



Laidlaw Scholars Undergraduate Leadership and Research Programme
Research Report

Designing a Canadian Youth Climate Corps

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Acronyms

ACC: American Climate Corps
BC: British Columbia
CCC: Civilian Conservation Corps
CEU: Climate Emergency Unit
GDP: Gross Domestic Product
ICA: Indigenous Climate Action
US: United States of America
YCC: Youth Climate Corps
YCCBC: Youth Climate Corps BC

1. Introduction

Humanity is facing an existential threat on a scale never before experienced: climate change. Each passing year becomes the warmest on record (Bardan, 2024), leaving behind a trail of unprecedented environmental destruction, from wildfires that destroy entire towns (Dickson, 2024), to hurricanes that batter miles of coastline (2023 Atlantic Hurricane Season Ranks 4th for Most-Named Storms in a Year, 2023), to heat waves that claim hundreds of lives (Schmunk, 2021). Among those most impacted by the climate crisis are young people, who face a lifetime of ever-worsening climate disasters. Here in Canada, young people's climate anxiety is compounded by an affordability crisis, marked by soaring living costs and a challenging job market (Lord, 2024). Many young people want to devote their careers to tackling the climate crisis, but employment opportunities in this field are few and far between, and often require specific qualifications (Boudreau, 2024).

A national Youth Climate Corps (YCC) would address the dual crises of climate and affordability that young people are currently experiencing, while preparing them for a career dedicated to mitigating climate change (We Need a Climate Corps, n.d.). A YCC would be a federally-funded youth employment program that would offer a good, green job to any young person who wanted one. A YCC would potentially both accelerate Canada's transition away from fossil fuels and toward renewable energy, while providing thousands of young people with well-paying, unionized jobs and equipping them with the skills needed to succeed in their careers.

National youth employment programs are not a new concept. In the US, the Civilian Conservation Corps (CCC), one of the most successful programs in President Roosevelt's New Deal, provided jobs to three million young Americans during the Great Depression (Aizer et al., 2020). The CCC not only helped pull the US out of the Great Depression, but also inspired a lasting appreciation of the outdoors and created national park infrastructure that Americans enjoy to this day (Salmond, 1967).

The concept of a national YCC has been gaining momentum, both in Canada and globally. In September 2023, President Biden established the American Climate Corps (ACC), which promises to employ 20,000 young Americans doing climate change-related work (FACT SHEET, 2023). A non-profit organization called Youth Climate Corps BC (YCCBC) has been running a YCC in British Columbia (BC) since 2020 (Youth Climate Corps in BC, n.d.), and another non-profit, the Climate Emergency Unit (CEU), has been relentlessly campaigning for a federal YCC (We Need a Climate Corps, n.d.). Recent polling

commissioned by the CEU found that the majority of Canadians support the idea (Klein, 2023). Research evidence suggests that youth employment programs have a positive impact on the long-term health and career outcomes of participants (Aizer et al., 2020), never mind the impact that a YCC could have on Canada's emissions.

This research aims to delve deeper into what a Canadian YCC could actually look like. It draws on existing literature, interviews, and jurisdictional scans to create a comprehensive list of recommendations for the design and implementation of a YCC in Canada. Research findings are broken down into three sections: structure, partnerships, and work. The structure section examines what generally makes youth employment programs effective, discusses the existing models available that can inform the design of a Canadian YCC, and presents a case study on YCCBC. The partnerships section focuses on how the federal government can work with Indigenous Peoples to create a decolonial YCC, and also examines potential partnerships with local governments, educational institutions, and trade unions. The work section presents an inventory of potential YCC jobs based on an analysis of municipal climate plans.

2. Methodology

The research question is: Based on YCCBC, the CCC, and other successful youth employment programs, what are the most important elements to include in a Canadian YCC? Supplementary questions include: What specific elements contributed to the success of other programs? What were the challenges faced by other programs and how were they overcome? Did national or regional/local programs tend to be more effective? What impact did other programs have on their participants and the economies in which they took place? What were the benefits and costs associated with other programs?

The methodology included an analysis of the research literature and original interview data.

A literature review was conducted of ten documents, reports, and journal articles exploring how to decolonize climate policy, both in Canada and abroad. A jurisdictional scan of BC post-secondary programs that would be relevant to a Canadian YCC was also completed.

The analysis of the literature review focused on seven journal articles that either explore what makes youth employment programs effective or evaluate existing youth employment programs. Articles were selected based on which ones provided the most relevant insights for a Canadian YCC. A jurisdictional scan of existing YCCs, both in Canada and abroad, was also conducted, and each was evaluated using the Climate Emergency Unit (CEU)'s proposal for a Canadian YCC (more on this in the "Youth Climate Corps Models" section). Finally, a scan of existing Government of Canada youth employment programs was conducted.

An analysis was also conducted of climate action plans from thirteen Canadian municipalities to create an inventory of potential YCC jobs. The municipalities included are the largest municipalities in each of Canada's thirteen provinces and territories. Plans were reviewed for specific action items that could not be completed by city staff alone and would require external labour. These action items were then compiled into an inventory and also distilled into a list of key themes.

Interviews were conducted in the summer of 2024 with two CEU staff members, four YCCBC staff members, and one YCCBC alumnus. The goal of the CEU interviews was to gain more information about the organization's proposal and campaign for a federal YCC. The goal of the YCCBC interviews was to gain more information about the organization's operations and impact, as well as staff and alumni recommendations for designing a national YCC.

Interviewees were contacted via email and asked to schedule an interview using Google Calendar's "Bookable Appointment Schedule" feature. Interviewees were sent an email in advance of their interview with a consent form (see Appendix A), a Zoom link, and their interview questions if requested (see Appendix B). The interviews were conducted via Zoom by the researcher. Interviewees were asked to verbalize their consent at the beginning of the interview, which was recorded separately from the interview itself. Interview recordings and transcripts were stored on the researcher's personal computer, which is password protected. Interviewees were sent a \$25 honorarium via e-transfer immediately upon completion of their interview. The fieldwork was approved prior to commencing interviews by the University of Toronto Health Sciences Ethics Board.

3. Structure

The first section of this paper explores how a Canadian YCC should be structured, based on what generally makes youth employment programs effective, existing examples of YCCs, existing Canadian youth employment programs, and a case study of YCCBC.

3.1. Literature Review

Youth unemployment has been a problem in various countries around the world for decades, and many governments have addressed this challenge by implementing youth employment programs (Betcherman et al., 2007). Previous literature evaluates the effectiveness of past youth employment programs and provides recommendations for the design of future youth employment programs. Many of the recommendations made in these papers are relevant for designing a Canadian YCC.

3.1.1. Youth Employment Programs & Climate Change

There is an emerging field of literature focusing on how social security programs, specifically youth employment programs, can help tackle climate change.

In "Harnessing Employment-Based Social Assistance Programmes to Scale Up Nature-Based Climate Action", Norton et al. use three case studies of employment programs in India, Ethiopia, and Mexico to illustrate how these programs can be used to address the "triple challenges of global inequality, climate change and biodiversity loss" (Norton et al., 2020, p. 1). They emphasize the compelling political logic for doing this - the poorest people in any given country will be hardest hit by unmitigated climate change, and will need ever more social assistance as a result. Further, they underscore how much money is already spent on social assistance programs by governments around the world - lower and middle income countries spend approximately 1.5% of their collective annual Gross Domestic Product (GDP) on these programs, and higher income countries spend even more. Pivoting these programs toward emissions reduction and ecological preservation is a simple and effective way to help countries meet their climate goals (Norton et al., 2020).

Acelandu et al. (2015) and Berger & Bendjebbour (2019) argue that youth employment interventions specifically should be used to tackle climate change. According to Aceleanu et al. (2015):

"The problem of persistently high rates of youth unemployment can be reduced by exploiting the potential of the green economy sectors to become an important source of jobs. Youth are the group most adaptable to the new, able to change, willing to experiment and learn, and to accept jobs in new areas, which represents precisely the elements that can boost the green economy towards achieving the proposed objectives." (Acelandu et al., 2015, p. 16)

They argue that preparing young people for the green workforce can both alleviate youth unemployment, which is generally higher than other age groups, and contribute to sustainable development (Aceleanu et al., 2015). Berger & Bendjebbour (2019) point out specific opportunities in Greece and Spain for programs like this to occur, and suggest using funding from national and European programs, such as the European Youth Guarantee (Berger & Bendjebbour, 2019).

3.1.2. Are Youth Employment Programs Effective?

The first question to ask before delving into how to design youth employment programs is: are they even effective at alleviating youth unemployment? While there are mixed opinions in the existing literature, the majority of studies find that youth employment programs have an overall positive impact on youth labour market outcomes (Betcherman et al., 2007; Kluve et al., 2019). However, Betcherman et al. (2007) emphasize that there is a lack of data available on the impact of youth employment programs. There is no standard for thoroughly evaluating the impact of these programs, and research shows that the more thorough the evaluation, the less positive the results. This means that the impact of youth employment programs may be overestimated (Betcherman et al., 2007). However, studies also suggest that the benefits of youth employment programs often take a long time to be fully realized, and there are few long-term studies on these programs (Datta et al., 2018). The long-term studies that do exist point to positive outcomes (Aizer et al., 2020). Overall, it is fair to assume that while there is room for improvement in terms of evaluation, youth employment programs are generally a good thing and should be pursued by policymakers.

Another thing to note is that there seems to be near unanimous agreement among researchers that youth employment programs are more successful (in terms of labour market outcomes and cost effectiveness) in developing countries (Betcherman et al., 2007; Datta et al., 2018; Kluve et al., 2019). This does not mean, however, that developed countries should not pursue them as a means for tackling youth unemployment and stimulating the economy.

3.1.3. What Makes Youth Employment Programs Effective?

There is a broad consensus in the literature on the key elements that make youth employment programs successful. These can be divided into three categories: development, design, and demographics.

Development

According to the literature, youth employment programs that are developed in collaboration with multiple stakeholders - including private companies and youth - tend to be more successful. Scholars recommend involving a diverse array of public and private sector actors in the development and implementation of youth employment programs (Betcherman et al., 2007; Datta et al., 2018; Kluve et al., 2019). Datta et al. stress the importance of ensuring that youth employment programs are in alignment with the needs of the labour market, which they argue can best be achieved by working with private sector companies. In his paper "Youth Participation in Youth Programmes: The Case of Ghana's National Youth Employment Programme", Gyampo argues that the failure of Ghana's National Youth Employment Programme (NYEP) to help young people transition into the labour market - between 2009 and 2010, over 90% of those who exited from the programme could not secure alternative employment - was in part due to the government's failure to meaningfully consult youth in the process of its creation. Gyampo emphasizes the importance of properly consulting youth when creating programs that affect them, in order to promote a sense of ownership and ensure the program is meeting their needs (Gyampo, 2012).

Design

Studies show that the most effective youth employment programs are “comprehensive” programs that incorporate multiple different types of employment interventions. Most youth employment programs fall into one of three categories: training and skills development, employment and intermediation services, and subsidized employment interventions. Training and skills development programs “intend to make workers more attractive to employers by providing foundational skills, technical skills including practical application, workplace skills, etc.” (Datta et al., 2018, p.16). Employment and intermediation services “create mechanisms that reduce costs of information exchange between employers and youth” such as job search assistance, career counselling, and recruitment services (Datta et al., 2018, p. 16). Subsidized employment interventions, such as wage subsidies and public works programs, “connect youth with jobs by reducing labor costs” (Datta et al., 2018, p. 17).

Skills training is the most popular type of youth employment intervention, but that does not mean it is the most effective. In fact, there are no major differences in effectiveness across categories (Betcherman et al., 2007). The programs that are more effective, though, are generally comprehensive programs that incorporate multiple different types of interventions (Kluve et al., 2019). Additionally, programs that provide follow-up services for at least one year after the completion of the program tend to be more effective. Follow-up services can include job search assistance or guidance in pursuing further education (Collura, 2010).

Demographics

How and when programs recruit participants also contributes to their effectiveness. It is important for programs to target a specific group of youth that they want to engage (Collura, 2010). Most programs target economically disadvantaged youth, which has been shown to increase their impact (Kluve et al., 2019). It is also important to intervene early on in an individual’s period of unemployment (Betcherman et al., 2007). Finally, profiling participants and responding to their individual constraints has been shown to be very effective. Profiling means “proactively using information about individual participants to direct them to the services that best fit their constraints” (Kluve et al., 2019, p. 7), and thus being able to address multiple different constraints is important. This can be achieved through having comprehensive programs.

Overall, it is important to have comprehensive programs, developed in collaboration with a diverse array of private and public sector stakeholders, that target specific demographics of youth and respond to their needs.

3.2. Youth Climate Corps Models

It is clear from the literature that youth employment programs provide a unique opportunity to address the dual crises of youth unemployment and climate change. This is why momentum has been building around the idea of a YCC.

The CEU has been spearheading the campaign for a Canadian YCC (We Need a Climate Corps, n.d.). The CEU has a detailed vision for what a federal YCC could look like, which is outlined in their policy brief (Klein, n.d.). Interviews were conducted with two CEU employees who are working on the YCC campaign to get their perspective on what a Canadian YCC should look like.

According to the CEU, a Canadian YCC should...

- Be open to all youth under 35;
- Have a special focus on enlisting systematically marginalized youth (Indigenous Peoples, Black, Brown, People of Colour, recent immigrants, lower income, youth with disabilities, 2SLGBTQIA+);
- Offer a two-year term of full-time work, training and study;

- Pay a living wage (What Is a Living Wage?, n.d.);
- Provide extended health, mental health, and dental benefits, vacation and sick leave, a pause on repayment of any student and apprentice loans, career counselling, low-cost child care, and any equipment or uniforms needed;
- Provide a trade certification or credential, credits towards post-secondary education, or a degree or diploma upon completion of service;
- Offer tuition-free post-secondary education upon completion of service;
- Provide pathways into life-long careers in climate/energy transition jobs of the future;
- Be administered by a new Crown corporation or agency;
- Be governed by local and regional boards;
- Fund projects that are integrated with local and provincial climate emergency plans;
- Create new, public-sector jobs doing climate and mitigation work that wouldn't otherwise be happening (Klein, n.d.).

There are many models available that can inform the development of a national YCC in Canada. After summarizing each program and discussing some of the impacts, I will present a checklist evaluating the following models based on the lens of the CEU framework.

3.2.1. Civilian Conservation Corps

The Civilian Conservation Corps (CCC) was one of the most popular programs in President Franklin D. Roosevelt's New Deal, a sweeping set of public policies aimed at pulling the United States out of the Great Depression. Launched in 1933, the CCC had two main objectives: providing relief to unemployed youth and preserving and enhancing natural resources. The CCC enlisted unemployed, unmarried young men between the ages of 17 and 25 to build national parks, preserve forests, and irrigate land. The men lived in work camps and were paid a monthly wage of \$30, \$25 of which was immediately sent home to their families. They were also provided with transportation to and from the work camps, accommodation, food, uniforms, medical and dental care, and insurance. While vocational training had always been part of the program, a formal education component was added in 1934 and became mandatory in 1937 (Aizer et al., 2020). Over 57,000 previously illiterate enrollees learned to read, and many left the program with high school diplomas or even college degrees (Enrollees, n.d.).

Despite its extreme popularity, the program was disbanded in 1942, in part due to the outbreak of the Second World War, and in part because it had never been established as a permanent federal agency (Salmond, 1967). From 1933 to 1942, more than three million young men took part in the CCC, with enrollment peaking at approximately 500,000. The CCC had a huge impact on both the lives of its participants and the natural resources of the United States. According to Britannica, CCC enrollees:

“...planted more than 2.3 billion trees, constructed 126,000 miles (more than 200,000 km) of roads and trails, and laid 100,000 miles (161,000 km) of telephone lines through national forests. They expended some 6,500,000 person-days fighting forest fires and similar time conducting fire prevention operations on forest lands. They built 6,660,000 small check dams to control soil erosion, 45,000 bridges and buildings, and more than 7,000 large diversion dams. They built hundreds of state parks with cabins, artificial lakes, and water supply systems, and much of the infrastructure in the U.S. National Park System was created using CCC labor.” (Civilian Conservation Corps (CCC) | History, Projects, & Facts | Britannica, 2024)

According to a 2020 study by Aizer et al., “enrollees who spent more time in CCC training grew taller, lived longer lives and had higher lifetime earnings” (Aizer et al., 2020, p. 2), as well as slightly higher educational attainment and geographic mobility.

The CCC was a groundbreaking and wildly successful public works program that has inspired countless more youth employment programs of varying scales, as well as the recent campaign for a Canadian YCC.

Evaluation:

- ✗ **Be open to all youth under 35** - while the CCC was only open to unmarried, unemployed young men, it did provide capacity for enrollment on the scale required to tackle the climate emergency.
- ✓ **Have a special focus on enlisting systematically marginalized youth** - the CCC had a special focus on enlisting young men from low-income backgrounds.
- ✓ **Offer a two-year term of full-time work, training and study** - CCC participants were allowed to serve for a maximum of four 6-month terms, or two years.
- ✓ **Pay a living wage** - CCC participants were paid \$30/month, \$25 of which was sent home to their families.
- ✓ **Provide extended benefits** - CCC participants received transportation to and from work camps, accommodation, food, uniforms, medical and dental care, and insurance.
- ✓ **Provide certifications/credentials** - many CCC participants left the program with high school diplomas or even college degrees.
- ✗ **Offer tuition-free post-secondary education** - CCC participants were not offered tuition-free post-secondary education upon completion of service.
- ✗ **Provide pathways into life-long careers** - the CCC did not provide specific career pathways.
- ✓ **Be administered by a new Crown corporation or agency** - the CCC was a temporary federal agency, but part of the reason it was disbanded is because it was never established as a permanent federal agency.
- ✗ **Be governed by local and regional boards** - the CCC was administered at the federal level, while the military was responsible for running the work camps.
- ✗ **Fund projects that are integrated with local and provincial climate emergency plans** - not relevant at the time of the CCC.
- ✓ **Create new, public-sector jobs** - probably the most important aspect of the CCC is that it created new, public-sector jobs doing work that was not already being done.

The biggest takeaway from the CCC is its scale. Of all the models listed in this report, the CCC is the only one on the scale required to tackle the climate emergency. A Canadian YCC should be an equally grand societal undertaking, albeit one that is more localized and open to all youth under 35.

3.2.2. American Climate Corps

The American Climate Corps (ACC) is essentially a modern-day version of the CCC, and is probably the best model on which to base a Canadian YCC.

The ACC was launched on September 20, 2023 and promises to train and employ more than 20,000 young Americans in the fields of clean energy, climate resilience, and conservation. Applications for the program opened on April 22, 2024, and the first “class” was deployed in June (FACT SHEET, 2024). Applicants must apply for specific positions via the program’s website, which are hosted by various federal agencies, state, local, and Tribal governments, non-profits, and state-based climate corps. Positions vary in terms of location, hourly wage, and term length. The focus areas listed on the website include public lands and waters, clean energy, urban areas, community resilience, food systems, and capacity building (Home | American Climate Corps, n.d.).

According to the website, some opportunities offer Segal AmeriCorps Education Awards, which “can be used to pay for post-secondary education and training or to reduce student debt upon completion of an eligible ACC opportunity”. Some participants will also be able to access “streamlined pathway[s] into federal service”, and additional benefits such as “healthcare, childcare, transportation, [and] housing” (What You’ll Do | American Climate Corps, n.d.).

The ACC also promises to “focus on equity and environmental justice” in pursuit of the Biden-Harris Administration's Justice40 Initiative (FACT SHEET, 2023).

Evaluation:

- ✗ **Be open to all youth under 35** - the ACC only has capacity for approximately 20,000 enrollees.
- ✓ **Have a special focus on enlisting systematically marginalized youth** - the ACC does have a special focus on enlisting systematically marginalized youth.
- ✗ **Offer a two-year term of full-time work, training and study** - ACC term lengths vary depending on the position.
- ✓ **Pay a living wage** - most ACC positions seem to pay a decent wage.
- ✓ **Provide extended benefits** - most ACC positions offer benefits such as healthcare coverage, forbearance on qualifying student loans and interest payments accrued during the term, and food and childcare assistance.
- ✓ **Provide certifications/credentials** - most ACC positions seem to offer some sort of credential/certification.
- ✓ **Offer tuition-free post-secondary education** - while ACC participants are not offered tuition-free post-secondary education, most positions come with a Segal Education Award that can be used to fund post-secondary studies.
- ✓ **Provide pathways into life-long careers** - the ACC does provide pathways into federal service.
- ✓ **Be administered by a new Crown corporation or agency** - the ACC is largely administered by AmeriCorps, which is a federal agency, although it was not created specifically to administer the ACC.
- ✓ **Be governed by local and regional boards** - many of the ACC positions are offered by state-level climate corps (more on this below). There is still room for more input from local governments.

- ✓ **Fund projects that are integrated with local and provincial climate emergency plans** - many state-level climate corps operate in tandem with state climate plans. Again, there is more room for incorporation of local climate plans.
- ✗ **Create new, public-sector jobs** - the biggest problem with the ACC is that it provides funding for participants to work with organizations/governments on projects that already exist, as opposed to creating new jobs.

The ACC is a helpful modern example of what a Canadian YCC could look like, but lacks the boldness and government involvement of the CCC. If the ACC was open to all youth under 35 and provided them with public-sector jobs instead of subsidized positions with independent organizations, it would be much closer to the CEU’s vision of a Canadian YCC.

3.2.3. State-Level Climate Corps

The ACC is being implemented in collaboration with various state-level climate corps, which also provide a helpful model on which to base a Canadian YCC. Thirteen US states in total have launched climate corps programs, including Arizona, California, Colorado, Illinois, Maine, Maryland, Michigan, Minnesota, New Mexico, North Carolina, Washington, Utah, and Vermont. Further information about some of the state-level climate corps is listed below.

Arizona Climate Resilience Corps

The Arizona Climate Resilience Corps (AZCRC) is run by the Northern Arizona University Centre for Service and Volunteerism, in collaboration with the Arizona Governor’s Office of Youth, Faith, and Family (Center for Service and Volunteerism Awarded \$945,000 to Launch Arizona Climate Resilience Corps – The NAU Review, n.d.). Building on the Centre’s Environmental Literacy Corps program, the AZCRC will focus on “environmental education, outreach, and volunteer coordination projects” (Arizona Climate Resilience Corps, n.d.). Members will be placed with a host organization, such as a public land management agency, city or county government, nonprofit organization, or education institution, for a 3-12 month term. They will receive a bi-weekly living stipend equivalent to \$19/hour and a Segal Education Award upon completion of their term. AZCRC members must be at least 17 years of age, but there is no upper age limit (Arizona Climate Resilience Corps, n.d.). According to an article published in the NAU Review in September 2023, the program aimed to engage 75 members that year (Center for Service and Volunteerism Awarded \$945,000 to Launch Arizona Climate Resilience Corps – The NAU Review, n.d.).

California Climate Action Corps

Launched by Governor Gavin Newsom in September 2020, the California Climate Action Corps (CCAC) was the first state-level climate corps and is the model on which both the ACC and other state-level climate corps are based (California Climate Action Corps History | California Volunteers, n.d.). The CCAC is implemented by Bay Area Community Resources and, similarly to the AZCRC, fellows are matched with organizations such as public agencies, Tribes, educational institutions, and nonprofit organizations for an 11-month fellowship. The first cohort began in January 2021, and since then, over 1,000 fellows have treated 412 acres of forest for wildfire resilience, planted 22,440 trees, diverted 34,602,821 pounds of food and organic waste from landfills, recovered and distributed 5,290,860 pounds of food, educated 10,862 people on climate action, and engaged 18,953 volunteers (Overview, n.d.).

Fellows receive a stipend of up to \$33,000 over their 11-month term, minimum essential healthcare coverage, forbearance on qualifying student loans and interest payments accrued during the term, and

food and childcare assistance (if eligible). They also earn up to \$10,000 in education awards upon completion and participate in 170-340 hours of professional development and training (Overview, n.d.).

Maine Climate Corps Network

The Maine Climate Corps Network (MCCN), run by Volunteer Maine, is basically a set of programs run by different organizations across the state that focus on eight key areas: coastal zone, transportation, energy, housing, land and freshwater preservation, community resilience, education, and public health.

Maryland Climate Corps

The Maryland Climate Corps is part of the Department of Service and Civic Innovation's Service Year Option (Maryland Climate Corps Fellow | American Climate Corps, n.d.), which "offers a year of professional growth and career exploration" (Member Fact Sheet, n.d.). Applicants must apply through the Maryland Corps/Service Year application portal and indicate their interest in working on climate issues (Maryland Climate Corps Fellow | American Climate Corps, n.d.). Successful applicants are paired with an apprenticeship program, nonprofit, business or government agency for the duration of their term. They earn at least \$15 an hour and receive on the job training, career coaching, job seeking assistance, and a \$6,000 stipend that can be paid out in cash or put towards tuition (Member Fact Sheet, n.d.).

MI Healthy Climate Corps

Michigan's Climate Corps, called the MI Healthy Climate Corps, was launched in early 2024 and is administered by the Department of Environment, Great Lakes, and Energy. The first cohort had 30 members, and applications are currently open for the second cohort (MI Healthy Climate Corps, n.d.). Members provide support for "aligned climate projects" in various governments, post-secondary institutions, and non-profit organizations. Members receive a living allowance of approximately \$3,200 per month, a \$7,395 education award to use toward loans or future education expenses, healthcare benefits that include dental, vision, and mental health support, eligibility for AmeriCorps child care assistance, access to Community Economic Development Association of Michigan (CEDAM) trainings, and travel, lodging, and meals for in-person events throughout the service term (Join the MI Healthy Climate Corps, n.d.).

Minnesota Energy Climate Corps

The Minnesota Energy Climate Corps is run by Conservation Corps Minnesota & Iowa, in partnership with ServeMinnesota and AmeriCorps. Participation in the program is open to Minnesotans aged 18 to 35 and involves completing an 11-month service term. Fellows perform "energy audits and basic efficiency maintenance in facilities at state parks and buildings in the Twin Cities region" ("Minnesota Energy Climate Corps," n.d.). In exchange, they receive a \$2,600 monthly stipend, forbearance on qualified federal student loans, a Segal AmeriCorps Education Award worth up to \$6,895, health insurance, and childcare assistance. They also receive skills training in areas such as energy systems and performance surveys, weatherization techniques, and conservation and renewable energy basics, along with certifications such as OSHA 10 construction safety and first aid ("Minnesota Energy Climate Corps," n.d.).

North Carolina Climate Action Corps

The North Carolina Climate Action Corps, launched in September 2023, is run by the State of North Carolina and has capacity for 25 members. Members work with public agencies, tribes, nonprofits, and educational institutions on climate action projects, with a focus on areas of the state most affected by

climate change (North Carolina Climate Action Corps | Nc.Gov, n.d.). Benefits include a living stipend of \$31,000 over 11 months, a \$7,395 education award, a healthcare premium reimbursement, child care assistance, and Supplemental Nutrition Assistance Program (SNAP) eligibility (Resilience Corps NC, n.d.).

Washington Climate Corps Network

The Washington Climate Corps Network (WCCN), run by Serve Washington, provides opportunities for young adults and veterans to do climate resilience work. Members are matched with local organizations, municipalities, and schools, and work on projects related to urban greening, wildfire reduction, heat island mitigation, distributed energy systems, sea-level rise, and food security. Members are paid a living stipend and receive “climate related professional and educational opportunities” (Washington Climate Corps Network Fact Sheet, 2023).

3.2.4. Ecogenia

Ecogenia is a Greek non-profit that aims to become a national youth climate corps by 2030. Ecogenia’s vision is to provide every young person (aged 18-30) in Greece with the opportunity to participate in a year of paid climate work (ECOGENIA – Γενιά Με Όραμα, n.d.). The organization has run four different programs since it was established in 2021: the 2022 and 2023 Ecotourism Pilot Programs, the 2022 Education Pilot Program, and the Olympus 2024 Social Service Program. According to the organization’s website, as of July 2023, a total of 25 cohort members had received 92 hours of training and contributed 6,501 service hours, reaching a total of 1,018 people (About – ECOGENIA, n.d.).

3.2.5. Youth Environmental Service

Similar to Ecogenia, the UK-based Youth Environmental Service (YES) is a non-profit organization that aims to provide youth aged 18-25 with the opportunity to participate in a year of paid climate work. YES would work with existing environmental organizations to have them provide year long paid work opportunities for young people. Aside from tackling climate change and youth unemployment, YES aims to diversify the UK’s environmental workforce, which is one of the least diverse in the country. As a result, the organization places a specific emphasis on recruiting participants from diverse and disadvantaged backgrounds (Youth Environmental Service, n.d.).

YES is currently supporting The National Lottery Heritage Fund and Groundwork UK's New to Nature programme, which is providing opportunities for 95 young people from diverse and disadvantaged backgrounds to do a year of paid climate work with an organization (New to Nature Pilot, n.d.).

3.2.6. Government of Canada Programs

There are a number of existing youth employment programs run by the Government of Canada, but none are on the scale of a potential YCC.

Apprenticeship Service

The Apprenticeship Service provides funding for employers in the skilled trades to hire first-year apprentices. Employers with 499 or fewer employees are eligible to receive \$5,000 per apprentice, or \$10,000 if said apprentice is from an equity-deserving group (women, persons with disabilities, Indigenous people, members of 2SLGBTQI+ communities, racialized communities, and newcomers) (Apprenticeship Service, 2021).

Canada Summer Jobs

Canada Summer Jobs provides wage subsidies to employers who create summer job opportunities for young people aged 15 to 30 (Youth Employment Strategy, 2017).

Indigenous Skills and Employment Training Program

The Indigenous Skills and Employment Training Program “provides funding to Indigenous service delivery organizations that design and deliver job training services to First Nations, Inuit, Métis and urban/non affiliated Indigenous people in their communities” (Description of the Indigenous Skills and Employment Training (ISET) Program, 2020).

Student Work Placement Program

The Student Work Placement Program provides wage subsidies to employers that offer work placements for post-secondary students in their field of study. Work placements can include mentorship programs, co-op placements, practicums, and internships (Student Work Placement Program, 2021).

Youth Employment and Skills Strategy Program

The Youth Employment and Skills Strategy Program “provides funding to organizations to deliver a range of activities that help youth (aged 15 to 30) overcome barriers to employment” (Youth Employment Strategy, 2017).

All of the existing Government of Canada youth employment programs focus on providing either wage subsidies to private companies or funding to independent employment organizations, instead of creating new public-sector jobs. The funding for all of these programs could instead be funneled into a YCC, which would provide two years of paid work experience to any young person who wanted it.

3.3. Case Study: Youth Climate Corps BC

In 2020, a BC-based non-profit organization called Wildsight piloted Canada’s first YCC in Nelson, BC (Simoni, 2023). The goal of the program was to “offer[] youth work in the sustainability and climate sector, focusing on leadership and personal development, while scaling up critical community climate action projects” (Simoni, 2023, p. 9). The inaugural cohort consisted of 14 young people aged 17-30, who were paid to work on a variety of climate projects over a period of four months. Wildsight continued to run YCC cohorts in Nelson and Kimberley/Cranbrook until 2021, when a separate non-profit called Youth Climate Corps BC (YCCBC) was formed, with the goal of expanding the program and serving young people outside of the Columbia Basin (Simoni, 2023). Fast forward to 2024, and YCCBC has expanded into seven different locations across the province and given more than 80 young people the chance to participate in a total of 7,000 days of climate action. The organization recently received \$3 million in funding from the provincial government to expand their programming (Support Empowers B.C. Youth to Take Action on Climate Change, 2024), as well as creating a Climate Changemakers Leadership Training microcredential in partnership with the British Columbia Institute of Technology (BCIT) (Climate Changemakers Leadership Training, 2024).

YCCBC provides an excellent proof of concept for what a national YCC could look like, as well as some valuable lessons to take into account when implementing a national YCC. Interviews were conducted with four YCCBC staff members and one YCCBC alumnus to learn more about the organization and how it could be used as a proof of concept for a national YCC.

3.3.1. About Youth Climate Corps BC

YCCBC currently operates in seven different locations across the province, including North Vancouver Island, Squamish, Vancouver, Kamloops, West Kootenay, East Kootenay, and Golden (Youth Climate Corps in BC, n.d.). A staff member explained that, “the local YCC teams across BC, they’re so different from one another because it’s really community based and we really want to foster their skills towards facing the climate crisis.” A central staff team coordinates across these different locations, establishes new ones, and handles operational responsibilities like funding, communications, and stakeholder engagement. “I see myself and the core team as support and in service for the teams that are local... those are really the frontline.” There is also a board of directors and a group of advisors that provide guidance and feedback.

YCCBC is a cohort-based program, meaning that a group of between four and fourteen young people are hired to work on climate action projects in their community for a period of four to six months. “That timeframe is often determined by funding, because we do pay a living wage... it would be nice to run it longer in some situations, but it’s often not possible.” Although the size and length of cohorts are currently constrained by funding, staff members expressed that they would like to make the cohorts longer and larger should more funding become available. Crew members work full-time and are paid a living wage for the duration of their cohort.

Each of YCCBC’s local hubs is managed by a coordinator, who is responsible for running cohorts in that location. One of the themes that came up again and again throughout my research on YCCBC was how community-focused the organization is. For example, one staff member explained the organization’s process for establishing a new local hub:

“We work with community leaders, rights holders, stakeholders to identify project priorities and identify funding, and then once we have those projects solidified and those goals solidified, then we’ll hire a coordinator, so a local person on the ground, ideally someone who has roots in their community, and then they will work with the local government or other ENGOs to run the project there. They’ll work to hire the crew, ideally local people as well.”

The same staff member emphasized that YCCBC’s goal is to “scale up existing projects” by providing additional labour, instead of starting new projects. This ensures that YCCBC’s work is aligned with community priorities identified by local governments and organizations. “These organizations have already seen the need, they’ve determined the projects, they define the project and we’re able to come in and say hey, we have a workforce that’s able to support you in scaling up this project.”

Examples of projects that YCCBC crew members have worked on include:

- The **Climate Friendly Homes Program** (Kamloops), in which YCCBC crew members “help[] households plan and prioritize ways to reduce energy costs and carbon pollution, prepare for extreme weather, and support biodiversity” (YCCBC Annual Report 2022-2023, 2023, p. 9).
- The **Kwakwaka'wakw Revitalization Project** (North Vancouver Island), in which YCCBC crew members are helping rebuild and reoccupy a village on Ma'amtagila territories. Current projects include “increasing infrastructure, including building a big house, organizing and running several youth camps [...] with a focus on food security, infrastructure enhancement, traditional land management practices, off grid technologies training, and working towards establishing an ecotourism/cultural-tourism venture at the village” (YCCBC Annual Report 2022-2023, 2023, p. 7).
- **Hub Cycling** (Vancouver), which involves “teaching school-age kids how to ride bikes”.

Armed with local climate action projects that need additional support, coordinators put together a cohort schedule that balances time spent actually working on these projects with educational activities aimed at increasing participants' employability in the climate field. Workforce readiness is one of YCCBC's primary objectives, and the organization is "always looking for the projects to align with the workforce readiness skills". Coordinators are responsible for weaving in training throughout the cohort, which can include workshops, lectures, experiential education, debriefs and reflection, mentorship, and on-the-job training (Simoni, 2023). One staff member spoke to how they help participants transition into the workforce:

"There's a couple ways that we do it: during the program, we'll try and help them network with the community as much as possible, so they're getting to know different employers, building those relationships, understanding what work needs to be done. In the BCIT course, they're going to be improving their resume [and] building a portfolio of work that they've done. And at the end, what we're going to be doing this year is having someone connect with them and help them identify where their next steps could be."

YCCBC is actively scaling up its workforce readiness component, as evidenced by the creation of a new microcredential in collaboration with BCIT. The Climate Changemakers Leadership Training Microcredential "provides foundational learning to support workers from various backgrounds interested in transitioning into sustainability and climate action careers" (Climate Changemakers Leadership Training, 2024), and will be woven into future YCCBC cohorts.

Once the cohort schedule is finalized, coordinators move on to hiring crew members. YCCBC aims to recruit diverse crew members who are from the region in which the cohort is taking place, although the former was noted as an area of improvement. "There are not a lot of people [of colour] that are in this space... I think people have this idea that climate justice or climate action is just one specific thing, but it's so many things, it's social justice, equity, all these things are part of this climate discussion." Applicants have to send in a resume and cover letter, which coordinators use to decide who to extend the invitation of an interview to. After interviewing shortlisted applicants, coordinators make a decision on the final cohort and contact successful applicants.

The YCCBC application process is intended to be "low to no barrier", and there are no specific qualifications or experience needed to be considered for a position. YCCBC would ideally be open to anyone who wanted to participate, but lack of funding necessitates an application process. One staff member noted that YCCBC cohorts are "consistently oversubscribed", emphasizing the need for a provincial or national program. Once crew members have been selected, coordinators are responsible for running the cohort and making sure everything goes smoothly.

YCCBC has had a remarkable impact since it began in 2020. 80 young people have completed the program, with "75% of alumni continu[ing] either work or education in climate". YCCBC received the 2020 Sustainability Leadership Award from the City of Nelson, where the inaugural cohort took place. This year, the organization co-designed a microcredential with BCIT and received \$3 million in funding from the provincial government to expand its operations across the province.

One YCCBC alumnus who was interviewed said that participating in the program gave them the experience they needed to find work in the environmental sector. As a computer science graduate who only had work experience in the technology sector, they were struggling to find a climate action job when they came across YCCBC. "That's where Youth Climate Corps [BC] has really helped me, because it gave me a lot of that experience that I missed through co-ops and other things I would have had in university". The alumnus was hired by one of the partner organizations for their cohort at the end of the program, and now works as a coordinator for YCCBC. The alumnus said that the most useful part of the

program, aside from the work experience, was the networking opportunities it provided with local climate leaders and organizations. “[YCCBC] has increased my leadership skills, my interpersonal networking skills, and I’ve been able to gain a network in Vancouver because of that”. The alumnus also emphasized the huge amount of knowledge they gained through the program, and how it allowed them to identify what they were passionate about within the climate field.

Staff members and alumni consistently emphasized the need to expand YCCBC across the country, or at least the province. One staff member said that, “it’d be great to run this program across Canada and offer it to every young person that wants to take it... that would be something we can't do right now, and really can't happen without direct government involvement.” Another staff member was specifically brought on to “win the campaign of expanding a Youth Climate Corps to be wide-scale within British Columbia.” Alongside a team of dedicated youth volunteers, this staff member has been building support for a provincial YCC among relevant stakeholders such as trade unions. “I outreach to organizations such as labor unions and say, hey, this is a Youth Climate Corps, we'd really like your support, we're trying to get more funding, and in order to do that, we need to show the provincial government that there's a consensus of support, would you be able to support us by endorsing us?” The staff member explained that while more government funding is always welcome, “it's our first choice for it to be a Crown agency, so that it's within the government [and] the government takes on that responsibility to implement it and deliver it.”

3.3.2. Lessons For A National YCC

YCCBC’s success proves that a national YCC is both possible and necessary, and its structure can be used as a starting point for designing a national YCC. Alumni and staff were asked what they felt was most important to consider when designing a national YCC based on their experience with YCCBC.

The answer given by every single interviewee was to ensure that a national YCC retains YCCBC’s community-focused approach. Staff members expressed concern that a national YCC would have a top-down structure and use the same approach in every community, which in their view would be a recipe for failure.

“I think that’s a risk with any government involvement, is that they like bureaucracy, and they like things in nice tidy boxes, and community climate action doesn’t often fit into a nice tidy little box, so having that flexibility to meet community needs and work with communities on what their priorities are, that would be something that should definitely be kept”.

One of the keys to YCCBC’s success is that it is not one size fits all; each YCCBC cohort is tailored to suit the community in which it takes place. This is important for two reasons: first, each community is unique. “With climate action, you really need that community piece to serve each community the best way you can. What you do in Nelson isn't necessarily going to work in even Casltegar or Vancouver.” Effective climate action must be localized. Second, giving young people work opportunities in their own communities allows them to build networks that they can use to find a job after the program has ended. A national YCC must have a bottom-up structure, in which Indigenous Peoples, local governments, and other stakeholders determine what climate action projects are needed, and these priorities are communicated up to the federal government who provides the funding to make them possible.

A national YCC must also strive to be decolonial in every sense of the word. YCCBC has one Indigenous-led project, the Kwakwaka'wakw Revitalization Project, but staff members expressed that with more funding, one of their top priorities would be to build more relationships with Indigenous communities. A federally-funded YCC would have the capacity to build these relationships, and should be fundamentally shaped by Indigenous Peoples as well as local stakeholders.

Participants said that a national YCC should work with high schools, post-secondary institutions, and trade unions to create a streamlined pathway into green careers for Canada’s youth. Students could learn about, or even complete an internship with, the YCC in high school, and then enroll upon graduation. Post-secondary institutions could help deliver the training aspect of the YCC and also provide credits or certifications to participants. Finally, working with trade unions could allow participants to seamlessly transition into a career in the trades. Multiple staff members explained that some of the most important climate jobs are in the trades; for example, one staff member shared a story about a professional insulator who made “more of an impact lowering emissions in a day than the average environmentalist sitting at their desk or protesting on the street [does] in a whole year.” Another staff member said that, “what’s been exciting for us is framing the trades as climate action work, because it is.”

YCCBC staff felt that paying participants a living wage was of the utmost importance, as well as providing benefits such as health and dental care, which they would provide if they had the funding to do so. One staff member noted that YCCBC participants often have a lot of climate anxiety that counselling services would help alleviate.

Finally, it is important to have YCC participants work on a number of different projects throughout their term, so that they are exposed to many potential future jobs and gain a broader skill set. The alumnus I interviewed said that “...climate action and environmental work is very broad, and it has to be brought into every part of our life, so getting to learn more about that and what that would look like I think is also [...] a really important part.”

Overall, YCCBC staff and participants felt it was important to have a localized YCC that is developed in partnership with Indigenous Peoples, as well as high schools, post-secondary institutions, and trade unions. Participants should be paid a living wage and receive other benefits such as health and dental care, and work on a variety of projects throughout their term. The next section will expand further on what partnerships with Indigenous Peoples and post-secondary institutions could look like.

4. Partnerships

There are many stakeholders with whom the federal government could and should collaborate when designing and implementing a Canadian YCC. This section mainly explores why and how the federal government should work with Indigenous Peoples, as well as post-secondary institutions.

4.1. Decolonizing Climate Policy

Interviews with YCCBC staff and alumni made it clear that a Canadian YCC should strive to be decolonial. The literal definition of decolonization is “the action or process of a state withdrawing from a former colony, leaving it independent” (Oxford University Press, 2022), but it is more commonly understood as “the process of freeing an institution, sphere of activity, etc. from the cultural or social effects of colonization” (Oxford University Press, 2022). But what does this actually look like in practice? There have been numerous papers written about decolonizing climate policy in Canada and abroad, which are summarized below.

4.1.1. Why Must Canadian Climate Policy Be Decolonized?

“Colonialism caused climate change. Indigenous rights are the solution.” (Decolonizing Climate Policy in Canada: Report from Phase One, 2021, p. 5) The opening sentence of Indigenous Climate Action (ICA)’s groundbreaking 2021 report, “Decolonizing Climate Policy in Canada: Report from Phase One”, sums up the most fundamental reason why climate policy must be decolonial: it is impossible to stop climate change without addressing its root causes, which are colonialism and capitalism. At the heart of

colonialism lies the belief that “...the land is something to be used and exploited rather than [...] a partner and a Mother” (Decolonizing Climate Policy in Canada: Report from Phase Two Part One, 2023, p. 58), and it is precisely this belief that has permitted the release of some 2.3 trillion tonnes of carbon dioxide into the atmosphere since the Industrial Revolution, leading to irreversible global warming (Hone, 2020). Colonialism must be dismantled if we are to have any hope of mitigating climate change. Many scholars attribute the “ongoing failure to address the climate crisis” (Reed et al., 2021, p. 2) to a “pervasive focus on the symptoms of the problem, rather than the root causes driving the crisis” (Reed et al., 2021, p. 2). Colonial climate policies come from the same system that caused the climate crisis in the first place, and thus will never be effective.

The solution is to pursue decolonial climate policies that are rooted in Indigenous knowledge and ways of being. While colonialism views human beings as separate from the land, Indigenous Peoples understand that the two are deeply interconnected (National Climate Strategy, 2023). In ICA’s “Youth Needs Assessment”, one participant shared: “I’m taught the Earth is our mother and it is not so much climate activism as taking care of our mother like any person would do.” Indigenous Peoples have been responding to environmental change for centuries - in fact, many view climate change as a continuation of the environmental change caused by colonialism (Decolonizing Climate Policy in Canada: Report from Phase Two Part One, 2023). Indigenous Peoples possess a wealth of knowledge and expertise on how to respond to environmental change, which must be centered in climate policymaking.

Additionally, the negative impacts of colonial climate policies often disproportionately affect Indigenous Peoples (Decolonizing Climate Policy in Canada: Report from Phase One, 2021). For example, since the median income is lower among Indigenous Peoples in Canada than among non-Indigenous Canadians, the former are disproportionately affected by carbon pricing schemes (Decolonizing Climate Policy in Canada: Report from Phase One, 2021). Furthermore,

“Given that intact forests sequester carbon and most of the world’s forests are found in Indigenous Peoples’ territories, many offset projects are being implemented on Indigenous lands and in many of these programs, implementation is leading to land grabs, killings, violent evictions and forced displacement of Indigenous Peoples.” (Decolonizing Climate Policy in Canada: Report from Phase One, 2021, p. 34)

Hydroelectricity is another example of a climate solution that has a disproportionate negative impact on Indigenous Peoples. Hydro dams are often built on Indigenous lands, a process which is incredibly destructive and often requires the displacement of Indigenous Peoples from their ancestral territories. Furthermore, building dams has been associated with “higher levels of toxic methylmercury in fish and mammals, including humans” (Decolonizing Climate Policy in Canada: Report from Phase One, 2021, p. 37).

4.1.2. What Does Decolonial Climate Policy Look Like?

It is clear that a Canadian YCC must be decolonial, but what does that actually look like in practice? ICA’s “Decolonizing Climate Policy in Canada: Report from Phase One” critically examines Canada’s two most recent federal climate plans, the Pan-Canadian Framework on Clean Growth and Climate Change (PCF) and A Healthy Environment, A Healthy Economy (HEHE), and provides a list of excellent recommendations for decolonizing climate policy in Canada going forward.

“Actively work towards climate policy in Canada that (unlike the PCF and the HEHE):

1. includes Indigenous communities and Nations as full partners at policy decision-making tables. National Indigenous Peoples Organizations are advocates for our communities and Nations and should not be treated as decision makers;
2. raises up the leadership from Indigenous women and 2SLGBTQIA+ folks;
3. respects Indigenous rights to self-determination and FPIC in the process of developing policy and in the contents of the policies and plans, as well;
4. adheres to federal commitments to Nation-to-Nation, Inuit-Crown, government-to-government relationships;
5. upholds the Calls to Actions emanating from the Truth and Reconciliation Commission and other government led-inquiries, including the Royal Commission on Aboriginal Peoples and the National Inquiry into Missing and Murdered Indigenous Women and Girls;
6. promotes climate solutions that take into account the realities faced by Indigenous communities and Nations, both rural and urban;
7. will not disproportionately impact Indigenous Peoples, negatively;
8. acknowledges and actively addresses structural inequalities that are continually being reproduced through colonial relation, processes, and structures in so-called Canada;
9. addresses the root causes of climate change (e.g. colonial capitalism and extraction);
10. engages an intersectional understanding of climate to design intersectional climate solutions that reduce emissions while undoing systemic oppressions.” (Decolonizing Climate Policy in Canada: Report from Phase One, 2021, p. 54)

“Decolonizing Climate Research and Policy: making space to tell our own stories, in our own ways” contains a transcript of a panel moderated by Eriel Tchekwie Deranger and including Rebecca Sinclair, Beze Gray, and Deborah McGregor. When asked, “if money was no obstacle, how would you see Indigenous climate policy and processes unfolding in so-called Canada?” panelists suggested giving Indigenous “knowledge keepers, land defenders, and water protectors” (Deranger et al., 2022, p. 68) financial support, in the same way as academic researchers, enabling Indigenous communities to create their own climate plans and strategies, and “focus[ing] on Indigenous-led climate solutions as the best practices” (Deranger et al., 2022, p. 69). Deranger emphasized:

“It’s time for all the people who call the territories of Canada home to demand that the colonial structures start being the ones to figure out how and where their resources and knowledge can offer support to existing Indigenous solutions. One place to start is to decolonize the policy-making process and start taking direction from Indigenous peoples on how to survive the climate crisis. Indigenous peoples: our culture, our knowledge, our knowledge holders, elders and youth and community members, deserve the respect and valuation of our time. This requires deconstruction and undoing and creating the space for something new, or actually the space for something old that has existed since time immemorial.” (Deranger et al., 2022, p. 69)

Two specific tools that can be used to evaluate climate policy through a decolonial lens are Jones et al.’s Indigenous climate justice policy analysis tool (Jones et al., 2024) and the First Nations Climate Lens described in the Assembly of First Nations’ National Climate Strategy (National Climate Strategy, 2023), both of which can be found in Appendix C and D.

4.2. Post-Secondary Institutions

As mentioned previously, the federal government should aim to collaborate with a broad range of partners on the design and implementation of a national YCC, including municipal governments, provincial and territorial governments, high schools, post-secondary institutions, and trade unions. Post-secondary institutions could specifically provide the training aspect of the YCC program. This would be advantageous for two reasons: first, it would make it easier to provide YCC participants with post-

secondary credits or even certifications upon completion of the program. Second, many post-secondary institutions already have programs aimed at preparing students for work in the climate sector, which could be incorporated into YCC training. A jurisdictional scan was conducted of YCC-related programs at BC post-secondary institutions, the results of which can be found in Appendix E.

Another important partner that the federal government should collaborate with is municipal governments, which will be discussed in the next section.

5. Work

One of the ways in which YCCBC remains localized is by collaborating with municipal governments. Staff and alumni recommended that a national YCC also work in collaboration with municipal governments, and specifically take direction from municipal climate plans on which projects to implement. An analysis of the climate action plans from 13 different municipalities across the country was conducted, and an inventory was created of action items from each of the plans that could be completed by YCC members. The complete inventory can be found in Appendix F.

5.1. Key Themes

A number of key themes emerged from the inventory, which represent the key areas of work that YCC members would be able to do in municipalities. The themes can be classified into five categories: buildings/infrastructure, energy, transportation, waste, and other.

Category	Key Themes
Buildings/infrastructure	Zero emissions new buildings, zero emissions retrofits, low carbon building materials, climate-resilient infrastructure/retrofits, affordable housing, infill development, brownfield redevelopment
Energy	Energy poverty, district energy systems, solar PV/renewable energy, low carbon fuels
Transportation	EV charging infrastructure, active transportation infrastructure, public transit
Waste	Food waste reduction, circular economy, waste diversion, landfill gas capture, prevention of littering
Other	Community outreach/education, natural infrastructure/green spaces, stormwater management, tree planting, workforce development, urban agriculture

6. Conclusion: Recommendations For A Canadian Youth Climate Corps

Based on multiple literature reviews, a jurisdictional scan of existing YCC models, interviews with YCCBC staff and alumni, a jurisdictional scan of BC post-secondary programs, and an analysis of municipal climate plans, here are the key recommendations that the federal government should take into account when implementing a YCC:

- The development and implementation of a national YCC should be a deeply collaborative process, involving municipal and provincial/territorial governments, high schools and post-secondary institutions, trade unions, young people, and most importantly, Indigenous Peoples.
- A new Crown corporation should be created to administer the YCC, along with governing bodies in every province/territory, region, and municipality (similar to the ACC's state-level climate corps).
- The work done by YCC members should be determined by the community in which they are based. For example, members could work on climate action projects that local First Nations or municipal governments want to see happen but don't have the capacity to take on themselves. Regardless, YCC members should work on new, public-sector climate action projects that wouldn't otherwise be happening (like the CCC).
- Post-secondary institutions should be involved in training YCC members, which they can do by drawing on existing climate action-related programs. A trade certification or credential, credits towards post-secondary education, or a degree or diploma should also be provided to YCC participants upon completion of service.
- YCC employees should be unionized, and the federal government should work with trade unions to provide a streamlined pathway into the trades for YCC graduates. The federal government should also leverage the YCC program to begin reframing the trades as essential for climate action.
- YCC members should be paid a living wage, and also receive extended health, mental health, and dental benefits, vacation and sick leave, a pause on repayment of any student and apprentice loans, career counselling, low-cost child care, and any equipment or uniforms needed.
- There should be a special focus on enlisting systematically marginalized youth (Indigenous Peoples, Black, Brown, People of Colour, recent immigrants, lower income, youth with disabilities, 2SLGBTQIA+).

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Appendices

Appendix A – Interview Consent Form

Designing a Canadian Youth Climate Corps Consent Form for Interviewees

Study Purpose

We are in the midst of a climate crisis, the reality of which has come into painful view over the last few years. 2023 was the hottest year on record, bringing with it a host of climate-related disasters, including the devastating wildfires that ravaged the Hawaiian island of Maui. Here in Canada, we had a record-breaking wildfire season, in addition to deadly flooding, drought, and heat waves. Yet, despite the years of climate chaos we have endured and the repeated calls from climate scientists to dramatically reduce our emissions, Canada has lacked a climate mobilization on the scale required. Young Canadians are staring down the barrel of a bleak future when it comes to climate change, a predicament that is exacerbated by the rising cost of living across the country.

A national Youth Climate Corps (YCC) would address the intertwining crises of climate and economy that youth are currently experiencing. A YCC is a federally funded youth employment program that would offer a good, green job to any young person who wanted one. A national YCC would both accelerate Canada's transition away from fossil fuels and toward renewable energy, while providing well-paying, unionized jobs for thousands of young people and equipping them with the skills needed to succeed in their careers. The goal of this study is to create a detailed proposal for a Canadian YCC that can be used by policymakers and activists to push for its implementation. The proposal will draw from youth employment programs around the world, as well as Youth Climate Corps BC (YCCBC), to outline what a Canadian YCC could look like.

Principal Investigator

The principal investigator of the study is Lilah Williamson, an undergraduate student at the University of Toronto. If you have any additional questions about this study, you may contact Lilah at lilah.williamson@mail.utoronto.ca or (778) 877-4721. You may also contact her supervisor, Dr. Daniyal Zuberi (Professor of Social Policy at the Factor-Inwentash Faculty of Social Work and the Munk School of Global Affairs & Public Policy at the University of Toronto), at daniyal.zuberi@utoronto.ca or (416) 978-3264.

Sponsor

This research is supported by the Laidlaw Scholars Leadership and Research Programme.

Study Procedures

Lilah will conduct a Zoom interview one-to-one with you. The interview will be digitally recorded to accurately capture the details of the conversation about your experiences. Your interview will take about 45 minutes and will focus on your experience with Youth Climate Corps BC (YCCBC). Lilah will be happy to answer any questions you have about the study procedures.

Conditions for Participating

Your participation in this study is voluntary. There will be no penalty or loss of benefits to which you are otherwise entitled, if you choose not to participate or if you start the interview and then change your mind. Additionally, you may stop the interview at any time or choose not to answer any questions with which you are not comfortable. If you start the interview, but then change your mind and decline further participation in the study during the interview, any data collected will be destroyed as paper copies will be shredded and digital copies will be erased.

Risks and Benefits

Any potential risks from participating in this project will be greatly reduced by measures taken to protect the confidentiality of your identity. Lilah can provide you with a list of free, accessible and local resources that you can turn to for support in the event that the interview unexpectedly causes distress.

As an incentive to encourage participation and to cover any expenses you may incur, you will be offered an honorarium in the amount of \$25.

Access to Information, Confidentiality, and Publication of Results

Lilah and her supervisor, Dr. Daniyal Zuberi, will have access to the data.

Your name and contact information will be collected and stored both securely and separately from interview data. All digital files relating to the project will be password protected and erased at the end of a 5-year storage period.

To protect your confidentiality, you will be referred to as “YCCBC staff member” in any publications and presentations that may result from this research.

You will receive a summary of the research results via email.

Consent

Your digitally recorded verbal consent indicates that you have read and understood this consent form, you have had the opportunity to have your questions about the study answered, and you consent to participate in the study.

To consent to participate in this study, please ask the interviewer to turn on the digital recorder.

On the recording, please:

1. say and spell your first and last names;
2. state that you consent to participate in Designing a Canadian Youth Climate Corps;
3. say today’s date (month/day/year);
4. say and spell your email address to receive an honorarium and a summary of the study results.

The interviewer will record your verbal consent in a separate digital file from your interview.

Appendix B – Interview Questions

YCCBC Staff:

- How did YCCBC come to be?

- What made you want to work for YCCBC?
- Describe YCCBC's current structure and operations.
- What about YCCBC do you think is working well?
- What about YCCBC do you think could be improved?
- How is YCCBC funded?
- What about YCCBC would you change if you had more funding?
- Could you see YCCBC operating on a national scale? What would have to change about the current structure in order for that to be possible?
- Is there anything else you would like to add?

YCCBC Participants:

- Describe your experience as a YCCBC participant.
- What made you want to work for YCCBC?
- What parts of the program do you think worked well?
- What parts of the program do you think could be improved?
- What did you gain from the experience of working for YCCBC?
- How has your participation in this program impacted your career?
- Would you recommend this program to a friend?
- Is there anything else you would like to add?

CEU Staff:

- Why did the CEU decide to launch the Youth Climate Corps campaign?
- Walk me through the campaign from its inception until now.
- What is the CEU's vision for a YCC? Please be as specific as possible.
- What components are important to include in a national YCC?
- What roadblocks has the CEU faced in advocating for a YCC?
- Is there anything else you would like to add?

Appendix C – An Indigenous Climate Justice Policy Analysis Tool

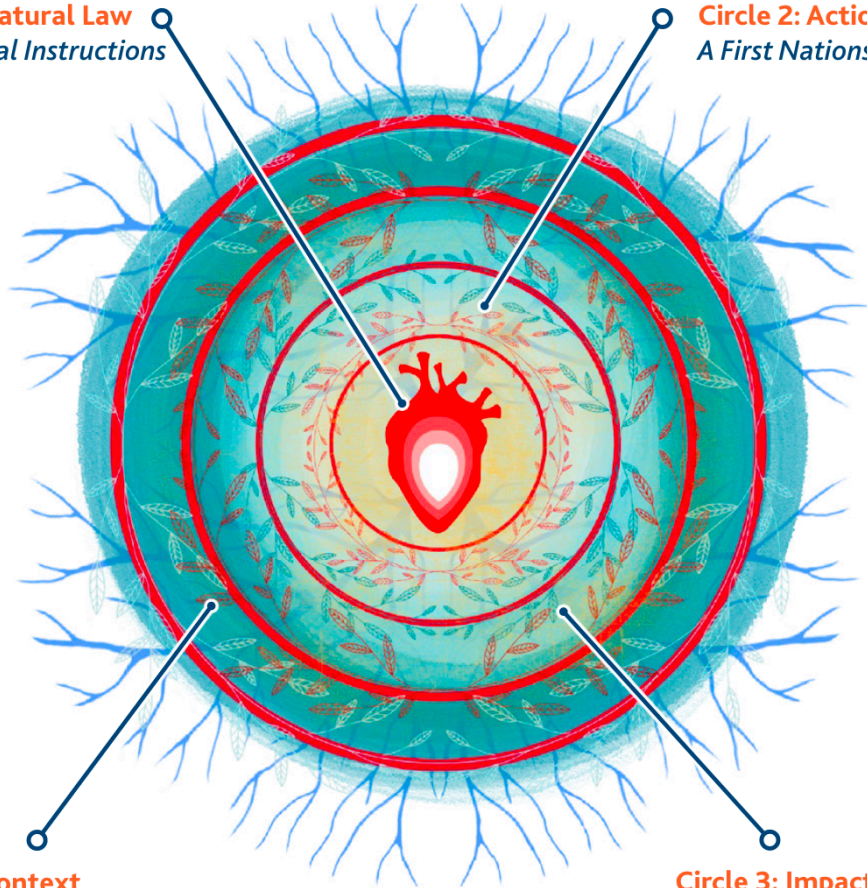
Domain	Criterion	Unacceptable	Progress towards justice	Climate justice	Examples of evidence sources
Relational justice	C1: To what extent does the policy strive towards a vision of relational wellbeing? (i.e. centring relationships with all our relatives)	Little or no acknowledgment of relationality or relational wellbeing goal(s)	Vision/goals/values articulate elements of relational wellbeing and identify opportunities for healing disrupted relationships	Vision/goals/values centre relational wellbeing and strongly underpin policy	Vision/goals/values in the preamble of the policy
	C2: Does the policymaking process explicitly address key aspects of relationships – consent, trust, accountability, and reciprocity?	Policymaking process doesn't address any of these aspects, or only addresses them perfunctorily	Policymaking process addresses aspects of consent, trust, accountability and/or reciprocity	Policymaking process adheres to explicit provisions to ensure consent, trust, accountability and reciprocity	Description of engagement between the decision-making body and Indigenous communities in the policy methods
	C3: How does the policy seek to disinvest from systems and structures that perpetrate relational violence? (e.g. industries / economic systems that create environmental harm)	Active investment, or minimal attempts to disinvest from violent systems and structures	Partial disinvestment from violent systems and structures	Full disinvestment from violent systems and structures (and investment in relationally-centred systems and structures)	Explanations of the methods and outcomes of effects modelling exercises (e.g., the use of capitalist macroeconomic models acts to uphold relational violence)
Procedural justice	C4: To what extent do Indigenous peoples have agency within colonial decision making processes?	Indigenous voices, where included, are subject to State selection/control and are limited to a consultative or advisory function	Active participation of Indigenous communities, with selection to some extent controlled by Indigenous peoples, but their capacity and/or capability to influence decision making is limited by properties of the decision making process	Genuine co-governance between the State and Indigenous peoples ensuring agency within decision making processes	Description of processes for public consultation, establishing advisory bodies and appointing Indigenous policymakers
	C5: To what extent does the policy enable the capacity for non-human entities to express political agency?	No mechanisms for non-human entities to express political agency	Efforts made to incorporate the interests of non-human entities within existing anthropocentric frameworks, e.g. through rights of nature and legal personhood provisions	Explicit creation of relational spaces with 'Known' and 'Unknown' 'Others' (including both present and future humans and non-humans) as a mechanism for enabling multi-species political agency	Record of policy submissions from organisations that represent non-human entities, and resulting action
	C6: How do the policymaking structures and processes recognise Indigenous decision making institutions and enable Indigenous sovereignty?	Policymaking occurs within 'standard' State-led structures and processes	Policymaking structures and processes acknowledge Indigenous decisionmaking institutions and ensure that policy does not constrain Indigenous self-determination	Policymaking structures and processes acknowledge the limits to State sovereignty and enable autonomy of Indigenous decision making institutions	Online organisational descriptions of the decision-making body; description of formal relationship(s) with Indigenous tribal authorities
Distributive justice	C7: Does distributive justice reflect Indigenous definitions of wellbeing and ecological understandings of health? (e.g. including impacts on more-than-human relatives and future generations)	No or minimal consideration of Indigenous definitions of wellbeing or ecological understandings of health	Equity analysis incorporates Indigenous definitions of wellbeing and ecological understandings of health	Equity analysis centres Indigenous definitions of wellbeing and ecological understandings of health	Description of the methods for evaluating evidence and effects modelling
	C8: What provisions are there to ensure that benefits and risks of the policy are equitably distributed?	Actively increases inequities, or limited/no mitigation of inequitable outcomes	Measures in place to ensure policy doesn't exacerbate existing inequities or create new inequities, but not sufficient to address existing inequities	Sophisticated assessment tools and provisions to fully address pre-existing inequities and avoid new ones	Explanation of how equity analyses shaped the policy decision-making
	C9: Is the proposed climate action sufficiently strong and rapid to protect against the negative and inequitable effects of climate change?	Insufficient action due to policy compromises that favour the status quo	Moderately strong and rapid action, but insufficient due to recognition of the risk of further injustices if emissions reduction were to be prioritised at the expense of other outcomes	Determined, meaningful action that is estimated to meet or exceed emissions reduction targets	Modelling of the expected emissions reduction; rationale for proposed intensity of action

Recognition Justice	C10: How are Indigenous worldviews / ontological positions recognised and honoured in the policy?	Indigenous worldviews and ontologies may be recognised but are not applied in any meaningful ways	Indigenous worldviews and ontologies are recognised, but are largely incorporated (and subject to validation) within colonial frameworks	Self-recognition and expression of Indigenous worldviews in ways that offer a radical alternative to colonial hegemony	Description of the theoretical underpinning of the policy in the methods
	C11: Is there 'epistemic justice'? How are Indigenous knowledges recognised, developed and expressed in the policy?	Indigenous knowledges recognised and expressed only insofar as they do not challenge Western knowledge	Indigenous knowledges are recognised and valued, and are selectively incorporated in the policy in ways that offer distinctly Indigenous solutions	Self-recognition, expression and development of Indigenous knowledges focused on emancipation	Description of policy measure(s) that are explicitly grounded in Indigenous knowledges
Restorative Justice	C12: Is there consideration of historical and ongoing colonial practices that enables an understanding of the depth and scope of injustices affecting Indigenous communities?	Limited or no consideration of historical and ongoing colonial practices	Policy considers relevant colonial practices and partially acknowledges the resulting injustices affecting Indigenous communities	Policy acknowledges injustices resulting from relevant colonial practices and assumes responsibility to rectify them	Identification of inequities due to colonial practices in the background section
	C13: Does the policy provide opportunities to rectify or ameliorate processes that have disenfranchised or harmed Indigenous communities?	Limited or no attempt to rectify historical and contemporary injustices	Provision of reparation (e.g. financial compensation), but without remedying the underlying situation	Contributes to genuine remediation of harm or disenfranchisement (e.g. restoration and return of land and natural resources)	Description of policy measures

Appendix D – First Nations Climate Lens

Circle 1: Natural Law
Our Original Instructions

Circle 2: Actions
A First Nations' Worldview



Circle 4: Context
*The Legislative Legal
and Policy Ecosystem*

Circle 3: Impacts
A First Nations' Lived Reality

Figure 2: First Nations Climate Lens

Circle 1: Natural Law – Our Original Instructions: First Nations Knowledge Keepers have described climate change as a symptom of a greater problem: a set of human values, based on the separation of humans from the natural world, that guide a series of destructive human behaviours and activities blatantly disrespecting Natural Law. Natural Law is a set of laws that originate directly from the Creator, based in our diverse languages, oral histories, and ceremonies, to govern how we must interact with the Land, Water, and more-than-human relatives to ensure balance and reciprocity.

Circle 2: Action – A First Nations’ Worldview: First Nations-led solutions are multidimensional, interrelated, interconnected, and grounded in First Nations spiritualities, legal systems, knowledges, languages, and governances. The core of a First Nations worldview is an understanding that we are one with the Land. This recognition lays the foundation for a set of legal principles and orders that, while unique to each individual First Nation, represent natural, spiritual, and environmental law. It is this sacred responsibility that continues to guide how First Nations interact with, protect, and respect Mother Earth.

Circle 3: Impacts – The First Nations’ Lived Reality: In Canada, climate conversations often disregard the historical legacy of colonization, which included relocating First Nations; forcibly removing children from their families and placing them in Residential Institutions; and prohibiting the use of traditional languages and practices, among other atrocities. Climate change exacerbates many of the resulting impacts of colonization, including those related to health, mental health and well-being, poverty, poor housing, food and water insecurity, and the erosion of rights, culture, and access to lands. The lived reality of First Nations must be understood and incorporated into analyses of the distribution and experience of climate-related impacts. In this regard, addressing the climate crisis cannot be separated from the broader project of First Nations self-determination and reconciliation.

Circle 4: Context – The Legislative, Legal and Policy Ecosystem: For First Nations, climate action is a rights- and Inherent responsibilities- based activity to be established, mandated, and implemented within First Nations governance, and working in concert with colonial legislative, legal, and policy contexts at the federal, provincial, territorial, and international level. This stems from our Inherent jurisdiction over our Lands, Waters, and territories, as well as our affirmed right to self-determination. The broader ecosystem for this includes the federal government’s passing of legislation to implement the United Nations Declaration on the Rights of Indigenous Peoples (UN Declaration), its commitment to implement the Truth and Reconciliation Commission’s Calls to Action, as well as the Calls for Justice from the National Inquiry on Missing and Murdered Indigenous Women and Girls. It also includes First Nations-specific jurisprudence and the protections afforded to First Nations by the *Constitution Act, 1982*.

Appendix E – BC Post-Secondary Programs

Institution	Program
British Columbia Institute of Technology	Applied Circular Economy: Zero Waste Buildings
British Columbia Institute of Technology	Climate Changemakers Leadership Training
British Columbia Institute of Technology	Construction of Mass Timber Structures

British Columbia Institute of Technology	<u>Drone Applications for Environmental Risk Assessment</u>
British Columbia Institute of Technology	<u>Ecological Restoration</u>
British Columbia Institute of Technology	<u>Essential Field Skills for Environmental Professionals</u>
British Columbia Institute of Technology	<u>Essentials of Community Energy and Emissions Management</u>
British Columbia Institute of Technology	<u>Essentials of Natural Resource and Environmental Protection (MENREP)</u>
British Columbia Institute of Technology	<u>Sustainable Energy Management</u>
British Columbia Institute of Technology	<u>Essentials of Net-Zero and Passive House Construction</u>
British Columbia Institute of Technology	<u>Introductory Studies in Mass Timber Construction</u>
British Columbia Institute of Technology	<u>Residential Air to Air Heat Pump Specialist</u>
British Columbia Institute of Technology	<u>Retrofit Solutions for Rural Communities</u>
British Columbia Institute of Technology	<u>Heat Pump Maintenance and Troubleshooting</u>
British Columbia Institute of Technology	<u>Renewable Energy Electrical Systems Installation & Maintenance</u>
British Columbia Institute of Technology	<u>Wind Turbine Essentials</u>
Camosun College	<u>Environmental Technology</u>
College of New Caledonia	<u>Natural Resources and Forest Technology</u>
Kwantlen Polytechnic University	<u>Environmental Protection</u>
North Island College	<u>Building Deconstruction and Salvage</u>
North Island College	<u>Coastal Forest Worker Certificate</u>
North Island College	<u>Coastal Forest Technology Diploma</u>
North Island College	<u>Principles of Ecosystem Stewardship Micro-credential</u>

Northern Lights College	Wind Turbine Maintenance Technician Advanced Certificate
Okanagan College	Sustainable Building Technology Diploma

Appendix F – Municipal Climate Action Plan Inventory

City of Calgary

Facilitate and support an information sharing, capacity-building and skills training centre to accelerate zero emissions new buildings and retrofits for commercial and residential buildings, in collaboration with stakeholders (e.g. industry, industry associations, businesses, skills training and employment organizations and other labour and non-profit organizations).
Investigate and develop financing programs, in collaboration with public and private-sector stakeholders, to leverage public and private financing sources to support new zero emissions buildings in both the residential and commercial sectors.
Develop process incentives to encourage net zero emissions residential and commercial buildings.
Develop financial incentives to encourage achieving higher energy performance standards for new residential and commercial buildings, in alignment with the development of a Net Zero Emissions Building Standard.
Establish Net Zero Emissions Building Standard that requires that new buildings achieve a better energy performance standard than required in the code. This should align with and accelerate implementation of federal net zero building code changes and be developed in collaboration with key stakeholders, other Alberta municipalities and other levels of government.
Establish a strategy to increase the use of low carbon building materials in new construction and renovations in buildings and infrastructure.
Facilitate and support information sharing, training and accreditation for contractors, energy auditors, homeowners, landlords and realtors in collaboration with stakeholders.
Develop and launch the Calgary Clean Energy Improvement Program to provide financing for residential energy efficiency and renewable energy retrofits.
Develop and launch a CEIP financing program for commercial buildings to encourage deep energy retrofits.
Investigate non-CEIP financing models and repayment mechanisms, in collaboration with public and private sector stakeholders, to leverage public and private financing sources to accelerate GHG reductions in residential and commercial buildings.
Develop process incentives to encourage deep energy retrofits in residential and commercial buildings.
Develop a net zero emissions retrofit incentive program to support the greater downtown.
Develop a retrofit incentive program to encourage the adaptive reuse of buildings.
Develop a retrofit incentive program for tenants that allows non-owners to benefit from improved energy performance and cost savings.
Develop financial incentives to retrofit residential and commercial buildings, in alignment with the development of a Net Zero Emissions Retrofit Standard.
Establish a strategy to increase the use of low carbon building materials in renovation in buildings and infrastructure.

Integrate climate mitigation considerations into strategies related to irregular building types (i.e., industrial, historic and institutional buildings) to support energy and GHG emissions reductions.
Engage with Calgarians impacted by energy poverty to understand their perspective and determine programming needs.
Establish a retrofit program for Calgarians experiencing energy poverty in partnership with community partners.
Investigate and pursue opportunities to support the transition of existing district energy systems to low carbon fuel sources in partnership with system owners and operators.
Develop and implement a city-wide strategy to accelerate the installation of solar PV in residential, commercial and industrial applications.
Support the implementation of solar PV on community buildings such as community associations and schools.
Explore and support community and co-operative ownership models for local renewable energy projects.
Work with Enmax and other electric utilities to support the transition to zero carbon electricity, particularly to implement grid and service upgrades to enable electrification.
Work with ATCO and other natural gas suppliers to explore low carbon fuels for heating, particularly to align with provincial and federal hydrogen strategies.
Integrate ATCO Hydrogen Strategy data into The City of Calgary GHG model to quantify the hydrogen pathway for decarbonizing home heating, and identify a 2030 and 2050 milestone for decarbonization of building heating fuels.
Implement local and regional public electric vehicle Level 2 and Level 3 fast charging infrastructure.
Develop process and financial incentives to support: at-home charging infrastructure, retrofit EV charging infrastructure in multi-unit residential buildings, private e-bikes and electric vehicles, low carbon or zero emissions fleet vehicles.
Require that all new residential buildings be built to an EV-ready standard, and require commercial buildings to be 10 per cent EV-ready with 90 per cent conduit/partial readiness.
Create community mobility hubs to facilitate EV charging and travel by modes other than private automobiles.
Increase investment in walking and wheeling infrastructure to support full implementation of the 5A network by 2050, and revise community design and development standards to support implementation.
Expand investment in primary transit network service provision.
Identify opportunities to repurpose existing vehicle travel lanes and update policies and complete streets design guidelines to prioritize active mobility, transit, green infrastructure, and traffic safety.
Incentivize and prioritize energy efficient development in all areas through land use bylaw rules and policy direction.
Update parking stall standards to include EV-ready infrastructure.
Enable and promote food waste reduction.
Enable reuse, sharing and a more circular economy.
Deliver waste diversion programs and services that target food and organic waste.
Improve participation in existing diversion programs and compliance with the Waste Bylaw.
Leverage the city's community outreach programs to establish or support community climate change ambassadors to help disseminate information, encourage community members to attend engagement

<p>events, and help the city target climate adaptation and disaster risk reduction efforts in communities and people that need them the most.</p>
<p>Map and develop equitable access to community spaces (indoor and outdoor) during climate hazard events by working with communities to understand their needs during periods of heat, cold and drought, and planning for long-term access solutions.</p>
<p>Complete climate risk and resilience assessments for facilities and infrastructure that meet defined criteria. Project specific mechanisms for integrating appropriate resilience measures to reduce climate risk will be implemented.</p>
<p>Develop central funding for climate-resilient infrastructure to support the incorporation of prioritized climate resilience measures in new facility/infrastructure development and existing facility/infrastructure retrofits.</p>
<p>Develop guidance for climate-resilient retrofits to support the timely, cost-effective and equitable retrofit of existing city facilities and public infrastructure to be climate-resilient. This will be intended to align with other corporate guidelines, requirements and protocols.</p>
<p>Communicate the Climate Ready Home Guide and other adaptation resources broadly so Calgarians have information on climate-resilient measures that can be implemented in and around their homes. This guide could be used to model the future development of similar guides for other building sectors.</p>
<p>Explore the development of a climate-resilient retrofit program for homes across the city to improve community resilience through individual, lot-level actions. Exploration to include a ROI analysis on various climate resilience options and approaches.</p>
<p>Develop a low-interest financing program for climate-resilient retrofit measures (e.g., similar to the Clean Energy Improvement Program) to support homeowners in making their homes more climate-resilient.</p>
<p>Implement pilot projects in affordable housing projects to demonstrate the return on investment for energy-efficiency and climate-resilient measures in non-market housing, with the understanding that the cost of these measures must not compromise our ability to meet the demand for housing in Calgary.</p>
<p>Improve funding for climate-resilient housing for low-income earners through collaboration with funders and community groups who support affordable and non-market housing. The need to improve climate resilience in equity-deserving populations can be met in part through adequate, safe, and accessible housing.</p>
<p>Assess the climate resilience and energy efficiency of Calgary Housing Corporation's existing housing stock and develop strategies to improve its resilience on a priority basis.</p>
<p>Improve awareness through holistic messaging, education, outreach and an online presence for the natural infrastructure program to support aligned initiatives, build public understanding and access resources to grow our portfolio of natural infrastructure.</p>
<p>Develop and implement an integrated funding strategy to fund the preservation, operation, restoration and creation of natural infrastructure, with shared climate adaptation, biodiversity, community and watershed health outcomes. Investigate and implement the use of levies, fees, grants, and sponsorships, where appropriate, to leverage funds whenever possible. Investigate the opportunity for creating a Conservation Reserve fund.</p>
<p>Develop guidance to support on the ground implementation such as green stormwater infrastructure guidelines, green roof recommendations, landscape specifications, restoration guidelines and private tree protection to build more climate-resilient natural infrastructure across the city. Resources including education, incentives and opportunities to guide private landowners in lot-level tree planting and site naturalization can increase climate resilience, biodiversity and ecosystem services provided by non-City owned land including multi-residential settings.</p>

Implement operational practices that improve the climate resilience of natural infrastructure in Calgary to provide a thriving landscape into the future (e.g., restoring underutilized spaces, selecting native species and drought tolerant vegetation, managing invasive species and pests, protecting riparian areas and maintaining green stormwater infrastructure).
Integrate natural infrastructure into Calgary’s greater downtown through multifunctional stormwater infrastructure, green network and support for innovative solutions in a highly urbanized environment.
Improve upstream water storage solutions through collaboration with upstream water managers, license holders and the provincial government to manage risks exacerbated by climate change, including flooding and drought. Dam operational practices and building new upstream reservoirs can significantly reduce flood risk and improve water security during drought to Calgary.
Integrate watershed management concepts and practices to support long-term water security and resilience to floods, droughts, and other changes in climate that influence our water resources.
Improve our understanding of stormwater flood risk in different areas of the city, including current guidelines, processes and practices with the projected climate impacts to precipitation (e.g., intensity frequency and variability) and integrate this into stormwater infrastructure design and implementation to improve neighbourhood resilience.
Implement stormwater management improvements to reduce risk from localized flooding and improve stormwater quality in established areas as climate change exacerbates risk. Review opportunities to retrofit existing infrastructure or underutilized space to improve stormwater management outcomes and protect communities.
Provide guidance and explore support to property owners to reduce their site-specific risk of flooding; protecting homes, businesses and belongings from more severe rainfall events. Stormwater education and engagement with the general public, property owners, the ICI sector and key stakeholders will require focused resources to improve understanding of stormwater management and reduce risk from flooding.
Assess water treatment and distribution infrastructure and operational practices for climate change risks so customers continue to receive high quality water in a changing climate.
Investigate, evaluate and implement innovative alternative water supply sources including water reuse and stormwater use to provide fit-for-purpose water.

City of Charlottetown

Establish a financing mechanism for energy upgrades.
Complete comprehensive energy audits and retrofits of City-owned buildings and infrastructure.
Construct all new City buildings to Passive House and Zero Carbon Building Standards.
Support Passive House and Zero Carbon multi-story affordable housing developments.
Develop strategies to entice greater use of high efficiency heat pumps, thermal energy storage, solar PV, and other cleantech in both retrofits and new construction.
Increase collaboration with efficiencyPEI and the Province of PEI to encourage incentives for GHG reduction measures and technologies.
Use incentives for installing at-home / public EV chargers. Help remove hurdles to EV adoption.
Complete the Fitzroy Street bike lane per the City’s 2018 Cycling Connectivity Report.
Investigate the potential of allowing low-speed biking on some sidewalks as done in other cities. Expand and connect dedicated cycling infrastructure and multi-use pathways.

Boost education campaigns for cycling and public transit to encourage multiple forms of mobility.
Work with the Province of PEI to explore developing more wind and solar capacity beyond current plans.
Increase the deployment and integration of renewable energies with smart technology and new market designs in the electricity sector.
Encourage a solar incentive program in the city.
Support private enterprise in the shift away from fossil fuels.
Examine the potential of large-scale cost-effective thermal storage of renewable energy.
Support retraining of affected workers and training of the future workforce.
Demonstrate low-carbon technology at all scales of City operations.
Continue implementing sustainability initiatives including those that help the private sector.

City of Halifax

Develop, adopt and apply a standard for net-zero and climate resilient new construction
Develop a retrofit program to enable and fast-track deep energy and climate resilience retrofits in residential and non-residential buildings
Expand programming for rooftop solar systems and energy storage
Develop partnerships for large-scale solar and wind generation
Develop a district energy initiative to decarbonize and expand district energy
Actively support, advocate and partner with Nova Scotia Power, the Province, and others to decarbonize the provincial electricity grid
Expand transit and active transportation infrastructure
Collaborate with local organizations and businesses to develop a community-wide EV strategy
Prepare for and catalyze electric vehicle uptake through planning and policy
Adopt a commitment, develop a detailed and costed infrastructure plan, and finance implementation to achieve net-zero municipal operations by 2030
Adopt a commitment and develop a detailed plan to achieve net-zero water and wastewater operations by 2030
Install zero-emissions back-up power in critical infrastructure
Develop or update codes and design standards for new municipal and private infrastructure that reflect future climate impacts
Fund and implement the Green Network Plan and Urban Forest Master Plan
Continue the naturalization program through pilot projects, public education and awareness to support the development of a region-wide naturalization program
Develop and implement a region-wide tree planting and re-greening program
Plan for the deployment of carbon-neutral district energy and microgrid systems

Acquire more land to preserve natural areas and ecosystem health in alignment with the Green Network Plan
Make emergency management training widely available to residents and businesses
Improve food security and food systems resilience
Expand workforce and technology development programs and funding to grow skills and trades for decarbonization and resilience

City of Iqaluit

educate and enforce Solid Waste Bylaw regarding littering
prevent littering through downtown signage
prevent littering through playground signage
one or more large-item pickups per year
continue annual community cleanup event in late spring
Promote clean and tidy residential and commercial properties by educating and enforcing the Unsightly Lands Bylaw
Increase the number of municipal garbage bins downtown
daily litter collection for litter-free playgrounds
hire seasonal staff dedicated to maintaining litter-free municipal playgrounds and recreation areas
Coordinate beautification projects (e.g. create a beautification committee; beautiful garden competition; adopt-a-block; workshops; tundra transplants; nature walks)
Prepare an “Open Space & Trail Network Improvement Plan” for creating additional scenic trails and routes
Develop a plan in conjunction with the City to clean up the beachfront in order that all citizens can enjoy better access to the waterfront
Cooperatively run and deliver annual community cleanup in Iqaluit with government and community partners
Create more beautiful walking trails, including interpretative walks
protect skidoo routes through town
install skidoo ramps over roads with road signage
communicate and promote safe driving rules, and educate and enforce helmet rules, insurance, and registration
Support and help promote community celebrations and events that demonstrate respect for nature (Parks Day, Celebration of the Seal, Oceans Day, Environment Week)
Monitor and protect green spaces in picnic areas and harvesting sites through patrolling and enforcing respectful use of these sites
Collect and record air quality data in Iqaluit, and share this information through communicating the Air Quality Health Index for Iqaluit
Within Sylvia Grinnell Park, provide picnic tables, garbage bins, fire pits, and wood delivery, plus offer outlets for relaxation, appreciation, and environmental stewardship

Build new solid waste management facility, following the City of Iqaluit Capital Plan (pending approval) and the City of Iqaluit Solid Waste Management Plan (pending approval)
Close and decommission West 40 Landfill, following the City of Iqaluit Capital Plan (pending approval) and the City of Iqaluit Solid Waste Management Plan (pending approval)
Develop a communication and education plan for municipal solid waste management programs, following the City of Iqaluit Solid Waste Management Plan (pending approval)
Implement and operate the composting and bulky recycling program components of the City of Iqaluit Solid Waste Management Plan (pending approval)
Promote existing community waste diversion projects
Continue aluminum can recycling program
Continue alcohol container recycling program, with support provided through GN Liquor Management
Continue and expand phone book recycling program
Continue to accept donations of used clothing and household items at the Piviniit Thrift Store, and re-circulate them at low cost, to encourage re-using goods instead of throwing them into the landfill
Explore options for recycling and composting at our festival
Continue to work cooperatively with the City, to ensure festival garbage is picked up
Attempt to cut down on waste through initiatives such as water filling stations (bring your own bottle)
Upgrade Wastewater Treatment Plant infrastructure, following City of Iqaluit Capital Plan (pending approval)
Construct the supplementary water supply infrastructure identified in the Supplementary Water Supply Plan (2014)
Communicate the need for annual residential tank cleaning and provide education about safe water
Encourage household emergency kits that include sufficient water storage
Enhance requirements in the next General Plan and Zoning By-law for energy conservation through building design
Introduce enhanced energy efficiency requirements and greenhouse gas reduction requirements in the new future subdivision Development Scheme
Use energy-saving, green products in public housing units, wherever possible
Include smart power solutions into the development scheme for the Inuit Owned Land (IOL) along Federal Road
Develop a solar demonstration project in Iqaluit
Distribute up-to-date lists of mental wellbeing programs and services available to Iqalumiut
Develop communication plan to improve public education and knowledge about the Air Quality Health Index for Iqaluit
Introduce public education on density tradeoffs in housing – striking a good balance between cost, quality of life, and number of units
Support partners in building more alternative housing (Habitat for Humanity, co-op housing, etc)
Collaborate with community groups to explore housing projects on Inuit Owned Land (IOL) in Iqaluit (i.e. Apex IOL, Federal Road IOL)

Working with the City and the Government of Nunavut, find ways to address Iqaluit’s specific mid- and long-term housing needs by developing, planning, and coordinating projects targeting Iqaluit’s unique land, infrastructure, and population pressures
Promote and distribute the “Homeowner’s Guide to Permafrost” in Iqaluit
Provide park facilities and services to Iqalumiut, increase access to shared outdoor experiences at Sylvia Grinnell Territorial Park, and promote a respectful relationship to the land and to other people
Develop a Transportation Master Plan that addresses car commuting, pedestrians, snowmobiles, parking, carpooling and public transit options
Promote car sharing, carpooling, flexible hours, and pack-a-lunch

City of Moncton

Develop and implement a strategy to ensure all new buildings in the community are built to “net-zero energy” standards by 2030.
Update the City’s internal Municipal Green Building Policy to ensure all new buildings starting in 2025 are built to be “net-zero ready” and are built to “net-zero energy” standards by 2030.
Develop a program to stimulate deep energy retrofits in residential and non-residential buildings.
Develop an industrial leadership program to improve industrial energy efficiency.
Leverage the City’s legal authorities (e.g. safety, business, and building inspection permits) and incentives to expedite the transition of buildings off fossil fueled space and domestic water heating.
Develop and launch programming to encourage rooftop solar PV systems on residential and commercial buildings.
Develop a ground mount solar PV installation initiative.
Support development of a “Green Hydrogen Freight Fueling Facility” as a pilot project to convert ground mount solar electricity to hydrogen, then use to fuel hydrogen fuel cell, long-haul trucks.
Develop and support implementation of a plan for three emission free district energy systems.
Offset corporate electricity use with net new, wind-generated electricity.
Support the establishment of e-bike and electric vehicle car share programs.
Expand and improve active transportation network, ‘end-of-ride’ facilities, and bike security to increase trips taken using active modes of transportation.
Prepare for and catalyze zero emission vehicle uptake by developing a community-wide Zero Emission Vehicle Strategy.
Partner with Eco360 and other communities served by Eco360 to develop an anaerobic digester facility that will convert organic waste to renewable natural gas.
Support development and implementation of tree-planting programs.
Develop a policy to protect, monitor and actively manage the remaining forested and wetland areas in Moncton.

City of Montreal

Deploy incentive campaigns for adoption of environmentally responsible practices
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Stimulate and consolidate the circular economy by creating networks between businesses, stores and community organizations
Form a multistakeholder work team to eliminate GHG emissions from construction projects
Launch a strategy to reduce food waste by 50 per cent by 2025 and facilitate textile donation and recycling
Educate Montrealers about the ecological transition by prioritizing the resilience of people in vulnerable situations
Foster the local emergence of climate resilience hubs
In all districts, develop collective and active transport, and favour car sharing, taxis and carpooling
Ensure universal access to sustainable mobility
Favour and increase the proportion of electric vehicles in downtown Montréal
Increase the number of charging stations on Montréal's territory and adopt a passenger road transport electrification strategy
Formulate a strategy to reduce the carbon footprint of transportation of goods by road to ensure that 25 per cent of deliveries are zero emission
Enhance land-use planning and regulation tools to favour the development of districts on a human scale and adapted to climate change
Encourage greening and stimulate densification by transforming open-air parking lots
Increase the proportion of protected areas on the Montréal community's territory to 10 per cent
Plant, maintain and protect 500,000 trees in zones vulnerable to heat waves
Restore the public riverbanks of the large parks network
Develop urban agriculture
Eliminate the use of heating oil in buildings
Adapt by-laws and support programs to improve energy efficiency and the resilience of all types of buildings
Develop a funding program for building owners to support healthy and environmentally sound renovation
Improve the energy performance of large buildings via an energy- consumption and GHG emissions rating and disclosure system
Encourage sustainable construction by providing information and support
Make 100 per cent of the municipal building stock net-zero carbon
Optimize the energy performance of municipal buildings
Reduce GHG emissions linked to the use of refrigerants in municipal activities
Pioneer clean technologies and innovations in electrification
Consolidate Montréal's leadership in electric, smart and sustainable mobility
Replace the incinerators of the Jean-R.-Marcotte wastewater treatment plant
Install passive biofilters to reduce GHG emissions associated with low-methane biogas produced by the Complexe environnemental de Saint-Michel (CESM)

Execute the actions of the PDGMR (waste management master plan)
Allocate 10 to 15 per cent of the budget of the Ten-Year Capital Expenditures Program to adaptation to climate change

City of Saskatoon

Apply energy efficiency standards (build to Passive House) to all new municipal buildings.
Perform deep energy retrofits on municipal buildings.
Upgrade plugged appliances and improve energy conservation behaviours in municipal buildings.
Update all municipal building lighting systems.
Retrofit municipal heating and cooling systems with ground-source or air source heat pumps.
Create an electric and thermal energy consumption cap for new home construction by utilizing a municipal step code.
Require new homes to include roof solar Photovoltaic (PV) installations in the final year of a municipal step code.
Incentivize and mandate homeowners to perform deep energy retrofits.
Require energy efficiency improvements residential and ICI building lighting systems.
Incentivize and later mandate homeowners to upgrade household appliances to energy and water efficient models.
Retrofit home heating and cooling systems with ground-source or air source heat pumps.
Create an electric and thermal energy consumption cap for new Industrial, Commercial and Institutional (ICI) construction by utilizing a municipal step code.
Require new ICI buildings to include roof solar PV installations. In the final year of a municipal step code.
Incentivize and later mandate ICI owners and operators to perform deep energy retrofits.
Retrofit ICI heating and cooling systems with ground-source or air source heat pumps.
Increase the efficiency of industrial processes.
Fund and implement improved cycling and walking infrastructure to encourage active transportation.
Build complete, compact communities through infill development, mixed-use buildings, and compact housing.
Focus development on densification in previously developed areas, increasing the number of multi-family buildings.
Increase Landfill Gas Capture from the Saskatoon Landfill
Install solar PV systems on municipal buildings.
Install solar PV systems on municipal lands.
Encourage existing residential building owners and mandate new buildings to install solar PV system through programming and bylaw.
Encourage existing ICI building owners and mandate new buildings to install solar PV systems through programming and bylaw.

Install new solar PV utility-scale facilities within or adjacent to city boundaries. With areas within city boundary to be prioritized first.
Install a CHP facility at St. Paul’s Hospital.
Implement district energy systems in the downtown and north downtown areas.
Construct a hydropower plant at the weir.
Install renewable energy storage over time.
Decrease water use through efficiency, monitoring, and leak reduction.
Reduce residential and ICI water use through education programming and water efficiency incentive programs.
Improve and expand waste management programs and services to increase reduction and diversion

City of St. John’s

Continue and expand urban tree planting and naturalization programs
Continue to naturalize greenspaces, and protect wetlands and waterway buffers
Develop a deep retrofit program for all buildings
Pilot a neighbourhood retrofit
Pilot a low-income housing retrofit
Pilot a rental property retrofit
Retrofit municipal buildings to net zero or net zero ready
Partner on the deployment of electric vehicle charging stations
Develop an EV education program
Collaborate with MUN/EH to decarbonize the DE system
Support the implementation of the renewable energy policies in the Envision St. John’s Municipal Plan
Renewable Energy Co-operative (REC) public education campaign & search for local leads
Expand the landfill gas capture system and explore collaborative frameworks for its feasible reuse
Develop and deliver educational programming about waste reduction, and waste sorting
Convene a working group to identify opportunities for building a local industry for repair and reuse including community composting and building materials reuse such as:
undertaking a review of existing guidance (e.g., Guide to Community Gardens in the City of St. John’s) to incorporate neighbourhood level community composting on city-owned land.
identifying barriers and opportunities for building materials reuse.
exploring the development of a food waste and resource flow map to identify food waste-to-value opportunities for innovation.

City of Toronto

Ensure near zero emissions for all new construction
Evaluate and limit impacts of embodied carbon in construction
Advance Implementation of the Net Zero Existing Buildings Strategy.
Require annual emissions performance reporting and public disclosure for all existing buildings
Establish emissions performance targets
Require energy and emissions audits and tune-ups
Provide integrated retrofit support
Expand and enhance retrofit financing
Support permitting and approvals processes for deep retrofits
Build awareness and capacity of home and building owners for emissions reduction strategies and supports
Support workforce development and training
Advocate and partner with other levels of government
Support adoption and mainstreaming of net zero, resilient energy sources for new and existing developments
Address barriers and develop strategies to increase the deployment of renewable energy and storage technologies, including but not limited to solar, wind, biomass, geothermal, waste heat recovery and heat pumps
Actively support, advocate to and partner with Toronto Hydro, as well as the Provincial and Federal governments and agencies, to decarbonize the provincial electricity grid, promote energy conservation and enable local renewable energy generation
Expand biking and pedestrian infrastructure, including the rollout of cycling routes, bicycle parking and bike share at or near TTC stations
Align the City's Electric Vehicle (EV) Strategy to the net zero goals and implement the EV Strategy
Increase public EV charging infrastructure
Increase EV charging at residential, commercial, institutional and industrial buildings
Review the Electric Vehicle Strategy
Continue implementation of the City's Long Term Waste Management Strategy which sets a goal of diverting 70 per cent of waste managed from City customers away from landfill, by focusing on waste reduction, reuse and recycling activities that promote resource conservation and reduce environmental impact
Continue outreach and engagement on waste reduction and diversion, with a focus on food and organic waste
Increase canopy cover and biodiversity and enhance greenspaces
Achieve equitable distribution of the urban forest, increasing tree canopy and naturalized greenspace where it is most needed
Encourage the growth of green industry to provide the products and services needed to enable a net zero city

Leverage City’s Live Green Toronto program to develop and implement a city-wide climate action awareness campaign
Ensure net zero City-owned buildings
Constructing new City-owned buildings to net zero on a go forward basis
Pursuing a Net Zero Carbon Plan for existing City-owned buildings
Lead by example in managing waste and producing renewable energy from biogas at City facilities
Begin development of a third organics processing facility with renewable energy, targeting completion by 2028
Produce renewable natural gas from the Disco Road Organics Processing Facility, Dufferin Organics Processing Facility and the third organics processing facility (target completion by 2028) and landfill gas control and utilization systems at Green Lane and Keele Valley Landfills (target completion by 2026).
Produce renewable natural gas from wastewater
Divert waste from landfill in City-owned facilities

City of Vancouver

Expand + improve walking/rolling + biking network
Increase electric vehicle charging on private property
Expand the public charging network
Support electric vehicle charging for passenger fleets
Build industry capacity for zero emissions retrofits
Support early zero emissions retrofits
Make it easier + less expensive to build with low-carbon materials
Facilitate access to renewable energy
Require new buildings to use low-carbon materials
Support people building with low carbon materials
Future aquatic projects could involve coastal + freshwater wetlands
Future land projects could involve forests, farms, grasslands + soil

City of Whitehorse

Continue to improve public transportation options to make public transportation options more convenient to users.
Conduct studies to determine the resources required to increase the City’s EV charging capacity and install EV infrastructure at all relevant City buildings & facilities - for City vehicles. This does not include public charging.
Consider implementing a preferential parking permit program for car sharing/EV programs once the necessary infrastructure has been installed and changes to the Zoning Bylaw to support Electric Vehicles.

Continue to implement sidewalk, pedestrian, transit, roadway, and bikeway investment projects and policies that encourage the shift to active transportation modes.
Develop active transportation campaigns, e.g., winter cycling week.
Continue to conduct regular inspections of trails, bridges, roadways, stormwater grates, and overland flow routes for signs of stress, damage, or blockage (e.g., following spring freshet).
Assess the feasibility and return on investment of contributing to retrofit conversion of streetlights to light emitting diode (LED) illumination.
Update City building asset management plans and policies to include the objective of investing in and upgrading assets to mitigate and adapt to climate change.
Complete building condition assessments and ASHRAE Level III energy audits on all major City buildings and facilities.
Review opportunities for decarbonization and develop a plan for all major City buildings and facilities.
Explore funding sources to increase resources and staff capacity for conducting BCAs on all major City buildings and facilities.
Continue to incorporate and improve climate adjusted design criteria for the construction or renovation of City assets and infrastructure.
Partner to support YG Energy Solutions in disseminating information and developing tools and guidelines to help property owners and managers undertake deep energy and GHG emissions retrofits of existing buildings (e.g., green roofs, white roofs, renewable energy systems)
Consider a bylaw review to update the City's building bylaw requirements to enhance climate change resilience and increase energy efficiency.
Encourage local educational institutions to adopt training and development program on renewable energy systems and net-zero / zero-emission buildings.
Continue to investigate options to reduce waste generated within the City and increase diversion of waste from the landfill.
Continue to work with haulers to improve opportunities for source separation.
Incorporate criteria related to the management of wastes from demolition, land clearing and construction activities into a Sustainable Development Checklist.
Explore the use of community-based social marketing (CBSM) to improve outreach of campaigns focused on waste reduction (e.g. Promote product exchange / resale networks, no junk mail, smart purchasing, reducing contamination in recycling, etc.).
Explore findings from the landfill gas assessment and conduct a feasibility study on developing a system to capture and utilize LFG. Accompany this with an evaluation of best practices implemented in other municipalities.
Consider developing a water conservation, and sanitary sewer inflow and infiltration reduction initiatives to reduce both the demand for water and the amount of wastewater that needs to be treated (i.e., reduce the emissions associated with pumping and treatment regardless of current water availability).
Conduct a feasibility study on the cost of achieving net-zero carbon emissions from water and wastewater conveyance, treatment, and byproduct management.
Conduct studies on how nature-based stormwater management (as a means to improve water quality) is implemented in other jurisdictions and identify options that may be appropriate for both new and existing developments within the City.

Continue incorporating climate change considerations and climate adaptive measures into the stormwater management plan to improve water detention, conveyance, and ground permeability and reduce maintenance requirements.
Look for opportunities to increase the tree canopy, particularly in Downtown.
Continue to develop public education materials on the City's current emergency / disaster mitigation. Enhance support of community FireSmarting by empowering residents through incentives and education to FireSmart their properties as a means to potentially avoid future shortfall with insurance and loss of home.
Encourage new developments to use fire resilient materials and to incorporate adequate egress routes. Consider supplementing this by offering loans for use of non-combustible building materials (e.g., metal roofs, siding).
Focus emergency management actions on emergency mitigation e.g., through permanent FireSmart program.
Develop a plan to prioritize and distribute fuel for City-owned backup generators during power outages. Consider adding hybrid or solar powered generators to critical facilities to reduce dependence on diesel. Establish facility specific emergency plans that include impacts/actions to address consequences of extreme heat, wildfires, wildfire smoke and other extreme events.
Develop an environmental public awareness program to inform the public of the importance of green spaces / natural areas, and the differences between green built infrastructure and protected areas.
Explore opportunities to support community gardens and local food sources/production, in the context of local bylaws and wildlife management.
Develop public education materials on emergency preparedness and planning (e.g., emergency kits) for the City and communities.

City of Winnipeg

Conduct an energy audit of all City facilities to seek opportunities to implement equipment and programs that will maximize energy performance
Regularly scheduled recommissioning and retrofits in existing facilities, guided by data from benchmarking
Evaluate opportunities to invest in renewable energy technologies at City buildings
Partner to establish a green building centre of excellence to promote education and awareness
Install publicly accessible energy consumption displays at City facilities
Expand the organics diversion programs for City facilities and operations
Work with Winnipeg Food Council to advise on opportunities for greenhouse gas mitigation, including local food procurement, support for urban agriculture, and promoting plant-based diets
With every new transit, cycling or pedestrian infrastructure investment, launch an education and awareness campaign targeting residents who live and work in the areas served by the infrastructure to gain the most from the City's investments in infrastructure (including GHG emissions reductions)
Improve existing park and ride services, and increase the total number throughout the City. Explore partnerships to increase convenient park and ride services. Work with retailers with large surplus parking close to transit services and with the Winnipeg Metro Region to increase availability of park and rides near the City boundary, to facilitate ridesharing across the region

Improve active transportation connectivity to transit services by installing sidewalks and cycling routes to link stops with the surrounding community, and provide bike racks at stops and on buses
Implement the policies included in the Transit Oriented Development Handbook, which guides and facilitates mixed-use, pedestrian-oriented infill development along high frequency transit corridors
Prioritize capital investments in active transportation to establish connected and integrated corridors for walking and cycling, which includes a downtown bike grid ‘hub’ with ‘spokes’ of protected bike lanes radiating outward along with supporting infrastructure that includes bike racks, facilities, and lighting
Continue to fund the Bike Education and Skills Training Program currently run by the Green Action Centre in partnership with Seven Oaks School Division and MPI. Work with partners to pilot, improve, and expand the program to other school divisions
Continue to fund and develop W.R.E.N.C.H, an organization focusing on core area education and outreach on bike repair
Enhance operation and maintenance of pedestrian and cycling facilities during winter months through re-prioritization of snow-clearing activities, assessing equipment needs, and engaging the active transportation community
Use development approval processes to encourage private active transportation facilities and infrastructure such as secure bike parking and shower facilities
Explore co-locating electric vehicle charging locations alongside transit bus charging stations at major terminals
Amend the zoning by-laws to require a minimum number of electric vehicle charging stations for parking garages within new commercial or multi-unit residential buildings
Consider amending policies and by-laws to require new homes to be constructed with compatibility for future retrofit installation of electric vehicle charging facilities
Partner with the Province of Manitoba and private industry to contribute to the planning and development of a Manitoba Electric Vehicle Fast Charging Network
Explore low emission freight delivery opportunities within the City of Winnipeg, including first and last mile business services, electric freight vehicles, and improved route use planning and infrastructure
Partner with Red River College’s Electric Vehicle Technology and Education Centre (EVTEC) to develop an education and information program to inform citizens about the latest developments and opportunities related to electric vehicles, charging infrastructure and policies
Prepare a transition plan outlining approaches to network integration, facility needs (charging facilities and storage), maintenance requirements and expected training considerations
Complete the Residential Infill Strategy which will provide direction for infill development that supports complete communities and increased mobility options.
Explore measures to encourage the re-purposing of surface parking lots in existing built areas
In new transit-oriented development, ensure there are active transportation linkages and connections to facilitate a connected diverse and sustainable transportation network
Develop a Brownfield Redevelopment Strategy for public and private lands. Implementation tools that should be considered include financial incentives to encourage redevelopment of key sites, development approval process incentives that encourage private sector investment into redevelopment activities, and streamlined processes
Explore opportunities for the City of Winnipeg to take a more direct role in advancing public redevelopment of brownfield sites. This may include developing City-owned lands, assembling land for resale, partnering on development, or using City funds to leverage private investment

Referencing the business case analysis, develop a comprehensive building energy performance improvement program in partnership with Manitoba Hydro or Efficiency Manitoba that will provide resources to facilitate energy audits for homes and commercial buildings
Review City by-laws to identify opportunities to facilitate retrofits and renovations that improve building energy performance, and/or increase the presence of renewable energy technologies
Launch a residential energy efficiency program that provides information and resources to support homeowners to use energy more wisely and link residents to key programs and resources to accelerate action
Work to develop a residential energy efficiency incentive program (i.e. grants, financing) that strategically targets emission reduction opportunities within homes. This program will seek to complement provincial and federal initiatives, as well as those supported by Manitoba Hydro and/or Efficiency Manitoba
Work in partnership with the Government of Manitoba, and other stakeholders to continually advance building code standards and other policy tools to increase energy efficiency in residential and commercial buildings
Review City by-laws to identify opportunities to help facilitate the innovative application of technologies that reduce energy use, and/or increase the presence of renewable energy technologies
Provide resources and incentives such as a property tax relief or permit cost reduction program to building owners that demonstrate high energy efficiency
Develop a carbon-neutral new buildings strategy with industry and key stakeholders to identify and advance new policy tools to accelerate the development of highly energy efficient buildings that have a zero-carbon footprint
Connect building owners and tenants to green builders and retrofit teams to support energy efficiency improvements in buildings
Implement direction from the Comprehensive Integrated Waste Management Strategy to advance the priority of organic material diversion from landfill
Continue to invest in educational and awareness programming to help maximize waste diversion (i.e. recycling and organics)
Investigate the feasibility of a green construction and demolition program to maximize the diversion of construction waste
Advance strategies and pilot projects to divert and utilize biomass resources for energy production
Work with local stakeholders and regional partners to support “circular economy” initiatives that minimize waste production. This includes community efforts such as supporting the establishment of lending libraries and local sharing hubs throughout the city, as well as regional efforts related to nutrient reuse and recovery from wastewater treatment processes
Investigate the feasibility of implementing a combined heat and power unit as part of the planned upgrades to the North End Sewage Treatment Plant
Encourage climate-friendly landscaping in residential, commercial and industrial buildings
Launch a public awareness campaign to highlight opportunities for residential climate resilience initiatives, including backyard composting and use of rain barrels
Continue and explore opportunities to expand the Winnipeg Releaf Program
Continue partnership with the University of Winnipeg and Trees Winnipeg to map the City’s canopy cover and to determine canopy cover targets for the city overall and for various land use categories

Develop a Citizen Engagement Strategy to amplify and support urban forestry initiatives and the work of community partners. The engagement strategy should aim to: a) mobilize and empower communities with information and tools to act individually and at the neighbourhood level to implement urban forestry actions, and b) build and maintain public awareness of the urban forest in enhancing quality of life for community members

City of Yellowknife

Install the first and second phase of centralized boiler system at Multiplex
Complete the installation of piping for PH1/WTP heating system
Approval to replace all of the City's facilities interior lighting with LED lighting
Complete exterior LED lighting
Improve the insulation value of the Baling Facility's roof when repaired
Complete design for a centralized boiler system near City Hall that would be shared with potential clients
Install more solar panels on facilities where it is economically viable
Replace existing pellet boilers with the best available technology
Promote active transportation with the support of the Communications Department
Investigate the feasibility of installing electric vehicle public charging stations
Make a decision on infrastructure changes based on data from initial study
Improve signage for bike lanes
Review existing bike lanes for potential improvement for future bike lanes
Communicate the benefits of energy efficient home retrofitting
Increase by-law requirements (e.g.; increase to minimum rating of 85) so that both energy efficiency and reduced GHG emissions are prioritized
Inform residents of the realities of solar power in the North through the CEP communications plan and the green retrofit program
Produce a solar potential map for roofs using the LIDAR data collected in 2015
Promote dark sky compliant fixtures in the communications plan
Assess wind measurements at an appropriate site using a small wind turbine to determine feasibility
Feasibility study and pilot project implementation for ECM circulatory pumps
Feasibility study for waste to energy infrastructure
Cost benefit analysis of biomass retrofitting for paper feedstock