Corporation of the City of
NEW WESTMINSTER

Utility Commission Meeting
Agenda

Tuesday, May 9, 2023, 2:00 p.m.
Meeting held electronically and in Committee Room 2
City Hall

We recognize and respect that New Westminster is on the unceded and unsurrendered land of the Halkomelem speaking peoples. We acknowledge that colonialism has made invisible their histories and connections to the land. As a City, we are learning and building relationships with the people whose lands we are on.

Pages

1. CALL TO ORDER AND LAND ACKNOWLEDGEMENT
The Chair will open the meeting and provide a land acknowledgement.

2. CHANGES TO THE AGENDA
Additions or deletion of items.

3. MOTION TO MOVE INTO CLOSED MEETING
THAT the Utility Commission will now go into a meeting which is closed to the public in accordance with Section 90 of the Community Charter, on the basis that the subject matter for all agenda items relate to matters listed under sections:

(1)(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee, or agent of the municipality or another person appointed by the municipality;
(1)(c) labour relations or other employee relations;
(1)(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

4. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

4.1 Minutes of March 21, 2023 3

5. REPORTS AND PRESENTATIONS
Staff and guest reports and presentations for information, discussion, and/or

action

5.1 **BC Building Code Updates: Energy Step Code and the new Zero Carbon Step Code** 7
Climate Action Team

6. CONSENT AGENDA

6.1 **Electrical Purchases & Sales Report (March 2023)** 51

7. NEW BUSINESS

Items added to the agenda at the beginning of the meeting.

8. END OF MEETING

9. UPCOMING MEETINGS

The next meeting is scheduled for June 20, 2023 at 2:00 p.m.

Corporation of the City of
NEW WESTMINSTER

Utility Commission

MINUTES

Tuesday, March 21, 2023, 1:30 p.m.
Meeting held electronically and in Committee Room 2
City Hall

PRESENT

Mayor Patrick Johnstone	Commissioner
Sally Bhullar-Gill	Commissioner
Maya Chorobik*	Commissioner
Councillor Paul Minhas	Commissioner
Lino Siracusa	Commissioner
Lisa Spitale	Commissioner

STAFF

Ron Au	Senior Financial Services Analyst
Rod Carle	General Manager, Electrical Operations
Katie Stobbart	Committee Clerk

*Denotes virtual attendance

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1. CALL TO ORDER AND LAND ACKNOWLEDGEMENT

Mayor Patrick Johnstone opened the meeting at 1:34 p.m. and recognized with respect that New Westminster is on the unceded and unsurrendered land of the Halkomelem speaking peoples. He acknowledged that colonialism has made invisible their histories and connections to the land. He recognized that, as a City, we are learning and building relationships with the people whose lands we are on.

2. INTRODUCTIONS

2.1 Welcome to new Councillor Paul Minhas

DRAFT

The Commission welcomed Councillor Paul Minhas as a new Commissioner.

3. CHAIRPERSON APPOINTMENT

3.1 Appointment of a new Chairperson (External Member)

MOVED and SECONDED

THAT Lino Siracusa be appointed as the new Chairperson of the Utility Commission.

Carried.

All Commissioners present voted in favour of the motion.

4. CHANGES TO THE AGENDA

MOVED and SECONDED

THAT item 5 be addressed after all other items on the Agenda.

Carried.

All Commissioners present voted in favour of the motion.

5. MOTION TO MOVE INTO CLOSED MEETING

Procedural Note: This item was addressed following all other agenda items. The minutes are recorded in numerical order.

MOVED and SECONDED

THAT the Utility Commission will now go into a meeting which is closed to the public in accordance with Section 90 of the Community Charter, on the basis that the subject matter for all agenda items relate to matters listed under sections:

(1)(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee, or agent of the municipality or another person appointed by the municipality;

(1)(c) labour relations or other employee relations;

(1)(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the

council, could reasonably be expected to harm the interests of the municipality if they were held in public.

Carried.

All Commissioners present voted in favour of the motion.

6. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

6.1 Minutes of October 18, 2022

MOVED and SECONDED

THAT the Minutes of the October 18, 2022 Utility Commission meeting be adopted.

Carried.

All Commissioners present voted in favour of the motion.

7. CONSENT AGENDA

MOVED and SECONDED

THAT items 7.2, 7.3, and 7.5 be adopted on Consent.

Carried.

All Commissioners present voted in favour of the motion.

7.1 BridgeNet Dark Fibre Utility

Rod Carle, General Manager, Electrical Utility, provided a brief overview of the BridgeNet Dark Fibre Utility report, noting the following:

- BridgeNet 2.0 was an initiative brought forward by IT to bring service to all the cities around us and create a hub at City Hall;
- An individual has been hired to handle marketing; and
- Currently working on agreements with the first customer to use the new Wavelength service.

In response to questions from the Commission, Mr. Carle advised that the Commission's oversight of BridgeNet is similar to its oversight of the electric utility.

The Commission recommended that staff report back on BridgeNet to the Commission more regularly, starting with the next Commission meeting.

7.2 Purchasing and Sales Report

7.3 Financial Report

7.4 2023 Utility Commission Meeting Schedule

7.5 Next Meeting

MOVED and SECONDED

THAT the reports for items 7.1 and 7.4 be received for information.

Carried.

All Commissioners present voted in favour of the motion.

8. NEW BUSINESS

There were no items.

9. END OF MEETING

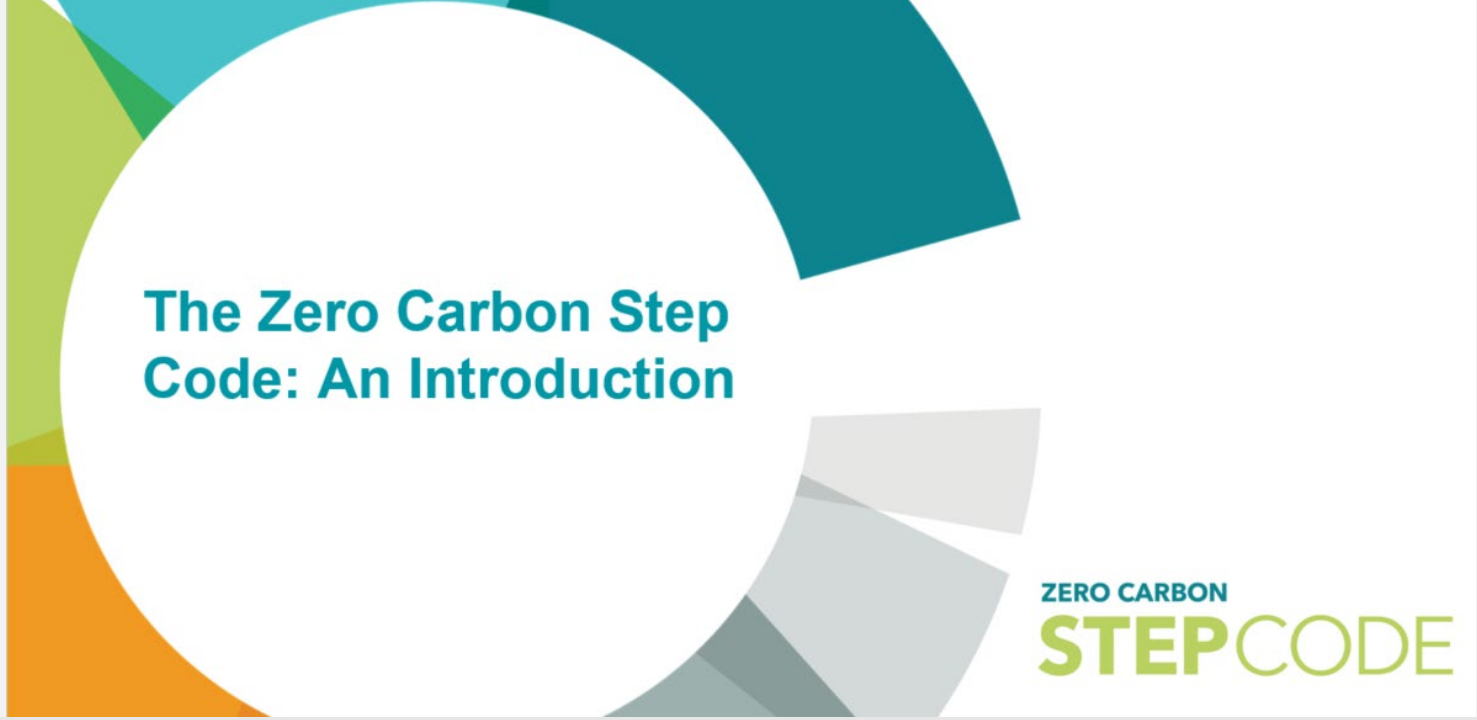
The meeting ended at 1:52 p.m.

10. UPCOMING MEETINGS

Remaining scheduled meetings for 2023, which take place at 2:00 p.m. unless otherwise noted:

- May 9
- June 20
- July 11
- September 19
- November 21

DRAFT



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

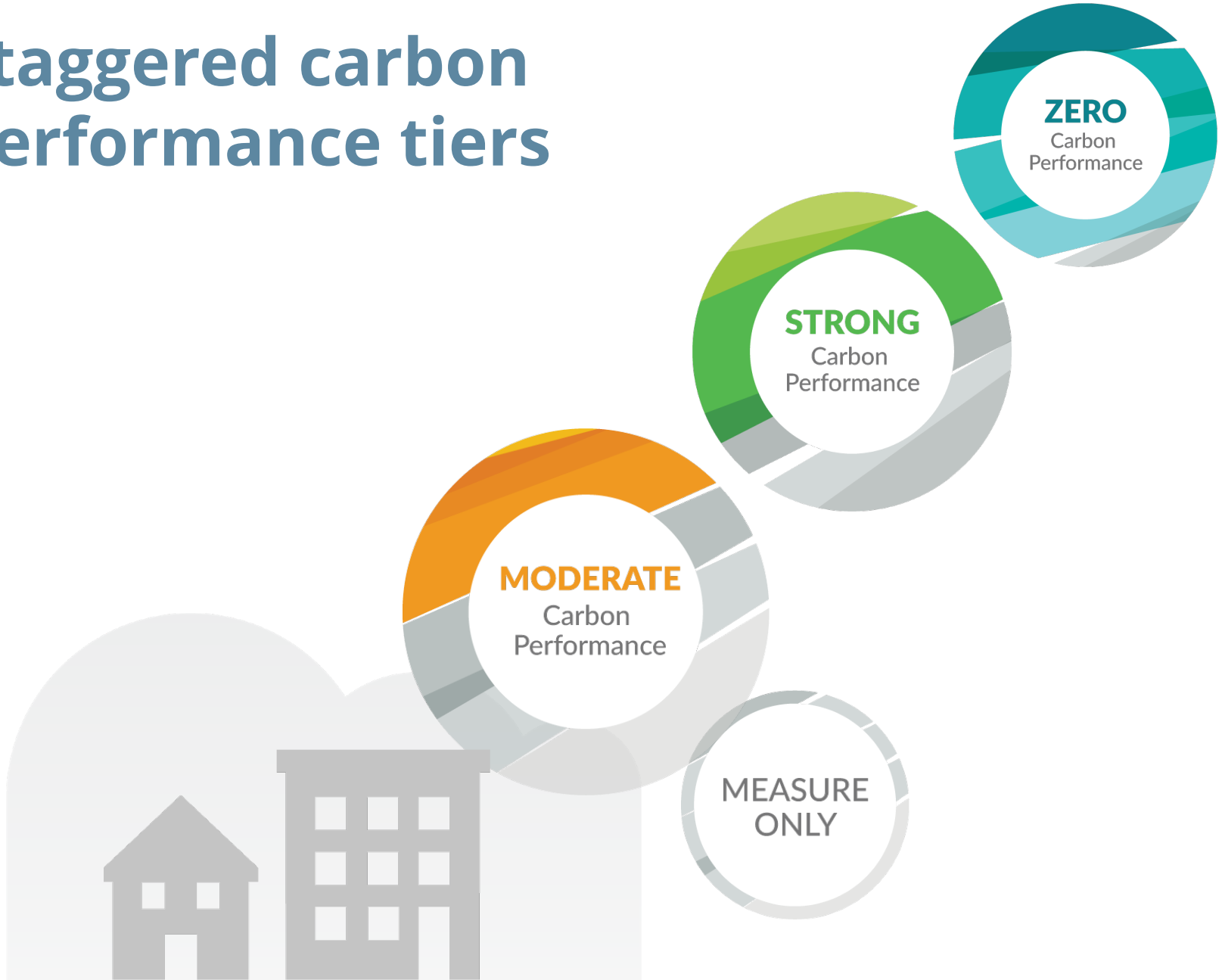
Solutions

Electric heat pump

Electric water heater

Induction stove

Staggered carbon performance tiers



2030 Provincial Requirement

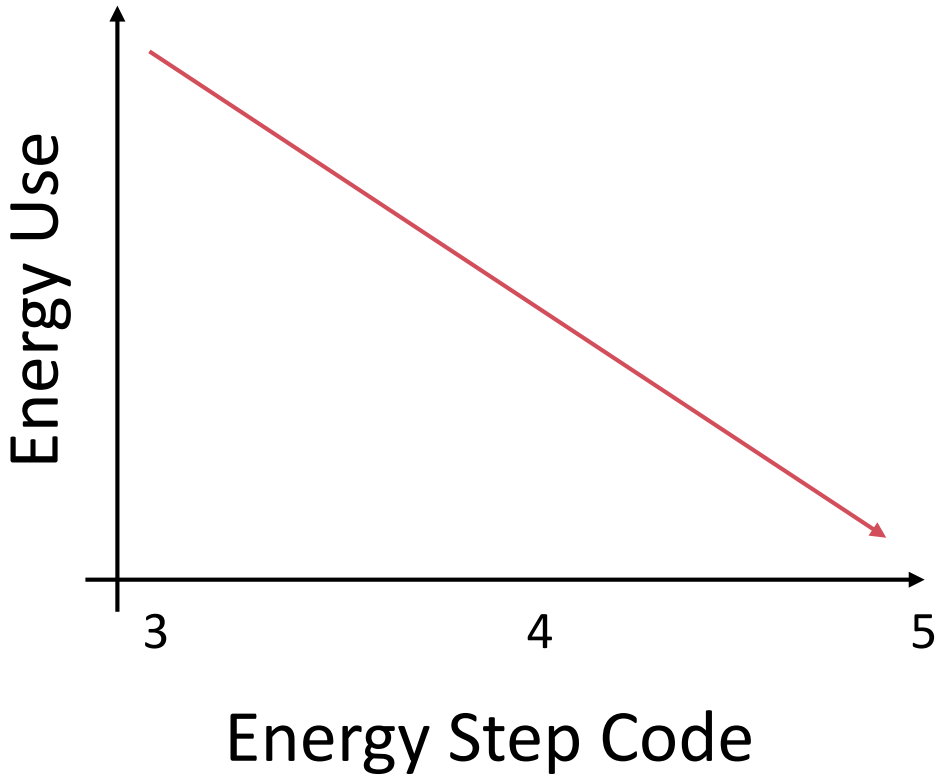
Compliance Approaches

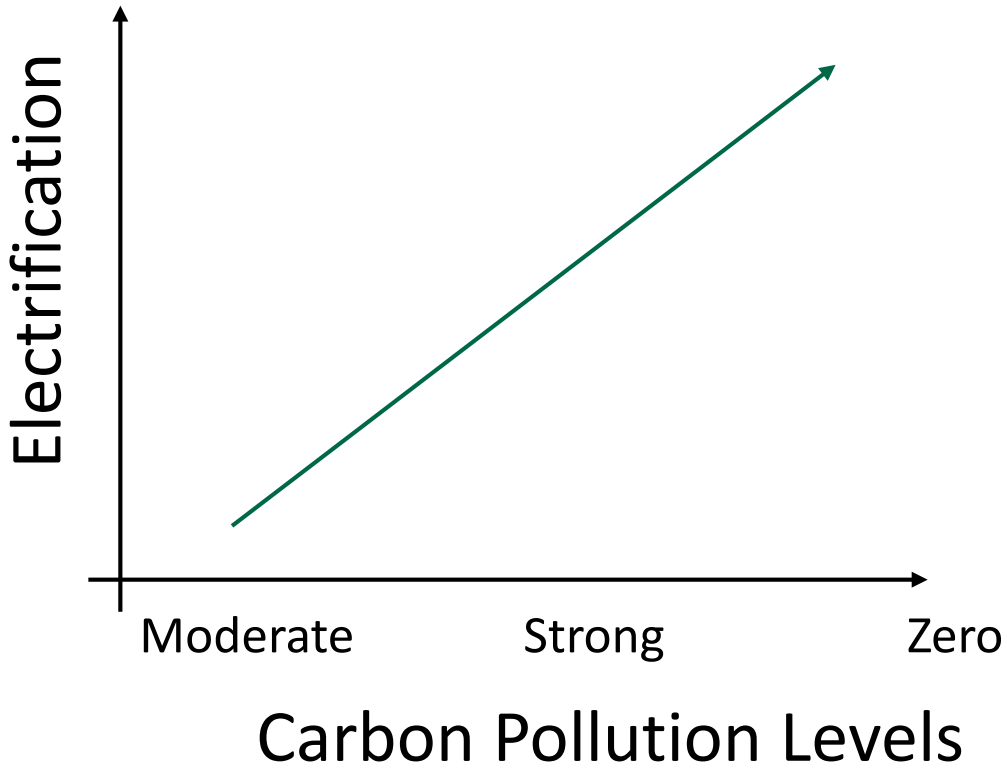
Building Type	Compliance Approach	Moderate	Strong	Zero
Part 9	Prescriptive	Space heating must be zero carbon.	Space and water heating systems must be zero carbon.	Space and water heating and cooking must be zero carbon.
	Maximum Carbon (Kg CO2e/yr)	1,050	440	265
	Carbon Intensity (Kg CO2e M2/yr)	6	2.5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

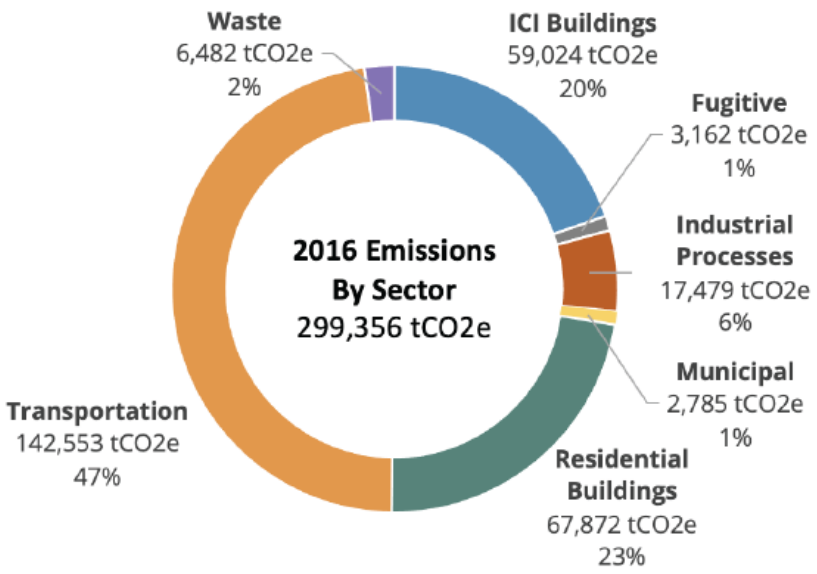
To meet the City's climate action targets, it is intended to have adopted the highest tiers of the Energy Step Code **before 2030**

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

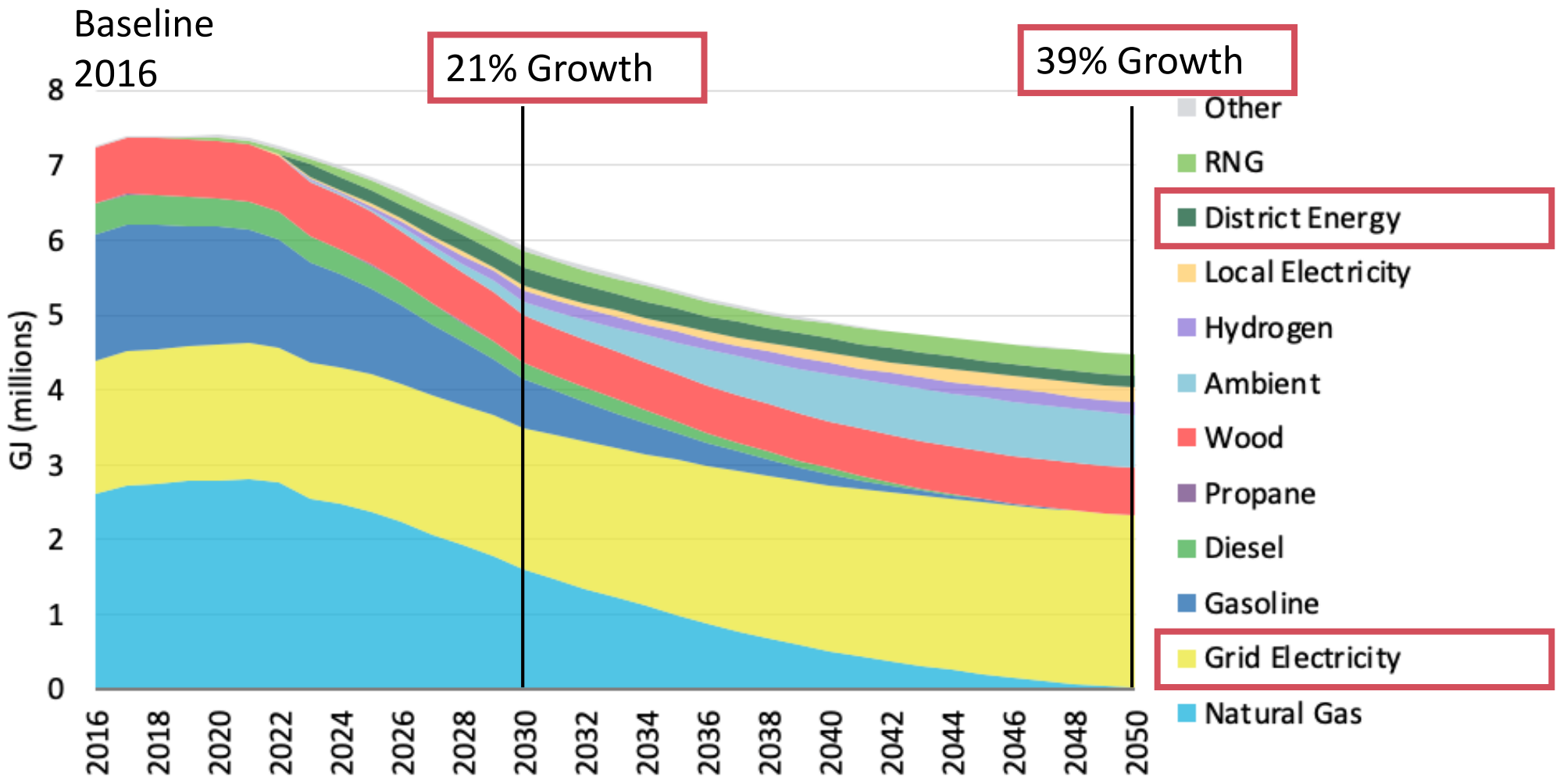
PROGRAM FUNDING AND INCENTIVES PROVIDED BY

NEW WESTMINSTER

BC Hydro Power smart

FORTIS BC™ Energy at work

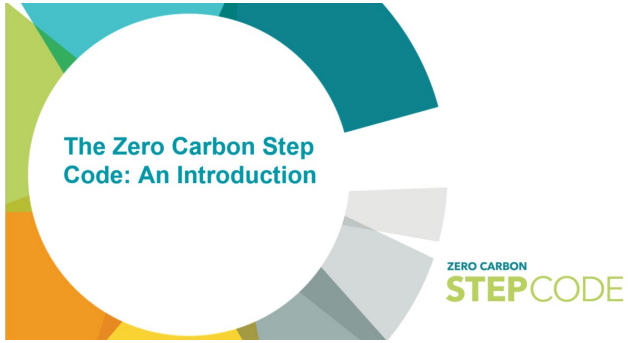
Electricity Consumption Model from CEEP2050



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

Leya Behra, P.Eng
Manager of Climate Action
City of New Westminster
lbehra@newwestcity.ca

Improving customer connections for a cleaner future

Presentation to the Energy Step Code Council

February 13, 2023

BC Hydro
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Topics for discussion today

1. Electrification

- Our role in electrifying B.C. to help combat climate change
- How we'll continue to meet B.C.'s growing electricity needs
- The Carbon Pollution Standard

2. Customer connections

- Capacity of our distribution system
- Overview of our Distribution Extension Policy
- Potential options to update the policy
- Improvements we're making to improve customer connections

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Climate change is a threat to B.C.

- B.C. has legislated targets for reducing greenhouse gas emissions:
  - 40% below 2007 levels by 2030; 60% by 2040; 80% by 2050.
- 70% of the energy used in B.C. comes from fossil fuels.
- To get where we need to go, we need to make a big shift and encourage electrification.

Our Electrification Plan

- Introduced in September 2021
- $260 million investment
- Goal is to reduce GHG emissions by 930,000 tonnes per year

Electrifying new buildings

- The Carbon Pollution Standard (CPS) is a critical tool for decarbonizing the operations of B.C.'s new building sector.
- Our broader electrification activities directly support building electrification.
- We're ready to work with municipalities and developers to ensure the successful implementation of the CPS.

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Supply resources

Our role in B.C.'s clean energy future

- 98% of the electricity we generate is clean and renewable.
- 30 hydroelectric plants that power more than 5 million customers.
- Site C will provide more power than we need until the end of the decade.
- We're planning for a future that includes more clean electricity.
- B.C. has excellent potential for wind and solar resources.

Conservation is still important

- Continue to encourage energy efficiency
- Annual savings = 5,400 gigawatt hours
  - Equivalent of powering 540,000 homes per year

Distribution capacity

Current state

- ~1,500 distribution feeders and 230 substations serving our distribution customers.
- Most areas have sufficient capacity to connect new customers in a reasonable timeframe.

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Measures to support rapid electrification

- Increased our distribution capital budget by $100 million in 2023-24.
- Updating planning criteria to advance the construction of new feeders.
  - 35 new feeders in the past 5 years and 18 new feeders under construction.
- Advancing major underground egress corridors projects.
  - ~130 km of new major underground distribution under construction.
- Implementing feeder level Demand Side Management.
- Advancing voltage conversion work to 25 kV in 12 kV areas.
- Offering capacity feasibility reviews for major customers.

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Carbon Pollution Standard

Demand from the building sector

- Quick uptake of the Carbon Pollution Standard (CPS) is expected
  - More than 50 Local Governments have adopted the Energy Step Code
  - 9 Local Governments have adopted a “Low Carbon Energy System” incentive
  - 2 Local Governments have proposed to adopt a LCES incentive
  - City of Vancouver, BC Housing have long experience with GHGi
- Expect most new buildings will electrify space and water heating

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How we'll support CPS rollout

- Our planning teams will work with local governments to identify high growth areas and potential grid impacts and solutions.
  - Municipal, regional, sub-regional
- Include building electrification learnings and approaches in a Local Government Best Practice Guide.
- Make it easier for customers to plan connections.

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Working with early adopters

- Local governments should contact Key Account Manager or Sustainable Communities
  - They'll arrange meetings with our planning teams
- Within three months (for "prioritized" municipalities), we'll:
  - Establish a shared understanding of new development timeline and grid impacts.
  - Identify zones with potential capacity constraints and our infrastructure upgrade schedule.
  - Review proposed Carbon Pollution Standard (CPS) roll-out and timing.
- Priority will be given to local governments that are:
  a) Actively reviewing the adoption of a community wide "low" or "zero-carbon ready" CPS.
  b) In known high growth areas with potential capacity constraint issues.

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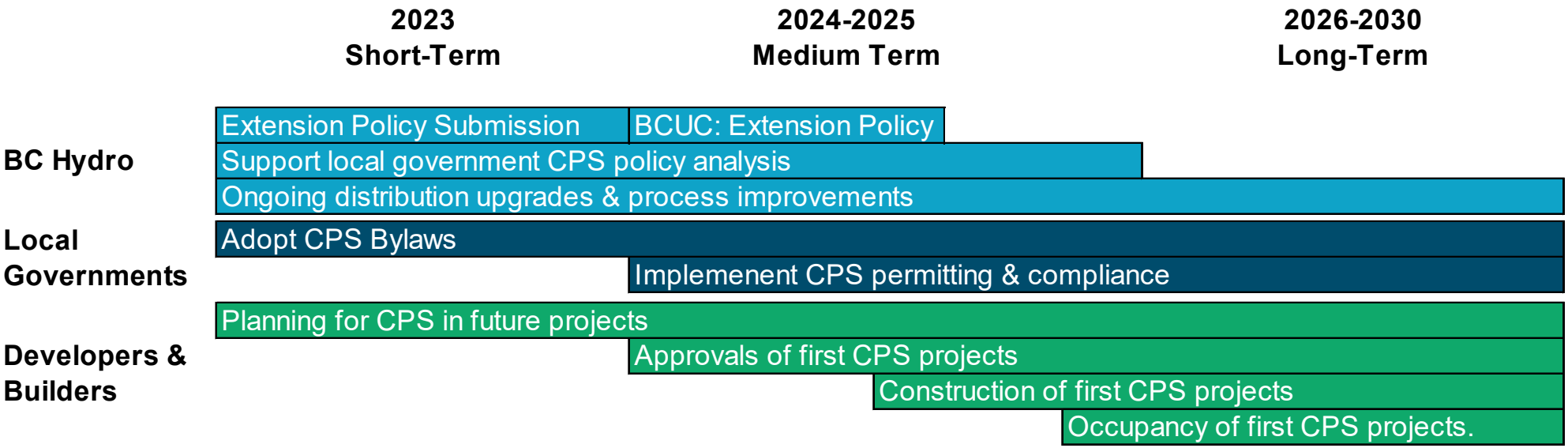
Aligning CPS roll-out with BC Hydro distribution upgrades



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Updating our Distribution Extension Policy

Current state

- Last updated in 2008
- Based on the principle of cost causation
- Cost Categories:
  - Service connection
  - Extension
  - System improvement charges
- Financial contribution from BC Hydro

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Issues with our current policy

- “Free riders”
- Cost unpredictability
  - Unpredictable extension costs
  - Unpredictable system improvement costs
  - Non-connection costs (non-BC Hydro requirements)

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Policy update options

1. Update our maximum contribution towards an extension.
2. Update our contribution and simplify the recovery of system improvement costs
3. Update our contribution and simplify the recovery of all connection costs
4. No connection fees

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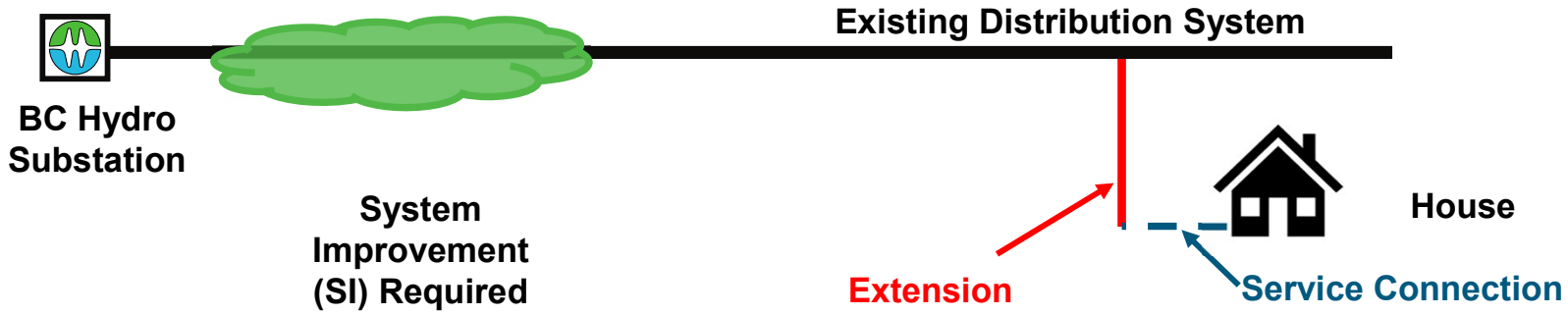
Illustrative Distribution Extension



	Option 1 Update Contribution	Option 2 Simplified SI Fee	Option 3 Simplified Connection Fee
Extension Fee	Project Specific	Project Specific	Unitized $/dwelling x 1
SI Fee	No	Unitized $/dwelling x 1	
Service Connection	Yes	Yes	Yes
Contribution	Yes	Yes	No

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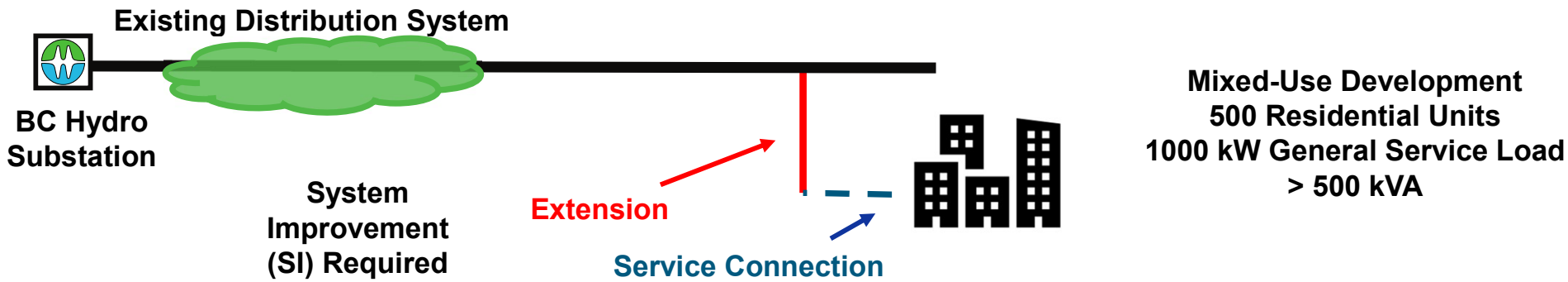
Illustrative Distribution Extension



	Option 1 Update Contribution	Option 2 Simplified SI Fee	Option 3 Simplified Connection Fee
Extension Fee	Project Specific	Project Specific	Unitized $/dwelling x 500 $/kW x 1000
SI Fee	Project Specific	Unitized $/dwelling x 500 $/kW x 1000	
Service Connection	Yes	Yes	Yes
Contribution	Yes	Yes	No

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Next Steps for Extension Policy Update

1. Engage on high level concept (Feb - Mar)
2. Develop detailed recommended approach (April)
3. Engage on detailed recommended approach (May-June)
4. BCUC submission (Summer/Fall 2023)

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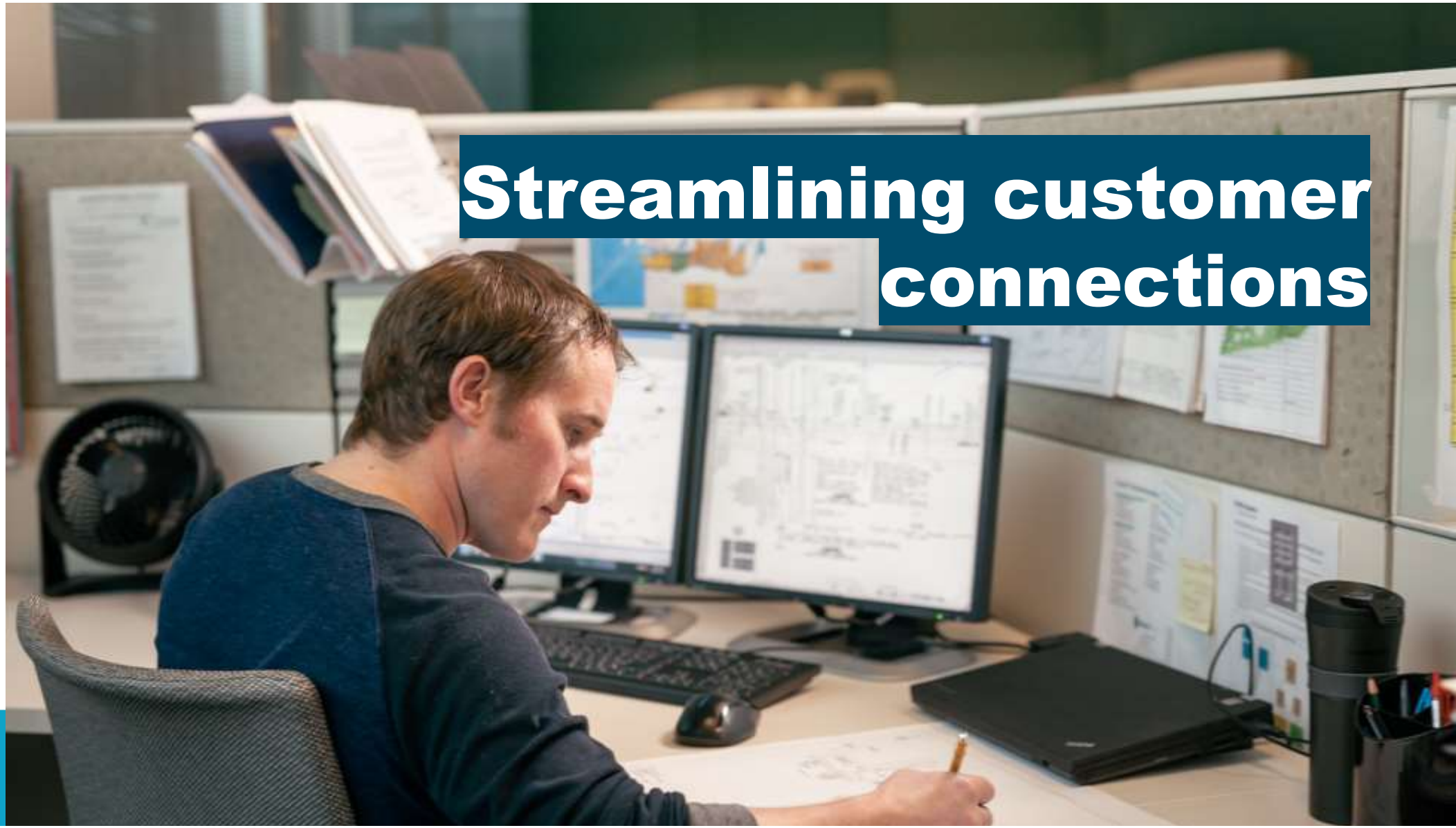

Streamlining customer connections

Our goals

- Improve our communication with customers
- Reduce timelines for connecting customers
- Increase the number of connections each year
- Improve the end-to-end customer experience

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Improvements we're making

1. Added 50 new positions to our customer connections group
2. Introducing a simplified process for less complex projects
3. Improving our intake process to make information gathering more efficient
4. Creating specialized teams to focus on specific types of connections
5. Implementing scheduled communications with customers

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BC Hydro's Commitment to the Carbon Pollution Standard

- We're a trusted partner to local governments, builders, and developers seeking to build low-carbon projects.
- We'll continue to make the distribution system upgrades and process improvements needed to enable building electrification.
- We're working to help all British Columbians achieve our shared climate goals

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SUMMARY OF ELECTRICAL ENERGY PURCHASES AND SALES
2022

MONTH		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	GRAND
BILLING PERIOD		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**TOTAL**
NUMBER OF CONNECTIONS		37,260	37,258	37,263	37,272	37,286	37,376	37,407	37,431	37,431	37,441	37,435	37,443	**37,443**
BILLING REVENUE	**GL CODING**													
Residential (RES)	9300.3704	1,556,589	4,962,009	1,889,354	3,740,423	2,133,582	2,353,721	1,261,986	2,943,659	1,700,568	2,609,347	1,400,710	3,874,235	**30,426,183**
RES: ADJs	9300.3704	(97,823)	(4,604)	(15,023)	(14,032)	(8,878)	(12,846)	(8,986)	(9,471)	(9,522)	(10,222)	(6,422)	(12,757)	**(210,585)**
Commercial (COMM)	9300.3706	1,396,111	3,036,850	1,792,623	2,563,862	1,972,320	1,999,561	1,754,378	3,422,519	1,960,162	2,477,766	1,928,930	2,988,353	**27,293,433**
COMM: ADJs	9300.3706	(4,567)	(35,889)	(2,947)	(24,863)	(23,717)	(20,072)	(10,269)	(26,811)	(330,833)	(113,151)	(2,028)	(54,030)	**(649,176)**
		2,850,310	7,958,366	3,664,007	6,265,390	4,073,308	4,320,363	2,997,108	6,329,895	3,320,374	4,963,740	3,321,191	6,795,801	**56,859,855**
Monthly Accruals														
RES: Rev Prior Month Accrual	9300.3704	(2,166,177)	(3,441,147)	(1,714,473)	(2,489,629)	(1,399,557)	(1,432,496)	(1,190,049)	(1,824,316)	(1,015,310)	(1,328,349)	(927,194)	(1,539,511)	**(2,166,177)**
COMM: Rev Prior Month Accrual	9300.3706	(2,166,177)	(3,441,147)	(1,714,473)	(2,489,629)	(1,399,557)	(1,432,496)	(1,190,049)	(1,824,316)	(1,015,310)	(1,328,349)	(927,194)	(1,539,511)	**(2,166,177)**
RES: Rec Current Month Accrual	9300.3704	3,441,147	1,714,473	2,489,629	1,399,557	1,432,496	1,190,049	1,824,316	1,015,310	1,328,349	927,194	1,539,511	1,115,922	**1,115,922**
COMM: Rec Current Month Accrual	9300.3706	3,441,147	1,714,473	2,489,629	1,399,557	1,432,496	1,190,049	1,824,316	1,015,310	1,328,349	927,194	1,539,511	1,115,922	**1,115,922**
Net Accrual Adjustment		2,549,941	(3,453,348)	1,550,311	(2,180,143)	65,876	(484,894)	1,268,534	(1,618,011)	626,078	(802,311)	1,224,635	(847,179)	**(2,100,509)**
TOTAL BILLING REVENUE EARNED		**5,400,251**	**4,505,019**	**5,214,319**	**4,085,247**	**4,139,184**	**3,835,470**	**4,265,642**	**4,711,885**	**3,946,452**	**4,161,430**	**4,545,826**	**5,948,622**	**54,759,347**
BC HYDRO - PURCHASE OF POWER														
Billed Demand (kVA)	9300.6805	919,310	771,869	689,476	670,626	668,772	669,113	690,158	704,170	667,923	668,806	675,491	883,810	**8,679,525**
Billed Energy (kWh)	9300.6805	2,605,292	2,348,524	1,961,283	1,950,382	1,782,461	1,748,640	1,813,657	2,123,150	1,866,510	1,779,015	2,137,319	2,601,610	**24,717,844**
Reverse Prior Month Accrual	9300.6805	(587,434)	(587,434)	(208,026)	(490,881)	(355,458)	(422,626)	(338,485)	(431,692)	(471,220)	(337,924)	(422,038)	(375,041)	**(587,434)**
Record Current Month Accrual	9300.6805	587,434	208,026	490,881	355,458	422,626	338,485	431,692	471,220	337,924	422,038	375,041	508,937	**508,937**
TOTAL PURCHASE OF POWER		**3,524,602**	**2,740,986**	**2,933,614**	**2,485,584**	**2,518,401**	**2,333,612**	**2,597,021**	**2,866,849**	**2,401,137**	**2,531,936**	**2,765,814**	**3,619,316**	**33,318,872**
GROSS MARGIN		**1,875,649**	**1,764,033**	**2,280,705**	**1,599,663**	**1,620,783**	**1,501,857**	**1,668,621**	**1,845,036**	**1,545,315**	**1,629,494**	**1,780,012**	**2,329,306**	**21,440,475**
GROSS MARGIN %		**35%**	**39%**	**44%**	**39%**	**39%**	**39%**	**39%**	**39%**	**39%**	**39%**	**39%**	**39%**	**39%**
PURCHASE OF POWER DETAILS														
Demand (kVA)														
Metered Peak Demand LLH		93,059	80,880	75,341	70,084	61,894	66,997	71,769	75,197	65,836	65,211	79,133	94,874	
Metered Peak Demand HLH		106,377	89,316	78,750	70,901	66,005	77,562	82,303	84,294	77,104	72,463	80,979	105,724	
50% Contract Demand		53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	53,500	
75% of Previous High Demand		65,409	65,409	79,782	79,782	79,782	79,782	79,782	79,782	79,782	79,782	79,782	79,782	
Billing Demand		106,377	89,316	79,782	79,782	79,782	79,782	82,303	84,294	79,782	79,782	80,979	105,724	
Energy (kWh)														
Total Metered Energy		51,437,157	46,367,704	38,722,262	38,750,647	35,468,478	34,798,092	36,091,168	42,229,212	37,134,456	35,400,182	42,504,347	51,749,912	
Billing Period Energy		51,437,157	46,367,704	38,722,262	38,750,647	35,468,478	34,798,092	36,091,168	42,229,212	37,134,456	35,400,182	42,504,347	51,749,912	**490,653,617**
Billed Period Energy - % Change		10%	-10%	-16%	0%	-8%	-2%	4%	17%	-12%	-5%	20%	22%	
Billed Demand Rate per kVA		8.6420	8.6420	8.6420	8.4057	8.3825	8.3868	8.3856	8.3537	8.3718	8.3829	8.3416	8.3596	
Billed Energy Rate per kWh		0.05065	0.05065	0.05065	0.05033	0.05025	0.05025	0.05025	0.05028	0.05026	0.05025	0.05028	0.05027	
INTERNAL ENERGY SALES														
St Lights and Traf Signals	9300.3708	24,250	24,250	24,250	24,250	24,250	24,250	24,250	24,250	24,250	24,250	24,250		**266,750**
Internal City Utility Charges	9300.3899	115,018	101,456	99,589	125,613	89,367	134,864	47,639	131,756	83,335	115,449	102,939	116,695	**1,263,719**
Climate Action Levy	9300.3710	97,331	271,749	125,312	213,940	139,196	147,431	102,435	216,141	113,379	170,746	113,407	159,784	**1,870,851**
Mean Temperature (Celsius)		4.1	4.4	7.3	8.0	8.0	15.6	18.9	19.8	16.0	12.1	7.5	-1.3	
Heating + Cooling Degree Days		432.0	382.0	333.4	291.0	300.7	76.9	56.0	53.3	64.1	178.6	422.0	514.4	

GL RECONCILIATION		
RES	28,049,424	
RES: Rec Current Month Accrual	1,115,922	
RES Subtotal		**29,165,346**
COMM	24,478,080	
COMM: Rec Current Month Accrual	1,115,922	
COMM Subtotal		**25,594,002**
TOTAL		**54,759,347**
CHECK		-