

## **Programs for the Denver Meeting (June, 2013):**

### **Seminar 4 (Intermediate)**

Sunday, June 23, 2013, 11:00 AM-12:30 PM

#### **Realizing Sustainability with Commissioning**

*Sponsor: 7.9 Building Commissioning*

*Track: HVAC&R Fundamentals and Applications*

*Room: Plaza Ballroom B*

*Chair: Rocky Alazazi, Member, Executive Director, City of Taylor, Taylor, MI*

The value of building commissioning is a well- documented and recognized process. The United States Green Building Council (USGBC) has recognized this value and made Fundamental Commissioning a mandate on most LEED projects (V3). USGBC also offers Enhanced Commissioning point options for starting the commissioning process before 50 percent construction documents (V3) and is seeking to name by reference the National Institute of Building Sciences (NIBS) Guideline 3, Commissioning The Building Enclosure (V4). However, do any of these commissioning processes fully address moisture control and some of the risks associated with Green high performance buildings? While green buildings have many positive benefits, there is also strong evidence to suggest a direct correlation between new products/innovative design and building failures..

#### **Learning Objectives:**

1. Understand the differences between MEP commissioning of the building energy systems, and a commissioning process known as moisture control commissioning.
2. Describe case studies including innovative HVAC design and building system failures.
3. Analyze alternative approaches to achieve high performance goals.
4. List the phases in the design where it is critical to engage the Commissioning Authority in a project.
5. Explain the benefits of commissioning various building systems.
6. Discuss the interrelationships between different building systems.

#### **1. Expansion of Integrated Design and Commissioning Scope**

H. Jay Enck, Member, Commissioning & Green Build Solutions Inc, Buford, GA, USA, Duluth, GA

The measure of a high performing building is how it performs over its life from a people, planet, and profit perspective. USGBC is again raising the bar of performance, providing suggested approaches to lower the total cost of ownership in LEEDv4, including expanding credit for integrated design, building enclosure and monitoring based commissioning. The seminar educates attendees on these changes.

## **2. Commissioning Issues and Benefits Log**

Charles Dorgan, University of Wisconsin, Madison, WI

A major task in the commissioning process is identifying issues and tracking them until resolution. The party responsible for resolving the issue may be the designer, contractor, owner, or other party. Regardless, the ultimate responsibility is with the commissioning team, which is composed of all these project participants. The benefits log, similarly, identifies and often monetizes specific benefits that have been realized by the commissioning process. This presentation reviews the purpose of the issues and benefits log, and demonstrate strategies for effectively resolving issues.

## **3. Expanded Commissioning Processes and Preventing Moisture Problems in High Performance Green Buildings**

Donald Snell, Member, Liberty Building Forensics Group, Zellwood, FL

The value of building commissioning is a well- documented and recognized process to deliver a high performance building. However, the very concepts intended to enhance a green building's performance over its entire lifetime are many of the same things that make a building highly susceptible to moisture and mold problems. While green buildings have many positive benefits, there is also strong evidence to suggest a direct correlation between new design strategies and building failures. This talk focuses on the moisture related risks and show how the commissioning processes can be adapted to address those risks.

## **4. Expanding the Commissioning Process**

Norman Nelson, P.E., Member, CH2M Hill, Portland, OR

Many commissioning projects do not fully address moisture control and some of the risks associated with high performance buildings. This talk focuses on the moisture related risks and show how the commissioning processes can be adapted to address those risks. Case studies illustrate the direct correlation of how innovative design can lead to building failures; how innovative HVAC and energy driven design can lead to building failures; and alternative compliance options to these building failures in achieving high performance building goals.

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### **Seminar 42 (Intermediate)**

Wednesday, June 26, 2013, 9:45 AM-10:45 AM

#### **The Commissioning Process Standard**

*Sponsor: 7.9 Building Commissioning*

*Track: HVAC&R Fundamentals and Applications*

*Room: Plaza Ballroom F*

*Chair: Mike Eardley, P.E., Member, Cannon Design, Boston, MA*

The new ASHRAE Standard 202, The Commissioning Process for Systems and Assemblies, is completing its public review and is about to be published. This standard

will set the minimum requirements for the Commissioning Process which will be adopted by codes and other standards. It is derived from the commissioning process in ASHRAE Guideline 0-2005. This seminar explains the commissioning process requirements as well as the background, organization and contents of the standard as well as the informative annexes. It also explains its relationship to other standards and guidelines and application to construction codes and projects..

Learning Objectives:

1. Understand the history and development of the commissioning process.
2. Understand the basics of the Commissioning Process.
3. Recognize that Commissioning is a process and not just a single event.
4. Be able to apply the Commissioning Process for design and construction of building elements and systems.
5. Be able to utilize the commissioning process deliverable documents.
6. Recognize the use of the Commissioning Standard to codes and standards in the industry..

### **1. ASHRAE Standard 202-2013**

Gerald J. Kettler, P.E., Life Member, AIR Engineering and Testing, Carrollton, TX

The proposed ASHRAE Standard 202 will benefit the industry by ensuring that the built environment industry follows the owner's quality-oriented process for achieving, verifying and documenting that the performance of buildings, systems and assemblies meets defined criteria. This presentation demonstrates how the standard will support the requirements in other ASHRAE standards and programs. By taking the best practices from the existing Guideline 0 and writing a standard, the requirements can be adopted by code bodies and used by standards developers.

### **2. Delivering Performance with the Commissioning Process**

H. Jay Enck, Member, Commissioning & Green Build Solutions Inc., Buford, GA

Commissioning of HVAC and other building systems is a term familiar to those in the facilities industry, but many wish to learn more about the process and its benefits. This presentation describes the commissioning process, why it is necessary for high performance buildings, and discuss the commissioning requirements that are emerging in construction standards. The difference between new and existing building commissioning is also discussed.