Hyland Hills Ski Area Chalet

Minnesota ski area improves traffic flow and energy efficiency

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> Jason P. Zemke,
> Senior Manager of Architecture
> at Three Rivers Park District

On wintery Minnesota days, Hyland Hills Ski Area is packed with families enjoying the slopes. They buzz around the hills and terrain park, and stop in the newly renovated chalet to warm up and have lunch. They have no idea how much work went into making the facility as energy efficient as possible.

Bigger and better

The new Hyland Hills Chalet was designed specifically to reduce the congestion and overcrowding experienced in the previous chalet. At almost 39,000 square feet, it more than doubles the size of the previous version, serving 160,000 ski visits each year.

When the team of architects and engineers sat down to design the new chalet, energy efficiency was a top priority. They worked with Xcel Energy's Energy Design Assistance (EDA) program, which provides computerized energy modeling to identify various efficiency measures available, potential costs, payback terms and rebates.

"What we loved about the EDA program is that the owner and design team get to participate in the energy modeling process, which shows the energy saving results of various options in real time," says Jason P. Zemke, Senior Manager of Architecture at Three Rivers Park District. "This makes it easy to discuss options and quickly make decisions that we know will help us lower our energy costs."

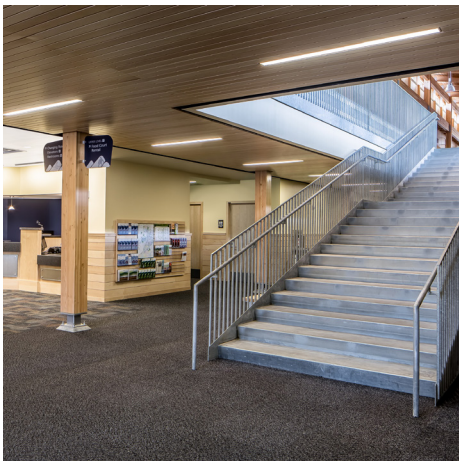
Zemke says energy consumption is the most tangible thing they consider in a new building, followed by durability and flexibility.

"While we had energy discussions, we also had parallel design discussions and one would influence the other," he explains. "EDA might talk about daylighting and then the design would change. It's a give and take where we could figure out the best solutions for things like lighting, controls, daylighting, and more."

Project highlights	
Estimated annual energy savings:	310,828 kWh
Estimated peak energy reduction:	30%
Estimated annual energy cost savings:	$ 38,200

Once the calculations were made, Hyland Hills Chalet incorporated the following measures:

- Comprehensive insulation
- Window glazing
- High efficiency lighting systems throughout the interior and exterior of the building
- Daylighting and occupancy sensors
- High efficiency heating and cooling systems
- In-floor radiant heating
- CO2 control of outside air
- VFD control of kitchen hoods



The interior lighting work alone saved them 50 percent in energy costs. Overall, these measures reduce their peak energy use by 30 percent and will save them more than $38,000 per year in energy costs as compared to building to code.

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Always searching for savings

The new chalet is up and running smoothly, but Zemke says they'll continue to look for ways to save at this building and others throughout Three Rivers Park District.

If you're planning a new construction, addition or major renovation project, visit **xcelenergy.com/BusinessNewConstruction** or call the Business Solutions Center at **855.839.8862**.