

# Education and Efficiency at the Children's Museum of Southern Minnesota

When the city of Mankato offered the Children's Museum of Southern Minnesota a former bus maintenance building to use for their new facility at \$1 per year lease, museum leaders couldn't believe their luck. They began planning a large-scale renovation, knowing all the while they would build efficiency and sustainability into the new facility.

"Serving as a model for sustainable practices is an important goal for us," says Peter Olson, Executive Director of the Children's Museum of Southern Minnesota. "With thousands of families with young children visiting the museum each month, we have a wonderful opportunity to promote best practices for sustainable living."

## Local team and local materials

From the beginning, the team set the bar high.

"We decided to go for LEED Gold certification and our architect actually donated the hours in kind to complete the LEED certification process," says Olson.

They worked with Xcel Energy's Energy Design Assistance program which provides computerized energy modeling to identify various efficiency measures available, potential costs, payback terms and rebates.

A few efficiency measures were priorities from the start. They opted to install motion sensors and high-efficiency boilers and water heaters. They made use of the warehouse windows to let in as much daylight as possible, reducing the need for light fixtures. They also chose CO<sub>2</sub> controls, a heat recovery system and in-floor coiled heating.

Those measures save the museum more than \$9,000 a year in energy costs over building to code and will continue to save them thousands of dollars in operational expenses every year. Overall, the building uses 30% less energy to heat, cool, light and operate than a typical building of the same size and use.

It's not enough to simply employ these energy-saving measures. The team also wanted visitors to understand how the measures help them save energy and money. They created signage, a visitor's guide, and a hands-on program that highlights the sustainable and high-efficiency attributes of the building.

Finally, using locally produced materials was a big priority. Kasota limestone is used in a quarry exhibit that lets kids get their hands dirty and understand how to work together. There are 26 steps on a Tree of Forts climber, the majority of which are indigenous to Minnesota. Each tree's name and leaf are engraved on each step.

"Authenticity is core to the museum experience," explains Olson. "There are so many benefits to connecting with your local environment through authentic materials. Children learn better through an authentic, hands-on experience."

"Serving as a model for sustainable practices is an important goal for us."

PETER OLSON

Executive Director of the Children's  
Museum of Southern Minnesota



## Project highlights

- Estimated annual energy savings: 73,109 kWh
- Estimated peak energy reduction: 50%
- Estimated annual energy cost savings: \$10,289

### Worth the extra effort

When the museum opened, it was an instant hit.

"Attendance is double what we thought it would be," says Olson. "The design, efficiency and all of the work we put into it has paid off. The families of southern Minnesota wonder what they did before the museum was here."

And to be able to share their LEED Gold certification and explain its significance to attendees is the icing on the cake.

"To see how this previously blighted building was transformed in a thoughtful, deliberate way with energy modeling and sustainability really exemplifies how Mankato can invest in its children," says Olson.

If you're planning a new construction, addition or major renovation project, visit [xcelenergy.com/BusinessNewConstruction](http://xcelenergy.com/BusinessNewConstruction) or call the Business Solutions Center at 1-855-839-8862.

