

Subject: Climate Change Master Plan – Annual Status Update

File Number: ACS2023-PRE-EDP-0017

Report to Environment and Climate Change Committee on 18 April 2023

and Council 26 April 2023

Submitted on April 4, 2023 by David Wise, Director - Economic Development and Long Range Planning, Planning, Real Estate and Economic Development Department

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Ward: Citywide

Objet : Le Plan directeur sur les changements climatiques : Compte rendu annuel de la situation

Dossier : ACS2023-PRE-EDP-0017

Rapport au Comité de l'environnement et du changement climatique

le 18 avril 2023

et au Conseil le 26 avril 2023

Soumis le 4 avril 2023 par David Wise, Directeur, Développement économique et planification à long terme, Services de la planification, des biens immobiliers et du développement économique

Personne ressource : Jennifer Brown, Gestionnaire de projet, Programmes environnementaux, Direction générale de la planification, de l'immobilier et du développement économique

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Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Environment and Climate Change Committee recommend Council:

- 1. Receive the annual status update on the Climate Change Master Plan and the Climate Change Master Plan progress report attached as Document 1;**
- 2. Direct the Climate Change and Resiliency team with support from departmental senior management teams to develop a Climate Change Resource Plan for consideration in future budgets;**
- 3. Approve that the Mayor, on behalf of Council, advocate to senior levels of government, for accelerated action and ambition to meet the urgency of climate change and provide additional resources for municipalities and the public to reduce their greenhouse gas emissions and build climate resiliency;**
- 4. Approve that Council's respective representatives, on behalf of Council, advocate to the Federation of Canadian Municipalities, the Association of Municipalities of Ontario, Hydro Ottawa, Conservation Authorities, and the Ottawa Climate Action Fund for accelerated action and ambition to meet the urgency of climate change and provide additional resources for municipalities and the public to reduce their greenhouse gas emissions and build climate resiliency;**
- 5. Approve revising the scope of Priority #5 "Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization" of the Climate Change Master Plan to "Establish a carbon budget and accounting framework and explore the feasibility of including embodied carbon".**
- 6. Re-establish the Climate Change Council Sponsors Group as described in this report; and**
- 7. Confirm Councillor King's participation on the Ottawa Climate Action Fund (OCAF) Advisory Board for the 2022-2026 Term of Council.**

RECOMMANDATION(S) DU RAPPORT

Que le comité de l'environnement et du changement climatique recommande

au Conseil :

1. **prenne connaissance du compte rendu annuel de la situation et du rapport d'avancement du Plan directeur sur les changements climatiques, reproduits dans la pièce 1;**
2. **demande à l'équipe chargée des changements climatiques et de la résilience de mettre au point, avec l'aide des équipes de cadres supérieurs des directions générales, le Plan des ressources pour le changement climatique à considérer dans les budgets projetés;**
3. **donne au maire l'approbation de mener, au nom du Conseil municipal, des démarches auprès des ordres supérieurs de gouvernement pour accélérer l'intervention et soutenir l'ambition de répondre à l'urgence des changements climatiques et pour offrir aux municipalités et au public des ressources supplémentaires afin de réduire leurs émissions de gaz à effet de serre et de fortifier la résilience climatique;**
4. **donne aux différents représentants du Conseil municipal l'approbation leur permettant de faire, au nom du Conseil auprès de la Fédération canadienne des municipalités, de l'Association of Municipalities of Ontario, d'Hydro Ottawa, des offices de protection de la nature et du Fonds d'action climatique d'Ottawa, des démarches pour accélérer l'intervention et l'ambition de répondre à l'urgence des changements climatiques et pour offrir des ressources supplémentaires permettant aux municipalités et au public de réduire leurs émissions de gaz à effet de serre et de fortifier la résilience climatique;**
5. **approuve la révision de la portée de la priorité n° 5 (« Explorer la faisabilité de l'établissement de budgets carbone pour la municipalité, notamment en les pilotant au sein d'une petite partie de l'organisation ») pour remplacer ce libellé par « Établir un budget carbone et une structure-cadre de comptabilité et se pencher sur la possibilité d'inclure le carbone intrinsèque »;**
6. **reconstitue le Groupe des conseillers parrains du Conseil municipal sur le changement climatique selon les modalités exposées dans ce rapport;**
7. **confirme la participation de Rawlson King, conseiller municipal, au Conseil consultatif du Fonds d'action climatique d'Ottawa (FACO) pour**

le mandat 2022-2026 du Conseil municipal.

EXECUTIVE SUMMARY

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

- Annual greenhouse gas (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; and
- New budget pressures, if required.

GHG Emission Inventories

The 2021 community and corporate GHG emissions inventories have been delayed to allow for a fulsome review of the inventory methodologies, data sources, and assumptions. Staff will undertake a third-party review of both inventory methodologies and data sources to confirm accuracy, consistency and alignment with reporting practices in historic and future GHG emission inventory results. This will support improved tracking towards the GHG reduction targets, as well as inform initiatives that depend on the accuracy of these results including implementation of the Task Force for Climate-Related Financial Disclosures recommendations and the future carbon budgeting exercise. The results of the 2021 and 2022 inventories will be released following the completion of the third-party review later this year.

Regardless of the outcomes of the third-party review, given the current level of action and investment to-date and early indications that emissions will rebound post-pandemic, it is not expected that Ottawa will achieve its short-term target to reduce community emissions by 43 per cent by 2025. If Ottawa is to meet its mid-term target to reduce emissions by 68 per cent by 2030, emissions will need to decrease substantially each year and significant accelerated action and investment is required. Staff believe the City still is on-track to achieving its short-term target to reduce emissions by 30 per cent by 2025 and 50 per cent by 2030.

Status Update on the Climate Change Master Plan Priorities

This report has been formatted as follows:

- Progress on the eight priorities since the last update in October 2021;
- Notable project and program achievements that contributed to reducing greenhouse gas emissions and/or building climate resiliency since October 2021;
- Challenges experienced over the past year and a half related to budget, staffing, governance, policy and regulatory authorities, data, timelines, and supply chain issues;
- Risk mitigation strategies to help overcome these challenges; and
- Key reports that are expected to be tabled at Committee and Council in 2023 and beyond.

Overall, seven of the eight Climate Change Master Plan priorities have advanced since the last update in October 2021, with considerable progress made on the first four priorities (Table 5). Most priorities are considered in development, with some identified as being off track primarily due to the need for further analysis and consultations because of the significant scale and scope of the projects. A priority is considered off track if it is not proceeding according to the revised milestones and timelines as identified in the last Climate Change Master Plan status update (October 2021). One priority, Priority #6, has not advanced since the last status update. Document 1 of this report provides further details of the status of each priority, including progress made since October 2021, the challenges faced over the past year and a half, and expected progress in 2023 and beyond.

Table 1: Status of the Climate Change Master Plan priorities since October 2021

#	Priority	Status	Schedule
1	Implement Energy Evolution: Ottawa's Community Energy Transition Strategy	Various (see Table 2)	Various (see Table 2)
2	Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy	In development	Off track
3	Apply a climate lens to the new Official Plan and its supporting documents	Official Plan: Implementation Supporting Documents: In development	Off track
4	Apply a climate lens to asset management and capital projects	In development	On track
5	Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the corporation	In development	Off track
6	Explore carbon sequestration methods and the role of green infrastructure	Not started	Off track
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	Implementation	On track
8	Develop a governance framework to build corporate and community capacity, align priorities, and share accountability in tackling climate change	In development	Off track

Energy Evolution: Ottawa’s Community Energy Transition Strategy identified 20 projects to be undertaken by 2025 across six areas: land use, buildings, transportation, waste and renewable natural gas, electricity, and enabling projects. Table 6 summarizes the status of each of Energy Evolution projects.

Table 2: Status of Energy Evolution Projects since October 2021

Sector	Priority project	Status	Schedule
Land use	Integration of energy and climate mitigation policies in the new Official Plan and supporting master plans	Implementation	Off track
Buildings	Better Homes Ottawa Loan Program ¹	Implementation	On track
	Better Buildings Ottawa Strategy and Programs ²	Implementation	On track
	Better Homes and Better Buildings Loan Programs ³	Implementation, embedded in Better Homes Loan and Better Buildings Programs	On track
	Energy and Emissions Community Improvement Plans	In development	Off track
	Community Building Heating Strategy	In development	Off track
	High-Performance Development Standard	Implementation	Off track

¹ Formerly called Residential Building Retrofit Accelerator Program

² Formerly called Commercial Building Retrofit Accelerator Program

³ Formerly called Building Retrofits through Local Improvement Charges

Sector	Priority project	Status	Schedule
	Net Zero Municipal Buildings Project ⁴	In development	Off track
	Municipal Green Building Policy Update	In development – embedded in Net Zero Municipal Buildings Project	Off track
Transportation	Personal Vehicles Electrification Strategy	In development	Off track
	Zero Emission Commercial Vehicles Strategy	Not started	Off track
	Green Fleet Strategy ⁵	In development	Off track
	Alternative Energy Sources for Transit Program	In development	Off track
	Transportation Mode Shift	In development	Off track
Waste and Renewable Natural Gas	Organics Resource Recovery Strategy	In development	Off track
	Renewable Natural Gas Strategy	In development	Off track
Electricity	Electricity Resource Strategy	In development	On track
Enabling Projects	Better Buildings Network ⁶	In progress – embedded into Better Buildings Ottawa project	On track
	Climate Change Education and Outreach Program	Implementation	On track

⁴ Formerly called Municipal Buildings Renewal and Retrofit Program

⁵ Formerly called Update to Municipal Green Fleet Plan

⁶ Formerly called Climate Ambassadors Network

Sector	Priority project	Status	Schedule
	Fund the Evolution	In development	Off track

RÉSUMÉ

Dans le cadre du Plan directeur sur les changements climatiques, qui a été approuvé, le personnel de la Ville s'est engagé à soumettre, relativement au Cadre d'intervention sur les changements climatiques, un compte rendu annuel dans lequel il fait le point sur :

- les inventaires des émissions de gaz à effet de serre (GES) de la collectivité et de la Ville;
- l'évaluation des moyens grâce auxquels Ottawa fait le suivi des progrès accomplis dans la réalisation des cibles de la collectivité et de la Ville;
- les priorités du Plan directeur sur les changements climatiques;
- les recommandations à adopter au besoin pour promouvoir les priorités du Plan directeur sur les changements climatiques;
- les nouveaux impératifs budgétaires, dans les cas nécessaires.

Les inventaires des émissions de GES

Les inventaires des émissions de GES de la collectivité et de la Ville pour 2021 ont été retardés pour permettre d'avoir une vue d'ensemble des méthodologies d'inventaire, des sources de données et des hypothèses. En menant les inventaires de 2021, le personnel de la Ville a signalé que les écarts potentiels pourraient se répercuter sur les résultats des inventaires, notamment les inquiétudes selon lesquelles les émissions de tout le territoire de la Ville pour les déchets solides pourraient avoir été statistiquement sous-comptabilisées. Le personnel de la Ville procédera à un examen indépendant des deux méthodologies d'inventaire et des sources de données afin de confirmer l'exactitude, la cohérence et le respect des pratiques de comptabilisation dans les résultats antérieurs et projetés des inventaires des GES, ce qui permettra d'améliorer le suivi de la réalisation des cibles dans la réduction des GES, en plus d'éclairer les initiatives qui dépendent de l'exactitude de ces résultats, dont la mise en œuvre des recommandations du Groupe de travail sur l'information financière relative aux changements climatiques et les travaux projetés

de budgétisation du carbone. Les résultats des inventaires de 2021 et de 2022 seront publiés à la fin de l'examen indépendant, plus tard cette année.

Sans égard aux résultats de cet examen indépendant et compte tenu du niveau actuel de l'intervention et des investissements jusqu'à maintenant, ainsi que des premières indications qui nous apprennent que les émissions devraient rebondir après la pandémie, on ne s'attend pas à ce qu'Ottawa atteigne sa cible à court terme, soit réduire de 43 %, d'ici 2025, les émissions de la collectivité. Si Ottawa veut atteindre sa cible à moyen terme, soit réduire les émissions de 68 % d'ici 2030, il faudra les abaisser substantiellement chaque année et accélérer considérablement l'intervention et les investissements. Le personnel croit que la Ville est toujours en bonne voie d'atteindre sa cible à court terme, soit réduire ses émissions de 30 % d'ici 2025 et de 50 % d'ici 2030.

Compte rendu de la situation : les priorités du Plan directeur sur les changements climatiques

Ce rapport a été structuré comme suit :

- progrès accomplis dans les huit priorités depuis le dernier compte rendu d'octobre 2021;
- réalisations importantes qui ont permis, dans le cadre des projets et des programmes, de réduire les émissions de gaz à effet de serre et de fortifier la résilience climatique depuis octobre 2021;
- difficultés éprouvées dans la dernière année et demie relativement au budget, aux effectifs, à la gouvernance, aux organismes responsables des politiques et des règlements, aux données, aux délais et aux problèmes de la chaîne logistique;
- stratégies de maîtrise des risques, pour pouvoir triompher de ces difficultés;
- principaux rapports qui devraient être déposés auprès du Comité et du Conseil municipal en 2023 et dans les années suivantes.

Dans l'ensemble, on a accompli des progrès dans sept des huit priorités du Plan directeur sur les changements climatiques depuis le dernier compte rendu d'octobre 2021; les progrès accomplis dans les quatre premières priorités sont considérables (tableau 1). On considère que la plupart des priorités sont en voie d'élaboration, et certaines sont hors voie essentiellement parce qu'il faut mener de nouvelles analyses

et consultations en raison de l'envergure et de la portée considérables des projets. On considère qu'une priorité est hors voie si tout ne se déroule pas selon les étapes et les délais révisés indiqués dans le dernier compte rendu de situation du Plan directeur sur les changements climatiques (octobre 2021). Pour la priorité n° 6, il n'y a pas eu de progrès depuis le dernier compte rendu de situation. La pièce 1 du présent rapport donne de plus amples renseignements sur la situation de chaque priorité, dont les progrès accomplis depuis octobre 2021, les difficultés affrontées au cours des 18 derniers mois, ainsi que les progrès accomplis en 2023 et à accomplir dans les années suivantes.

Tableau 3 : Situation des priorités du Plan directeur sur les changements climatiques depuis octobre 2021

N°	Priorités	Situation	Calendrier
1	Mettre en œuvre l'Évolution énergétique (la Stratégie de la collectivité d'Ottawa pour la transition énergétique).	Différents statuts (cf. le tableau 2).	Différents délais (cf. le tableau 2).
2	Mener une évaluation de la vulnérabilité climatique et mettre au point la Stratégie de la résilience climatique.	En voie d'élaboration	Hors voie
3	Appliquer le point de vue du climat au nouveau Plan officiel et à ses pièces justificatives.	Plan officiel : mise en œuvre Pièces justificatives : en voie d'élaboration	Hors voie
4	Appliquer le point de vue du climat dans les projets de gestion des biens et d'infrastructures.	En voie d'élaboration	En bonne voie
5	Explorer la faisabilité de l'établissement de budgets carbone pour la municipalité, notamment en les pilotant au sein d'une petite partie de l'organisation.	En voie d'élaboration	Hors voie
6	Se pencher sur les méthodes de séquestration du carbone et sur le rôle des infrastructures vertes.	Travaux non lancés	Hors voie
7	Encourager l'intervention privée grâce à la formation, à des mesures d'incitation directes et indirectes, à l'aide municipale et à la promotion du soutien des particuliers et des entreprises privées par les ordres supérieurs de gouvernement.	En cours de mise en œuvre	En bonne voie

N°	Priorités	Situation	Calendrier
8	Mettre au point une structure-cadre de gouvernance pour étoffer la capacité de la Ville et de la collectivité, harmoniser les priorités et prendre en commun la responsabilité de lutter contre les changements climatiques.	En voie d'élaboration	Hors voie

L'Évolution énergétique : la stratégie de la collectivité d'Ottawa pour la transition énergétique faisait état de 20 projets à réaliser d'ici 2025 dans six secteurs d'activité : l'aménagement du territoire, le bâtiment, le transport, la gestion des déchets et le gaz naturel renouvelable, l'électricité et les projets médiateurs. Le tableau 2 fait la synthèse de la situation de chacun des projets de l'Évolution énergétique.

Tableau 4 : Situation des projets de l'Évolution énergétique depuis octobre 2021

Secteurs	Projets prioritaires	Situation	Calendrier
Aménagement du territoire	Intégration des priorités de l'énergie et de l'atténuation des effets climatiques dans le nouveau Plan officiel et dans les plans directeurs complémentaires	Mise en œuvre	Hors voie
Bâtiments	Programme de prêts Maisons durables Ottawa ⁷	Mise en œuvre	En bonne voie
	Stratégie et programmes d'amélioration des bâtiments d'Ottawa ⁸	Mise en œuvre	En bonne voie
	Programme de prêts Maisons durables Ottawa et Programme d'amélioration des bâtiments ⁹	Programme de prêts Maisons durables Ottawa et Programme	En bonne voie

⁷ Ancienne appellation : Programme d'accélération des travaux de modernisation des bâtiments résidentiels.

⁸ Ancienne appellation : Programme d'accélération des travaux de modernisation des bâtiments commerciaux.

⁹ Ancienne appellation : Programme de taxe d'améliorations locales pour la modernisation des bâtiments.

Secteurs	Projets prioritaires	Situation	Calendrier
		d'amélioration des bâtiments	
	Plans d'amélioration de l'efficacité énergétique communautaire	En voie d'élaboration	Hors voie
	Stratégie du chauffage communautaire des bâtiments	En voie d'élaboration	Hors voie
	Norme pour l'aménagement de bâtiments très performants	Mise en œuvre	Hors voie
	Projet de bâtiments municipaux carboneutres ¹⁰	En voie d'élaboration	Hors voie
	Mise à jour de la Politique sur les bâtiments écologiques de la Ville	En voie d'élaboration – projet intégré dans le Projet de bâtiments municipaux carboneutres	Hors voie
Transport	Stratégie d'électrification des voitures particulières	En voie d'élaboration	Hors voie
	Stratégie pour les parcs de véhicules commerciaux non polluants	Projet non lancé	Hors voie
	Stratégie de verdissement du parc automobile ¹¹	En voie d'élaboration	Hors voie

¹⁰ Ancienne appellation : Programme de rénovation et de modernisation des bâtiments municipaux.

¹¹ Ancienne appellation : Plan vert du parc de véhicules municipaux.

Secteurs	Projets prioritaires	Situation	Calendrier
	Programme de transport en commun pour les différentes formes d'énergie	En voie d'élaboration	Hors voie
	Transformation des modes de transport	En voie d'élaboration	Hors voie
Gestion des déchets et gaz naturel renouvelable	Stratégie de récupération des matières organiques	En voie d'élaboration	Hors voie
	Stratégie du gaz naturel renouvelable	En voie d'élaboration	Hors voie
Électricité	Stratégie des ressources en électricité	En voie d'élaboration	En bonne voie
Projets médiateurs	Réseau bâtiments durables Ottawa ¹²	En cours – projet intégré dans le Projet d'amélioration des bâtiments d'Ottawa	En bonne voie
	Programme d'information sur le climat et de sensibilisation aux changements climatiques	Mise en œuvre	En bonne voie
	Financement de l'Évolution	En voie d'élaboration	Hors voie

BACKGROUND

In April 2019, City Council declared a climate emergency for the purposes of naming, framing and deepening our commitment to protecting our economy, our ecosystems, and our community from climate change. ([ACS2019-CCS-ENV-0005](#)).

¹² Ancienne appellation : Réseau des ambassadeurs et des ambassadrices du climat.

In January 2020, Council approved the Climate Change Master Plan, with the vision to undertake collective action to transition Ottawa into a clean, renewable and resilient city by 2050. It included setting new short, mid, and long-term GHG emission reduction targets and eight priority actions ([ACS2019-PIE-EDP-0053](#)). The eight priority actions 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.

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; and
- New budget pressures, if required.

Council has subsequently received two status update reports: one in January 2021 ([ACS2020-PIE-EDP-0043](#)) and one in October 2021 ([ACS2021-PIE-EDP-0039](#)).

DISCUSSION

GHG INVENTORIES

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

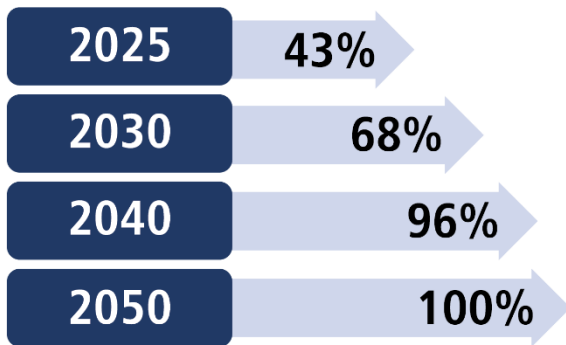


Figure 1: Short, Mid and Long-term Community Targets to Reach 100% by 2050 Target

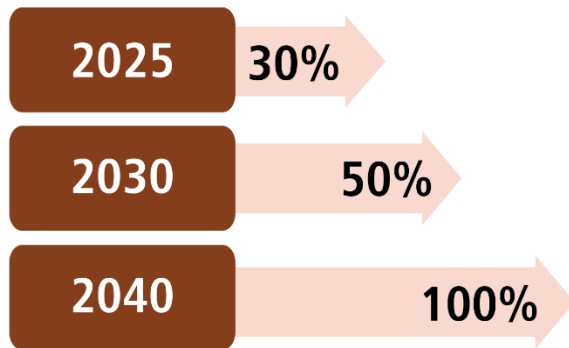


Figure 2: Short, Mid and Long-term Corporate Targets to Reach 100% by 2040 Target

The most recent GHG emissions results are for the 2020 calendar year and indicate a 15 per cent reduction in community emissions and 43 per cent reduction in corporate emissions based on a 2012 baseline. The 2021 community and corporate GHG emissions inventories have been delayed to allow for a fulsome review of the inventory methodologies, data sources, and assumptions. While undertaking the 2021 inventories, staff flagged that there may be potential discrepancies that could impact the inventory results, notably around concerns that city-wide emissions for solid waste may have been historically underreported. Staff will undertake a third-party review of both inventory methodologies and data sources to confirm accuracy, consistency and alignment with reporting practices in historic and future GHG emission inventory results. This will support improved tracking towards the GHG reduction targets, as well as inform initiatives that depend on the accuracy of these results including implementation of the Task Force for Climate-Related Financial Disclosures recommendations and the future carbon budgeting exercise. The results

of the 2021 and 2022 inventories will be released following the completion of the third-party review later this year.

Regardless of the outcomes of the third-party review, given the current level of action and investment to-date and early indications that emissions will rebound post-pandemic, it is not expected that Ottawa will achieve its short-term target to reduce community emissions by 43 per cent by 2025. If Ottawa is to meet its mid-term target to reduce emissions by 68 per cent by 2030, emissions will need to decrease substantially each year and significant accelerated action and investment is required. Staff believe the City still is on-track to achieving its short-term target to reduce emissions by 30 per cent by 2025 and 50 per cent by 2030.

Recommendations 1-5:

1. Receive the annual status update on the Climate Change Master Plan and the Climate Change Master Plan progress report attached as Document 1;
2. Direct the Climate Change and Resiliency team with support from departmental senior management teams to develop a Climate Change Resource Plan for consideration in future budgets;
3. Approve that the Mayor, on behalf of Council, advocate to senior levels of government, for accelerated action and ambition to meet the urgency of climate change and provide additional resources for municipalities and the public to reduce their greenhouse gas emissions and build climate resiliency;
4. Approve that Council's respective representatives, on behalf of Council, advocate to the Federation of Canadian Municipalities, the Association of Municipalities of Ontario, Hydro Ottawa, Conservation Authorities, and the Ottawa Climate Action Fund for accelerated action and ambition to meet the urgency of climate change and provide additional resources for municipalities and the public to reduce their greenhouse gas emissions and build climate resiliency;
5. Approve revising the scope of Priority #5 "Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization" of the Climate Change Master Plan to "Establish a carbon budget and accounting framework and explore the feasibility of including embodied carbon".

a) Status of Climate Change Master Plan Priorities

Overall, seven of the eight Climate Change Master Plan priorities have advanced since the last update in October 2021, with considerable progress made on the first four priorities (Table 53). Most priorities are considered in development, with some identifying as being off track primarily due to the need for further analysis and consultations because of the significant scale and scope of the projects. One priority, Priority #6, has not advanced since the last status update. This is primarily a result of allocating limited staff resource and prioritizing the most critical initiatives to advance climate change goals. Document 1 of this report provides further details of the status of each priority, including progress made since October 2021, the challenges faced over the past year and a half, and expected progress in 2023 and beyond.

Status for each of priority actions is based on the following:

- **Not started** – Priority has not been initiated
- **In development** – Priority is in the development phase for a project, program or plan
- **Implementation** – Priority has shifted from the development phase into the implementation phase for a project, program, or plan
- **Completed / Monitoring** – Priority has reached the end of the implementation phase and is in the monitoring phase
- **Cancelled** – Priority has been cancelled
- **On Track** – Priority is proceeding according to the revised milestones and timelines in the last Climate Change Master Plan status update (October 2021)
- **Off Track** – Priority is not proceeding according to the revised milestones and timelines in the last Climate Change Master Plan update (October 2021)

Table 5: Status of the Climate Change Master Plan priorities since October 2021

#	Priority	Status	Schedule
1	Implement Energy Evolution: Ottawa's Community Energy Transition Strategy	Various (see Table 4)	Various (see Table 4)
2	Undertake a climate vulnerability assessment and develop a Climate	In development	Off track

#	Priority	Status	Schedule
Resiliency Strategy			
3	Apply a climate lens to the new Official Plan and its supporting documents	Official Plan: Implementation Supporting Documents: In development	Off track
4	Apply a climate lens to asset management and capital projects	In development	On track
5	Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the corporation	In development	Off track
6	Explore carbon sequestration methods and the role of green infrastructure	Not started	Off track
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	Implementation	On track
8	Develop a governance framework to build corporate and community capacity, align priorities, and share accountability in tackling climate change	In development	Off track

Energy Evolution: Ottawa's Community Energy Transition Strategy identified 20 projects to be undertaken by 2025 across six areas: land use, buildings, transportation, waste and renewable natural gas, electricity and enabling projects. Table 6 summarizes the status of each Energy Evolution project.

Table 6: Status of Energy Evolution Projects

Sector	Priority project	Status	Schedule
Land use	Integration of energy and climate mitigation policies in the new Official Plan and supporting master plans	Implementation	Off track
Buildings	Better Homes Ottawa Loan Program ¹³	Implementation	On track
	Better Buildings Ottawa Strategy and Programs ¹⁴	Implementation	On track
	Better Homes and Better Buildings Loan Programs ¹⁵	Implementation, embedded in Better Homes Loan and Better Buildings Programs	On track
	Energy and Emissions Community Improvement Plans	In development	Off track
	Community Building Heating Strategy	In development	Off track
	High-Performance Development Standard	Implementation	Off track
	Net Zero Municipal Buildings Project ¹⁶	In development	Off track
	Municipal Green Building Policy Update	In development – embedded in Net	Off track

¹³ Formerly called Residential Building Retrofit Accelerator Program

¹⁴ Formerly called Commercial Building Retrofit Accelerator Program

¹⁵ Formerly called Building Retrofits through Local Improvement Charges

¹⁶ Formerly called Municipal Buildings Renewal and Retrofit Program

Sector	Priority project	Status	Schedule
		Zero Municipal Buildings Project	
Transportation	Personal Vehicles Electrification Strategy	In development	Off track
	Zero Emission Commercial Vehicles Strategy	Not started	Off track
	Green Fleet Strategy ¹⁷	In development	Off track
	Alternative Energy Sources for Transit Program	In development	Off track
	Transportation Mode Shift	In development	Off track
Waste and Renewable Natural Gas	Organics Resource Recovery Strategy	In development	Off track
	Renewable Natural Gas Strategy	In development	Off track
Electricity	Electricity Resource Strategy	In development	On track
Enabling Projects	Better Buildings Network ¹⁸	In progress – embedded into Better Buildings Ottawa project	On track
	Climate Change Education and Outreach Program	Implementation	On track
	Fund the Evolution	In development	Off track

b) Notable Achievements since October 2021

Staff have made considerable progress in advancing specific projects and programs that help reduce greenhouse gas emissions and/or build climate resiliency. Notable

¹⁷ Formerly called Update to Municipal Green Fleet Plan

¹⁸ Formerly called Climate Ambassadors Network

achievements over the past year and a half are summarized in Table 7. For a full list of achievements since October 2021, refer to Document 2.

Table 7: Notable achievements since October 2021

Date	Achievement
November 2021	Better Homes Ottawa Loan Program launched for homeowners to access low-interest, 20-year loans to cover the costs of home energy improvements.
Early 2022	Ottawa's first four zero emission buses went into service.
February 2022	Better Buildings Ottawa launched to support large, privately owned buildings to achieve deep energy retrofits.
April 2022	Council approved the High Performance Development Standard , raising the performance of new building projects to achieve sustainable and resilient design.
April 2022	Council approved the four core Asset Management Plans : Drinking Water, Wastewater, Stormwater, and Transportation, which identified potential climate risks and opportunities to contribute to greenhouse gas emission targets.
Spring/Summer 2022	City installed 26 Level 2 charging stations at 12 locations across the city; two additional Level 3 charging stations were installed at Bob MacQuarrie Recreation Complex.
June 2022	Council received the Climate Vulnerability and Risk Assessment , which identified 40 priority risks to be addressed in the next one to three years and will form the basis of the Climate Resiliency Strategy.
July 2022	Council approved \$1 million in capital close out and \$3.7 million in Hydro Ottawa Dividend Surplus to advance Climate Change Master Plan priorities.
July 2022	Council endorsed the Fossil Fuel Non-Proliferation Treaty .
November 2022	Ministry of Municipal Affairs and Housing approved the new Official Plan , an essential tool to meet climate change

Date	Achievement
	objectives through land use planning, urban design, regulatory practice, building design and environmental protection.
March 2023	Council approved Budget 2023 with more than \$52 million of new investments with moderate or major climate contributions. More than \$30 million of investments are expected to reduce greenhouse gas emissions beyond the Energy Evolution business-as-planned scenario and \$22 million of investments are expected to make a moderate or major contribution to build climate resiliency. For the first time Budget 2023 also applied a climate lens to capital budget requests and included stable, consistent funding of \$5 million annually for the Climate Change Master Plan.
April 2023	A free, comprehensive GHG calculator tool (funded through the City of Ottawa, City of Calgary and the Regional Municipality of Durham) was made available for organizations and individuals to calculate the GHG impacts from capital projects and municipal policies.

Over the same period, City staff secured more than \$760 million of external funding to leverage municipal funds over the coming years. This includes:

- \$350 million funding grant from Infrastructure Canada and a \$380 million loan from the Canada Infrastructure Bank for the purchase of 350 electric buses, charging infrastructure, and building upgrades;
- \$30 million from VanCity Community Investment Bank for the recapitalization of the Better Homes Ottawa Loan Program;
- \$629,970 from Infrastructure Canada's Green and Inclusive Community Buildings program for deep retrofits at the Hintonburg Community Centre;
- \$175,000 and \$34,650 from Federation of Canadian Municipalities' Green Municipal Fund for the Better Buildings Ottawa Benchmarking and Auditing Program and GHG Calculator Tool, respectively;
- \$125,000 from Natural Resources Canada to fund 25 electric vehicle charging stations for municipal fleet vehicles; and

- \$15,000 from ICLEI Canada to support a volunteer program advancing community resiliency private action.

c) Challenges and Risk Mitigation Strategies

The eight Climate Change Master Plan priorities support the vision to take unprecedented collective action to transition Ottawa into a clean, renewable, and resilient city by 2050. As evidenced by Tables 3 through 5, a lot of work has occurred to move closer to realizing this vision; however, there are considerable challenges to meeting the accelerated and unprecedented scale of action and investment required.

Challenges experienced over the past year and a half include: budget, staffing, governance, policy and regulatory authorities, data, timelines, supply chain issues and new and emerging technologies. Some challenges are within the control of the municipality and can be addressed, while others are outside of municipal control. Strategies to mitigate these challenges are highlighted in bold below; where required, staff have made recommendations for consideration by Council.

Budget

- Significant funding is required to accelerate both mitigation and adaptation action and leverage further investment to move beyond business-as-usual and business-as-planned. For mitigation actions alone, Energy Evolution's financial assessment estimated that annual spending of roughly \$687 million net present value (in 2020 dollars) would be required to fund municipal actions including transit and active transportation infrastructure, municipal building retrofits, municipal fleet conversion, sewer heat capture, and to catalyze community action. Costs to implement the Climate Resiliency Strategy will be in addition to Energy Evolution and will not be known until the Strategy is complete in 2024. It is recognized that the municipality alone will not be able to accomplish the scale of investment required. Future year funding commitments by the municipality, combined with revenue streams, private capital sources, and funding from senior levels of government will ultimately influence the City's success in achieving emissions reductions and building climate resiliency. **Staff will continue to develop and refine estimates and bring the information to Committee and Council for consideration when approval is sought on priority projects.**
- Historically, a climate change lens has not been applied to annual budgets and climate change has had limited consideration in current Long Range Financial

Plans. Climate Change Master Plan priorities for Energy Evolution and the Climate Resiliency Strategy have been funded primarily through static operational budgets and the Hydro Ottawa Dividend Surplus, in years where a surplus existed. The amount of the surplus was inconsistent, unpredictable, and at risk of being used for other priorities. Without a stable and consistent source of funding, planning at any scale was difficult. Starting in 2023, staff applied a climate lens to capital budgets demonstrating more than \$52 million of new investments to reduce emissions and build resiliency. Council also approved \$5 million annually to advance the Climate Change Master Plan. This is a good start, and it will help significantly with planning, staffing and early implementation actions, but it is not sufficient to achieve Council's climate goals. **The next Long Range Financial Plans will consider additional funds to advance the Climate Change Master Plan, including Energy Evolution and the Climate Resiliency Strategy. Staff will continue to explore new sources of funding as well as the development of a new community focused Climate Change Financial Plan or Community Climate Change Strategic Initiative to outline how the City can catalyze private action through investment or ramp up to stable funding from senior levels of government in line with Energy Evolution. This report is expected to be tabled at Finance and Corporate Services Committee in Q2 2023.**

- Historically, many provincial and federal funding programs have been oversubscribed, demonstrating the collective need across the country to fund these types of initiatives. For funding applications that are successful, there can be long delays to when the funding gets approved and received. This applies to funding for municipalities as well as the private and not for profit sectors. **Staff will continue to apply for funding as opportunities arise and recommend advocating to senior levels of government to increase and accelerate funding availability as part of the advocacy noted in recommendations 3 and 4.**

Staffing

- Many priorities are off track due to staff capacity – both within the Climate Change and Resiliency Team and the broader corporation. Staffing constraints have put many projects at risk of not meeting their milestones, including community facing projects under Energy Evolution, carbon sequestration, and

the carbon budget and accounting framework. While the Official Plan, Master Plans and Asset Management Plans will incorporate climate change mitigation and resiliency considerations, additional capacity is required to undertake detailed analysis, risk assessment, costing, and implementation planning for actions required to meet GHG targets and build resiliency to climate risks.

With consistent, stable annual funding confirmed for the Climate Change Master Plan, additional staff resources will be allocated to advance climate change goals.

- Since 2019, the Climate Change and Resiliency team has grown from 4 to 15 staff; however, most of the current positions are temporary, job descriptions are not available or reflective of key duties, and the organizational structure is temporary and relatively flat making it difficult for staff to advance into positions based on their level of experience and expertise. Combined, these issues make it difficult to attract or retain talent with the necessary skills, experience, and networks to advance climate goals. Staff in other departments are or will experience increased pressure if expectations to embed climate considerations increase or as emerging projects are defined. **As described in recommendation 2, staff recommend that the Climate Change and Resiliency team, with support from departmental senior leadership teams, lead the development of a Climate Change Resource Plan for consideration in future budgets.**

Governance

- The Climate Change Master Plan's current governance structure focuses primarily on internal governance bodies within the City. It includes roles for a Council Sponsor's Group, a Tiger Team of General Managers and key climate advisors (Directors and Managers from across the corporation). It does not:
 - Account for recent changes to Committees of Councils (e.g., the addition of a new Emergency Preparedness and Protective Services Committee), departmental restructuring or staff changes;
 - Identify or recommend how members of Council who represent the City on other boards (e.g., the Federation of the Canadian Municipalities, the Association of Municipalities of Ontario, Hydro Ottawa, Conservation Authorities, and the Ottawa Climate Action Fund) can advocate for or support implementation of the Climate Change Master Plan;

- Identify governance structures of specific climate projects, define roles and responsibilities for new or emerging areas, or consider how to make use of existing governance structures;
- Identify City roles and responsibilities in catalyzing community action;
- Recommend an external structure to ensure that all levels of government, utilities, stakeholders, and the broader community can work together to effect change and develop joint solutions; or
- Identify or provide direction on decision-making processes.

Staff will consider these challenges and refresh the climate change governance structure in 2023. Specific considerations related to the establishment of a Climate Change Council Sponsors Group and Council representative on the Ottawa Climate Action Fund board are provided in recommendations 4 and 5 below.

- Collective action from all levels of government, utilities, businesses, organizations, and individuals is required to change things at a system level. It is estimated that the majority of emissions within Ottawa are attributable to activities outside the direct control of the municipality; however, research shows that municipalities can influence over half of emission reductions in cities. As additional work is completed to advance the Climate Change Master Plan, Council will have ongoing decisions about what role the corporation will play in reducing or catalyzing community actions to reduce greenhouse gas emissions and build climate resiliency. **Corporate Finance is leading a reporting initiative with the support of the Climate Change and Resiliency team to implement the Task Force for Climate-Related Financial Disclosures (TCFD) recommendations. TCFD is the leading sustainability reporting framework used to identify and disclose climate-related risks and opportunities. The TCFD also supports municipal stakeholders and decision-makers by incorporating reliable and consistent climate-related information into key governance processes. More information about TCFD will be brought forward in a memo to Council in Q2 2023. The first climate-related financial disclosures will be brought forward in Q3 2023 as part of Corporate Finance's Annual Financial Report.**

Policy and Regulatory Authorities

- Provincial and federal government policies, regulations, standards, and authorities can have significant impacts on the corporate and community ability to achieve the City's climate change goals. In some cases, policies like the carbon pricing and zero emission vehicle (ZEV) sales targets support the City's objectives; in other cases, provincial authority over the bulk electricity system or legislative changes can also have negative impacts a project or program, including causing delays or cancelling the project outright (e.g. Bill 23 delayed the launch of the High Performance Development Standard). **As described in recommendations 2 and 3, staff recommend that the Mayor and Council's respective representatives advocate, on behalf of Council, to senior levels of government, the Federation of Canadian Municipalities, the Association of Municipalities of Ontario, Hydro Ottawa, Conservation Authorities, the Ottawa Climate Action Fund, and other potential partners for accelerated action and ambition to meet the urgency of climate change and provide additional resources and support for municipalities and the public to reduce their greenhouse gas emissions and build climate resiliency.**
- There is no City policy or requirement that mandates that a climate lens be applied to a project or program in the early stages of development. If emission reductions, climate projections or climate hazards are not considered in the project planning phase, projects may experience carbon lock in or be exposed to increased climate risks. **Staff will review project management processes and procedures to identify opportunities to embed climate considerations earlier in the process.**

Data

- GHG emission inventories are an evolving field with changing methodology and data sources. Given how foundational inventories are for tracking progress towards achieving GHG targets, implementing the Task Force for Climate-Related Financial Disclosures recommendations and carbon budgeting, **staff will undertake a third-party review of both inventory methodologies and data sources to confirm accuracy, consistency and alignment with reporting practices in historic and future GHG emission inventory results.**
- Accessing timely and reliable data from external sources is a challenge and impacts the City's ability to support decision makers and track progress,

including inability to track progress on specific projects or programs or reporting out on the annual GHG inventories. For example, Environment Canada releases its National Inventory Report two years later whereby 2020 data was reported in 2022 and 2021 specific data was not available at the time of this report. **Staff recommend advocating for more timely and reliable data as part of advocacy to senior levels of government.**

- Key performance indicators have still not been defined in many of the strategies and plans that support the goals of the Climate Change Master Plan (including the Climate Resiliency Strategy, Asset Management Plans, and Master Plans). Some preliminary indicators have been identified in Document 2 but as the number of key performance indicators grow, it will take more resources to properly track and report on the information, particularly for indicators associated with private action. **Staff will continue to develop performance indicators and a dashboard for use on the City’s website to make the information easier to access. Staff will also consider the resource requirements as part of the recommended Climate Change Resource Plan.**
- Embodied carbon (i.e. GHG emissions arising during manufacturing, transport and construction of building or infrastructure materials with end-of-life emissions) is currently out of scope in Council’s GHG reduction targets and annual GHG emission inventories. Emerging bodies of research suggest that embodied carbon is a considerable source of emissions and requires further research on to how best to embed it in the GHG emissions inventories and targets. **As described in recommendation 5, staff recommend revising the scope of Priority #5 from “Explore the feasibility of setting corporate carbon budgets, including piloting them in a small portion of the organization” of the Climate Change Master Plan to “Establish a carbon budget and accounting framework and explore the feasibility of including embodied carbon”.**

Timelines

- Many key plans and strategies that support the goals of the Climate Change Master Plan have had to extend their timelines past the initial completion date. This can be attributed to the need for further analysis and consultations to support the scale, scope and complexity of the projects, the amount of staff and resources available, the pandemic and its impact on staff capacity and

priorities, external consultations and surveys, and the impact of the 2022 municipal election. Furthermore, aggressive implementation timelines have not necessarily aligned with or accounted for typical City processes including capital budget approval, long-range financial plan, planning, consultation, approvals, design, construction, and commissioning or account for provincial or federal approval processes that are out of the City's control. **Staff will continue to advance the Climate Change Master Plan with approved resources and budgets. The \$5 million Climate Change Master Plan spending plan includes funding for some projects that are off track. Staff will also continue to identify risks and potential solutions to key Climate Advisors, the Climate Change Tiger Team of General Managers, the Climate Change Council Sponsors Group, appropriate Committees of Council, and Council.**

- The timing of annual Climate Change Master Plan status updates has been inconsistent. Factors affecting the timing include staff capacity, availability of data, and election cycles. In non-election years, staff recommend bringing the status update including the annual GHG inventories in the fall before the annual budget is tabled. In election years, staff recommend bringing the status update early in the new Term of Council and providing an update on the annual GHG inventories in the fall, when data is available. **Staff will work with the Climate Change Council Sponsors Group and others to refine the timing and format for Council updates, aiming for consistency where possible. See recommendation 6 below for additional considerations in the re-establishment of the Climate Change Council Sponsors Group.**

Supply Chain Issues and New and Emerging Technologies

- Current and continued supply chain issues, compounded by rising interest rates and inflation will impact the City's and community's ability to accelerate action and investment. **Staff will take these risks into consideration when developing upcoming key strategic plans (e.g., Municipal Green Fleet Strategy), annual budgets, and Long Range Financial Plans.**
- Some projects are reliant on new and emerging technologies, which come with additional financial and operational risks. They will also require accelerated training and scaling up of the workforce to implement, monitor, maintain and operate these new technologies. **Staff will take these risks into consideration as projects are developed.**

d) Looking Ahead

Staff will continue to move forward on initiatives that support climate change action and investment. Table 8 lists key reports that are expected to be tabled at Committee and Council in 2023.

Table 8: Key 2023 Legislative Agenda Items that Support City's Climate Change Goals

Timing	Report	Committee(s)
Q1	Climate Lens in Budget 2023	All
Q1	Wastewater Energy Transfer Pilot Project	ECCC
Q2	Transportation Master Plan (Phase 1)	Transportation
Q2	Better Homes Ottawa Loan Program (BHOLP) Update and Program Amendments	FCSC
Q2	Climate Change Master Plan Annual Status Update	ECCC
Q2	High Performance Development Standard Site Plan Control Bylaw Update	ECCC
Q2	Community Climate Change Strategic Initiative	FCSC
Q2	Better Buildings Ottawa Loan Program Creation Report	FCSC
Q3	Task Force on Climate-Related Financial Disclosures (TCFD) section of Corporate Finance's Annual Financial Report	Memo to Council
Q3	Building Performance Standards and Emissions Community Improvement Plan	ECCC
Q3	Draft Solid Waste Master Plan	ECCC
Q3/Q4	Update to Asset Management Strategy	FCSC
Q4	Update Infrastructure Master Plan	PHC
Q4	Updated Corporate EV Policy	ECCC

Timing	Report	Committee(s)
Q4	Personal EV Strategy	ECCC
Q4	Draft Climate Resiliency Strategy	ECCC

There are also major plans, projects, and programs that are currently in development that will have a direct impact or influence on reducing emissions and building climate resiliency. These are anticipated to be tabled at Committee and Council in 2024 and 2025 and highlights include:

- Final versions of the Transportation Master Plan, Solid Waste Master Plan, and Climate Resiliency Strategy
- A new Zoning By-Law and updates to the Greenspace and Urban Forest Master Plan;
- Asset Management Plans for all other City services;
- New Municipal Green Fleet Strategy; and
- New Net Zero Municipal Buildings Project / Update to the Green Building Policy.

Staff will continue to leverage external funding when opportunities arise, as well as continue to participate in external consultations to advocate for regulatory and legislative changes that support the Climate Change Master Plan priorities.

Recommendation 6: Re-establish the Climate Change Council Sponsors Group as described in this report

On April 24, 2019, Council considered the Councillor’s report titled, “City of Ottawa – Declaration of Climate Emergency,” and approved the establishment of a Council Sponsors Group to provide guidance on the Review and Update of the Air Quality and Climate Change Management Plan (AQCCMP) and the Energy Evolution Final Report. Subsequently, on June 26, 2019, Council considered the Committee report titled, “Membership of Council Climate Change Sponsors Group” and approved the membership for the then Council Climate Change Sponsors Group. Staff recommend re-establishing the Sponsors Group for the 2022-2026 Term of Council. The mandate of the Climate Change Council Sponsors Group is to champion and support implementation of the Climate Change Master Plan, including eight priority actions that can be embedded into City business.

As part of the Governance Review report, City Council directed the City Clerk to undertake a review of the City's consultative bodies, including Council Sponsors Groups. The City Clerk is expected to submit his report on this topic to City Council in Q2 2023. Any tools, guidance, or other matters arising from the City Clerk's report will be incorporated into the practices associated with the Climate Change Council Sponsors Group and/or brought forward to the Environment and Climate Change Committee for its consideration, as appropriate.

Recommendation 7: Confirm C. King's participation on the Ottawa Climate Action Fund (OCAF) Advisory Board for the 2022-2026 Term of Council

In May 2020, the City of Ottawa and the Ottawa Community Foundation entered into a Memorandum of Understanding (MOU) to confirm their intention and willingness to engage in discussions and work together on reducing greenhouse gas emissions. As part of the MOU, the City committed to designating a representative to participate on the OCAF advisory board. In consultation with OCAF and the Mayor's office, staff recommend that Council confirm Councillor King's participation on the OCAF Advisory Board for the 2022-2026 Term of Council.

FINANCIAL IMPLICATIONS

Recommendation 1, 5-7: There are no direct financial implications. Recommendation 2 to 4: Budget requests will be brought forward in future budgets to address resourcing requirements, subject to the outcome of staff's consideration and funding.

LEGAL IMPLICATIONS

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

COMMENTS BY THE WARD COUNCILLOR(S)

This section is not applicable as it is a city-wide report.

ADVISORY COMMITTEE(S) COMMENTS

The advisory committees were not formalized for the 2022-2026 Term of Council at the time of this report.

CONSULTATION

No public consultation was required for this report. Public consultation was and will be completed for each of the Climate Change Master Plan priorities as required.

ACCESSIBILITY IMPACTS

All actions taken under the Climate Change Master Plan will follow the City's accessibility legislative framework including the requirements of the *Accessibility for Ontarians with Disabilities Act (2005)* and the *Integrated Accessibility Standards Regulation, 191/11* and meet the City of Ottawa Accessibility Design Standards to the greatest extent possible.

As part of Energy Evolution: Ottawa's Community Energy Transition Strategy, projects have been identified to be undertaken by 2025 across six areas in land use, buildings, transportation, waste and renewable natural gas, electricity and enabling projects. Each individual project will have direct consideration on its impact to people with disabilities.

ASSET MANAGEMENT IMPLICATIONS

The City's Comprehensive Asset Management (CAM) Policy identifies sustainability among its guiding principles and emphasizes the need to move towards being a more sustainable, resilient community through an increased emphasis on mitigating climate change risks and vulnerabilities. As per the status update for Priority #4, Climate Change considerations are integrated into the CAM Program through direct inclusions in the CAM Policy and the Framework for developing the Asset Management Plans (AMPs). The AMPs for core services (water, wastewater, stormwater, roads, and bridges) are complete, and work is underway on the update to the Asset Management Strategy and the AMPs for the City's other assets. Close collaboration between Asset Management Services and the Climate Change and Resiliency Section continues to ensure that climate change considerations are being appropriately addressed and embedded in these key documents.

CLIMATE IMPLICATIONS

This report covers climate implications associated with significant policies, programs, and plans being developed to achieve the vision of the Climate Change Master Plan to take unprecedented collective action to transition Ottawa into a clean, renewable and resilient city by 2050. Climate implications associated with Climate Change Master Plan projects will be explored as the priorities continue to be further developed in 2023.

ECONOMIC IMPLICATIONS

Economic implications associated with the Climate Change Master Plan eight priorities will be explored and considered as the priorities are further developed and implemented.

ENVIRONMENTAL IMPLICATIONS

Environmental implications associated with the Climate Change Master Plan eight priorities will be explored and considered as the priorities are further developed and implemented.

INDIGENOUS GENDER AND EQUITY IMPLICATIONS

One of the guiding principles of the Climate Change Master Plan is that all decision-making processes incorporate equity and inclusion considerations. Indigenous, gender and equity implications associated with the Climate Change Master Plan eight priorities will be explored and considered as they are developed and implemented.

RISK MANAGEMENT IMPLICATIONS

There are risk implications. As part of the corporate risk register, the following corporate-wide risks were identified related to climate change:

- Climate Change GHG Reduction Targets – Failing to meet short, mid and long-term corporate and community greenhouse gas emission (GHG) reduction targets due to delayed or inadequate implementation of Energy Evolution. Challenges with meeting these targets include limited budget and staffing to meet the aggressive scale of action and investment required to develop, implement and operate/maintain projects; delays due to competing priorities, regulatory barriers and authority limitations, supply chain issues, and new and emerging technologies.
- Climate change; extreme weather events – Local climate projections indicate that temperatures and precipitation will increase, and seasons will shift over the coming decades. There is also a risk of climate change increasing extreme weather events in Ottawa and the surrounding region. Adapting to the effects of climate change and responding to extreme weather events increases strain on resources for the city and its stakeholders. Strained resources such as staff, financial, and competing priorities have a direct impact on the City's response to such events and ability to deliver services. Climate change can

damage infrastructure and impact public health, the natural environment and the economy. While floods are recognized as the most costly natural disaster, extreme heat is a leading cause of death among climate change-related weather events. In addition to the dangers to human health, extreme-heat events pose risks to infrastructure such as train tracks, roads and electricity grids, and can harm plants and animals (including those supporting food production). All can adversely affect the economy. Global and national climate events can impact the City's supply chain and increase costs.

These corporate risks are being tracked through internal processes.

RURAL IMPLICATIONS

Rural implications associated with the Climate Change Master Plan eight priorities will be explored and considered as the priorities are further developed and implemented.

TECHNOLOGY IMPLICATIONS

Technology implications associated with the Climate Change Master Plan eight priorities will be explored and considered as the priorities are further developed and implemented.

SUPPORTING DOCUMENTATION

Document 1 – Climate Change Master Plan Priorities Progress Report

DISPOSITION

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