Ottawa Energy Collective Impact State of the City Report:

Action on Climate Change in Ottawa

ECOLOGY OTTAWA

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1. Introduction and problem statement

The following summarizes the current state of action on climate change in Ottawa, including an analysis of emissions targets and plans in all jurisdictions (i.e., federal, provincial and municipal) impacting city-level climate policy.

a. Summary of the issue

The residents and government of the City of Ottawa stand at a crossroads when it comes to taking meaningful action to combat climate change. Like other cities in Canada and around the world, Ottawa is where hundreds of thousands of residents make the day-to-day decisions that use up energy and generate greenhouse gas (GHG) emissions as a result. Also like other cities, Ottawa's action on climate change is a vital part of larger plans and agreements.

Similar to its counterparts at the Government of Canada and the Government of Ontario, the City of Ottawa seeks to reduce emissions by 80% below 2012 levels by 2050. [1] This entails addressing Ottawa's [2] five emissions sources: buildings, transportation, solid waste, agriculture and wastewater. However, two local emissions sources are particularly important; buildings and the built environment account for 49% of Ottawa's emissions, while transportation accounts for 40%. [3]

So far, the most detailed articulation of the City of Ottawa's climate strategy is contained in the 2014 Air Quality and Climate Change Management Plan. This plan has broad coverage in its analysis and in its list of suggested policy actions to reduce GHG emissions. However, it lacks content on Ottawa's strategy for energy generation, energy conservation and energy efficiency – content related to the building stock that will be covered in a yet-to-be-articulated Renewable Energy Strategy.

The City has started to take meaningful action on reducing emissions from transportation with its large investment in light rail. When it comes to buildings, policy measures are urgently needed. Currently, there is no integrated strategy in place; new buildings and developments are being constructed according to inefficient design and planning standards, and will generate life-cycle emissions that pose a long-term threat to Ottawa's emissions-reduction targets. In this context, the City has an opportunity to work with various stakeholder groups to address challenges associated with new builds, while also implementing measures to retrofit existing homes, offices and other buildings across the city.

[1] City of Ottawa (2016). City of Ottawa joins Carbon 613 to help cut greenhouse gas emissions. Retrieved April 19, 2017 from: http://ottawa.ca/en/news/city-ottawa-joins-carbon-613-help-cut-greenhouse-gas-emissions.
[2] The emissions profile of Ottawa can be thought of in two different ways. On the one hand, there are the "corporate inventory" emissions of the municipal government and its inventory. These corporate emissions make up a subset of the larger "community inventory," produced by all residents and built infrastructure in the city. This document will focus on the community inventory throughout.
[3] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Appendix A – GHG Inventory Summary, p. 6. Retrieved April 18, 2017 from: http://ottawa.ca/en/city-hall/planning-and-development/official-plan-and-master-plans/air-quality-and-climate-change.

b. Why buildings ?

The rationale for a collective impact focus on buildings relies on two key concepts. First, as noted above, the City has started taking action on transportation but currently lacks an integrated strategy for buildings and the built environment. Second, whereas transportation emissions can be partially addressed by a large investment in a single item - in Ottawa's case, a new light rail transit transit system, comprising the largest infrastructure investment in the City's history - the building sector cannot. The sector is comprised of a range of diverse actors with diverse needs and capacities. In this context, a collective impact approach seems particularly useful as a means of opening dialogue between the various actors and generating solutions that can be applied across sectors.

c. Overview of report objectives

The purpose of this report is to identify the state of the City of Ottawa's progress on action on climate change. To do this, the report will first briefly summarize the federal and provincial climate change policy context, including a look at major initiatives and GHG reduction targets. Following this, the report will examine City of Ottawa policy and progress. To this end, the report will look at the various areas of city-wide GHG emissions identified by the City of Ottawa, as well as any available information on the City's current efforts and likelihood of progress in these areas.

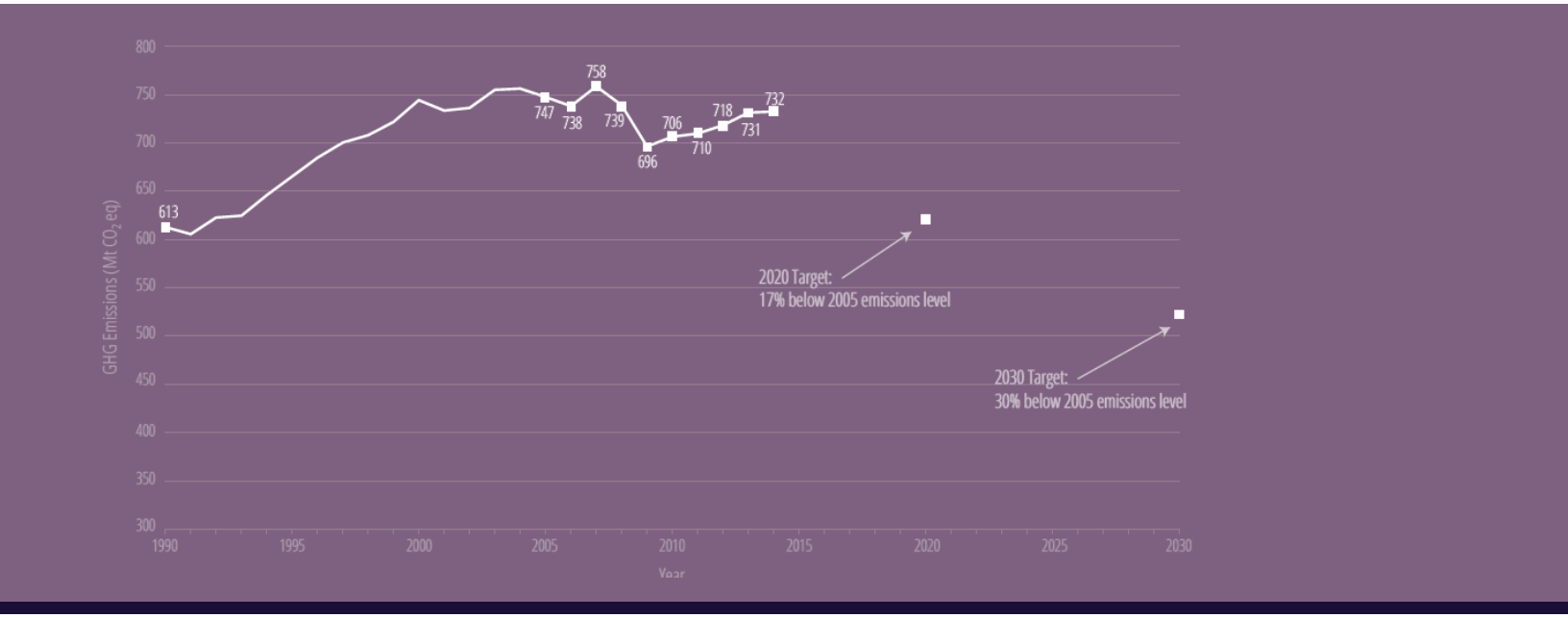
Preliminary analysis

a. Overview of commitments and progress from the Government of Canada

The federal government is struggling to meet GHG reduction targets set as part of the Copenhagen Accord in 2009. Here, the federal government committed to reducing GHG emissions by 17% below 2005 levels [4] by 2020. Later the federal government added a 2030 emissions reduction target of 30% below 2005 levels. A 2014 snapshot of federal progress on GHG emissions reductions since 1990 is shown in Figure 1 below.

[4] Office of the Auditor General of Canada (2017). A Timeline of Canadian Climate Change Commitments. Retrieved May 17, 2017 from: http://www.oag-bvg.gc.ca/internet/English/sds_fs_e_41101.html/

Figure 1: National emissions trends, 1990 to 2014



Source: Pembina Institute (2016). Race to the Front: Tracking Pan-Canadian Climate Progress and Where We Go From Here. The Pembina Institute. Adapted from Environment and Climate Change Canada.

Evidently, progress on emissions reductions remains an ongoing federal challenge. However, recent policy initiatives provide an indication of positive momentum on the climate change file, with direct implications for cities like Ottawa.

In 2016, the federal government enacted the Pan-Canadian Framework on Clean Growth and Climate Change. This framework marked unprecedented progress in coordinating action on climate change from all provinces and territories. The framework included a pan-Canadian approach to pricing carbon as well as measures designed to achieve emission reductions across all sectors of the economy. Several aspects of the Pan-Canadian Framework are of particular relevance to Ottawa because they focus directly on the two largest sources of city-wide emissions: transportation, responsible for 40% of Ottawa's emissions; and buildings and the built environment, responsible for 49% of Ottawa's emissions.

On buildings and the built environment, the Government of Canada has pledged to work with provinces and territories to develop more energy efficient building codes for new and existing structures and work toward labelling energy use in buildings. Further, the Government of Canada pledged to use funds from a $2 billion Low Carbon Economy Fund, as well as green infrastructure investments, to help interested provinces and territories improve building energy efficiency and set new standards for heating equipment. [5]

On transportation, the Government of Canada has pledged to work with provinces and territories to cut emissions from vehicles through new efficiency standards, develop a Canada-wide strategy for zero-emission vehicles, invest in charging and natural gas and hydrogen fuelling infrastructure, invest in public transit, and develop a clean fuel standard. [6]

[5] Government of Canada (2016). The Pan-Canadian Framework on Clean Growth and Climate Change. Retrieved May 18, 2017 from: https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html.
[6] Government of Canada (2016). The Pan-Canadian Framework on Clean Growth and Climate Change. Retrieved May 18, 2017 from: https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html.

Also notable is the federal government's stated commitment to investment in climate-related projects. The City of Ottawa has taken note of this investment commitment in its internal documentation, as this money could flow towards project implementation in Ottawa as long as the City positions itself to take advantage of the funds. In its 2016 budget, the federal government allocated more than $5 billion over five years for "green infrastructure" [7] projects such as electric vehicle charging stations, regional electricity grid co-operation and the development of building codes. [8]

In short, the federal government has started a comprehensive approach to addressing climate change mitigation. This plan, while still in its infancy, holds potential for the City of Ottawa insofar as it aligns with local mitigation priorities such as buildings and transportation, and insofar as it pledges funding to projects designed to lower GHG emissions in these areas. Given the scale of the challenge being faced by the federal government and the important role that cities play in key areas such as buildings and transportation, there may be long-term opportunities for funding and partnership on mitigation projects beyond the short-term projects listed above.

b. Overview of commitments and progress from the Government of Ontario

The Government of Ontario has been relatively successful in reducing its emissions over the past decade or so, with emissions falling 19% from 2005 to 2014. This progress stems primarily from Ontario's efforts to phase out coal-fired electricity generation, a process which was completed in 2014. [9] As of 2014, Ontario was Canada's third-lowest GHG emitting province per capita. However, because of Ontario's large population, the province remains Canada's second largest provincial emitter overall, behind Alberta. [10]

Beyond the coal phase-out, the Government of Ontario has enacted a series of policy initiatives that have helped reduce GHG emissions across a range of areas. In 2009, the Province enacted the Green Energy and Green Economy Act, which was designed to expand renewable energy production and encourage energy conservation across the province. This legislation resulted in rapid expansion of Ontario's renewable energy generation capacity, and the City of Ottawa has used it to implement several solar projects on City buildings. In 2015, Ontario joined the Western Climate Initiative, a North American-wide cap-and-trade program. Ontario pledged to direct revenues from this program to climate change initiatives.

[7] The federal government's use of the term "green infrastructure" differs from the conventional usage of this term. Whereas the conventional usage typically refers to living systems and technologies used to manage water flow in cities, the federal government's use of the term refers to infrastructure investments slated to provide beneficial environmental impacts.
[8] City of Ottawa (2017). Report to Environment and Climate Protection Committee and Council. Retrieved May 18, 2017 from: http://app05.ottawa.ca/sirepub/view.aspx?cabinet=published_meetings&fileid=427140.
[9] Pembina Institute (2016). Race to the Front: Tracking Pan-Canadian Climate Progress and Where We Go From Here. The Pembina Institute. Adapted from Environment and Climate Change Canada.
[10] Pembina Institute (2016). Race to the Front: Tracking Pan-Canadian Climate Progress and Where We Go From Here. The Pembina Institute. Adapted from Environment and Climate Change Canada.

Most recently, in 2016, the Province rolled out a comprehensive Climate Change Action Plan. This provided some detail on how cap-and-trade revenues would be spent, and provided a strategy to tackle emissions from across a wide range of sectors. This plan outlined $8.3 billion worth of spending on incentives and infrastructure between 2016 and 2020. Many aspects of this plan have direct implications for cities like Ottawa and its main sources of emissions - transportation and the built environment. In the area of transportation, there is funding for electric vehicles, energy efficiency retrofits and public transportation infrastructure, as well as sales targets for electric and hydrogen vehicle sales and proposed regulations on renewable fuels. On the topic of buildings and the built environment, there are proposed changes to the provincial building code as well as support for community energy planning. [11]

In summary, as with the federal government, the provincial government has been unveiling key policy initiatives designed to tackle emissions, and many of these initiatives have direct implications for Ottawa. As with the federal government, the provincial government has tied substantial revenues to its climate plan. While cap-and-trade revenues will fluctuate depending on the individual permit auctions, the government recently brought in over $450 million to invest in climate change initiatives, and has pledged to spend billions in the coming years.

In contrast to the federal government, which is attempting to reduce emissions across a diverse variety of provincial economies across the country, the Government of Ontario's two largest emitting sectors are similar in size and importance to those of the City of Ottawa. Whereas transportation and the built environment represent 40% and 49% of Ottawa's emissions profile respectively, they represent 33% and 22% of Ontario's.[12] As such, provincial efforts to mitigate climate change align closely with those of the City of Ottawa.

c. Overview of commitments and progress from the City of Ottawa

The City of Ottawa's efforts to address climate change date back to 2005, when it introduced its first Air Quality and Climate Change Management Plan. In 2005, Ottawa City Council set a target of reducing corporate GHG emissions by 30% and community GHG emissions by 20% from 1990 levels by 2012.[13]

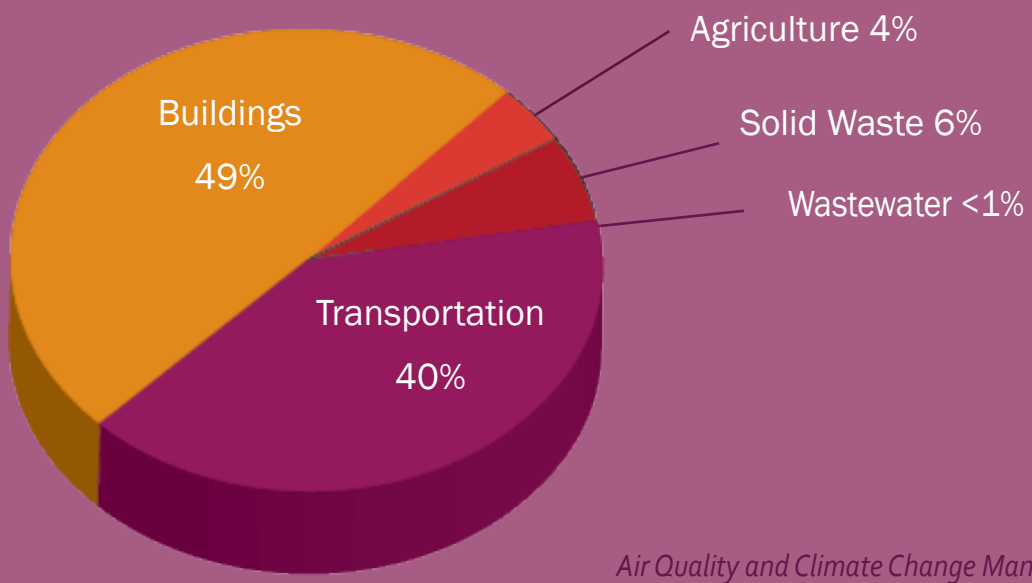
The City of Ottawa did not meet the reduction targets set out in its 2005 plan. Combined, corporate and community emissions dropped by only 12% between 2004 and 2012 (1990 data are difficult to estimate, although they are almost certainly lower than 2004 emissions). According to the City of Ottawa's own assessment, much of the drop in Ottawa's emissions is attributable to the Ontario coal phase-out, as opposed to municipal policies. [14]

In 2014, the City presented a new Air Quality and Climate Change Management Plan, which took stock of updated data on emissions and outlined a new approach for reducing emissions. The City has also made a public commitment to reduce emissions by 80% below 2012 levels by 2050.[15] As noted above, Ottawa's new target is roughly in line with federal and provincial ones.

[11] Government of Ontario (2016). Ontario's Five Year Climate Change Action Plan 2016-2020. Retrieved May 18, 2017 from: https://www.ontario.ca/page/climate-change-action-plan.
[12] Pembina Institute (2016). Race to the Front: Tracking Pan-Canadian Climate Progress and Where We Go From Here. The Pembina Institute. Adapted from Environment and Climate Change Canada.
[13] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.
[14] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.
[15] City of Ottawa (2016). City of Ottawa joins Carbon 613 to help cut greenhouse gas emissions. Retrieved April 19, 2017 from: http://ottawa.ca/en/news/city-ottawa-joins-carbon-613-help-cut-greenhouse-gas-emissions.

In order to fulfill its emissions reduction promises, the City must address emissions in five main areas, as outlined in its 2014 climate plan. These areas are: buildings and the built environment (accounting for 49% of emissions), transportation (accounting for 40%), solid waste (6%), agriculture (4%) and wastewater (<1%). The percentage of Ottawa's CO_2e emissions by end use are illustrated in Figure 2 below.

Figure 2: Percentage of CO_2e emissions by end use, Ottawa 2012



Source: City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.

The City's climate plan and public-facing documents consistently acknowledge the challenge posed by reducing emissions in the areas of buildings and transportation. To this end, the City has made substantial transportation investments. With funding from both other levels of government, the City of Ottawa is currently building a city-wide light rail transit system in two stages. At an estimated $5.1 billion, light rail constitutes the largest infrastructure project in Ottawa's history.

Meanwhile, the City of Ottawa's plan for tackling emissions from buildings and the built environment remains a work in progress. While the 2014 Air Quality and Climate Change Management Plan touches on this area, the City notes that a comprehensive plan for renewable energy, energy efficiency and energy conservation will be contained in the Renewable Energy Strategy, to be presented towards the end of 2017.

3. City of Ottawa progress on pathways to reduce GHG emissions

As part of its proposed Renewable Energy Strategy, the City of Ottawa has committed to developing a series of "pathway analyses" and technical briefings on a wide range of areas impacting emissions. These pathway analyses will touch on a range of sectors including transportation, buildings, waste management and storage.

According to the City, "[t]he pathway studies consider the overall potential and constraints that are likely to reduce uptake of a technology, as well as any control or influence that the City and its community partners may have." [16] The list of the City's proposed pathway analyses, along with interim results analysis on their potential impact on GHG reductions, is included in Figure 3 below:

Figure 3: List of proposed pathway studies with interim results on emission reductions:

Pathway studies	Potential Impact
Renewable energy generation	
Solar - Large scale	Medium
Solar - Commercial rooftop	Medium
Solar - Residential	Small / medium
Waterpower	Small
Heat pumps - Air and ground source	Large
Biogas for renewable natural gas and electricity	Medium
Biomass for renewable fuels and heat	Small / medium
District energy systems	Large
Buildings	
Existing buildings - Conservation and efficiency	Not yet defined
Fuel substitution - Fossil fuel to solar, heat pumps, biomass and surplus base load power	Not yet defined
Higher efficiency new building standards	Not yet defined
Mid density buildings	Not yet defined
Urban intensification	Not yet defined
Transportation	**Not yet defined**
Fuel switching - Renewable fuels and hydrogen	Not yet defined
Electric vehicles - Fleet and commercial	Not yet defined
Electric vehicles - Personal use	Not yet defined

[16] City of Ottawa (2017). Report to Environment and Climate Protection Committee and Council. Retrieved May 18, 2017 from: http://app05.ottawa.ca/sirepub/view.aspx?cabinet=published_meetings&fileid=427140.

Other	
Waste management	Not yet defined
Storage	Not yet defined

Source: City of Ottawa (2017). Report to Environment and Climate Protection Committee and Council. Retrieved May 18, 2017 from: http://appo5.ottawa.ca/sirepub/view.aspx?cabinet=published_meetings&fileid=427140.

As the pathway analyses are currently a work in progress, the City does not have information readily available on each of the items listed in the table above. However, they have implemented a variety of strategies that will impact overall emissions. These strategies can be broken down by the basic categorization used above; they touch primarily on the areas of renewable energy generation, buildings and transportation. Progress on these and other areas is outlined below, based on publically available documentation.

a. Renewable energy generation

To date, the City has produced little to no publically available information on some of the aspects of renewable energy generation proposed for pathway analysis. Public documentation on heat pumps, biogas, biomass and district energy systems is not readily available.

However, the 2014 Air Quality and Climate Change Management Plan provides some information on the City's planned use of solar power. The document provides a commitment to develop a City policy on the use of solar photovoltaic at new and existing City buildings.

To date, the City has used the Government of Ontario's solar incentive structure - namely, the provincial microFIT program which stems from the Green Energy and Green Economy Act. This program pays participants for the electricity generated by their renewable projects. As of 2015, the City had taken advantage of the MicroFIT program to install solar panels on three facilities, generating 23 kilowatts of electricity. The City has also committed to continuing to investigate opportunities to install additional solar and renewable energy projects subject to the availability of incentive programs.[17]

The City of Ottawa has also taken action to expand its energy supply from waterpower. In 2014, Hydro Ottawa (an electricity distribution company owned by the City of Ottawa) was awarded a 40-year contract to expand its use of the Chaudière Falls. Through the construction of a 29 megawatt facility, Hydro Ottawa will generate enough renewable energy to power 20,000 homes for a year. This project will increase Hydro Ottawa's hydroelectric capacity to 58 megawatts. [19]

b. Buildings and the built environment

The City of Ottawa has done work in identifying the energy consumption pattern in its building stock. According to the City, the majority of the energy consumed in buildings is for temperature control (i.e., heating in the winter and cooling in the summer). Secondarily, energy is used for refrigeration and other constant energy uses. Lastly, energy is consumed by equipment used intermittently such as lighting, appliances and electronics. [19]

[17] City of Ottawa (2015). Energy Conservation and Demand Management Plan 2015. Retrieved online May 18, 2017 from: https://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/cdmp_en.pdf.
[18] Energy Ottawa (2014). Hydro Ottawa to expand clean power generation at Chaudière Falls. Retrieved May 18, 2017 from: http://energyottawa.com/generation/hydro-ottawa-to-expand-clean-power-generation-at-chaudiere-falls/.
[19] City of Ottawa (2015). Energy Conservation and Demand Management Plan 2015. Retrieved online May 18, 2017 from: https://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/cdmp_en.pdf.

The City of Ottawa has done work in identifying the energy consumption pattern in its building stock. According to the City, the majority of the energy consumed in buildings is for temperature control (i.e., heating in the winter and cooling in the summer). Secondarily, energy is used for refrigeration and other constant energy uses. Lastly, energy is consumed by equipment used intermittently such as lighting, appliances and electronics.

To address this challenge, the City is seeking to roll out a multi-pronged plan targeting energy conservation and efficiency, fuel substitution, higher building standards and intensification. With the exception of fuel substitution, there is some publically available documentation on each of these aspects.

The City has already done work on retrofits designed to enhance energy efficiency and energy conservation. The Air Quality and Climate Change Management Plan notes that, between 2008 and 2012, the City implemented retrofits at existing facilities that reduced propane and heating oil use by 44% and 71%, respectively. During this same period, the City reduced overall facility emissions by approximately 30% and community emissions fell by 24%. [20]

While the City acknowledges that some of this progress is due to the Ontario coal phase-out, it states that some attribution can be made toward the municipal retrofit program, as well as the expired federal ecoEnergy program and the actions of individual building owners.

Another important initiative to enhance city-wide efficiency and conservation is the City of Ottawa's establishment of the Building Engineering and Energy Management (BEEM) Unit. The BEEM Unit is responsible for unrolling a four-year (2015-2019) investment strategy, where approximately 40 capital measures are implemented within City facilities and associated infrastructure each year, with annual investments of $2 million. Every investment is designed to result in a 5.5-year simple payback through savings in either energy or water waste reduction. Most of these investments will be focused on electrical measures. [21]

When it comes to new buildings, the City enacted a Green Building Policy in 2005. This policy requires that all buildings with a footprint greater than 500 square metres be designed, delivered and certified by the Canada Green Building Council as meeting the LEED "Certified" rating at minimum, and that staff pursue the LEED "Silver" rating when it can be demonstrated the additional investment will be paid back through a reduction in building operating costs over a period of seven years or less. [22]

The City has also made some headway on the issue of urban intensification. The City's Official Plan and most recent Transportation Master Plan support Transit-Oriented Development initiatives, where intensification is prioritized around transit nodes. The City also uses zoning to direct intensification around specified target areas throughout Ottawa - namely, the central area, arterial mainstreets, town centres and mixed-use centres. [23] According to the City, "The intent is to permit and promote higher-density mixed use developments in areas which are easily accessed by the transportation system, including the forthcoming rapid transit network."

[20] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.
[21] City of Ottawa (2015). Energy Conservation and Demand Management Plan 2015. Retrieved online May 18, 2017 from: https://documents.ottawa.ca/sites/documents.ottawa.ca/files/documents/cdmp_en.pdf.
[22] City of Ottawa (2009). Green Building Policy - 2009 status report. Retrieved May 18, 2017 from: http://www.ottawa.ca/calendar/ottawa/citycouncil/occ/2010/06-09/csedc/09%20-%20ACS2010-ICS-INF-0015%20-%20Green%20Building%20Policy-2009%20Status%20Report.
[23] City of Ottawa (2017). Density index. Retrieved May 18, 2017 from: http://ottawa.ca/en/city-hall/public-consultations/planning-and-infrastructure/density-index.
[24] City of Ottawa (2017). Density index. Retrieved May 18, 2017 from: http://ottawa.ca/en/city-hall/public-consultations/planning-and-infrastructure/density-index.

c. Transportation

On the topic of transportation, the City does not yet have public documentation on fuel switching. However, it has some content on electric vehicles as well as a range of detailed plans touching on reduced vehicle use.

The City has embarked on a procurement strategy designed to reduce emissions from its corporate fleet. Through its Municipal Green Fleet Plan, the City has obtained 59 hybrid and/or electric vehicles for use within its municipal fleet. In addition, five City facilities now have one or more electric vehicle charging stations available to the public. [25] Since 2005, the City has purchased 175 hybrid buses, and has pledged to procure buses and other transit vehicles that meet the latest emissions standards available at the time of manufacture. [26]

Further, the Air Quality and Climate Change Management Plan contains a commitment to develop a City policy on electric vehicle charging stations at new and existing City buildings. In 2017, it was announced that the City will install electric vehicle charging stations on five City sites in partnership with Electric Circuit, although the new City policy has not yet been articulated.[27]

The majority of City of Ottawa documentation related to transportation outlines a series of plans designed to reduce vehicle use through transit, cycling and walking. The City's commitment to light rail is a major component here. Not only will light rail facilitate the use of transit by a great number of people, but it is expected to reduce OC Transpo fleet emissions by approximately 94,000 tonnes per year by 2031. [28]

Other major policies to reduce vehicle use and increase cycling, pedestrian and transit use include the City's Complete Streets Policy, the Ottawa Cycling Plan and the Ottawa Pedestrian Plan. These policies and plans are designed to coincide with the modal targets stated in the City's Transportation Master Plan. These targets are outlined in Figure 4 below. [29] In short, the City plans to reduce the modal share of car usage and increase the frequency of trips via transit, cycling and walking over the next few years. If the plan is fully realized, half of all trips during the morning peak period will be made using non-emitting or low-emitting means of transportation.

Figure 4: mode shares and person-trip volumes: 2011 observations and 2031 targets (morning peak period)

Travel mode	Mode share	
	2011	2031
Walking	9.5%	10.0%
Cycling	2.7%	5.0%
Transit	22.4%	26.0%
Automobile passenger	10.7%	9.0%
Automobile driver	54.6%	50.0%

Source: City of Ottawa (2013). Transportation Master Plan. Retrieved May 18, 2017 from: http://documents.ottawa.ca/en/node/5836.

[25] City of Ottawa (2016). City of Ottawa earns national recognition as a top green employer. Retrieved May 18, 2017 from: http://ottawa.ca/en/news/city-ottawa-earns-national-recognition-top-green-employer-0.
[26] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.
[27] City of Ottawa (2017). Report to Environment and Climate Protection Committee and Council. Retrieved May 18, 2017 from: http://app05.ottawa.ca/sirepub/view.aspx?cabinet=published_meetings&fileid=427140.
[28] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.
[29] The City of Ottawa defines 'mode share' or 'modal share' as the proportion of all trips that people make using a given mode of transportation.

d. Other sources of emissions

The City does not yet have much detailed publically accessible literature on other sources of GHG emissions. However, it has some content on waste management. Of particular interest here is the Trail Waste Facility. In partnership with Energy Ottawa (an energy company wholly owned by Hydro Ottawa) and a private partner, the City built a landfill gas power plant at this facility which now generates approximately 6 megawatts of electricity, enough to power 6,000 homes. This project, along with expansion and upgrades of the system, has reduced emissions at the facility by 19% since 2008. [30]

The City has also reduced emissions from waste by reducing overall landfill tonnage. This was done through the roll-out a city-wide green bin program and by moving garbage collection to a bi-weekly schedule. [31]

Conclusion

The City of Ottawa does not act alone on climate policy. The City's capacity for action on reducing GHG emissions is strongly influenced by the strictures and opportunities stemming from federal and provincial policies. In both cases, the City of Ottawa stands at an opportune moment for action on climate change. The federal government must act aggressively to meet its Copenhagen targets, and has rolled out a nation-wide plan for action on climate change that involves investing in areas such as transportation and the built environment. Meanwhile, the provincial government has a multi-billion dollar plan that touches on areas as diverse as building retrofits, electric vehicle subsidies, and renewable energy capacity. The City's GHG reduction targets cohere with targets at the federal and provincial targets, and the City has an opportunity to position itself to receive funding to advance its emission reduction goals in a way that assists with climate progress at other jurisdictional levels.

The community of Ottawa - including the municipal government as well as other stakeholder groups such as the development community, energy providers and non-profit advocacy groups - has a unique opportunity to leverage policy opportunities and funding streams to make progress on reducing GHG emissions at this time. Like other cities in Canada, the City of Ottawa has influence over a range of important areas, especially transportation and the built environment.

In a large number of areas, the City has stated a commitment to introduce policies, but the details on those initiatives remain unclear. This is especially true of the City's plan for improving how we heat, cool and electrify our homes, offices and other buildings. Further, unlike the transportation sector, no single public investment can make a substantive impact on building emissions; instead, a collective impact approach is potentially useful, as it brings a diversity of partners together and allows for cross-pollination and cross-coordination.

Much hinges on the content of the Renewable Energy Strategy, to be presented to City Council in late 2017. As part of this Strategy, well-articulated pathway analyses will play an important role in delineating the economy-wide actions required for Ottawa to do its fair share in the fight against climate change.

[30] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.

[31] City of Ottawa (2014). Air Quality and Climate Change Management Plan. Ottawa: City of Ottawa.

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