UBC CLIMATE ACTION LEADERSHIP

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UNIVERSITY ALLIANCE FOR SUSTAINABILITY CONFERENCE | NOVEMBER 2020
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AGENDA

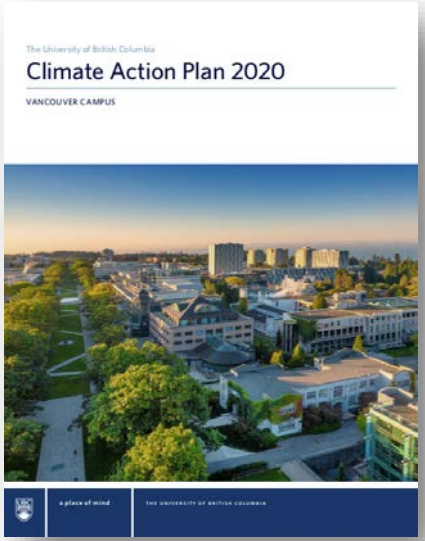
- Setting the Context
- UBC Climate Action Planning
- Big Bold Moves
- Key factors in advancing toward carbon Neutrality
- Looking Ahead

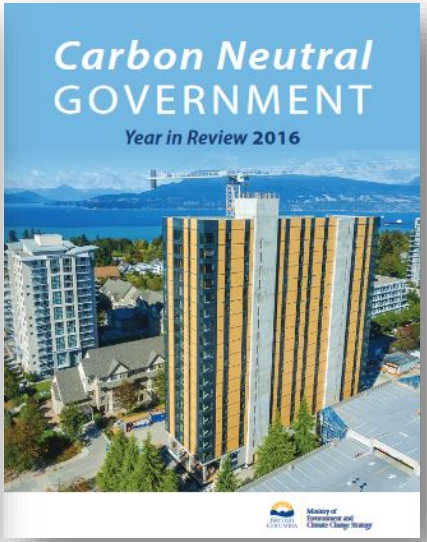
UBC CONTEXT

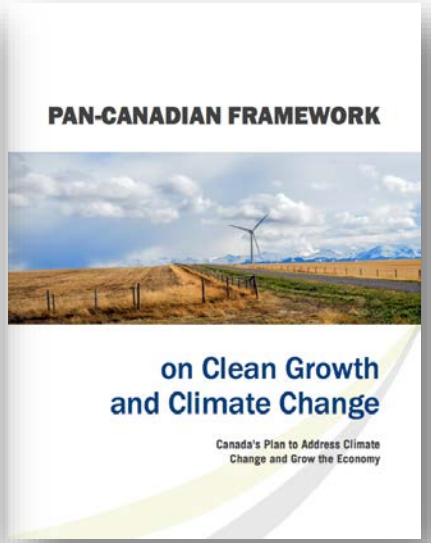
Vancouver Campus

- 1000 acre campus
- 44,000+ students (FTE)
- 13,000+ staff and faculty (FTE)
- 20,000 residents
- 500+ buildings
- 15 million sf building floorspace
- 80,000+ daytime population

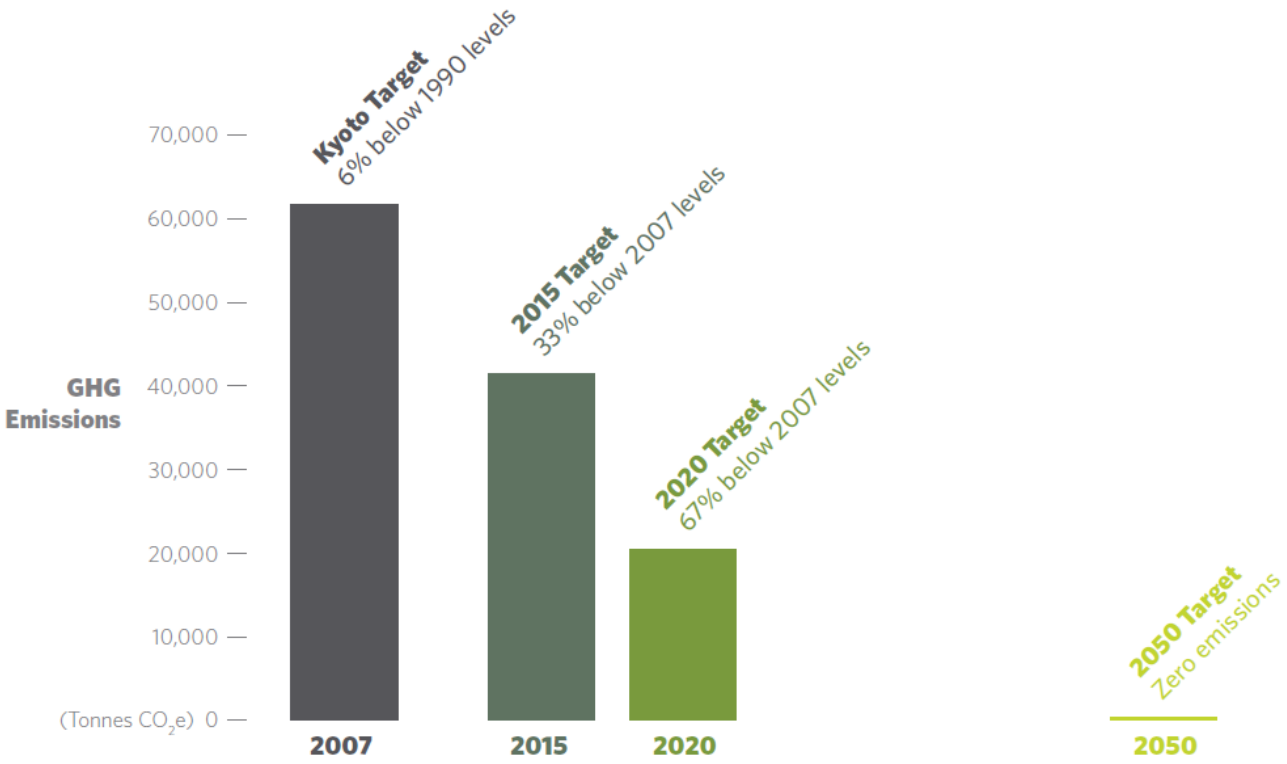
ALIGNMENT OF GOVERNMENT POLICY



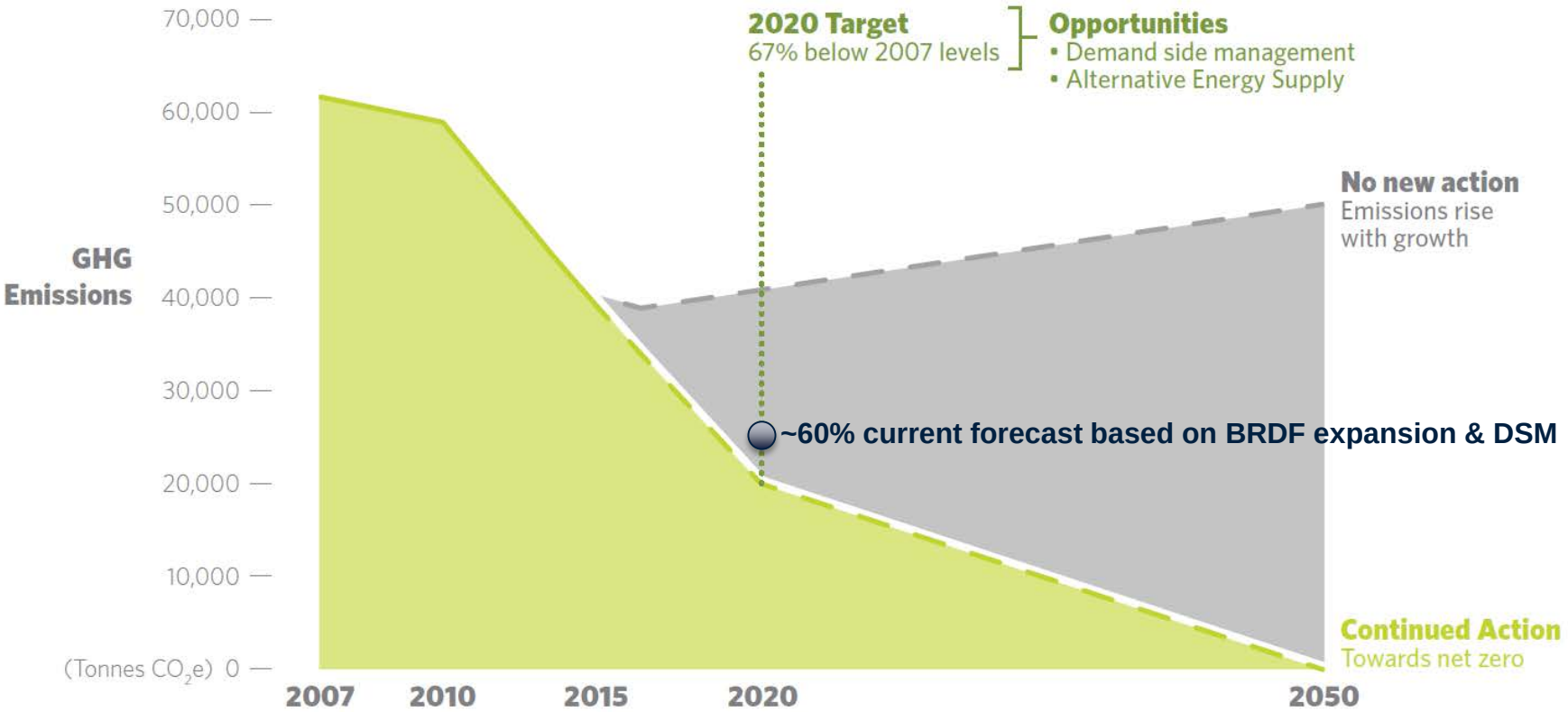




UBC CLIMATE ACTION: TARGETS



UBC CLIMATE ACTION: PROGRESS



ADVANCING TOWARD ZERO CARBON

Academic District Energy System

22% GHG Reduction
(11,000 tonnes GHG/yr)

Bio-energy Research and Demonstration Facility

11% GHG Reduction
(8,000 tonnes GHG/yr)

Continuous Optimization Building Tune-Up

Recommission over 72+ buildings
(4,000 tonnes + 3,000 tonnes for new green bldgs)

ENERGY AND CARBON TARGETS

INSTITUTIONAL BUILDING TARGETS

- New institutional buildings will meet incrementally reduced energy targets to be Net Positive Ready by
- Target: Reduce average building thermal energy us intensity (TEDI plus DHW) for campus buildings by to 75 kwh/m2/yr by 2050.
- Target: Reduce the performance gap between mod and metered energy use in new institutional buildi 75% within three years of occupancy by 2020

MASS TIMBER: EMBODIED CARBON

First Nations House of Learning
1992
Larry McFarland Architects

Centre for Interactive Research on Sustainability
2011
Perkins+Will Architects

Campus Energy Centre
2015
DIALOG

Brock Commons Tall Wood

PASSIVE HOUSE & NET ZERO

Net Zero Energy Ready and Passive House Certification: Evolve Faculty and Staff Housing Project

CLIMATE ACTION ENGAGEMENT

Seasonal Shut Down

- 1,023 UBC participants
- Contributed to* 900,000 kWh electricity 3,000 GJ of natural gas 150 tonnes of carbon
- Contributed to* $90,000 savings

Cool Campus Challenge

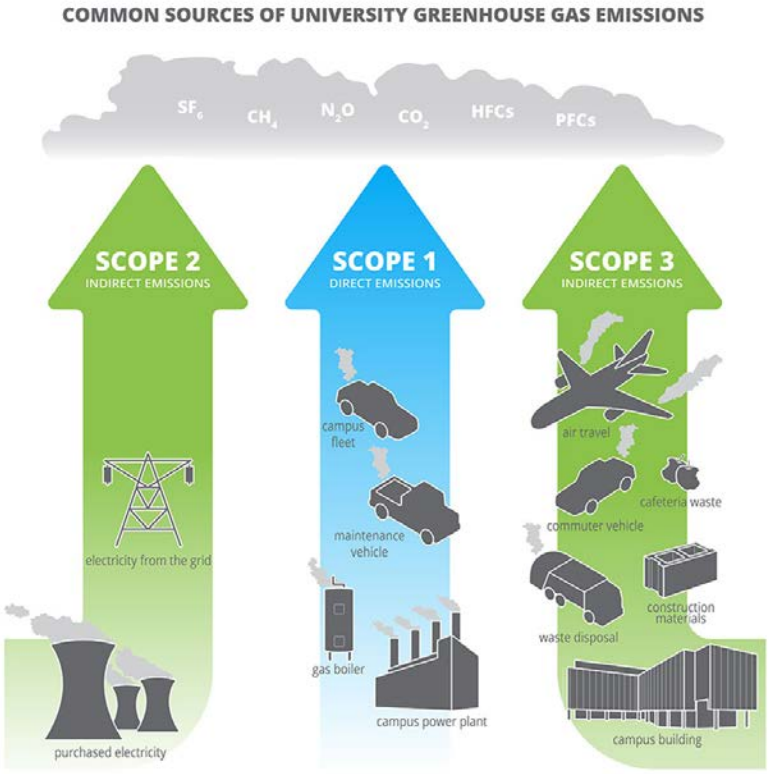
- 500+ students pledged
- Promotes individual climate actions, and helps enable UBC to make temperature adjustments in buildings to significantly reduce energy and GHG emissions

Green Labs Program

- 2000+ UBC researchers engaged
- Pilot scale savings: 100,000+ kWh electricity 200+ GJ natural gas
- $10,000 savings. Full scale implementation expected to achieve $50,000+ annually

**Reductions primarily due to building temperature turndowns. Direct behaviour change savings are likely small, but engagement contributes to overall initiative success & reduces barriers to turndowns.*

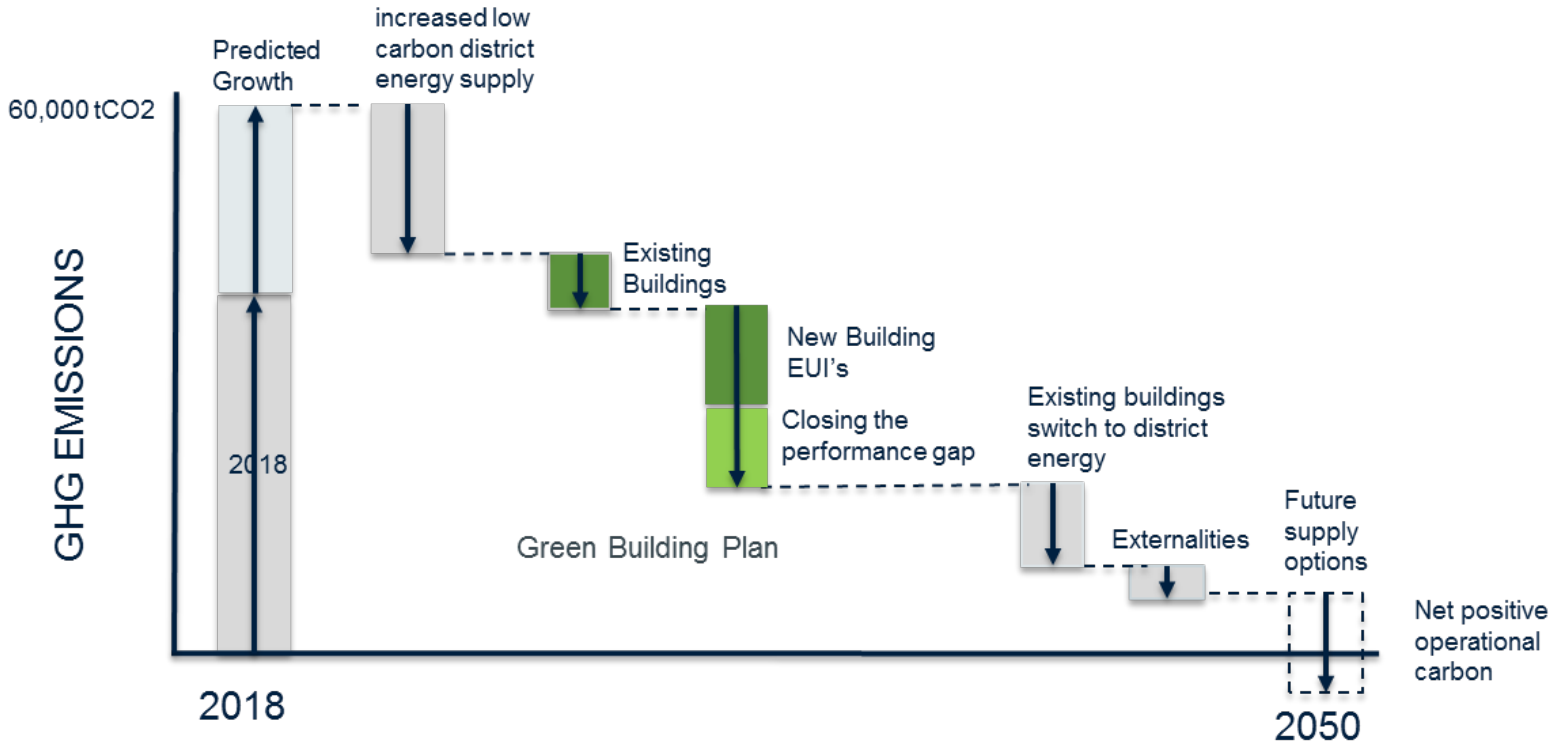
UBC CAP 2030—EXPANDED SCOPE & ACCELERATION



Expanded to include Scope 3 emissions with a focus on:

- ❑ Air Travel emissions
- ❑ Food systems
- ❑ Commuting

ADVANCING TOWARD NET POSITIVE




WE NEED TO CHANGE THE NAME TO 'PANDEMIC.'
CLIMATE 'CHANGE' INACTION
WOULD STILL BE UNDERSTATING IT.
TOLES
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