



Construction Institute

*Advancing Relationships
Developing Leaders
Building Opportunities*

Save These Dates . . .

September 22, 2005

11th Annual Institute Golf Classic, Lyman Orchard Golf Club, Middlefield, CT

October 26, 2005

11th Annual State of the State, Radisson Hotel, Cromwell, CT

November 10, 2005

Member/Guest Social Event of the Year, Farmington Club, Farmington, CT

December 8, 2005

Owner's Forum, Northeast Utilities, Berlin, CT

January 26, 2006

North/Central Region Forecast, Basketball Hall of Fame, Springfield, CT

February 24, 2006

Southwestern Region Forecast, Housatonic Community College, Bridgeport, CT

March 23, 2006

Member/Guest Social & Facility Tour, UofH ISET Facility, West Hartford, CT

Commissioning Solves Building Problems

Standard design and construction are no longer enough to assure that a new building will function optimally, considering today's accelerated construction schedules and advances in building systems. Commissioning is a series of construction documentation and testing activities that analyze how a building functions before the space is occupied.

A professional commissioning provider tests the operation of critical mechanical and electrical equipment. Commissioning is appropriate for an existing facility as well as one that is under construction and can solve equipment problems before they become serious.

Many building owners don't realize these services are only available from commissioning providers and are not included in design and construction. Consider a few tasks in building a fume hood for a typical laboratory construction project. A mechanical contractor installs an exhaust fan, a sheet metal contractor builds the exhaust duct around the fan, and a temperature control contractor installs sensors in the exhaust duct. Several hoods are built in one space and have to interact with each other. Only commissioning providers examine how all of these pieces function together as a system according to the intentions of the designer.

Energy Savings

A commissioning provider should look at installation issues, as well as making adjustments. This ensures that a system will operate as efficiently as possible within the design intent and see that the systems are fine-tuned for the specific application. Energy savings are not necessarily the intent of commissioning, but can be a by-product of the service. Commissioning will help a building operate more efficiently, which can lead to cost savings.

Here's one example: a variable air volume handling unit supplies air with a 50 horse power fan motor. A duct static pressure sensor

measures the air pressure in the supply air ductwork and the fan motor reacts to the pressure by running faster or slower. This fan motor may only need to operate at an annual average power draw of 30 horse power. However, if the sensor isn't working properly, the fan could operate at a higher speed, or even full speed, which could cost an extra \$5,000 per year. The time it would take for a commissioning provider to determine if the sensor works properly is about 15 minutes.



Commissioning and LEED

Hiring a commissioning provider to write a commissioning plan, perform functional testing, and complete a commissioning report is a prerequisite to Leadership in Energy and Environmental Design (LEED) Certification. The LEED Green Building Rating System is a voluntary national standard for developing high-performance, sustainable buildings. The

(please see Commissioning on page 3)

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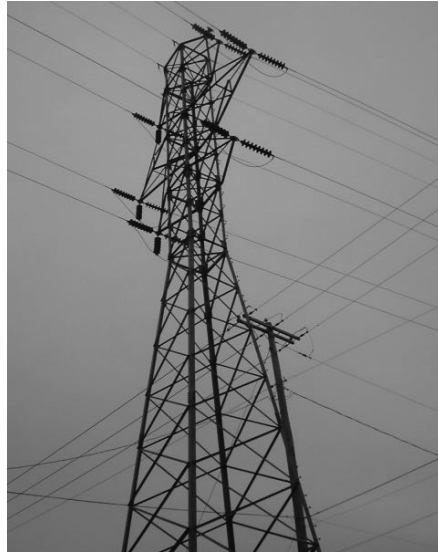
Surging Power Costs Impact Connecticut Businesses

In any state, energy is a significant cost of doing business. Yet, for Connecticut businesses, energy costs are among the highest in the nation, often exceeding labor costs and other product costs. In fact, in Connecticut, emerging electric energy costs and concerns have converged. The dearth of transmission and generation in the State, particularly in Southwest Connecticut, have serious cost and reliability consequences for all Connecticut consumers.

Not so long ago, utilities furnished all components of electric service including generation, transmission and distribution. This is no longer the case, with generation supply now being provided by separate entities. Yet, the tight margin between generation and transmission in Connecticut has resulted in many Connecticut generation owners securing expensive Reliability Must Run (RMR) Agreements instead of relying on the New England power market for compensation. RMR Agreements provide payments to owners of certain generating units to ensure they remain operational for reliability purposes. RMR Agreement costs are imposed on local electric distribution companies (EDCs) [e.g., United Illuminating Co. (UI) or Connecticut Light & Power Co. (CL&P)], which may then pass along the costs to retail customers. RMR Agreements could impose an additional

\$250 million in costs on all Connecticut ratepayers next year. The Connecticut Department of Public Utility Control (DPUC) decides how these wholesale costs are collected from retail ratepayers.

In addition, a federally approved wholesale market design, known as



Locational Installed Capacity (LICAP), is scheduled to go into effect on January 1, 2006. LICAP is intended to encourage long-term generation investment in Connecticut (and elsewhere in New England) at a projected annual cost of an additional \$375 million to Connecticut customers. These cost projections assume that Phase I and II Southwest Connecticut transmission projects go into service in 2007 and 2009, respectively. Without these transmission projects, the RMR and LICAP costs will be substantially higher. Phase I and Phase II transmission project costs are also substantial, due in part to the undergirding necessitated by recent state legislation and the Connecticut siting process. Prospective price tag estimates to maximize the Phase II transmission line undergirding exceed \$900 million. The specific impact on Connecticut ratepayers will be determined by the DPUC.

Higher energy costs have severe implications for the facilities management and construction industries. As energy costs

soar, the importance of demand-side initiatives, such as conservation, improved efficiency, and participation in demand response programs (in which customers volunteer to reduce their energy consumption through their local EDCs or competitive Curtailment Service Providers) cannot be understated. Investment in efficient products and processes will have near-term paybacks in energy savings, whether your business involves constructing single-family homes or operating energy-intensive manufacturing processes. Money from state energy funds, distributed through CL&P or UI, may also be available for customer conservation and load management initiatives. ISO New England (ISO-NE), which is the entity responsible for the operation and planning of New England's wholesale generation and transmission system and market, offers demand response programs that are especially appropriate for energy intensive businesses and provides additional tools to help manage energy costs. ▲

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Welcome New Members

Berlin Steel Construction Co.
 City of Hartford
 Connecticut Roofing Reps.
 Corporate Construction, Inc.
 Diggs Construction, LLC
 Groton Utilities, City of Groton
 Interstate Electrical Services Corp.
 JLC Preconstruction & Estimating Services, LLC
 Rinker Materials-Hydro Conduit Div.
 TO Design LLC

www.construction.org

The Construction Institute is looking forward to introducing its new website in the very near future. The new website will feature improved content, be easy to navigate, and support online program registrations on a secure site. ▲

Commissioning

(continued from page 1)

commissioning prerequisite falls under the Energy and Atmosphere category of the LEED program.

There is also an Additional Commissioning Credit available in the Energy and Atmosphere category that requires a third-party commissioning provider to review design development and pre-bid documents, among other criteria.

It is important to remember that fulfilling the commissioning-related aspects of LEED Certification need to be considered well in advance of completing construction documents.

Hiring a Commissioning Provider

A commissioning provider should have experience with the project's systems and building type. Ideally, the firm providing commissioning services will have a full-time, dedicated commissioning staff, not designers who do commissioning on the side.

Seek professionals with nationally recognized certification. The Building Commissioning Association (www.bcx.org) certifies commissioning providers when they have a minimum of three years of experience and have passed a written examination that demonstrates not only their technical knowledge, but also their knowledge of commissioning best practices, documentation and resources. ▲

F O C U S

30th Annual Membership Meeting & Awards Dinner



Distinguished Achievement Award recipient Dr. Charles H. Thornton makes a point about the future of the workforce and mentoring during his acceptance speech.



Distinguished Service Award recipient Peter Shmigelsky of the City of New Haven with his wife Anita, daughter Erika and son-in-law John Meyers.



Dr. Charles H. Thornton with ACE, CT State Board President, Maria Loitz of BVH Integrated Services and Chuck Cassidy, Executive Director of ACE, CT.



CI Member Bob Vitelli of Blakeslee Prestress with Member Services Committee Member Sharon Roberts of DiCesare Bentley Engineers and Member Services Chairman George Mulvaney of Mulvaney Mechanical.

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Banner Year for CI Education Workshops

The Construction Institute Education Committee proudly announced workshop attendance exceeded their goal of 400. With enrollment of over 433, the Institute enjoyed a banner year with the highest attendance ever recorded at its workshops.

Increasing numbers of workshop participants are signing up for the certificate programs, and the facilities management program appears to be meeting a real need. More than a dozen people completed their construction management certificate, and 23 people completed their facilities management certificate this year. Attendees included those from public and private institutions, small and large organizations, hospitals, schools, colleges and project management firms. Watch for the Fall workshop listings later in the summer. ▲



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