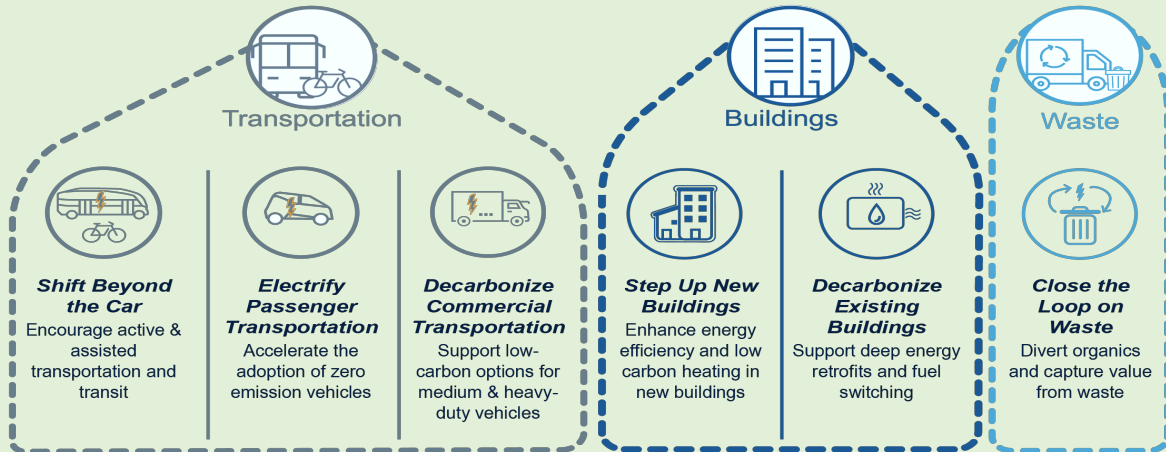


# CLIMATE EQUITY FRAMEWORK FOR THE “BIG MOVES” FOR DEEP EMISSIONS REDUCTIONS.



## Community Energy Association

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## **DISCLAIMER**

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of Community Energy Association staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the Community Energy Association or the University of British Columbia.

The frontpage figure was adopted from Community Energy Association.

### ***Acknowledgement***

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### ***Land and Territorial Acknowledgement***

We conducted this research on the traditional, ancestral, and unceded territories of the xwməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səlílwətaʔ/Selilwítlh (Tseil-Waututh) Nations, and we appreciate their benevolence. We recognize the systemic and many years of violence and discrimination against the First Nations, including the dispossession of their lands, waters, and culture. In this regard, the governments and people across Canada are committed to constant and meaningful consultation, collaboration, and engagement with Indigenous people on whose land, climate policies and programs are being designed, planned, and executed. In this project, we hope to build capacity and create spaces of learning to inform policies that center around marginalized histories, voices and lived experiences through constant engagement. In our work with local governments to drive down GHG emissions, we recommend concrete actions to address inequities in distributing the benefits and burdens.

Source: Adopted from Toronto Environmental Alliance

## **Preface**

### ***Purpose of the Report***

Globally, governments are realizing the need to increase support for social equity, inclusion, and justice goals in ramping up their climate action initiatives. Local governments across British Columbia are increasing their investment and commitment to driving down greenhouse gas (GHG) emissions through climate emergency responses, renewing climate action plans, or accelerating the implementation of climate action initiatives. Through the “Big Moves,” municipal governments are aiming to reduce GHG emissions from buildings, transportation, and waste drastically. Specific actions, policies, plans, and projects are being developed around these three (3) core areas in the [CleanBC](#) Plan to use renewable energy or reduce wasteful energy overuse. While these actions are planned and implemented, attention to communities and people most affected or in need often comes as afterthoughts. In the United States, examples abound where Sustainability Action Plans (SAPs) and Climate Action Plans (SAPs) do not consider equity goals as part of the design and implementation (Schrock et al., 2015). However, due to differences in resilience and adaptive capacity levels, climate change impacts communities and people differently. Hence, mitigation and adaptation policies and initiatives must consider vulnerability and marginality in designing, planning and implementation.

In response to this need, this project seeks to develop and advocate for integrating equity goals, inclusion, and justice, including reconciliation with Indigenous communities, supporting marginalized populations, and acknowledging systemic racism. We have developed a climate equity framework that outlines the equity dimensions and how to integrate them into the various phases of the “Big Moves” initiatives and policies. We reviewed extant literature in academic and local governments’ policy documents to outline what should be included when considering equity goals in climate actions. This framework does not intend to be a conclusive climate equity framework, but so far, it is comprehensive enough to support the integration of social equity, inclusion, and justice in current climate actions. We have showcased how the framework works with the Big Moves focusing on the transportation territory.

### *How to use this Report*

We wrote this report in simple language to enable its wide usage by expert and non-expert local government elected officials and staff. We try to present and describe technical terms, concepts, and climate actions in clear language for the understanding of everyone. Aside from the diagrammatic or schematic representation of the framework, we have explicitly stated the various equity dimensions, explained their definitions, scope, and how to integrate them into climate actions and initiatives. The precise actions or activities that should be considered in the various phases of climate actions/policies are also spelled out, including how to integrate them. The final part of the framework has utilized the E-Mobility program/policy as a case study to illustrate how the framework applies to contemporary climate actions. Therefore, city planners, climate action managers, policymakers, and academics can adopt and use this framework, or portions, to support and make provisions for marginalized and vulnerable communities and people.

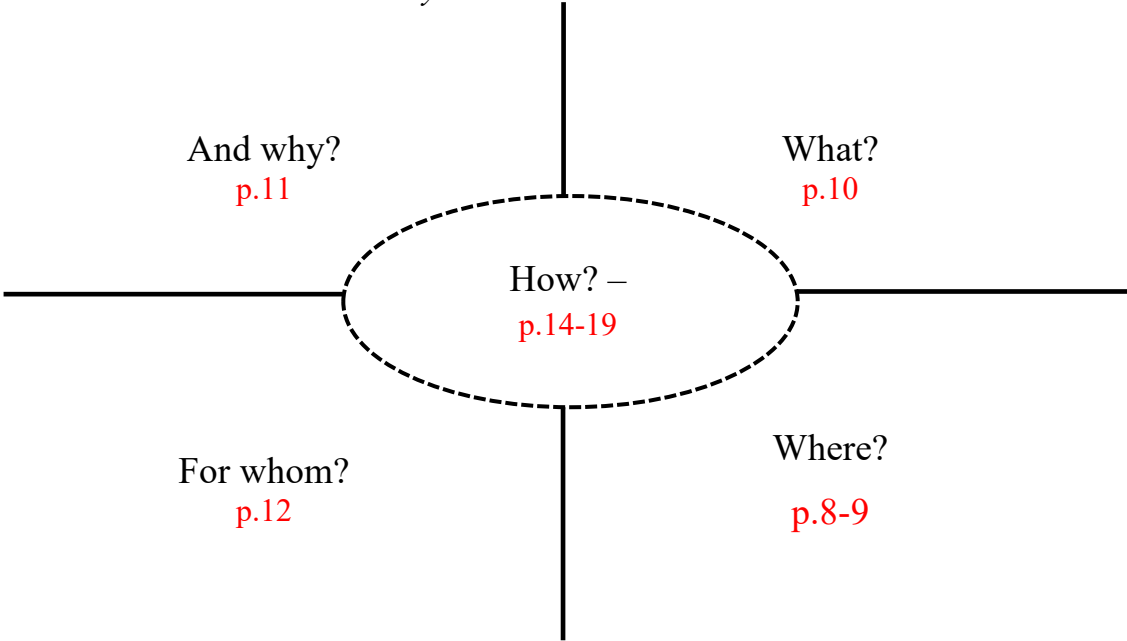
Notwithstanding, the framework can be optimally interpreted and implemented with the support of qualified municipal planners, researchers, and policymakers. The framework was intended to guide the integration of equity, inclusion, and justice in climate plans, but users must do so with some discretion. The characteristics of the community, purpose and type of climate action, and the capacity of the local governing structure should be considered to select portions of the framework that apply to their situation. Undoubtedly, not all the framework components that apply to all climate actions as context and geographic differences can influence the outcomes. Not all stages or facets of the climate actions may require applying the equity framework but it can be applied to those steps that present an opportunity to integrate equity considerations into the process (WHO, 2019).

**Executive Summary**

While our communities experience growing inequities in accessing resources, opportunities, and power, municipalities have opportunities, though constrained, to promptly address them. This report presents an adaptable equity framework that can be incorporated into climate action initiatives to mitigate the disproportionate climate impact on marginalized and vulnerable populations and communities. The report addresses five major “wh” and “h” questions:

- What equity concerns are we talking about? Procedural, distributive, structural and transgenerational
- Where are we considering these equity goals? Including spatial distribution and policy phases.
- For whom are we developing or fighting for equity?
- And why? What are the cost and risks in neglecting equity, and what are the benefits of integrating them?
- The last question is, how do we do that? Thus, developing a framework and showing how to apply it.

*Figure 1: Schematic Executive Summary*



Source: Adopted from City for All Women Initiative, 2015.

## **Introduction**

### ***Background to Climate Action in BC.***

The provincial and local governments are ramping up ambitious actions to mitigate and adapt to climate change impact in various sectors, including transportation, buildings, and waste. Over the years, the BC government has enacted laws and regulations such as the Climate Change Accountability Act, Carbon Tax Act, Greenhouse Gas Industrial Reporting and Control Act, and Clean Energy Act to reduce emissions. The latest bold step by the government is the CleanBC climate plan which targets to reduce GHG emissions by 80% below 2007 levels by the year 2050 and 40% by 2030. Measures outlined in the CleanBC include sourcing clean and renewable energy electricity, improving building-energy performance, electrifying and decarbonizing transportation, and reducing industrial emissions. These actions could meet 75% of the targets in the plan and work is underway to identify opportunities to reduce the remaining emissions.

Similarly, local governments are stepping up with aggressive community climate plans or energy and emissions plans to reduce emissions. Usually, these outline the measures to take and how to apply them within their capacities and jurisdiction. The recent high temperatures and heatwaves are pressing communities to increase investment and commit to rapidly scale-up climate action. For the most part, many local governments are committing to ambitious actions against climate change to protect the environment, built resilient and livable communities, and stronger economies.

While climate managers implement these policy actions, they are considering how the actions benefit people of all ages and abilities. Generally, climate change disproportionately affects frontline and vulnerable communities so, adaptation and mitigation should reflect the same. Thus, climate actions need to prioritize and target the most impacted with the support and incentives. For instance, people with more socio-economic privilege have more means/opportunities to reduce individual emissions through their choices (purchasing EVs, home retrofitting), so local governments' climate initiatives should prioritize lower-income residents in providing EVs purchasing subsidies. This explains why many local governments are now developing and integrating equity, inclusion, and justice goals into climate action plans and initiatives. Previously,



equity issues often come as afterthoughts, and it’s about time municipal policymakers and planners consider local measures to advance climate action plans (Angelo et al., 2020).

***Climate Action Areas***

We have described below the primary focus areas for local governments. Similarly, these action areas can serve as the central points when integrating the specific equity goals.

*Table 1: Climate Action Areas*

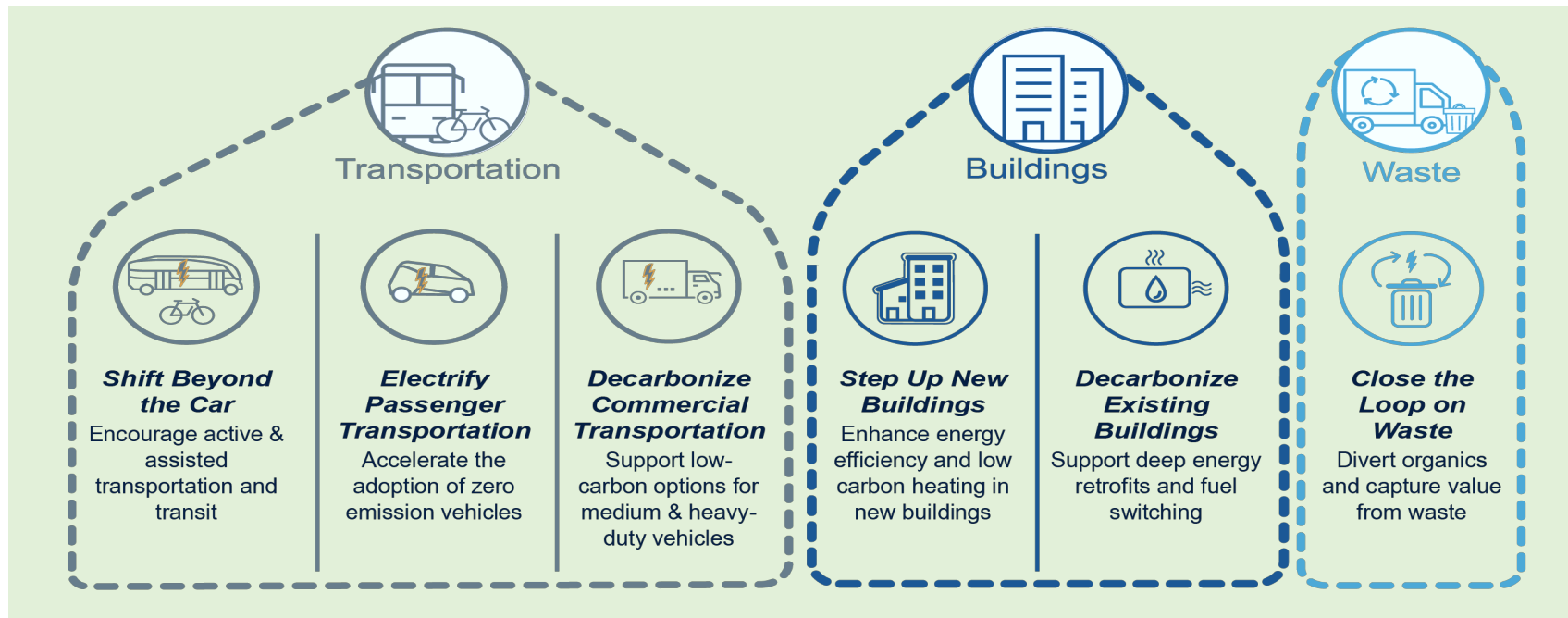
<b>Climate Action Area</b>	<b>What is in it</b>	<b>What needs to be done</b>
<b>Policy and regulation</b>	<ul style="list-style-type: none"> <li>➤ Policy preparation</li> <li>➤ System appraisal</li> <li>➤ Implementation</li> <li>➤ Bylaws enforcement</li> </ul>	<ul style="list-style-type: none"> <li>➤ Conduct diversity and vulnerability assessment</li> <li>➤ Draft and apply OCP, climate action plans, etc.</li> <li>➤ Enforce regulatory requirements for buildings, transportation, and waste</li> <li>➤ Develop and implement supportive policies</li> </ul>
<b>Outreach and Engagement</b>	<ul style="list-style-type: none"> <li>➤ Education</li> <li>➤ Consultation</li> <li>➤ Feedback/communication</li> </ul>	<ul style="list-style-type: none"> <li>➤ Form engagement/outreach committee</li> <li>➤ Education and capacity training</li> <li>➤ Develop outreach strategy/program</li> <li>➤ Develop incentives</li> <li>➤ Engage with all stakeholders</li> <li>➤ Give feedback to community</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>➤ Provide physical projects</li> <li>➤ Advance opportunity</li> <li>➤ Improve access</li> <li>➤ Minimize burden</li> </ul>	<ul style="list-style-type: none"> <li>➤ Plan, design, and fund infrastructure projects</li> <li>➤ Local governments lead by example</li> <li>➤ Implement cross-cutting programs</li> <li>➤ Target the marginalized and vulnerable</li> </ul>
<b>Other(s)</b>	Monitoring and Evaluation	<ul style="list-style-type: none"> <li>➤ Track policy/program progress</li> <li>➤ Readjust, amend, and change where appropriate</li> </ul>

Source: Author’s construct

### ***The “Big Moves” in Deep Emissions Reduction***

These are the major decisions and bold actions when local governments initiate, can significantly drive down GHG emissions by 50% by 2030 toward a zero-carbon community by 2050 in BC. Principally, these initiatives target to reduce the emissions from the primary territorial sources of emissions including transportation, buildings, and waste. Below is a diagram showing the “Big Moves” climate actions.

*Figure 2: The “Big Moves” Climate Actions*



Source: Community Energy Association

### *Climate Equity Goals*

Defining and integrating equity goals into sustainability planning is fast gaining traction among leading local governments. Previously, sustainability planning rarely considered equity goals in the process and did not target those most in need or affected by climate impacts. Even in the few existing cases, climate actions and initiatives seem to center around addressing economic equity, i.e., income inequalities, rather than addressing racial or social inequities by co-designing clear, accountable co-benefits for all stakeholders (Toronto Environmental Alliance, 2020). Meantime, climate actions are supposed to generate co-benefits for all stakeholders, including indigenous people, low-income households, people with disabilities, and racialized groups, and minimize or avoid harm. In recent years, leading cities and municipalities across North America are now making equity central in their sustainability planning, including climate and clean energy plans (Parker, 2014). Parker further argues that we must consider all the dimensions of equity in climate policies, including the processes and procedures, distribution of benefits and burdens, structural accountability, and generational impact. In building the framework, we utilized the four (4) forms of equity: procedural, distributive, structural/recognition and transgenerational (Bowron & Davidson, 2011).

1. *Procedural*: When the processes and procedures of designing, planning, and implementing climate actions limit or exclude others from full participation, the outcomes can be regressive for some groups of people. Therefore, managers must provide a fair opportunity for all to participate through effective community outreach, education, and engagement, particularly those disproportionately impacted by climate change.
2. *Distributive*: Ensuring that climate actions produce equitable outcomes; fair and just distribution of resources, benefits, and cost/burden among all people while prioritizing those with highest unmet need. This form of equity can be achieved by ensuring that community interests, concerns and priorities are part of policy actions.
3. *Structural/recognition*: Climate actions commit to accountability by recognizing and addressing historical, cultural and governance structures that might create or accentuate disparities for subordinated groups. Instituting affirmative measures around social markers, managing past harms and future consequences can address structural inequities.

4. *Transgenerational*: Current climate actions may result in long-term regressive effects causing risks to future generations. Climate managers must do progressive planning using projection and modelling to address potential risks and harm to future generations.

With these forms of equity, municipal climate managers need to identify, define, and outline specific equity goals to be integrated into the action or initiative. All the phases/areas of the climate actions may not require equity consideration but steps that present an opportunity to integrate equity (WHO, 2019).

### ***Rationale for Equity Goals in Climate Actions.***

Communities and individuals are variedly exposed to climate risk and impacts; hence, climate actions and initiatives must be targeted by considering equity, inclusion, and justice goals to offer support or incentives where they are needed most. Many factors, including systemic, social-economic, and geographic, account for these disparities. For instance, income inequality, poverty, access to basic social amenities, social cohesion and residential location could offer resilient conditions to some people more than others (Yuen et al., 2017). Globally, there is an increase in climate risks among low-income households, racialized and Indigenous communities, and frontline communities than among other categories (Markkanen & Anger-Kraavi, 2019; Mattoo & Subramanian, 2012). These communities of people are historically and systemically marginalized; therefore, they require targeted climate mitigation and adaptive actions to build resilience and capacities (Chu et al., 2017). International protocols, researchers, and regional development blocks are advancing equity goals to be included in sustainability planning at every governance level (Johnson & Svava, 2015; WHO, 2019; Zapata & Bates, 2017). In BC, the Toronto Environmental Association (TEA reviewed the City of Vancouver’s Climate Plan and emphasized the need to seriously consider incorporating equity, inclusion and justice goals into the “Big Moves” climate initiatives (Toronto Environmental Alliance, 2020).

In adhering to these demands and pressure, climate managers are reworking the action plans and initiatives to include equity to address potential disparities in the policy outcomes. In doing so, they mend the histories, connections, and relationships within communities and build comprehensive stronger economies and resilient communities.

### *Key Questions and Considerations*

Generally, local government elected officials, policymakers and practitioners have to respond to some initial questions when framing, developing, and integrating social equity goals into sustainability action plans. Similarly, anyone advocating for increased local action, such as community groups and non-profit organizations, would also benefit from asking similar questions. The following are some of the questions to reflect in developing equity frameworks or parameters for consideration in climate action plans. These questions basically border around themes such as acknowledging systemic disparities, mitigating impacts, participating in the planning process, and sharing the benefits and costs of climate actions.

- What are the potential equity concerns in the policy/program, and which identity groups will they affect?
- What are the potential negative impacts of the climate action, and what action can municipalities take to mitigate these impacts?
- How can the policy program deliver equitable access to resources, opportunities, services, and benefits? How can our program be inclusive, accessible, just, and sustainable?
- Do the policy program goals/objectives and expected outcomes reflect equity and inclusivity? Have we made provisions for equity and inclusion goals in the project management documents (e.g., business plan, communication plan, monitoring and evaluation plan, strategic plan)?
- Is our team representative of the diversity of the population likely to be affected by the policy program? What steps can we take to ensure representation and diverse perspectives?
- Is our engaged groups representative the affected population?
- In what ways does the policy program provide for the needs of a historically marginalized and vulnerable population of the community?
- What are the potential costs or risks of disregarding equity concerns in the policy program? What do we stand to gain?

## **The Climate Equity Framework**

### ***Climate Equity Framework***

The framework has the following proposed components:

- *Forms of equity* – As noted, not all climate policies or programs may require all forms of equity to be integrated. Also, the various forms of equity have specific action areas they can be considered or integrated.
- *The definitions of equity*– this column intends to define and explain the form and scope of equity to be discussed and considered.
- *Framework in Action* – this column outlines the precise actions to take within the climate action to ensure that the selected equity goal can be integrated into the policy.

Table 2: Schematic representation of the Climate Equity Framework

Equity framing	Definition	Framework in Action
Procedural (Inclusion)	Meaningful engagement and representation: Inclusive, accessible, authentic engagement and representation in the process to develop or implement programs or policies.	<ul style="list-style-type: none"> <li>➤ Define equity goals in action</li> <li>➤ Appraise baseline data – demographics, identify stakeholders/communities</li> <li>➤ Ensure ongoing and meaningful engagement –simple, effective, efficient, and culturally competent.</li> </ul>
Distributive (Access)	Equitable distribution of benefits and burdens: prioritizing those with highest need or marginalized.	<ul style="list-style-type: none"> <li>➤ Work with communities</li> <li>➤ Prioritize efficiency actions</li> <li>➤ Make policies co-beneficial –job creation, resilience</li> <li>➤ Subsidize for poor households - Targeted incentives</li> <li>➤ Track program progress and make amends</li> </ul>
Structural/ Recognition	Recognize systemic institutional, historical, and cultural disparities: enshrine accountability and recognize power struggles.	<ul style="list-style-type: none"> <li>➤ Racial analysis and baseline data (e.g., vulnerabilities)</li> <li>➤ Create conducive and enabling environment for participation</li> </ul>
Transgenerational	Decisions consider generational impacts and do not result in unfair burdens on future generations.	<ul style="list-style-type: none"> <li>➤ Long-term program sustenance- structures for technology service, upkeep, and repairs.</li> <li>➤ Stranded assets</li> <li>➤ Institutionalizing EDI frameworks/institutions</li> </ul>

Source: Author’s construct

### *Notes for Framework Utilization*

- The social equity goals should be clearly defined, clarified, and the scope should be specified for team members and stakeholders to understand.
- Collect baseline information about the population, including socio-demographic: race, ethnicity, Indigeneity, gender, sexuality, religion, age, socio-economic status, and mental or physical disability. People within these groups are potential stakeholders depending on the type of climate action being considered. Gathering this type of information can be difficult as upper-level governments might have the authority over data collection and not municipalities.
- Identify groups that will likely be affected by the policy and provide appropriate support for them to participate, involve in, and contribute to the policy action. For instance, municipalities should choose an accessible location to persons participating and provide information in applicable language (s).
- Municipal governments should work with communities and not for communities. Thus, following the International Association of Public Participation (IAP2) guidelines, the people to be affected should be informed, consulted, involved, collaborated with, and empowered during all the phases of the policy program<sup>1</sup>.
- Identify potential areas where policies can be co-beneficial, including job creation, capacity building, skills development, and building community resilience.
- In addressing equity issues, municipalities should make targeted interventions to appropriately assist the people most in need. Blanket policy incentives or assistance programs may benefit the wealthy or people who don't need them, thereby widening the equity gap.
- Municipalities should make deliberate efforts to sustain equity institutions, objectives, and achievements beyond current generations. Thus, provisions should be made to script equity frameworks or policies, institutionalize equity working groups, and ensure the sustenance of equity achievements.

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<sup>1</sup> [https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum\\_8.5x11\\_Print.pdf](https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf)



## ***Framework in Action: Transportation Big Moves***

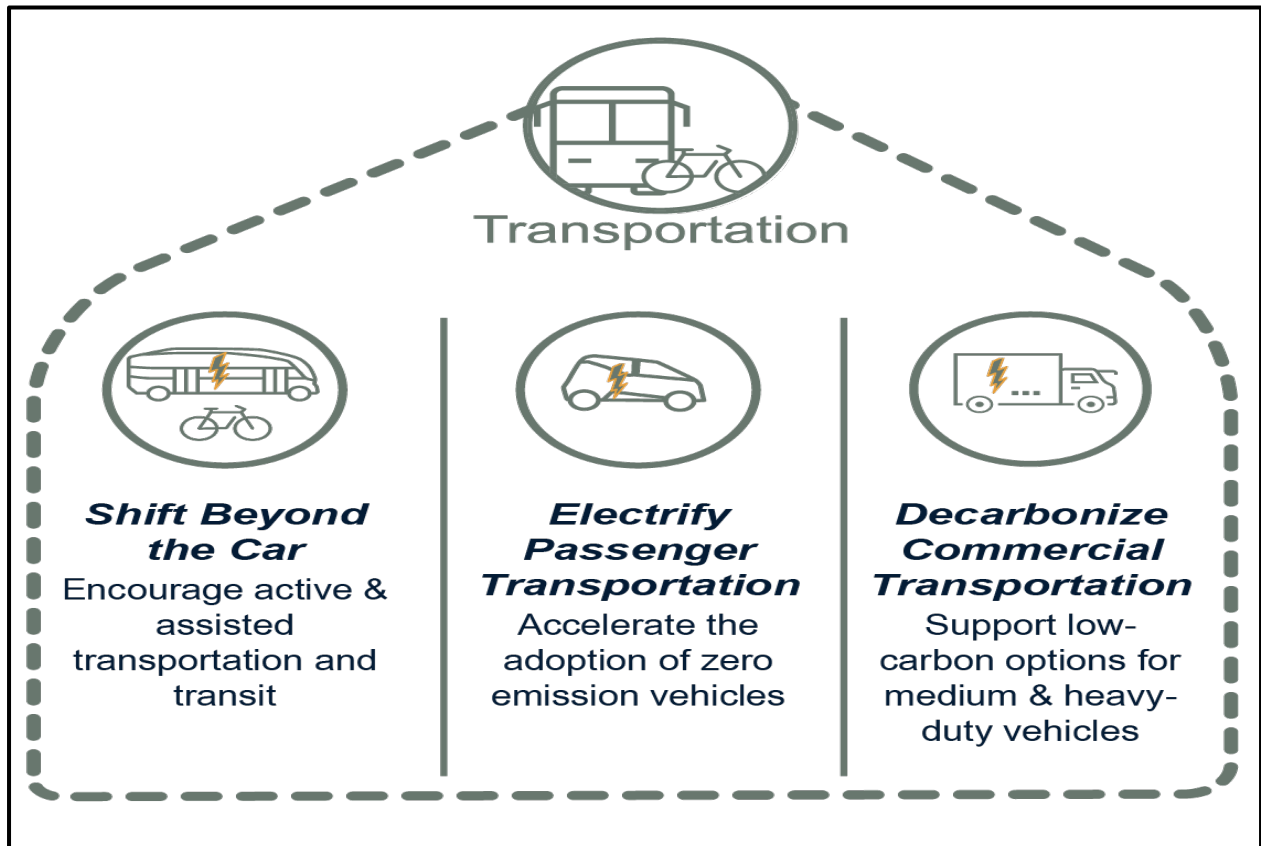
This section outlines the transportation “Big Moves” and how to apply our climate equity framework to ensure equitable program outcomes.

Local governments ought to ensure that access to the resources, benefits, and burdens of policy programs to decarbonize the transportation system are distributed equitably. In British Columbia, the transportation sector generates about 39% of GHG emissions, with the majority coming from passenger vehicles and freight trucks. As local governments reduce emissions in this sector, they can realize several co-benefits, including healthier air quality, safer communities, greater social connectivity, a boost for economies and tourism, and environmental sustainability. Added to these gains is the potential to electrify vehicular traffic with affordable, clean, and renewable energy.

The biggest potential source of GHG reductions for local governments is supporting the electrification of passenger transportation. However, owning an electric vehicle is still out of reach for many people, so it is important for municipalities to continue supporting increased transit ridership and active transportation. As more trips are shifted from single passenger vehicles to transit and active modes, fewer electric vehicles (EVs) need to be purchased to meet GHG reduction targets. Shifting beyond the car also affords other benefits, such as reclaiming road space, improved health, and reduced congestion.

While governments ramp up plans to electrify passenger vehicles, freight trucks and bikes, they are mindful of spreading the gains and costing proportionally across people of all ages, gender, class, and abilities. Even though some challenges such as the difficulty in accessing data and limited financial and human capacities can inhibit this process, climate managers must provide a clear framework/roadmap in doing so. Our framework presents such a roadmap, and here, we demonstrate how to apply it in the transportation sector to achieve equitable outcomes. Among the three transportation areas to reduce emissions: shift beyond the car, electrify passenger transportation, and decarbonize commercial transportation, our demonstration will cover the first two areas. First, we provide specific activities local governments can undertake and indicate how to incorporate the social equity objectives into the program.

Figure 3: The Transportation "Big Moves"



Source: Community Energy Association

Table 3: Case study I: Electrifying Passenger Vehicles

Electrifying Passenger Vehicles			
Policy Phase	Activities	Equity Dimension	How to integrate Equity
<b>Policy and Regulation</b>	<ul style="list-style-type: none"> <li>➤ Identify and map population demographics, social class, etc.</li> <li>➤ Adopt EV-ready building requirements</li> <li>➤ Implement supportive policies to accelerate EV adoption</li> </ul>	Distributive Structural	<ul style="list-style-type: none"> <li>➤ Identify vulnerable and marginalized populations -low-income, disabled, racialized, etc.</li> <li>➤ Identify and map potential effects of EV-ready building requirements.</li> <li>➤ Provide targeted support and policy incentives for identity groups.</li> </ul>
<b>Outreach and Engagement</b>	<ul style="list-style-type: none"> <li>➤ Develop an EV outreach strategy</li> <li>➤ Provide incentives to accelerate EV adoption such as priority parking</li> </ul>	Distributive Procedural	<ul style="list-style-type: none"> <li>➤ Ensure a diverse and representative outreach team and process</li> <li>➤ Provide priority support and service for persons who will most be affected.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>➤ Collaborate with the region to design, fund and build a public EV charging network</li> <li>➤ Lead by example by electrifying the municipal fleet and providing workplace charging</li> </ul>	Procedural Structural Transgenerational	<ul style="list-style-type: none"> <li>➤ Engage identity groups to understand the goals and expected benefits of the EV program.</li> <li>➤ Ensure diversity in EV program teams and perspectives from planning to implementation.</li> <li>➤ Prioritize charging locations in areas with less access to charging infrastructure (i.e., low-income areas and/or areas with more “garage orphans.”</li> </ul>
<b>Monitoring and Evaluation</b>	<ul style="list-style-type: none"> <li>➤ Track policy/program progress</li> <li>➤ Readjust, amend, and change where appropriate</li> </ul>	Procedural	<ul style="list-style-type: none"> <li>➤ Diversify M&amp;E teams and processes by involving interest groups and stakeholders.</li> <li>➤ Involve stakeholders in EV program revisions.</li> </ul>

Source: Author’s construct

**Notes: the framework in action.**

- ***Gather demographic, social-economic, and transportation baseline information:*** What is the percentage of the population in your community commuting by private vehicles, passenger vehicles, cycling or walking. What are their physical abilities and social-economic status (e.g., income levels)? Also, find out other systemic marginalities – race, Indigenous, immigrant, etc.
- ***Institutionalize and establish diverse teams and engagement processes:*** Identify and include all groups and stakeholders likely to be affected by the program at all stages -design to implementation. Thus, form a diversified EV program team, welcome divergent views, and reconcile conflicting perspectives. Additionally, identify with groups how the program will affect them and make provisions to mitigate the impacts.
- ***Targeted support and incentives:*** While the program strives to achieve maximum benefits, due to systemic and social-economic factors, some people may not benefit as much. These situations could be discovered at the outreach and engagement stages for tailored support and incentives to mitigate the regressive effects. For instance, when creating bus lanes, local governments should ensure that majority of the people are using public transport in the community and that those biking or using scooters are accommodated. Better still, local governments cannot sidestep and use disability parking spots to build EV charging stations to make them available while totally depriving persons living with disabilities. Generally, EVs are not affordable for lower income residents so, EVs policy incentives and subsidies should be income qualified. In locating EVs charging systems, local governments should also prioritize areas with less access to charging infrastructure, including lower-income neighborhoods and garage orphan areas. In doing so, the net benefit of the policy will spread out to cover disadvantaged and vulnerable populations often left out in blanket policies.

Table 4: Case study II: Shift beyond the car

Shift beyond the car			
Policy Phase	Policy Activities	Equity Dimension	How to integrate Equity
<b>Policy and Regulation</b>	<ul style="list-style-type: none"> <li>➤ Optimize and apply OCP policies, development permit guidelines and zoning bylaws that enable complete and compact growth</li> <li>➤ Enable e-mobility on demand (e.g., e-scooters and e-bikes)</li> <li>➤ Normalize and establish car-free zones</li> </ul>	Distributive Structural Transgenerational	<ul style="list-style-type: none"> <li>➤ Identify vulnerable and marginalized populations -low-income, disabled, racialized, etc.</li> <li>➤ Identify and map potential effects of byelaws.</li> <li>➤ Provide targeted subsidies for low-income, racialized, and Indigenous people</li> </ul>
<b>Outreach and Engagement</b>	<ul style="list-style-type: none"> <li>➤ Develop active transportation and transit outreach strategy</li> <li>➤ Develop “Work From Home” community and business engagement strategy</li> </ul>	Procedural Structural	<ul style="list-style-type: none"> <li>➤ Ensure the outreach team is diverse and the process represents the community.</li> <li>➤ Plan “Work From Home” with stakeholders showing objectives and expected benefits.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>➤ Build safe routes for walking, cycling and other forms of zero-emission mobility</li> <li>➤ Support a zero-emission transit network</li> </ul>	Distributive Structural Transgenerational	<ul style="list-style-type: none"> <li>➤ Engage identity groups to understand the goals and expected benefits of e-mobility.</li> <li>➤ Ensure diversity in program teams and perspectives from planning to implementation</li> </ul>
<b>Monitoring and Evaluation</b>	<ul style="list-style-type: none"> <li>➤ Track policy/program progress</li> <li>➤ Readjust, amend, and change where appropriate</li> </ul>	Procedural	<ul style="list-style-type: none"> <li>➤ Diversify M&amp;E teams and processes by involving interest groups and stakeholders.</li> </ul>

Source: Author’s construct

## Conclusion

- While local governments across BC ramp up their climate action, they are looking for ways to support social equity, inclusion, and justice goals, including through reconciliation with Indigenous communities, supporting marginalized populations and acknowledging systemic racism.
- This climate equity framework can be adopted and applied by small, medium, large municipalities.
- In sustainability planning, including climate actions, equity issues often come as afterthoughts even though municipalities are increasingly looking in that direction. The problem now is how to reflect on all the intersecting factors such as race, Indigeneity, gender, income, and disability to develop a comprehensive framework that works for all (Angelo et al., 2020).
- Already, climate actions are not working for Indigenous and racialized populations in most cases because of pre-existing marginalities that often extremely expose them to climate risk and impact. Therefore, municipal climate managers should acknowledge historical and systemic disparities in designing and implementing climate actions to avoid exacerbating such conditions.
- Going forward, more research is needed to suggest ways that a comprehensive definition and framing of equity can be developed to cover all aspects of equity issues. Additionally, more research can direct how local governments can incorporate equity ideas, issues, and objectives at the early stages of policy development.
- BC municipalities interested in advancing equity goals in climate actions should establish and institutionalize equity working committees/groups, tools, and frameworks in their governance structures. Equity, diversity, and inclusion issues have gained traction in current environmental governance, but if the efforts, systems, and frameworks are not consolidated by institutionalizing, this progress might wane with time. This can be done by legislating equity goals, frameworks, and structures into policies that cannot easily be changed over time and building local capacities to sustain equity works.

## **Current Limitations**

- As a student of colour with black African origin, I am not familiar with Vancouver's historical, social, or political context. During the literature review, I gathered general knowledge about British Columbia and the ongoing climate action plans and policies, including CleanBC, through vigorous online search and policy documents review and support from the mentors to fill the gaps.
- As a person of colour of African descent, the experiences and knowledge of the history of colonialism, oppression and inequalities sometimes affect my clear sense of judgement and perspective. Inasmuch as we strive to decolonize personal feelings and emotions, I might have been influenced, through conscious and subconscious ways, by these experiences and carry some biases to developing the framework.
- Having acknowledged these limitations, the team still conducted a review of environmental justice literature, climate action/plans, and climate equity frameworks to provide a starting point to advance social and economic equity in the Big Moves.

## **Appendix**

### ***Methodology***

We employed a qualitative research method to synthesize information from multiple sources on climate actions and social equity to produce the report. After identifying the research objectives, we outlined various questions, including the data/information needed. For instance, the forms of equity dimensions in the literature and how they are defined and integrated into climate actions were initial ideas that guided our search for resources. The secondary data was obtained from peer-reviewed and policy documents. We conducted the academic literature search in Google Scholar, Web of Science Core Collections and the UBC Library Catalogue. Relevant articles were identified, downloaded, and uploaded into Mendeley software for thought reading to extract the necessary information by the primary author. We also searched and consulted existing climate action plans and equity frameworks (see other resources) to learn how local governments elsewhere support equity goals in driving down GHG emissions. We adopted and synthesized information from these sources to produce the framework and illustrate its application.

### ***Definition of key terms***

1. *Climate Action Plans* – Policies, programs, initiatives, and plans developed by (local) governments to mitigate and adapt to climate change impact.
2. *Deep Emissions Reduction* – drastic reduction in sectors or industries with significant GHG emissions
3. *The “Big Moves”* – climate actions, policies and programs that target to drive and cause significant GHG emissions reductions from transportation, buildings, and waste.
4. *Climate Equity* – protection from regressive impacts of climate actions and access to the benefits by all, respective of economic and social status.
5. *Equity* – ensuring fairness in accessing opportunities, resources, benefits, and burdens, recognizing pre-existing disparities.
6. *Procedural Equity* – Meaningful engagement and representation: Inclusive, accessible, authentic engagement and representation in developing or implementing policy programs.
7. *Distributive Equity* – Fair distribution of benefits and burdens: prioritizing those with the highest need.



8. *Structural/Recognition Equity* – Recognize systemic institutional, historical, and cultural disparities: enshrine accountability and recognize power struggles.
9. *Transgenerational Equity* – Decisions consider generational impacts and do not result in unfair burdens on future generations.
10. *Equality* – same treatment in accessing opportunities, resources and distributing benefits and burdens without considering any factors or conditions.
11. *Diversity* – any dimension that can be used to differentiate groups and people from one another.
12. *Inclusion* – the act of creating environments in which any individual or group can feel welcomed, respected, supported, and valued to participate fully.

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## **Other Resources**

1. The Climate Leaders Playbook: <https://bcclimateleaders.ca/>
2. Community energy Associations: [https://www.communityenergy.ca/wp-content/uploads/2021/05/2020\\_Annual\\_Report-stitch.pdf](https://www.communityenergy.ca/wp-content/uploads/2021/05/2020_Annual_Report-stitch.pdf)
3. The Alberta Urban Municipalities Association: Measuring Inclusion Tool
4. Chicago Climate Action Plan: Our City, Our Future
5. Climate Action Through Equity: The integration of equity in the Portland/Multnomah County 2015 Climate Action Plan
6. San Diego's Climate Equity Index Report
7. City of Saskatoon's Equity Toolkit for Projects