

# GREEN *edge*

HEROES BEFORE LEED:  
GREEN PATRON SAINTS

BY PETER RUMSEY, PE, CEM, AND JASON F. MCLENNAN, LEED AP

In the mid-nineties Sym Van Der Ryn published an article that he called “Patron Saints of Ecological Design.” In it, he described the individuals who helped shape his own ideas – people whom had inspired him and taught him to become the green visionary that he’s been over the last three decades.

The ever increasing volume of LEED projects springing up around the country means that more and more architecture and engineering firms are developing experience designing and building green structures. Increasing numbers of ‘experts’ are available to help with questions or to invent strategies for reducing environmental impact. This is fantastic news for the newly initiated, but we remember a time – when both of us were getting our start in the green building industry – when there were considerably fewer people to turn to for support, guidance and ideas. This column honors just a few of the pioneers who helped blaze trails for all of us.

For Jason, the two who have influenced him the most are Bob Berkebile and Pliny Fisk III.

## **BOB BERKEBILE**

Bob Berkebile was an advocate for sustainable design even before the term “sustainable” became a buzzword within the design and construction industry. He studied under Buckminster Fuller during the 1960s, and spent years working with renowned environmental thinkers, including Amory Lovins and Wes Jackson, presi-

dent of The Land Institute. For the past 30 years, Berkebile has committed his life to restoring social, economic and environmental vitality of communities. Berkebile was the founding Chairman

of the AIA Committee on the Environment (COTE) and served on the board of the U.S. Green Building Council. Highly regarded by fellow professionals and recipient of numerous awards, he has been involved in some of the most significant national demonstration projects from the early nineties to the present. Berkebile’s greatest gifts to the profession have been his ability to communicate and inspire people to see the larger potential in their projects and themselves. His style is openly collaborative and warm—and almost everyone who has worked with him leave better at what they do—and better as people. Berkebile is the kind of leader we all aspire to be and is a major force behind the success of the green building movement. For the last eight years Jason has worked closely with Berkebile, first as his disciple, and then as his partner at BNIM Architects in Kansas City.

## **PLINY FISK III**

Pliny Fisk III has been a pioneer and leading thinker in the green building movement since the seventies – and always ten



*Bob Berkebile*

years ahead of his time. Fisk, a co-director at the Center for Maximum Potential Building Systems in Austin, Texas, has been an inventor of numerous systems and technologies and has done more than



*Pliny Fisk III*

just about anyone in the green building industry to help increase the understanding and importance of regional building materials and systems. Fisk’s early work focused on the developing world and on the fundamental questions regarding what it meant to build sustainably. In the early nineties Fisk was instrumental in creating the Austin Green Builder Program, the country’s only award at the 1992 Earth Summit. The Austin program has gone on to spawn similar programs in cities all over North America. Fisk’s effect on the movement has rippled out beyond his immediate sphere into design, construction and building science. As a relentless and effective educator, numerous architects and builders can point to time spent at the Center where their most fundamental ideas on the built and natural environments were shaped. Fisk’s ideas on regional mapping and life cycle analysis has been critical in Jason’s own understanding of sustainable design and he worked with Fisk on and off for the last decade on projects ranging from the University of Montana EpiCenter to the University of Texas School of Nurs-

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ing. His unique talent is his ability to see connections between systems that go from the microscopic level (how fly ash works, for example) to the macro level of carbon balancing a whole city or country. Few people in any profession have Fisk's range of vision.

Ecotone Publishing is publishing biographies of both Fisk and Berkebile in 2005 and 2006 respectively.

Now to Peter's picks. For the engineer motivated to see a more sustainable future, there are two environmental heroes that stand out from the long list of great people that have moved the field forward over the last two decades: Amory Lovins and Lee Eng Lock.

#### AMORY LOVINS

Amory Lovins is the well-known proponent of energy efficiency as a key economic and security strategy. On a policy level, no single person has done more to advance energy efficiency in buildings as well as all sectors of the global economy. Lovins started promoting the "Soft Energy Path" in the 1970s during the U.S. oil crisis. At that time, much to the consternation of the mainstream energy forecasters and policy analysts, he projected that energy use with a moderate amount of attention to soft energy alternatives would grow only modestly and that the steep increases in energy use were misguided and incorrect. As it turns out, Lovins' projections were proven correct and his critics were proven wrong. This work helped to spark the efforts of major utilities throughout the country to initiate aggressive efficiency programs. It was Lovins who wrote and talked at length about how the benefits of efficiency strategies that improved indoor air would yield worker productivity benefits that far outweighed the simple energy savings. So was born the "multiple benefits" of energy efficiency concept. This work in part played an

important role in motivating the creators of the LEED system to emphasize indoor environmental quality. Despite his large ideas, Lovins has always had a love for the technical details and the creative side of engineering. Peter has spent many a design charrette with Lovins on a wide variety of buildings and industries enjoying the existential pleasures of engineering.

Lovins has had a major impact on the automobile industry, semiconductor industry, power generation industry, building industry and several others. He was named a MacArthur Fellow in 1993 and has scores of other awards, along with nine honorary doctorates. Nonetheless, Lovins has always been and continues to be accessible, kind, and a tireless teacher to engineers, including Peter, and others who need and want to understand how to transform our economy and society to a more sustainable one.

#### LEE ENG LOCK

Lee Eng Lock is a less known engineer that has had a quiet but significant impact on efficient building design in this country as well as throughout the world. Lee is a Singapore based engineer that has pioneered best practice energy efficient design of HVAC systems for the last 20 years. His first job out of college was working for the Singapore Government, where he spent three years studying and measuring large HVAC systems performance. Through this experience, he gained a clarity and understanding of HVAC systems that is unrivaled in the industry. In one project in Singapore in the late 80s, the energy use was reduced so dramatically the utility company thought that the building owner had



Amory Lovins

been tampering with the electric meter. Lee was first discovered in the U.S. when Compaq Computer Corporation learned of the low energy bills of their Singapore assembly plant designed by Lee. Compaq worked with Lee to build a high tech campus outside of Houston that was arguably the most efficient building project in the 1980s. Lee was one of the key technical authors of the Competitek and then ESource Technology Atlas on energy efficient HVAC systems first written in the 1980s. In the late 1990s Peter worked with Lee in helping to make STMicroelectronics, one of the world's top computer chip makers, a global leader in industrial energy efficiency. He pioneered the concept of high accuracy instrumentation and long term one minute trending of energy use of HVAC and industrial systems. Lee takes a very integrated approach where energy waste is eliminated in all possible areas. His favorite saying is, "Like Chinese cooking, use everything. Eat the feet."

So, from Peter and Jason, we raise our glasses to these four eco-pioneers and many others who have helped inspire us and the larger green building movement get to where it is today. Cheers!+



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