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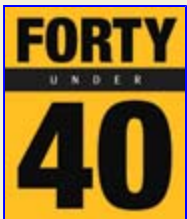
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CORRIDOR

2030 goal: Zero building energy use

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Don't just reduce, eliminate.

Although the popular green-friendly phrase is, "reduce, reuse, recycle," that sentiment doesn't go far enough, some say. Instead, local architects and construction companies are taking on a new challenge with building projects.

Many are adopting the 2030 Challenge, an industry-wide initiative aimed at completely eliminating the use of fossil fuels energy and emission of greenhouse gases in the construction and operation of buildings.

Much media attention focuses on the environmental impact of cars and other vehicles in this commuter-driven world. Buildings, however, are guilty of using 76 percent of the power plant-generated electricity in the country.

Groups such as the American Institute of Architects (AIA) are working together to reduce that number. Rick Seely is a board member of AIA's Iowa chapter and associate principal with OPN Architects. He acts as the sustainability guru for the company, leading it through its 2030 efforts.

"We don't get the most bang from our buck if that's (transportation) what we're going to focus on," he said. "The less energy we consume, the less greenhouse gases we're emitting. If we don't reverse it it's just going to continue to impact global warming."

The 2030 challenge is more aggressive than LEED (Leadership in Energy and Environmental Design) initiatives.

"The LEED program is a great start but it'll get us nowhere near this initiative," Mr. Seely said. "The value of LEED is it gives us a benchmark to compare one building to the next that is relatively easy to understand for a building owner or our clients. The 2030 plan is really an effort to look at the bigger picture, the targets that we're trying to get to, these reductions in greenhouse gases."

The 2030 plan advocates a 60 percent reduction in energy use by 2015, 90 percent reduction by 2030 and 100 percent by 2035.

"I think it's relatively easy to make the target reductions that we're seeing initially in the plan," he said. "I think as we start to move into 2015 and as we move down the road even to 2030. Basically what we're trying to get to is a building that sits on its site and consumes no energy to run or exist."

To reach those goals, major advances in solar and wind energy will likely need to be made.

"I don't believe this is going to happen unless we have advances in technology or mandates through our federal or state governments that require us to get there," Mr. Seely said. "For a building to sit completely off the grid and not consume any power, that's a big challenge right now."

A recently constructed Rockwell Collins engineering building was completed using 2030 and other green initiatives. For example, there are occupancy sensors that help coordinate the heating, cooling and lighting. OPN and the other building teams involved in the project managed to divert 1,000 tons of waste from the landfill during the construction process.

OPN is also working on the University of Iowa's Hygienic Laboratory along Highway 965 in Coralville. Crews are recycling nearly all of the waste that is produced on the site.

Kevin Monson, president of Neumann Monson Architects, said it's been his company's mission for years to promote what he calls the fifth dimension in design, long-term



sustainability. When buildings operate more efficiently, so can the occupants. Green buildings can also help a company retain workers, he said.

"People feel better under natural lighting and perform better as well," he said.

Neumann Monson is working on many of the post-flood rebuilding projects at the UI and across the Corridor. Since the flood, the UI has resumed with the construction of the Beckwith Boathouse along the Iowa River, the university's first LEED-certified building.

"It just shows, even a boathouse can be sustainable," he said.

Older buildings can be retrofitted with LEED and other sustainable measures, as well.

"If we can do anything to improve their performance long-term, that's going to pay huge benefits," Mr. Monson said. "There are fantastic opportunities to make huge strides over what they were originally."

The rate of new construction and rebuilding is significant in this country and an important consideration in the 2030 Challenge, he said. Each year, 1.7 billion square feet of buildings are torn down, 5 billion square feet are renovated and another 5 billion are built new.

"By the year 2035, approximately three-fourths of the built-in environment will be either new or renovated," Mr. Monson said. "If we take that challenge and in less than 30 years we have rehabilitated 75 percent of built-in environment, if we do that and save even 50 percent of the energy they're using now, you can imagine what that means on a total basis. But we need to do better."

Miron Construction is another company in the Corridor working with the 2030 plan. Theresa Lehman, director of sustainable services for Miron's Iowa offices, works to educate employees on LEED, consults with architects in LEED projects and implements green, yet economical, practices within the company itself. For example, using recycled materials in its marketing saves the company \$60,000 annually.

At construction sites, they work to eliminate erosion, airborne dust and waste. Miron also buys its material from companies within 500 miles of the site to reduce pollution related to transportation, she said.

"Sustainability is referred to as a triple bottom line, with emphasis on the people, the building occupants, the materials in place and it needs to make economical sense," Ms. Lehman said. "You need all three legs of that stool to make it work." **CBJ**



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