District Geothermal Design and Deployment to Equitably Decarbonize Low Income Neighborhoods in Ann Arbor

Project Team: Community Action Network (CAN), a local community-based organization that operates a series of deeply trusted and highly leveraged community service centers, including the Bryant Community Center in the project area, and City of Ann Arbor's Office of Sustainability and Innovations (OSI), the keeper of the community's climate and equity plan and programs, have combined to make the Bryant neighborhood the nation's first fully decarbonized existing low-income neighborhood.

Community: The Bryant neighborhood, an underserved, frontline community, consists of 262 households, of which 75% are considered low-income with median household incomes of $45,464. Over 50% of residents are Black, Indigenous, People of Color (BIPOC) and 50% are renters. Average home values are just under $150,000, compared to $435,000 city-wide. Median monthly rents are $662, but many units rent for over $1,000. The neighborhood is directly adjacent to the City's capped landfill and a busy highway system.

Energy related challenges: Over one-third of households are energy burdened. Most households in Bryant qualify for weatherization assistance, but many homes are in too poor of a condition to be served.

Goal: Design and implement a geothermal system that reduces heating and cooling demand by 75% and greenhouse gas emissions by 40% in the project area, significantly helping create the first decarbonized existing low-income neighborhood in North America while improving the quality of life and health outcomes of existing and future residents.

Work to Date: Designed an energy assessment with community members, conducted it on 70+ homes, and performed energy efficiency and health and safety upgrades on 20+ homes using the results. Work is already underway with a coalition of residents, engineers, local labor unions, and industry experts to design the geothermal system, equitably build out the workforce, and prepare for deployment.