

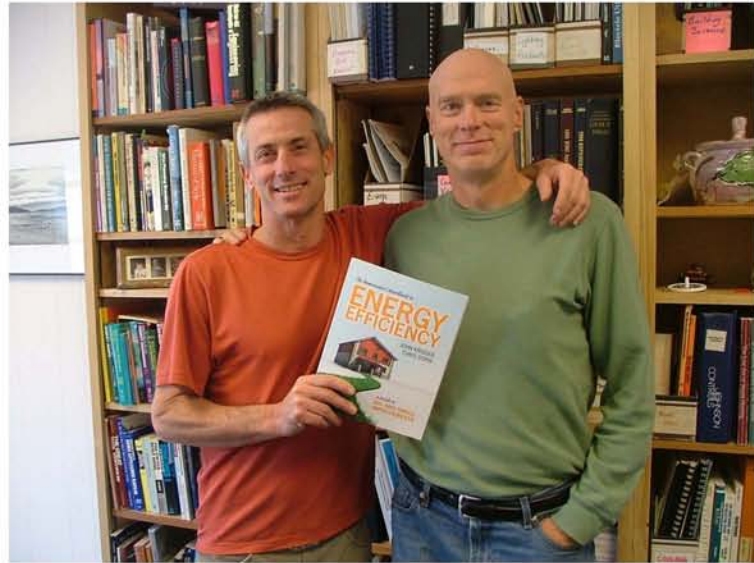
HAPPY HOLIDAYS

FROM THE STUDENT ADVOCATES FOR VALUING THE ENVIRONMENT

The S.A.V.E. Foundation endorses “The Homeowner’s Handbook for Energy Efficiency,” by John Krigger and Chris Dorsi as the ultimate guide to energy efficiency within the home. This book can be bought at savemobile.org for \$30 with proceeds going to recycling efforts within the city of Helena.



Also, give a sustainable gift over the holidays! With every donation of \$100 or more, Saturn Resource Management, will give you a free copy of “The Homeowner’s Handbook to Energy Efficiency.” Your donation to the S.A.V.E. Foundation will go towards environmental advocacy and recycling organization throughout the region. We hope the article below by John Krigger inspires you to ‘Be Green’ these holidays and take a step towards becoming more energy efficient. For more information please visit savemobile.org or call 449.6008.



Chris Dorsi and John Krigger of Saturn Resource Management hold a copy of their book, “The Homeowner’s Handbook for Energy Efficiency.”

We sense that a profound shift is taking place in how many of us view our homes. That shift is driven by the cost of energy, by the recognition that we all share a finite set of natural resources, and by the hope that our homes can house us but not burden us. We hope the advice we offer in The Homeowner’s Handbook to Energy Efficiency helps you create a shelter that is safe, secure, and sustainable, and that it helps you move one step closer to claiming control of your own housing. We wish you luck in the endeavor. -- Chris Dorsi

DEEP ENERGY REDUCTIONS by John Krigger

It was 30 years ago in April that Jimmy Carter urgently asked Americans to reduce their energy use in order to achieve energy security, mitigate environmental destruction, conserve natural resources, and avoid future conflicts over energy. Carter was frustrated by the lack of interest in conservation. He said, “our energy problem is worse today....because more waste has occurred, and more time has passed by without our planning for the future. And it will get worse every day until we act.” American demand for energy has increased in the 30 years since President Carter issued this call for conservation, and each passing year without resolute action further jeopardizes our ability to meet our energy needs while preserving our quality of life.

We have little choice but to eventually reduce our energy consumption. A combination of technical improvements and behavioral changes supported by a shift in policy could save us from the embarrassing realization that we can no longer afford our energy costs. Progressive conservationists face skepticism over our focus on deep reductions of 70 to 90 percent. Although conservation on this level requires some sacrifice, it is possible, as illustrated by the successes with green home construction and the passive housing movement.

Decades ago, Amory and Hunter Lovins showed that there is a tipping point where the extra effort and investment in conservation suddenly becomes convincingly superior to a conventional approach. The Passive House or zero-energy-home approach demonstrates this economic tipping point through the goal of a 90 percent reduction in energy use.

My first American experience with the deep-reduction approach was working at the National Center for Appropriate Technology in Butte starting in 1979. NCAT architect Bob Corbett partnered with local entrepreneur Brian Curran to design factory-built super-insulated houses at a business called Buffalo Homes. NCAT produced this popular booklet back in 1980, and we all thought we were on the cusp of a new movement in energy-efficient housing.

We learned the hard way that social acceptance doesn’t necessarily follow technical innovation when Buffalo Homes failed in 1983. Nevertheless, over the years, super-insulated homes and super-insulated retrofits have continued in North America, although not many and not within an organized framework. Super-insulated homes are currently being built in North America under the banner of zero-energy homes and there is also a small American passive-house movement emerging.





John Krigger is a Helenan and a nationally recognized expert in the field of energy conservation technology. He is part of Saturn Resouce Management Inc.

In contrast, the typical American McMansion squanders money on blind adherence to a fashion that makes new homes look like they have already been badly remodeled. Let no one tell us that insulation, shading, air sealing, and other conservation measures are too expensive. Too expensive compared to what? Compared to what we spend on fireplaces, spas, and unnecessary light fixtures for our homes? Compared to the cost of securing our supplies of middle-east oil? We already spend \$40 billion on building renovation every year. Adding another 20 percent to our major renovation budget is probably all we need to start securing deep reductions in energy use.

“Let no one tell us..conservation measures are too expensive”

Rethinking our expectations is important because if somehow we can reduce expectations, it makes our deep reductions much easier to achieve. I learned how to reduce expectations while living in the Czech Republic between 2003 and 2006. My wife and I discovered that our clothes didn't need washing as often as we had previously thought. This resulted from less clothes-washing convenience compared to at home. Washing machines are small and everyone dries their clothes on clotheslines and drying racks in the Czech Republic.

One of my first Czech friends Jaroslav Shultz, a mechanical engineer and graduate of Michigan State University asked me why

Americans use electric lights during the day in buildings with windows. Czechs evidently believe that offices with windows need no artificial light during the day. I see this ethic at work in many German and Austrian buildings too.

York Ostermeyer, a German passive house specialist, was told while visiting Japan that Japanese homes are hot in the summer and cold in the winter, but he had a difficult time getting an opinion about whether or not comfort was acceptable. The Japanese are rather reserved in their opinions. After a lot of polite questioning, someone finally explained that indoor temperature variation was the natural order of things and necessary for people to adapt to the changing outdoor environment. Later he learned about a government standard that said that indoor temperatures between 60 and 90 degrees F were normal.

These anecdotes are important to understanding how people's expectations determine what constitutes an acceptable indoor environment. Do you see how widely these expectations vary and how they might dramatically affect energy consumption? We North Americans currently have some unsustainable expectations, which we will eventually have to revise. I hope we can do so voluntarily.

“We must make deep reductions....to preserve our quality of life, and to ensure energy sustainability”

Our current incremental-savings approach generates unexpected complexities, stumbles into problems, attempts halfway solutions, and produces unsatisfactory results. Our current energy-program goals and standards are too complex, too vague, and too low to produce the deep energy reductions that we're going to need to extend our prosperity to our children and grandchildren. We do face skepticism over this goal of deep reductions. The social, political, technical, bureaucratic, and behavioral challenges loom large indeed. We absolutely must make deep reductions in the next 20 years to preserve our environment and quality of life, and to ensure our energy sustainability for the future.



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