How we see – and spend – will change dramatically

ARE WE READY FOR SMART LIGHTS OR WALLS THAT GLOW?

By Jim Downing
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For Michael Siminovitch, if the design is right, energy efficiency will follow.

Siminovitch directs the California Lighting Technology Center in Davis, a partnership of the University of California, Davis, and the California Energy Commission as well as utilities and industry.

He talked with The Bee about the future of lighting and his approach to illumination.

We often think of energy efficiency as a matter of being frugal, of doing without. You say it doesn’t have to be that way. Why’s that?

We look at energy efficiency as really looking at user amenity, looking at comfort, productivity, all of the quality-of-life kinds of experiences. And whenever we develop a new lighting system, what we want to do is bundle multiple objectives together, looking at the quality of the near environment, making people happier and more productive in the spaces with better lighting. And incidentally it’s more energy-efficient.

It’s not a function of doing with less or doing with poorer lighting. Better lighting can actually do better things for us, but also save lots of energy.

What are some examples?

We have a “smart lighting” initiative here – smart lighting means using lighting when it’s needed and using it less when it’s not needed. By marrying these two functions, you do something interesting.

One issue is looking at daylight integration. We do a very good job of daylighting buildings (using the sun as a source of interior light) in California. But we do a terrible job of what’s called “daylight harvesting.” We don’t reduce the lights in the

ENERGY EFFICIENCY MAY COST TO START, BUT IT WILL PAY OFF

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The bad economy is prompting Americans to save instead of spend. But spending less makes the economy even worse.

One small way to help break the cycle? Invest in efficiency. Done right, it allows you to save and spend at the same time.

This week, we offer a package of tips and discussions on how to take advantage of incentives and rebates to trim your energy bill, and how technology is changing the efficiency outlook.

The federal stimulus package passed in February includes $20 billion in spending on energy efficiency – the biggest such investment in U.S. history. A good place to start: http://energy.gov/energystar
Efficiency: Future lighting systems will be invisible

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of daylight. In fact, people working in areas with high levels of natural light have been shown to be more productive and less stressed than those in more artificially lit areas.

But what’s new is the potential for daylighting to be even more efficient and effective. In the past, daylighting systems were expensive and required a lot of maintenance. However, new technologies are making daylighting more accessible and affordable.

One example is the use of automation and smart technology to control lighting systems. This allows for more precise and efficient control of lighting levels, which can save energy and improve comfort.

Another example is the use of materials like smart glass and light-redirecting films. These materials can help to redirect sunlight into areas where it is needed most, improving the overall efficiency of the lighting system.

Tips: Energy efficiency makes economic sense

LOW-LIGHT ENERGIES

- Smart glass and light-redirecting films can help to redirect sunlight into areas where it is needed most.
- Automation and smart technology can help to control lighting levels more precisely and efficiently.
- Daylighting systems can be more accessible and affordable with new technologies.

The city of Sacramento will soon be implementing a new lighting system that is expected to save 50% of the energy currently used by the city. This is just one example of how energy efficiency is becoming more and more important.

In conclusion, energy efficiency is not only good for the environment, but it also makes economic sense. By implementing energy-efficient technologies, we can save money while also reducing our carbon footprint.