



Maine's Electric Vehicle Supply Equipment Initiative

Working Plan – Update as of 2/13/2019

MAINE'S EVSE INITIATIVE -- OVERVIEW

- Funded by the VW Environmental Mitigation Trust
- Pursuant to the State of Maine's Beneficiary Mitigation Plan
 - Zero Emission Vehicle Service Equipment Option
- Administered by the Efficiency Maine Trust
- Funding Level -- \$3.15 million
- Period – mid-2018 through mid-2020

OUTLINE

- Goals, Objectives and Characteristics
- Phase I:
Establish the Foundation of Maine's EV Fast-Charge Network
- Phase II:
Improve Local Access and Destination Charging
- Phase III:
Extend Maine's EV Fast-Charge Network

GOALS, OBJECTIVES and CHARACTERISTICS

GOALS

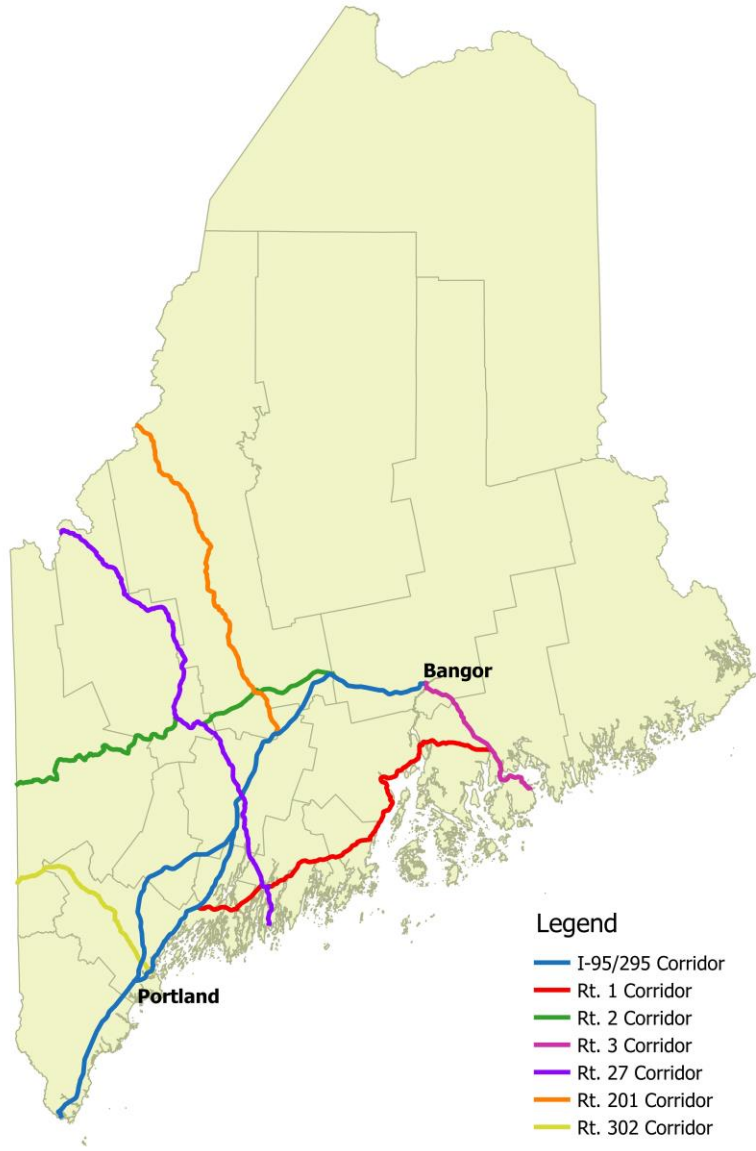
- Strengthen the Maine economy by reducing Maine drivers' energy costs for transportation and by promoting tourism from neighboring provinces and states; and,
- Advance Maine's progress toward reducing emissions of nitrous oxides and carbon from light-duty vehicles traveling Maine roads.

OBJECTIVES

1. Deliver on the Maine's commitment to the Premier of Quebec to:
 - a. establish corridors of publicly available, fast-chargers ("Level 3" or "DC Fast Chargers")
 - b. spaced approximately 50 miles apart
 - c. linking Quebec to tourist destinations in Maine;
2. Facilitate market transformation that will, over time, result in more Maine drivers shifting to use of vehicles that operate on electricity;
3. Maximize the length of routes in Maine that satisfy Federal Highway Administration (FHWA) FAST Act designations of "signage ready" EV corridors as described in the FHWA "2017 Alternate Fuels Corridor Request for Designation Nominations"; and,
4. Make Maine an eligible and attractive candidate for funding from federal, corporate, or national initiatives.

GENERAL CHARACTERISTICS for Fast-Charge Network in Maine

- Establish robust, reliable corridors of fast-charge stations
- Connect high-traffic points of origin with high-traffic destinations for EV drivers
- Aim for max distance of 50 miles between sites
- Select sites that are accessible and appealing for consumers
 - very close to route
 - public access
 - appropriate safety (signage, lighting)
 - amenities nearby (food, restrooms)



Maine's Priority EV Fast-Charge Corridors

Priority Fast Charge Corridors

I-95 / 295

- I-95: From Kittery to Bangor
- I-295: From Portland to W. Gardiner

Route 1 Corridor -- From Freeport to Ellsworth

Route 2 Corridor – From New Hampshire (Bethel) to Newport

Route 3 Corridor – From Bangor to Bar Harbor

Route 27 Corridor – From New Hampshire (Coburn Gore) to Boothbay Harbor

Route 201 Corridor – From Quebec (at Jackman) to I-95

Route 302 Corridor – From New Hampshire (Fryeburg) to I-95/295

PHASE I:

**Establish the Foundation of
Maine's EV Fast-Charge
Network**

Existing Fast Chargers in Maine (as of June, 2018)

Augusta

Augusta Supercharger (Tesla)
58 Stephen King Drive

Hannaford Supermarket (CCS/SAE + CHAdeMO)
29 Whitten Rd.

Bangor / Brewer

Darling's Nissan (CHAdeMO + J-1772)
69-299 Sylvan Rd., Bangor

Brewer Supercharger (Tesla)
24 Walton Dr, Brewer

Brunswick / Topsham

Goodwin Chevrolet (CCS/SAE + J-1772)
195 Pleasant St., Brunswick

Lee Nissan of Topsham (CHAdeMO + J-1772)
107 Main Street, Topsham

Hannaford Supermarket (CCS/SAE + CHAdeMO)
Winners Circle, Topsham

Freeport

Freeport Supercharger (Tesla)
14 Justins Way

Kennebunk

Kennebunk Service Plazas – North/South (Tesla)
Maine Turnpike at Exit 25

Lewiston / Auburn

Lee Nissan of Auburn (CHAdeMO + J-1772)
793 Center Street, Auburn

Portland

Hannaford Supermarket (CCS/SAE + CHAdeMO)
49 Baxter Blvd.

Fore Street Garage (CHAdeMO and J-1772)
425 Fore St.

South Portland

Hannaford Market - Maine Mall (CCS/SAE + CHAdeMO)
232-330 Gorham Rd.

South Portland Recreation Center (CHAdeMO + J-1772)
215 Evans Street

Pape Chevrolet (CCS/SAE + J-1772)
425 Westbrook St.

Westbrook

Bill Dodge BMW (CCS/SAE)
15 Saunders Way

BMW of Westbrook (CCS/SAE)
1 Saunders Way

York

Hannaford Supermarket (CCS/SAE + CHAdeMO)
5 Hannaford Dr.

Benefits and Markets Served

- Establish corridors of EV travel for interstate and international travelers to overcome range anxiety for EV owners/operators
- Encourage / reassure EV tourists to embark for Maine destinations
- Encourage / reassure intrastate business and recreational EV travel to Maine destinations

Siting for Phase I

- **Locations**

- Maine Turnpike Kennebunk Plaza - North
- Maine Turnpike Kennebunk Plaza - South
- Maine Turnpike W. Gardiner Plaza
- Canada Connector Sites on Rt 201, Rt 302, Rt 2 and Rt 27
 - Jackman
 - Skowhegan
 - Farmington
 - Bridgton

- **Siting Criteria**

- 1 mile or less from route
- 24-hour public access
- Very close to 3-phase power (or alt. fast-charge solution)



Equipment Criteria for Phase I

- Min. two (2) DC Fast Charge 50kW stations and one (1) Level 2 charger per site, with “future-proofing”
 - Provide both the SAE CCS standard and CHAdeMO standard at every site
 - For Turnpike sites, requested bids for 50 kW and 150 kW units
 - For lower-traffic sites, requested bids for 50 kW units
 - Level 2 Equipment: 208-240 volt AC charging equipment; cord connector complies with SAE J-1772 standard
- Network interoperability including multiple point-of-sale methods
- Data Capture Required (usage data recorded)

Implementation

- **Site Recruitment**
 - Host-site selection and negotiation led by Vendor, Efficiency Maine Trust, with assistance from State agencies, host community
- **Competitive Solicitation for Vendor(s) provided:**
 - Technical assistance on host-site arrangements
 - Connection to the electrical service
 - EVSE equipment purchase and installation
 - Operation and maintenance for 7 years
 - Billing (where applicable)
 - Customer service / tech support
 - Equipment Warranty – Min. 5 years
 - RFP was issued Summer 2018; Awarded to ChargePoint, Inc. October 2018
 - Break ground spring/summer of 2019

Bid Strategy

- **Bundled high-traffic locations with low-traffic locations in 1 contract**
 - A. **Maine Turnpike locations -- Prescribed siting, ready host**
 - Recently installed 3-phase, separately metered, available for dedicated parking spaces at Kennebunk Plaza (North & South) adjacent to Tesla Superchargers (installed 6-2018)
 - Through traffic, very high volume
 - Existing 3-phase at Gardiner Plaza
 - B. **Canada Connector Locations**
 - Jackman, Skowhegan, Farmington, Bridgton
 - Host sites TBD, will be recruited/arranged by ChargePoint and Efficiency Maine
 - Line extension/transformer costs covered by Efficiency Maine
- **Conserve budget**
 - Eliminated/reduced risk of high cost or cost uncertainty related to selecting host site and connecting to the electrical service
 - Rejected locations where electrical service connections are cost prohibitive; Fully subsidized service connections where necessary
 - Focused competition on provision of equipment and operation

PHASE II:

Improve Local Access and Destination Charging

With Publicly Available Level 2 Chargers

Benefits and Markets Served

Benefits:

1. Lowering energy costs for Maine drivers
2. Lowering carbon footprint of Maine drivers
3. Mitigating “Range Anxiety” for local EV travelers
4. Transforming the marketplace toward lower cost/lower carbon vehicles
5. Engaging Maine consumers and communities

Market Served/Intended Use:

1. Commuters
2. Local drivers at mid-point of errands/shopping
3. Business people driving to/from meetings
4. Overnight guests
5. Rental car drivers

Site Qualifications and Selection Process

- Public access
- Proximate and convenient to significant vehicle traffic
 - Expectation of high EV-traffic parking for extended stays (1-4 hours)
- Basic safety (e.g., lighting, curbing)
- Free charging or paid charging remains to be determined (TBD)
- Competitive Solicitation
 - Likelihood of high-traffic/usage
 - Geographic targeting, priorities TBD
 - Design of financial incentive (e.g., % of cost, flat \$ rate, caps) TBD
 - Process for awarding incentive (e.g., application, first-come first-served)
TBD

Site Recruitment

- Program Outreach
 - Efficiency Maine website
 - Earned media
 - Events
 - Targeted communications with
 - municipal officials
 - large employers and/or high-traffic operations
 - hospitality industry
 - multi-family housing

Timeline and Budget

- Timeline: Launch in late winter/early spring 2019
- Tentative Budget Allocation
 - \$300,000

PHASE III:

Extend Maine's EV Fast-Charge Network

**NEW TARGET DATE TO
LAUNCH RFP: SUMMER 2019**

Benefits and Markets Served

Benefits:

1. Encourage / reassure tourist travelers to embark to Maine destinations
2. Encourage / reassure intrastate travel to Maine destinations
3. Lower energy costs for Maine drivers
4. Facilitate market transformation to increased purchase and use of EVs

Market Served/Intended Use:

1. Vacationers / tourists / eco-adventurers
2. Intrastate business travelers
3. Local shoppers

Site and Equipment Criteria

1. Aim to fill in and around Foundation sites to achieve corridors with < 60 mile gaps
Interoperability
2. Universal Payment and Charging
3. Min. 1 DCFC per site plus a Level 2
4. Min. 50 kW per DCFC
5. Other Site Criteria:
 - Public access, easy access
 - High-traffic area
 - Located along or w/in 3 miles of any of Maine's EV Fast-Charge Priority Corridors
 - Priority for I-95/295 and Rt 1
 - Within range of next closest DCFC
 - Safety, visibility, accessibility
 - Availability of parking space(s)
 - Probability of longevity of presence
 - Commitment level of host
 - Importance/significance of Fast Charger (versus Level 2 charger)

Competitive Solicitation

1. Single round of competitive bidding
2. Potential considerations for screening / scoring criteria
 - a. Distance from nearest Level 3 fast charger (DCFC)
 - b. “Preference criteria” regarding host site (e.g., extending FHWA “signage ready” EV Corridor distances, visibility, accessibility, traffic served, accommodations, importance of “fast-charger” capacity)
 - c. Economics (e.g., lowest Efficiency Maine Trust incentive per charging station or per kW installed, projected cost-effectiveness, etc.)
3. Other Solicitation Considerations
 - a. Capacity/willingness to host more than 1 DCFC
 - b. Vendor qualifications
 - c. Host commitment to sustaining the EV charging facility / access

Priorities for Location

Stretches of Priority EV Corridors Underserved by Fast Chargers

1. I-95 from Bangor to Augusta
2. I-95 from W. Gardiner to Portland
3. Route 1 from Ellsworth to Brunswick/Topsham

Timeline and Budget Allocation

- Timeline (This is a change from the Original Plan)
 - Outreach Spring 2019
 - Launch RFP Summer 2019
 - Award & Contract Summer/Fall 2019
 - Employ 12-18 month deadline for project completion
- Initial Budget Allocation
 - \$1,000,000