



Ministry of  
Environment and  
Climate Change Strategy

## **Plenary Session 2: Buildings, Fleet and Adaptation Policy Proposals**

**Public Sector Climate Symposium  
Langara College  
Nov 26, 2019**

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# Presentation Overview

- CleanBC Public-Sector Climate Commitments
- Amendments to the Climate Change Accountability Act
- New Regulatory Authorities resulting from the Amendments:
  - Low Carbon Sustainable Buildings Policies
  - Fleet Electrification
  - Climate Ready Buildings and Reporting Policies



## Review of Public-Sector Commitments



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# Current Government Direction

## CleanBC Commitment: Public-Sector Buildings and Fleets

- Public buildings will reduce emissions by 50% by 2030
- The Province will reduce GHG emissions from government vehicles by 40% by 2030

## Related CleanBC Commitments

- By 2020, the Province will develop an Adaptation Strategy based on a province-wide climate risk assessment (published in 2019)

## Other Policy Drivers

- New public-sector buildings must be built to LEED Gold or equivalent
- Carbon neutral government requirements







# Climate Change Accountability Act

New Amendments Introduced October 30<sup>th</sup>, 2019



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# Changes to the CCAA

Previous CCAA	Amendments
Provincial GHG reduction targets	Unchanged
Ministerial powers to set targets for year or sectors	Minister will use these powers
Provincial reporting every 2 years	Annual reporting
CNG requirements	Unchanged
Silent	New regulatory authorities



# Overview: 2019 CCAA Amendments

- **Annual Report**
  - Report to be tabled in the legislature by the Ministry of Environment and Climate Change Strategy
    - Provincial GHG emissions and climate risk
    - Actions to reduce GHG reducing and manage climate risks
    - Plans to continue progress towards targets and manage climate risks
    - Advice received from Advisory Committee
- **Requirement to appoint Advisory Committee**



# Public Sector Climate Change Accountability

- **Regulation making powers** to set prescribed requirements and targets related to buildings, fleets and fuels to achieve emission reductions and prepare for changing climate
- The annual report from PSOs is changing names in 2020 from Carbon Neutral Action Report to **Climate Change Accountability Report (CCAR)**
- Each PSO to report on actions to comply with prescribed requirements and targets, if set by regulation
- CNG requirements remain unchanged

# CCAA Regulatory Authorities

## Scope of authority to prescribe requirements for buildings:

- Energy efficiency, energy use, GHG intensity targets, environmental effects
- Assessing and planning to reduce GHG emissions
- Assessing, managing, reporting on climate change risks
- Building design, construction, commissioning, operations and maintenance, retrofitting, decommissioning, demolition



# CCAA Regulatory Authorities

## Scope of authority to prescribe requirements for fleet:

- Zero emission vehicles (ZEVs)
- Fuel efficiency
- Assessing and planning to reduce GHG emissions

## Scope of authority to prescribe requirements for fuel:

- Use of, and infrastructure for, prescribed fuels

# Key Points: 2019 CCAA Amendments

- Goal is to bring more **specificity, clarity, and accountability** to emissions-reduction efforts and climate adaptation in the public sector
- Legislation is **enabling** only: there are no new targets or requirements for public sector buildings until regulations are approved by Cabinet.
- Any proposed regulations will be developed through **extensive consultation** with public sector stakeholders, including capital ministries and public sector organizations.

# **Low Carbon and Sustainable Public Sector Buildings**



# Building on Our Successes

**Ferris Elementary, Richmond**  
*2019 greenest school in Canada*



**Wood Innovation Research  
Laboratory, UNBC**  
*Certified Passive House*



**St. Mary's Hospital, Sechelt**  
*Canada's greenest hospital*



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# Regulatory Consultation: Scope and Objectives

## Scope:

- Phase 1 of the regulatory consultation is focused on **new buildings**
- Considering creating equipment efficiency standards and operations in existing buildings

## Potential environmental performance objectives:

- Reduce GHG emissions
- Increase energy efficiency
- Conserve water
- Improve air quality
- Reduce waste
- Address other environmental effects





# Potential Performance Objectives

- **Greenhouse Gas Emissions Intensity (GHGi) targets for buildings**
  - Based on emissions per square metre of floorspace
- **Water conservation**
  - Specifying water conservation points in LEED
- **Building standards to reduce adverse environmental effects**

# Green Building Standards: LEED



## LEED Certification

- Widely used and respected green-building certification system
- Four levels
  - LEED Certified – 40-49 points
  - LEED Silver – 50-59 points
  - LEED Gold – 60-79 points
  - LEED Platinum – 80 points+
- LEED Gold is currently the baseline for new PS buildings

## How can we add to, supplement, improve upon the Gold baseline?

- Designate mandatory LEED points in specific categories?

# Green Building Standards: LBC



## Living Building Challenge (LBC)

- A very ambitious green-building certification system
- Requires all electricity to be generated on site via renewables
- All projects must supply 100% of the project's water needs via captured precipitation or other closed-loop water systems

**Are there specific components of LBC that could inform green-building standards in BC? What are the pros and cons of this approach?**

# Green Building Standards:



## BC Energy Step Code

- Provincial regulation available to local governments to incentivize or require energy efficiency in new buildings that goes beyond the requirements in the base building code
- Step Code includes steps for complex (Part 3) residential, office and retail spaces.
  - Applicable to new buildings only
  - Step 1 includes energy modelling, performance equal to the National Energy Code for Buildings reference building, and airtightness testing
  - Step 1 is not required for public sector buildings. However, if individual local governments designate Step 1 as a requirement, it would mean that PSOs in the jurisdiction would need to comply.

## How can the BC Energy Step Code inform potential public-sector energy efficiency regulations?



# UPDATE ON BETTER BUILDING BC

- The CleanBC Better Buildings program offers a suite of incentives to help with fuel-switching transition for commercial, institutional, and multi-unit residential buildings:
  - **Retrofit** - Up to \$200,000 in capital incentives (\$40-60/tonne) and up to \$20,000 in energy study funding (Custom and Custom-Lite offers)
  - **New Construction** - Up to \$500,000 in capital incentive (\$30-\$100/tonne) funding and \$15,000 in energy study funding (CNC program)
  - **Non-profit housing** - Up to \$200,000 in capital incentives (\$70/tonne) to support fuel-switching measures or building envelope measures, up to \$5000 towards an energy study, and up to \$7000 in implementation support (SHIP)
- CleanBC also offers gas efficiency retrofit incentives of up to \$100,000 (\$40/tonne) (through the FortisBC Custom Performance Program).



# Questions for Discussion

- **Which sustainable building standards, certification systems, or approaches might be best suited for your sector?**
- **What are the opportunities and challenges that would be created by new or more ambitious environmental standards?**
- **Do you have any other suggestions for us? What have we missed?**

# Low Carbon Public Sector Buildings: How to Get There?

- This symposium is the first step in the **consultation process** on potential new regulations to advance climate leadership for public sector buildings.
- Any proposals advanced will be developed in partnership with capital ministries and public sector organizations.
- We look forward to working with you, listening to you, and **gathering feedback and input** over the coming months.



# PUBLIC SECTOR FLEET





- 40% reduction of emissions from all public sector fleet vehicles by 2030
- Starting 2020, 10% of LDV government fleet purchases are ZEVs where an electric option meets operational needs

# Pathways to CleanBC Goals

CLEAN FUELS	CLEAN VEHICLES	SUPPORTING INFRASTRUCTURE
<ul style="list-style-type: none"> <li>• Electricity</li> <li>• Hydrogen</li> </ul>	Zero-emission	<ul style="list-style-type: none"> <li>• Charging Stations</li> <li>• Refueling stations</li> </ul>
<ul style="list-style-type: none"> <li>• High-renewable content</li> <li>• Cleaner burning</li> </ul>	Specialized motors	Refueling stations
	More fuel efficient vehicles that use conventional fuels	None needed



# CCAA Regulatory Authorities

Scope of authority to prescribe requirements for fleet:

- Assessing and planning to reduce GHG emissions
- Zero emission vehicles (ZEVs) or other vehicle types
- Fuel efficiency
- Use of, and infrastructure for, prescribed fuels





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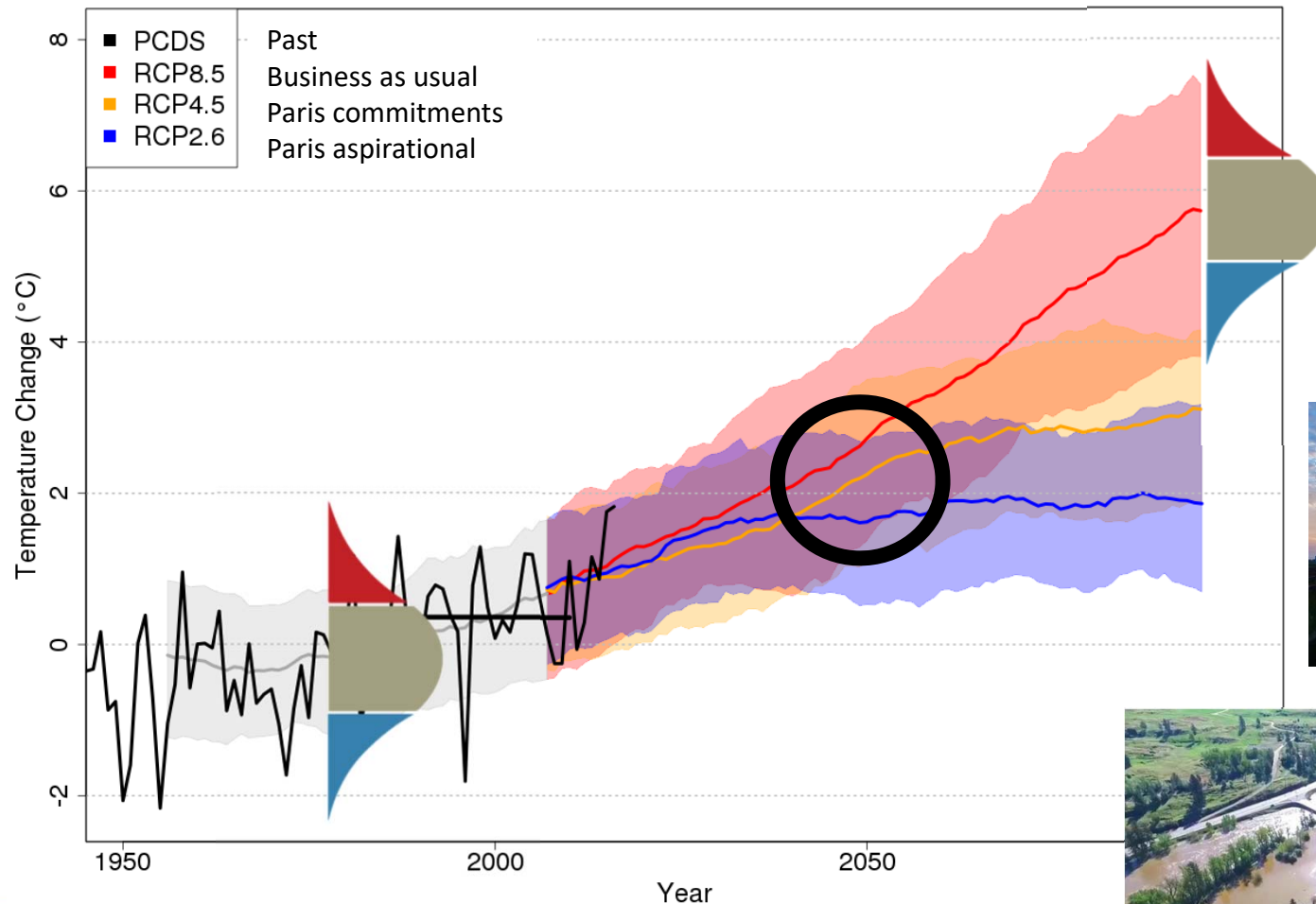
# Climate Ready BC: Preparing Together

## Climate Ready Buildings & Climate Risk Reporting



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# Why does the public sector need to manage climate risks?





# What are climate risks to buildings?

- Heat
- Flooding
- Wildfire and wildfire smoke
- Freeze-thaw
- Extreme Storms – Wind & Rain





# Climate Ready Building Requirements



**Assess  
Manage  
Report**

BC Housing, First Ave & Clark Dr., Vancouver

# Potential Resources

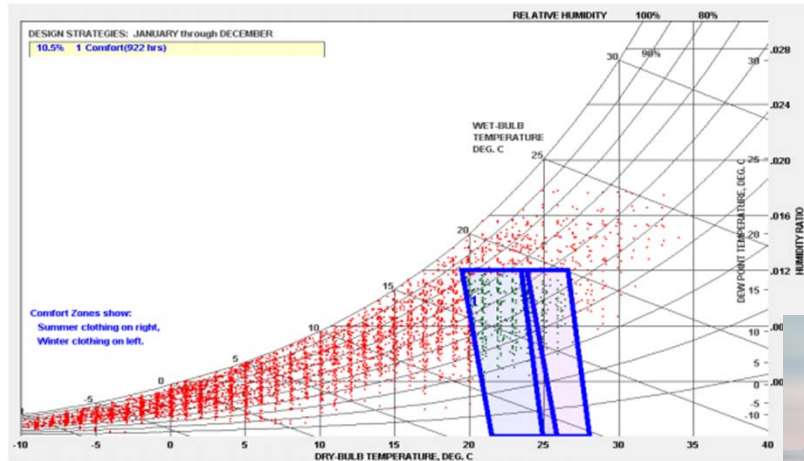
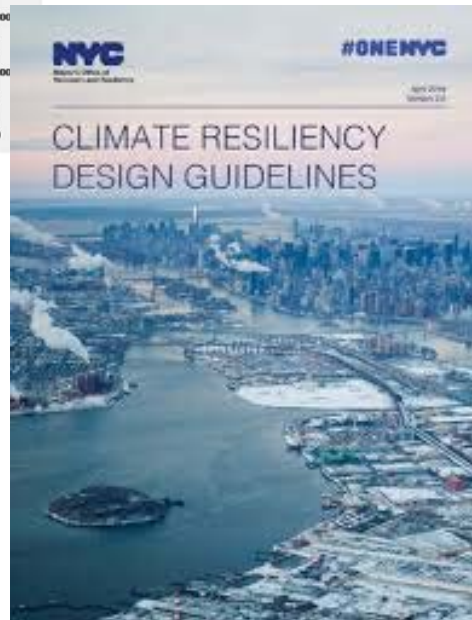
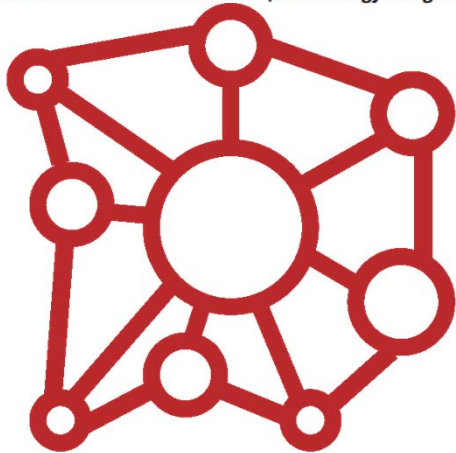


Figure 6: Psychrometric Chart of CN2014 TMY (UCLA Energy Design Tools Group, 2016)



Likelihood of impact occurring	High	Medium	Low
	Higher risk, higher priority		Lower risk, lower priority
	Low	Medium	High
Consequence of impact occurring			





# Climate Risk Reporting

## Proposed categories of information:

1. **Understanding** of climate risk to buildings and service delivery
2. **Actions taken over the last calendar year** to manage known climate risks, including expenditures
3. **Proposed actions for the current calendar year** to manage climate risks, including planned expenditures
4. **Outcomes** that could reasonably be expected
5. **Plans** to continue progress toward managing climate risk to the organization
6. Any other prescribed matters.

# Potential Reporting Resources

- **Overview of Reporting Instructions**
  - Climate data resources
  - Reporting template
- **Resources for completing climate risk and vulnerability assessments**
  - Tools
  - Framework





Thank you!

Questions?