



# EV Charge Stations at UPMC



Allison Robinson, Director  
UPMC Environmental Initiatives  
Pittsburgh Region Clean Cities  
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# About UPMC

- As the largest nongovernment employer in Pennsylvania, UPMC has:
- More than 90,000 staff members.
- 40 academic, community, and specialty hospitals.
- 700 doctors' offices and outpatient sites.
- 4,900 employed doctors.
- An array of rehab, retirement, and long-term care options.

Each year, UPMC gives back more than \$1 billion to our communities. This amounts to more than 15 percent of net patient revenue.

# Overview

- Commitment
- Installation
- Usage
- Re-evaluation
- Next Steps

# Commitment

- Interest and commitment started in 2010
- PA DEP AFIG opened
  - Encouraged partnerships
  - Equipment restriction: Level II only
- Partnering organization offering matching funds to meet AFIG
- Site assessments criteria:
  - **Limited to owned property only**
  - Garages that have utility service already (cost management)
  - Easy access (close to entrance for people who only need a short time to recharge)
  - High density locations (high employee and patient parking => high usage likelihood)
  - Position such that future add-ons could occur



# Installation

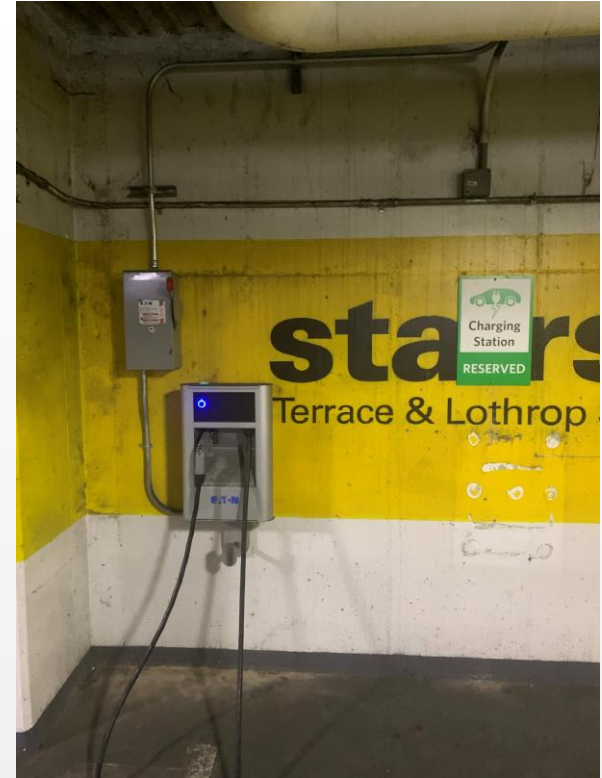
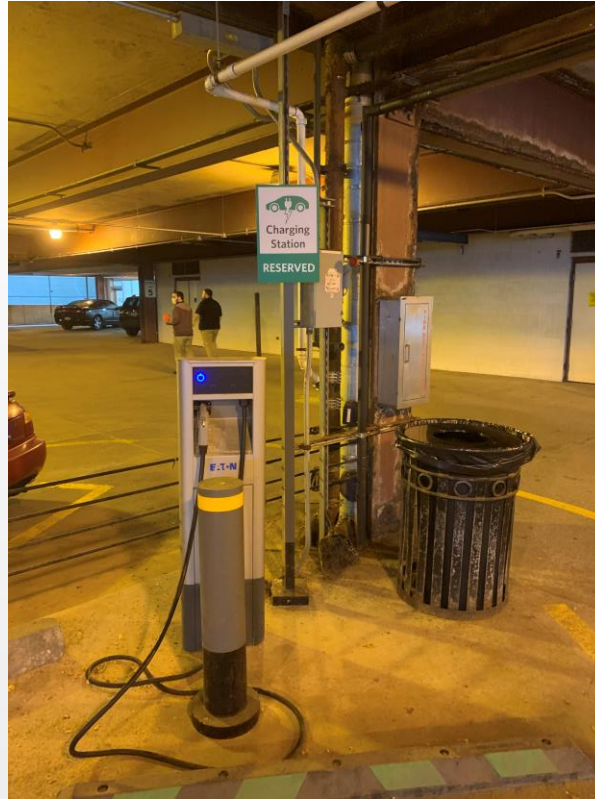
- All in Allegheny County...so far
- Started with urban campuses in Pittsburgh, then expanded to Suburban sites
  - Urban: Childrens, University Center, Forbes Tower, Presbyterian, Magee, Montefiore, Shadyside, Mercy
  - Suburban: St Margarets, Passavant North Hills, East
- Equipment:
  - Initially: Eaton Level II charging station with single hoses, wall mounts except for St Margaret's and Passavant
  - Add-on at Mercy in 2015 and Children's 2019
- Collaborated with utility service providers when assessing load to hub
- Conducted online education about alternative transportation and alternative fuel vehicles
- Share(d) public events (PRCC) for experiential learning



# Some stations



# More,...



# Usage

- Total currently installed: 26
- Usage was as expected initially, but increased sooner than anticipated
  - Forbes Tower, Tower View, Children's, Mercy, Shadyside
- Usage is mostly employees except at Shadyside, Montefiore, Magee, Children's, Passavant, Mercy
- Average parking time (mostly employees, either 4 or 8 hrs)
- In some locations, employee-owners met and coordinated a parking schedule to optimize usage experience
- Mercy and Children's had a higher than expected usage, so they added another wall mount station at each site



# Usage

- Passavant and St Margaret's get increased weekend usage
- *Tesla-s have to have their own adapters to use*
- *No vandalism or theft; no equipment malfunctions, ...even after one was struck*
- Recently complaints: hose connectors becoming outdated
- Directional signage installed in 2018 at all sites
- Sites are listed on [afdc.energy.gov](http://afdc.energy.gov)
- *...because of the nature of our business, usage is NOT affected during COVID*



# Re-Evaluation

- We conducted two re-evaluations: 2016 and 2020
  - 2016: Goal: check usage, access and functionality (~33 owners, Allegheny only)
  - 2020: Goal: demand assessment for expansion, survey was systemwide (~117 owners, over 300 responses, many with inquiries, statewide)
    - Interest in New Castle, Erie, Williamsport, Harrisburg, Somerset, ...
- Audience: UPMC employees (~90,000 in 2020)
- Coverage: Pennsylvania with sites in NY and MD
- Each survey conducted with education outreach about alternative fuels and health benefits
- Station location awareness:
  - 2011: no centralized database,
  - 2012: [afdc.energy.gov](http://afdc.energy.gov) database
  - 2016: PRCC local info
  - 2020: can find anywhere using any type of mapping app (add-on)



# Next Steps

- Had planned an equipment update for Allegheny County...**BUT**
- After seeing growth and interest revealed through 2020 survey now have to reconsider....
  - AFIG still a cost management option
  - New installations vs upgrades
  - Newer charging equipment has more technology for monitoring use and performance via Bluetooth
    - Equipment replacement are now required since Eaton no longer sells
    - Have to engage IT, Facility Management, Parking and Transportation, Energy,...
  - Other sites do NOT have garages, so new installations will likely be standalones for detached surface lots, or an outdoor wall mount for lots adjacent to facility



# Thank You and Questions?

**Allison Robinson, PhD, MS, MPW**

*Director, Environmental Initiatives*

UPMC

T 412 647 8136

[robinsonal2@upmc.edu](mailto:robinsonal2@upmc.edu)

