



ncbfo.ca

# NATIONAL CONFERENCE ON BUILDING AND FACILITY OPERATIONS

October 25<sup>th</sup> & 26<sup>th</sup>

**Mississauga Convention Centre**

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# Wednesday, October 25<sup>th</sup>

**8:15 – 8:45**      **Breakfast and Registration**

**8:45 – 9:00**      **Opening Remarks**  
**Speaker: Derek Cheung, BCA ECC President & Isotherm Engineering Ltd.**

**9:00 – 9:30**      **Commissioning – The Government of Canada's Perspective**  
Natural Resources Canada has taken an active interest in commissioning, recommissioning and building optimization for at least the past decade. This presentation will clarify the Federal Government's interest in existing building commissioning, in context of the Pan-Canadian Framework on Clean Growth and Climate Change.  
**Speaker: Ian Meredith, Natural Resources Canada**

**9:30 – 10:00**      **Roundtable Discussion on Significant Cx Issues**  
This discussion will focus on the most important issues facing the Cx profession. Points for discussion will include marketing Cx and EBCx and articulating the value proposition, professional development, customer's expectations, the role of government, etc. Learning more about these issues and industry priorities will help Natural Resources Canada to develop and propose more meaningful programming ideas.  
**Moderator: Ian Meredith, Natural Resources Canada**

**10:00 – 11:00**      **The Power of Open Automation**  
The industry is buzzing with terms like "Connected Real-Estate", "Intelligent Buildings" and "The Internet of Things". A lot of discussion about the blue-sky possibilities of having previously unconnected systems suddenly able to share information. This session will dig a little bit deeper into what is required to actually make that happen. What are the motives behind the manufacturers making these products? Do they have a philosophy of openness or do they wish to close off their data? What are the right questions to ask, and what are some of the answers we need to move to the next level of openness.  
**Speaker: James Breckenridge, HTS Engineering**

**11:00 – 11:15**      **Coffee**

**11:15 – 12:15**      **Data Center Retro-Commissioning: A Case Study**  
Data centers serve as critical operational facilities for a variety of organizations and institutions, where downtime costs can be measured in millions of dollars lost per minute. At the same time, energy efficiency and operational cost concerns are of prime importance. This session will examine how to guard against downtime, consider methods for optimizing operational efficiency, and review an approach to commissioning a data center to balance these sometimes competing end-goals through a case study of a completed data center retro-commissioning project.  
**Speakers: Nigel Bastiampillai and Todd Steffens, Loring Engineers**

**12:15 – 1:15**      **Lunch**

**1:15 – 2:15**      **Your Building Already IS the Internet of Things: How can you leverage all that data to improve energy consumption and comfort?**  
Today's buildings offer a wealth of data producing sensors and systems, but the truth is most of this valuable data is wasted. Leveraging this plethora of data, powerful new analytics software solutions are helping to drastically reduce energy consumption in buildings, while improving occupant comfort and reducing maintenance costs. Learn the state of the art in building, energy and fault detection analytics as they apply to built spaces through real world case-studies.  
**Speaker: Keith La Rose, CopperTree Analytics**

**2:15 – 3:15**      **Commercial Office Buildings: Energy Conservation Roadmap**  
Commercial landlords are faced with the ongoing struggle to limit overall energy cost increases as unit rates continue to rise. This session will discuss the implementation of a successful energy conservation roadmap as well as addressing the common barriers that limit energy saving opportunities. The importance of a strong team approach between Landlord and Tenant for energy saving opportunities will be illustrated as well as the lessons learned from the implementation of energy conservation measures.  
**Speaker: Adrienne Cressman, Cadillac Fairview**

**3:15 – 3:30**      **Coffee**

**3:30 - 4:30**      **Thermal Imaging For Building Science**  
The science behind thermal imaging will be explained in a manner to allow attendees to understand the thermal imaging process and to interpret the images to best effect. The key techniques and procedures required for accurate and useful thermal scans will be reviewed along with what not to do. The software available to facilitate the analysis of thermal images will be discussed and suggestions offered to ensure the most useful outcomes are achieved.  
**Speaker: Trish Peden, Safety Express**

**4:30 – 5:30**      **Project Manager's Role in Sustainable Building Projects: A case study in Canada**  
The case study of a Canadian project (certified LEED-Platinum) helps us examine the success factors, optimization potentials, and shortcomings of projects manager's role in the sustainable building process. The empirical data, which includes extensive documentation of the design, build and operation phases, LCA analyses and interviews, help us analyze the processes and stakeholders' interest and expectations.

The results show that adopting integrated Design Process in the design phase alone is not able to reduce fragmentation in following

phases (notably without changes in the role of the project manager). From a theoretical point of view, these results highlight the importance of project management practices in integrating stakeholders, information, and knowledge in the age of sustainable development. From a practical point of view, they reveal opportunities to strengthening project managers' role in sustainable projects.

**Speaker: Ricardo Leoto, Université de Montréal**

**5:45 – 7:00**      **Cocktails**

## Thursday, October 26<sup>th</sup>

**8:15 – 8:45**      **Breakfast**

**8:45 – 9:45**      **BIM for Owners & Facility Managers**

This presentation will outline the various benefits of a Building Information Model (BIM). Starting with the Pre-Design phase and proceeding through the Design, Construction and Operation phases the responsibilities of the various parties will be described. As well the keys to monitoring design work, asset data input / output and the development of the model will be discussed. Participants will learn the difference between design and as-built construction models and the inputs for a true as-built model. Finally the owner manager group will be informed of the benefits of using the information rich model in operations and maintenance and presented with examples cost savings on BIM projects.

**Speakers: Omar Zuberi and Magdalena Ordyniec, EllisDon**

**9:45 – 10:45**      **Soliciting Commissioning Proposals – Procurement and Standards**

Commissioning services covers a broad range of systems, equipment and building operations. In order to request a proposal that suits the particular needs of the project there are a few key issues to understand. This presentation will offer suggestions for gaining the benefits of commissioning without surprises. As well the most important standards applicable to the commissioning process will be reviewed with reference to particular facility types.

**Speaker: Mike Loughry, H.H. Angus and Associates Ltd.**

**10:45 – 11:00**      **Coffee**

**11:00 – 12:00**      **District Energy Solutions**

District Energy solutions are an effective way to positively impact some of the most pressing issues of our time while bringing energy clarity, security and reliability to both existing buildings and new development projects. Learn how District energy solutions can improve building efficiencies, reduce electricity use, water use and a building's carbon footprint. This session will show you why district energy solutions are leading the way in community energy planning and community development.

**Speaker: Mark Vonk, Enwave**

**12:00 – 12:30**

**Testing, Commissioning, Acceptance and Turnover from an owner's perspective**

The Greater Toronto Airports Authority (GTAA) created the Testing, Commissioning, Acceptance and Turnover (TCAT) program during the Terminal Development Project in 1999. The TCAT program is now part of the foundation of all GTAA projects at Toronto Pearson. The purpose of the program is to establish structure around team structure, roles and responsibilities, equipment installation, testing and commissioning and project deliverables such as O&M manuals, as build drawings, technically training, asset inventory, etc. This program has been instrumental in successfully transitioning major & minor projects at the airport from construction to operations and maintenance.

The presentation will provide an overview of the TCAT program and provide examples of how it has been applied on major airport projects.

**Speaker: Mark Hamilton, Greater Toronto Airports Authority (GTAA)**

**12:30 – 1:15**

**Lunch**

**1:15 – 1:30**

**Closing Remarks  
Derek Cheung, BCA ECC President**

**1:30 – 2:00**

**Transport and Check in at Site Tour**

**2:00 – 3:30**

**Site Tour**

The site tour will visit the GTAA Central Utilities Plant (CUP) built in 2000, the adjacent Cogeneration Plant built in 2005 and the Automated People Mover (APM). The CUP supplies heating and cooling water to various buildings at the airport. The cooling is generated by five 1,250 ton electric water chillers and two 2,000 steam drive water chillers. The heating is provided by four 65,760 lb/hr steam boilers. The cogeneration plant includes two 42 MW gas turbines with once-through heat recovery steam boilers and a 33 MW steam turbine generator. The cogeneration plant's electrical output can be switched between the grid and airport or a combination of the two.

The APM is a cable liner shuttle that includes two fully automatic train systems with two distinct guideways and drive systems. These seven vehicle trains are propelled by a haul rope (cable) with three stations located at terminal 1, terminal 3 and the Viscount Station at the Value Parking lot.

## Speaker Bios



### **Ian Meredith, Natural Resources Canada**

Following an extensive private sector career in the interrelated fields of environmental certification, labelling and marketing, Mr. Meredith accepted a position with Natural Resources Canada's Office of Energy Efficiency in 2005. Developing commissioning programming was one of Ian's core activities for the OEE, before moving on his current assessment with the Building Energy Codes team. His current duties are generally focused on initiatives to help move future codes towards a net-zero ideal; commissioning has re-emerged as a significant issue in that context.



### **James Breckenridge, P.Eng, HTS Engineering**

James Breckenridge joined HTS in 1993 through the University of Waterloo coop program as a Controls Technician and is now responsible for the Automation & Control department throughout Ontario. He is an integral part of the business development of IT solutions group, and is leading HTS Engineering's Intelligent Building initiative. He became a shareholder and was named Managing Director in 2014.



### **Nigel Bastiampillai, Loring Engineers**

Mr. Bastiampillai joined Loring as a Vice President with nearly a decade of engineering and project management experience focussed in the design and commissioning of mission critical facilities for the banking and telecommunications industry. In addition to his work in critical environments, he has international airport, university and healthcare project experience.



### **Todd Steffens, Loring Engineers**

Mr. Steffens has 15 years of experience in the design, commissioning/retro-commissioning of mechanical systems for commercial, institutional, educational, airport and data center facilities. This experience includes managing and coordinating construction activities, all phases of the commissioning process, and developing and presenting efficient, comprehensive solutions.



### **Keith La Rose, CopperTree Analytics**

With sixteen years of business development experience in software, scientific and environmental verticals, plus a background that includes environmental monitoring and renewable energy projects, Keith La Rose leads the business development charge at CopperTree Analytics. At CopperTree, he focuses on energy management software solutions for companies seeking to create operational efficiencies, reduce their buildings' energy consumption, and enhance their bottom lines.



### **Adrienne Cressman, Cadillac Fairview**

As Embedded Energy Manager for Toronto-Dominion Centre, Adrienne Cressman is responsible for overseeing all areas of energy management policy and initiatives throughout the TDC community. Adrienne brings industry leading experience to her role. With over 15 years of front line project experience with H.H. Angus Limited Consulting Engineers, Adrienne has played a central role in a number of important area projects – Sick Kids Research Tower, Art Gallery of Ontario Redevelopment, TD Bank Renovation (77 Bloor W) as well as numerous projects at TD Centre.



### **Trish Peden, Safety Express**

Trish Peden is a Certified Level III Thermographer, UAV Pilot, Equine Thermographer and Thermal Imaging trainer. She has been the National Thermal Imaging Specialist for Safety Express for almost twelve years and regularly speaks to various organizations across the country educating people on the many applications of thermal imaging.



### **Ricardo Ferreira Leoto, Université de Montréal**

Ricardo Leoto is a Ph.D. candidate in the Facility of the Built Environment at the Université de Montréal, Canada, and a member of the IF Research Group (Integrated Processes and Innovation for the Built Environment). M. Leoto has 16 years of working experience as an architect as well as a Sustainable Building Consultant. He has been working for Equiterre (a Canadian non-governmental organization) as a consultant since 2010, a period during which he designed the interactive exhibits of the Centre for Sustainable Development, a space for the meeting and sharing of innovative ideas about sustainable development.



### **Omar Zuberi, EllisDon**

Omar Zuberi is the Virtual Design and Construction Manager for Eastern Canada at EllisDon Corporation. He brings an engineering degree and 10 years of Construction industry experience with him; with projects ranging from large scale retail, high rise residential, hospital, and subway. Omar helps deploy and support the constantly evolving people, knowledge, and technology of BIM on projects while pushing the boundaries of collaboration and open interaction.



**Magdalena Ordyniec, EllisDon**

Magdalena has over 13 years of international experience in the consulting, construction and project management field working in Europe, Middle East and Canada, specializing in Building Information Modeling (BIM) and Virtual Design and Construction (VDC) in all project phases, from design through to construction. In her role as a VDC Consulting Manager at EllisDon, she is responsible for managing business development strategies for the VDC Consulting group within a profit & loss environment, securing new work, creation of proposals, development and supervision of BIM production staff and processes related to the implementation of BIM for various EllisDon's VDC services. She is managing the continuous development of BIM standards and project specifications.



**Mike Loughry, H.H. Angus and Associates Ltd.**

Mike Loughry is a professional engineer and has been involved in many aspects of building construction and operations. His experience includes work as a building operator, site representative / field inspector, mechanical designer and principal in a consulting engineering company. He will bring his ideas on current trends but also the perspective on commissioning from a historical perspective through his knowledge of the evolution of the business over the past four decades.



**Mark Vonk, Enwave**

Mark is a Professional Process Engineer and Project Manager, and is a member of Enwave's Engineering Team. Mark has over 10 years in international experience in engineering and project management across numerous industries including Oil and Gas, Mining, Infrastructure and ICI. Mark is responsible for managing technical energy projects relating to Toronto's District Energy grid. His major focus is working with new and existing buildings in developing and evaluating connection concepts in line with their energy efficiency, optimization and sustainability goals.



**Mark Hamilton, Greater Toronto Airports Authority (GTAA)**

As the Manager, Infrastructure Activation at Greater Toronto Airports Authority (GTAA), Mark manages the testing, commissioning, acceptance and turnover process for the GTAA to transition new development from construction to operation. He is the site representative for Terminal Infrastructure for all aspects of design and construction document review, factory testing and system and component installation quality assurance. Mark has been employed by the GTAA since 1992 in a series of positions of increasing seniority and responsibility.

## In Memoriam



**Sundar (Seth) Sethuraman  
President, Green Initiatives Inc., Certified Commissioning Professional, BCA ECC Treasurer, Colleague and Friend**

It is with heavy hearts that we recognize the recent passing of our good friend and colleague Seth Sundar. Seth had been involved with the chapter since inception and was a tireless volunteer in supporting chapter activities. His positive attitude and ready smile carried us through many trials. He will be greatly missed for his organizational skills and contagious enthusiasm but more for his friendship. Our condolences are offered to Seth's family as well as his many friends in the commissioning community.

## Registration Rates

**Early Registration – \$250**

**Registration – \$325 (After October 6, 2017)**

**Registration information at <http://ncbfo.ca/>**

**The Building Commissioning Association (BCxA)** is an international non-profit organization that serves as the recognized authority and resource on commissioning. Our membership is made up of professionals from all aspects of the building industry, committed to the highest standards and practices for the commissioning process. Our mission is to guide the building commissioning industry by advancing best practices and education throughout the building industry, and promoting the benefits of building commissioning to achieve buildings that work.

The Building Commissioning Association Eastern Canada Chapter (BCxA ECC) holds regular meetings as well as hosting industry events to educate and inform on issues related to the building commissioning community. The mandate of the BCxA ECC is to promote the benefits of commissioning within **Ontario, Quebec and the Atlantic Provinces.**

<http://www.bcxa.org/eastern-canada/>

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