Presentation to College of Trades

John Calvert,
Associate Professor,
Faculty of Health Sciences

May 26, 2017
• SSHRC Adapting Work and Workplaces (ACW) to Climate Change Project – 7 Years, $2.5 Million
  • Purpose is to document the potential role of labour in contributing reducing Canada’s climate footprint
  • Research is examining major sectors of Canadian economy
  • My focus is on the Contribution of the Construction Industry
  • A key part of this is the role of apprenticeship and training in promoting climate literacy at the workplace
Presentation Roadmap (2)

• My Recent Research in BC
  • BC Insulator’s Climate Initiative Overview
  • Efforts to ‘green’ the building code in BC
  • Project to Audit Energy Consumption of Buildings
  • Climate Change Module in Apprenticeship Program

• My proposed Research will now be on Climate Change Initiatives in Ontario Construction

• Focus on training and apprenticeship – what is being done to promote climate literacy in the building trades
The Research Team and Network

- Professor Carla Lipsig-Mumme, York University, PI for the overall SSHRC Grant
- Professor Linda Clarke, University of Westminster, UK (training and apprenticeship in Europe)
- Professor Colin Gleeson University of Westminster (engineering and trades training)
- Professor Fred Steward, University of Westminster (policy development)
- Associate Professor, John Calvert, Simon Fraser University (BC trades)
- Professor Elaine Bernard, Harvard University (workplace training initiatives)
- Professor Warren Maybee, Queen’s University
- Mr. Donald Lafleur, Vice-President, Canadian Labour Congress
- Mr. Lee Loftus, President, BC and Yukon Building Trades Council
- A number of other academic and community partners
- Linkages to ILO (Bela Galcoczi) and ETUC in Europe
Working Groups

To facilitate work for the project, Adapting Canadian Work and Workplaces (ACW) is organized into areas of study, also known as working groups. The groups are: Built Environment, Domestic Policy, Energy, Green Education and Training, International Policy, Law, Manufacturing, Municipalities and Provinces, Services and Work Design. Under the direction of its lead, each group is developing a baseline report. The reports will outline the main climate change issues for each study area, the current progress in greenhouse gas reduction, and how to green workplaces and work processes. The baseline reports will also identify and briefly describe the research projects working groups plan to undertake. Education and training, along with knowledge mobilization, are also important components of ACW.
Workshop report: Climate change and work – international perspectives

Lively and thought-provoking discussions and interventions on integrating climate change-related action into collective agreement clauses.

BC Insulators Union, Béla Galgóczi, British Columbia Building Trades, Canada Post, Canadian Labour Congress, Canadian Union of Postal Workers, Canadian Union of Public Employees, Carla Lipsig-Mummé, Donald Lafleur, European Trade Union Institute, Friends of the Earth, Graham Petersen, Greener Jobs Alliance, Greenpeace, Humberside, Jenny Patient, John Calvert, Labour Network for Sustainability, Linda Clarke, Sheffield Climate Alliance, Sheffield Trade Union Council, South Yorkshire, United Steelworkers, University of Sheffield, York University
Recent Books Published through ACW

- *Work in a Warming World* by Carla Lipsig-Mummé and Stephen McBride
- *Labour in Canada* edited by Carla Lipsig-Mummé
- *Greening Auto Jobs* by Caleb Goods

A Critical Analysis of the Green Job Solution
The focus of the recent research in BC has been on the role of the BC Insulator’s Union in promoting climate literacy in the BC Construction industry.

The research has had the support of Lee Loftus, President of the BC and Yukon Building Trades Council and Business Agent for the BC Insulators.

The research has documented the recent history and various components of the campaign of the BC insulators.

It has examined the union’s involvement in lobbying municipal councils for higher standards.

Its efforts to strengthen the provincial building code.

Its outreach to the industry to promote better mechanical insulation in new buildings.

Its initiation of a new program to audit the energy efficiency of HVAC systems in public buildings in BC and Alberta.

And its efforts to promote climate issues in the apprenticeship curriculum.
PIES NEED JACKETS TOO

Improving Performance of BC Buildings through Mechanical Insulation Practice and Standards - A White Paper
Creating a greener world. There is no better way to save energy, reduce greenhouse gases and leave a light carbon footprint in your building developments than by using mechanical insulation.

It’s clean, efficient and safe. Low upfront costs deliver large and ongoing savings in money and energy.
ENERGY CONSERVATION SPECIALISTS
INCREASE BUILDING EFFICIENCY WITH MECHANICAL INSULATION

BENEFITS  A NEW STANDARD  WHITE PAPER  MI SPEC  BC INSULATORS  BLOG

You are here: Home / A New Standard

A New Standard

BC’s mechanical insulators are campaigning to develop improved standards and best practices.

And we’re providing information, and supporting education and training in government and industry.

Building owners, developers, architects, engineers, politicians and senior staff at all levels of government, and members of the public, should be part of the discussion.

Here’s what needs to be done.

At the senior government level:

- Update national and provincial building codes and city building bylaws to include specific and up-to-date requirements on mechanical insulation
- Require that work be inspected by registered professionals.

At the local government level:

- Create or update development permit checklists in planning and building approval departments
- Take steps to meet standards in municipal buildings and retrofits
- Require builders to hire qualified mechanical insulators
- Build staff capacity through education and training
To: Mayor Darrell R. Mussatto and Members of Council

From: Emilie Adin, Deputy Director, Community Development

SUBJECT: MECHANICAL INSULATION AND PASSIVE DESIGN BEST PRACTICES

Date: August 27, 2012

File No: 3760-10-01

The following is a suggested recommendation only. Please refer to Council Minutes for adopted resolution.

RECOMMENDATION:


THAT staff continue their current practice of encouraging mechanical insulation best practices for all construction projects in the City;

AND THAT mechanical insulation specifications and best practices be included in the City’s tendering and procurement process;

AND THAT the City’s Sustainable Development Guidelines be updated with explicit encouragement of mechanical insulation and passive design best practices;

AND THAT staff be directed to create a Passive Design Toolkit as a resource for the development industry as part of the Community Development Department 2013-2014 Work Program, provided that outside funding be secured;

AND THAT the City continue to consider partnership opportunities as they arise in relation to testing new energy efficiency standards and emerging construction practices.
TO: CITY MANAGER
FROM: DIRECTOR PLANNING AND BUILDING
DATE: 2011 June 15
FILE: 1400 20
Reference: UBCM Resolutions

SUBJECT: MECHANICAL INSULATION RESOLUTION

PURPOSE: To propose a resolution regarding changes to the BC Building Code as related to improvements in mechanical insulation practices and standards for submission to the 2011 Convention of the Union of BC Municipalities.

RECOMMENDATIONS:

1. THAT Council approve the resolution contained in Section 3.0 of this report, for submission to the 2011 Union of BC Municipalities (UBCM) Convention.

2. THAT staff be authorized to forward a copy of this report to the UBCM, located at Suite 60, 10551 Shellbridge Way, Richmond, BC V6X 2W9.

3. THAT a copy of this report be sent to Mr. Lee Loftus, Business Manager and Mr. Lyndon Johnson, Quality Control Advisory, of the International Association of Heat and Frost Insulators and Allied Workers Union Local 118, both at 233 East 11th Ave., Vancouver, BC V5T 2C4.
MECHANICAL INSULATION

Providing Technical Information to the BC Industry on Mechanical Insulation (web site)

Guide & Specification for BC

1. View the MI Guide and Specification in 2 formats:
2. Browse the guide using this website. The numbered headings below correspond to the PDF guide.

1. Download the guide as a PDF. Click the arrow in the top right-hand corner.

DRAFT
Documenting the Campaign to Promote Climate Literacy in BC’s Construction Industry

• As part of our research, we conducted extensive interviews with union staff, municipal managers, industry professionals and government officials

• We documented the history of the BC Insulator’s campaign

• We assessed its impact on the industry in raising awareness of the impact that Mechanical Insulation could have in lowering the climate footprint of buildings

• This is documented in a 53 page report available on the ACW website
Salamander Inspections
Adapting Canadian Work and Workplaces to Climate Change: Canada in International Perspective
John Calvert and Crista Bartolomeu Simon Fraser University
BC Insulator’s Salamander Energy Audits Program

• A systematic inspection is conducted to identify the scope of the work and the condition of the building

• The preliminary inspection identifies the type of system in the building, its condition and ideal operating temperature

• These systems are then checked by a trained employee using an FLIR thermal camera

• The FLIR thermographic camera quantifies heat loss of the area it is “capturing” in the image

• These cameras filter ambient heat to create a graduated color image with brighter images representing areas of greater heat loss, they also provide a digital image for reference (as seen below)
Introducing a Climate Change Module into the Apprenticeship Program

• The BC Insulators deliver the Mechanical Insulation apprenticeship program at the BC Institute of Technology campus in Burnaby

• They have incorporated a new ‘green’ module into the curriculum starting in 2012

• The goal is to ensure that newly qualified insulators are aware of the role that mechanical insulation can play in reducing the carbon footprint of buildings

• It is also to begin changing the broader culture of the industry in BC to facilitate ‘climate literacy’
Documenting the Impact of the Climate Change Module in the Apprenticeship Program

• Our research involved interviewing the 2nd and 4th year apprentices to assess the extent to which the new climate change module had influenced their views on climate change and on their role as insulators in the building industry.

• Their views and experience are documented in a 58 page report that summarizes their assessment of the relevance of the climate module itself and their concerns about overcoming the challenges in promoting climate literacy in their workplaces.
Expanding the Focus in BC

• I am discussing the feasibility of doing a similar piece of research to assess the extent to which climate issues are being included in the apprenticeship programs for other trades at BCIT

• Meetings have been set up in June to discuss how we might proceed with this initiative

• Part of the goal would also be to identify ways to incorporate climate literacy more generally in the apprenticeship program at BCIT
The Focus of My Ontario Research

- I am interested in documenting the extent to which climate change issues have been incorporated into the apprenticeship training and curriculum standards for the major trades.
- A key area for me is to be able to identify what is now being included in the apprenticeship curriculum standards and content on ‘greening’ the construction industry.
- Part of this could involve analysing the course content itself.
- But part of it could also involve interviews with a sample of instructors in several of the key trades.
What would be helpful to me would be for the College to identify the training facilities and trades curriculum standards that it would make sense to examine.

I freely acknowledge that I am on a learning curve with respect to the system in Ontario.

Consequently your advice and suggestions will be most appreciated.

Who should I speak to?

Which facilities should I try to visit?
One Last Point - Thanks

• Thank you so much for hosting me today
• I would also like to thank the people who arranged this meeting – Jennifer, Dan, Eric, Irene Harris and Pat Dillon
• Thanks for all of you for taking the time to come today
• I really appreciate the opportunity and I do hope what I have said is of interest
• And I look forward to working with the College in the future, assuming this would be of interest to you
Discussion

Questions?
Comments?
Thoughts?