

Provider: Conference: Date:		Reed Exhibitions BuildingsNY 2012 May 2 - 3, 2012			GBCI CE HOUR APPROVALS			
Session Number (User created)	Session Title:	Total minutes of Instruction:	GBCI Topic Category (Pick one only)	Session Description (100 words):	Learning Objectives (Minimum of three)	Approved GBCI CE Hours	Is session LEED-specific?	Session meets LEED-specific requirements for the following LEED AP Specialties:
AD01	Active Design Guidelines Panel	90	Improvements to the indoor environment	Can transformations in the built environment inspire people to be more physically active, and make our communities healthier? According to a growing body of research, the answer is yes. New York City's Active Design Guidelines translates this knowledge into concrete strategies for the future. In this session, panelists will discuss how designers, planners, developers, and operations managers can adapt these Guidelines into their own projects to promote physical activity and help counteract the most pressing health epidemics of our time – obesity and chronic diseases such as diabetes. Learn methods of achieving the program's goals include building and site design changes, such as promotion of stair use and provision of on-site recreational spaces; and urban design changes, such as public space layout and promotion of biking, walking, and transit use.	1. Recognize the relationship between health and the built environment. 2. Explore the synergies between Active Design, environmental sustainability, and universal design. 3. Understand the Guidelines and its list of urban design and building design strategies along with related NYC policy initiatives.	1.5	No	N/A
AD02	Case Studies	90	Project Site Factors	This panel presents case studies and lessons learned from three very different types of projects with one thing in common: they were successful in achieving their objectives. Key questions that will be answered include: What were their goals and strategies? How did their approach to these goals and strategies evolve over time? How did they overcome their obstacles? The panel members will describe the process, design, construction, and performance approaches used to achieve significant energy savings and in two cases LEED Gold or Platinum certification on time and within budget in a corporate commercial environment.	1. Understand cost/benefit of various green building strategies and technologies 2. Understand efficient building management systems and their effective utilization. 3. Define approaches to cost effectively achieve LEED certification based on unique factors of the different rating systems	1.5	No	N/A
AD03	BIPV: Buildings as Powerplants	60	Stakeholder involvement in innovation	In this session, the panel of experts will provide proof points and industry expertise to make the financial case for dynamic facades. This session will outline dynamic facade solutions including building integrated photovoltaics (BIPV) which, through new innovations, can pay back initial costs within five years through energy savings and energy generation. Attendees will learn about the considerations for integration of systems that require close collaboration between various stakeholders. In addition, it will detail how new dynamic facade solutions combine benefits for architectural flexibility. And finally, the panel will discuss how to enable property developers and building owners to realize their visions for dynamic facades that reap economic rewards.	1. Understand the drivers and motivation for high performing facades 2. Understand the various considerations involved in the design of dynamic facades 3. Account for the different parameters, considerations and trade-offs that make the economics of dynamic facades	1	No	N/A
AD04	Clearing the Air: The Importance of IEQ	90	Improvements to the indoor environment	More High Efficiency Net Zero Buildings are being built each year, but they tend to be quite small. Implementing these strategies for mid-sized to larger buildings remains challenging. While, the biggest economic benefit of LEED arguably is improved occupant performance and health resulting from enhanced indoor environmental quality, these benefits are poorly recognized and can cut against other goals, such as energy efficiency. In the drive to improve indoor air quality (IAQ) and save energy, there is a tremendous shift on the horizon. Many building and design professionals strive to commission a 'smart building' – one that is green, healthy, environmentally conscious and operating in the most efficient way possible. This is why buildings with the correct air cleaning technologies are able to lower their operating costs while achieving better IAQ. Through case studies and analyses this panel will address several interrelated challenges as they apply to the next generation of efficient green buildings: 1. Building Envelope and Architecture 2. Internal heat gains and lighting 3. Heating and Comfort Air Conditioning 4. Ventilation and Infiltration Mandates.	1. Define 4 main ventilation-related architectural and engineering challenges to achieve net zero or very low energy usage 2. Appreciate the impact of indoor environmental quality on occupant health and well-being 3. Through new technology and design strategies, solve the apparent dilemma currently facing building and design professionals where high IAQ is equated high cost/energy	1.5	No	N/A
AD05	Window to the Future	90	Project systems and Energy impacts	Smart windows are a fast-growing segment of the glass industry that can be applied to retrofit, replacement and new construction projects to allow facility managers to offer enhanced security features and energy efficiency performance in their buildings. This panel presentation/discussion introduces smart windows and their light-control properties, demonstrates various configurations of smart window products and presents the sustainability benefits of these products. As building energy requirements are becoming more stringent and the market demands more glazing, the window industry is shifting from its "one-size-fits-all" to provide glazing solutions specifically tailored to different regions and applications. The panel will comprehensively cover emerging technologies and how they differ today as a result of the increase in demand from around the world for more energy efficient and sustainable products. It will also enlighten the participants in understanding the many different uses for dynamic glazing.	1. Understand the primary characteristics of active and passive smart window technologies, including those for retrofit, replacement and new construction projects. 2. Understand the sustainability benefits of smart window technology, including those related to energy efficiency and occupant well-being and how these benefits can support LEED certification. 3. Understand how smart windows, when integrated with a building automation control systems, can help optimize the dual benefits of security and sustainability.	1.5	No	N/A
AD06	Master Speaker Session - Restorative Human Urban Settlement: Sustainable Development as a Cornerstone of New Urban Revitalization	60	Project Site Factors	Carlton Brown is a green pioneer in the truest sense of the word. His firm, Full Spectrum of New York, has been at the forefront of innovative, green and affordable urban development from technical contributions to New York's first green certified high-rise residential—the Solaire—to the Kalbari, New York's first mixed-income green high-rise and the green-centered urban renewals of Jackson, Mississippi & Kibeho, Rwanda. Mr. Brown will share his vision and secrets of green success stemming from his decades of experience in real estate and development.	1. Illustrate the interconnected elements of New Urbanism, green design & Equitable Development 2. Demonstrate how green development can anchor urban renewal 3. Describe how green development is affordable	1	No	N/A
AD07	LED: Faster than the Speed of Lighting	60	Project systems and Energy impacts	As lighting manufacturers rapidly develop new solid state (LED) technologies for both retrofit and new construction, existing building owners, facilities managers, and other building professionals often need help sorting the grain from the chaff. Salesmen and advertising sometimes make claims that aren't supported by test results, or products are recommended for applications different than those for which they were developed. This panel of experts will help enlighten you about what's usable now and identify some of the best new lighting and lighting control options for current adoption in commercial buildings. The session will lay out guidelines and resources to help building professionals without extensive knowledge of lighting systems. Discover why some lower cost solid state (LED) retrofit options may yield less than desired results in others. Learning how to evaluate the Return on Investment (ROI) for a given retrofit option is important. Readily available resources will be discussed using some real world examples.	1. Understand which new lighting retrofit developments are worth considering and which ones aren't quite ready for widespread adoption. 2. Recognize what to consider when looking at LED retrofits. 3. Understand critical independent test results when selecting LED lighting options.	1	No	N/A

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				Both the popularity of LEED and the presence of new green building laws in New York and nationally raise the question: is this really saving any money? This panel will describe how LEED and local, state and federal laws are modifying the ways buildings are built and renovated. Also, it will present and discuss the success of investments in energy savings in multi-family housing through a variety of no-low cost ways to improve net operating income (NOI). Supporting these improvements in NOI, technologies are now available that gather and organize data from facility equipment, building management and automation systems, electric, gas, water meters and other metering devices. This session will discuss how the data gathered by an owner can be analyzed by software to present a usable picture of performance, and compare this with similar buildings, showing building owners how to comply with the laws and improve their bottom line.	1. Walk away with an introductory understanding of LEED and green building laws that are changing the way buildings are built and run. 2. Understand the financial goals of green building and whether saving money over the long term is realistic. 3. Learn what data and analytic tools are available both to verify energy savings from green building measures and to improve performance.	1.5	No	N/A
BP101	Verifying Performance, Green Building and Energy Efficiency: Does it Make Dollars and Sense and How do you Verify the Impact?	90	Project systems and Energy impacts					
				In this session, panelists will discuss a business case for metering & submetering and where it makes sense, as well as how the analysis of high frequency utility data from "SmartMeters" and Interval Data Meters can unlock opportunities for low cost/no cost operational savings. The Panel will address the current Local Laws now in force under New York's Greener Greater Buildings Plan with an eye to how compliance can be achieved through implementation of automatic meter reading (AMR) technology in five key areas, including: (1) energy audits, (2) retro-commissioning (RCx); (3) energy analysis; (4) energy savings measures and priorities and (5) system startups, which can help avoid unsatisfactory retrofit results that come from lack of follow-up in measuring and verifying (MBV) retrofit performance on a continuing basis. Energy-efficiency retrofit initiatives like the GGBCP are rapidly becoming law in many jurisdictions around the country, as municipalities seek to upgrade their existing building stock to more stringent energy performance levels. However such projects require resources, insight and planning. This session will help identify the benefits (economic and others) of metering and data collection methods and attendees will discuss ways to utilize information gathered and identify strategies for successful metering projects.	1. Identify the practical approaches and best practices of an Advanced Metering System, highlighting the economic and operational benefits achievable through sub-metering, including compliance with the new Local Laws under the Greener Greater Building Plan. 2. Understand how automatic meter reading and new analysis methods can find operational savings that can elude auditors and retro-commissioning agents. 3. Discover how to use meter data and post-retrofit measurement and verification to track building performance on a continuing basis to encourage behavioral and operational changes by building operators and occupants.	1.5	No	N/A
BP102	Metering for Measurement and Management	90	Other/Multiple					
				Being a truly sustainable firm is about more than just being "able" to deliver green projects. It's about aligning overall company vision, management, operations and project delivery with the demands of integrative design and collaborative relationships – and measuring company performance improvements as a result. Is your organization achieving its full potential, or are dysfunctions on your teams blocking success? What is the cost when your organization is not performing at its peak? What is the potential when it is? Most strategies and plans fail when rolled out to the organization because culture gets in the way. This session shares effective strategies for your company to build capacity to implement these strategies in the most cost-effective way and provides tools to enable you to implement comprehensive strategic initiatives in your firm. The strategies that you put in place improve profit and internal efficiencies and position your company to be a truly "green" firm to differentiate yourselves in a very competitive market. Through these experts, you will learn how tribal leaders build thriving and high performing organizations resulting in industry-leading productivity, innovation, collaboration, and job satisfaction. The outcome you will achieve will be greater strategic success, more effective workplaces, less stress and 3-5 times more profit!	1. Discover how effectively leveraging culture and sustainability concepts can untap wells for transforming organizational performance. 2. Formulate goals and strategies to achieve productivity and sustainability excellence & improve performance through actionable ideas, tools & strategies necessary to upgrade your organization. 3. Connect sustainability concepts to measurable business objectives and use industry metrics to evaluate your company's true (current) capability.	1	No	N/A
BP103	Managing for High Performance	60	Stakeholder involvement in innovation					
				Recent Federal, state, and local statutes clearly identify the efforts to reduce energy consumption and lower GHG emissions as a leadership initiative. That is, both the public and private sector building managers are required to develop strategies, implement and report on projects, and continuously improve their processes. Too often, the lowest level of effort is given to those initiatives that are the least understood. Where as many instances the failure to comprehensively address sustainability is due to the lack of buy-in by top managers. Among the most important aspects of justifying the costs of sustainability is the degree to which leadership aligns the mission of the organization with sustainability objectives. Organizations can experience improvements in cost savings, employee performance and increased sales due to sustainability being "part of the DNA" of the organization. This session will demonstrate how there is a direct correlation between increasing sustainability activity at the highest levels and moving down within the organization and the overall performance of that organization. In addition, the presentation will address how sustainability initiatives should be supported from the highest level of the organization and included in the mission and strategic plan.	1. Identify the critical success factors for effective sustainability strategic planning. 2. Understand how to choose the best measurement and standardized report model to validate sustainability outcomes. 3. Identify how to establish buy-in and strategic alignment with management and employees.	1	No	N/A
BP104	Leadership in Strategic Sustainability Planning	60	Stakeholder involvement in innovation					
				A panel of experts will review myriad laws and regulations of New York to help you BE GREEN and SAVE GREEN. Panelists will detail water conservation techniques and review new plumbing fixture requirements for buildings, air conditioning and refrigeration requirements, noise code rules and food service establishment wastewater discharge compliance. This session will reveal how to avoid costly enforcement actions, save on maintenance and utility costs and ease stress on your facility's infrastructure.	1. Understand water conservation techniques and how to avoid costly leaks in your building. 2. Discover when to perform proper periodic maintenance on air conditioning and refrigeration systems to avoid enforcement actions. 3. Learn the rules and regulations covering wastewater discharges from your plumbing infrastructure.	1.5	No	N/A
BP202	Greener Greater Compliance	90	Project systems and Energy impacts					
				All high-rise buildings suffer from one or more interrelated problems of indoor environmental quality (IEQ) and energy consumption. In this panel we will show how building engineers regularly fix these problems in existing buildings after occupancy and alternatively, how they can be fixed for one-tenth to one-thousandth the cost during design and construction. Real-world examples will be presented and attendees will learn how problems can be fixed easily prior to occupancy by proper commissioning and how designs can be improved to avoid problems in the first place. Tried and true techniques to better integrate a building's structure with it's envelope to reduce energy use and improve IEQ, such as separating the external components from the interior building structure across the envelope, will be discussed, including their role in reducing the carbon footprint of the building and contributing to a project's LEED Certification. The panel will share experiences of recent domestic projects that incorporate these elements and principles.	1. How building design can be improved to avoid problems in the first place. 2. Understand the role of the building structure in reducing building energy use. 3. Explain the conditions that should be avoided when insulating walls in order to prevent an unhealthy IAQ environment, via moisture condensation that could be optimal for mold growth.	1.5	No	N/A
EN01	Optimizing Energy for Healthy Buildings	90	Project systems and Energy impacts					

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EN02	Cogeneration Panel	90	Other/Multiple	<p>The panel will address key issues facing any project contemplating a cogeneration project. Panelists will describe what are the basic concepts and the pros and cons of different technologies available in the marketplace and in development. Participants will learn how to identify projects that are good candidates for the technology and what tradeoffs among reasonable design alternatives are indicated. The benefits of increased efficiency, significant energy cost savings increased reliability and in lower emissions per unit of power produced will be discussed. The difficulty of construction, ongoing maintenance and major maintenance intervals as well as the relative space requirements for each technology will be discussed. Finally, correctly matching the technology to the facility is critical to the economic success of cogeneration and this forum will address the "sweet spot" for each as well as identify situations where cogeneration should not be attempted.</p>	<ol style="list-style-type: none"> <li>1. Understand the principles &amp; technology of cogeneration combined heat &amp; power, including design, operations and maintenance.</li> <li>2. Understand the major decision points to determine if cogeneration should be considered and how to evaluate whether a given building or building complex is a candidate for a successful cogeneration project.</li> <li>3. Estimate energy savings including economic and environmental benefits.</li> </ol>	1.5	No	N/A
EN03	Commissioning Your Building Inside & Out	60	Project systems and Energy impacts	<p>The energy and operational savings present in the nation's inventory of existing buildings can be likened to "gold waiting to be mined." Unfortunately, much of this savings potential is largely ignored. Commissioning of existing building systems and façades is increasingly being employed to realize this high-return but untapped savings potential while improving building performance. Commissioning of major building energy systems is increasingly being accepted, but the façade is a critical building element that is frequently overlooked when it comes to commissioning and preventative maintenance. Façade deficiencies are often addressed only once they have resulted in leaking or serious distress. The panel will address available inspection options, frequency, and tools of the trade for all elements of building commissioning. Learn ordinances, current and emerging, that impact whole building commissioning requirements and how they are evolving. The panel will review what characteristics of building systems and façades that represent good commissioning candidates and how this rapidly expanding industry is evolving.</p>	<ol style="list-style-type: none"> <li>1. Develop an understanding of existing building commissioning and processes both inside and outside the building.</li> <li>2. Learn how to apply existing building commissioning to different kinds of facilities.</li> <li>3. Discover available building system and façade inspection options &amp; frequency.</li> </ol>	1	No	N/A
EN04	Solar Energy	60	Project systems and Energy impacts	<p>Solar energy, with its rapidly evolving technology, cost-effectiveness, and plethora of federal and state incentives, has grown rapidly. The reality is that solar is most effective when combined with a larger conservation and cost-saving program. Solar Roof development, for example has become more involved in LED lighting upgrades, taking a holistic approach by not only looking at solar, but also at upgrading lighting and electrical equipment. Federal and state governments recognize the value of upgrading the efficiency of the electric in buildings, offering rebates and tax credits for upgrades in energy efficiency. The result helps protect against rising energy costs and can save money. This session navigates the complexity of incentives including soon-to-expire federal Section 1603 grants, ongoing availability of solar renewable energy certificates (SRECs), and others.</p>	<ol style="list-style-type: none"> <li>1. Learn the best possible utilization of solar installations, including selection of equipment, sites and pricing.</li> <li>2. Determine availability of federal and state incentives tied to solar installation, how they can be accessed, how they can be utilized, and upcoming deadlines.</li> <li>3. Explore how solar energy can and should be combined with other sustainability resources, such as LED lighting and energy-efficient equipment, for maximum benefit.</li> </ol>	1	No	N/A
FN01	Green to Gold: Finance & Incentives Panel	90	Stakeholder involvement in innovation	<p>This panel addresses financial and tax incentives for green projects at the federal, state and local level. 3 experts in each of these topics will look at practical means of maximizing incentives for green projects.</p> <p>NYC has established leadership in enacting local laws to encourage energy efficiency in 22,000 buildings. DC, Seattle and San Francisco have enacted similar laws, much of which has been modeled from New York. Now, after more than a year in force, what are the lessons learned? How are building owners coping to pay for the required compliance of these unfunded mandates? What are some traditional and non-traditional tools to make compliance into a revenue positive and energy saving experience for building owners? At the federal level, the Energy Policy Act of 2005, Section 179D includes Federal Tax deductions available for the design of energy-efficient buildings including the upgrades for lighting, HVAC, or building envelope and new construction to a value up to \$1.80 per square foot for building owners and tenants. By implementing key strategies projects can realize valuable tax savings, significantly improve project ROI's and increase annual cash flow. At the local level, Local Laws 84,87 and 88 have sharpened the focus on energy consumption in large buildings. When owners and managers look for ways to pay for all of the additional services and upgrades, utility incentives from ConEd and state incentives from NYSERDA can help fund green projects. The experience of building managers working with incentives can help you decide if this is the right path for you.</p>	<ol style="list-style-type: none"> <li>1. Gain an understanding of the "do's and don'ts" of federal, state and local tax and financial incentive programs available and how they apply across the various green buildings stakeholders.</li> <li>2. Get practical tips &amp; learn about traditional and non-traditional tools for financing green projects whether to show compliance with NYC's greener, greater buildings laws, achieve LEED certification or simply make a better building.</li> <li>3. Think strategically about turning compliance into a revenue positive and energy saving experience.</li> </ol>	1.5	No	N/A
GG01	Green Buildings as an Economic Driver	90	Project systems and Energy impacts	<p>This panel session will address effective approaches to demystify and simplify the development process. Panelists will provide up-to-date information on navigating the government and legal system, explore available financial incentives and supports as well as provide effective strategies for developer engagement. This panel will share the benefits of how to build a successful relationship with the workforce development system in order to receive support for your projects including an interactive discussion of common obstacles to developer engagement and successful strategies to overcome these challenges.</p>	<ol style="list-style-type: none"> <li>1. Identify the most valuable developers and appropriate contacts by understanding their incentives and motivations</li> <li>2. Discuss financial incentives and resources including navigating government guidelines and legal requirements.</li> <li>3. Explore the potential of partnerships between the workforce development system and real estate development community, including the mutual value of developer-workforce agency partnership.</li> </ol>	1.5	No	N/A
GG02	Greener Greater New York Charrette	90	Project systems and Energy impacts	<p>New York City's Greener Greater Buildings legislation represents some of the most ambitious municipal energy efficiency mandates in the country requiring energy benchmarking reports for all New York City buildings over 50,000 square feet. The legislation was developed in support of PlaNYC, Mayor Michael Bloomberg's ambitious campaign to reduce citywide carbon emissions to 30 percent below 2005 levels and to reduce emissions from government operations to 20 percent below fiscal year 2006 levels by 2017. Using the intensive "Charrette" format, participants will discuss and evaluate the goals of the law, practical considerations of carrying out the benchmarking, problems with the roll out, what we've learned from the data, and the benefits and considerations of a doing a benchmark. Participants also will discuss how building owners are complying with the laws and how the laws are affecting the broader commercial real estate industry in New York City. Are there aspects of the law that could be improved or hinder the implementation of cost-effective strategies for complying? We hope to have an in-depth discussion of the benefits of compliance, presentation of a case study highlighting the energy savings achieved through compliance in numerous NYC buildings, and are there gaps in information and support?</p>	<ol style="list-style-type: none"> <li>1. The Local Laws associated with the Greener Greater Buildings Plan: the cost of complying with them and how to build a compliance strategy that fits your building.</li> <li>2. Understand what we have learned about energy usage by buildings in NYC and the limitations of benchmarking and how to work with the information it does provide.</li> <li>3. Learn how complying with the laws can help you achieve LEED-EB certification.</li> </ol>	1.5	No	N/A

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LD01	A Public Forum: Is the USGBC Moving Too Fast or Too Slow? Are LEED Standards Too High or Too Low?	90	Improvements to the indoor environment	The USGBC has been under significant pressure in recent years to increase the stringency of the LEED system and has committed itself to a process of major revisions every few years. The session will explore the unintended and intended consequences of this process and whether it is fundamentally changing LEED for better or worse. It will explore the crucial balance between the need to promote increasing levels of sustainability in buildings while continuing to ensure that the broader industry still sees LEED as being achievable. Audience participation will be encouraged. Session Audience: This session will appeal to those who are interested in understanding more about the LEED Rating System Development process from the perspective of LEED practitioners. It will be of interest to those with many years experience as well as to those relatively new to the standard.	1. An understanding of the process by which a LEED revision is developed and approved. 2. A basic outline of some of the fundamental changes in LEED 2012 3. Insights into the underlying reasoning behind the USGBC approach to its revisions	1.5	Yes	BD+C
LD02	Buildings in the Cloud: Cloud Computing, LEED and Advanced Design	90	Project systems and Energy impacts	This educational session addresses how new wireless, cloud computing products and services are breaking down barriers to implementing green and energy efficient projects. Wireless networks have continued to evolve and can now equal and in some cases surpass traditional wired networks in their ability to manage and control inherently dispersed and traditionally uncontrolled energy use such as plugloads, which can represent up to 25% of a building's energy load. Learn how global project teams can interact effectively and how coordination between different parts of the building management team can be facilitated wirelessly to improve building and employee performance. Questions that will be answered include: What is cloud computing, how is cloud computing being used in construction, how can cloud computing help overcome some challenges with LEED projects; How can you leverage wireless technology to cost effectively implement security and surveillance on your campus and buildings where it previously couldn't be installed or wasn't financially feasible?	1. Identify the technology tools needed for successful implementation of green building projects. 2. Evaluate the differences between traditional "project management" or "project information management" applications and this new class of software. 3. Learn how to improve energy efficiency, employee productivity, security and management through new wireless technologies and products available today.	1.5	No	N/A
LD03	Tomorrow's Envelope Today	60	Project systems and Energy impacts	Building envelopes that dynamically adapt to the changing environment not only reap big energy savings, but also improve the comfort and productivity of occupants with abundant daylight. Imagine a building that brings the natural outdoors in, completely unencumbered by the thermal and visual problems caused by excess solar heat gain and glare or by the mechanical workarounds that are conventionally used to combat this problem. This panel will provide a summary of contemporary building enclosure systems, how they interface, and how potential design and installation critical points, problems and failures can be addressed through an integrated quality control and quality assurance program.	1. Describe how dynamic glass and modern facade design techniques can be an architectural design enabler allowing other sustainable design aspects to be implemented that otherwise would not be possible. 2. Demonstrate cutting edge systems, materials and technologies to achieve energy efficient, stable and watertight enclosures 3. Incorporate expert technical review and quality control in project design and construction to ensure the best possible results.	1	No	N/A
MD01	BIM-BAM-BOOM	90	Acquisition, installation and management of project materials	Advances in simulation modeling allow designers, developers and owners to more readily conceive and visualize complex projects. The session will explore the evolution of these vital tools and help participants understand how they can be used to improve the sustainability of buildings. This session is of interest to Architects, Building Owners, Property Managers and anyone who oversees the design, construction and operation of buildings from large to small. As more building owners demand Building Information Modeling (BIM) from their architects, BIM has now entered into the mainstream of the delivery and construction of buildings. Architects and Engineers use BIMs to improve the construction document delivery process, contractors use BIMs to improve construction and for savvy owners the models can be passed downstream so facilities managers can use the digital asset created from the BIM to improve building operations. See a case study of the use of BIM to create better construction documents that are coordinated in 3D for fewer clashes during construction and examples of how BIMs can be used by owners to manage their building operations to understand and reduce energy use. Information-led Design and Multidimensional Modeling and Design represent the next step in the evolution of the way architecture, engineering and construction (AEC) firms design and deliver their services. Within this new framework, engineers and designers deploy as much information as possible about an asset at the earliest stages in the project. The ability to provide more information in the design phase of a project inherently provides more immediate and long-term value for the client, these new processes promise to create a new way of doing business where data, rather than documents, are the principal deliverable. Because of these advances, future AEC businesses may find it difficult to find staff with CAD training. At the current rate of design costs training for CAD use by the businesses that insist on using it. As the popularity of	1. Participants will be able to understand the key elements and characteristics of successful Building Information Modeling (BIM) models and how they can be used to improve the delivery of projects from design through operations. 2. Learn about extensions of BIM, such as Information-led design and Multidimensional Modeling and Design that can improve designs, accelerate project timelines and lower life-cycle costs 3. Critical steps to achieve this new way of doing business.	1.5	No	N/A
MD02	Optimizing Energy and Money	60	Project systems and Energy impacts	The session will explain how, by using energy modeling and other holistic assessment techniques for new construction and renovation projects, accurate estimates of costs/benefits for many energy efficiency measures can be determined early on. Examples of more common and other counter intuitive measures will be discussed. The session will show that assessments early on can help to reduce (but not eliminate) the perceived risk and uncertainty of an investment in energy efficiency. In addition, financing for energy efficiency will be discussed. Some specifics on, as well as some pros and cons for available financial incentives, performance contracting and private investment mechanisms will be examined. Computer simulations like energy and daylight modeling are becoming increasingly popular ways to explore and optimize various design considerations, and create a framework for assessing design strategies. Modeling provides a complete picture of a project's surroundings and the interactive effects of design elements, such as program, fenestration, finishes and mechanical systems on the performance of the built environment. Modeling is also an effective tool towards documenting code compliance and LEED points. The goal of this session is to explore performance modeling and how it can be effectively applied to different project types. The session will illustrate how a computer simulation can provide a more complete and visual picture of the factors that can impact a design, and how design decisions can impact the ultimate performance and goals of a project for cost, comfort and design intent. It will also discuss the differences between early and late design phase modeling and how to use modeling as part of the integrated design process.	1. Understand the value that whole energy modeling and forecasting brings to energy efficiency projects 2. Understand the differences between and advantages to public financial incentives, performance contracting and private investment strategies. 3. Describe possible energy efficiency measures that can be applied to new construction and renovation projects, including analysis of difficult to understand features such as indoor climate, daylighting, massing and orientation and custom fenestration.	1	No	N/A
NW01	Trash to Treasure: Today's New is Old	60	Acquisition, installation and management of project materials	This course will provide a brief review of the evolution of reclaimed building materials and an overview of all aspects of antique and vintage woods in New York City and the region along with the types of woods found and their sources, properties, applications, and historical background. Images will be shared through a range of sample building and design projects that have effectively used these materials. Additionally covered would be the value of reclaimed woods and materials in generating points for those projects pursuing LEED.	1. Review the origins and evolution of using reclaimed materials and the range of reclaimed softwood and hardwood species that are locally available. 2. Explore common pricing, specifying, sourcing, milling, and installation challenges. 3. Understand the building applications that are most appropriate for different wood species, and how reclaimed wood and other materials contribute to LEED.	1	No	N/A