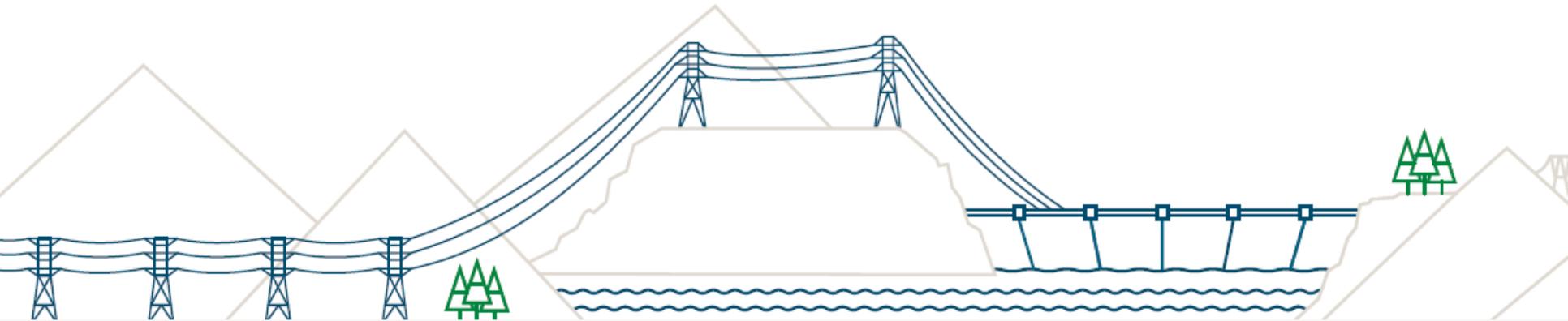


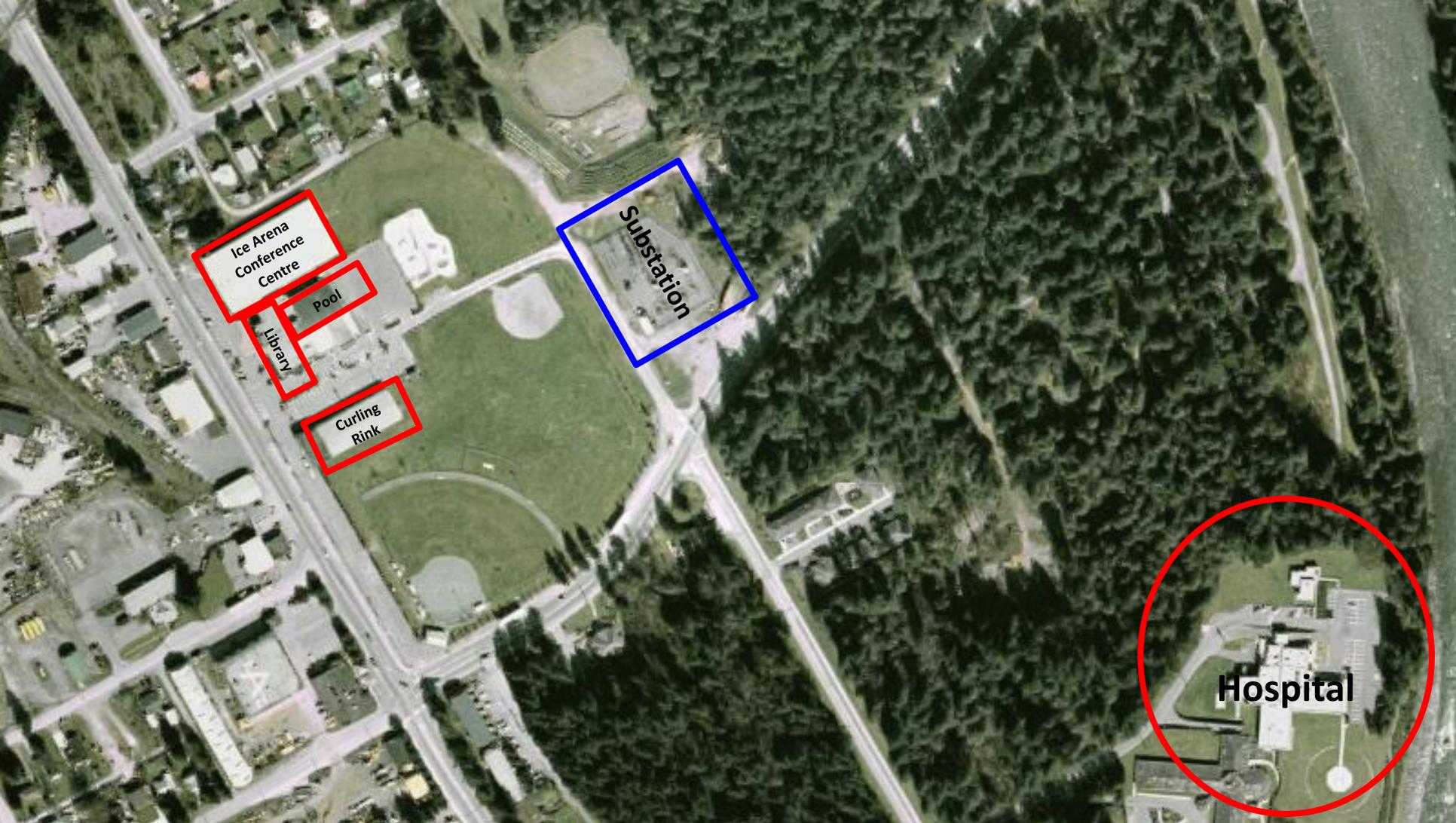
# Developing Low Carbon Electrification Programs

2018 E Source Forum

Session: Strategic Electrification and the Next Generation of Efficiency Programs



September 2018



**Ice Arena  
Conference  
Centre**

**Pool**

**Library**

**Curling  
Rink**

**Substation**

**Hospital**

# Integrated DSM

## Offer programs that:

1. Reduce GHG emissions through fuel switching
2. Support customers to be energy efficient
3. Reduce/shift load to assist with capacity constraints

Conference Centre

Pool

Library

Curling Rink

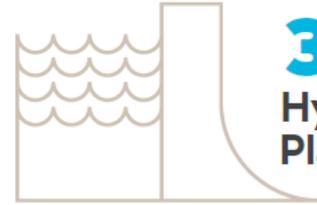
Hospital

A commercial  **crown corporation** owned by the province of **British Columbia**



**98%**

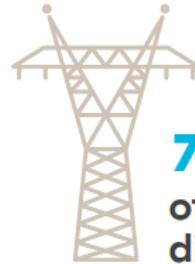
clean electricity generated in B.C. in fiscal 2018



**30**  
Hydro  
Plants



Safely provide reliable, affordable, clean electricity throughout B.C.



BC Hydro has a network of approximately **79,000 kms** of transmission & distribution lines

**Over 300**



**substations**

Serves **95%** of the province's population

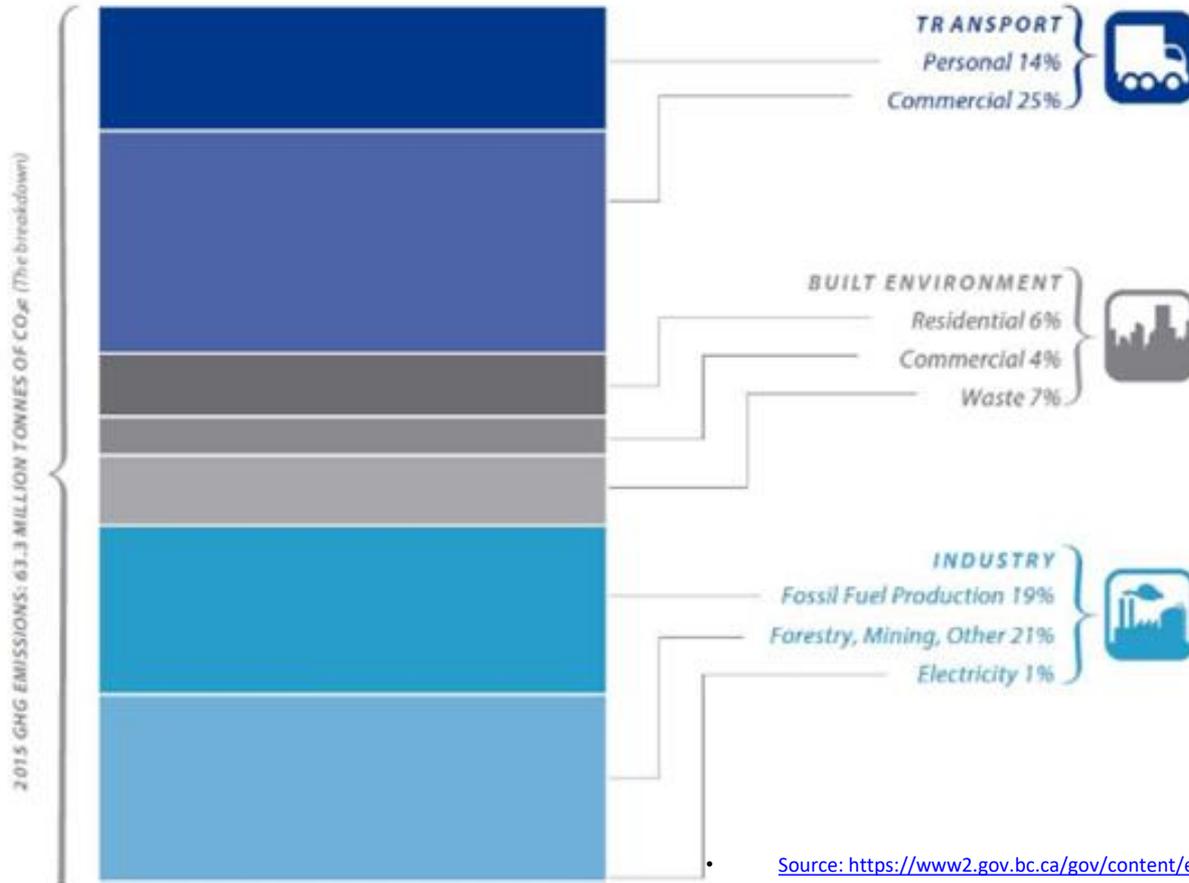
Provides over **4,000,000** customers with reliable electricity

- 30+ years of Energy Conservation & Efficiency Programs
- Current DSM portfolio includes:
  - Energy-Focused Programs (Residential, Commercial & Industrial Segments)
  - Capacity-Focused Offers
  - Codes and Standards
  - Rates
  - Supporting Initiatives
- Our DSM portfolio achieved 741 GWh of new incremental electricity savings in fiscal 2018



### B.C.'S GREENHOUSE GAS EMISSIONS

In 2015, B.C.'s emissions were 61.6 million tonnes (mt) of CO<sub>2</sub>e net after offsets. Most emissions fall into three categories: transportation, the built environment and industry.



# Emissions In B.C.

# Why do low carbon electrification?



AUG 24 2017

Ref.: 101514

Mr. Kenneth Peterson  
Chair  
BC Hydro and Power Authority  
18<sup>th</sup> Floor, 333 Dunsmuir Street  
Vancouver, BC V6B 5R3

Email: [kenneth.peterson@bchydro.com](mailto:kenneth.peterson@bchydro.com)

Dear Mr. Peterson:

On behalf of Premier John Horgan and our new government, thank you for your service to the people of British Columbia. I look forward to working with you in the months and years to come to help deliver on government's priorities, and provide effective programs and services to the people of our province.

This Mandate Letter lays out the principles of this government and you are to take these into consideration when revising your Service Plan for the *Budget 2017 Update*. It is expected that BC Hydro and Power Authority (BC Hydro) will manage its programs and initiatives within its existing budget targets, unless otherwise directed.

Going forward, you are to begin the process of working with me as the Minister responsible to develop strategic actions through the 2018 Mandate Letter process for *Budget 2018*. I will provide further direction. The Ministry of Finance will provide guidance on preparation for *Budget 2018*.

Our government made three key commitments to British Columbians.

Our first commitment is to make life more affordable. We expect all public service organizations to work to contain costs, and to be conscious of the impact of every decision on the daily cost of living of families and businesses.

Our second commitment is to deliver the services that people count on. In many cases, critical programs and services are delivered by Crown Corporations, and Ministers will work with Board Chairs to ensure your organizations remain focused on maintaining and improving levels of service to citizens.

.../2

Ministry of  
Energy, Mines and  
Petroleum Resources

Office of the Minister

Mailing Address:  
PO Box 9052, Stn Prov Govt  
Victoria, BC V8W 9E2

Telephone: 250 953-0900  
Facsimile: 250 356-2965



## Clean Energy Act & Orders in Council

Clean Energy Act Page 1 of 3

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This Act is current to August 29, 2018

See the [Tables of Legislative Changes](#) for this Act's legislative history, including any changes not in force.

**CLEAN ENERGY ACT**  
**[SBC 2010] CHAPTER 22**

Assented to June 3, 2010

**Contents**

- 1 Definitions
- Part 1 – British Columbia's Energy Objectives**
  - 2 British Columbia's energy objectives
  - 3 Integrated resource plans
  - 4 Approval and procurement
  - 5 Status report
  - 6 Electricity self-sufficiency
  - 7 Exempt projects, programs, contracts and expenditures
  - 8 Rates
  - 9 Domestic long-term sales contracts
- Part 2 – Prohibitions**
  - 10 Tailfiners system development
  - 11 Project prohibitions
  - 12 Prohibited acquisitions
  - 13 Burrard Thermal
- Part 3 – Preserving Heritage Assets**
  - 14 Sale of heritage assets prohibited
- Part 4 – Standing Offer and Feed-in Tariff Programs**
  - 15 Standing offer program
  - 16 Feed-in tariff program
- Part 5 – Energy Efficiency Measures and Greenhouse Gas Reductions**
  - 17 Smart meters
  - 17.1 Improvement financing
  - 18 Greenhouse gas reduction
  - 19 Clean or renewable resources
- Part 6 – First Nations Clean Energy Business Fund**
  - 20 First Nations Clean Energy Business Fund
- Part 7 – Transmission Corporation**

[http://www.bclaws.ca/civix/document/id/complete/statreg/10022\\_01](http://www.bclaws.ca/civix/document/id/complete/statreg/10022_01) 9/7/2018

2/1/2018 Greenhouse Gas Reduction (Clean Energy) Regulation

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B.C. Reg. 102/2012 Deposited May 15, 2012  
O.C. 295/2012

This consolidation is current to January 30, 2018.

[Link to Point in Time](#)

**Clean Energy Act**  
**GREENHOUSE GAS REDUCTION**  
**(CLEAN ENERGY) REGULATION**

[includes amendments up to B.C. Reg. 114/2017, March 22, 2017]

**Contents**

- 1 Definitions
- 2 Prescribed undertakings
- 3 Repealed
- 4 Prescribed undertaking – electrification

**Definitions**

1 In this regulation:

**"Act"** means the *Clean Energy Act*;

**"eligible vehicle or machine"** means

- (a) a specified vehicle,
- (b) a marine vehicle,
- (c) an asphalt paver,
- (d) a fracture pump unit,
- (e) a mine haul truck, and
- (f) a locomotive

that uses, as a fuel source, compressed natural gas or liquefied natural gas;

**"heavy-duty vehicle"** means a truck, other than a mine haul truck, or tractor-trailer with a manufacturer's gross vehicle weight rating of 11 793 kg or more;

**"medium-duty vehicle"** means a vehicle, including a waste-haulage truck, with a manufacturer's gross vehicle weight rating of more than 5 360 kg but less than 11 793 kg;

[http://www.bclaws.ca/civix/document/id/complete/statreg/102\\_2012#section4](http://www.bclaws.ca/civix/document/id/complete/statreg/102_2012#section4) 1/11

[http://www.bclaws.ca/civix/document/id/consol24/consol24/00\\_10022\\_01](http://www.bclaws.ca/civix/document/id/consol24/consol24/00_10022_01)

## Underway with Initial Projects – Development of Business Case

- Supporting Studies & implementation
- Industrial & Commercial customers

## Commercial Retrofit Pilot Program

- Supporting Studies & implementation
- Launched in July

## Residential Retrofit Pilot

- Supporting heat pump retrofits
- Launching this Fall

# Insights from the journey so far...



**Economics**  
**Competition**  
**Integration**

An aerial photograph of a large concrete dam situated in a mountain valley. The dam is a curved structure with several spillways. The surrounding landscape is lush with green and yellow trees, and the mountains in the background are covered in dense forest. The sky is clear and blue. The text "Thank you" is overlaid in the center of the image in a large, white, sans-serif font.

**Thank you**

Michael Travers  
Manager, Marketing Alliances  
BC Hydro