



COLORADO REAL ESTATE JOURNAL

THE COMMUNICATION CHANNEL OF THE COMMERCIAL REAL ESTATE COMMUNITY

AUGUST 17, 2011 – SEPTEMBER 6, 2011

Applying the AIA 2030 Challenge

The AIA 2030 Professional Series is a focused, step-by-step process of how to meet the ambitious goals of The 2030 Challenge. With buildings using an estimated 49 percent of total energy consumption, architects' influence on meeting this goal in such a short time span becomes a major factor in the success of the program. The challenge itself has benchmark goals of reducing greenhouse gas emissions of 70 percent by 2015, 80 percent by 2020, 90 percent by 2025 and, of course, carbon neutral (or 100 percent) by 2030. If these goals can be reached, we stand a good chance of stopping, or even reversing, some of the effects of global-warming by moving the United States toward greater energy independence.

Ours is a boutique design firm of architects and interior designers. We are tasked throughout a project with being a source of education about sustainability strategies. These areas range from proper solar orientation to sizing the right mechanical equipment, all of which impact how much energy a building will use. Our clients need and want to understand their energy consumption and carbon footprint. Our participation in the AIA 2030 Professional Series has allowed us to be the conduit for this valuable program. This series gives participants further resources and knowledge to tackle any obstacle that should arise through the course of any project. The series was established with AIA Seattle



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integrated project delivery has shown positive results by having multiple consultants selected and working on the project from the very beginning. Currently our firm is using IPD on the Wheeler Opera House tenant improvement project; efficiencies have been established and the entire team is informed and responsive, having been involved from project inception. Session Two (February) addressed more in-depth discussions of *targets and load reduction* to ensure owners, architects and consultants are all speaking the same energy language, similar to understanding the common term of miles per gallon. In Session Three (March), the focus was on *climate responsive design* and utilizing past data and inventory to inform future decisions. This session assisted us internally as we design large custom residential homes, small commercial spaces and have specific energy concerns in both high alpine and urban environments. Session Four (April) discussed *thermal envelope*

last year and has grown to include Colorado this year as a 10-part series that began in January and will complete in November.

Session One (January) began by emphasizing how

lopes and the importance of maintaining the energy you do use and not being wasteful. Walls and roofs are obvious pieces of an envelope, but not forgetting openings and foundations and how air infiltration and exfiltration can be both a benefit and hindrance if not detailed properly. We are committed to having more energy audits performed on our projects in order to track the data and make informed decisions on future projects. Finally, Session Five (June) looked at *passive solar design and strategies*. We perform solar studies on our projects in order to harness the power of solar thermal energy. Specific emphasis is focused on how people exist in residential and commercial spaces as the load demands vary greatly between day and night, workday and weekends.

Through the midpoint in the series, we have studied the benefits of IPD, analyzed goals and began to dissect the many components that make up a sustainable project. As we move forward, new sessions (July-September) will explore illumination systems and daylighting, sizing equipment, and proper use of on-site power. Once we examine the many remaining aspects of a sustainable project, the series will shift gears and educate participants on how to return the knowledge to their respective firms and teams (October-November). This will be an important step in the series as it will give this knowledge back to the end users.

The AIA 2030 Professional

Series has been a great resource when looking to push sustainable design further to the forefront. LEED and the U.S. Green Building Council already have established sustainable design as a mainstream discussion, but it is important for design professionals to be able to guide clients down this path. As more and more owners look toward sustainable properties, better education has resulted in better investments and ultimately higher return on investment. These sessions have allowed a handful of professionals in Denver and surrounding areas the opportunity to further understand this process, discover new resources they might not have already known and thus improved the overall project.

The microview of sustainability is a must in all projects and this series further illustrates that need. As fossil fuels continue to escalate in price, so do consumer goods. It is our responsibility as professionals to serve not only our clients but also mankind as best we can, which includes minimizing overall impact. The 2030 Professional Series has given our firm the knowledge and leverage to create the next wave of energy-efficient buildings and help set them apart in a struggling and tight marketplace. As the series has grown from the program in Seattle, architecture firms should include this into their internal continuing education programs to stay competitive and build value into their projects.▲