



# Maine's Electric Vehicle Supply Equipment Initiative

Working Plan – Updated as of 1/8/2020

# 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 late-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 nitrogen oxides and carbon from light-duty vehicles traveling Maine roads.

# OBJECTIVES

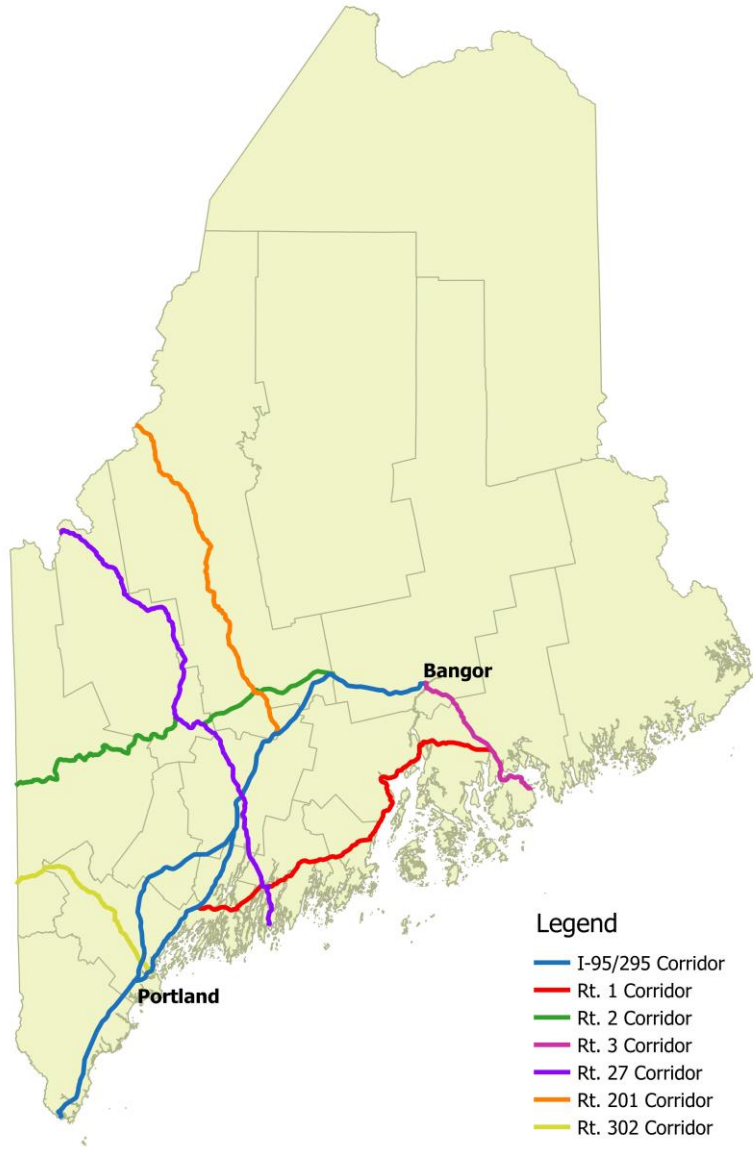
1. Deliver on the Maine's commitment to the Premier of Quebec to:
  - a. establish corridors of publicly available, fast-chargers ("Level 3" or "DC Fast Chargers")
  - b. spaced 50-70 miles apart
  - c. linking Quebec to tourist destinations in Maine;
2. Facilitate market transformation that will, over 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 70 miles between universal Level 3s
- 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 December 2019)

## 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  
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.

## Skowhegan

- Hannaford Supermarket  
496 Madison Avenue, Skowhegan

## 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

## West Gardiner

- West Gardiner Service Plaza – North/South  
Maine Turnpike at Exit 51 I-295

## 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
  - N. Windham

- **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)

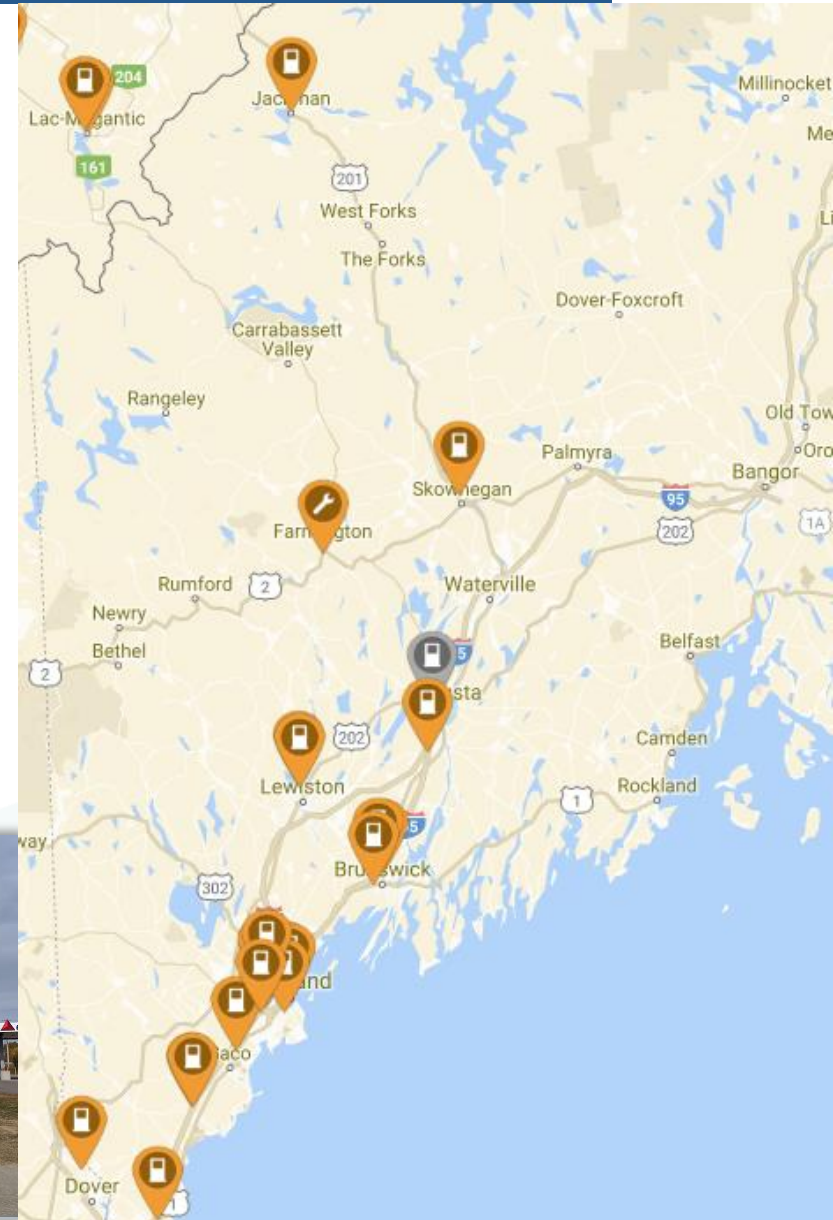
# Implementation

- **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



# Status of Phase I Level DC Fast Chargers

- Kennebunk Turnpike Service Plaza North (operational)
- Kennebunk Turnpike Service Plaza South (operational)
- W. Gardiner Turnpike Service Plaza (operational)
- Skowhegan (Hannaford) – (operational)
- Jackman (Gulf Fueling Station) – (operational)
- Farmington (Hannaford) – April 2020
- N. Windham (Hannaford) – May 2020



# 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 West Gardiner Plaza
  - B. **Canada Connector Locations**
    - Jackman, Skowhegan, Farmington, and North Windham
    - Host sites 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:**
  - Conducted two rounds of request for proposals (RFP) from qualified bidders to host, purchase, install, and operate public level 2 EV charging stations
  - Announced total of 33 incentive awards for municipalities, organizations, and businesses across the State in Fall/Winter 2019
  - Some new public level 2 chargers have already been installed and the remainder will be installed by Spring 2020
- **Tentative Budget Allocation**
  - \$300,000



# Phase 2: Level 2 Charger Incentive Awards 2019

## Round 1

### Category 1:

- International Motel, Calais
- Down East Community Partners, Milbridge
- Indian Hill Trading Post, Greenville
- Northern Maine Medical Center, Fort Kent
- Town of Fort Kent, Downtown Fort Kent

### Category 2:

- Bates College, Lewiston
- Bowdoin College, Brunswick
- City of Auburn
- City of Bangor
- City of Bath
- City of Belfast
- City of Portland (Back Cove)
- City of Portland (City Hall)
- City of Portland (High Street)
- City of Portland (Payson Park)

- City of Portland (Westbrook Street)
- City of Rockland
- College of the Atlantic, Bar Harbor
- Falmouth School District, Falmouth
- Holiday Inn, Bangor
- Maine State Housing Authority, Augusta
- Town of Skowhegan
- Unum, Portland

## Round 2

- City of Augusta, Dickman St.
- City of Augusta, Cony St.
- Maine Behavioral Healthcare
- Town of York Public Library
- Town of Kennebunk
- Nissen Building Condo Association, Portland
- Town of Damariscotta
- Best Western, Rumford
- Maine Medical Center, Portland
- Town of Thomaston

## **PHASE III:**

**Extend Maine's EV Fast-  
Charge Network**

# 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 50-70 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

## Competitive Solicitation

- Distance from nearest universal Level 3 fast charger (DCFC)
- “Preference criteria scoring” regarding host site (e.g., visibility, accessibility, traffic served, accommodations, importance of “fast-charger” capacity)
- Economics (e.g., lowest Efficiency Maine Trust incentive per charging station or per kW installed, projected cost-effectiveness, etc.)

## Timeline (This is a change from the Original Plan)

- Outreach Spring 2020
- Launch RFP Summer 2020
- Award & Contract Fall 2020
- Employ 12-18-month deadline for project completion
- Initial Budget Allocation
- \$1,000,000



# The Current State of EV Charging in Maine (as of December 2019)

