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Sunlight powers charging station for electric vehicles

IN PARTNERSHIP WITH:



The city of Duluth, Minnesota Power, Enbridge and Hunt Electric partnered to develop the first solar-powered electric vehicle charging station for public use in the region. The project grew out of their efforts to find ways to reduce carbon emissions and use more renewable energy.

The three private partners invested in the project and donated the facility to the city of Duluth. The city will contribute the use of the space and operate and maintain the facility over its expected 25-year lifespan. Total cost of the project is about \$378,000.

- The 54-kilowatt canopy is constructed of 171 solar modules, each module rated at 315 watts, which supplies enough electric energy to meet the needs of about 7-8 homes per year.
- The project has nine chargers. Four dual-port charging stations offer eight level 2 plug-ins that can charge a vehicle in two to six hours, depending on vehicle make and model. The ninth charger is a more powerful DC fast-charging station capable of charging a vehicle in 20 to 40 minutes.
- When fully charged, electric cars can go from about 100 miles to about 200 miles, depending on vehicle make and model.
- The charging station's solar panels will feed electricity into the energy grid when the EV chargers are not in use, making the charging carport a net zero energy user.
- Charging a vehicle will cost 80 cents an hour for the slower chargers and \$3 an hour for the more powerful fast-charger. These costs are in addition to standard parking lot rates.
- Electric vehicles generally average a little more than 3 miles per kilowatt-hour. In terms of gasoline, that translates to about 100 miles per gallon.
- The carport also offers covered parking for additional vehicles.