No Fear Of Commitment
CHICAGO FIRMS MAKE BIG STEPS TOWARD 2030
By Steve Kismohr and Colin Rohlffing

AIA National created an initiative in 2009 to challenge its member firms to take a leadership role in reducing energy consumption in the built environment. By adopting the AIA 2030 Commitment, many firms have risen to this challenge—and Chicago is leading this initiative. Chicago is home to 24 of the design firms that have signed the commitment. That’s 15 percent of the total sign-on, and the largest involvement of any city.

By measuring the potential energy consumed in a proposed building, architects and their design teams can predict energy costs for building owners and operators. The AIA 2030 Commitment includes a simple, yearly reporting mechanism for tallying a firm’s predicted energy intensity for all buildings in the design phase. AIA Chicago’s 2030 Working Group, which created the national AIA reporting tool, has collected two years of reporting data from Chicago firms signed onto the commitment. The group was curious to see how Chicago matches up with the national data and how the data trends could provide additional insight for Chicago design firms.

On the national level, the year 2010 reporting encompassed more than 380 million square feet of the built environment. The average reduction reported for design firms was approximately 35 percent, using the Energy Information Administration’s Commercial Buildings Energy Consumption Survey 2003 data as a baseline. For lighting power density, measuring the watts per square foot for a given occupancy/space type, reduction on a national scale was approximately 21 percent. (Note that there is a +/- factor of 2 percent for this data.)

The 2010 results indicate that Chicago-based design firms are creating buildings that are predicted to use 32 percent less energy than the national average, affecting more than 39.2 million square feet of the built environment. The energy reduction reported

---

**AIA Chicago Participating Offices**

**2010 Predicted EUI Reduction by Building Sector**

- **2010:**
  - Assembly/Cultural: 30%
  - Education: 25%
  - Healthcare: 20%
  - Office: 40%
  - Laboratory: 30%
  - Residential: 22%
  - Retail: 10%
  - Warehouse: 15%

- **2011:**
  - 32% reduction

- **2009:**
  - 22% reduction

---
BREWER’S FEAST
DETAILS PUT A HEAD ON THIS PUB

ALSO INSIDE:
THE COMEBACK ARTISTS 28
ARCHITECTS GO TO EL 32

PLUS:
A TALK WITH RALPH JOHNSON 50
by Chicago firms is similar to that of all firms reporting nationally, probably due in part to Chicago’s high percentage of firms signed onto the commitment. These results also confirm a 10 percent increase in efficiency from 2009 levels reported in Chicago. Similar results can be seen among interior fit-out projects in our region. Collectively, Chicago-based firms are also designing spaces that are predicted to decrease lighting power density levels by 17 percent from ASHRAE / IESNA baseline standards—a percentage similar to levels reported in 2009.

The Chicago data accumulated over the two-year period also suggests that certain building types are predicted to be more efficient. Commercial office space and education buildings, including both higher education and K-12, are leading the way. Laboratories and healthcare facilities are lagging behind, possibly due to the high amount of energy required to operate these building types. Although Chicago residential building data also suggest a slower increase in energy efficiency, the national baseline metrics to measure this are currently under refinement.

Members of the working group have shared their best practices for incorporating energy reduction techniques in their designs and management techniques. Some noted the AIA 2030 Commitment has helped them organize their priorities and clarify the goals of energy efficiency in their practice. Given an imperative, they now have a reason to speak to the building owners about energy efficiency and related equipment. Using an energy model also provides data and graphical information firms may use to present multiple energy use options. Tracking the predicted energy use across multiple projects has also brought another set of parameters to understand the performance and skill sets of project teams and their consultants.

The Chicago 2030 Working Group predicts the increased performance of buildings resulted from a combination of energy efficiency awareness during design, inclusion of energy modeling in more projects, and the measurement of firms’ total designed energy use. Eileen Pedersen, the current Chicago COTE KC chair and working group member, said, “If you don’t measure it, you cannot track it.” The Chicago data indicates that 80 percent of 2010 design projects are performing whole-building energy modeling.

This number has increased significantly from past years and is becoming the norm for mid- to large-size projects. Residential and small commercial project designers are also beginning to realize the benefits of tracking designed energy use. The working group continues to expand its membership as more Chicago-based firms sign onto the commitment, and hopes to see an even greater increase in performance and firm participation continuing Chicago’s momentum for 2011 firm data.

For more information about the 2030 Commitment and to sign your firm up on the AIA 2030 Commitment, go to http://www.aia.org/about/initiatives/AIA078458. See www.aiachicago.org for more information about the reporting tool and Chicago’s involvement.

Steve Kismohr, AIA, LEED AP BD+C is a senior project manager at the Midwest Energy Efficiency Alliance. Colin Rohlfing, Assoc. AIA, LEED AP BD+C is the sustainable design leader at HOK’s Chicago office.