

## Problem/Opportunity statement

At this time, the Ottawa community - including the residents, businesses and government of the City of Ottawa - stands 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 emissions. Also like other cities, the Ottawa community's action on climate change is a vital part of larger plans and agreements.

The urgency of action in Ottawa is part of a global challenge to reduce greenhouse gas emissions. According to scientific consensus, anthropogenic climate change is an urgent global problem. According to a recent analysis by the Global Carbon Project, the planet has a mean budget of approximately 600 gigatonnes of carbon dioxide left to emit before the planet warms dangerously by more than 1.5°C to 2°C above pre-industrial levels. To keep within this global carbon budget, the world's countries must realize year-over-year emissions reductions starting by around 2020 and continuing towards full decarbonization by mid-century.<sup>1</sup>

The global nature of the climate challenge requires action at the national and sub-national levels. 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.<sup>2</sup> This entails addressing the Ottawa community's<sup>3</sup> 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 the Ottawa community's emissions, while transportation accounts for 40%.<sup>4</sup>

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 greenhouse gas emissions. However, it lacks content on the City of Ottawa's strategy for energy generation, energy

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<sup>1</sup> Figueres et al. (2017). Three years to safeguard our climate. Retrieved July 7, 2017 from: <https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201>.

<sup>2</sup> 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>.

<sup>3</sup> 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 the entire Ottawa community - all residents and built infrastructure in the city, including urban and rural areas. Accordingly, this document will differentiate between the City of Ottawa and the Ottawa community throughout.

<sup>4</sup> 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>.

conservation and energy efficiency – content related to the building stock that will be covered in a yet-to-be-articulated Renewable Energy Strategy.

With its commitment to light rail, the City has started to make investments that will lead to meaningful action on reducing emissions from transportation. Once completed in 2023, Stage 2 of the City of Ottawa’s light rail project will bring 70% of the population within five kilometres of rail,<sup>5</sup> lessening emissions from daily car travel.

Yet when it comes to buildings and the built environment, policy measures are still 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 the City of Ottawa’s emissions reduction targets. A systemic approach to building retrofits is also required; according to some estimates, at least half of the buildings that will be in use in developed economies by 2050 have already been built.<sup>6</sup> 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.

Addressing climate change means more than responding to a threat to the future health of our city and our livelihoods - it is also an opportunity to redesign the Ottawa community’s energy and building system to promote healthy, green and prosperous city. If we do not step up, and simply continue business as usual, we may find ourselves losing out in the green economy of the future while failing to secure local energy resilience. We will do this while facing increasing climate-related risks damaging infrastructure and livelihoods, in floods, heatwaves and unpredictable weather patterns.

Climate change is too complex of an issue to be resolved by any one entity. Government bodies at all levels, energy producers, distributors and users, developers, investors, and community leaders must work together, rising above the perspective of each organization to find innovative ways of working, relating, and governing to ensure we reach the superordinate goal of prospering as a whole as we shift to a climate-sustaining economy. We know there is demand for action - for example, 73% of Canadians want their governments to do more to limit further climate change from happening, and the vast majority are in favour of various policies to reduce emissions.<sup>7</sup> Beyond policy changes, addressing climate change requires sustained education and culture change, including an inculcation of the inter-generational nature of climate problems and solutions.

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<sup>5</sup> City of Ottawa (2017). About Stage 2 rail. Retrieved July 7, 2017 from: <http://www.stage2lrt.ca/>.

<sup>6</sup> Building Efficiency Initiative (2017). Why focus on existing buildings? Retrieved July 7, 2017 from: <http://www.buildingefficiencyinitiative.org/articles/why-focus-existing-buildings>.

<sup>7</sup> EcoAnalytics (2016). New survey finds Canadians nationwide support government action to spur clean energy. Retrieved August 9, 2017 from: [https://www.ecoanalyticscanada.org/sites/default/files/images/upload/documents/climate-survey-newsrelease\\_051216.pdf](https://www.ecoanalyticscanada.org/sites/default/files/images/upload/documents/climate-survey-newsrelease_051216.pdf).

The next three years are a critical time to plan and collaborate for meaningful action. We stand in a rare moment where governments from the international down to the municipal level all agree that deep cuts in carbon are required to save civilization from catastrophic climate change. There are unprecedented investments in green infrastructure and innovation happening federally now and the foundations for carbon trading are just being laid. No one knows exactly how to do it, but if we are wise enough to work together, we can discover and innovate how to create eco-wealth for the entire Ottawa community now and set up a sturdy foundation for the future.

This collective impact fellowship will set out to understand the problem more deeply in our local context, encourage broader support for innovative and bold policy and investment strategies, access funding and share resources for projects and prototypes that will make meaningful, long term impact.

Are you ready to step into the fire of collective impact? If not you, then who? If not now, then when?

### **Problem/Opportunity statement in a nutshell**

The residents, businesses and government of the Ottawa community will risk not achieving our greenhouse reduction targets unless we radically change the way we build, heat and cool the city. This complex challenge requires municipal planners, developers, investors, energy system operators and community members to work together in unprecedented ways to rapidly transform the energy and building systems across the Ottawa community, in concert with provincial, federal and international efforts. We have the opportunity to build a beautiful, healthy, livable city with future-forward economic development, a city the next generation will thank us for.