

**CLIMATE CHANGE MASTER PLAN – ANNUAL GREENHOUSE GAS
INVENTORIES, STATUS UPDATE AND ADMINISTRATIVE AMENDMENTS**

**PLAN DIRECTEUR SUR LES CHANGEMENTS CLIMATIQUES –
INVENTAIRES ANNUELS DES ÉMISSIONS DE GAZ À EFFET DE SERRE,
RAPPORT D'ÉTAPE ET MODIFICATIONS ADMINISTRATIVES**

COMMITTEE RECOMMENDATIONS

That Council:

- 1. Receive the annual status update on the Climate Change Master Plan, including the 2019 greenhouse gas emissions inventories attached as Document 1 and updates on the eight priority actions as summarized in this report;**
- 2. Approve administrative amendments to the Climate Change Master Plan attached as Document 2 and as outlined in this report.**

RECOMMANDATIONS DU COMITÉ

Que le Conseil :

- 1. prenne acte du rapport d'étape annuel sur le Plan directeur sur les changements climatiques, y compris les inventaires des émissions de GES de 2019, présentés dans le document 1 ci-joint, et les derniers développements concernant les huit mesures prioritaires, résumés dans le présent rapport;**
- 2. approuve les modifications administratives proposées pour le Plan directeur sur les changements climatiques, décrites dans le document 2 ci joint ainsi que dans le présent rapport.**

DOCUMENTATION

1. Director's report, Economic Development and Long Range Planning, Planning, Infrastructure and Economic Development Department, dated 1 December 2020 (ACS2020-PIE-EDP-0043).

Rapport du directeur du Développement Économique et Planification à long terme, Direction générale de la planification, de l'infrastructure et du développement économique, daté le 1 décembre 2020 (ACS2020-PIE-EDP-0043).

2. Extract of Draft Minutes, Standing Committee on Environmental Protection, Water and Waste Management, 15 December 2020.

Extrait de l'ébauche du procès-verbal, Comité permanent de la protection de l'environnement, de l'eau et de la gestion des déchets, le 15 décembre 2020.

**STANDING COMMITTEE ON
ENVIRONMENTAL PROTECTION,
WATER AND WASTE MANAGEMENT**

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**COMITÉ PERMANENT DE LA
PROTECTION DE
L'ENVIRONNEMENT, DE L'EAU ET
DE LA GESTION DES DÉCHETS
RAPPORT 13
LE 27 JANVIER 2020**

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**Report to
Rapport au:**

**Standing Committee on Environmental Protection, Water and Waste Management
Comité permanent de la protection de l'environnement, de l'eau et de la gestion
des déchets**

15 December 2020 / 15 décembre 2020

**and Council
et au Conseil**

27 January 2021 / 27 janvier 2021

**Submitted on December 1, 2020
Soumis le 1er décembre 2020**

**Submitted by
Soumis par:
Don Herweyer**

Director / Directeur

**Economic Development and Long Range Planning / Développement économique
et Planification à long terme**

**Planning, Infrastructure and Economic Development Department / Direction
générale de la planification, de l'infrastructure et du développement économique**

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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2020-PIE-EDP-0043

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**SUBJECT: Climate Change Master Plan – Annual Greenhouse Gas Inventories,
Status Update and Administrative Amendments**

**OBJET: Plan directeur sur les changements climatiques – Inventaires
annuels des émissions de gaz à effet de serre, rapport d'étape et
modifications administratives**

REPORT RECOMMENDATIONS

**That the Standing Committee on Environmental Protection, Water and Waste
Management recommend that Council:**

- 1. Receive the annual status update on the Climate Change Master Plan,
including the 2019 greenhouse gas emissions inventories attached as
Document 1 and updates on the eight priority actions as summarized in
this report;**
- 2. Approve administrative amendments to the Climate Change Master Plan
attached as Document 2 and as outlined in this report.**

RECOMMANDATIONS DU RAPPORT

**Que le Comité permanent de la protection de l'environnement, de l'eau et de la
gestion des déchets recommande au Conseil :**

- 1. de prendre acte du rapport d'étape annuel sur le Plan directeur sur les
changements climatiques, y compris les inventaires des émissions de GES
de 2019, présentés dans le document 1 ci-joint, et les derniers
développements concernant les huit mesures prioritaires, résumés dans le
présent rapport;**
- 2. d'approuver les modifications administratives proposées pour le Plan
directeur sur les changements climatiques, décrites dans le document 2
ci-joint ainsi que dans le présent rapport.**

EXECUTIVE SUMMARY

Assumptions and Analysis

This report includes:

- Results of the 2019 community and corporate greenhouse gas (GHG) inventories
- Annual status update on the Climate Change Master Plan's eight priorities.

In January 2020, Council approved the Climate Change Master Plan, the overarching framework for how Ottawa will mitigate and adapt to climate change over the coming decades. As part of the approved plan, staff committed to providing an annual update on the climate change framework that includes the latest GHG inventories and how Ottawa is tracking towards achieving the GHG emission reduction targets, and a status update on the eight priorities. The eight priorities are:

1. Implement Energy Evolution: Ottawa's Community Energy Transition Strategy.
2. Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy.
3. Apply a climate lens to the new Official Plan and its supporting documents.
4. Apply a climate lens to asset management and capital projects.
5. Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization.
6. Explore carbon sequestration methods and the role of green infrastructure.
7. Encourage private action through education, direct and indirect incentives, municipal support, and advocacy for support of individuals and private organizations by senior levels of government.
8. Develop a governance framework to build corporate and community capacity, align priorities, and share accountability in tackling climate change.

Progress towards achieving the GHG emission reduction targets

The latest community and corporate inventories are for the 2019 calendar year. Community inventories track emissions from activities taking place within the

geographic boundaries of the City of Ottawa. Corporate inventories track emissions under municipal operational control within the corporate organizational structure.

Community emissions decreased 12 per cent between 2012 and 2019; however total emissions increased slightly from 2018 and have remained relatively flat since 2016. This decline in emissions remains primarily attributable to the provincial phase-out of coal plants and a significant reduction in emissions from electricity generation. Per capita emissions dropped from 7.4 tCO₂e per person in 2012 to 6.1 tCO₂e per person in 2019. Roughly 90 per cent of community emissions are attributable to the buildings and transportation sectors, and natural gas consumption was the largest contributing source of emissions.

Corporate emissions decreased 34 per cent between 2012 and 2019, currently exceeding the short-term target to reduce emissions by 30 per cent below 2012 baseline levels by 2025. This decrease in emissions remains primarily due to significant decline in emissions in the solid waste sector which can be attributed to the considerable efficiencies made at the Trail Road Waste Facility. The largest contributing sector to total corporate emissions was fleet, accounting for 63 per cent of total corporate emissions of which 48 per cent was attributed to transit fleet. Directly related, diesel consumption was the largest contributing source of emissions, accounting for 55 per cent of total corporate emissions. Corporate emissions accounted for roughly 4 per cent of total community emissions in 2019.

Looking ahead, staff will:

- Review the GHG inventory methodology and assumptions for 2012 and 2016-2019 to ensure consistency and transparency and update where required
- Complete the 2020 GHG inventory and, if required, revise the 2012 baseline and 2016-2020 GHG inventories based on the above review
- Make the 2012 and 2016-2019 GHG inventory results available on the City's Open Data platform
- Review the GHG inventory methodology and assumptions as part of the five-year update of the Climate Change Master Plan in 2025.

Status Update on the Climate Change Master Plan Priorities

Key achievements in 2020 that supported the advancement of the Climate Change Master Plan priorities include:

- Final Energy Evolution strategy unanimously approved by Council in October 2020 ([ACS2020-PIE-EDP-0036](#)) and shared on ottawa.ca/energyevolution
- *Climate Projections for the National Capital Region* received by Council in June 2020 ([ACS2020-PIE-EDP-0014](#)) and shared on ottawa.ca/climatechange and on [Open Ottawa](#)
- The Draft Official Plan released in November 2020 and shared on Engage.ottawa.ca/the-new-official-plan; climate change mitigation (reduce GHG emissions) and adaptation (prepare for the impacts of climate change) policies are embedded throughout
- Climate change is being considered in the development of Master Plans through analysis of ways to align with Council's greenhouse gas emissions reduction targets and identification of climate risks and adaptation strategies
- Asset Management Plans for core services (water, wastewater, stormwater, roads and bridges) are being developed to meet regulatory deadlines in 2021. The Framework for developing Asset Management Plans includes guidance on how to develop strategies to respond to a high-level risk assessment and includes how climate change could potentially affect assets and levels of service
- More than \$210,000 of external funding was secured to support implementation of Energy Evolution projects
- Five additional funding applications and eight letters of support were submitted (decisions pending) to encourage private action
- The 2018-2022 Mid-term Governance Review report, which was considered by the Finance and Economic Development Committee on December 1, 2020 and will be considered by City Council at its meeting of December 9, 2020, recommends that a new Climate Implications section be added to the standard

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Committee and Council report template. If approved by Council, staff anticipate that the new section will appear in report templates as of January 2021

- An internal Tiger Team comprising of all General Managers, the Chief Financial Officer, the City Manager's Office and Ottawa Public Health established to support implementation of the Climate Change Master Plan
- Climate Change Council Sponsors Group met three times in 2020

To further advance the Climate Change Master Plan priorities, staff continue to implement previously approved recommendations as described further in this report

Amendments to the Climate Change Master Plan

When Council considered the proposed Climate Change Master Plan in January 2020, staff presented two different sets of short, mid and long term GHG emission reduction targets: the former targets set between 2012 and 2016 and the recommended, now approved, targets. To avoid confusion about Council's approved GHG emission reduction targets, staff recommend that Council approve administrative amendments to the Climate Change Master Plan, attached as Document 2, and approve the amended Climate Change Master Plan to support communication and outreach efforts. The administrative amendments to the Climate Change Master Plan do not affect the GHG emission reduction targets or any of the eight priority actions approved by Council in January 2020. If approved, staff will use the final approved text and prepare graphically appealing, well designed and laid out versions of the Climate Change Master Plan in English and French to post on ottawa.ca/climatechange in early 2021.

Financial Implications

There are no financial implications associated with the report recommendations. Financial implications associated with Climate Change Master Plan projects will be explored as projects are further developed in 2021.

Public Consultation/Input

No public consultation was required for this status update report. Public consultation was completed in each of the relevant projects.

RÉSUMÉ

Hypothèses et analyse

Le présent rapport comprend :

- les inventaires des émissions de GES communautaires et municipales de 2019;
- le rapport d'étape annuel sur les huit mesures prioritaires du Plan directeur sur les changements climatiques.

En janvier 2020, le Conseil a approuvé le Plan directeur sur les changements climatiques, un cadre général orientant les efforts que déploiera Ottawa en vue d'atténuer les effets des changements climatiques et de s'y adapter au cours des prochaines décennies. À cette occasion, le personnel s'est engagé à présenter un rapport d'étape annuel sur ce cadre, rapport devant comprendre les plus récents inventaires des GES et indiquer les progrès d'Ottawa relativement aux cibles de réduction des émissions de GES, ainsi qu'un rapport d'étape sur les huit mesures prioritaires, qui vont comme suit :

1. Mettre en œuvre la stratégie « Évolution de l'énergie : la stratégie de la collectivité d'Ottawa pour la transition énergétique ».
2. Évaluer la vulnérabilité aux changements climatiques et élaborer une stratégie de résilience.
3. Appliquer l'optique des changements climatiques au nouveau Plan officiel de la Ville et à ses documents complémentaires.
4. Appliquer l'optique des changements climatiques à la gestion des biens et aux projets d'immobilisation.
5. Explorer la faisabilité de l'établissement de budgets carbone pour la municipalité, notamment les piloter au sein d'une petite partie de l'organisation.
6. Examiner les options pour la séquestration du carbone et le rôle des infrastructures vertes.

7. Encourager les initiatives privées par l'éducation, les mesures incitatives directes et indirectes, le soutien municipal et la défense du soutien des individus et des organisations privées par les paliers supérieurs de gouvernement.
8. Définir une structure de gouvernance afin de renforcer la capacité de la municipalité et de la collectivité à faire face aux changements climatiques, d'harmoniser les priorités des divers intervenants et de partager la responsabilité.

Progrès dans l'atteinte des cibles de réduction des émissions de GES

Les plus récents inventaires des émissions de GES communautaires et municipales se rapportent à l'année civile 2019. Les inventaires communautaires présentent les émissions associées aux activités ayant lieu dans le territoire de la ville d'Ottawa, tandis que les inventaires municipaux recensent celles sous le contrôle opérationnel de la municipalité au sein de sa structure organisationnelle.

De 2012 à 2019, les émissions communautaires ont connu une baisse de 12 %. Cela dit, les émissions totales ont légèrement augmenté depuis 2018, tout en demeurant relativement stables depuis 2016. Cette diminution demeure principalement attribuable à l'élimination progressive, dans l'ensemble de la province, des usines de charbon, ainsi qu'à une réduction importante des émissions issues de la production de l'électricité. Les émissions par habitant sont passées de 7,4 tonnes de CO₂e par personne en 2012 à 6,1 en 2019. Grosso modo, 90 % des émissions communautaires sont imputables au secteur du bâtiment et à celui des transports, la consommation de gaz naturel étant la plus grande source d'émissions de GES.

Quant aux émissions municipales, elles ont diminué de 34 % de 2012 à 2019, une baisse qui dépasse actuellement l'objectif à court terme (d'ici 2025) de réduire ce type d'émissions de 30 % par rapport aux valeurs de référence de 2012. Cette baisse des émissions demeure principalement due à la diminution considérable de celles générées par le secteur des déchets solides, que l'on peut attribuer aux importants gains d'efficacité réalisés à la décharge du chemin Trail. Le parc automobile est le secteur qui contribue le plus aux émissions municipales, représentant à lui seul 63 % du total des émissions municipales, dont 48 % sont attribuables au parc de véhicules de transport en commun. Directement liée au parc automobile, la consommation de diesel constitue la plus grande source d'émissions de GES, représentant 55 % de toutes les émissions

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municipales. Ces dernières représentaient environ 4 % des émissions communautaires totales en 2019.

Pour la suite des choses, le personnel :

- évaluera la méthodologie et les hypothèses associées aux inventaires de 2012 et de la période 2016-2019 et y apportera les changements nécessaires afin d'en garantir la transparence et l'uniformité;
- terminera l'inventaire de 2020 et, si nécessaire, révisera les données de référence de 2012 et les inventaires de 2016-2020 en fonction de l'évaluation susmentionnée;
- rendra disponibles les inventaires de 2012 et de ceux de 2016-2019 sur la plateforme de données ouvertes de la Ville;
- évaluera la méthodologie et les hypothèses associées aux inventaires des GES dans le cadre de la mise à jour quinquennale du Plan directeur sur les changements climatiques de 2025.

Rapport d'étape sur les mesures prioritaires du Plan directeur sur les changements climatiques

Voici les principales réalisations de 2020 qui témoignent des progrès accomplis relativement aux mesures prioritaires du Plan directeur sur les changements climatiques :

- L'approbation unanime de la version finale de la stratégie Évolution de l'énergie par le Conseil en octobre 2020 ([ACS2020-PIE-EDP-0036](#)), et sa diffusion sur ottawa.ca/evolutionenergetique
- La présentation des *Projections climatiques pour la région de la capitale nationale* au Conseil en juin 2020 ([ACS2020-PIE-EDP-0014](#)), et leur diffusion sur ottawa.ca/fr/changementsclimatiques ainsi que sur [Ottawa ouverte](#).
- La présentation de la version provisoire du Plan officiel en novembre 2020, et sa diffusion sur <https://participons.ottawa.ca/nouveau-plan-officiel>. Ont été intégrées au nouveau Plan officiel des politiques d'atténuation des changements

climatiques (diminution des émissions de GES) et d'adaptation aux effets attendus (préparation).

- La prise en considération des changements climatiques dans l'élaboration des plans directeurs, qui passe par une analyse des façons d'atteindre les cibles de réduction des émissions de GES du Conseil et par la définition des risques climatiques et des stratégies d'adaptation.
- L'élaboration de plans de gestion des actifs pour les services essentiels (eau, eaux usées, eaux pluviales, routes et ponts) afin de respecter les échéances réglementaires en 2021. Le cadre pour l'élaboration de ces plans explique la façon de mettre au point des stratégies pour donner suite à une évaluation globale des risques et l'incidence que les changements climatiques pourraient avoir sur les actifs et les niveaux de service.
- La garantie d'un financement externe de plus de 210 000 \$ pour soutenir la réalisation des projets d'Évolution de l'énergie.
- La présentation de cinq demandes de financement additionnelles et de huit lettres d'appui pour encourager les particuliers à agir (décisions en instance).
- La présentation du rapport de l'Examen de mi-mandat de la structure de gestion publique 2018-2022, qui a été étudié par le Comité des finances et du développement économique le 1^{er} décembre 2020 et sera examiné par le Conseil municipal à sa réunion du 9 décembre 2020. Ce rapport recommande l'ajout d'une section sur les répercussions climatiques au modèle normalisé utilisé pour les rapports destinés au Conseil et aux comités. Si le Conseil donne son aval, le personnel s'attend à retrouver la nouvelle section dans les rapports dès janvier 2021.
- La mise sur pied d'une équipe spéciale interne réunissant tous les directeurs généraux, la cheffe des finances, le Bureau du directeur municipal et Santé publique Ottawa pour appuyer l'implantation du Plan directeur sur les changements climatiques.
- La rencontre à trois reprises du Groupe de conseillers parrains sur les changements climatiques en 2020.

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Pour faire davantage valoir les priorités du Plan directeur sur les changements climatiques, le personnel continue d'appliquer les recommandations précédemment approuvées, comme l'explique le présent rapport.

Modification du Plan directeur sur les changements climatiques

Quand le Plan directeur sur les changements climatiques a été présenté au Conseil, en janvier 2020, le personnel avait deux séries de cibles de réductions des émissions de GES à court, moyen et long terme à lui soumettre : celles établies pour la période 2012-2016, et celles qu'il recommandait, qui sont désormais approuvées. Afin d'éviter toute confusion à propos des cibles approuvées par le Conseil, le personnel recommande maintenant à ce dernier d'approuver les modifications administratives proposées pour le Plan directeur sur les changements climatiques, décrites dans le document 2 ci-joint, ainsi que le Plan directeur sur les changements climatiques modifié, des mesures qui faciliteront la communication et la sensibilisation. Ces modifications administratives ne touchent pas les cibles de réduction des émissions de GES, ni les huit mesures prioritaires approuvées par le Conseil en janvier 2020. Si le Conseil acquiesce, le personnel utilisera le texte final approuvé pour préparer un document visuellement attrayant, bien conçu et bien présenté, en versions française et anglaise. Le Plan peaufiné sera affiché sur ottawa.ca/changementsclimatiques au début de 2021.

Répercussions financières

Aucune répercussion financière n'est associée à la mise en œuvre des recommandations du présent rapport. Les répercussions financières liées aux projets du Plan directeur sur les changements climatiques seront étudiées au fil de la mise au point de ces projets en 2021.

Consultation publique/commentaires

Aucune consultation publique n'était requise pour le présent rapport d'étape. Une consultation publique a toutefois été tenue pour chacun des projets concernés.

BACKGROUND

In April 2019, City Council approved a motion to declare a climate emergency ([ACS2019-CCS-ENV-0005](#)) which included the following directions to Council and staff:

1. Officially declare a climate emergency for the purposes of naming, framing, and deepening our commitment to protecting our economy, our eco systems, and our community from climate change.
2. Establish a Council Sponsors Group comprised of representatives from the Standing Committee on Environmental Protection, Water and Waste Management, Planning Committee, Transportation Committee, Transit Commission, the Ottawa Board of Health and the Councillor Liaison of the Environmental Stewardship Advisory Committee.
3. Direct City staff to include the following in the review and update of the Air Quality and Climate Change Management Plan (AQCCMP):
 - a) An analysis of how the AQCCMP's long term target to reduce GHG emissions 80 per cent below 2012 levels by 2050 compares to the IPCC's targets for limiting global warming to 1.5°C
 - b) Midterm (2030) corporate and community GHG emission reduction targets
 - c) Climate Change mitigation and adaptation priorities for next five years (2019-2024) to embed climate change considerations across all elements of City business.
4. Direct City staff to include the following in the Energy Evolution Final Report:
 - a) Status update of Energy Evolution Phase 1 actions
 - b) New concrete actions and resource implications (staff and financial) to achieve GHG emission reduction targets
 - c) Use an equity and inclusion lens in the prioritization of actions
 - d) Funding and savings options for the City when implementing emission reductions
5. Direct City staff to report back, within the 2019 calendar year, on a spending plan for the Hydro Ottawa Dividends Surplus that would help reduce community and

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corporate GHG emissions beyond the scope of the City's current climate targets while also saving money.

6. Direct City staff to complete a vulnerability assessment and develop a climate resiliency strategy to reduce the impacts of a changing climate.
7. Recognize climate change as a strategic priority in the City's Strategic Plan and accompanying budget directions for the remaining Term of Council.
8. Work with senior levels of government to accelerate ambition and action to meet the urgency of climate change and provide additional resources for municipalities and the public to reduce their GHG emissions and build resiliency to climate impacts.

In January 2020, Council approved the Climate Change Master Plan, which included setting new short, mid, and long-term GHG emission reduction targets, and received a project status update ([ACS2019-PIE-EDP-0053](#)) on Energy Evolution including the draft energy and emissions model and a draft list of proposed projects to be more fully developed as part of the Energy Evolution Final Report. Council also directed staff to bring forward the final report for Energy Evolution: Ottawa's Community Energy Transition Strategy in Q2 2020 that included:

- Finalized energy and emissions model.
- A financial and affordability analysis of the model to identify the investment required, the net present value, the return on investment, marginal abatement costs, and employment impacts.
- Detailed descriptions of the proposed Energy Evolution projects listed in this report including roles and responsibilities, timelines, municipal authorities and barriers to implementation, equity and inclusion considerations, and resourcing needs.
- A proposed spending plan for the 2019 Hydro Ottawa Dividend Surplus once the value of the dividend surplus is known.

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In January 2020, Council also directed staff to consider a Climate Impact lens for the template for all Standing Committee reports and that this consideration be referred to the Mid-term Governance Review (Motion 4/8).

In June 2020, Council received the climate projections for the National Capital Region ([ACS2020-PIE-EDP-0014](#)), which provided a comprehensive analysis of future climate conditions in the National Capital Region to 2100. The report includes projected changes in temperature, rainfall, snow, wind and extreme events such as freezing rain, tornadoes and storms. It is the first phase in a three-phase process. The next phase is to undertake climate vulnerability and risk assessments (Phase 2) followed by the development of an Adaptation and Resiliency Strategy and Plan (Phase 3). The climate projections will also inform the development of the Official Plan, Master Plans and Asset Management Plans.

In October 2020, Council unanimously approved the final strategy for Energy Evolution: Ottawa's Community Energy Transition Strategy. Energy Evolution provides a framework for achieving Council's target to reduce community greenhouse gas emissions by 100 per cent by 2050 and corporate greenhouse gas emissions by 100 per cent by 2040. Council also approved the spending plan for the 2019 Hydro Ottawa dividend surplus of \$2.6 million to support Energy Evolution projects ([ACS2020-PIE-EDP-0036](#)).

DISCUSSION

Recommendation #1: Receive the annual status update on the Climate Change Master Plan, including the 2019 GHG emissions inventories attached as Document 1 and updates on the eight priority actions as summarized in this report;

In January 2020, Council approved the Climate Change Master Plan, the overarching framework for how Ottawa will mitigate and adapt to climate change over the coming decades. It has a vision to take unprecedented, collective action that transitions Ottawa to a clean, renewable and resilient city by 2050. The Plan sets guiding principles, goals, GHG emission reduction targets, and eight priority actions for the next five years (2020-2025) that can be embedded into City business. The eight priority actions are:

1. Implement Energy Evolution: Ottawa's Community Energy Transition Strategy.

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2. Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy.
3. Apply a climate lens to the new Official Plan and its supporting documents.
4. Apply a climate lens to asset management and capital projects.
5. Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization.
6. Explore carbon sequestration methods and the role of green infrastructure.
7. Encourage private action through education, direct and indirect incentives, municipal support, and advocacy for support of individuals and private organizations by senior levels of government.
8. Develop a governance framework to build corporate and community capacity, align priorities, and share accountability in tackling climate change.

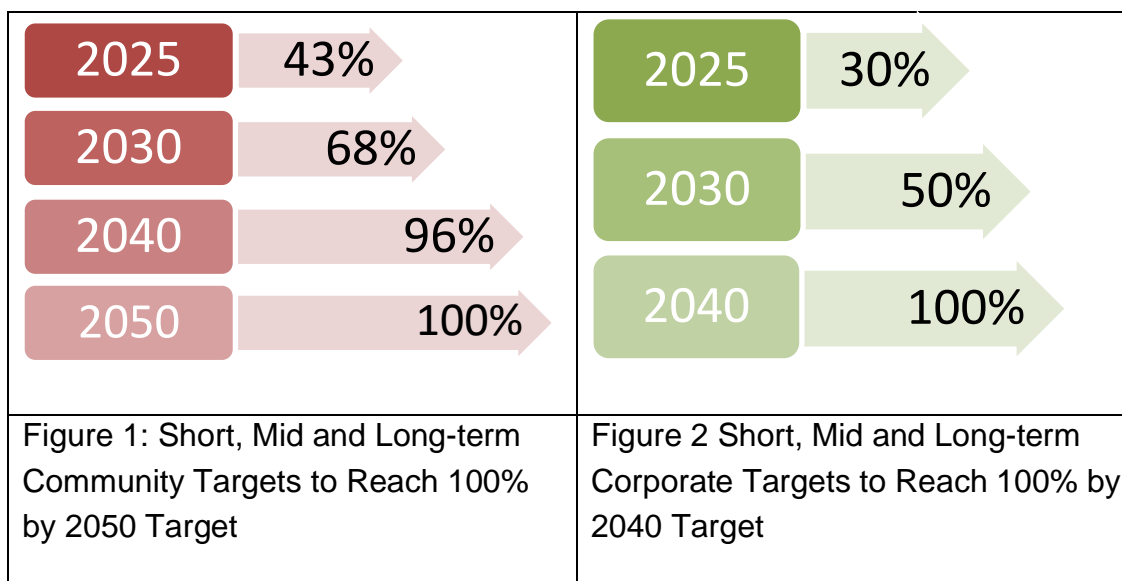
As part of the approved plan, staff committed to providing an annual update on the climate change framework that includes:

- Annual GHG community and corporate inventories
- An assessment of how Ottawa is tracking towards community and corporate targets
- An update on the Climate Change Master Plan priorities
- Recommendations, as required, to advance the Climate Change Master Plan priorities
- New budget pressures, if required.

Annual GHG community and corporate inventories

As part of the Climate Change Master Plan, Council approved short, mid and long-term GHG emission reduction targets to reduce community emissions by 100 per cent by 2050 and corporate emissions by 100 per cent by 2040 (Figures 1 and 2). These targets

align with the Intergovernmental Panel on Climate Change's target to limit global warming increases to 1.5 degrees Celsius.



GHG inventories provide a snapshot of energy use and associated emissions over a given period within the buildings, transportation, waste, and agriculture sectors. Emissions are reported in tonnes of equivalent carbon dioxide emissions (tonnes of CO₂e), which are calculated based on carbon dioxide (CO₂), methane (CH₄), and nitrogen oxide (N₂O) emissions. Inventories follow the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories, which offers a consistent and robust accounting methodology that allows for comparison around the world. They are based on five principles in order to represent a true account of emissions: relevance, completeness, consistency, transparency, and accuracy.

The City of Ottawa undertakes two types of greenhouse gas (GHG) emissions inventories on an annual basis: community inventories and corporate inventories. The latest inventory results are for the 2019 calendar year.

Community inventories track emissions associated with activities within the geographic boundaries of the city of Ottawa and are broken down into four sectors:

- Buildings – includes emissions from residential, commercial, institutional, and industrial buildings; streetlights; and fugitive emissions/

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- Transportation – includes emissions from on-road, aviation, railway, and off-road transportation/
- Waste – includes emissions from solid waste and wastewater treatment/
- Agriculture – includes emissions from crop production and livestock operations/

Corporate inventories are used to track emissions under municipal operational control within the corporate organizational structure and are broken down into four sectors:

- Facilities – includes buildings, streetlights, traffic lights, and light rail transit (stations and vehicles).
- Fleet – includes municipal, transit, and police fleets.
- Solid waste – includes emissions from the Trail Road Waste Facility and Nepean landfill.
- Wastewater treatment – includes emissions from the treatment of wastewater at Robert O. Pickard Environmental Centre.

How Ottawa is tracking towards community and corporate targets

Community Inventory

Between 2012 and 2019, community emissions dropped 12 per cent; however total emissions increased slightly from 2018 and have remained relatively flat since 2016. This decline in emissions remains primarily attributable to the provincial phase out of coal plants and a significant reduction in emissions from electricity generation. Per capita emissions dropped from 7.4 tCO₂e per person in 2012 to 6.1 tCO₂e per person in 2019.

Roughly 90 per cent of community emissions are attributable to the buildings and transportation sectors, a trend that has been consistent since 2012. Waste and agriculture sectors make up the other 10 per cent of emissions. Natural gas consumption was the largest contributing source of emissions, accounting for 38 per cent of total community emissions. Gasoline and diesel consumption were the second and third largest contributors, accounting for 26 per cent and 11 per cent, respectively.

Figure 3 depicts annual community GHG emissions by sector for 2012 and 2016-2019; Figures 4 and 5 depicts community GHG emissions by sector in 2019.

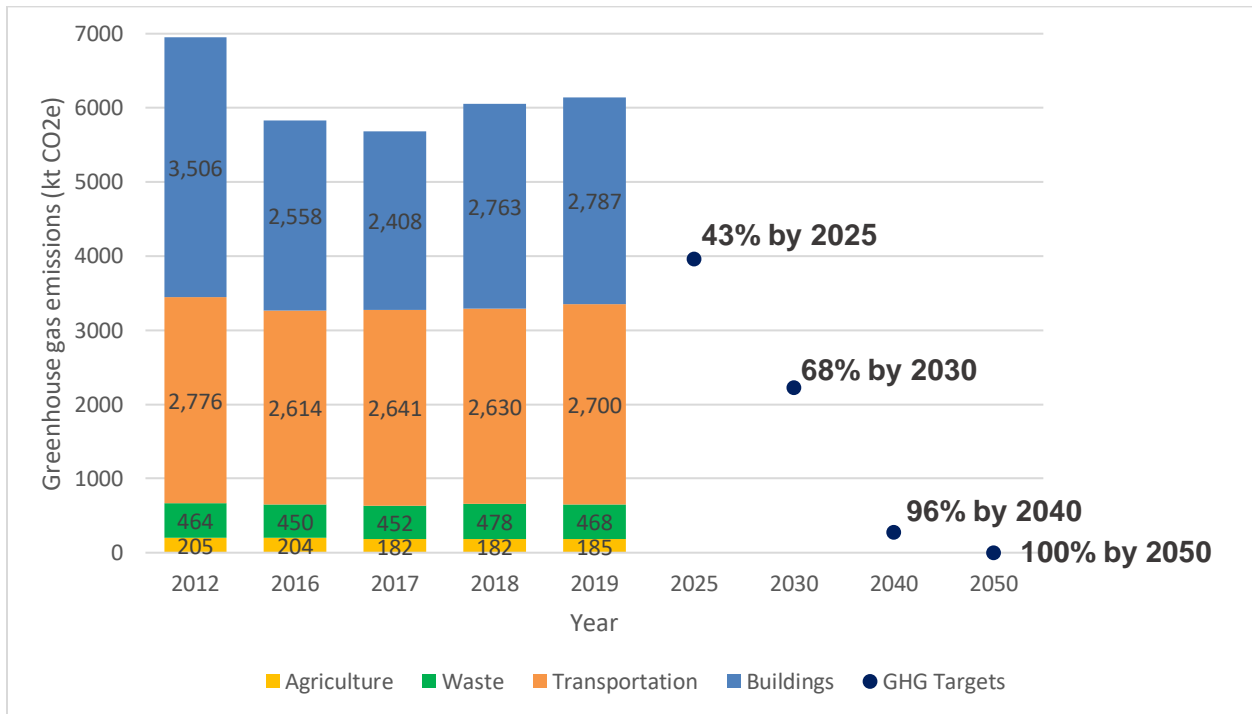


Figure 3: Annual Community GHG Emissions by Sector, 2012 and 2016-2019

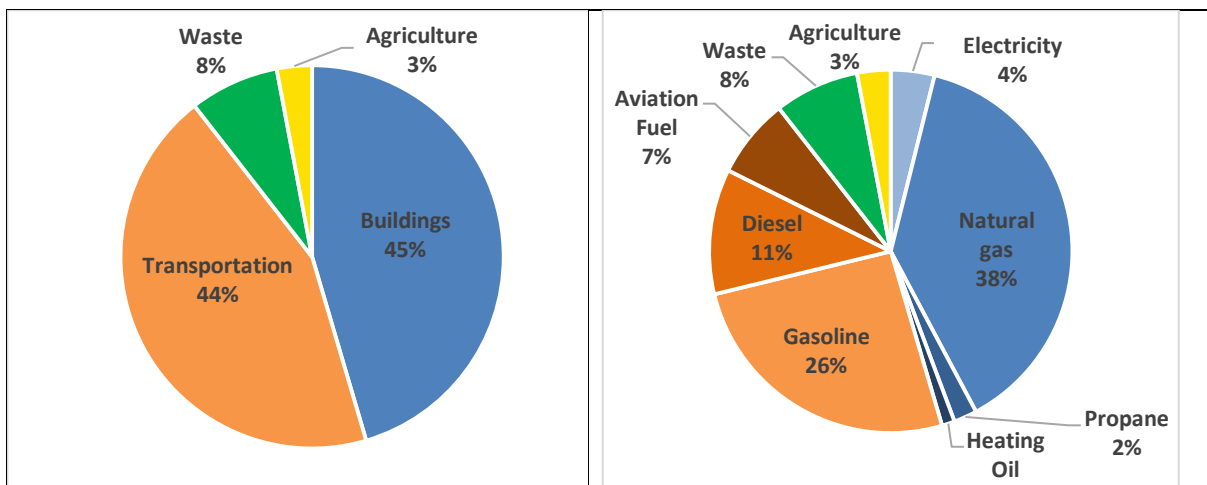


Figure 4: Community GHG Emissions by Sector (2019)

Figure 5: Community GHG Emissions by Source (2019)

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Corporate Inventory

Between 2012 and 2019, corporate emissions decreased by 34 per cent, currently exceeding the short-term target to reduce emissions by 30 per cent below 2012 baseline levels by 2025. This decrease in emissions remains primarily due to the significant decline in emissions in the solid waste sector, accounting for the majority of emission reductions and which can be attributed to the considerable efficiencies made at the Trail Road Waste Facility. As noted last year, emissions from the solid waste sector are anticipated to increase starting in 2021 as a result of requirements to meet provincial regulations. The provincial phase out of coal plants and a significant reduction in emissions associated with electricity generation also contributed to a decrease in total corporate emissions.

The largest contributing sector to total corporate emissions was fleet, accounting for 63 per cent of total corporate emissions of which 48 per cent was attributed to transit fleet. Directly related, diesel consumption was the largest contributing source of emissions, accounting for 55 per cent of total corporate emissions. Corporate emissions accounted for roughly 4 per cent of total community emissions in 2019. Figure 6 depicts annual corporate GHG emissions by sector for 2012 and 2016-2019; Figures 7 and 8 depicts corporate GHG emissions by sector in 2019.

For the first time since 2012, emissions from conventional buses decreased. This is primarily due to the introduction of light rail transit in Ottawa with the launch of O-Train Line 1 and an associated decrease in diesel fuel consumption. Overall diesel fuel consumption by buses in 2019 decreased by 6 per cent compared to 2018. And for the period that the LRT was operational in 2019 between October and December and bus service was reduced, diesel consumption decreased 15 per cent compared to the same period in 2018 and system-wide ridership went up. It should also be noted that due to operational issues in the first months of O-Train Line 1, additional buses were deployed to replace and supplement train service when necessary.

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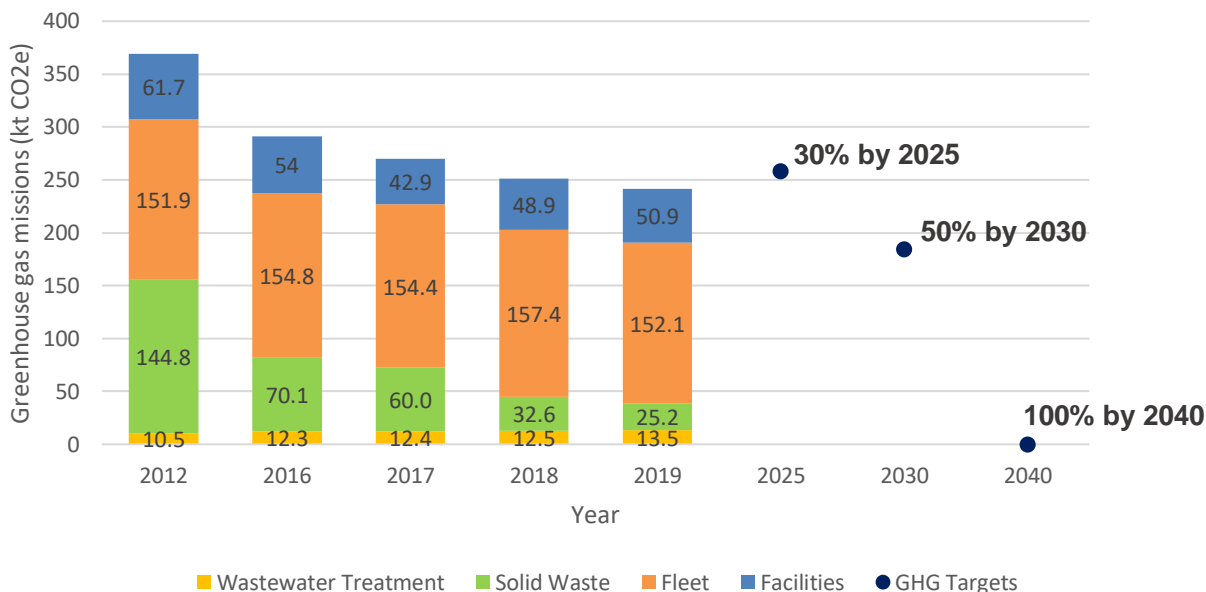


Figure 6: Annual Corporate GHG Emissions by Sector Since 2012

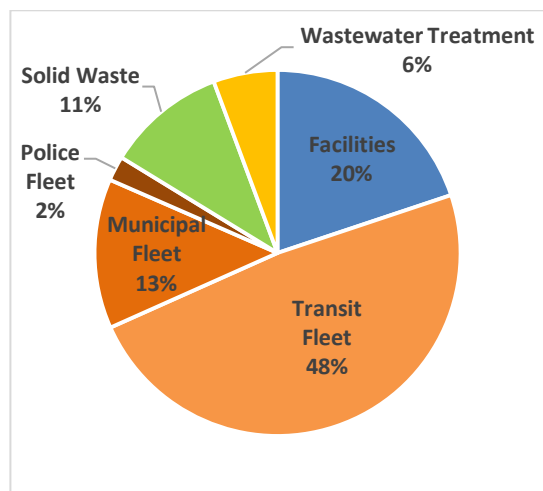


Figure 7: Corporate GHG Emissions by Sector (2019)

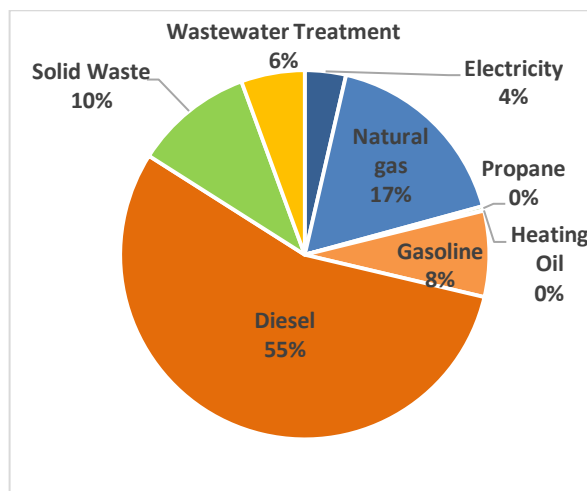


Figure 8: Corporate GHG Emissions by Source (2019)

For a detailed summary of the results of the 2019 GHG inventories, refer to Document 1.

The strategy for what it will take for Ottawa to achieve its GHG emissions reduction targets was Council by approved in October 2020. This strategy, called Energy

Evolution, provides a framework to accelerate action and investment over the next five years (2020-2025) towards achieving the targets. With Council's approval of Energy Evolution, staff move from the planning to the further development and implementation of 20 community and corporate projects. For more information, visit ottawa.ca/energyevolution.

COVID-19

COVID-19 has had global, national, and local impacts on all aspects of society, impacting everything from personal commutes to the amount of energy consumed in buildings to manufacturing of goods.

The Global Carbon Project¹ estimates that during the most intense lock-down periods in early 2020, daily global CO₂ emissions may have been reduced by up to 17 per cent compared to the mean level of daily CO₂ emissions in 2019. As the duration and severity of COVID-19 and associated measures remain unclear, it is difficult to predict the total annual reduction in CO₂ emissions for 2020; however, preliminary estimates by the World Meteorological Organization anticipate a global reduction of between 4.2 per cent and 7.5 per cent compared to 2019 levels². At this scale, an emission reduction of this magnitude will not cause atmospheric CO₂ levels to decrease. They fall well within the natural inter-annual variability which means that in the short-term, the impact of COVID-19 confinement measures cannot be distinguished from natural year-to-year variability.^{3, 4, 5}

¹ World Meteorological Organization/United Nations Environment Programme/Intergovernmental Panel on Climate Change/United Nations Educational, Scientific and Cultural Organization/Intergovernmental Oceanographic Commission/Global Carbon Project, 2020: United in Science 2020: A multi-organization high-level compilation of the latest climate science information, https://library.wmo.int/index.php?lvl=notice_display&id=21761#.X3w_uEBuJjs.

² World Meteorological Organization Greenhouse Gas Bulletin No. 16 | 23 November 2020 The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2019: https://library.wmo.int/doc_num.php?explnum_id=10418

³ World Meteorological Organization Greenhouse Gas Bulletin No. 16 | 23 November 2020 The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2019: https://library.wmo.int/doc_num.php?explnum_id=10418

⁴ Evans, S., 2020: Daily global CO₂ emissions 'cut to 2006 levels' during height of coronavirus crisis. Carbon Brief, <https://www.carbonbrief.org/daily-global-co2-emissionscut-to-2006-levels-during-height-of-coronavirus-crisis>.

⁵ Kutsch W. et al., 2020: Finding a hair in the swimming pool: The signal of changed fossil emissions in the atmosphere. Integrated Carbon Observation System, <https://www.icos-cp.eu/event/917>.

Furthermore, declines in GHG emissions are expected to be temporary and are not expected to have a significant impact on the scale or scope of what's required to achieve the 100 per cent by 2050 GHG emissions reduction target.

Next steps:

Looking ahead, staff will:

- Review the GHG inventory methodology and assumptions for 2012 and 2016-2019 to ensure consistency and transparency and update where required.
- Complete the 2020 GHG inventory and, if required, revise the 2012 baseline and 2016-2020 GHG inventories based on the above review.
- Make the 2012 and 2016-2019 GHG inventory results available on the City's Open Data platform.
- Review the GHG inventory methodology and assumptions as part of the five-year update of the Climate Change Master Plan in 2025.

Update on Climate Change Master Plan priorities

The following provides an update on each of the eight priorities under the Climate Change Master Plan including progress to date in 2020 and next steps.

1. Implement Energy Evolution: Ottawa's Community Energy Transition Strategy

Energy Evolution: Ottawa's Community Energy Transition Strategy sets the framework for what it will take for Ottawa to meet the Council approved long-term targets to reduce community GHG emissions by 100 per cent by 2050 and corporate GHG emissions by 100 per cent by 2040. A comprehensive energy, emissions and finance model was used to identify what it will take to achieve Council approved the targets in five key sectors: Land Use and Growth Management, Buildings (New and Existing), Transportation, Waste and Renewable Natural Gas, and Electricity.

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Progress to date:

- Final Energy Evolution strategy unanimously approved by Council in October 2020 (ACS2020-PIE-EDP-0036) and shared on ottawa.ca/energyevolution.
- A total of 20 projects were identified to accelerate action and investment over the next five year (2020-2025) towards achieving the GHG emission reduction targets.
- Council also approved a spending plan for the \$2.6 million Hydro Ottawa dividend surplus to support implementation of Energy Evolution projects.

Next steps:

- All 20 Energy Evolution projects will be further developed with input from staff, stakeholders, and the public, and brought to the appropriate future Standing Committee and Council for approval, as required.
- Staff will develop a 10-year spending plan that can be considered in annual municipal budget processes and feed into the City's Long-Range Financial Plans. Budget and staffing requirements will be brought forward as part of the annual budget process.
- Staff will continue to engage with and provide training to staff and the public to embed climate considerations more broadly across the corporation and the community.
- Staff will prepare department specific presentations on Energy Evolution starting in Q1 2021 to support on-going alignment of priorities, work plan, and budgets across the corporation.
- Staff will share the Energy Evolution modelling work through the CityInSight tool on ottawa.ca/energyevolution the community can better understand the projected emissions for Ottawa and manipulate the data for their own analysis and research.

2. Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy

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The purpose of the Climate Resiliency Strategy is to assess how Ottawa is vulnerable to climate change and identify strategies to mitigate the greatest risks. The strategy will assess and mitigate climate risks to Ottawa's community, infrastructure, environment and economy. It will be developed in close coordination with internal and external stakeholders to align and integrate with initiatives such as Official Plan and Master Plans, Hazard Assessment Mitigation and Prevention, climate and health vulnerability plan and Comprehensive Asset Management.

Progress to date:

- Climate Projections for the National Capital Region received by Council in June 2020 ([ACS2020-PIE-EDP-0014](#)) and shared on ottawa.ca/climatechange.
- The climate projections study uses the latest climate science and modelling to provide a comprehensive set of data for future temperature, precipitation, wind and extreme events to 2100 under high and moderate climate emission scenarios. The report offers a clear understanding of how Ottawa's weather will change in the coming decades and provides consistent climate information for use across departments, by external stakeholders and the public. The report was developed as a partnership with the National Capital Commission and with technical advice from Environment and Climate Change Canada. Making the data and analysis available publicly saves time and money.
- Data is available on the City's Open Data platform - [Open Ottawa](#).
- Project Charter approved to undertake the climate vulnerability assessment and develop a Climate Resiliency Strategy.

Next steps:

- The vulnerability and risk assessment will be undertaken in collaboration with internal and external stakeholders. Internal and external working groups are being established.
- Project timelines have been delayed due to COVID-19. The vulnerability assessment is planned to be completed by mid-2021 and the Climate Resiliency Strategy by early 2022. An Action Plan will be developed by Q1 2023.

3. Apply a climate lens to the new Official Plan and its supporting documents

The Official Plan provides a vision for the future growth of the city and a policy framework to guide the city's physical development. The plan's vision is for Ottawa to grow to be the most liveable mid-sized city in North America. To achieve this vision, Ottawa must be an energy conscious city where people can live, work and play in all future climate conditions. The Official Plan is an essential tool to meet climate change objectives through land use planning, urban design, regulatory practice, building design and environmental protection.

The new Official Plan will be coordinated with updates to the Transportation Master Plan, Infrastructure Master Plan, Greenspace and Urban Forest Master Plan, Parks Plan, Solid Waste Master Plan and the Development Charges By-law.

Progress to date:

- Preliminary Policy Directions were approved by Council in December 2019 that include policy directions to conserve energy, mitigate greenhouse gas emissions and build resiliency to climate change.
- The Draft Official Plan released in November 2020 and shared on [Engage.ottawa.ca/the-new-official-plan](https://engage.ottawa.ca/the-new-official-plan) embeds climate change mitigation and adaptation policies throughout.
- Policies in the draft Official Plan align with the City's intent to support a sustained transition away from fossil fuels toward a low carbon economy and fulfil both community and corporate greenhouse gas emissions reduction targets. This includes:
 - Energy conservation and efficiency: The plan's growth management strategy and intensification targets support Council's target to reduce emissions 100 per cent by 2050. Intensification requires less energy for transportation by locating housing and employment closer to transit and within walking or cycling distance to services. Implementation tools include the High-Performance Development Standard, Community Energy Plans and the Zoning By-law which will support and enable measures to conserve energy within existing and new growth areas.

- Promoting local energy generation and renewable energy technologies, and simultaneously supporting new green jobs in building construction and energy retrofits.
- Proposed policies build resilience to a changing climate by:
 - Reducing the urban heat island effect and helping protect the vulnerable from extreme heat through shade, urban greening and light-coloured (reflective) roofs, parking lots or other hard surfaces.
 - Reducing flood risks by avoiding building in flood plains, mitigating risks in areas vulnerable to flooding under future climate conditions, adopting stormwater management practices that consider future precipitation, and using low impact development.
 - Protecting trees, wetlands and other natural areas and use nature-based solutions for flood protection, heat mitigation, stormwater management, biodiversity and provide for improved mental, social and physical health.
 - Protecting Ottawa's agricultural sector and enabling local food production throughout the city to build resilience to fluctuating availability and price of food.
- Climate change is being considered in the development of Master Plans through analysis of ways to align with Council's greenhouse gas emissions reduction targets and identification of climate risks and adaptation strategies

Next Steps:

- Stakeholder and public consultation on the Draft Official Plan will be carried out throughout 2021 with Council adoption anticipated for Fall 2021.
- Targeted consultation on climate related draft policies is planned for early 2021.
- Consultation is ongoing on the High-Performance Development Standard, one of the implementation tools to support Draft Official Plan policies.

4. Apply a climate lens to asset management and capital projects

The Comprehensive Asset Management (CAM) program guides the management of the City's \$42 billion worth of assets. Risk management and asset resiliency are already core principles of asset management. Further integrating climate considerations into CAM will enable climate change to be considered alongside additional challenges such as aging infrastructure, growth and limited resources. This project will examine ways to embed climate change considerations into the management of existing assets, the design of new capital projects and current City asset management policies and practices. It supports the City to meet provincial regulations ([O. Reg 588/17](#)) that require municipalities to commit to considering climate change in asset management planning and better positions the City to respond to external funding opportunities.

Progress to date:

- An update to Comprehensive Asset Management Policy has been drafted and refers to the targets and actions in the Climate Change Master Plan. The Comprehensive Asset Management Policy reflects commitment to consider climate change in its asset management systems and processes.
- The framework for developing Asset Management Plans includes guidance on how to develop Asset Management Strategies that are supported by a high-level risk assessment that includes how climate change could potentially affect assets and levels of service.
- The inter-departmental approach to identifying climate risks and opportunities for the initial set of Asset Management Plans enables further assessment to be done through the development of Master Plans and the Climate Resiliency Strategy.
- Asset Management Plans for core services (water, wastewater, stormwater, roads and bridges) are being developed to meet regulatory deadlines in 2021.

Next Steps:

- Asset Management Plans for core infrastructure (water, wastewater, stormwater, roads and bridges) continue to be developed to meet the provincial deadline of July 2021.

- Additional analysis of mitigation and adaptation strategies will be integrated into subsequent Asset Management Plans.

5. Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization

In order to prevent dangerous levels of global warming, scientists have determined that there is a finite amount of carbon dioxide that can be emitted into the atmosphere. This is considered to be the global carbon budget. The latest science data indicates that in order to limit global warming to 1.5°C, the world has a strict global carbon budget of 420 gigatonnes of carbon dioxide equivalent (CO₂e).

Around the world, more and more cities are adopting or exploring the implementation of a carbon budget to support projects that reduce GHG emissions and can be applied to both city-wide and corporate emissions. Developing a carbon budget for Ottawa would involve establishing a local emissions budget and making decisions about how we “spend” our corporate GHG budget within that context. Corporately, a carbon budget could be embedded within the financial budgetary framework. For a carbon budget in Ottawa to be successful, an implementation and monitoring framework would be required.

Progress to date:

- Using a methodology allocating the remaining global carbon budget to cities, Energy Evolution quantifies Ottawa’s remaining carbon budget between 2019 and 2050 as 58 MtCO₂e. If GHG emissions are not reduced rapidly, Ottawa will exceed this carbon budget in less than 10 years.
- Staff are exploring and keeping apprised of progress by other municipalities, including Vancouver and Edmonton who have already developed corporate and community carbon budgets.

Next steps:

- Project timelines have been delayed due to COVID-19. Staff are developing a project charter and consultant statement of work for mid-2021 to:

- Develop a cumulative carbon budget for both the community and City corporate operations that aligns with the 2030 and 2050 GHG targets.
- Assess whether responsibility for specific GHG emissions reductions in the community should be distributed across all departments in the City of Ottawa.
- Assess whether a corporate carbon budget could be embedded within the financial budgetary framework, as has been done in Oslo for example.
- Pilot an implementation and monitoring framework.

6. Explore carbon sequestration methods and the role of green infrastructure

Carbon sequestration is the process through which forestry, agricultural, and wetlands practices capture carbon dioxide caused by activities such as burning fossil fuels and stores it over the long-term. It does not replace the need for action to mitigate climate change and transition off fossil fuels; rather, it complements it. The value of carbon sequestration was identified in both the City's Urban Forest Management Plan and the Significant Woodlands Policy. Additionally, understanding and quantifying the climate benefits of trees, forests and wetlands will support the justification for the active management of the City's forests and wetlands.

To help better understand the potential for carbon sequestration in Ottawa, a number of initiatives should be undertaken within the next couple of years. These include:

- Inventorying forests as carbon sinks
- Monitoring and evaluating changes in carbon in agricultural soils
- Mapping wetlands as functioning carbon sinks
- Exploring carbon market options

Progress to date:

- Staff have adjusted their work plan to reflect competing priorities
- Staff are keeping apprised of carbon sequestration accounting best practices

- Tree inventory for wooded urban parks underway
- Completion of city-wide canopy cover data collection and preliminary analysis

Next Steps:

- Staff are working to complete the recommendations of the first management period of the Urban Forest Management Plan by the end of 2021.
- Staff will include exploring carbon sequestration as part of the second management period of the Urban Forest Management Plan to be initiated in 2022.

7. Encourage private action through education, direct and indirect incentives, municipal support, and advocacy for support of individuals and private organizations by senior levels of government

To mobilize climate mitigation and adaptation actions across all sectors, the City of Ottawa is playing a leadership and coordinating role in:

- Climate education that helps people understand the causes and implications of climate change, the actions we can take now to reduce emissions and build resilience against a changing climate, and the benefits in doing so
- Leveraging other resources where feasible
- Communicating what resources are available
- Recommending, advocating for and promoting incentives to catalyze action (e.g. utility rebates, home protection grants, etc.)
- Assessing municipal tools to support action (e.g. High-Performance Building Standards, Local Improvement Charges, Community Improvement Plans, etc.)
- Setting policies and procedures that facilitate a shift to low carbon and resilient future (e.g. through the Official Plan)

Progress to date:

- Communications and outreach initiatives included:
 - A new Communication and Outreach coordinator was hired in January 2020 to support the Climate Change and Resiliency Section.
 - A new Climate Change e-newsletter was launched in 2020, with seven issues to-date and almost 3500 subscribers.
 - Energy Evolution education and outreach included two Energy Evolution Sounding Board meetings, two public presentations, one city-wide staff presentation, and one ESAC meeting attracting more than 500 people and generating more than 250 unique questions. The Energy Evolution page on Engage Ottawa attracted almost 5,000 views.
 - General climate change education and outreach included presentations to seven community organizations, over 80 social media posts on City and Ottawa Public Health channels which received over 6,500 engagements, and two feature stories on Ottawa.ca focused on private action.
 - Sponsored a community talk on Mass Energy Retrofits co-hosted by Energy Mix Productions and Hub Ottawa which attracted 150 people.
 - Sponsored EnviroCentre's Green Drive Week which featured a daily speaker series, electric vehicle drive-by demo and virtual car tours. Thus far, Drive Green Week has reached 758 residents through live and recorded content Informative available at envirocentre.ca/drive-green-ottawa.
 - Sponsored Plug N' Drive's Mobile Electric Vehicle Education Trailer (MEET) which featured on-site specialists, learning displays, and EV test drives. The MEET attracted more than 150 people between September and November.
- Funding initiatives included:
 - Securing \$130,000 of Natural Resources Canada funding for the installation of 26 electric vehicle chargers at 12 locations in the right of way and one

location at a Park and Ride. Consultations were completed in the fall of 2020. Installations will begin in 2021.

- Securing \$82,450 of Federation of Canadian municipalities funding for a biogas optimization study.
- Submitting four funding applications (decisions pending) to support development or implementation of Energy Evolution projects.
- Submitting nine letters of support provided for community led funding applications.
- Advocacy initiatives included:
 - Submitting comments on four discrete topics to advocate on matters of provincial interest.

Next steps:

- Staff are developing an annual climate change education and outreach program to support private action and the roll out of community focused Energy Evolution and climate resiliency projects.
- Staff are developing an education and incentive program to support homeowners to manage rainwater on their property (for consideration by Committee and Council in 2021).
- Staff will provide comment on the recently released provincial hydrogen strategy white paper.
- Staff are developing an overarching advocacy strategy to advance Energy Evolution and climate resiliency projects.
- Staff will continue to monitor and pursue funding opportunities support implementation of Energy Evolution and climate resiliency projects.

- Staff will review and monitor the progress of the proposed *Canadian Net-Zero Emissions Accountability Act* and continue to identify opportunities for collaboration with the federal government.
- 8. Develop a governance framework to build corporate and community capacity, align priorities, and share accountability in tackling climate change**

Transitioning to a clean, renewable and resilient city will require broad and deep participation in mitigation and adaptation efforts. Through Energy Evolution, the City has identified a comprehensive and ambitious strategy to reduce GHG emissions. Following the development of local climate projections, the City will undertake a vulnerability assessment and develop a climate resiliency strategy to help adapt to the current and future changes of our climate.

Major stakeholders in the National Capital Region including the federal government, the National Capital Commission, the City of Gatineau, Hydro Ottawa, the conservation authorities, and institutions such as universities also have strategies underway to address climate change. However, there is currently no forum in which large or leading organizations can come together to coordinate efforts, align priorities, and mobilize the broader community. This priority will explore governance approaches to support and encourage collaboration over the course of what will be a profound transition.

Progress to date:

- The City established an internal Tiger Team comprised of all General Managers, the Chief Financial Officer, the City Manager's Office and Ottawa Health to support implementation of the Climate Change Master Plan.
- The Climate Change Council Sponsors Group met three times in 2020.
- The 2018-2022 Mid-term Governance Review report, which was considered by the Finance and Economic Development Committee on December 1, 2020 and will be considered by City Council at its meeting of December 9, 2020, recommends that a new Climate Implications section be added to the standard Committee and Council report template. If approved by Council, staff anticipate that the new section will appear in report templates as of January 2021.

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- The City signed a Memorandum of Understanding with the Ottawa Community Foundation confirming our intention to work together to reduce GHG emissions through the new Ottawa Climate Action Fund (OCAF), Ottawa's LC3 Centre. The General Manager of the Planning, Infrastructure and Economic Development Department is a member of the OCAF founding advisory board. OCAF intends to invite Chair Moffat to join the Foundation's new OCAF Committee once OCAF is formally launched in early 2021.

Next steps:

- Staff will develop proposed municipal and community governance structures to support implementation of the Climate Change Master Plan including Energy Evolution and climate resiliency projects.
- Internal and external technical working groups will be established to support the development and implementation of Energy Evolution projects.
- Internal and external advisory groups of key stakeholders will be formed to support the development of the Climate Resiliency Strategy.

Recommendations, as required, to advance the Climate Change Master Plan priorities

Staff are implementing recommendations approved in previous reports as described above.

New budget pressures, if required

Staff and resource pressures will be identified as each of the Climate Change Master Plan priority projects are further developed and brought to Committee and Council, where required. Opportunities to embed financial considerations will be explored in relevant long-range financial plans and future annual budget processes. In October 2020, Council approved \$2.6 million of Hydro Ottawa dividend surplus to advance 13 of the Energy Evolution projects.

Recommendation #2: Approve administrative amendments to the Climate Change Master Plan attached as Document 2 and as outlined in this report;

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When Council considered the proposed Climate Change Master Plan in January 2020, staff presented two different sets of short, mid and long term GHG emission reduction targets: the former targets set between 2012 and 2016 and the recommended, now approved, targets.

To avoid confusion about Council's approved GHG emission reduction targets, staff recommend that Council approve the following administrative amendments to the Climate Change Master Plan, attached as Document 2 and outlined below, and approve the amended Climate Change Master Plan to support communication and outreach efforts:

1. Replace the text "DRAFT - December 2, 2019" on the cover page and in the footer with "Approved January 2020, revised December 2020"
2. Remove all text, table and figure references to the former GHG emission reduction targets:
 - A short-term target to reduce community emissions by 12 per cent by 2024
 - A short-term target to reduce corporate emissions by 20 per cent by 2024
 - A long-term target to reduce community emissions by 80 per cent by 2050
3. Replace priority #5 "Explore community and corporate carbon budgets" on page four with "Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization" to align it to the Climate Change Master Plan staff report approved by Council in January 2020.
4. Replace priority #7 "Encourage private action through education, incentives, and municipal support" on page four with "Encourage private action through education, direct and indirect incentives, municipal support, and advocacy for support of individuals and private organizations by senior levels of government" to align it to the Climate Change Master Plan staff report approved by Council in January 2020.
5. Replace the line graphs in Figures 10 and 12 on pages 14 and 16 with bar graphs that more clearly explain the same information.

6. Remove all references to Annex A – Results of 2017 and 2018 Community and Corporate GHG Inventories and Annex B – List of Corporate Actions. Annexes A and B were attached as supporting documents to the staff report Council approved in January 2020, but they were not included in the approved Climate Change Master Plan. Rather than adding the Annexes, referencing a specific year of GHG Inventory results or an old version of the list of Corporate Climate Change Actions, staff recommend directing the reader to the most current information available on the website.

Annual community and corporate GHG inventories are available on The 2019 community and corporate GHG Inventories will be posted online at ottawa.ca/climatechange after they have been received by Council and future community and corporate GHG inventories will be added as available. Staff will also post GHG inventories on Open Data. The list of Corporate Climate Change Actions is also available on ottawa.ca/climatechange and is periodically updated.

The revised text in the amended Climate Change Master Plan would:

- a. Replace “For a detailed summary of the results, refer to Annex A” with “For a detailed summary of the annual GHG inventory results, visit Ottawa.ca/climatechange” on page 12.
- b. Replace “For further details on the GHG inventories, refer to Annex A” with “For further details on the GHG inventories, refer to Ottawa.ca/climatechange” on page 16.
- c. Replace “For a full list, refer to Annex B” with “For the most recent list, visit Ottawa.ca/climatechange” on page 17.
- d. Replace “For a full list, refer to Annex B” with “For the most recent list, visit Ottawa.ca/climatechange” on page 20.

The administrative amendments to the Climate Change Master Plan do not affect the GHG emission reduction targets or any of the eight priority actions approved by Council in January 2020.

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Next steps

If approved, staff will use the final approved text and prepare graphically appealing, well designed and laid out versions of the Climate Change Master Plan in English and French to post on ottawa.ca/climatechange in early 2021.

RURAL IMPLICATIONS

All regions of Ottawa, including the city's rural areas, are key to meeting the goals of the Climate Change Master Plan. The Climate Change Council Sponsors Group includes a rural Councillor.

CONSULTATION

No public consultation was required for this status update report. Public consultation was completed in each of the relevant projects.

COMMENTS BY THE WARD COUNCILLORS

This is a city-wide report – not applicable.

LEGAL IMPLICATIONS

There are no legal impediments to Committee and Council's approval of the recommendations of this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk implications for this report. Risk implications associated with implementation of the Climate Change Master Plan has been and will continue to be identified and addressed in each of the relevant priority projects.

ASSET MANAGEMENT IMPLICATIONS

As per the status update for Priority #4, Climate Change considerations being actively integrated into the City's CAM Program through direct inclusions in the draft of the updated [CAM Policy](#) and Framework for developing the Asset Management Plans (AMPs). Work is already well underway on the AMPs for core services (water, wastewater, stormwater, roads and bridges). There has been close collaboration between Asset Management Branch and the Climate Change and Resiliency Section to

ensure that climate change considerations are being appropriately addressed and embedded in these key documents.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the report recommendations. Financial implications associated with Climate Change Master Plan projects will be explored as projects are further developed in 2021.

ACCESSIBILITY IMPACTS

Accessibility impacts will be assessed as part of the development and implementation of the Climate Change Master Plan's eight priorities.

ENVIRONMENTAL IMPLICATIONS

The Climate Change Master Plan is a framework for how Ottawa will mitigate and adapt to climate change over the next three decades. It is structured to support limiting global warming to 1.5°C and for Ottawa to become a resilient city.

TERM OF COUNCIL PRIORITIES

The Climate Change Master Plan aligns with the current 2019-2022 Term of Council priority, Environmental Stewardship, to grow and protect a healthy, beautiful, and vibrant city that can adapt to change. Identified outcomes in support of this priority include:

- The City has climate change mitigation and adaptation plans in place
- The City is a leader in energy management and in conserving, recycling and reusing resources
- The City's long-term plan for solid waste includes more diversion from landfills
- The City reduces its greenhouse gas output and embeds climate change considerations across all operations.

**STANDING COMMITTEE ON
ENVIRONMENTAL PROTECTION,
WATER AND WASTE MANAGEMENT**

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**COMITÉ PERMANENT DE LA
PROTECTION DE
L'ENVIRONNEMENT, DE L'EAU ET
DE LA GESTION DES DÉCHETS
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SUPPORTING DOCUMENTATION

Document 1 Results of the 2019 Community and Corporate GHG Inventories

Document 2 Climate Change Master Plan

DISPOSITION

The Planning, Infrastructure and Economic Development Department will continue to coordinate the Climate Change Master Plan with input from various departments to implement the eight priority actions.