

*Professional Education
Honorable Mention*

***The Daylighting Collaborative
Energy Center of Wisconsin***

PROGRAM OVERVIEW

The Daylighting Collaborative was started by various utilities, environmental organizations, and the state of Wisconsin to promote the incorporation of daylighting into mainstream design and construction. The collaborative brings together utilities, product manufacturers, state agencies, design and construction professionals, and other organizations interested in promoting building design that promotes the human, energy, environmental, and economic benefits of daylighting.

The program promotes the use of “cool daylighting” or cooling load avoidance daylighting—reducing the need for electric lighting while reducing the load for space cooling. The program advocates a basic approach for integrated design of the envelope, electric lighting, and HVAC systems to increase the energy performance of a building without necessarily increasing first costs (design and construction).

The Daylighting Collaborative provides these services:

- Technical training for design professionals—full-day seminars and summary “lunch and learn” sessions to introduce basic concepts
- Information for decision-makers—owners, facility managers, and occupants—through presentations and various printed and electronic media
- Demonstration sites of daylighting in practice in both commercial office and school spaces
- Technical design assistance to project designers

The program was initiated in 1999 at the direction of the Wisconsin Public Service Commission, which had previously directed the Energy Center of Wisconsin to work with Wisconsin’s electric utilities to perform a needs assessment and feasibility study for a statewide daylighting program. The program has operated primarily in Wisconsin, but also has done work in New York and Iowa.

PROGRAM PERFORMANCE

The program was initially designed primarily as a market transformation effort, seeking to affect the design of a majority of commercial office and school buildings in Wisconsin, as well as influence daylighting design for other types of buildings. By focusing on the design community as the primary target audience, the program sought to teach designers how to incorporate effective daylighting design into all future projects. To date, the program has exceeded expectations in reaching out to and influencing the design community in Wisconsin and elsewhere. Daylighting is now commonly adopted as a design objective—with its corollaries “natural light” and “outside views.” Daylighting in general, and cool daylighting

in particular, have become part of the vernacular of the design community in Wisconsin. Requests for information from the website and program have increased dramatically in the 3+ years that the program has been in existence.

Daylighting is also working its way into building design guidelines and related requirements. The State of Wisconsin Division of Facilities Development is adopting cool daylighting design guidelines for consideration in all new state projects. A Wisconsin state senator introduced a bill to require a change to Wisconsin's commercial building code that would mandate consideration of "daylighting that does not increase cooling loads." (While this bill did not make it to full hearings in the 2002 session, it is slated to be re-introduced in 2003.)

The technical training sessions have been very popular and highly regarded among participants, who have included architects, engineers, contractors, and other building professionals.

The program has established about ten completed demonstration sites where the concepts taught in the course are shown in practice. These have proven to be very influential, especially for design elements such as glass or luminaire selection. In turn, the collaborative estimates that about 50 building projects in Wisconsin and the surrounding states have incorporated cool daylighting as a result of the program. A set of these building projects are profiled in program literature as case studies.

LESSONS LEARNED

Education and training have been the primary focus of the Daylighting Collaborative. The keys to success included:

- *Design for behavior change, not information transfer.* The training sessions are designed around case studies. Participants are required to perform design calculations in class and are eligible for design assistance after the training to support them in applying the techniques on their first daylighting projects.
- *Balance content expert with education experts.* Instructional designers worked with technical experts to develop curriculum. "Train the trainer" classes focus on both technical experience and teaching skills.
- *Integrate training into market transformation strategically.* Training is designed for various levels—awareness building, introduction to skills, and advanced training. The marketing efforts feed the training, and in turn, the training feeds project identification and design assistance.
- *Provide value to participants by treating them as customers.* Participants receive continuing education credits required for their professions' licenses (AIA "learning units"). The program also increasingly emphasized Wisconsin-based case studies as projects began being implemented locally.
- *Evaluate properly.* Both on-site and long-term follow-up evaluations of training and education events are used. Post-training evaluations evaluate the application of both envelope and mechanical design techniques to measure impact on energy savings. Evaluation results feed future program design.

PROGRAM AT A GLANCE

Program Name: Daylighting Collaborative

Targeted Customer Segments: Building design and construction professions, including architects, lighting designers, engineers and contractors; also, building owners, facility managers, and other decision-makers

Program Start Date: 1998

Measures of Program Results to Date: The program has influenced 48 building projects.

Budget

Year	Program Costs
2002	\$250,000 per state
2003 (projected)	Not available

Funding Sources: Utility funding, Wisconsin Focus on Energy, New York State Energy Research and Development Authority, in-kind contributions from product manufacturers

Best Person to Contact for Information about the Program

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