



NH General Court SB 517 Study Commission

# **Electric Vehicle Infrastructure**

March 22, 2018

# ABOUT UNITIL

## Company Overview

- Electric and natural gas distribution utility with **operations in three states** serving ~182,000 customers
- We provide **energy for life**, safely and reliably delivering energy in New England
- Unitil serves electric customers in two regions of NH:
  - Capital Area: ~30,000 customers
  - Seacoast Area: ~ 47,000 customers



# POLICY QUESTIONS & PRIORITIES

# Enabling Electric Vehicle Technology

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- Utility Role in Development of EVSE
- Barriers to Utility Investment
- How Utilities Can Help Reduce Barriers

# Utility Role in Development of EVSE

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- EV Charging Rate Structures
- Electric Distribution Infrastructure
- Customer Engagement

# Utility Role in Development of EVSE

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- EV Charging Rate Structures
  - Enable customers to charge EVs using TOU
  - Provide pricing schemes that are simple and easy to understand in order to promote off-peak charging
  - Find balance in demand and energy charges to ensure cost causation and EV adoption

# Utility Role in Development of EVSE

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- Electric Distribution Infrastructure
  - Work with customers to determine if distribution system upgrades are necessary on circuits
  - Ensure that the distribution system can provide safe and reliable power to existing customers and added EV loads
  - Upgrades could include added transformation, protection, conductors, services, etc.

# Utility Role in Development of EVSE

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- Customer Engagement
  - Work with communities to site EV charging
  - Provide customers with information about the benefits of switching to an EV
  - Showcase incentives from federal, state, private sector, and manufacturer sources



# Barriers to Utility Investment

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- “Chicken or the Egg” Dilemma
- Start-up Costs for the Market
- Uncertain Regulatory Environment

# Barriers to Utility Investment

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- “Chicken or the Egg” Dilemma
  - Without charging stations, customers will not buy EVs
  - Without EVs, no one will build charging stations
  - Competitive market continues to deploy charging stations
  - The market is ramping up with more and more charging locations
  - More EV models coming over the next decade to attract a broader market

# Barriers to Utility Investment

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## ● Start-up Costs for the Market

- Depending on the desired location for EVSE, the costs to install can be in the tens/hundreds of thousands of dollars
- Despite this cost, the service of EV charging still caters to a limited audience
- Recovery of these investments can span over an extended time horizon
- Focus on mitigation of stranded costs

# Barriers to Utility Investment

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- Uncertain Regulatory Environment
  - Some states have issued policy directives to incentivize development of the EVSE market
  - Providing a policy directive is an objective of the SB517 Commission
  - Utility recovery of investments in EVSE or “make-ready” infrastructure has not been tested

# How Utilities Can Help Reduce Barriers

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- Focus on Equity in Investments
- Until TOU Rate Pilot

# How Utilities Can Help Reduce Barriers

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- Focus on Equity in Investments
  - Some communities or locations for charging may not see private sector investment
  - Utilities may provide a pathway to offer EV options for underserved communities
  - Focus on social justice and equity

# How Utilities Can Help Reduce Barriers

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- **Unitil TOU Rate Pilot**
  - Leverage AMI technology that is already in place
  - Enable assessment of broad-based deployment of TOU rates for residential and small commercial and industrial customers
  - Engage and educate stakeholders and provide information and an opportunity for parties to address elements of the proposal
  - Identify TOU rates that improve customer decision-making, are simple, understandable, equitable, and result in rates that are stable

# How Utilities Can Help Reduce Barriers

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- Unifil TOU Pilot: Rate Design
  - Assessed based on actual underlying costs of all service components taken together
  - Must be clear and simple to understand
  - Supply can be from UES or competitive electric power supplier
  - TOU block pricing rates designed to align retail prices with energy, capacity, and transmission costs to send accurate price signals that better reflect cost causation
  - Distribution costs allocated to classes based on distribution cost studies





# Questions?

Thank You!

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