

POWER SMART NEW CONSTRUCTION PROGRAM BUILDING ENVELOPE THERMAL PERFORMANCE WORKSHOP

The BC Hydro Power Smart New Construction Program (NCP) team, and FortisBC cordially invites you to a complimentary Building Envelope Thermal Performance Workshop intended for those who make use of building envelope thermal performance data for designing new and major retrofit commercial, institutional and multi-unit residential (MURB) buildings.

The Power Smart NCP provides incentives for commercial, institutional and MURB buildings in the early design process to help fund up to 100 per cent of an approved energy modelling study cost, and capital costs to implement energy efficient measures. FortisBC co-funds the energy modelling study cost and also offers capital incentives for measures that will reduce natural gas consumption.

WHO SHOULD ATTEND:

Architects, energy modellers, building envelope consultants and mechanical designers who make use of building envelope thermal performance data for designing new commercial, institutional and MURB buildings.

WORKSHOP DESCRIPTION FOR JANUARY 23, 2014:

The administration and enforcement of building codes, energy codes, and energy conservation incentive programs are in state of change, demanding a more stringent and rigorous evaluation of building enclosure thermal performance. There has been an explosion of research about how the effective thermal resistance of enclosure assemblies is impacted by thermal bridging and consequently, energy use in buildings. However, the recent increase in information has not yet been absorbed into common energy modeling practice, leaving concerns about the appropriateness of energy code compliance.

This workshop will describe the roles and responsibilities of key project team members in the energy modeling process, and present a clear interpretation of the codes as it relates to building envelope performance.

HOW TO REGISTER:

Limited space is available and by invitation only. Please confirm your registration for this event by email to alliance@bchydro.com by January 17, 2013.

LOCATION:

BC Hydro Edmonds Building
(next to Edmonds skytrain station)

Main Floor, 6911 Southpoint Drive,
Burnaby

Podium A entrance from parkade

Meeting Room: Edmonds
Auditorium Centre

Please sign-in as visitor at
security desk.

DATE:

Thursday, January 23, 2014

MORNING SESSION:

8:00 a.m. to 1:00 p.m.
(up to 80 participants)



Learn how to effectively and efficiently
determine U-values for the building
envelope, subject to thermal bridging and
heat flow in three-dimensions

AGENDA: MORNING SESSION 8:00 A.M. TO 1:00 P.M. (UP TO 80 PARTICIPANTS)

- 8:00 a.m.** REGISTRATION & BREAKFAST
- 8:30 a.m.** POWER SMART NEW CONSTRUCTION PROGRAM AND FORTISBC
Overview of the Power Smart NCP design, history and results, including FortisBC capital incentives.
- 9:00 a.m.** INTRODUCTION
Brief introduction on the basics of heat flow through building enclosures, and how codes and standards define building envelope performance. The significance of the envelope in relation to whole building energy performance will also be discussed.
- 9:30 a.m.** ROLES AND RESPONSIBILITIES
Introduction to the broad responsibilities of each of the professionals that contribute to the design and review of components considered by energy modeling, i.e. the architect, building envelope consultant, electrical designers, mechanical designers, and whole building energy modellers.
- 10:00 a.m.** BUILDING ENCLOSURE CODE REQUIREMENTS
Discussions on the requirements and procedures embodied in the energy standards for evaluating the building envelope U-value. There will be a break-out session for smaller groups to discuss their own current interpretations of the code, leading to a common and useable interpretation to be applied across all projects.
- 10:45 a.m.** BREAK
- 11:00 a.m.** CALCULATION METHODS AND SOURCES OF INFORMATION
This section will discuss how to model the building envelope in energy models for different stages of projects, analysis objectives, and required level of detail. Sources of information to estimate U-values, including the use of linear transmittance to efficiently estimate performance, will be a focus of this discussion.
- 12:00 p.m.** LUNCH WILL BE PROVIDED

PRESENTERS

Oscar Ceron is a New Construction Program Manager at BC Hydro Power Smart. He has spent the last 5 years in Power Smart managing and promoting energy efficiency programs. Prior to joining BC Hydro, Oscar held various roles in Marketing, Communications and Product Management at Attachmate, Creo and Kodak.

Ramsay A Cook is the Program Manager for FortisBC's Energy Efficiency and Conservation programs aimed at Commercial and Industrial Customers. Ramsay has worked in this role for over 4 years, and has overseen the roll out or revision of more than 10 incentive programs. He began this work after completing a business degree in 2009. Prior to joining FortisBC, Ramsay served as director of engineering at an architecture and building engineering firm in Montréal, and as a consulting engineer located in Toronto. As a consultant he participated in a number of energy efficient building designs, and successfully obtained funding via incentive programs offered by both the Federal Government and Hydro Quebec.

Mark Lawton, B.A.Sc., P.Eng. is a principal and senior building science specialist at Morrison Hershfield (MH) in Vancouver. He is one of Canada's recognized leaders in the Building Science field. Mark's areas of particular expertise include: building envelope durability, energy conservation methods, HVAC systems, indoor air quality and dealing with mold in buildings. This expertise is applied at all stages of the building process including the setting of requirements for design, and the evaluation of building performance in existing buildings. Mark has helped develop and deliver similar workshops that were focused on market transformation.

Christian Cianfrone, P.Eng., LEED® AP BD+C, BEMP is a principal and building energy specialist at the MH in Vancouver. Christian is the technical lead for MH's energy simulation group, HVAC designer, and project manager on a wide array of projects within the green building and sustainability sectors. Christian has a strong technical background in mechanical engineering, building science and energy modeling. Using his multi-disciplinary expertise, Christian coordinates and guides many aspects of the sustainable design process by understanding the synergies and trade-offs of the various design solutions. Christian is heavily involved in related industry committees and has experience in curriculum development and delivery.