Municipal Considerations for Installing EVSE

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Goals

Before you decide to install EVSE in your community, it's worth asking yourself what the goals of such a project are. More specifically, who are you hoping will actually use the equipment you plan to install?

Is the purpose of the project to accommodate municipal workers? Tourists to your community? Local businesses? Downtown residents? Commuters?

Are you trying to attract EV drivers TO your community, or to accommodate those who are already IN your community? Do you even know the difference?

Can you anticipate any patterns of usage for the equipment you install?

These are critically important questions to address, because the answers will (or should, at least) inform the way you approach nearly every aspect of the EVSE procurement process.

Summary of Considerations

Locations and Suitability

Where should municipal EVSE be located?

Equipment and Regulations

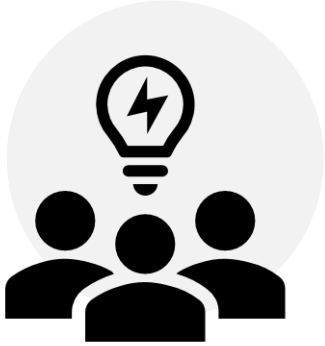
Learn about the different types of equipment and relevant regulations in your community

Short- and Long-Term Costs

Understand your financial options and obligations

Pricing and Revenue

Consider different models for recovering costs and/or generating revenue



Promotion and Public Relations

Build awareness and support in the community

Locations and Suitability

Where should they be located? Who decides?

Understand where Charging is Done

Current Breakdown:

Residence: 80%

Workplace 12%

Other: 8%

Match Equipment to Users

Short Term Users: Under 1 hour

Medium Term Users: 1-3 Hours

Long Term Users: Over 3 hours

Consider Site Locations Carefully

Types of Spaces:

-- Street Parking

-- Parking Lots

-- Parking Garages

Choice of Parking Spots IN these locations

Types of EVSE

Level 1 – Home Charging

Very slow, only about 5-6 miles of range per hour of charging

Typical of home-charging, minus special equipment.

Can use existing 110-volt infrastructure

Level 2 – Work/Public Charging

Moderate charging speed, typically between 13-23 miles of range per hour

Most public stations are currently Level 2

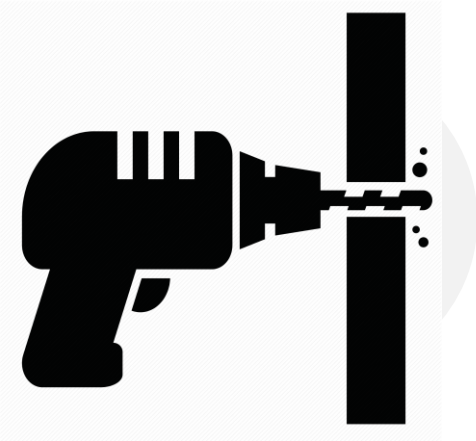
Level 3 – DC Fast Charging

Very fast charging, typically around 60 miles of range in 10-20 minutes

Limited number of vehicles can use this

Costs to Consider

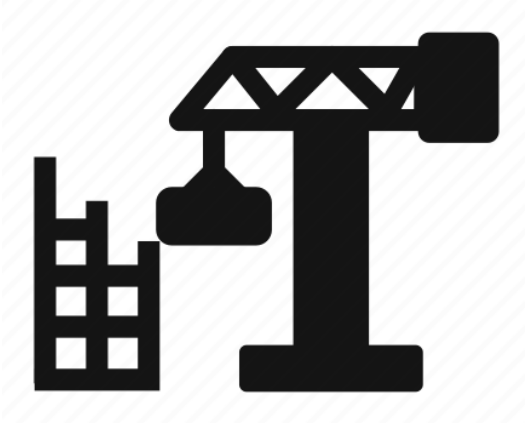
Be sure to account for costs of operation, as well as costs of construction and installation



Equipment & Installation

Most current municipal EVSE is Level 2

NYSERDA, DEC & NYPA all provide various funding support



Construction and Make-Ready

Site-Dependent

Can Vary Widely

Funding Available from Utility company

Costs of Operation

Primary Costs:

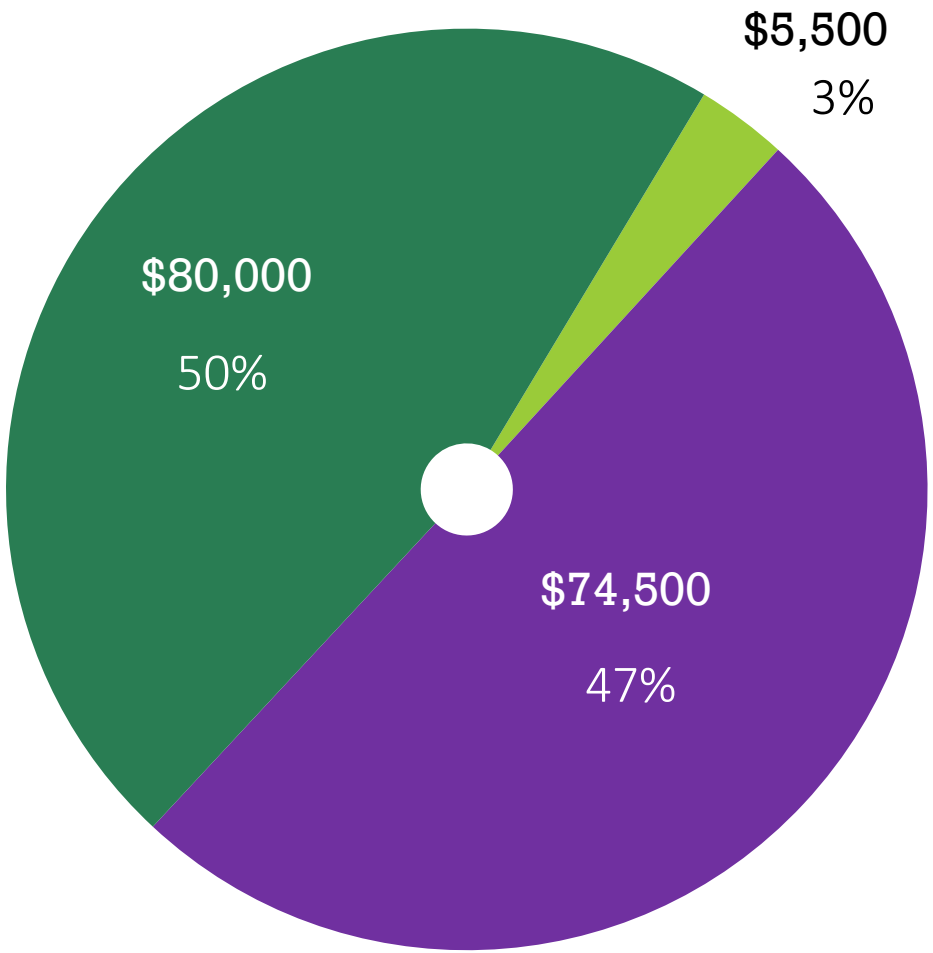
-- Cost of Electricity

-- Networking Fees

-- *Maintenance & Repairs

Funding Example

Installation & Make Ready Costs for 10 stations/20 ports at 8 locations around Glens Falls



Municipality

Amount Not Covered by NYSERDA or National Grid

NYSERDA Charge Ready Grant

Funded $4000/port for equipment and installation

National Grid Support

Funded up to $5000/port for construction & make-ready

Pricing Options

Pay for Energy

- Charge per kWh – typically $ 0.14-0.18
- Advantage:
  - User only pays for energy they use
- Disadvantage:
  - Users don't pay for remaining plugged in after fully charging

Pay for Time

- Charge by hour – typically $1.50/hour
- Advantage: Simplifies pricing structure; likely maximizes revenue
- Disadvantage: Some vehicles charge faster than others; thus different users pay different rate for same energy

Pay for Popularity

- Assess fees for keeping vehicle plugged in after fully charging
- Advantage: Incentivizes drivers to move vehicle after charging
- Disadvantage: Very punitive to long-term users who don't have flexibility.

Be Creative

- Charge per kWh until fully charged or for certain period, then impose hourly fee
- Provide one rate for a certain period, then increase the rate when period exceeded
- Add off-time rates to encourage overnight charging
- Add special rates for locals, or city employees or business EV

Public Relations and EVSE Promotion

Create a Plan for Public Engagement

1) Enlist Support from Public Officials and Municipal Employees
    - Offer Incentives
    - Provide Discounted Rates
2) Inform the Public
    - Ribbon Cutting Ceremonies
    - Local Media Stories
    - Awareness Campaign
    - PR Support (National Grid)
3) Engage the Business Community
    - Develop Partnerships
    - Create Promotions

Questions?

Thank You!

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