Project Overview

Project Overview: This proposed SERC grant project will: install air-source heat pump technology in income-eligible mobile home dwelling units in a forty-five (45) unit mobile home park, Edgemere Mobile Home Park, located at 151 Hartford Turnpike in Shrewsbury, Massachusetts. In addition, this project will serve underserved clients residing in a municipal utility service territory while also achieving the goals of the Justice40 initiative. The main goal is to reduce the energy costs (energy burden) for these income-eligible clients who reside in a mobile home park community.

In Massachusetts, there are forty-one (41) municipal light plants (MLPs) that provide electricity to citizens in all or part of fifty (50) municipalities. Unlike the investor-owned utilities in Massachusetts, the MLPs face limited regulations as they are regulated by municipal officials as opposed to the investor-owned utilities that are regulated by the Massachusetts Department of Public Utilities (DPU). Thus, citizens who live in an MPL service territory do not typically receive equal assistance for energy efficiency measure installation that citizens receive who live in an investor-owned service territory. DHCD classifies these MLP service territories as an underserved population in relation to energy efficiency measure installation.

This project will address income-eligible clients who reside in mobile home dwellings within a specific MLP service territory (Shrewsbury Electric and Cable Operations). Dwellings that heat with heating oil or propane generally receive no energy efficiency assistance in MLP service territories. Heating oil and propane are currently the most expensive delivered heating fuels in the Commonwealth. Thus, for low-income clients, this represents an added financial energy burden. In addition, most propane tanks are "dealer owned", so consumers cannot shop around with other dealers for better prices.

Project Location:
The mobile home park, called Edgemere Mobile Home Park, is situated on well-travelled Route 20 (Hartford Turnpike) in Shrewsbury, Massachusetts. Shrewsbury is a town located adjacent to the east of Worcester, the second largest city in Massachusetts. The location is also on the east shore of Lake Quinsigamond which makes it more susceptible to adverse weather and cold brought forth with the westerly winds. This mobile home park is the only mobile home park in SELCO's service territory.

Housing Type & Household Demographics:
There are approximately forty-five (45) stand-alone units in the mobile home park. All of the units are mobile homes. SMOC is able to tell from past LIHEAP applications, that there is a diversity of racial ethnicities in the park. Exact demographics will be obtained as part of the community needs assessment.

Activities: The focus of this grant award will be to replace the existing heating system with cold climate air- source heat pump technology for qualified/selected income-eligible clients residing in mobile homes in this specific mobile home park. Air-source heat pumps have become a major focus of the investor- owned utilities' efforts to capture energy savings in their 2022-2024 energy

efficiency plans filed with the DPU. The Massachusetts 2050 Decarbonization Roadmap references air-source heat pumps as being a critical element to meeting both the electrification needs of space heating across the Commonwealth as well as reaching climate related goals. Air-source heat pumps are 300%-350% efficient compared to high-efficiency oil and natural gas heating systems that are only 90%-98% efficient. The air-source heat pumps will be paid for with the SERC grant funds and where applicable will leverage HEARTWAP funds for system replacement. The annual maintenance of the systems going forward will be paid for mostly with HEARTWAP funds. Weatherization to eligible units will be done as part of a Community Scale Pilot Program Grant recently granted to DHCD for weatherization in this same mobile home park. It is also likely that many of the electrical systems/panels in these mobile homes will need to be added or replaced to accommodate the increased electrical demand/usage in the dwellings.

This major barrier to electrification will be addressed with these SERC funds by installing upgraded panels, when applicable, capable of supporting not only air- source heat pumps, but future capacity for additional renewable energy measures and/or electric vehicle charging stations at these residences.

Additionally, SERC funds will be used to remove the heating oil system and tanks along with any clean-up necessary upon removal. SERC funds will also be used to replace any domestic hot water heaters that run on heating oil with updated electric domestic hot water heaters.

Project Outcomes: The impact of this project is significant as it will show the successes and challenges of installing air-source heat pump technology in mobile homes. Moreover, this project will provide a cost-effective heating source to those clients served that is also environmentally friendly. By targeting units in a mobile-home park, DHCD hopes to provide a road map for other similar projects conducted not just through this program but the nationally recognized Massachusetts energy efficiency and related programs.

This project will strive to meet the Justice40 initiative goals. One hundred percent (100%) of the client dwellings will be located in MLP service territories across the Commonwealth. A minimum of forty percent (40%) of the selected income-eligible clients will be clients who identify as “minority status” in the general population. Further preference regarding project dwelling selection will be for clients heating with heating oil and propane.

Summary: This project will utilize the SERC Grant funds, a Community Scale Pilot Program grant for Weatherization, and HEARTWAP funds. SERC funds are highly desired because the costs of converting a dwelling’s heating system from fossil fuel to air-source heat pump technology is very expensive and may require additional upgrades to the dwelling unit. By conducting projects such as this, there will be tangible validation of results that will help to transform the market going forward. Market transformation is a process that can only occur through efforts such as this SERC project. The more installations that are completed in the next couple of years will help to bring down the prices of air-source heat pump technology, and make the technology that much more cost effective for both income-eligible programs and non-income-eligible residents of the Commonwealth and beyond.