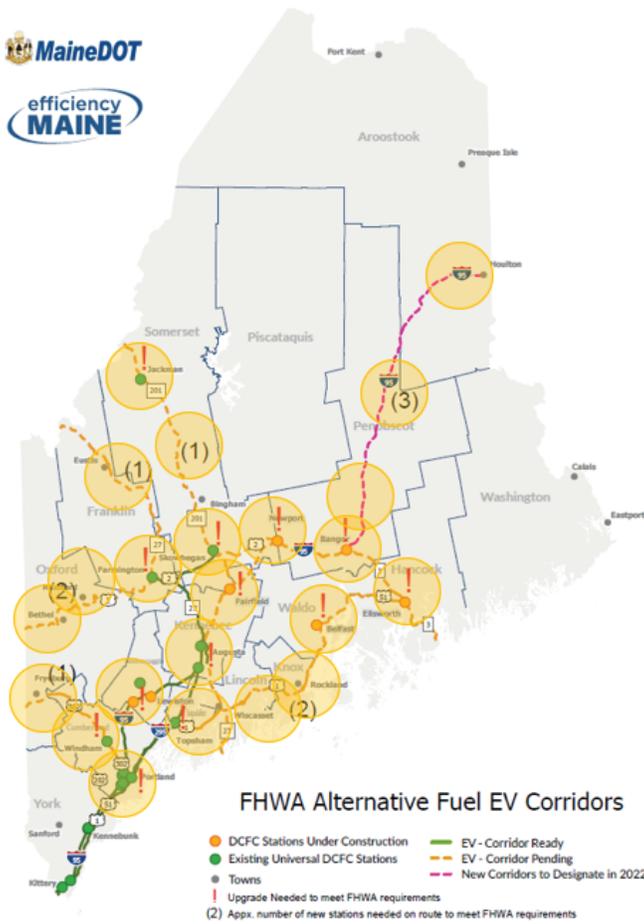
# Interim Buildout of AFC Stage 2

- Low traffic sites
- Medium and high traffic sites: Full buildout

Fig. 7 In the interim stage of buildout, medium traffic sites are upgraded to full NEVI standards, while low traffic sites remain at partial buildout. Data on DCFC use will dictate how soon sites are upgraded to the full NEVI standard. Maine will continue to monitor charging investments by private entities to determine whether public investment is still needed.

As utilization of DCFC at the Low Traffic sites increases, Maine will move into Stage 3, where all Low Traffic sites will be upgraded to the full NEVI standard. As with Stage 2, usage data will be monitored to determine the order to be followed for the upgrades.

**Graphic 23: Full NEVI Buildout of AFC (Stage 3)**



## Full NEVI Buildout Stage 3

● All sites

Fig. 8 In the final stage, all sites along Alternative Fuel Corridors are built to the full NEVI standard with 4 x 150kW plugs and a total power capability per site of no less than 600kW.

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To sum up: in later stages, as demand for charging grows and additional funding is available, Maine will proceed toward and achieve fully built-out status on all AFCs.

### State, Regional, and Local Policy

Efficiency Maine and MaineDOT solicitations so far have placed responsibility on the contractor for permitting and complying with zoning. Maine plans to continue this practice.

MaineDOT plans to obtain a NEPA Categorical Exclusion for charging infrastructure installations and to follow NEVI guidance.

MaineDOT has listed EV Charging Infrastructure in its FY 22 – FY 24 STIP.

Efficiency Maine has a comprehensive public education and outreach plan targeted to potential EV buyers, including seven YouTube videos at <https://www.efficiencymaine.com/ev/>. Other forms of Efficiency Maine public engagement will help with education.

## Implementation

Efficiency Maine and MaineDOT will build on experience gained over the past four years. This includes contract provisions related to uptime with financial enforcement mechanisms.

Maine will participate, as invited, in developing minimum standards for charging infrastructure on AFCs. These were issued in the proposed form in May 2022. When the standards are finalized, Maine will comply with minimum standards related to equipment, data sharing, and other requirements by specifying them in its solicitations and/or funding opportunity notices and codifying those requirements in contracts or terms and conditions.

As funding opportunities for L2 and L3 chargers are developed, Maine will consider including funding for 110V bicycle charging where appropriate.

### Strategies for EVSE Operations & Maintenance

In past rounds of DCFC grants, Efficiency Maine has employed contract provisions related to uptime with financial enforcement mechanisms. Efficiency Maine and MaineDOT will likely include similar provisions in contracts using NEVI formula funds. This may entail withholding retention payments or operating support during the contract term if uptime requirements aren't met. Uptime requirements likely will be 97%, consistent with the final minimum standards to be released later in 2022.

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

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. Efficiency Maine has a mailing list of over 1,600 and will continue to notify them before any new solicitations. In addition, Efficiency Maine will continue identifying and contacting local stakeholders for geographically targeted solicitations.

Efficiency Maine has produced four instructional videos on EV chargers, including "Reasons to Install a Public EV Charger" and "What Makes a Good EV Charging Site?" and others. The videos are geared towards potential private owners, who might be swayed to install an L2 charger with little/no incentive dollars.

### Strategies for EVSE Data Collection & Sharing

Maine will follow data collection and sharing requirements to be included in the charging infrastructure minimum standards expected to be finalized in August 2022.

### Strategies to Address Resilience, Emergency Evacuation, Snow Removal

Siting for charging infrastructure will consider Maine's designated evacuation routes.

The following also will be considered:

- (In the event of a natural disaster) too many people trying to use charging stations at once
- Extended, widespread grid outages

Contracts have covered snow removal; it hasn't been a problem.

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

Efficiency Maine maintains a list of local contractors who install EV charging equipment. It is not uncommon for an energy services company to use this list to find a local electrician who can do the connection wiring for charging infrastructure installation. See more under Labor and Workforce Considerations.

## Civil Rights

Access to EV infrastructure is critical for all users, regardless of abilities. MaineDOT ensures that charging stations and parking are accessible, to the maximum extent feasible, for individuals with disabilities. MaineDOT refers to the US Access Board Technical Guidance for Parking Spaces:<sup>28</sup>

Lessons Learned – EV Project: Accessibility at Public EV Charging Locations for guidance on the installation of charging components and parking accessibility.

MaineDOT’s Title VI assurances can be found online in the “2022 FHWA Title VI Plan”.<sup>29</sup>

These assurances are updated annually and signed by the Commissioner of Transportation.

Maine will follow the NEVI minimum guidelines regarding Title VI of the Civil Rights Act and accompanying USDOT regulations, the Americans with Disabilities Act, and Section 504 of the Rehabilitation Act for projects funded with NEVI Formula funds.

## Equity Considerations

Since its inception in 2019 (June 2019, LD 1679 was signed into law), the Maine Climate Council (MCC) has included equity considerations in its discussions and analyses. At the request of the Maine Climate Council (MCC) the University of Maine prepared “Assessing the Potential Equity Outcomes of Maine’s Climate Action Plan: Framework, Analysis, and Recommendations,” which was issued in September 2020.<sup>30</sup> MCC issued *Maine Won’t Wait* in December 2020. It added important context to the goal of reducing greenhouse gases, namely: creating economic opportunity, preparing communities/people for impacts of climate change, and advancing equity.<sup>31</sup> *Maine Won’t Wait* recommended a new Equity Subcommittee, which issued a detailed report and recommendations in February 2022.<sup>32</sup> That report leads with the transportation sector and addresses equity issues related to electrification.

The above efforts included robust outreach, as described in the Public Engagement section. The MCC Equity Subcommittee was co-chaired by a representative from one of Maine’s tribes and also included, among many others, representatives from Maine Public Health Association, Maine Equal Justice, Aroostook County Community Action Program, AARP and the Maine Council on Aging. Please see Appendix A for membership lists for each group.

Through these equity discussions Maine has identified both concerns and opportunities related to electrification:

- The initial cost of electric vehicles is high.
- Other factors that facilitate buying an EV, such as ability to charge at home (an estimated 80% of charging occurs at home<sup>33</sup>) and owning two or more vehicles, also are strongly associated with higher income families.

But in some cases, current challenges also present opportunities. Low-income families spend a higher percentage of their income on transportation. This is a hardship, but it also means that these populations will see a larger benefit – but only if efforts to establish lower cost electrification can reach them. Likewise, urban populations are disproportionately affected by emissions (and in Maine the transportation sector is the largest contributor to emissions). Electrification of vehicles that pass through urban areas would disproportionately benefit those who live in Maine’s urban areas.

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<sup>28</sup><https://www.access-board.gov/files/aba/guides/parking-ABA.pdf>

<sup>29</sup><https://www.maine.gov/mdot/civilrights/title-vi>

<sup>30</sup>[http://climatecouncil.maine.gov/future/sites/maine.gov.future/files/inline-files/MCC\\_EquityAssessmentReport\\_201007.pdf](http://climatecouncil.maine.gov/future/sites/maine.gov.future/files/inline-files/MCC_EquityAssessmentReport_201007.pdf)

<sup>31</sup>*Maine Won’t Wait*

<sup>32</sup> [https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MCC\\_EquitySubcommitteeInterimReport\\_Feb2022.pdf](https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/MCC_EquitySubcommitteeInterimReport_Feb2022.pdf)

<sup>33</sup>2020 Equity Assessment

Maine has already taken steps to counteract observed inequities based on knowledge gained. Efficiency Maine rebates for EVs now:

- Exclude the most expensive vehicles (cars/SUVs costing more than \$50,000; trucks/vans costing more than \$73,000),
- Are higher for low-income applicants,
- Are available (at lower levels) for used EVs, and
- Are granted at the point-of-sale (overcoming a participation barrier identified in *Maine Won't Wait*)

The rural nature of Maine presents a special set of challenges – and opportunities. As noted earlier, charging infrastructure, especially DCFC, has been concentrated in the higher population, usually wealthier, southern and coastal regions. NEVI formula funding will enable Maine to reach a key milestone, namely extending DCFC to complete coverage of the northern interstate. The I-95 Bangor to Houlton corridor (Round 6 nomination for AFC) spans very sparsely populated areas, most of which are DACs. Covering the whole interstate will dramatically improve EV access to Aroostook County.

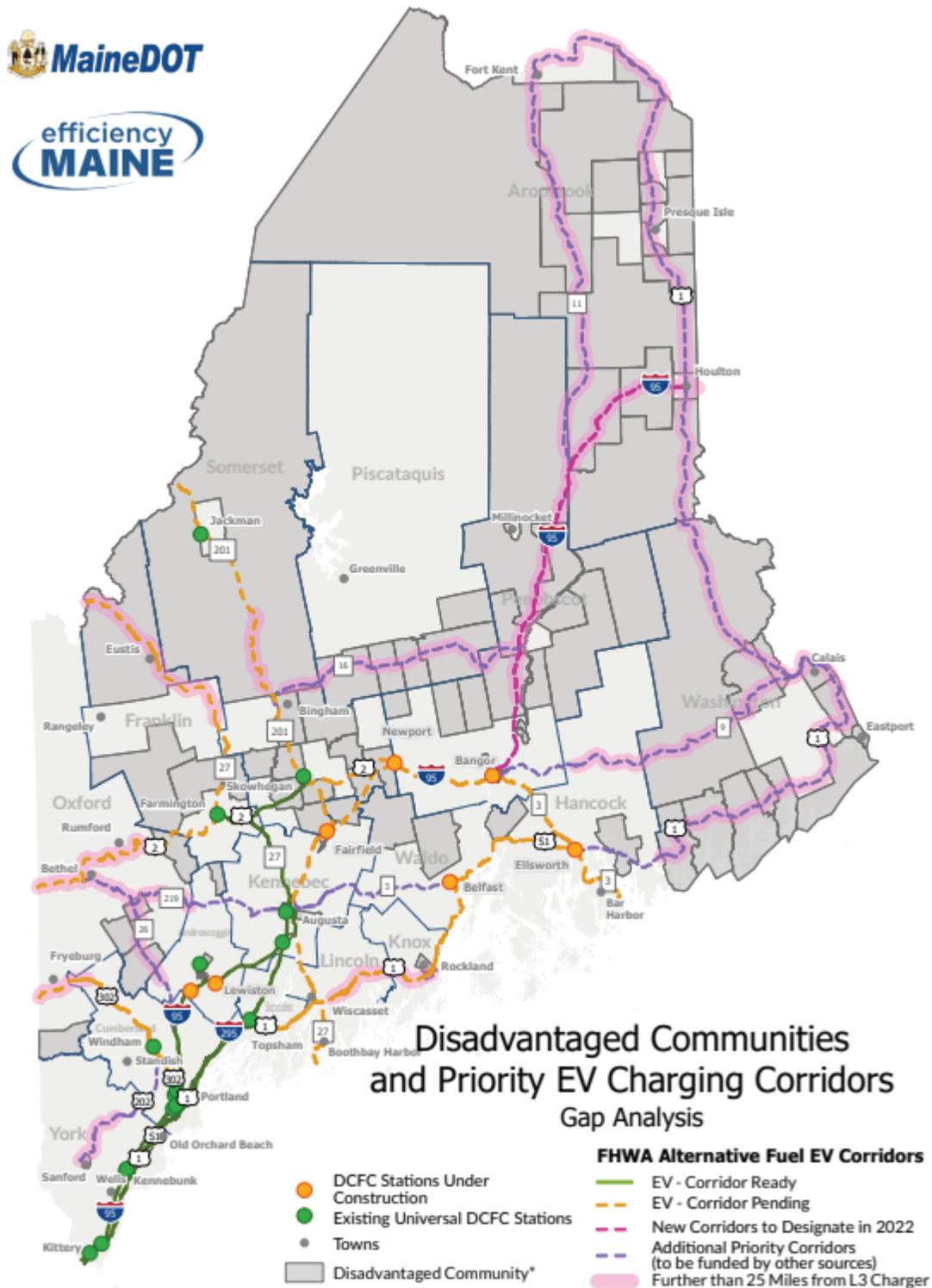
Rural areas face a low density of charging infrastructure availability. Siting of DCFC and L2 charging infrastructure in identified rural service centers will help with this. But rural drivers also present an opportunity. Because they tend to drive longer distances, successful electrification would have outsize economic benefits (to those drivers) and GHG-reduction benefits for the whole state and beyond.

Development of this Maine PEVID included meeting with Efficiency Maine's Low Income Advisory Group. The TWG also recently met with members of the Subcommittee on Equity to discuss their recommendations. These include EV Charging in rural locations and at multi-dwelling locations.

### Identification and Outreach to Disadvantaged Communities (DACs)

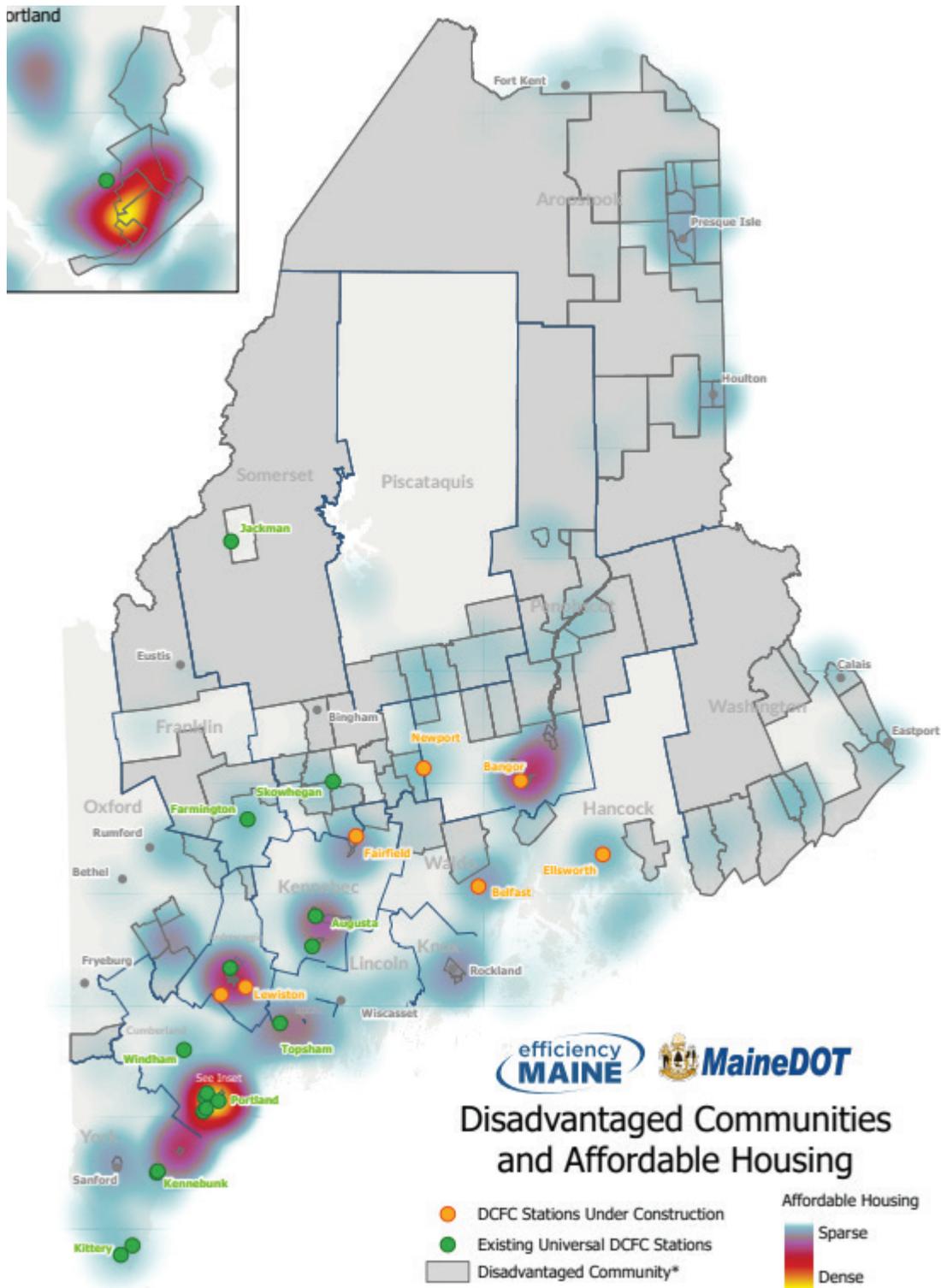
Please see references to Efficiency Maine's Low Income Advisory Group (LIAG) and other stakeholders in the Public Engagement and Contracting sections.

Graphic 24: Disadvantaged Communities and Priority EV Charging Corridors

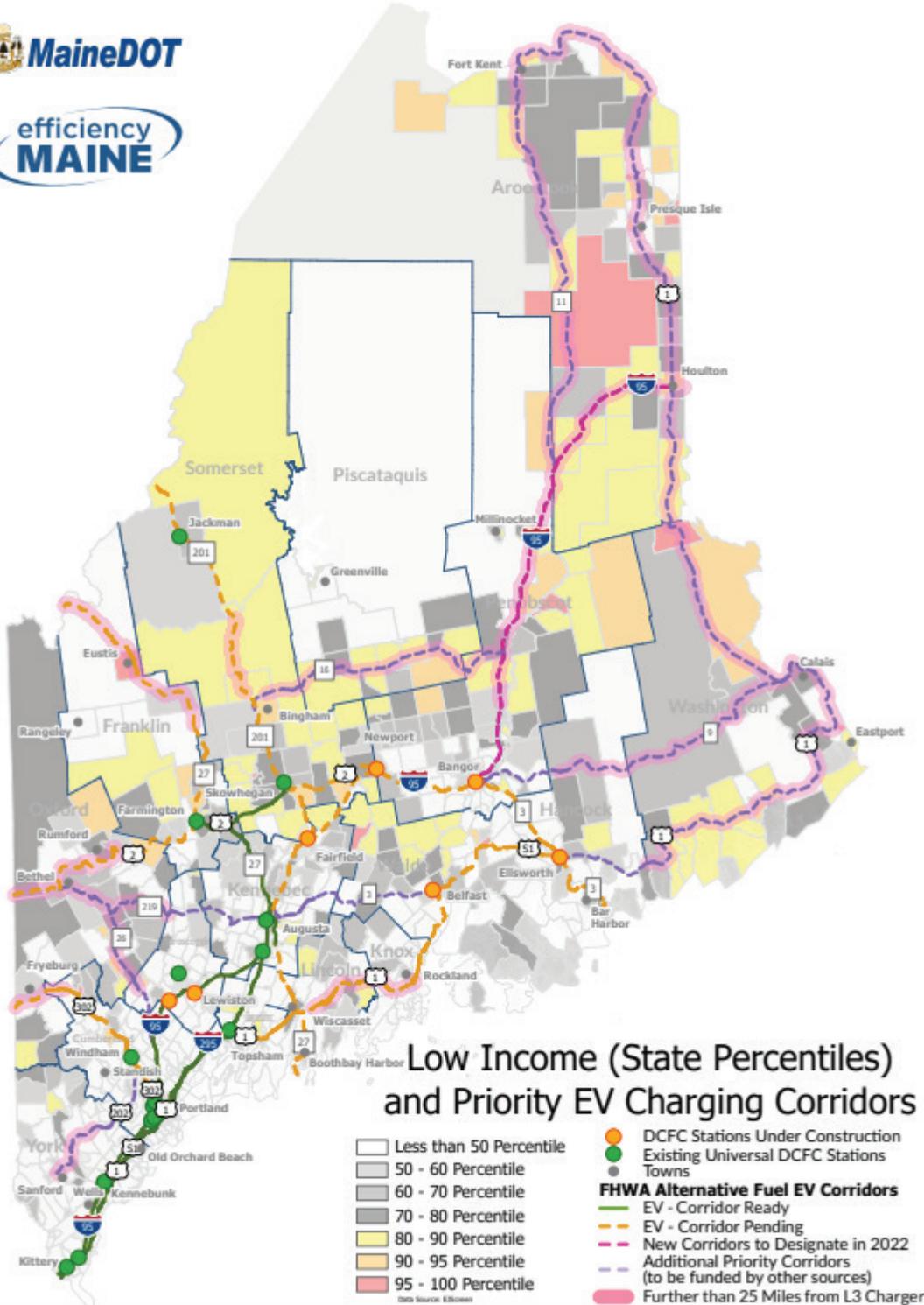


- Consistent with NEVI Formula Program guidance, this Plan aims to deliver at least 40% of EV charging investments in DACs
- DACs are identified using the Council on Environmental Quality (CEQ) screening tool: <https://screeningtool.geoplatform.gov/>
  - Considers income, environmental, and other socio-economic and demographic factors

Graphic 25: Disadvantaged Communities and Affordable Housing



Graphic 26: Low Income (State Percentiles)



## Benefits to DACs through this Plan

Graphic 27: Percentages for DACs

	Planned DCFC Investment	Percent of Planned Investment	Plugs	Percent of Total Plugs
In DAC	12,423,000	41%	60	43%
Not in DAC	18,156,000	59%	80	57%
Total	30,579,000	100%	140	100%

As shown in the maps in the section above, covering the northern interstate will benefits DACs, as most of the towns it runs through are DACs.

EV travel to and within Aroostook County (see Equity section) will be improved.

Health benefits from reduced emissions will disproportionately benefit Maine’s urban communities. The Maine Climate Council Equity Subcommittee noted “Reducing air pollution from vehicles would benefit all Maine people and specifically communities of color.”<sup>34</sup>

Maine has used the CEQ tool to identify DACs in this iteration of the plan. It is important to note that the CEQ tool returns different results than the J40 EV Infrastructure tool when selecting for disadvantaged communities, particularly in rural areas. This discrepancy may be due to low population in rural census tracts, where a small change in the metrics used could equal a large difference in the tracts that are identified as DACs. Noting these discrepancies, Maine will keep a close eye on discussions happening at the state level around identifying underserved communities and will be prepared to adapt if a new tool for identifying DACs becomes available. Maine also intends to use median income and concentration of affordable housing developments as indicators of DAC status.

## Labor and Workforce Considerations

The MCC includes a representative from Maine AFL-CIO; a representative from the Blue Green Alliance serves on the Transportation Working Group; and a Maine-based installer of charging stations is represented on the MCC Equity Subcommittee.

“Electrification of the transportation sector could create new jobs if Maine businesses and workers capitalize on the growth of this innovative new technology, including supportive infrastructure. It will result in the need for more installation and maintenance of EV charging infrastructure. Traditional auto jobs may be displaced by new auto jobs. Electrification at scale will negatively impact employers sell petroleum and gas.”<sup>35</sup>

Southern Maine Community College recently launched an Electric Vehicle Repair Certification program. The White Mountain Community College (in New Hampshire) is adding a new Electric Vehicle (EV) Technician certificate to the Automotive Technology program in the fall of 2022.

## Cybersecurity

Maine would benefit from additional guidelines from the US DOT/DOE relating to cybersecurity and plans to request greater detail and clarity in comments to the Notice of Proposed Rulemaking.

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<sup>34</sup>2022 Equity Subcommittee Report

<sup>35</sup>[https://www.maine.gov/future/sites/maine.gov/future/files/inline-files/TransportationWG\\_FinalStrategyRecommendations\\_June2020.pdf](https://www.maine.gov/future/sites/maine.gov/future/files/inline-files/TransportationWG_FinalStrategyRecommendations_June2020.pdf)

## Program Evaluation

Efficiency Maine has a Research and Evaluation Manager and has experience contracting with outside firms for evaluation of its other programs. MaineDOT also has internal and external audit safeguards. Maine will evaluate the NEVI program at the end of each fiscal year.

## Discretionary Exceptions

At this time Maine is not aware of any Discretionary Exceptions (related to maximum 50-mile spacing, or to “within 1 travel mile of the Interstate”) that will be needed.

## Supporting Materials

### Appendix A:

Member lists (with affiliations) for MCC, TWG, Roadmap Advisory, Equity Subcommittee. (p 43)

### Appendix B:

List of current and funded (under construction) DCFC on AFCs (p.49)

# The Members of The Maine Climate Council Are:

## Co-Chairs:

Hannah Pingree, Director of the Governor's Office of Policy Innovation and the Future

Melanie Loyzim, Acting Commissioner of the Department of Environmental Protection

## Members of the State Legislature:

Representative Lydia Blume (D)

Representative Richard Campbell (R)

Senator Everett Brownie Carson (D)

Senator David Woodsome (R)

## Members of the Executive Branch, or their designees:

Amanda Beal, Commissioner of the Department of Agriculture, Conservation and Forestry

Dan Burgess, Director of the Governor's Energy Office

Judy Camuso, Commissioner of the Department of Inland Fisheries and Wildlife

Major General Doug Farnham, Commissioner of the Department of Defense, Veterans and Emergency Management

Kirsten Figueroa, Commissioner of the Department Administrative and Financial Services Designee: Elaine Clarke, Chief Facilities Officer

Laura Fortman, Commissioner of the Department of Labor Designee: Kim Moore, Director of the Bureau of Employment Services

Heather Johnson, Commissioner of the Department of Economic and Community Development

Patrick Keliher, Commissioner of the Department of Marine Resources

Pender Makin, Commissioner of the Department of Education Designee: Scott Brown, Director of School Facilities and support from Page Nichols, DOE Director of Innovation

Bruce Van Note, Commissioner of the Department of Transportation

Jeanne Lambrew, Commissioner of Department of Health and Human Services Designees: Nirav Shah, Director of the Maine Centers for Disease Control and Prevention; Susan Breau, Hydrogeologist - Water Resources Team Manager, Maine Centers for Disease Control and Prevention

## Members of Quasi-Government Agencies:

Dan Brennan, Executive Director of the Maine State Housing Authority

Michael Stoddard, Executive Director of Efficiency Maine Trust

Members Representing Environmental Nonprofit Organizations or Foundations:

Alexander Buck, President, Horizon Foundation

Kate Dempsey, Maine State Director for The Nature Conservancy

Members with Expertise in Climate Change Science:

Ivan Fernandez, Distinguished Professor at the University of Maine's Climate Change Institute & School of Forest Resources

Andrew Pershing, Chief Scientific Officer, Gulf of Maine Research Institute

Members with Expertise in Resilience, Climate-Change Adaptation, Emergency Management, or Disaster-Risk Reduction:

Judy East, Executive Director of the Land Use Planning Commission

Kristina Ford, Selectwoman for Town of Boothbay (resigned November 9, 2020)

## Other Members:

Lori Parham, Maine State Director for AARP

Jessie Perkins, Executive Director of the Bethel Chamber of Commerce

Expert on State's Energy Sector: Ken Colburn, Energy and Climate

Expert Representative of Manufacturing Industry: Benedict Cracolici, Energy Manager for Sappi North America

Representative of Maine's Tribes: Ambassador Maulian Dana, Penobscot Nation

Representative of Municipal Government: Steven C. Golieb, Town Councilor for the Town of Millinocket

Representative of Small Business: Daniel Kleban, Owner of Maine Beer Company

Representative of Agriculture: Melissa Law, Owner of Bumbleroot Organic Farm in Windham

Representative of Building and Construction Trades: Matt Marks, Executive Director of the Associated General Contractors of Maine

Representative of Marine Fisheries: Patrice McCarron, Executive Director of Maine Lobsterman's Association

Representative of Business: Jeff Saucier, Environmental Control for McCain's Foods

Representative of Labor: Matt Schlobohm, Executive Director of the Maine AFL-CIO

Representative of Forest Industry: Patrick Strauch, Executive Director of the Maine Forest Products Council

Representative of Maine Youth: Ania Wright, Student at the College of the Atlantic

# Transportation Working Group Members:

## Co-Chairs:

Sarah Cushman, Cushman Transportation Consulting, LLC

Joyce Taylor, Maine Department of Transportation

## Members:

Representative Bettyann Sheats, Maine State Legislature

Senator Brownie Carson, Maine State Legislature

Senator Brad Farrin, Maine State Legislature

Kendra Amaral, Town of Kittery

Mackenzie Bowe, VHB

Tom Brennan/Nathan Sinclair, Poland Spring Bottling Co. / Nestle Waters North America Inc.

Jennifer Brennan, Efficiency Maine Trust Director

Dan Burgess, Governor's Energy Office

Benedict Cracolici, Sappi North America

Nell Donaldson, City of Portland

Kristina Egan, Greater Portland Council of Governments

Maria Fuentes, Maine Better Transportation Association

Judy Gates, HNTB

Greg Jordan, Greater Portland Transit District

Emily Green, Conservation Law Foundation

Jay Kamm, Northern Maine Development Commission

Ben Lake, VEIC

Matt Marks, Associated General Contractors of Maine

Jess Maurer, Maine Council on Aging

Peter Merfeld, Maine Turnpike Authority

Lori Parham, AARP

Maine Brian Parke, Maine Motor Transport Association

Patricia Quinn, Northern New England Passenger Rail Authority

Jonathan Rubin, University of Maine Margaret Chase Smith Policy Center

Tim Seymour, Darling's Auto Group

Beckett Slayton, Bowdoin College, Youth Representative

Jim Tassé, Bicycle and Pedestrian Coalition of Maine

Mike Williams, BlueGreen Alliance

Rob Wood, The Nature Conservancy in Maine

## Advisory Group for Clean Transportation Roadmap

Adam Lee, Lee Auto Malls (auto dealer)

Barry Woods, ReVision Energy

Brian Parke, Maine Motor Transport Association

Deb Hart, Hart Public Policy

Eric Feigenbaum, Versant Power (electric utility)

Garrett Corbin, Maine Public Utilities Commission

George Parmenter, Hannaford (grocery store chain)

Jason Rauch, Central Maine Power (electric utility)

Jeremy Hunt, NESCAUM (New England Convenience Store and Energy Marketers Association)

Kate Hickey, Tilson (Telecommunications service provider)

Kevin Miller, ChargePoint

Neal Goldberg, Maine Municipal Association

Sandy Buchanan, Maine Transit Association/Western Maine Transportation Services

Sara Mills Knapp, Greater Portland Council of Governments

Tim Archambault, Quirk Auto Group (auto dealer)

Troy Trejo, Maine Health

# Members of the Maine Climate Council Equity Subcommittee

## Co-chairs of the Subcommittee

Ambassador Maulian Dana of the Penobscot Nation and

Gabriela Alcalde, Executive Director of the Elmina B. Sewall Foundation.

Members of the Equity Subcommittee represent the entire State and a variety of communities, industries, and interests. The full member list is below:

## Maine Legislators

Senator Craig Hickman, D-Winthrop

Senator Jeffrey Timberlake, R-Androscoggin

Representative Tom Martin, R-Greene

Representative Rachel Talbot Ross, D-Portland

## Co-Chairs

Ambassador Maulian Dana, Penobscot Nation

Gabriela Alcalde, Executive Director of the Elmina B. Sewall Foundation

## Additional Members

Becca Boulos, Maine Public Health Association

Maine Climate Council Community Resilience Planning, Public Health, and Emergency Management Working Group

Curt Brown, Ready Seafood

Shanna Cox, Lewiston Auburn Chamber of Commerce

Lesley Fernow, Central Hall Commons

Steve Golieb, Maine Climate Council; Town Councilor for the Town of Millinocket

Corey Hinton, Drummond Woodsum

Amara Ifeji, Maine Environmental Education Association

Melissa Law, Maine Climate Council; Owner of Bumbleroot Organic Farm

Suzanne MacDonald, Island Institute

Matt Marks, Maine Climate Council; Executive Director of the Associated General Contractors of Maine

Gabe McPhail, Town of Vinalhaven

Fortunat Mueller, Revision Energy

Jason Parent, Aroostook County Action Program

Ambureen Rana, Maine Equal Justice

Darren Ranco, University of Maine

Isaiah Reid, University of Maine at Farmington Student; Permanent Commission on the Status of Racial, Indigenous and Maine Tribal Populations

Jonathan Rubin, University of Maine

Matt Schlobohm, Maine Climate Council; Executive Director of the Maine AFL-CIO

Adelaide Taylor, Revision Energy

Claudette Townsend, Dead River

Ania Wright, Maine Climate Council Representative of Maine Youth; Sierra Club Maine

# Appendix B

## Existing Locations of Charging Infrastructure Along AFCs

Station Name	kW	Alt Fuel Corridor	Street Address	City	State	ZIP	Ports	EV Network	Utility	Incentive
Darling's Nissan	50	I-95	114 Sylvan Rd	Bangor	ME	04401	1	Non-Networked	Versant	
Bill Dodge Nissan - Saco	50	US 1	852 Portland Rd	Saco	ME	04072	1	Non-Networked	CMP	
Berlin City Nissan	25	I-95	227 Maine Mall Rd	South Portland	ME	04106	1	Non-Networked	CMP	
Lee Nissan - Topsham	50	I-295	107 Main St	Topsham	ME	04086	2	Non-Networked	CMP	
City of South Portland - Community Center	44	US 1	21 Nelson Rd	South Portland	ME	04106	1	Non-Networked	CMP	
DC CORRIDOR KENNEBUNK S DC2	62.5	I-95	Exit 25 Maine Turnpike Kennebunk South servic	Kennebunk	ME	04043	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR KENNEBUNK S DC1	62.5	I-95	Exit 25 Kennebunk South service plaza	Kennebunk	ME	04043	1	ChargePoint Network	CMP	Efficiency Maine
BIG MOOSE HD DCFast HOG	25	I-95	375 Riverside St	Portland	ME	04103	1	ChargePoint Network	CMP	
DC CORRIDOR SKOWHEGAN DC1	62.5	2/201	398 Madison Ave	Skowhegan	ME	04976	1	ChargePoint Network	CMP	Efficiency Maine
Walmart 1788 - Scarborough, ME	50-350	I-95/I-295	500 Gallery Blvd.	Scarborough	ME	04074	4	Electrify America	CMP	
DC CORRIDOR KENNEBUNK N DC1	62.5	I-95	Maine Turnpike Kennebunk North Service plaza	Kennebunk	ME	04043	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR W GARDINER DC1	62.5	I-95	102 Maine Turnpike	West Gardiner	ME	04345	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR W GARDINER DC2	62.5	I-95	102 Maine Turnpike	West Gardiner	ME	04345	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR SKOWHEGAN DC2	62.5	US 2/ US 201	398 Madison Ave	Skowhegan	ME	04976	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR JACKMAN DC 2	62.5	US 201	407 Main St	Jackman	ME	04345	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR JACKMAN DC 1	62.5	US 201	407 Main St	Jackman	ME	04345	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR FARMINGTON DC1	62.5	US 2	134 Hannaford Dr	Farmington	ME	04938	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR FARMINGTON DC2	62.5	US 2	134 Hannaford Dr	Farmington	ME	04938	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR KENNEBUNK N DC2	62.5	I-95	Maine Turnpike Kennebunk North Service Plaza	Kennebunk	ME	04043	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR WINDHAM DC1	62.5	US 302	797 Roosevelt Trail	Windham	ME	04062	1	ChargePoint Network	CMP	Efficiency Maine
DC CORRIDOR WINDHAM DC2	62.5	US 302	797 Roosevelt Trail	Windham	ME	04062	1	ChargePoint Network	CMP	Efficiency Maine
Simon Kittery Premium Outlets (Kittery, ME)	50-150	I-95/US 1	375 US-1	Kittery	ME	03904	4	Electrify America	CMP	
Hannaford Supermarket	50	I-295	49 Topsham Fair Mall Rd	Topsham	ME	04086	1	eVgo Network	CMP	
Hannaford Supermarket	50	US 1	5 Hannaford Dr	York	ME	03909	1	eVgo Network	CMP	

Hannaford Supermarket	50	I-95	415 Philbrook Ave	South Portland	ME	04106	1	eVgo Network	CMP	
Hannaford Supermarket	50	I-95	29 Whitten Rd	Augusta	ME	04330	1	eVgo Network	CMP	
Hannaford Supermarket	50	I-295	295 Forest Ave	Portland	ME	04101	1	eVgo Network	CMP	
Market Basket Biddeford #75	100	I-95	220 Mariner Way	Biddeford	ME	04005	4	eVgo Network	CMP	
Market Basket Westbrook #85	100	I-95	90 Rock Row	Westbrook	ME	04092	4	eVgo Network	CMP	
Hannaford Supermarket	62.5	US 1	225 High Street	Ellsworth	ME		1	ChargePoint Network	Versant	Efficiency Maine
Hannaford Supermarket	62.5	US 1	225 High Street	Ellsworth	ME		1	ChargePoint Network	Versant	Efficiency Maine
Hannaford Supermarket	62.5	US 1	93 Lincolnville Ave	Belfast	ME		1	ChargePoint Network	CMP	Efficiency Maine
Hannaford Supermarket	62.5	US 1	93 Lincolnville Ave	Belfast	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	301 Odlin Rd	Bangor	ME		1	ChargePoint Network	Versant	Efficiency Maine
Irving Oil	62.5	I-95	301 Odlin Rd	Bangor	ME		1	ChargePoint Network	Versant	Efficiency Maine
Irving Oil	62.5	I-95	18 Moosehead Trail	Newport	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	18 Moosehead Trail	Newport	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	204 Centre St	Fairfield	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	204 Centre St	Fairfield	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	1813 Washington St	Auburn	ME		1	ChargePoint Network	CMP	Efficiency Maine
Irving Oil	62.5	I-95	1813 Washington St	Auburn	ME		1	ChargePoint Network	CMP	Efficiency Maine
Mobil - On the Way	62.5	I-95	1930 Lisbon Street	Lewiston	ME		1	ChargePoint Network	CMP	Efficiency Maine
Mobil - On the Way	62.5	I-95	1930 Lisbon Street	Lewiston	ME		1	ChargePoint Network	CMP	Efficiency Maine