

The green behind green

How to pay for better energy efficiency

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B. Alan Whitson, president of Corporate Realty Design & Management Institute in Portland, Ore., advises corporations and building owners on the financial benefits of energy efficiency. *Crain's* asked the 57-year-old former real estate developer, broker and construction manager how to save money by going green.

What's the biggest misconception about green buildings?

That a green building costs more and that any benefits it provides are non-financial. The reality is it doesn't cost any more money if you are doing it right. In fact, creating a high-performance building can provide a higher return than any other investment you can find in the market.

Why is that?

If you build efficiently, the footprint will be smaller and the operating costs lower. There's a lot of waste now, which you see in electrical capacity. Most buildings in downtown Chicago are designed to use 8 watts per square foot, although you'd be hard-pressed to find a company using even 2.4 watts per square foot. If a building has 900,000 square feet, you're designing for a load of 7.2 million watts. Everything has to be oversized to match: the mechanical and electrical equipment, the ducts, the pipes. It makes it more expensive than necessary.

So why are developers doing it?

Everyone runs on this rule of thumb. They've been told that the tenants won't lease the space unless it can handle 8 watts per square foot. It's one of those urban myths.

Where else is there waste?

Buildings could take 8 inches to a foot off every floor by running the heat through the floor instead of ducts in the ceiling. That requires less material on the skin of the building. Another problem is the lighting. The amount we use is obscene. What's more important is the quality of the light. With less wattage and better color rendition, you can reduce energy used for lighting by 20%. Sticking with standard lighting and using daylight and occupancy sensors will reduce lighting consumption by 30% or more.

What's the biggest impediment to more efficient design?

One is a lack of integrated design. We work in linear format. Architects design from the outside in. They hand it off to structural engineers, mechanical engineers and electrical engineers. They work independently, hand it back to the architect, who combines it and gives it to the contractor.

What else?

The second is resistance from contractors and unions. The contractors compete on price rather than value. They fear if they do anything that is more expensive they will not get the work. The unions fear change. Why don't we have more waterless urinals? They are simpler, cleaner, more sustainable and more cost-effective. But the unions are afraid of them because there's less plumbing and therefore less work.