Business Energy Audits

- Project Design Assistance
- Conservation Rebates
- Grants

Energy-conscious building design often involves integrating new or existing systems in unique ways. As buildings become more complex, it is increasingly important to ensure that all systems—heating, ventilation, air conditioning, electrical, lighting, plumbing, building envelope, etc.—work together for maximum performance.

One way to do this is through commissioning, a systematic process of assuring by verification and documentation that all building systems are installed properly and interact in ways that meet the design intent and operational needs. It includes training of building operation personnel on all equipment and systems to achieve consistent long-term results. The objectives are to improve the building turnover process from contractor to operator, verify system performance, reduce contractor and designer callbacks, ensure proper long-term operation and conserve energy.

Commissioning was a popular topic at the 2009 Energy Design Conference and Expo, held at the Duluth Entertainment Convention Center (DECC) in March. This year’s conference offered a new track specifically focused on improving the energy performance of commercial facilities.

Rebecca Ellis, president of Questions & Solutions Engineering, Inc., and a nationally recognized leader in the commissioning industry, was a featured speaker. Her presentations, Commissioning and Retro-Commissioning and Commercial HVAC and Commissioning, walked attendees through the commissioning process with examples of real-world projects, including information currently being gathered at the DECC itself.

Ellis and her firm have spent months meeting with designers, contractors, the building owner and maintenance personnel, reviewing historical information about the DECC, poring over plans for a multimillion-dollar expansion, and documenting the facility’s growing maze of equipment, systems and processes.

It is part of an extensive commissioning and retro-commissioning project that will help DECC owners and operators determine whether all systems—old and new—will perform as intended when the expansion is completed. Retro-commissioning applies the same principles and processes as commissioning to adjust and optimize existing systems.

Learn more about POWER Grant.

Minnesota Power’s Conservation Improvement Program
218-722-5642 or toll-free at 800-228-4966, ext. 2909
www.mnpower.com/powergrant/

The 2009 Energy Design Conference offered a new track to help participants improve the energy efficiency of commercial buildings.
The DECC owner chose to incorporate commissioning very early in the process—from the preplanning stages of the new construction portion of the project—to ensure maximum benefit.

Adding a commercial track to the annual Energy Design Conference reflects growing demand for energy-efficient commercial facilities. More building owners now recognize the long-term benefits of energy efficiency and are choosing to build and retrofit their facilities to standards such as the State of Minnesota Sustainable Building Guidelines (Buildings, Benchmarks & Beyond) and the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Green Building Rating System®.

“We’re hoping to educate commercial builders, property owners and facility managers about the value of energy efficiency and the importance of contacting Minnesota Power early in a project for maximum energy savings and rebates.”

Tim Gallagher, Minnesota Power

“Commercial construction professionals who understand high performance design and construction have a competitive advantage,” said Tim Gallagher, program director of POWER Grant, Minnesota Power’s commercial conservation program. “The commercial track is a new tool to help participants grow their businesses.”

Other commercial topics included commercial energy management, common energy-efficiency projects and their evaluation, LEED case studies, daylighting fundamentals and energy-efficient commercial lighting.

“Response to the new commercial components of the Energy Design Conference has been very favorable,” Gallagher said. “We’re already working to expand offerings for next year.”

Minnesota Power is funding research through its commercial conservation program to determine whether commissioning and retro-commissioning at the DECC improves energy performance. The DECC is a good candidate because it has many energy-consuming systems, has had multiple renovations, and is in the midst of an expansion that will integrate new systems.