

Ordway Center for Performing Arts: Renovating with Efficiency



When renovating the Ordway Center for Performing Arts, the four organizations of the Arts Partnership had to consider a variety of things: how four distinct organizations with different priorities would cohabitate in the same building; how to ensure scheduling every practice and performance for a variety of musical, theater and dance groups; and how to build efficiency and sustainability into the new 1,100 seat concert hall and surrounding space.

With an extraordinary amount of planning and collaboration, they did it. And now, the Ordway, recognized as one of the country's leading non-profit performing arts centers, is able to keep The Saint Paul Chamber Orchestra, Minnesota Opera, The Schubert Club, the Ordway's own programming, and a variety of outside artists and performing groups not only accommodated, but thriving.

Meant to be

It was always part of the plan to build efficiently. The Ordway team, which included a lighting consultant and architect, worked with Xcel Energy's Energy Design Assistance program. The program provides computerized energy modeling to identify various efficiency measures available, potential costs, payback terms and rebates.

Several measures helped them save significant amounts of energy including wall insulation, energy-efficient windows in the two-story lobby space and occupancy sensors throughout the building. They installed LED lighting wherever possible and used other efficient lighting technology elsewhere. They also built daylight into the lobbies and production wing. 3M film on the windows is made to be heat resistant in summer and cold resistant in winter.

The air systems in the new concert hall are unique in that they are not traditional drop systems. They're called displacement ventilation systems. The air comes from under the theater seats at a very slow velocity and convection pushes it out. They use outside air as necessary to aid in cooling or heating without adding any cost.

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ANDY LUFT
Director of Production

That system accounts for 29 percent of their overall energy savings and allows them to keep the heating and cooling equipment out of the hall.

"Part of good acoustics is great silence," says Director of Production Andy Luft.

Additional energy savers installed include pump controls to help them lower the pressure to supply hot water and a humidification system, which keeps the humidity constant in public areas.

"We can add humidity in the winter to make the temperature feel warmer and subtract humidity in the summer to make it feel cooler," explains Luft.

Worth the effort

The new and improved space has everything they need. With the music theater in use more than 300 days a year and the new concert hall occupied more than 200 dates a year, it's a good thing they built efficiency in from the start. There's no time to slow down now.

"We all have to be responsible for our own carbon footprint, whether you're an individual or a business," says Luft. "The organization is always looking to be responsible, but cost efficient, too."

Project Highlights

- Estimated annual energy savings: 340,735 (kWh) and 874 (Dth)
- Estimated peak energy reduction: 25%
- Estimated annual energy cost savings: \$49,934

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