



## Madison Friends Meetinghouse

On the path to net-zero

Although the Madison Friends (Quaker) Meetinghouse is over 100 years old, an extensive 2022 renovation added solar and geothermal systems that dramatically reduce carbon emissions.

**This all-electric building now uses less than 20% of the energy of comparable facilities.**

- **Awards:** 4 star Climate Champion of 2022
- **Location:** 1704 Roberts Ct, Madison, WI 53711
- **Project Type:** Renovation plus addition
- **Project Size:** Added 1,750 sq. ft. (33% increase), finished project 8,000 sq. ft.
- **Architect:** David Ferch of Ferch Architecture
- **Construction:** Ideal Builders
- **Engineer:** Hein Engineering Group
- **Project Managers:** Rick Pifer and Susan Kummer
- **Partners:** Full Spectrum Solar, Legacy Solar Co-op, Johnson Bank



This document was made by 350 Wisconsin's Community Climate Solutions Team to promote green buildings in our communities.



## Geothermal Heating and Cooling

New geothermal wells under the parking lot will save roughly

**\$2,300**

annually in energy bills for the Meetinghouse.

### What Is Geothermal?

Geothermal energy systems exchange heat between the building and the ground, which is at a constant temperature. This significantly reduces carbon emissions because it is more efficient to transfer heat from the ground than to burn fossil fuels.

# Active and Passive Solar Features

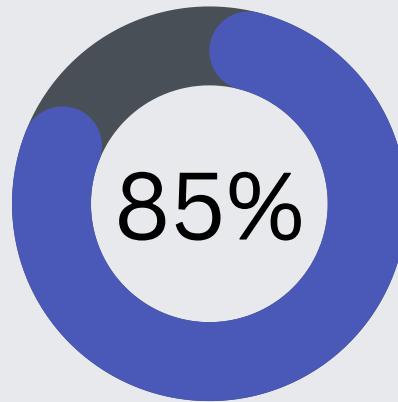
Passive solar - south-facing windows provide direct heat; other new large windows increase natural light.



Active solar - Roof-top photo-voltaic panels convert the sun's energy to electricity.



## Powered by Solar



85% of the building's electricity comes from its solar array.

## Spirituality and the Environment

With Divine guidance, we strive for a Meetinghouse that nourishes and supports the spiritual growth of our religious community, young and old alike; that is welcoming and accessible to all; and that reflects our commitment to the environment."

-Renovation Vision Statement

MADISON  
FRIENDS  
MEETING



## Green Design Features

- Geothermal energy for heating and cooling
- Active and passive solar
- Electric heat pumps replace gas furnaces
- Tighter, better-insulated building envelope
- Energy Recovery Ventilation (ERV) units use outgoing air to cool or warm incoming air
- Ventilation system with bipolar ionization improves indoor air quality
- Airlock entries on both levels
- New LED lighting and controls
- Greater use of natural light
- Better rain water management
- Bicycle- and bus-friendly location