



UBC Climate Action Plan 2020

Stakeholder Consultation Summary Report

September 2015

campus + **community** planning



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

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1. Executive Summary

UBC is on track to make a 33% reduction in greenhouse gas (GHG) emissions. This reduction is largely attributed to UBC’s Climate Action Plan adopted in 2010 (CAP 2010). Building on this success, UBC is now developing a Climate Action Plan for 2020 (CAP 2020), which will outline what actions we will take over the next 5 years to achieve a 67% reduction in GHG emissions.

This report documents the stakeholder consultation process for the CAP 2020, which involved targeted UBC staff, faculty, students and technical experts, many of which have experience with past climate and sustainability initiatives at UBC. Consultation with these stakeholders produced valuable insights for the CAP 2020 planning process and also developed internal stakeholder support for continued climate action on campus. The process was led by Campus and Community Planning (C+CP) and took place from May to July 2015. It included:

- Meetings with key operational units on campus, including Energy and Water Services, Building Operations, Student Housing and Hospitality Services, Infrastructure Development, Payment and Procurement Services, and UBC IT;
- Topic-based ideas workshops on buildings, low carbon energy supply, fleets and behaviour change, which represent the key opportunity areas for reducing greenhouse gas emissions on campus.

A key outcome from the stakeholder consultation was a list of potential actions for reducing UBC’s GHG emissions. These actions are being added to a long list of actions that will be assessed as part of the feasibility analysis. Preferred options that emerge from the analysis will be presented to the UBC community for feedback later in the fall. The long list of actions is currently being developed and assessed with additional input from UBC staff, faculty, and students as well as the broader campus community.

2. UBC CAP 2020 Process

The planning process to develop the CAP 2020 began in Spring 2015 and is being led by C+CP, in collaboration with Energy and Water Services. A steering committee with representatives from operational units, faculty and students is overseeing the project.



Figure 1. UBC Climate Action Plan 2020 Planning Process

Spring/Summer 2015: Several steps took place during this time: 1) Preliminary technical analysis was conducted to review the baseline and develop a forecast of emissions to 2020; 2) The project team met with key operational units on campus, including Energy and Water Services, Building Operations, Student Housing and Hospitality Services, Infrastructure Development, Payment and Procurement Services and UBC IT to review performance to date; 3) A series of workshops with campus operational units, faculty, students and technical experts were held to do some initial thinking about potential actions in the areas of low carbon energy supply, buildings, fleet and behaviour change to achieve the 2020 target; 4) A call for proposals to UBC researchers was circulated to tap into the great depth of knowledge and expertise on climate change and climate action that we have in our academic community.

Fall 2015/Winter 2016: Phase 1 of the public consultation will launch in September to solicit the broad campus community for ideas on how UBC can achieve its 2020 target. This will be followed by a technical analysis to review all of the proposed ideas. In late fall, Phase 2 of public consultation will present the initial evaluation for feedback. This will be complemented with additional stakeholder consultation.

Winter/Spring 2016: The plan will be prepared in Winter 2016. A draft version of the Plan will be presented for public input (Phase 3 Public Consultation) before going to the Board of Governors for approval in April 2016.

3. Campus Stakeholders

The stakeholder consultation process involved internal campus stakeholders, including managers and senior staff from UBC's operational units at the Vancouver campus, as well as targeted experts from UBC and external technical experts. Many of these stakeholders have played an active role in the implementation of the CAP 2010. See the Appendix for the list of campus stakeholders that participated.

4. Stakeholder Consultation Summary

Meetings with Operational Units

Staff from C+CP met with senior staff from key operational units to a) discuss the progress they had made on their energy and emissions action items for 2014/15 (included in their unit sustainability framework); and b) introduce the CAP 2020 planning process. Key achievements and future initiatives of each unit will be reported through the Annual Sustainability Reporting process.

Ideas Workshops

C+CP hosted four Ideas Workshops, each focused on a different topic: buildings, low carbon energy supply, fleet and behaviour change. The purpose of the workshops was to a) provide an update on climate action planning, both progress to date and commitments moving forward; and b) generate ideas on what more we can do to achieve UBC's 2020 reduction target, with respect to each topic.

Each of the workshops began with an introductory presentation given by C+CP, which outlined UBC's progress on the CAP, the CAP 2020 planning process and the climate policy context. This presentation was followed by various workshop activities, as detailed below.

Notes taken during each of the workshops are available upon request.

Buildings Workshop

28 people participated in this workshop, including operational staff from Energy and Water Services, Building Operations, Student Housing and Hospitality Services, Infrastructure Development, Athletics and Recreation and C+CP, as well as faculty, students, and external experts with knowledge in green building design, management and modelling. After the introductory presentation, each operational unit gave a 5-minute presentation summarizing initiatives they have led that resulted in GHG emissions reductions over the past 5 years, as well as future initiatives they have committed to.

Following the operational unit presentations, there was a post-it exercise where participants posted potential building related ideas that would result in GHG reductions and then voted for ideas they believed were worth exploring further. A total of 83 ideas were generated, which were grouped into three broad topic areas: existing buildings, new construction and other. Participants were divided into three groups to discuss each topic area. Specific ideas explored by the groups included:

- Establishment of a Capital Renewal and Deferred Maintenance (CRDM) "green fund," to support building renovations and renewals that result in GHG emissions reductions;
- Development of an educational program for Building Operations operators to ensure green operator practices on campus;
- Developing a process to incorporate best practices and lessons learned into the design process
- Integrating life-cycle costing practices into existing UBC approval processes
- Development of policies to support an Integrated Design Process.

Energy Supply Workshop

12 people participated in this workshop, including operational staff from Energy and Water Services, Infrastructure Development and C+CP, as well as faculty, students and external experts with knowledge in alternative energy supply. The discussions began with participants brainstorming a list of risks associated with various alternative energy options. Afterwards the group drafted energy supply principles to inform the development of the CAP 2020 options. These principles included:

- Strive to decrease natural gas consumption by diversifying energy supply;
- Decrease the demand for energy on campus through demand side management and meet remaining demand using alternative energy supplies;
- Diversify energy supply to minimize risk;
- Design infrastructure for increased levels of flexibility and resilience;
- Develop strategic energy supply options that leverage opportunities available in the Lower Mainland, the province of B.C., Canada, and internationally, in order to maximize benefits;
- Partner with other institutions to harness synergies (ie. cooperative buying – economies of scale);

- Apply the principle of exergy: select energy sources that are the most appropriate for their use.

Finally, building off of this discussion, a list of nine energy supply options were identified for further exploration:

- Waste energy from the TRIUMF Research Centre;
- Expanding the Bioenergy and Research Demonstration Facility (thermal or combined heat and power);
- A new biomass facility;
- Renewable natural gas (biogas) – e.g. Agassiz, Burns Bog, landfill, food waste;
- Thermal storage;
- Ocean energy;
- Building-scale renewable energy projects – e.g. solar thermal/PV, wind, building waste heat;
- Sewer heat;
- Bio-solid energy.

Fleets Workshop

8 people participated in this workshop, including operational staff from Building Operations, Student Housing and Hospitality Services, and Athletics and Recreation. In addition to the introductory presentation from C + CP, this workshop also included 5-minute presentations from each unit outlining their fleet-related accomplishments from 2010 to 2015 that have resulted in GHG emissions reductions. Each unit also discussed challenges they faced in implementing these initiatives in their presentations. The operational unit presentations were followed by a group discussion on future actions. Ideas that were discussed include:

- Developing a pitch for centralized fleet management which may include a cost sharing model;
- Centralizing fleet procurement;
- Car sharing programs (may involve leveraging existing companies);
- The need for more data on academic fleets (potential for a SEEDS project);
- Improved trip planning (may include using telematics).

Behaviour Change Workshop

15 people participated in this workshop, including operational staff from Risk Management Services, Student Housing and Hospitality Services and C+CP, as well as faculty, students and technical experts. After the introductory presentation from C +CP, there was a discussion on existing behaviour change programs and practices at UBC. This was followed by a group post-it exercise where participants posted their ideas related to behaviour change. A total of 68 ideas were generated, which covered four broad topic areas: labs, offices, student residences and general. Participants voted for the ideas they thought were worth exploring further. Afterwards, two groups were formed and each group explored one of the top ideas identified. The two ideas that were discussed by the groups were:

- Building feedback mechanisms and user controls in campus buildings;

- Approaches to engagement programming and communications to enhance UBC's culture of sustainability.

5. Next Steps

A key outcome from the stakeholder consultation was a list of potential actions for reducing UBC's GHG emissions. These actions are being added to a long list of actions that will be assessed as part of a feasibility analysis. All ideas that emerge from the process will be evaluated by the project team against the following criteria:

- Alignment with existing UBC Policy - e.g. 20 year Sustainability Strategy;
- Impact on GHG and energy reductions toward achieving targets;
- Economic performance (business case);
- Acceptable risk – e.g., technical, fuel supply, public acceptance;
- Extent to which the idea is within UBC's jurisdiction and control;
- Ease of implementation: affordability, financing, lack of barriers, regulatory approvals, external dependencies;
- Research & innovation / partnership opportunities;
- Other co-benefits – e.g. impacts water consumption.

Preferred options that emerge from the analysis will be presented to the UBC community for feedback later in the fall. The long list of actions is being developed and assessed throughout the fall with additional input from UBC staff, faculty, and students, as well as the broader campus community. The plan will be prepared in Winter 2016. A draft version of the Plan will be presented for public input (Phase 3 Public Consultation) before going to the Board of Governors for approval in April 2016.

6. Appendix

Campus Stakeholders

Operational Unit Meetings: Stakeholders by Unit

Building Operations

- Karyn Magnusson, Managing Director
- Denise Pearce, Superintendent Customer Services
- Karl Fox, Superintendent of Trades
- John Sacre, Superintendent of Asset Stewardship
- Azmina Manji, Superintendent of Custodial Services
- Frank Crudo, Superintendent of Municipal Services
- Janice Weigel, Continuous Improvement, Informatics Programs
- Darren Duff, Continuous Improvement, Informatics Programs
- Ray McNichol, Director, Finance
- Tariq Din, Senior Manager, Risk Management Services
- Patrizia Todaro, Senior Manager, Human Resources
- Stephen Quinn, Manager, Human Resources
- Chris Freek, Senior Manager, Communications
- Steve Henzel, Fleet & Inventory Manager

Student Housing & Hospitality Services

- Andrew Parr, Managing Director
- David Kiloh, Director, Facilities & Building Services
- Ricky Biring, Facilities Coordinator
- Victoria Wakefield, Purchasing Manager
- Caroline Kingston, Assistant Director, Residence Life
- Tiffany Mintah, Assistant Director, Residence Life

Energy and Water Services

- David Woodson, Managing Director
- Orion Henderson, Director, Energy Planning and Innovation
- Jeff Giffin, Manager, Energy Conservation
- Paul Holt, Director, Utilities and Energy
- Julie Pett, Climate and Energy Engineer
- Joshua Wauthy, Energy Conservation Engineer
- Blair Antcliffe, Energy Conservation Manager

Infrastructure Development

- John Metras, Managing Director
- Jennifer Sanguinetti, Director, Project Services

Athletics and Recreation

- Kavie Toor, Director, Facilities & Business Development
- Dan Cooper, Facilities Manager

UBC IT

- Phil Chatterton, Director, Digital Media Technologies

Payment and Procurement Services

- Michael Frost, Manager, Supply Management
- Gerald Rarama, Procurement Officer, Supply Management
- Alexey Baybuz, Category Analyst, Supply Management

CAP 2020 Idea Workshops: Stakeholders by Workshop

Buildings Workshop

1. Aviva Savelson, Campus and Community Planning
2. Bud Fraser, Campus and Community Planning
3. John Madden, Campus and Community Planning
4. Karolina Pol, Campus and Community Planning
5. Penny Martyn, Campus and Community Planning
6. Gabriel Armstrong, Campus and Community Planning
7. Gerry McGeough, Campus and Community Planning
8. Ralph Wells, Campus and Community Planning
9. Joyce Yang, Campus and Community Planning
10. Orion Henderson, Energy and Water Services
11. Julie Pett, Energy and Water Services
12. Blair Antcliffe, Energy and Water Services
13. Patrick Wong, Athletics and Recreation
14. Kavie Toor, Athletics and Recreation
15. Denise Pearce, Building Operations
16. Marian Lis, Building Operations
17. Mike Thayer, Building Operations
18. Mike Champion, Infrastructure Development
19. Andre Harrmann, Infrastructure Development
20. Catherine Alkenbrack, Infrastructure Development
21. Andrew Parr, Student Housing and Hospitality Services
22. Dan Giordano, UBC Properties Trust
23. Greg Johnson, School of Architecture and Landscape Architecture & Civil Engineering
24. Michel Labrie, School of Architecture and Landscape Architecture
25. Anne Chu, student, Institute for Resources, Environment and Sustainability
26. Jana Foit, Perkins + Will
27. Curt Hepting, Enersys Analytics

28. Brad White, SES Consulting

Energy Supply Workshop

1. John Madden, Campus and Community Planning
2. Bud Fraser, Campus and Community Planning
3. Aviva Savelson, Campus and Community Planning
4. Karolina Pol, Campus and Community Planning
5. Jeff Giffin, Energy and Water Services
6. Josh Wauthy, Energy and Water Services
7. Paul Holt, Energy and Water Services
8. Jennifer Sanguinetti, Infrastructure Development
9. Iain Evans, Office of the Vice President Research and International
10. Walter Merida, Clean Energy Research Centre
11. Gerard Macdonald, Reshape Strategies
12. Ian Theaker, student, Institute for Resources, Environment and Sustainability

Fleets Workshop

1. Aviva Savelson, Campus and Community Planning
2. Bud Fraser, Campus and Community Planning
3. Karolina Pol, Campus and Community Planning
4. Frank Crudo, Building Operations
5. Stephen Henzel, Building Operations
6. Vicky Wakefield, Student Housing and Hospitality Services
7. Dan Cooper, Athletics and Recreation

Behaviour Change Workshop

1. John Madden, Campus and Community Planning
2. Bud Fraser, Campus and Community Planning
3. Aviva Savelson, Campus and Community Planning
4. Karolina Pol, Campus and Community Planning
5. Charlene Ponto, Campus and Community Planning
6. Ralph Wells, Campus and Community Planning
7. Noga Levit, Risk Management Services
8. Joey Cheng, Student Housing and Hospitality Services
9. Deepti Mathew-Iype, Collaborative for Advanced Landscape Planning
10. Jiaying Zhao, Psychology
11. Allan Kingstone, Psychology
12. Sylvia Coleman, student, Institute for Resources, Environment and Sustainability
13. Elizabeth Williams, student, Institute for Resources, Environment and Sustainability
14. Mania Nematifar, student, School of Community & Regional Planning
15. Stephan Storey, Structured Reports Corp