

- EV charging stations: important for EV planning
- Reliable energy sources and strain on the grid: important considerations in locating EV charging
- Convenience of Level 2 home charging for EV owners
- Equity issue 1: what demographic groups have EV and/or level 2 EV charging stations in homes?
- Equity issue 2: what groups see higher property values from having EVs and/or level 2 EV charging stations in homes?





For a Subset of Locations In Connecticut:

1. Determine how real estate sales prices (for 1 to 4 family homes) may be different for those with solar panels onsite, opposed to those without, based on the actual locations of residential solar installations in CT.
2. Determine how real estate sales prices (for 1 to 4 family homes) may be different for those with EV charging stations, and/or that are “close” to EV charging stations.
3. Estimate how real estate sales prices (for 1 to 4 family homes) may be different for those with **both** EV charging stations and solar panels onsite (CONTINGENT ON DATA AVAILABILITY).
4. Examine whether there is equality in who receives these benefits of solar and EV charging stations among residents in a subset of locations in Connecticut, and who gains and loses the most.
5. Forecast how adding EV charging stations and/or solar panels in a subset of some CT locations would be expected to impact real estate value and equality of who receives the benefits.



Data Sources:

- Eversource Energy level 2 EV charging residential locations by zip code (proprietary)
- grand list data on EV locations by town (some proprietary data)
- Single-family Level 2 EV charging stations locations in West Hartford and Westport (town permits data)
- Resident demographics - various sources (some proprietary data)
- property values (town assessors and other sources)
- locations of residential solar - CT Green Bank (proprietary)

Data analysis:

- Regressions (statistical analysis)
- How are house prices affected by having Level 2 EV chargers and/or residential solar panels, controlling for demographics?
- GIS mapping
- Lorenz Curves/Gini Coefficients

Advisory Panel:

- Yale, UCONN, Eversource Energy, AVANGRID/UI, CT DEEP, CT DOT, CT Green Bank



Outcomes and Deliverables



UCONN TECH PARK

1. A database of the data to be used in the statistical analysis, including a set of summary statistics and description of the variables and sources. NOTE: Some of the raw data may be proprietary and subject to nondisclosure agreements; therefore it is possible that not all of the raw data used in the analysis can be shared with EEC and/or all of the project's partners.
2. A literature review of how residential solar impacts house prices; and how EV charging stations impact house prices.
3. A preliminary set of GIS maps.
4. One or more follow-up funding applications. A summary of these follow-up funding applications will be submitted as a deliverable; in Year 1, this will likely be limited to a follow-up EEC funding application.
5. Monthly virtual meetings of the project's advisory panel.



UCONN

Eversource Energy Center

EVERSOURCE



- This 1-year project: demonstrate the feasibility of using the techniques described, in a smaller setting.
- Pursue a larger, multi-year grant from EEC that would consider a broader geographic area than considered in this pilot project.
- After Year 1, explore relevant funding opportunities with the National Science Foundation (NSF); U.S. Department of Energy (DOE).
- Follow-up funding possibility for graduate students: National Academies of Science, Engineering and Medicine's National Research Council (NRC) Research Associate Program (RAP)
- Work with advisory panel members to develop ideas for follow-up research

