

PATHWAYS TO NET-ZERO BUILDINGS

Accelerating deep retrofits

THOUGHT LEADER FORUM | November 28-29, 2016
Sandman Hotel Vancouver City Centre

This year we have a high-impact opportunity to significantly reduce emissions from the building sector.

In 2016, the government of British Columbia advanced the first phase of a revised Climate Leadership Plan and a new set of beyond-code energy efficiency requirements (the energy step code). Alongside the development of the Federal Pan-Canadian framework on climate change and clean growth, these policies will set the stage for energy efficiency in buildings for years to come.

The Climate Leadership Plan set a target for all new buildings to be net-zero ready by 2032, and announced new regulations for heating equipment and new incentives for high performance buildings. The energy step code was developed by a multi-stakeholder working group, and provides a set of performance requirements that local governments and utilities can use to incentivize or require higher energy efficiency.

Many municipalities are keen to lead on increasing energy efficiency and to capitalize on opportunities for green infrastructure investment from federal and provincial governments. For example, the City of Vancouver is pioneering the way with a plan to require zero emissions new buildings by 2030.

Alongside these provincial and local initiatives, the federal government is currently negotiating

a pan-Canadian climate framework with the provinces — with a focus on accelerating energy efficiency in buildings. From national code development to ‘green strings’ tied to infrastructure spending, federal climate policy is bound to influence the evolution of building policy in B.C.

Our collective ability to seize these cross-jurisdictional policy opportunities will dictate our ability to meet our 2030 targets aligned with the Paris Agreement, and determine the health and growth of Canada’s low-carbon building sector in the decade ahead.

Policy development to date has been focused on new construction, and there is a need to extend the conversation to the acceleration of deep energy retrofits in existing buildings.

Project overview

The 2016 forum will be a two-day closed-door event hosted in Vancouver on November 28-29. This event will build upon the discussions from last year's Thought Leader Forum as well as recent buildings-related policy opportunities locally, provincially and federally. This forum will identify areas to leverage, coordinate and resolve in order to successfully implement the policies and plans that will put B.C. and Canada on a credible path to reduce emissions and grow our low-carbon building sector.

There is growing momentum for policies to improve performance of new construction, but much remains to be done to capture opportunities to improve efficiency in existing buildings. This year's forum will cement the gains made in the area of new construction and test proposed roadmap to meet the goals set in the Climate Leadership Plan. Looking at synergies between new and existing buildings, it will also ask how we can

accelerate deep retrofits to achieve a low-carbon built environment. This work, which has been initiated by stakeholders such as BC Hydro and the City of Vancouver, needs to be expanded to include recommendations for a national and provincial retrofit strategy and code.

The forum is designed as a venue to vet specific policy proposals and dig into the nuts and bolts of implementation with key stakeholders.



Desired outcomes

Given the strong interest from federal, provincial and local governments, forum outcomes will include:

1. Confirming the regulatory roadmap to net-zero ready buildings in B.C. (building code schedule, role of energy step code, and integration between Climate Leadership Plan and federal Pan-Canadian framework objectives)
2. Providing policy recommendations for a national and provincial retrofit strategy, including retrofit codes
3. Clarifying major barriers and success factors, from a range of perspectives
4. Identifying quick wins, no regrets actions, and research gaps

Deliverables

1. Recommendations on energy code roadmap and connection with energy step code
2. Recommendations on retrofit strategy and retrofit code
3. Opportunities for aligning utilities and local government incentives
4. Identification of key opportunities for federal programs to support net-zero construction and deep retrofit objectives

Scope

In: Net-zero ready new Part 3 and Part 9 buildings, retrofit codes and incentives, roadmap for deep retrofits

Out: On-site generation, industrial load

DRAFT Agenda

DAY 1

a.m. Pathways to net-zero ready for NEW buildings

Panel Discussion: update on roadmap to net-zero ready by 2032

Table Discussion: reaction to provincial and federal roadmaps

Plenary: testing overall level of confidence with proposed approach

p.m. Pathways to deep retrofits for EXISTING buildings

Presentations:

1. Assessing the opportunity (energy/GHG savings, jobs, healthcare costs)
2. Seven strategies for retrofits
3. Options for retrofit regulations

Table Discussion: design and phasing of retrofit regulations

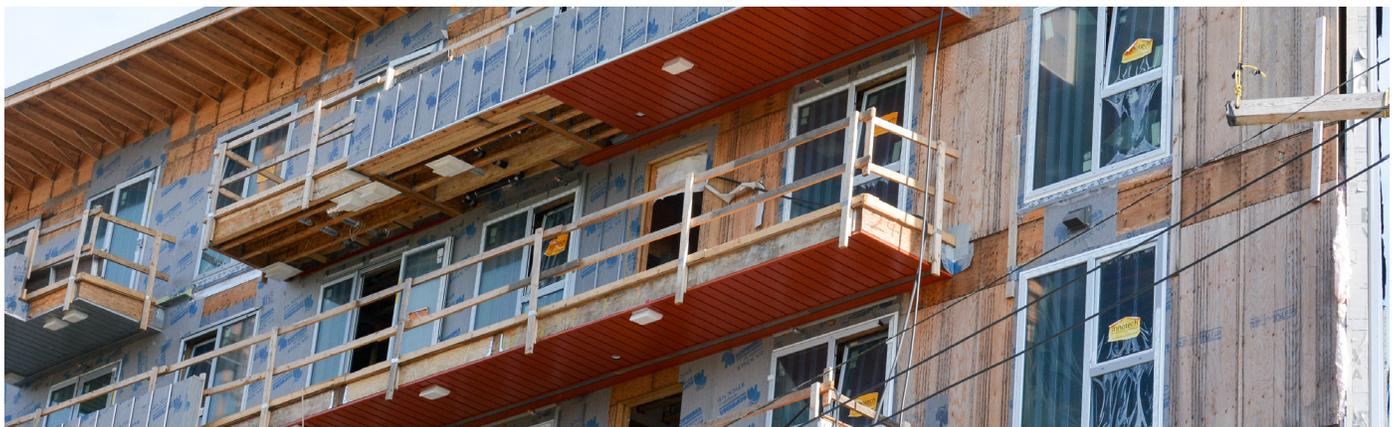
Presentation: compliance challenges and solutions

Table Discussion: improving compliance processes

Plenary: takeaways on retrofit codes and compliance

Throughout the day: identification of knowledge gaps and no-regret actions)

5:30-7:30 Evening reception



DAY 2

a.m. Pathways to deep retrofits for EXISTING buildings (con't)

Breakout Sessions: possible topics include MURB retrofit strategies, sequenced deep home retrofits, home retrofit training and professionalization, path to benchmarking reporting and disclosure in commercial buildings, periodic recommissioning in commercial buildings

p.m. Moving to action

Plenary: report back from breakouts — gathering no-regret actions

Identify level of support/readiness for each strategy

Caucuses: Testing no-regrets actions, identifying leads & flagging barriers

Plenary: Confirm next steps & identify lead for action items

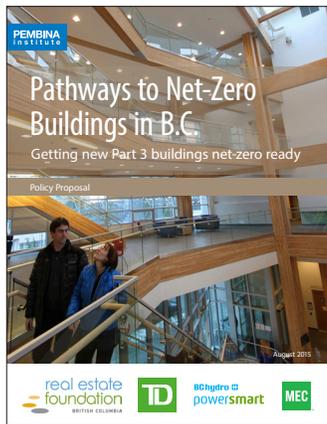
Assessing readiness and support for next regulatory steps

Closing comments from government and industry rapporteurs

Engagement to date

In June 2015, the Pembina Institute convened the first 'Pathways to Net Zero Buildings' Thought Leader Forum. Over two days, 82 participants from 50 organizations met to discuss a proposed goal to achieve net-zero ready new buildings by 2030 and the supporting policies required. Results were summarized in a report, and a revised proposal was developed.

Outcomes from the forum informed Pembina's recommendations on the building sector to B.C.'s Climate Leadership Team, the government-appointed advisory panel, and on the development of the energy step code.



Building on the strong alignment and relationships developed at the forum, we launched a Call to Action on Climate and Energy in the Building

Sector in September 2015 in partnership with the Urban Development Institute and Architecture Canada. Over a hundred signatories, including local governments, industry associations, civil society organizations, companies and educational institutions endorsed the call. (pembina.org/pub/buildings-declaration)

The Pembina Institute engaged a broad range of building sector leaders across Canada and produced in June 2016 a set of recommendations for the pan-Canadian climate framework, including policies for energy efficiency in buildings.

Building on this success, in August 2016 we submitted a letter to federal ministers together with the Canadian Energy Efficiency Alliance, Toronto Atmospheric Fund, and eight other key organizations, calling for a bold national action plan for energy efficiency in buildings. This letter led to strategic meetings engaging with federal decision makers in September 2016. (pembina.org/pub/bold-plan-for-buildings)

The Pembina Institute's Thought Leader Forum model

Resolving public policy questions through collaborative dialogue and joint fact-finding is one of the key roles the Pembina Institute plays, in partnership with leading universities, think tanks, companies and government agencies.

Thought Leader Forums hosted by the Pembina Institute:

- Alberta Climate Summit (2016) – pembina.org/event/2016-alberta-climate-summit
- Alberta Climate Summit (2015) – pembina.org/event/2015-alberta-climate-summit
- Pathways to 'Net Zero' Buildings in B.C. (2015) – pembina.org/node/2743
- Alberta Clean Electricity Standard (2013) – pembina.org/pub/2464
- Responsible Shale Gas Development in Canada (2012) – pembina.org/pub/2529
- Oil Sands Metrics (2011) – pembina.org/pub/2242
- Wind and Cogeneration Opportunities in Alberta (2010) – pembina.org/node/2636
- ENGO-Industry Cap-and-Trade Dialogue (2009) – pembina.org/pub/1898
- Carbon Capture and Storage (2008) – pembina.org/node/2635
- Carbon Pricing for a Sustainable Economy (2007) – pembina.org/pub/1669
- Environmental NGO and Industry Collaboration (2006) – pembina.org/pub/1377

Anticipated attendees

Government

- ✓ B.C. Building and Safety Standard Branch
- ✓ B.C. Electricity and Alternative Energy Division
- ✓ B.C. Climate Action Secretariat
- ✓ B.C. Homeowner Protection Office
- Canadian Codes Centre
- NRCan
- ✓ Vancouver
- ✓ Victoria
- ✓ North Vancouver
- ✓ Surrey
- ✓ Richmond
- ✓ Seattle

Industry associations

- ✓ UDI
- B.C. Construction Association
- ✓ BOMA
- REALpac
- NAIOP
- APEG-BC
- AIBC
- ✓ Energy Services Association of Canada
- B.C. Building Envelope Council
- ✓ Mechanical Contractors Association of B.C.

Developers

- ✓ Concert Properties
- ✓ Quantum Properties
- ✓ Adera
- ✓ 8th Avenue
- PCI
- Wesgroup
- Polygon
- Solterra
- Westbank

Builders/Contractors/Manufacturers

- ✓ Ledcor
- PCL
- Scott
- ✓ Performance Construction
- ✓ Peak Construction
- ✓ Centra Windows
- ✓ Euroline Windows
- Innotech Windows
- ✓ Rangate

Architects/Engineers

- ✓ Dialog
- ✓ Perkins+Will
- ✓ Morrison Hershfield
- ✓ RDH Engineering
- ✓ HCMA
- ✓ Integral Group
- ✓ MHPM

Financial institutions

- ✓ TD
- ✓ Vancity

Education and research

- ✓ BCIT
- ✓ UBC
- ✓ SFU
- ✓ PICS

Utilities

- ✓ BC Hydro
- ✓ FortisBC
- Creative Energy

NGOs/Labour

- ✓ CaGBC
- ✓ CanPHI
- North American Insulation Manufacturers
- B.C. Trades Council
- B.C. Advanced Conservation and Efficiency Association
- ✓ Light House Sustainable Building Centre
- ✓ Community Energy Association
- ✓ *Has signed call to action and/or participated in previous Thought Leader Forum*

For more information about this event, please contact:

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