RENEWABLE CITIES

SFU MORRIS J. WOSK CENTRE FOR DIALOGUE

DIALOGUE REPORT
MAPPING ENABLING POLICIES FOR VANCOUVER'S 100% RENEWABLE ENERGY STRATEGY

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FEBRUARY 28, 2018

EXECUTIVE SUMMARY

Renewable Cities conducted a policy mapping project, resulting in the creation of policy maps that provide a snapshot of the complex policy landscape that impacts the City of Vancouver's transition to 100% renewable energy and the interdependencies at municipal, regional, provincial, and federal levels.

These maps represent a simplification of the current policy landscape and point to the complexity of policies impacting energy choices and carbon reductions within each level of government, as well as the limitations of multi-level governance in achieving complex policy goals, even when these (as in the case of climate action) are shared.

Participants identified a number of policy steps at local, provincial, and federal levels that could help the City of Vancouver achieve its long-term climate objectives, and similarly, help other municipalities better contribute to this shared challenge, including:

- *A federal zero-emissions vehicle mandate*
- *A national zero (or net-zero) emissions agenda, integrating a government-wide emissions-reduction lens*
- *A national/continental long-distance transportation strategy*
- *Comprehensive land use policies to focus urban growth and work towards creating complete, compact, energy efficient communities*
- *An electrification strategy*
- *A renewable natural gas strategy*
- *Stronger multi-level governance systems to enable all levels of government to collaborate and coordinate to achieve climate goals*
- *Better communications and engagement on climate and energy issues, and linkages to 'kitchen table issues' like housing, affordability, and local resilience*

CONTEXT

Cities can be powerful actors towards reducing emissions and building resilience to climate change. Many are taking increasingly ambitious steps forward in transforming their energy systems, many of these actions support complementary social, economic, and environmental objectives.

Vancouver is an international leader in the movement to transition cities to 100% renewable energy. Its Renewable City Strategy, adopted in 2015, lays a pathway to 100% renewable energy in community-wide building, transportation, and energy supply systems by 2050. To implement its Renewable City Strategy, Vancouver needs to take into account the different levels of government—municipal, regional, provincial, and federal—that affect energy demand and supply locally.

In the Canadian context, federal and provincial governments have unique jurisdictions over different aspects of our energy systems. In most Canadian cities, individual municipal governments continue to face challenges in influencing provincial and federal policies in order to advance their renewable energy and climate agendas. Canadian cities interested in implementing renewable energy must work within a complex web of local, provincial, and federal policies, with important incomplete policy areas yet to be considered.

The City of Vancouver has relatively unique authority among Canadian cities with the Vancouver Charter , granting it certain rights and responsibilities that most municipalities do not wield. Having control over building codes and a degree of financial independence, for example, complicates Vancouver's relationship with provincial and federal governments in some portfolios, while simplifying it in others.

This project is an attempt to clarify the roles of government actors in the various policy areas covered by the RCS, to identify gaps, and determine where better alignment is needed. Alignment in this context refers to the degree to which policies set out by senior levels of government allow City of Vancouver to achieve its targets, in this case, transitioning to 100% to renewable energy.

Renewable Cities began this project by creating a set of policy maps, outlining local, provincial, and federal government policies in the built environment and transportation sectors that intersect with the RCS. A dialogue was held on November 30, 2017, in Vancouver, involving participants from all three levels of government and other stakeholders, to refine the current policy map and inform policy development priorities to enable this long-term transition.

THIS REPORT IS USEFUL FOR INFORMING AMBITIOUS CLIMATE AND ENERGY POLICY FROM A MULTI-LEVEL GOVERNANCE PERSPECTIVE, WITH A FOCUS ON THE URBAN CONTEXT

THE DIALOGUE IDENTIFIED POLICY GAPS OR TENSIONS BETWEEN THE CITY OF VANCOUVER'S RENEWABLE CITY STRATEGY AND SENIOR LEVELS OF GOVERNMENT

DIALOGUE

This report details the proceedings of a dialogue convened by Renewable Cities on November 30, 2017, in Vancouver. This dialogue session convened 19 participants, including staff from the City of Vancouver, Metro Vancouver (the regional government), the Government of British Columbia, the Government of Canada, the BC Utilities Commission and a number of civil society groups. The findings reported are not a result of a consensus process and reflect a variety of views. This dialogue was governed by Chatham House Rule[1].

The dialogue session opened with participants introducing themselves and sharing the expertise they felt most able to contribute. Expertise included:

- *B.C.'s Climate Action Charter and compact energy efficient communities*
- *Building retrofit*
- *Community engagement on decarbonization*
- *Electric supply-side policy*
- *Electric vehicle (EV) policy*
- *Electrical generation and transmission*
- *Energy efficiency and electrification policy*
- *EV policy and fleet greening*
- *Federal climate policy*
- *Integration of resources and renewable fuels*
- *Intergovernmental relationships*
- *Multi-sectoral approaches, innovation, energy efficiency*
- *Policy levers for low-carbon transition*
- *Regulatory*
- *Vancouver's RCS and intergovernmental relationships*

The dialogue report is organized in 3 sections, reflecting the day's proceedings:

1. Policy Maps, focusing on the current context
2. Beyond the Maps, exploring new policy opportunities
3. Priority Setting, identifying key recommendations to advance 100% RE locally

These sections are followed by an appendix that includes an Atlas with updated policy maps reflecting the dialogue.

I. POLICY MAPS

The policy maps (see p.5-6) were developed through participatory research to build an understanding of the shared policy environment currently impacting Vancouver's 100% Renewable City Strategy. Covering both the building and transportation sectors, they provided a simplified overview of a complex set of policies, regulations, and incentives. The maps identified different policies that are controlled by each level of government—local, regional, provincial, and federal—in electricity, heating and cooling, and transportation activities. The policy maps were encumbered by the fact that policies from different levels of government do not always fit neatly into these categories. Many cross-cutting policies that influence more than one area of energy supply and end-use were identified, and where appropriate more detailed sub-categories were identified.

[1] Chatham House Rule states that "participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed."

Figure 1 - Original map of federal, provincial, and municipal policy relating to buildings, renewable electricity and renewable heating and cooling

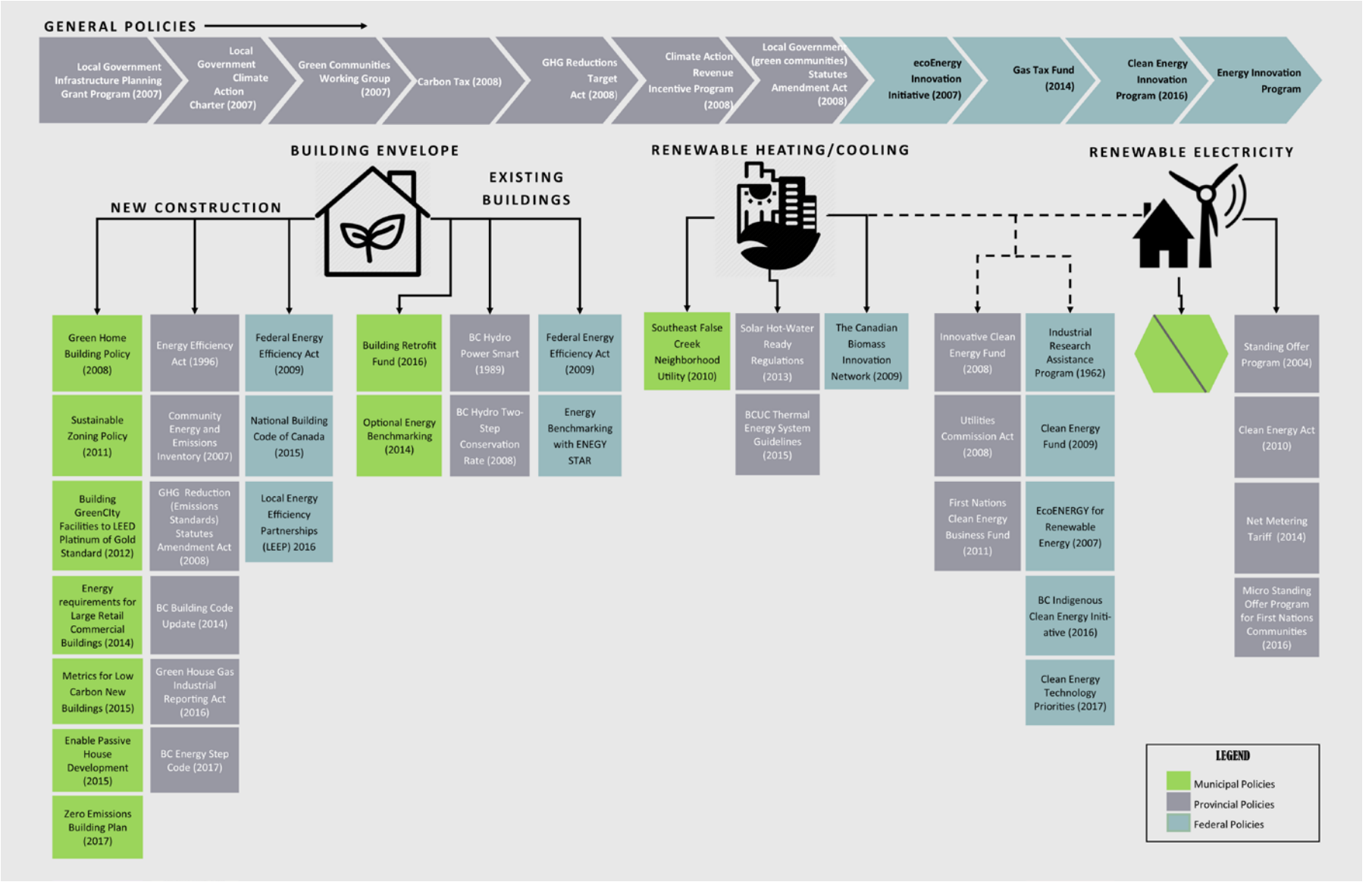
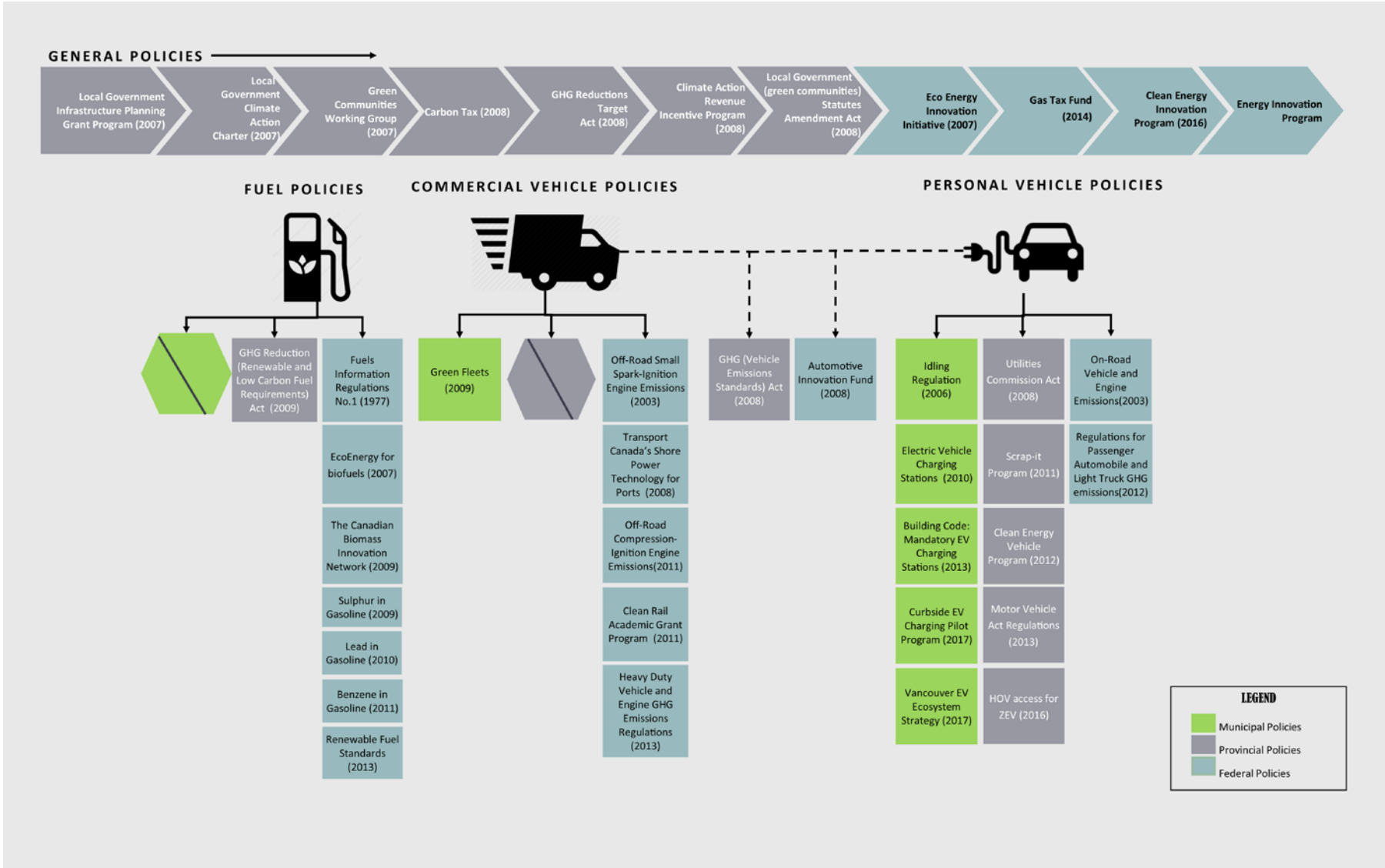


Figure 2 - Original map of federal, provincial, and municipal policy relating to personal and commercial vehicles and fuels



Participants were introduced to the maps through a roundtable session where a clarifying questions and answers session was convened. This discussion mostly centered around the processes by which Renewable Cities decided what to include, such as how "policies" were defined in this project. Participants also inquired why some groups of policies, such as land use or zoning, were not included.

DISCUSSION

Following clarifying questions, participants were asked to provide detailed feedback on how the maps could be strengthened. A number of participants suggested that Renewable Cities should clarify, at least internally, the intended end-users of the policy maps in order to determine which suggestions should be incorporated into future versions.

Participants suggested the following additions for future iterations:

- *Distinguishing between different policy types (i.e. regulatory policy, incentives)*
- *Distinguishing between fully-implemented policies, as opposed to committed policies (i.e. policies that have passed legislative approval but are not yet in force), and those in preparation for legislative approval*
- *Including policies and programs that originate from regional governments, in this case Metro Vancouver, which has important regulatory powers and energy related services, notably in solid and liquid waste*
- *Showing interconnections between different policies, especially those held by different levels of government, as, often, federal guidance produces a provincial policy that is brought into force by a municipality*
- *Including funding and or incentive programs, because these might also point to areas where capacity or funding is not sufficient to overcome barriers to action, despite tacit approval/regulation*
- *Identifying non-financial barriers and trade-offs. An example in renewable energy supply policy might be building safety regulations that might conflict with renewable energy development. In these instances, knowing the tradeoffs may be important to support decision-making*
- *Identifying material effects of policy, in this case, the measurable GHG reductions and/or increase in renewable energy supplied associated with different policies and/or the value of GHGs and energy associated with a sector or sub-sector*
- *Calculating the progress towards overarching policy goals the mapped policies represent, and figuring out a way to represent the degree to which implemented policy/regulations are sufficient to the end result*
- *Including land use and waste policies*

A few participants suggested removing some sections from the maps. There was widespread agreement that renewable electricity supply did not need to be included in British Columbia, since the province has already largely achieved 100% renewable power. However, if developed for other jurisdictions, renewable electricity supply may be more relevant. Participants suggested creating separate maps for detailing supply-side policies, instead of blending policies relating to energy supply and energy demand on the same page.

Participants suggested that future iterations could be improved with a layering system. The specific layering scheme would be used to simplify the policy maps for specific end-users.

Two immediately obvious layering schemes would separate policies enacted by different levels of government such that different levels of government policy would each be laid out in an overlay, or by different policy types (i.e. fiscal, regulatory, guidance, etc.) would be included in different overlays. Others suggested including contextual information in the form of pie charts or stoplights that help users understand the relative importance of different policies/sectors. Another suggested analyzing the degree of 'completion' in each policy area, to assess the degree to which existing policies have completed the work intended from when they were first enacted.

It became clear that participants that work more closely with one level of government could, at times, have differences in understanding how policies interact at other levels. For example, a federal government participant had a different interpretation of the term 'enabling' than participants working at other levels of government. This may indicate that different levels of government may not always share common vernacular when it comes to policy development, a finding which may be worth further exploration as it might have implications in establishing multi-level good governance.

II. BEYOND THE MAPS

For the next exercise, Renewable Cities identified five policy areas that have been deemed critical, either within Vancouver's Renewable City Strategy or well understood as important components of more general renewable energy/decarbonization transition strategies.

The five areas that Renewable Cities initially identified as target policies for further work included: district energy, deep building retrofits, renewable fuels, electric vehicles, and freight. However, participants suggested that, from a municipal perspective, inter-urban freight policies were of less interest and the municipal interest in intra-urban freight could, in fact, be covered by renewable fuel and electric vehicle policy areas. Thus, land use was nominated as a more critical policy area to address and replaced freight in the discussion.

DISTRICT ENERGY

Participants in this subject area agreed that municipal and provincial governments share equal responsibility for district energy. Some identified two major policy changes at the provincial level to facilitate the 100% renewable strategy:

1) Enabling municipalities to mandate district energy connection to existing buildings

2) Allowing utilities to both own and operate district energy systems, and to cross-subsidize systems

Some participants acknowledged that a barrier to greater district energy adoption, beyond the City of Vancouver, which has its own building code is greenhouse gas emission management is not recognized in B.C.'s building codes, including the new BC Energy Step Code.

At the municipal level, participants suggested that internal capacity-building and expertise is required. In addition, local governments should pursue an agnostic and outcomes-based approach to building energy planning, utilizing district energy where and when it makes best sense, and literally "pushing the envelope" on efficiency and other zero carbon heating systems where performance and costs are superior.

Participants at this table indicated financial incentives, including using revenues from the carbon tax, would be helpful to decarbonize district energy to achieve stated policy goals. Other opportunities for alignment include: 1) utility demand-side management and/or fuel-switching; and 2) converting existing district energy systems to more efficient, more renewable or less carbon-intensive fuels.

DEEP BUILDING RETROFITS

Participants declined to identify the level of government with the most influence in implementing policy for building retrofits. At the local level, participants suggested that municipal governments should take care not to impede retrofits in permitting and codes enforcement. At the provincial level, retrofits could be enabled by mandating building energy benchmarking at point of sale or upon issuing permits.

A further suggestion was to create innovative, outcomes-based (as opposed to technology-based) requirements for retrofits and to focus policy action on deep retrofits rather than on incremental changes.

At the federal level, some participants identified the need to develop a Canadian retrofit code in consultation with cities, as a policy priority. This group included suggestions for provision of specific financing tools, including tying the code to specific funds, in order to increase the financial capacity of provincial and local governments to take on this work.

The greatest barriers to further policy alignment was the lack of coordination between building energy use regulations and incentives for decreasing building energy use, including the price of natural gas versus electricity, and the certification of innovative new building technologies.

Other opportunities included:

1) Federal government promotion of electrification through a suite of policies aimed at different energy end-uses

2) Incentivizing fuel switching with an associated GHG target for all utilities nationwide, or implementing a provincial fuel-switching mandate associated with a GHG emissions reductions target

3) Linking property taxes to energy efficiency of buildings

RENEWABLE FUELS

In this policy area, participants concluded that the provincial and federal governments share responsibility for enabling the transition to

greater renewable fuels. Given the jurisdictional context (British Columbia), discussion focused on decarbonizing natural gas in buildings and pursuing low carbon fuels for transportation.

At the provincial level, some participants suggested enabling municipalities to adopt bylaws for fuel supply. The city was encouraged to develop infrastructure to expand renewable fuel generation, as well as take action to support fleet use of renewable fuels, where appropriate.

Provincially, some participants suggested establishing GHG targets and/or renewable portfolio standards for natural gas utilities and recycle carbon tax revenues into renewable fuels (such as biomass).

At the federal level, participants suggested a stronger clean fuel standard in the transportation sector, as well as stronger federal GHG performance requirements on vehicles. The limited availability of feedstock to create renewable natural gas (RNG) and the limited lifetime of some incentive programs were seen as barriers to achieving greater use of renewable fuels. To secure renewable fuel feedstocks, many participants recommended regulating content requirements at federal levels in transportation fuels and provincially for renewable natural gas, as well as other renewable fuels (including the need for complete biomass availability studies). Participants saw greater regulation of GHGs as the best opportunity to incentivize greater renewable fuel content.

ELECTRIC VEHICLES

Participants saw a shared responsibility for this policy area. Municipalities have a role to play in supporting electric vehicle (EV) infrastructure through land use and building codes. At the municipal level, participants called for EV-ready new building construction, incentives to upgrade for EV-readiness in existing buildings, preferential parking policies for EVs, provision of public charging stations, and EV fleet procurement policies.

Participants' highest priority policy was for a zero-emission vehicle (ZEV) mandate, although different groups disagreed about whether this policy would be best implemented at the federal or the provincial level. Some participants suggested that a ZEV mandate should be implemented at the provincial level and include provincial tax rebates and incentive programs for electric vehicles, including making high-occupancy vehicle lanes accessible to electric vehicles. A further suggestion was that preferential utility electricity rates (i.e. through BC Hydro) be offered to EV owners.

If the ZEV mandate was implemented at the federal level, participants called for federal tax rebates and incentives for EV owners. Participants also called for a single national Electric Vehicle Supply Equipment charging standard, as well as a continent-wide transportation strategy to coordinate and enable EV readiness and availability of charging infrastructure.

The greatest barriers to greater uptake or use of EVs were identified as the lack of EV charging infrastructure in existing multi-family and commercial developments, as well as the need for the capital and incentives to install sufficient charging infrastructure. Some participants emphasized allocating most incentives to deploying level two EV charging infrastructure over EVs themselves.

LAND USE

Participants in this group agreed that municipal governments have the central role to play in developing land use policies, while recognizing that the provincial governments would need to provide enabling authority. Both federal and provincial governments would need to adjust fiscal policies to change the high carbon/high energy urban growth pattern, notably shifting spending sway from roads and highways.

At the municipal level, participants called for an integrated climate lens on land use policies city-wide, including a transportation GHG reduction target linked to land use. Participants also wanted to see changes in single-family zoning, increasing the number of housing units/households on single-family home parcels.

At the provincial level, participants called for support and coordination in setting regional transportation sector GHG targets and linking these to planning, as well as implementation on mobility pricing and increased funding for public transportation. These strategies could be implemented through a much-needed multi-stakeholder review of the Provincial Regional Growth Strategy. Participants also wanted to see housing affordability addressed and integrated into land use planning policies and the building retrofit agenda, tying these to reverse the hollowing out in single-family homes. At the federal level, participants saw a need for funding programs, especially for infrastructure, to have strong climate lens, possibly including deferred capital gains tax and zero-interest financing for low-carbon developments.

As assessed by this group, major barriers to stronger land use policies include: 1) relatively weak regional governments; 2) a bias in current transportation planning and policy towards personal automobiles; 3) parking and high-cost transit infrastructure without clear density requirements. Participants also cited the lack of land use planning integration in both typical local government climate plans and major infrastructure lifecycle cost assessments.

Participants outlined the huge opportunity, as well as multiple co-benefits, that can be realized by integrating land use policies more fully into climate and energy planning, including in housing and transportation affordability, community-wide resilience, reduction of vehicle-kilometres travelled/congestion, and farmland protection. Participants also pointed out that the climate targets outlined in the Pan-Canadian Framework on Clean Growth and Climate Change framework will not be met without coordinated and integrated effort on transportation, land use, housing, and GHGs.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III. PRIORITY SETTING

Participants were asked to review the work of all policy groups and, in pairs, choose one policy that would most be critical to implement. Recommendations and suggestions included:

- *Establising a federal and/or provincial level zero-emissions vehicle mandate (stated by 2 groups)*
- *Enacting a global zero-emissions (or net-zero) strategy: harmonized across different levels of government, would apply equally to buildings, waste, vehicles, land use, and a comprehensive retrofit code*
- *Creating long-distance transportation strategy, including funding for active transportation, transit, and zero-emissions vehicle policies, especially due to the need for national and continental coordination strategies for heavy-freight/long-haul trucking. The infrastructure needed for these changes is beyond the scope of any one municipality, province, or country.*
- *Undertaking comprehensive land use policies to stop urban sprawl. Ideally, this would be realized by empowering regional districts with more authority in partnership with local governments. Planning and support for associated cultural shifts would also be included.*
- *Developing an electrification strategy: including a clean fuel standard, GHG targets for all retrofits, and including tying GHG emissions reductions in land use planning, which in the City of Vancouver context would encourage electrification. This strategy would necessarily require cooperation and collaboration from all levels of government.*
- *Supporting renewable natural gas development, including a provincial level renewable portfolio standard for natural gas, and involve policies applying to feedstocks for liquid biofuels. This action would be combined with energy demand-reduction policies.*

The majority of these policy areas involve portfolios controlled in large part by senior levels of government. Only one, comprehensive land use policies, could the city lead on while it, too, requires senior government in many instances. The degree to which the City of Vancouver could successfully implement land use policies to account for Vancouver's workforce which travels regionally, is likely modest.

Participants were then asked to describe which critical policy changes they think could be implemented within a year. For the most part, participants noted that most could be initiated within one year, including a commitment to electrification (even if all attendant policies are not yet in place). Integrating a GHG emissions-reductions lens in all government decision-making was also deemed a change that could be achieved within a year's time.

One participant argued that a commitment to a ZEV mandate would be possible in less than one year's time, with various organizations collaborating to help push it forward. One participant pointed to the fact that the Metro Vancouver regional climate action strategy will be updated in 2018.

Several participants agreed on the need for a coordinated retrofit strategy, noting that many necessary policies are in place or almost in place at provincial and federal levels. One participant discussed the need to create a GHG target (not merely energy use) target for building retrofits. The City of Vancouver is hoping to launch a renewed retrofit program in 2018. Several participants commented on the need for energy efficiency policies to include both incentives and regulatory elements, especially as the low-hanging policy fruit is picked. One participant noted that absent

a coordinated electrification policy, energy efficiency alone will likely not be sufficient to move the dial substantially on reducing GHGs in buildings. Participants generally agreed that a point of sale retrofit standard might be useful.

Several participants called for a stronger link to be made between affordability, housing, the City of Vancouver's Renewable City Strategy, and broader climate action. It was unclear whether these linkages would be rhetorical (i.e. made primarily in communications and through public engagement) or enshrined in a specific policy.

Further, a participant with deep expertise in engagement reflected that many of the workshop attendees wanted to see a 'cultural shift' and noted that this is perhaps a bigger challenge, and one as worthy of attention as any conventional policy. The kinds of communications and engagement strategies that would be necessary are not possible without being well resourced, planned, and executed. Participants noted that technical language can be a barrier to clear communication with the public (i.e. using terms like GHG emissions reductions, which may not be as clear to laypeople as a term like "reducing carbon pollution").

In a final round, participants were asked to provide a piece of advice for Renewable Cities for this project. Participants agreed that although many of the policy changes needed to move the City of Vancouver to 100% renewable energy are outside the municipality's jurisdiction, one of the natural outcomes of future work could be further defining priority policies and advancing deeper discussions with senior governments. One participant suggested that advancing a stronger multi-level governance regime that allows all levels of government to coordinate and collaborate on specific climate and energy policy and planning is important.

Participants also advised Renewable Cities to remember the intended end-user of the policy maps, and to design future iterations to make best sense for different, specific audiences. Several participants pointed to the need to focus further iterations of the maps to understand the impacts of future policy choices, identifying pathways to move down, or as a platform to evaluate future policy development.

UPDATED POLICY MAPS

As a result of the feedback and expertise shared by participants in this dialogue, Renewable Cities has updated the policy maps (see Appendix I). Some notable changes include:

- *Dividing the policy areas covered into three maps instead of two, including two demand-side policy maps, one for buildings and one for transportation; as well as a supply-side policy map covering electricity supply and heating and transportation fuel policies*
- *The addition of a stand-alone document that maps the material outcomes of the policies mapped in the sectors of energy end-use (buildings, transportation). This would include an estimate of the percentage of renewable energy currently in use in each sector, as well as an estimate of the contribution of each sector to the City of Vancouver's overall GHG emissions.*
- *Active transportation and transit-related policies have been added to the transportation policy map.*
- *An "other end uses" category has been added to the buildings map, to capture policy as well as emissions information on energy end-use within buildings (i.e. not related to building envelopes themselves)*
- *Policies created at the regional government level have been added. These are included under 'Local Governments'*
- *Iconography has been created to help distinguish between different policy types, including regulatory policy, incentive/ funding programs, and policies providing guidance*

Renewable Cities decided not to customize the maps for specific audiences. The maps will retain general applicability at this point in the project, but customized policy maps for specific purposes or audiences could be created in the future. Their creation would require more detailed understanding of particular project needs and uses and perspectives.

CONCLUSIONS AND NEXT STEPS

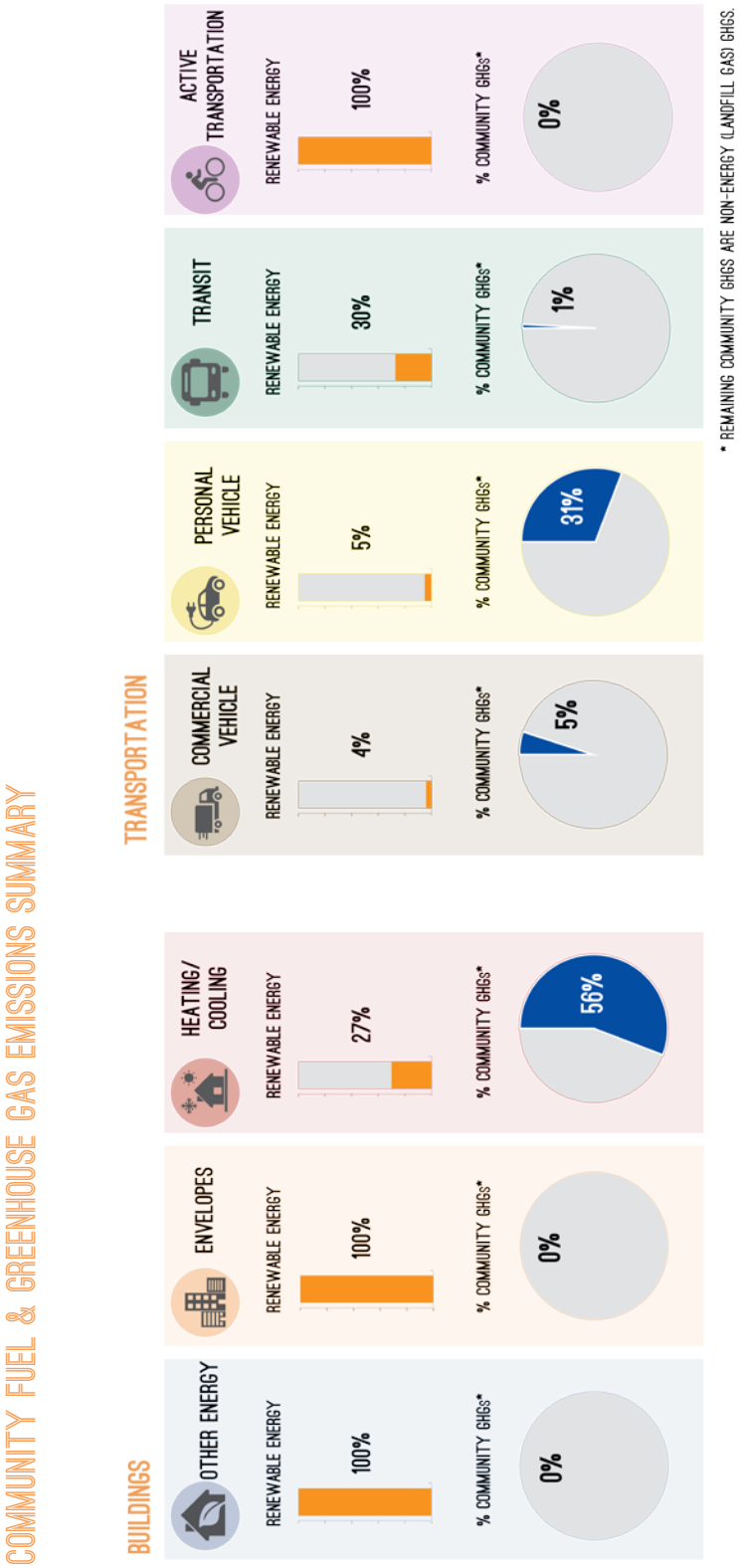
In a policy arena as complex and multi-faceted as mapping the enabling policies for Vancouver's 100% renewable energy transition, it is perhaps not surprising that there are few clear-cut conclusions to be drawn from this exercise. Overall, participants agreed that the primary undertaking of this project, to map the policies at the municipal, provincial and federal levels that relate to the City of Vancouver's authority and ability to transition to 100% renewable energy, is a worthwhile one, and have made concrete suggestions to improve this project in the future.

A list of prime policies has been developed, but notably, none of the listed policies are ones that the City of Vancouver can advance acting alone, and all require action of at least one level of senior government.

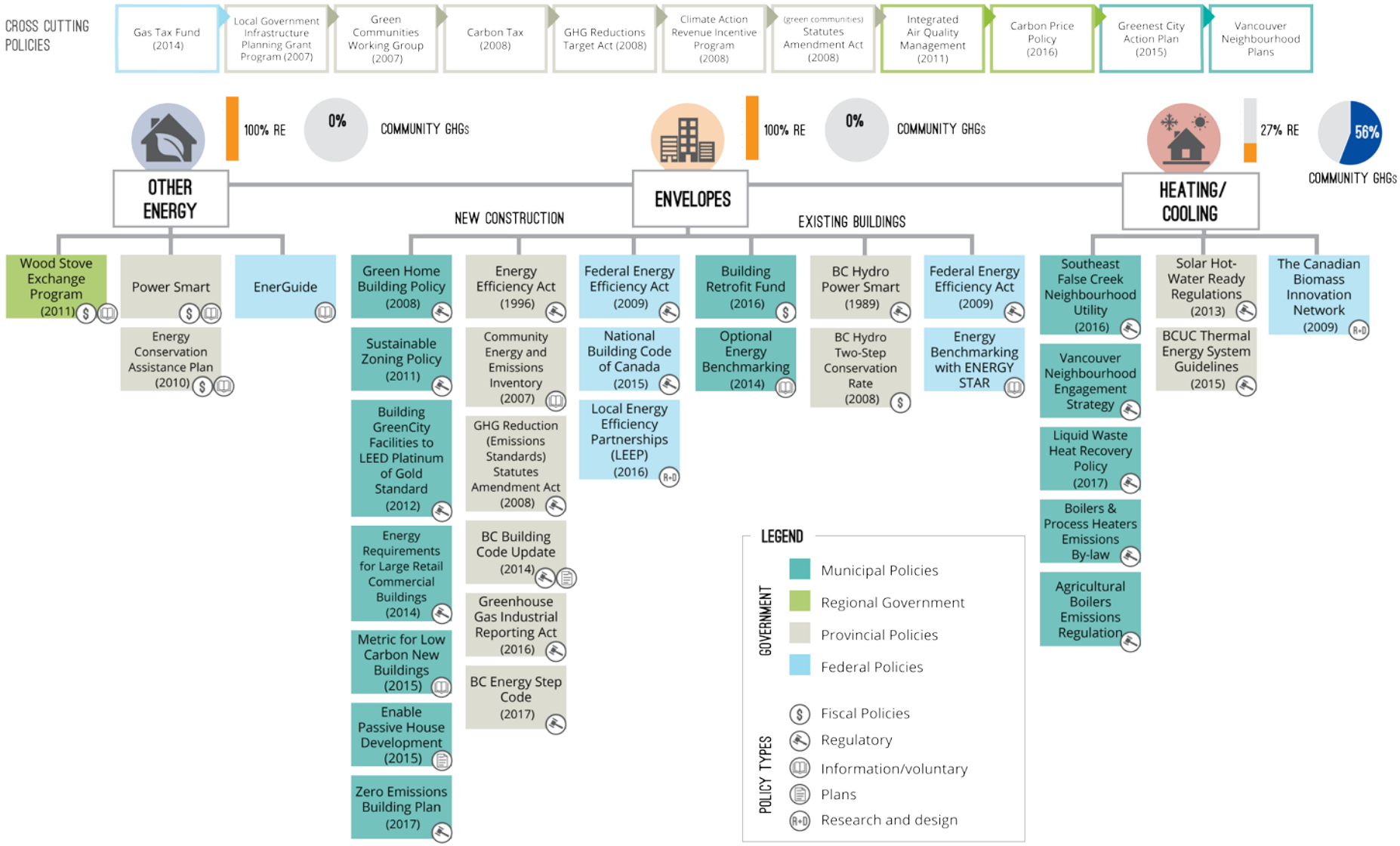
Renewable Cities will continue to advance research into policy changes at all levels of government to enable the transition to 100% renewable cities. The maps were created using replicable, collaborative research methods that could be adapted to other jurisdictions.

Renewable Cities will continue to investigate multi-level governance to support ambitious climate and energy policies for cities.

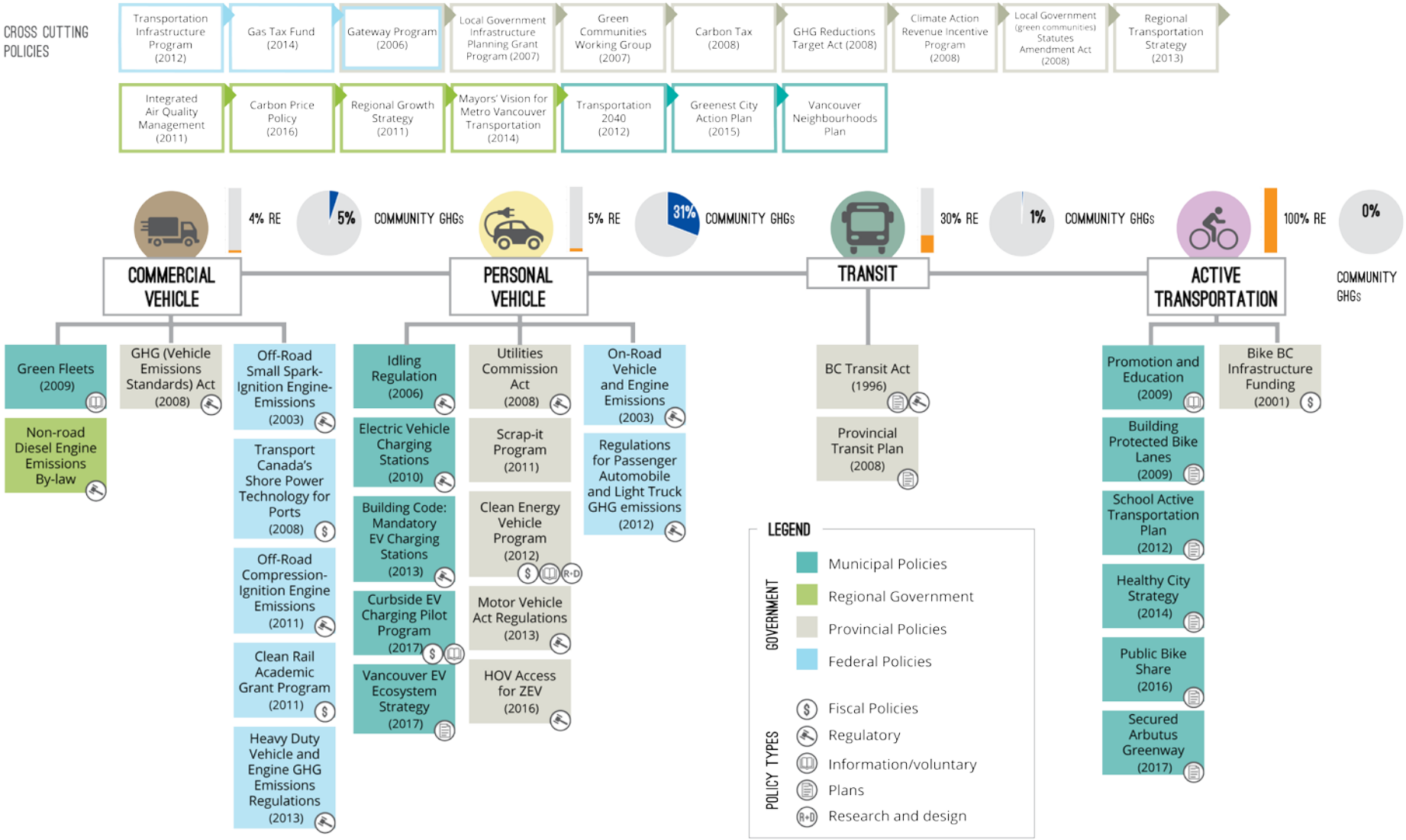
APPENDIX I: CITY OF VANCOUVER CURRENT POLICY ATLAS FOR 100% RENEWABLE ENERGY



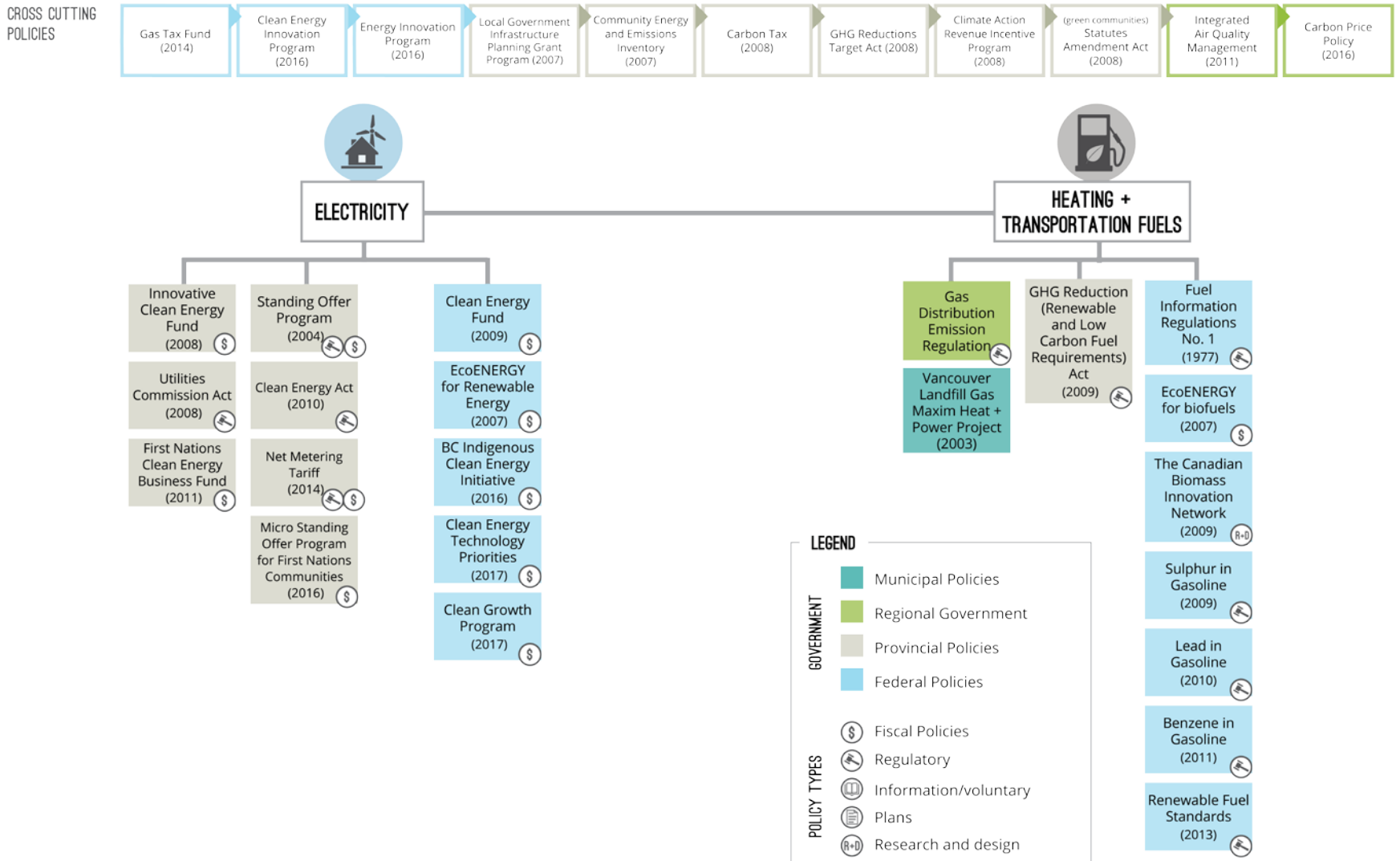
BUILDING POLICY MAP



TRANSPORTATION POLICY MAP



ENERGY SUPPLY POLICY MAP



APPENDIX II: DIALOGUE EVALUATION

In order to improve future dialogues, we asked participants to complete an evaluation survey immediately following the dialogue. For each question, participants indicated whether they disagreed or agreed with each statement (on a scale of 1 to 7 where 1 = totally disagree, 7 = totally agree).

1. Phone calls and emails during recruitment and after agreeing to participate gave helpful information: 5/7
2. The discussion guide provided was clear and contained relevant and useful information: 5.6/7
3. The facilitator provided clear explanations, guidance and support throughout the day: 6.4/7
4. The meals and refreshments were satisfactory: 6.9/7
5. There was adequate opportunity for me to learn and participate in group discussions: 6.4/7
6. Overall the dialogue was worthwhile to me: 6.6/7
7. Based on this experience, I am likely to become involved with similar consultations: 6.9/7

ACKNOWLEDGEMENTS AND CREDITS

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The primary author of this dialogue report is Kathryn Sheps, SFU Morris J. Wosk Centre for Dialogue. It was reviewed by Alex Boston, Keane Gruending and Angela Paley of the SFU Morris J. Wosk Centre for Dialogue and Morgan Braglewicz, SFU School of Resource and Environmental Management. Madi Kennedy, SFU School of Public Policy and Morgan Braglewicz also provided research assistance without which this project would not be possible.

The views in this publication are provided to stimulate discussion and learning. They do not necessarily reflect the views of Renewable Cities' staff, funders, collaborators, or the SFU Morris J. Wosk Centre for Dialogue.

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Contact information

Renewable Cities
SFU Morris J. Wosk Centre for Dialogue
3300-515 West Hastings Street
Vancouver, British Columbia
Canada
V6B 5K3

Email: info@renewablecities.ca
Telephone: 778-782-8851
www.renewablecities.ca

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SFU MORRIS J. WOSK CENTRE FOR DIALOGUE

Dialogue Report: Mapping Enabling Policies for Vancouver's 100% Renewable Energy Strategy

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