Center for Energy and Environment

Twin Cities Habitat for Humanity Builds 147 Affordable, Electric Homes

Center for Energy and Environment's (CEE) New Homes team is partnering with Twin Cities Habitat for Humanity on a major redevelopment of the 112-acre former Hillcrest Golf Course on St. Paul's East Side. This all-electric and affordable housing development is the largest project in Twin Cities Habitat for Humanity's history, and will be one of the largest sustainable communities in the Midwest. From consulting during the early design process to testing throughout, the New Homes team is helping this project reach U.S. Department of Energy (DOE) Efficient New Homes (formerly Zero Energy Ready Homes), U.S. Environmental Protection Agency Indoor airPLUS, and ENERGY STAR® Certifications.

Project Background

The planned 147 mid-density affordable homes on 12 acres will be a mix of townhomes (twin homes, triplexes, and fourplexes) and single-family homes that use a combination of solar and all-electric appliances. Before construction, CEE's New Homes team reviews the building plans, completes projected ratings reports, and performs heating and cooling load calculations that allow us to make early recommendations regarding the energy efficiency components of each building's design.

This pre-construction process also includes meetings to ensure the relevant energy certification standards are incorporated into the plans and building teams are aware of the standards so all program requirements are met. To complete the review process, the team recommends any revisions to the building plans (e.g., insulation levels, air-sealing details, ventilation and mechanical systems) to ensure compliance with program requirements.

Testing and Inspection

Between the framing and drywall stages of building, each unit's insulation and air-sealing installations are inspected and tested according to DOE's Efficient New Homes requirements. The testing includes blower door tests, duct leakage tests, and performance tests on exhaust and ventilation systems. If any units do not initially meet the certification requirements, the construction partners make the necessary corrections and the units are retested. Once all finished units successfully meet Efficient New Homes standards, the team updates the energy models and submits results to a third-party quality assurance provider for final certification.

Results

As of October 2026, CEE has tested and verified 69 homes, representing the majority of the first phase of construction and testing. The verified homes have achieved an overall average HERS score of 35, which is 25% more efficient than the average HERS-rated home in Minnesota. By using the information from CEE's onsite verification and HERS ratings, Twin Cities Habitat for Humanity can receive approximately $25,700 in rebate incentives through Xcel Energy's Affordable Efficient New Home Construction program.



Certifications and Ratings

- **DOE Efficient New Homes (V2)**
- **EPA Indoor airPLUS**
- **ENERGY STAR Single-Family New Homes**
- **RESNET HERS**
- **LEED Platinum for Communities (site-wide)**

Energy Efficiency Features

- **All-electric** (includes solar shingle arrays and EV-ready charging)
- **Overall energy efficiency: HERS 35; with solar, HERS 12** (average of 69 rated homes)
- **Air-tight construction: 1.5ACH**
- **Weatherization:**
  - o Exterior continuous wall insulation
  - o High-performance windows, average .25 U-factor
- **Electric appliances:**
  - o Energy recovery ventilation (ERV)
  - o Cold climate air source heat pumps
  - o Heat pump water heaters
  - o ENERGY STAR certified appliances

Partners

- **Twin Cities Habitat for Humanity**
- **Doran Companies**
- **Saint Paul Port Authority**
- **City of Saint Paul**

Contact

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