

Zero Energy New Build in St. Paul

Energy efficiency was top of mind for Robert Straka as he began designing his new home on Mississippi Boulevard in St. Paul. After carefully considering the environmental impact of his housing wants and needs, Straka set course for Zero Energy Ready certification. Straka hired SALA Architects, Sustainable 9 Design + Build, and CEE's new homes team to make his vision for a multi-rated energy efficient home a reality.

Many innovative sustainable features were incorporated into the home's design plans. CEE's team provided progress inspections and feedback reports to ensure these features matched rating codes and kept the build on track to achieve Zero Energy Ready certification. CEE's energy raters went above and beyond the usual standard rating process by providing on-going design consultation and energy modeling updates during construction.

“Our teamwork with CEE has been invaluable,” said Sustainable 9 project coordinator Paul Trieu. “CEE ensured we met milestones and standards for certification.”

With the help of CEE, Straka's new home met multiple above-code energy efficiency certifications and won the Sustainable 9 team a Department of Energy (DOE) Housing Innovation Award at the 2020 Energy and Environmental Building Alliance (EEBA) Summit.



Finished Build



Drain water heat recovery coil



Tstud™ Insulation System

Learn more about our work at mncee.org/newhomes.



Energy Efficient Features

- High performance Tstud™ insulation system
- Energy recovery fresh air system
- Energy efficient appliances and LED lighting
- PV solar arrays
- Drain water heat recovery system
- Motion activated hot water recirculation
- Geothermal heat pump system for heating and cooling



Home Certifications/Ratings/Awards

- DOE Zero Energy Ready Home Certification
- -8 HERS Rating
- Environmental Protection Agency Indoor airPlus Certification
- **DOE Housing Innovation Award**
- Xcel Energy Home of the Year



Housing Specifications and Potential Savings

- 4,785 square feet
- \$-15 average monthly energy bill
- \$5,900 annual savings
- \$245,700 saved in the first 30 years



CEE's Services

- Upfront consultation and design review
- On-site inspections during framing and insulation
- Construct reports based on inspections
- “Mid-point” blower door test
- Final performance testing
- Energy modeling for rating compliance
- Assistance submitting certifications and ratings paperwork

Partners

SALA Architects
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