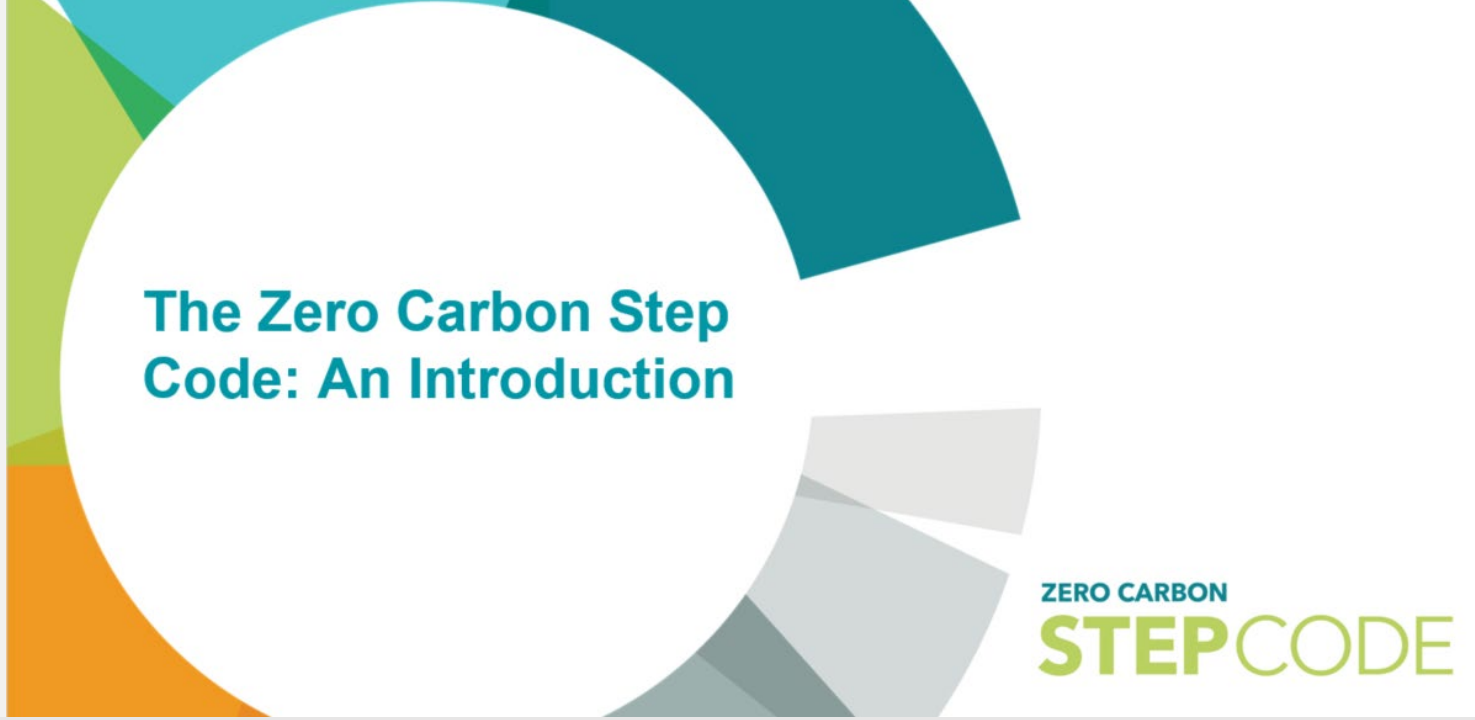


BC Building Code Updates and Electric Utility Considerations

Leya Behra, P.Eng, Manager of Climate Action

09-May-2023

NEW WESTMINSTER

Agenda

- Introduction to the Zero Carbon Step Code
- Existing Building and Transportation Electrification
- Electric Utility Related Considerations
- Discussion

BCBC 2018 Revision 5: Effective May 1, 2023

Summary Part 3 buildings

- Introduces the Zero Carbon Step Code, an opt-in building carbon pollution standard for operational carbon.
- Introduces modified TEUI targets for office and retail occupancies.

Summary Part 9 buildings

- Introduces the Zero Carbon Step Code, an opt-in building carbon pollution standard for operational carbon
- Introduces a prescriptive option for Step 3, Part 9 buildings if a local government passes an enabling bylaw
- More airtightness testing options
- New energy performance improvement compliance calculations

Zero Carbon Step Code

- **Objective:** Zero carbon emissions new buildings
- **How:** Stop use of fossil fuels for heating, hot water, and cooking
- **Provincial mechanism:** Province sets Levels and minimum adoption timelines (like Energy Step Code)
- **CNW impacts:** Alignment with actions outlined in adopted climate strategies, increases electricity demand and consumption.

Origin of the new regulation

"**By 2030, all new buildings will be zero carbon**, and all new space and water heating equipment will meet the highest standards for efficiency."

– *CleanBC Roadmap to 2030*

Building carbon pollution sources and alternative eqiupment

43% of carbon pollution is from buildings

City of New Westminster

Sources

64% Space heating

35% Water heating

1% Cooking

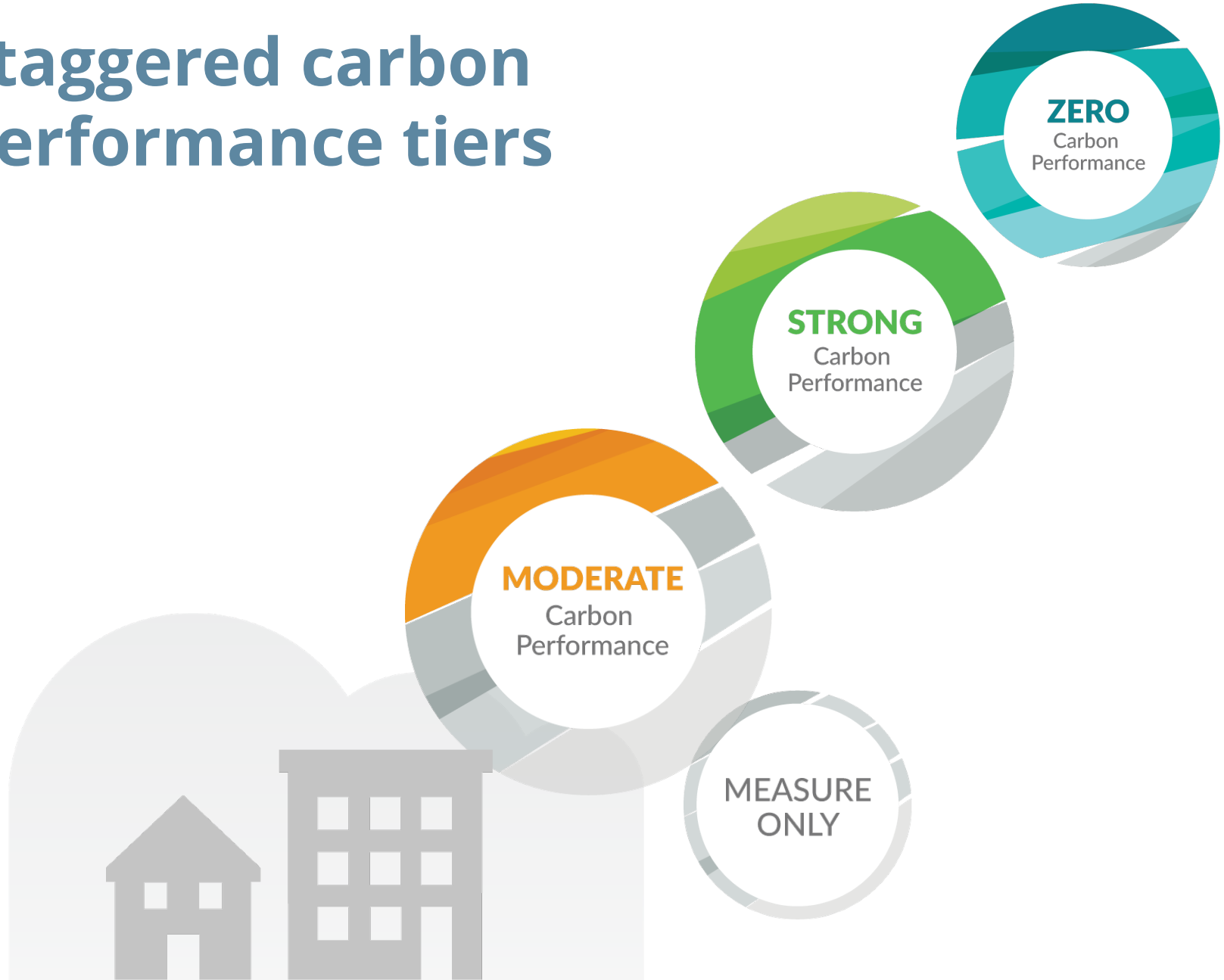
Solutions

Electric heat pump

Electric water heater

Induction stove

Staggered carbon performance tiers



2030 Provincial Requirement

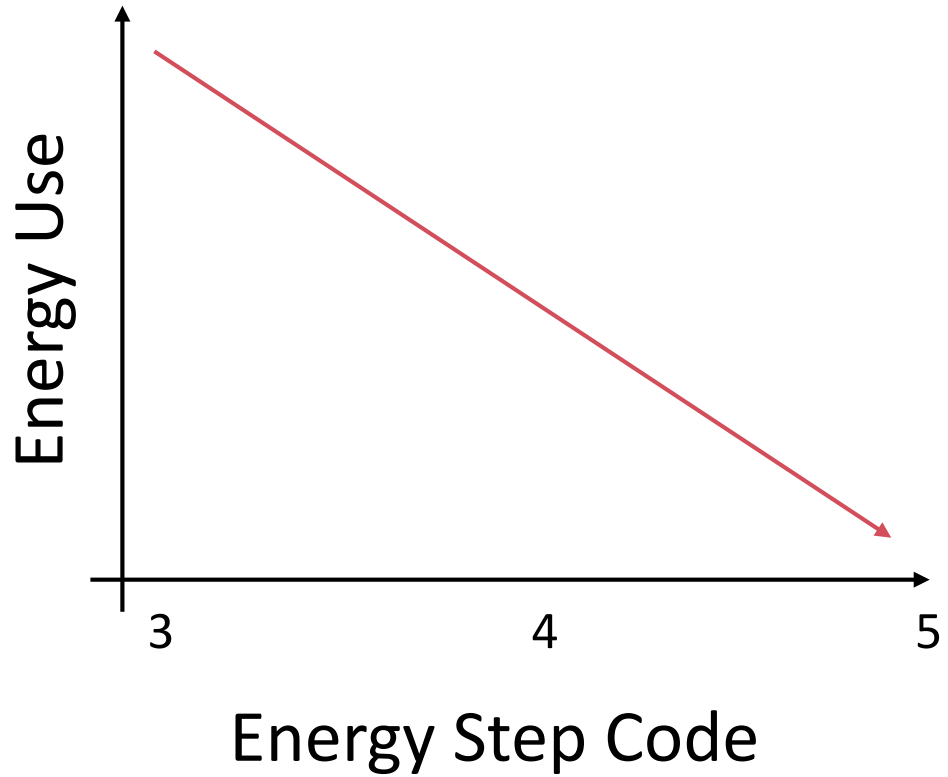
Compliance Approaches

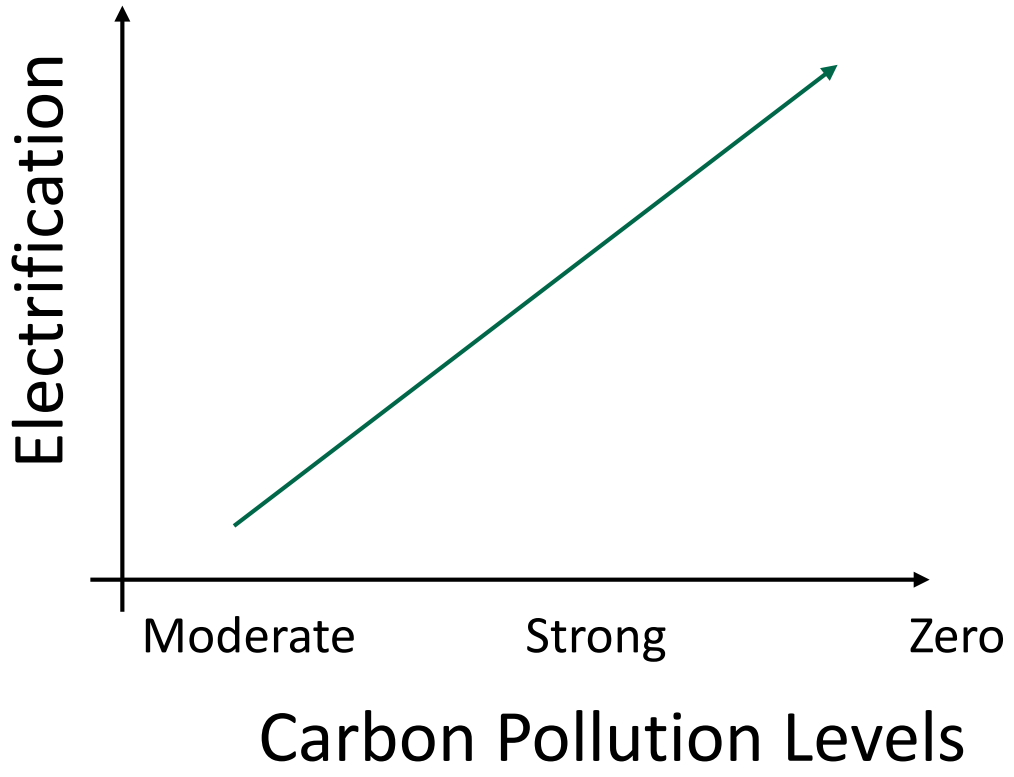
Building Type	Compliance Approach	Moderate	Strong	Zero
Part 9	Prescriptive	Space heating must be zero carbon.	Space and water heating systems must be zero carbon.	Space and water heating and cooking must be zero carbon.
	Maximum Carbon (Kg CO2e/yr)	1,050	440	265
	Carbon Intensity (Kg CO2e M2/yr)	6	2.5	1.5
Part 3 Residential	Carbon Intensity (Kg CO2e M2/yr)	7	3	1.8
Part 3 Offices	Carbon Intensity (Kg CO2e M2/yr)	5	3	1.5

Provincial Energy Step Code Pathway to 2032

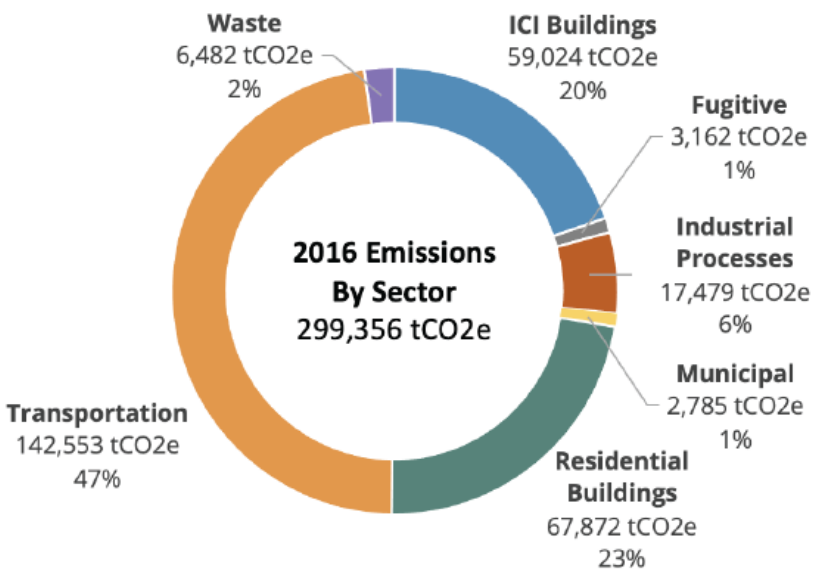
To meet the City's climate action targets, it is intended to have adopted the highest tiers of the Energy Step Code **before 2030**

Energy Step Code and Zero Carbon Interaction





Existing Buildings and Transportation



- Continue to promote existing CleanBC electrification and efficiency programs
- Supporting transition to EVs (Public, at home, and private EV charging)

Principals and Program Delivery

REDUCE

- Turn it off, walk instead of drive

IMPROVE

- Increase efficiency

SWITCH

- Replace fossil fuel with clean energy source

ENERGY SAVE NEW WEST

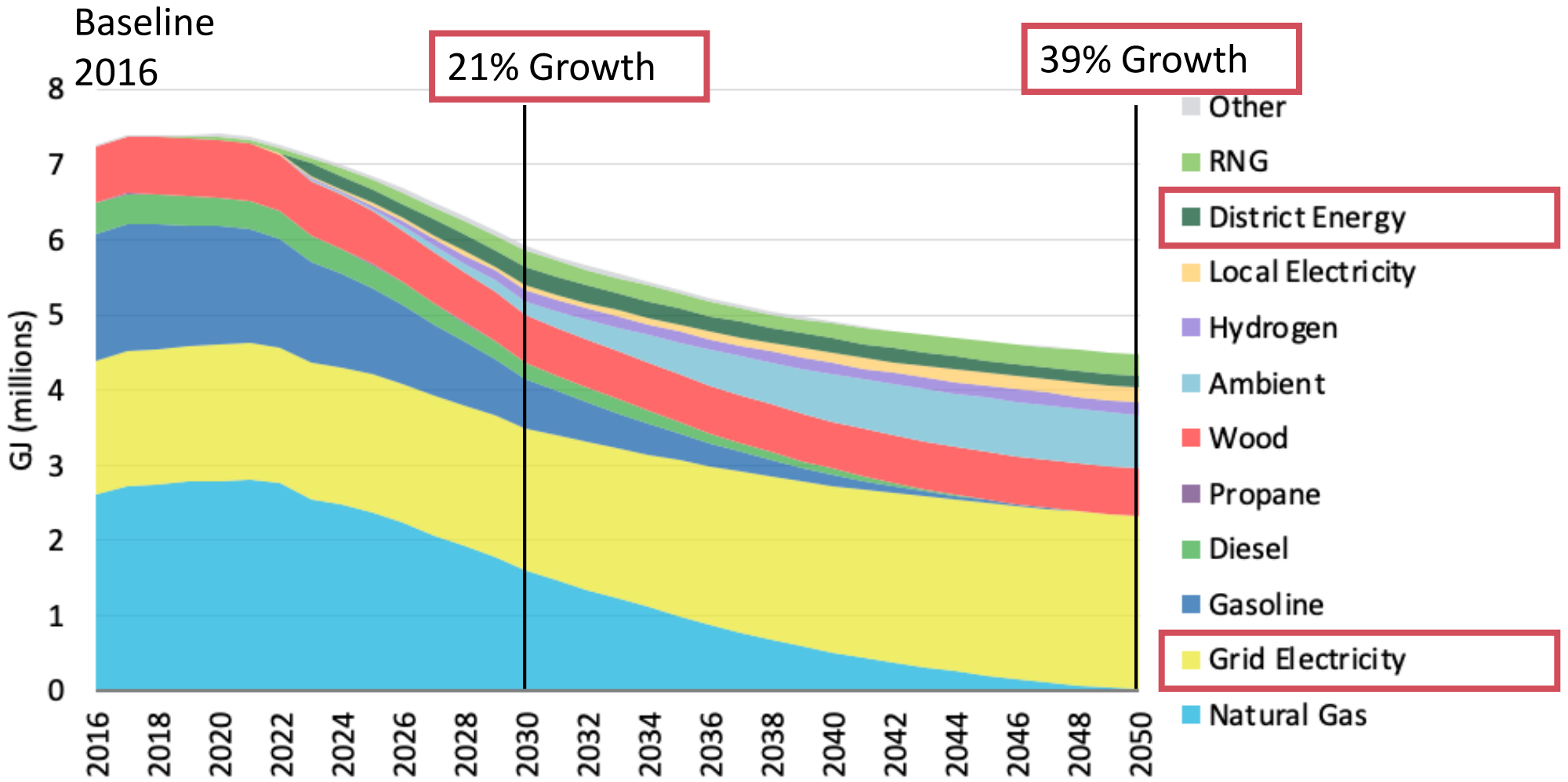
PROGRAM FUNDING AND INCENTIVES PROVIDED BY

NEW WESTMINSTER

BC Hydro Power smart

FORTIS BC Energy at work

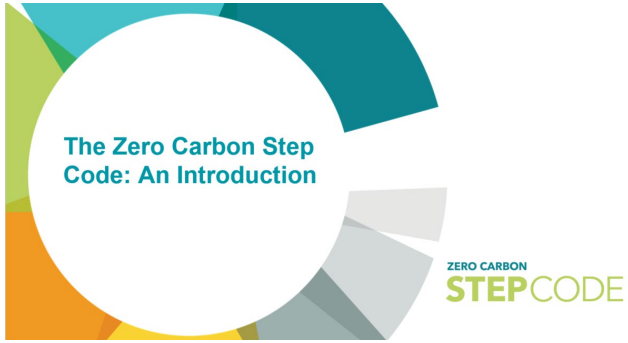
Electricity Consumption Model from CEEP2050



Electric Utility Related Considerations

ELECTRICITY SUPPLY

DISTRIBUTION CAPACITY



ZERO CARBON BUILDINGS

EQUITABLE DISTRIBUTION EXTENSION POLICIES

Discussion

Zero Carbon Buildings

- Does the Utility Commission Support, in principle, accelerated adoption of the Zero Carbon Step Code in parallel with Energy Step Code?

Electricity Supply

- Does the Utility Commission, in principal, support the delivery of municipal conservation and demand management programs through Energy Save New West?

Climate Action

- What information does the Utility Commission need from the Climate Action team to support recommendations around utility planning (i.e. load forecasting, policy planning, etc.)?

Thank you

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