Appendix 1.1

Summary of implementation progress to date for the Short-term Implementation Plan 2022-2025 of the TransformTO Net Zero Strategy

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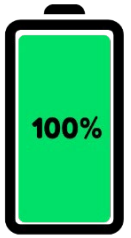
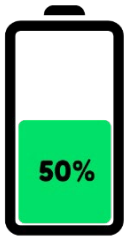
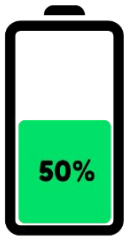
Progress to date on actions from the TransformTO Net Zero Strategy Short-term Implementation Plan 2022-2025 (2021.IE26.16, Attachment A).

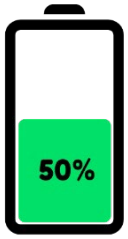
	Actions for implementation 2022-2025	Responsible Divisions & Agencies.* Lead is first.	Description of action from Short-term Implementation Plan	Progress description	Progress to date
1	Ensure near zero emissions for all new construction	CP, E&C	New construction activities 2022-2025 include: i. Implement the Toronto Green Standard, which requires net zero emissions for new development applications in 2030. ii. Review options to advance higher levels of uptake of Tier 2 and 3 buildings to facilitate transformation to net zero earlier than 2030.	Toronto Green Standard (TGS) Version 4 came into effect for new planning applications in May 2022, including requirements for energy and emissions caps for new builds above the Ontario Building Code, electric vehicle charging, green infrastructure and more. The TGS was updated in May 2023 to include embodied emissions caps for Tier 2+ and City-owned projects. The TGS Communication Strategy was launched in October 2023. Environment & Climate has created an RFP to conduct a study on the emissions-related targets for TGS v5. The study will occur during 2024 and will be used to create ambitious but feasible carbon targets for new development in Toronto.	

				Environment & Climate has worked with City Planning to develop appropriate zoning by-law language to allow underutilized mechanical penthouse space into amenity or residential space. In 2023, Environment & Climate and City Planning developed the necessary Zoning By-law Amendment language needed to repurpose underutilized mechanical penthouse space in buildings that include low-carbon energy systems.	
2	Evaluate and limit impacts of embodied carbon in construction	CP, E&C	More information is needed to understand what kinds of materials and construction techniques should be used for Toronto. The City will study the impacts and set embodied carbon limits for building materials and construction practices in new buildings.	The report, TGS: Advancing Net Zero Emissions in New Development, adopted by City Council in May 2023, updated the TGS to include embodied emissions caps for new development for Tier 2+ and City-owned projects (2023.PH3.19): https://secure.toronto.ca/council/agenda-item.do?item=2023.PH3.19 Environment & Climate is currently participating in multi-party workshops regarding the impacts of embodied carbon in urban design, waste and circularity, and procurement processes. The findings of the workshops will influence the City's future embodied carbon targets for new buildings.	

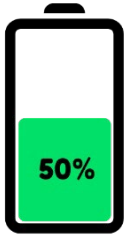
3	Advance Implementation of the Net Zero Existing Buildings Strategy. (Refer to the Net Zero Existing Buildings Strategy, adopted by City Council in July 2021, for a detailed short-term implementation plan.)	E&C, TB, MLS, CP, HS	The Net Zero Existing Buildings (ExB) Strategy presents nine recommended actions for the City to undertake, identifies key design and implementation considerations for each action, and presents the potential impacts on emissions, costs and co-benefits. The ExB Strategy takes the approach of introducing voluntary programs and policies in the near-term, followed by a transition to mandatory requirements in the medium to long-term. A detailed short-term implementation plan has been adopted, which can be accessed on the City's website.	The report, Update on the Net Zero Buildings Strategy and Implementation of Mandatory Emissions Performance Standards, was adopted by City Council in October, 2023 and provides an overview of implementation progress (2023.IE6.4): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE6.4 2023 progress includes: • Accelerated the development of Emission Performance Standards and Reporting through the City's Long Term Financial plan. These standards will set emissions limits for all buildings and will require owners to improve emissions performance over time. • Emissions Performance Reporting By-law adopted by City council in December, 2023 (2023.IE9.5): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE9.5. • The Home Energy Loan Program distributed more than $4,786,375 in funding to support more than 90 energy efficient and net zero renovations and awarded more than $162,000 in incentives for heat pumps, solar photovoltaic (PV) and deep retrofit projects. • Supported more than 100 design build professionals to become	

				CHBA Net Zero Renovator qualified. • Provided training and peer learning opportunities to 180 building operators/ managers on advanced carbon management topics such as building operations and tenant engagement. • Received $1M in NRCan funding to support the development of a carbon labelling and engagement program in Toronto. • Operated programs including Deep Retrofit Challenge (DRC), Navigation & Support Services, Green Will Initiative (GWI), Energy Retrofit Loan (ERL). • Launched Taking Action on Tower Renewal (TATR), a new financing program which provides a combination of loans and grants for eligible rental housing property owners to complete retrofits that increase energy efficiency and reduce greenhouse gas emissions. • Kicked-off the development of retrofit guidance materials and options to expand financing options for building retrofit.	

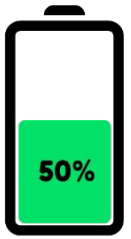
4	Work with industry experts to explore limiting the expansion of natural gas systems and reversing system growth, where feasible, and limiting installation of natural gas equipment	E&C, CP	Over 2022-2025 staff will explore tools to phase out natural gas installation and connections, including but not limited to: i. Develop a framework with City divisions and industry experts to limit the expansion of natural gas systems and reverse system growth, where feasible, and limit installation of natural gas equipment, and report back by Q2 2022 on recommended tools to limit use of natural gas. ii. Expand district heating systems into communities. iii. District energy heating system ready processes. iv. Neighbourhood impact assessments.	Emission Performance Standards for buildings, in combination with the Toronto Green Standard, provide a framework for reducing reliance on fossil fuels and limiting expansion of the natural gas system. Development of Emission Performance Standards was accelerated through the City's Updated Long Term Financial plan (2023.IE7.1). These standards will set emissions limits for all buildings and will require owners to improve emissions performance over time. In 2023, E&C defined the scope and principals for a broad public engagement, including with building-sector industry experts, to take place in 2024. Other progress includes: ii. District heating systems are primarily driven by large developments by private developers. Environment & Climate continues to meet with private developers to speak with them about the opportunity to build and expand district heating systems and to connect them with local industry professionals to implement this work. iii. Environment & Climate published "Mechanical System Design Guidelines for Low Carbon Buildings" to provide	

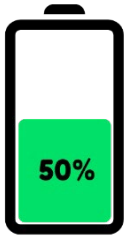
				guidance to developers and consultants on low temperature heating systems and integration of low carbon thermal energy sources, including connection to district energy. iv. Environment & Climate is not currently doing neighbourhood specific impact assessments to phase out natural gas installations. Environment & Climate is aware of the many benefits of creating district energy systems in neighbourhoods and has dedicated a webpage to communicating them to interested members of the public.	
5	Support adoption and mainstreaming of net zero, resilient energy sources for new and existing developments	E&C, CP	Activities in 2022-2025 include: i. Plan for net zero emissions districts and large developments, including secondary and precinct plan areas, academic and healthcare campuses, commercial real estate portfolios, brownfield sites, and civic clusters. ii. Support various City Divisions and Energy Developers in developing renewable thermal energy projects where City-owned assets are involved, including sewer heat recovery, lake-based	Progress includes: i. Environment & Climate has made progress on planning net zero emissions districts through its work on: • Using the Joint Development Agreement, to deliver the Etobicoke Civic Centre Precinct which will be one of Toronto's first near-zero carbon communities. • Participating in on-going planning and providing policy recommendations for a number of Secondary Plans throughout the City, namely Downsview, Jane Finch Initiative and North York at the Centre.	

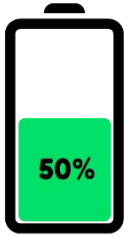
			exchange, and geothermal projects. iii. Provide power engineering services for low-carbon backup power systems at designated emergency reception centres, and support the Office of Emergency Management in planning for new emergency reception centres.	ii. Environment & Climate progress includes: • Updated the Solarmap for to better capture solar potential data for addresses within a parcel. Data analytics show over 300 properties are searched monthly on the solar map. An automated solar advisor feature was added to the existing SolarTO website to further streamline support for interested homeowners or businesses. • Breaking ground on the first wastewater energy pilot at Toronto Western Hospital. This project will utilize flowing wastewater to provide heating and cooling to the hospital and is expected to reduce the overall natural gas use by 90% or 8,400 tonnes of CO2 annually. • Launched a wastewater energy map which displays the approximate heating and cooling capacities of Toronto sewers. • Exploring the potential of deep geothermal as a direct energy source. • The City recently completed an ambitious, comprehensive net-zero emissions energy retrofit project at the City Waterfront Building located at 627/635 Queens Quay West. One of the main features of the project was an innovative lake-	

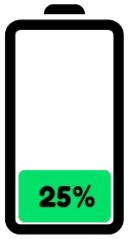
				based thermal exchange system that relies solely on electricity to provide 100% of the heating and cooling for the building. • Environment & Climate has facilitated the installation of photovoltaic (PV) solar panels on 11 City-owned buildings across Toronto. iii. Environment & Climate currently has Backup Power Guidelines available online to interested parties. In 2024, Environment & Climate will work with the Office of Emergency Management and other City Divisions to clarify the process identifying and designating new emergency reception centres.	
6	Address barriers and develop strategies to increase the deployment of renewable energy and storage technologies, including but not limited to solar, wind, biomass, geothermal, waste	E&C, TH, CP	Activities to increase renewable energy over 2022-2025 include: i. Environment and Climate and other relevant parties to develop a Renewable Energy Taskforce to address barriers and develop strategies for increasing renewable energy development including; - Investigate opportunities to encourage wider adoption of renewable energy through regulatory and incentives	Progress includes: i. SolarTO, Toronto Hydro and The Atmospheric Fund (TAF) have established a monthly working group to accelerate the deployment of solar and storage, including through streamlining the interconnection of distributed energy resources (DERs), which include solar and storage. Toronto Hydro has been reviewing its solar and storage connection processes to increase transparency and improve the overall customer experience.	

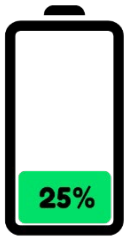
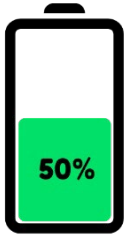
	heat recovery and heat pumps		structures such as rebates, low-interest financing and credits; - Work with Toronto Hydro to enhance the Distributed Energy Resource interconnection process for renewable energy; - Review the building permitting process related to renewable energy and storage and explore opportunities for streamlining; - Review zoning requirements and identify restrictions that prohibit renewable energy development including solar photovoltaic, and assess opportunities for improvement; ii. Environment and Climate to report back in 2023 with findings from this work and identify specific budget requests, authorities and actions required for increasing renewable energy development, including but not limited to solar, heat pumps, geothermal, waste heat recovery and storage.	Following a technical assessment, Toronto Hydro is lifting solar and storage system size restrictions for most residential and small business installations, and has improved its Grid Connection Process web page to provide a list of feeders that are currently at capacity restrictions. In its rate application before the Ontario Energy Board, Toronto Hydro has proposed investments to remove all current and anticipated grid constraints for solar and storage out to 2029. Toronto Hydro has connected more than 2,200 solar projects with a total nameplate capacity of over 110 MW. ii. A recent report provided an update on City Renewable Energy Programs (2023.IE9.7): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE9.7 In December 2023, City Council directed Environment & Climate and other relevant City Divisions to explore options for streamlining permitting processes for solar and explore zoning requirements and identify restrictions that prohibit renewable energy development.	

7	Actively support, advocate to and partner with Toronto Hydro, as well as the Provincial and Federal governments and agencies, to decarbonize the provincial electricity grid, promote energy conservation and enable local renewable energy generation	CMO, E&C, TH, HS	Activities include: i. Continue to advocate to the Government of Ontario the critical importance of lowering GHG emissions from the electricity grid in order to reach net zero targets, and work with the Province and other partners in this regard. ii. Collaborate with and advocate to all levels of government and related agencies and utilities to bring about the changes in energy consumption and generation that are needed to reach net zero.	Environment & Climate continues to work with other levels of government, agencies and utilities to develop strategies to reach Toronto's goal of net zero by 2040. In 2023, Environment & Climate provide comments as opportunities arise to items posted on the Environmental Registry of Ontario, and to the Independent Electricity System Operator. The City is working closely with Toronto Hydro's Climate Action team on opportunities for collaboration and coordination on the development and delivery of building decarbonization programs and initiatives. The City advocates to and partners with the Provincial and Federal governments, and communicates with Toronto Hydro on an ongoing basis, including through a monthly touchpoint between E&C and Toronto Hydro's Climate Action Team. The City of Toronto and Toronto Hydro signed a Memorandum of Understanding (MOU; 2023.EX4.2) in April 2023 to ensure coordination between Toronto Hydro's Climate Advisory Services and the City's TransformTO Net Zero Strategy.	

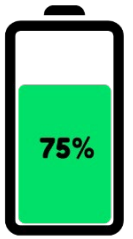
				Environment & Climate also contributes to Toronto's role as an environmental leader by sharing expertise and knowledge other cities locally and internationally. In September of 2023, Toronto hosted the Carbon Neutral Cities Alliance (CNCA) Annual Conference. The conference was attended by cities from all over the world where participants shared their experience with climate-focused programs, including decarbonization and fuel transition in buildings.	
8	Expand biking and pedestrian infrastructure, including the rollout of cycling routes, bicycle parking and bike share at or near TTC stations	TSD, TTC, BST	The City will continue to expand active and multi-modal transportation infrastructure, building on progress made in accelerating ActiveTO, expanding Bike Share Toronto (including the pedal assist e-bike pilot program), and other initiatives.	The City continues to implement the Cycling Network Plan and Missing Sidewalk Link programs to provide opportunities for safe and zero emissions through cycling and walking. The Cycling Network Plan's 2022-2024 Near-Term Implementation Program proposes approximately 100 centreline km of new bikeways, in addition to upgrades to existing routes and studies for future implementation. In 2023, approximately 19 km of bikeways were constructed, with another 27 km of bikeways under-construction, and approximately 13 km of upgrades to improve and enhance the existing network. As of January 2024, approximately 679 centreline km of bikeways have been installed. In 2023, the City constructed 3.66 km of new sidewalks through the Missing Sidewalk program. As of January 2024, 4,465 km	

				of sidewalks have been installed throughout the city. TTC finished installing the remaining bike parking and bike repair stand inventory across various stations. Both TTC and Metrolinx are also continuing to work with Bike Share to install new Bike Share stations on TTC and transit property. • 91% of TTC stations have bike parking nearby. • 74% have bike Share stations. • 70% have bike repair stands.	
9	Increase existing bus and streetcar service levels to encourage shifts to low-carbon, sustainable transportation	TTC, TSD, CP	The TTC's 5-Year Service Plan and 10-Year Outlook aim to move people more efficiently on transit using enhanced service levels and priority bus lanes to improve reliability, speed and capacity on some of the busiest transit routes in the city.	In 2023 ridership continued to recover from the COVID-19 pandemic. By mid-November, bus was at 92% pre-COVID levels and 75% system wide. The continuation of work-from-home and hybrid work arrangements are constraining further ridership recovery. TTC continues to align service levels to changes in customer demand. In 2023, staff completed Step 1 of consultations for RapidTO Jane. Technical work to evaluate design options is on-going. Staff began the development of a new 5-Year Service and Customer Experience Action Plan. Four rounds of consultation were completed. The new	

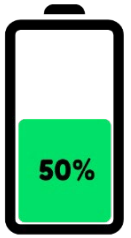
				plan will be presented to the TTC Board in early 2024.	
10	Update and accelerate implementation of city-wide Transportation Demand Management Strategy	TSD & E&C, CP, EDC	Activities 2022-2025 include: i. The City will update, accelerate implementation, and measure the impact of the city-wide Transportation Demand Management (TDM) Strategy. ii. Pilot targeted residential TDM engagement in several of Toronto's communities to support the uptake of sustainable transportation and low-carbon commuting options. iii. Lead community outreach and engagement campaigns to support the uptake of more sustainable modes of transportation/ commuting (including, but not limited to, promoting public uptake of active transportation, transit, carpooling and telework). iv. Work with Toronto-based employers and businesses to implement TDM and other sustainable transportation best practices as a part of COVID-19 recovery and rebuild process. v. Convene a Transportation Demand Management leaders	Resources were not available in 2023 for a coordinated city-wide Transportation Demand Management (TDM) Strategy, however TDM work continues: • Ongoing delivering of the Smart Commute Employer program including tools, resources, webinars and annual campaigns (Bike Month, Bike to Work Day, Smart Commute Month) to encourage sustainable transportation. • Development of a Micromobility Strategy. • Update of the Cycling Network Plan. • New Cycling Infrastructure.	

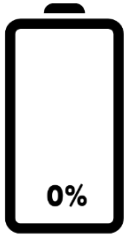
			table, which would include relevant City of Toronto divisions and agencies and would promote uptake of TDM best-practices.		
11	Develop tools to address emissions of greenhouse gases and air pollutants on an area or project level	TSD, CP, E&C	The City will develop a framework to address emission reductions of greenhouse gases and air pollutants on an area or project level, including guidance documents and technical modelling, and report back in 2023 with a framework to be implemented in 2024.	Staff conducted a jurisdictional scan. A Request for Proposal (RFP) is currently being developed to enlist a consultant. The consultant will be tasked with evaluating transport-based emissions at the project level and determining how the components of existing frameworks can be adapted or applied to the specific context of Toronto.	
12	Align the City's Electric Vehicle (EV) Strategy to the net zero goals and implement the EV Strategy	E&C, TSD, TPA, TH, CP, FS, MLS, CREM, EDC	The City, along with its partners, will implement the City's Electric Vehicle Strategy and align it to the Net Zero Strategy goals. Activities planned for 2022-2025 include: i. Relevant Divisions and Agencies will report to City Council in 2023 with options for how the City of Toronto can support and encourage provision of the home and workplace EV charging infrastructure needed to accommodate growth in EV ownership to 5 per cent of registered personal vehicles in 2025 and 30 per cent in 2030. ii. Relevant Divisions and Agencies will report to City Council	Increasing public EV charging has been a strong focus of City efforts to support the transition to EVs in Toronto. In 2023, Toronto Parking Authority (TPA) installed 186 public EV charging stations at on-street parking spaces and in Green P parking facilities (Toronto Parking Authority's EV Charging Program). TPA also initiated a process to develop strategic partnerships for public charging. The Transportation Services Division (TSD) supported the TPA with the rollout of 50 on-street charging spots by amending the curbside parking regulations to accommodate EV charging. TSD also developed On-Street EV Siting Guidelines to help with the identification of appropriate on-street charging spots.	

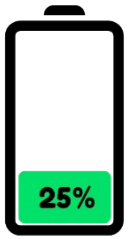
			in 2023 with a strategy to meet the 2025 targets in the EV Strategy for public EV charging infrastructure and ensure that sufficient public EV charging infrastructure will be in place to accommodate growth in EV ownership to 30 per cent of registered personal vehicles in 2030.	E&C led planning for long-term public charging deployment to ensure that public charging will be available when and where it is needed to support the City's goals for EV uptake and sustainable transportation. Toronto Hydro is supporting the City's Electric Vehicle Strategy by enabling the TPA EV charging station rollout and engaging with customers who have expressed interest in adding public charging to their properties. E&C led an EV Outreach Initiative, in partnership with Clean Air Partnership (CAP) and Plug'n Drive and with funding from the federal Zero Emission Vehicle Awareness Initiative. As part of this project, E&C collaborated with CP, TH, and CAP to develop and deliver information resources to support the development industry in meeting the City's EV charging infrastructure requirements for new developments.	

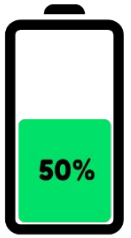
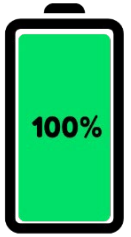
	A) Increase public EV charging infrastructure	E&C, TSD, TPA, TH, CP, FS, CREM	The City will develop a strategy and plans to meet the 2025 targets in the EV Strategy for public charging infrastructure (220 Level 3 DCFC ports and 3,000 Level 2 ports are installed in public locations) and to ensure that sufficient public charging infrastructure will be in place to accommodate growth in EV ownership to 30 per cent of registered personal vehicles by 2030. Next steps 2022-2025: i. Identify high priority public charging areas. ii. Explore potential partnerships to support development of public charging infrastructure. iii. Apply for funding (e.g. ZEVIP) and secure match funding.	E&C is leading long-term planning for public EV charging in Toronto, to ensure that public EV charging will be available when and where it is needed to support the City's goals for sustainable transportation and EV uptake. This work will inform a report to City Council in the second quarter of 2024 with recommendations on how the City can ensure that sufficient public charging will be in place across Toronto between 2025 and 2040. TPA, in collaboration with TH, TSD and E&C, has identified and assessed potential locations for on-street public EV charging to be implemented between 2022-2024, with 97 on-street charging stations installed to date. TPA has also identified priority locations for public Level 2 and DC fast charging stations, with a total of 287 Level 2 and 23 DC fast charging stations installed to date at Green P off-street parking facilities across Toronto. Recent expansion of TPA's EV charging program has made TPA the country's largest operator of municipally-owned EV charging. TPA aims to further expand the network to 550 public charging stations open by the end of 2024 across its on-street and off-street locations.	

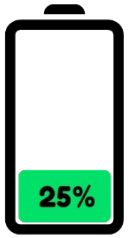
				MLS put forward its report on Transitioning the Vehicle-for-Hire Industry (VFH) to Net Zero by 2030, which was adopted by Council in October 2023. The report included by-law amendments to require all VFH to be zero-emission vehicles beginning in 2030 and complementary programs to support the industry's transition to net zero, including incentives for early adoption. The report noted the importance of incorporating the needs of the VFH industry into public EV Charging Strategy (2023.EC6.6): https://secure.toronto.ca/council/agenda-item.do?item=2023.EC6.6 In Q2 2023, TPA issued an Expression of Interest (EOI) to help shape the future of the City of Toronto's Electric Vehicle (EV) Public Charging Network. There was a high level of interest with the EOI and TPA is currently reviewing submissions. TPA has secured $2.145 Million in funding from NRCan's Zero Emission Vehicles Infrastructure Program; this funding, combined with $8.2 Million from TPA's 2023 capital budget, was used to install 228 public Level 2 and 15 public DC fast charging stations.	

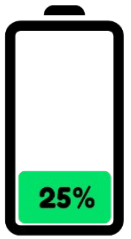
				TPA is currently exploring other potential sources of funding. An E&C report on Options for Permitting Private Installation of Electric Vehicle Charging Infrastructure on Public Streets was adopted by City Council in May, 2023 (2023.IE3.6): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.6	
	B) Increase EV charging at residential, commercial, institutional, and industrial buildings	CP, E&C, TH	2022-2025 activities to increase EV charging include: i. Mandate EV ready requirements for all new developments to ensure that buildings in Toronto will have sufficient EV charging infrastructure to accommodate growth in EV ownership to 30 per cent of registered personal vehicles and 35 per cent of commercial vehicles by 2030 and 100 per cent of all vehicles by 2050. ii. Provide incentives for charging infrastructure in home, public, workplace and fleet settings, as feasible and as needed to improve equity and spur EV adoption. iii. Expand financing options for charging infrastructure installation on private property, as feasible	Progress includes: i. TGS v4 requires that parking spaces must be equipped with an energized outlet, which is clearly marked and identified for electric vehicle charging, in accordance with Zoning By-law 569-2013. ii, iii. There was not sufficient staff capacity in E&C to undertake this work in 2023. iv. Toronto Hydro was one of the first utilities in Ontario to offer the Ultra Low Overnight Rate for electricity. This rate of electricity offers a reduction in electricity rates overnight and encourages Electric Vehicle Charging overnight. More information about this rate, and the announcement that Toronto Hydro participated in, can be found here: https://news.ontario.ca/en/release/1002	

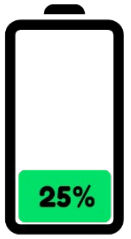
			and as needed to improve equity and spur EV adoption. iv. Explore the feasibility of Toronto Hydro offering rebates for Electric Vehicle charging in residential properties during off-peak hours. v. Work with Toronto Hydro and the provincial regulator to remove barriers to the installation of EV charging by changing the regulations related to new electrical connections or requests for additional capacity. vi. Develop policies, regulations and/or programs to support provision of EV charging infrastructure in existing homes and workplaces.	916/ontario-launches-new-ultra-low-overnight-electricity-price-plan Toronto Hydro is also piloting smart charging technology to determine methods to manage charging. Information about that pilot can be found here: https://www.torontohydro.com/electric-vehicles/smart-charging Toronto Hydro's Climate Action Team is engaging with customers to assist with adding EV Charging stations to their properties. vi. In 2023, E&C pursued initial scoping and information gathering related to understand how the City can support and encourage home and workplace EV charging.	
	C) Review the Electric Vehicle Strategy	E&C, TSD, TPA, TH, CP, FS, MLS, CREM, EDC	The City will conduct a comprehensive review of the Electric Vehicle Strategy in 2024-2025.	This action was not intended to start until 2024. Terms of Reference for this review will be developed by the cross-corporate EV Working Group in 2024.	

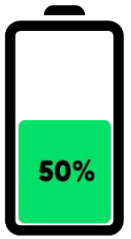
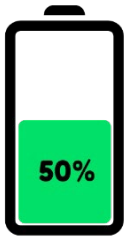
13	Determine options to incentivize EV adoption and disincentivize use of gas and diesel vehicles	E&C, TSD, TPA, CP	The City will determine options to incentivize EV adoption and disincentivize use of gas and diesel vehicles. Incentives and disincentives may be financial and/or non-financial. Activities 2022-2025 include: i. Advocate to other levels of government to provide/expand purchase incentives for new EVs. Advocate to both levels of government to provide incentives for purchase of used EVs. Advocate for additional taxes/fees on new internal combustion engine vehicles and use money collected to fund rebates for low-cost EVs, additional EV infrastructure and/or transit/active infrastructure (particularly in low income areas). Next steps: - Form a working group to determine the priority of preferred actions by the provincial and federal governments. - Advocate for governments to pursue EV enabling activities or policies. ii. Explore providing purchase incentives, including potential funding sources and equity	The City advocates to and partners with the Provincial and Federal governments on an ongoing basis. One of the key principles of the Citywide Parking Strategy (currently under development) is “Alignment with Broader Mobility Strategies - Explore ways to use parking to encourage a desirable balance of mobility types and consumer behaviour, including modal shifts to public transit and active transportation and a transition to electric mobility” (2022.IE28.8): https://secure.toronto.ca/council/agenda-item.do?item=2022.IE28.8	

			considerations and measures to mitigate the potential for increasing auto ownership rates. Incentives for EVs should be offset by disincentives for internal combustion engine vehicles. iii. Explore other incentives such as those related to parking.		
14	Encourage the adoption of electric commercial and freight vehicles, including EVs and e-bikes for last-mile deliveries	TSD, CP, TPA, TH, E&C, FS	The City will explore opportunities and develop policies to encourage the use of EVs and e-bikes for commercial and freight transportation.	The City joined MTO's "Cargo e-Bike Pilot Program" which runs from 2021-2026.	
	A) Encourage the use of e-bikes and EVs for last-mile deliveries	TSD, CP	Activities: i. In consultation with the freight industry, develop policies to encourage and facilitate use of e-bikes, cargo e-bikes and electric vehicles for last-mile deliveries. ii. Explore opportunities to facilitate provision of charging infrastructure and parking for e-bikes, cargo e-bikes and electric vehicles used for last-mile deliveries.	TSD has worked with the courier industry in the launch of large e-cargo bikes for commercial delivery. As part of the Cargo e-Bike Pilot, the City has been conducting surveys with the courier operators about their experiences/ concerns/ needs in regard to operating e-cargo bikes for last mile delivery purposes in Toronto. In 2023, the City continued to partner with Purolator, on the launch and evaluation of one on-street and one off-street "mini hub". These mini hubs have provided parking facilities for five e-	

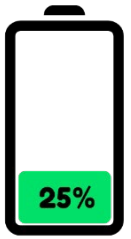
				cargo bikes which have been used to make deliveries in and around the University of Toronto St. George campus (2022.IE30.12): https://secure.toronto.ca/council/agenda-item.do?item=2022.IE30.12 TSD is in regular communication with courier companies concerning their transition to zero emission vehicles.	
	B) Encourage adoption of electric commercial and freight vehicles	E&C, TSD	Activities: i. Explore opportunities to encourage and support adoption of electric vehicles for commercial and freight use, including light-duty, medium-duty, and heavy-duty vehicles. ii. Explore opportunities to encourage increased availability of electric light-duty, medium-duty and heavy-duty commercial and freight vehicles in the GTHA.	The City has continued to explore options to encourage delivery companies to transition fleets to electric vehicles through a permitting program.	

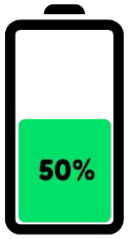
15	Continue to pursue policy and programmatic interventions that help the City reach its aspirational goals of zero waste and a circular economy, and which identify pathways to more sustainable consumption in both municipal operations and in all sectors of the economy	SWMS, other City divisions	The City will identify and implement new policies and operational changes across City divisions, and enter into strategic partnerships where possible, to reduce waste, maximize resources and support positive environmental outcomes through circular and sustainable consumption.	Recent progress to move Toronto towards a Circular Economy includes: • Completion of the Baselining for a Circular Toronto research project, which assessed the current state of circularity in Toronto and proposes a vision for what a circular Toronto could look like. • The launch of training resources for City staff to increase awareness and understanding of how to reduce waste and achieve circular outcomes in various purchasing decisions. • Ongoing support of local and national initiatives to advance the circular economy transition, including the Circular Cities and Regions Initiative, National Zero Waste Council, Canadian Circular Textiles Consortium and Canada Plastics Pact. • Initiating a review and update of the Long Term Waste Management Strategy. • Initiating the development of the Circular Economy Road Map, including the issuance and evaluation of a Negotiated Request for Proposals to secure the required professional services to enable City staff to deliver this project. • Advancing and implementing Stage 2 of the Single-Use and Takeaway Items Reduction Strategy with the	

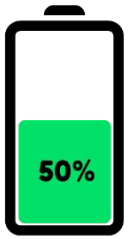
				adoption of the Single-Use and Takeaway Items Bylaw in effect March 1, 2024 and initiating work towards Stage 3. • Advancing Phase 1 of the Circular Food Innovators Fund to support businesses to participate in a more circular food system in Toronto, beginning with reuse business models.	
	A) Develop a City-wide governance structure, strategy and policy framework to establish a path to make the City the first municipality in the Province of Ontario with a circular economy and to align with the Provincial goal as part of the Waste Free Ontario Act	SWMS, other City divisions	SWMS, with involvement and leadership from other City Divisions, will develop a Circular Economy Road Map for Toronto that will help guide the City in becoming the first municipality in the province with a circular economy. Once finalized, Toronto's Circular Economy Road Map will inform policy and program changes to advance the City's aspirational circular economy goals.	Solid Waste Management Services (SWMS) has developed a governance model to enable cross-divisional oversight and accountability during the co-creation of a Circular Economy Road Map and has secured the participation of 14 additional partner Divisions on the project, as well as commitment from Environment and Climate Division to co-sponsor the project. In 2023, SWMS issued and evaluated a Negotiated Request for Proposals to procure professional services to deliver the Road Map in close collaboration with City staff. SWMS is on track to begin developing the Circular Economy Road Map in the first quarter of 2024.	

	B) Conduct a consumption based emissions inventory and identify targets that would meaningfully reduce consumption based emissions	E&C	The City will: i. Conduct a consumption based emissions inventory. ii. Set short- and long-term community-wide consumption emission reduction targets. iii. Report back by Q2 2023.	A consumption based emissions inventory (CBEI) estimates the total greenhouse gas (GHG) emissions associated with producing, transporting, using and disposing of goods and services consumed by a particular community or entity in a given time frame (e.g., typically one year). Progress includes: i. The City conducted a CBEI and published it in 2023 (2023.IE6.6): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE6.6. ii. The City did not propose targets at this time since the CBEI methodology, along with local datasets to use for the analysis, is still evolving.	
	C) Enable Torontonians to reduce waste and engage in sustainable consumption by implementing the Single-Use and Takeaway Items Reduction Strategy	SWMS, other City divisions	The City will: i. Implement a voluntary measures program that enables and encourages businesses to reduce waste in their operations. ii. Introduce mandatory measures to reduce and prevent the generation of single-use and takeaway items in Toronto.	The Single-Use and Takeaway Items Reduction Strategy (Reduction Strategy) is aimed at encouraging and enabling businesses to take action to eliminate the unnecessary use of single-use and takeaway items in their operations along with connecting businesses to suppliers of innovative reusable container solutions and services. In June 2022 the City launched the Reducing Single Use Program (Stage 1 of the Reduction Strategy) to recognize	

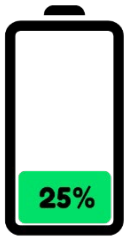
				businesses taking a leadership role to reduce single-use and takeaway items. In 2023, as part of Stage 2 of the Reduction Strategy, City Council adopted the Single-use and Takeaway Items Bylaw (Toronto Municipal Code, Chapter 702) which includes mandatory measures that restrict the use of single-use items in retail business establishments. The new bylaw is in effect March 1, 2024. In 2025, Solid Waste Management Services will report back to City Council on further measures as part of Stage 3 of the Reduction Strategy. This includes the feasibility of expanding the bylaw to include large venues, the acceptance of reusable food containers and requirements to use reusable food containers and beverage cups in dine-in operations. In 2023, SWMS staff also secured Council authority to establish a business grant program that will help small businesses in the food sector to implement or expand reuse systems that eliminate single-use and takeaway items. SWMS is on track to issue the call for applications for Phase 1 of the Circular Food Innovators Fund in the first quarter of 2024.	

16	Continue implementation of the City's Long Term Waste Management Strategy which sets a goal of diverting 70 per cent of waste managed from City customers away from landfill, by focusing on waste reduction, reuse and recycling activities that promote resource conservation and reduce environmental impact	SWMS	Reduction, reuse and recycling activities include a food waste reduction strategy, textile collection and reuse strategy, supporting other reduction and reuse programs, exploring new technologies and creating a Circular Economy and innovation unit within SWMS to help Toronto reach its goal of becoming the first circular city in Ontario. Within the scope of the Long Term Waste Management Strategy, opportunities to explore waste reduction outside of the integrated waste management system are identified and actioned where within the scope of control of SWMS, for example, the Community Reduce & Reuse Programs and public communications for waste related information.	SWMS continues to implement the Long Term Waste Management Strategy which includes the development of the Single-Use and Takeaway Items Reduction Strategy, Community Reduce and Reuse Programs, Food Waste Reduction and other programs. A review and update of the Long Term Waste Management Strategy was initiated in late 2023 through City Council direction, with a final report expected in 2025.	
	A) Continue outreach and engagement on waste reduction and diversion, with a focus on food and organic waste	SWMS, E&C	The City will continue to enable food and organic waste reduction and diversion among City waste customers through implementation of strategic action roadmaps such as the Long Term Waste Management Strategy.	SWMS continues to promote food waste reduction and the Green Bin organics program to divert organic waste from landfill. SWMS continues to partner with the National Zero Waste Council with other municipalities and private sector partners across Canada on the Love Food Hate Waste campaign to raise	

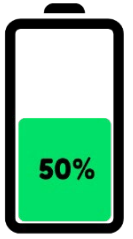
				awareness about the issues of food waste and provide residents with tips to reduce their own food waste. Community Reduce and Reuse Programs also support Food Waste Reduction through community composting efforts and the redistribution of surplus harvests from gardens of single-family residential homes.	
17	Increase canopy cover and biodiversity and enhance greenspaces	PFR, E&C	Over 2022-2025 the City will continue to increase tree canopy cover including prioritizing tree planting programs on both public and private lands to help achieve a more equitable distribution of canopy cover across the city. In collaboration with multiple City divisions, the implementation of the Strategic Forest Management Plan, Parkland Strategy, Ravine Strategy and Version 4 of the Toronto Green Standard will continue to contribute to canopy, biodiversity and greenspace goals.	Multiple City divisions are working collaboratively to increase canopy cover and improve the quality of greenspace across the city. The City planted 118,000 trees and shrubs in 2023. The City offers PollinateTO Grants to support pollinator habitat creation projects to help protect Toronto's diverse pollinator community and educate and engage communities in pollinator stewardship. Since 2019, 150 community-led projects have been supported through the grants, resulting in more than 400 pollinator gardens (about 24,000 square metres) across Toronto, including 41 projects in Neighbourhood Improvement Areas and 66 projects on school grounds.	

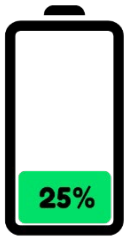
	A) Achieve equitable distribution of the urban forest, increasing tree canopy and naturalized greenspace where it is most needed	PFR	In collaboration with other City divisions, Parks, Forestry and Recreation will continue to protect existing trees and increase tree canopy cover where it is currently lacking, creating more equitable distribution of the valuable services and benefits the urban forest provides.	Urban Forestry is developing a tree equity score analysis tool, in partnership with American Forests. This interactive tool will be used by multiple City divisions and external stakeholders to plan and initiate projects that help to improve the equitable distribution of tree canopy at the neighbourhood scale. A tree equity score will be determined for the city's 158 neighbourhoods using land cover analysis and socio-demographic factors.	
18	Support resident-led climate action and engagement	E&C	Over 2022-2025, the City will continue to implement city-wide climate action engagement under the Live Green Toronto banner. Outreach will be focused on those most impacted by climate change and equity deserving groups to lead and implement local climate action.	The City continues to implement city-wide climate action engagement with a focus on Indigenous communities and equity-deserving groups. This includes hosting and participating in events, workshops and community initiatives; research and testing of new engagement tactics; producing and distributing materials and promotional items; and providing grants, support and incentives to community members.	

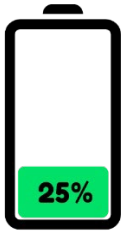
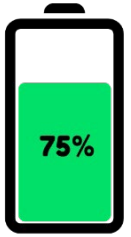
	A) Support resident-led climate action engagement through Climate Action Grants	E&C	Over 2022-2025, the City will scale up and design new grant programs including those directed to Indigenous communities and youth.	The Indigenous Climate Action Grants launched in spring 2023 and provided funding to 18 Indigenous-led projects over two rounds of applications. The Neighbourhood Climate Action Grants provided funding to 23 community-led projects, including two Indigenous-led projects. Since 2022, the Youth Climate Action Grants has provided 28 funding awards to support Toronto District School Board (TDSB) student-led projects, activities, and events. These projects have engaged over 10,000 residents in climate actions that directly or indirectly reduce GHG emissions.	
	B) Expand Neighbourhood Climate Action Champions Program	E&C	Over 2022-2025, the City will continue to implement city-wide climate action engagement, specifically continue and scale-up the Neighbourhood Champions program through 2030.	Since 2020, the City recruited and trained more than 70 Toronto residents to engage and initiate local climate action projects in their communities. To date, there are 30 community-led climate action projects being implemented across the city.	

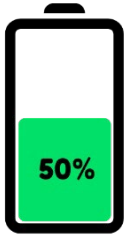
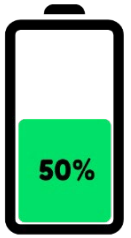
19	Work with Indigenous rights holders and urban Indigenous communities to share knowledge and learnings	E&C, IAO	The City will develop a plan for meaningful, in-depth, respectful, and ongoing engagement with local Indigenous communities to provide feedback on City's Strategy implementation. 2022-2025 activities include a climate action grants program as well as: i. Ensure TransformTO policies, programs and services are developed with and for Indigenous communities to ensure a just economic transition. ii. Ensure opportunities for Indigenous representation in TransformTO engagement and advisory processes. iii. Explore ways to reflect and take action on responses from the Indigenous Climate Action Summary Report, such as to measure and communicate progress that speaks to broader questions such as "Are we good ancestors?" or “How are we honouring the land, water, and all our relations?” iv. Implement Reconciliation Action Plan. v. Connect with Indigenous Affairs Office and Placemaking Advisory	In 2023, Environment & Climate with the Indigenous Affairs Office has engaged with more than 100 Indigenous community members through visioning sessions, feasts, garden tours and events. Progress includes: i. An Indigenous Project Lead was hired in February 2023 to support the development of the Indigenous Climate Action Grant program. Their position has also led to the development of meaningful Indigenous engagement activities for the community and opportunities for staff to learn about Indigenous perspectives of climate change and engagement. In June 2023 the City launched the Indigenous Climate Action Grants program. The program successfully distributed $220,000 to Indigenous-led climate action programs including gardens, cultural programming and projects directly related to the reduction of GHGs in Toronto. Outreach & Engagement staff contributed to the development of an Indigenous placemaking map of Toronto. ii. The hiring of the Indigenous Project Lead and an Indigenous Youth	

			Circle on future placemaking and place-keeping initiatives.	Research Associate have ensured that the Indigenous Climate Action Grants program is Indigenous-led. The grants decision-making process was led by an Indigenous Review Committee, consisting of six Indigenous community members and an elder co-facilitator, who are First Nations and Metis, and who represent the many diverse Nations who live in Toronto. iii. The development of the Indigenous Climate Action Grants program Review Committee has been able to fund projects that reflect these broader questions. Iv. The Indigenous Climate Action Grants program has integrated many strategic actions of the City's Reconciliation Action Plan. Presentations on the integration of the Reconciliation Action Plan into the Indigenous Climate Action Grants program were delivered to the Net Zero Climate Leadership Table and to the Climate Advisory Group in 2023. v. All E&C Indigenous engagements were developed in conjunction with the Lead of Indigenous Placemaking at the Indigenous Affairs Office. In December 2023 a community forum at NCCT	

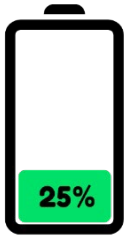
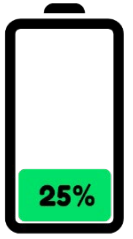
				about Indigenous Placemaking took place.	
	A) Develop and deliver Indigenous Climate Action Grants program	E&C	Over 2022-2025, E&C will work with the Indigenous Affairs Office to design and deliver a new grant program dedicated specifically to local Indigenous climate action.	The Indigenous Climate Action Grants launched in spring 2023 and provided funding to 18 Indigenous-led projects over two rounds of applications, resulting in the distribution of $220,000 to Indigenous-led climate initiatives in Toronto. The hiring of an Indigenous Project Lead and an Indigenous Youth Research Associate have ensured that the Indigenous Climate Action Grants program is Indigenous-led. The grants decision-making process was led by an Indigenous Review Committee, consisting of six Indigenous community members and an elder co-facilitator, who are First Nations and Metis, and who represent the many diverse Nations who live in Toronto.	
20	Develop and implement youth engagement strategy	E&C	Over 2022-2025 the City will develop and implement a youth engagement strategy, launch an academic innovation hub, and continue to involve youth in developing and implementing the Net Zero Strategy.	In partnership with the University of Toronto, Environment & Climate is co-developing a youth engagement strategy throughout 2023-2024. From Oct 2023 to March 2024, the strategy team is consulting with youth in Toronto through events, pilot projects, social media and online tools. The strategy is intended to be complete at the end of 2024.	

	A) Design and launch a City-academic innovation hub to support youth-led climate initiatives and innovative student pilot projects	E&C	Over 2022-2025, the City will design and establish an innovation hub where City staff, youth, students, faculty, and community will work together to design innovative local projects.	It is anticipated that the youth engagement strategy co-development process will result in recommending the development of a youth hub. The City of Toronto currently collaborates with academic institutions on an ongoing basis with CivicLabTO.	
21	Design and launch a climate advisory group for 2022 and beyond to ensure implementation of the Net Zero Strategy is equitable and reflects the priorities and interests of the community	E&C	The Net Zero Advisory Group will be updated and refreshed as the City moves from design of the Net Zero Strategy in 2021 to implementation over 2022-2025.	The Climate Advisory Group was established in October 2022 with 26 members (individuals and representatives of organizations). Terms of Reference were formalized in early 2023. The group meets quarterly and held four meetings in 2023, with an additional orientation workshop focused on equity in climate and resilience. CAG members have also formed topical working groups that are meeting in between the quarterly CAG meetings. The CAG provides advice to staff working on climate mitigation and climate resilience, and also champions climate initiatives in their sectors and at the community level. Detail on the CAG is available on the City's website: https://www.toronto.ca/services-payments/water-	

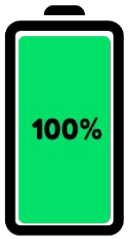
				environment/environmentally-friendly-city-initiatives/transformto/	
22	Develop equity indicators to be reported on as part of the TransformTO implementation status update	E&C	Staff will be developing equity indicators where possible and reporting on them regularly.	E&C is in the process of undertaking research to support the development of equity indicators that relate to climate change impacts and climate action. It is expected that this work will culminate in a list of key equity indicators that can be reported on in future annual updates.	
23	Encourage the growth of green industry to provide the products and services needed to enable a net zero city	EDC	The City and partners will encourage the growth of the green industries to enable net zero. 2022-2025 activities: i. Work with Toronto's green industries to undertake market research of key products and services required to achieve the Net Zero Strategy targets and goals and to provide a report to Council by Q3 2024. ii. Develop green industry growth roadmaps for each green sector, including a workforce development plan (a low-carbon job strategy), in partnership with Toronto's green industries and report back to Executive Committee – 2023 through 2024.	Economic Development & Culture (EDC) will be reporting back on three initiatives related to this action, in one report with staff recommendations, to City Council in the second quarter of 2024: i. A study is underway of six key markets (heat pumps, high efficiency window, energy advisors, solar PV, bicycles and e-bikes, and the tree canopy). ii. This initiative is underway but has been constrained due to lack of human and budget resources. The first of five industry roadmaps (for the Sustainable Transportation sector) will be completed in early 2024. iii. Consultations and report are complete. The consultant's report can be found here:	

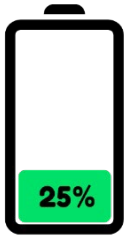
			iii. Consult with the local green industries on the opportunities to develop green industries cluster management organizations and identify the preferred form of the organization or organizations and the necessary steps to achieve implementation – by 2023. (The proposed timelines for these actions are contingent upon additional funding).	https://www.toronto.ca/wp-content/uploads/2023/04/8ed5-edc-GrowingGreenIndustryCollaborationinTorontoAODAcompliant31-Mar-23.pdf	
24	Leverage Live Green Toronto to develop and implement a city-wide climate action awareness campaign	E&C	Over 2022-2025 the City will develop and implement a city-wide climate action awareness campaign.	Launched Phase 1 of a multi-phased campaign to create awareness of the City's action to achieve Net Zero by 2040. Phase 1 began in November 2023: an awareness campaign that educates Torontonians on the City's climate leadership. Phase 2 will launch in 2024: a series of campaigns focused on specific climate actions residents can take to get to net zero by 2040.	
25	Develop and apply a Climate Lens in decision-making	E&C, CFO	The City will continue to advance a climate lens systematically including climate priorities, opportunities and risks in decision making. Activities over 2022-2025 are outlined below.	The Climate Lens Program has been available to staff since 2022. It provides resources for staff to use in applying a climate lens to their new and existing initiatives (e.g. capital projects, programs, policies). In particular, a Climate Lens Guide is available for staff use. A screening tool helps staff determine whether their initiative is	

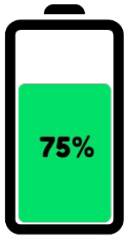
				suitable for a climate lens assessment and the appropriate level of detail. Climate lens criteria are applied to all new and existing projects and programs via the annual budget process. The City's work on asset management plans to satisfy O. Reg. 588/17 will include consideration of climate mitigation and climate risks.	
	A) Implement a Climate Lens Program	E&C, CFO	A Climate Lens Program integrates climate considerations in all new operating programs and capital projects and builds staff competency to assess both climate change mitigation and adaptation impacts. The City will: - Apply climate lens to all new operating and capital projects by 2022. - Apply climate lens to all existing programs, services, and assets by 2024.	The Climate Lens Program developed a series of resources to build City staff competency in applying a climate lens to initiatives (projects and programs, as well as policies). These include: • a three-module Climate 101 training course. • Climate Lens Guide outlining relevant standards and best practices for assessing the GHG and climate risk impact of City-led initiatives. • Climate View Map (incorporating pre-existing GIS data on climate hazards, vulnerabilities and resilience). • Climate Policy Map to help visualize and organize the cross-corporate directions and sector-specific strategies relevant to the City's climate action. City staff are encouraged to use these tools and resources to apply a climate	

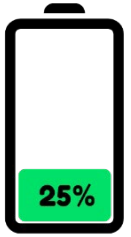
				lens to all new and existing City-led initiatives, with the scope and depth appropriate for the circumstances.	
	B) Report on climate risks to assets	E&C, CFO, AS	The CFO to report on all major climate risks associated with existing programs, services and assets, identified via the Climate Lens Program, to Council by 2024, and Council to direct the appropriate Divisions/Agencies to address risks in future capital planning. The CFO is to also provide ongoing annual updates on the City's climate risks as part of its annual consolidated financial statements.	The City's work on asset management plans to satisfy O. Reg. 588/17 will include consideration of climate risks. Asset management plans will inform future capital planning. Environment & Climate Division is also leading work to gather information to support a refined understanding of the overall costs and benefits of climate resilience work carried out by divisions. The City's climate-related risks are disclosed as part of the annual financial report (AFR). In 2023, the City will continue to include this disclosure in the AFR, but anticipate that further information will become available in later years as the Climate Lens Program matures.	
	C) Enhance Sustainable Procurement	E&C, PMMD, SDFA	Align procurement policies with the following climate lens objectives: 1. Integrate climate considerations into strategic decision-making 2. Build staff climate competency and leadership 3. Increase climate accountability	PMMD staff supported a cross-divisional working group to embed Cool Food Pledge reporting requirements in a 2023 solicitation for supply and delivery of groceries. PMMD staff began preliminary work on the development of a sustainable procurement strategy, including: a jurisdictional scan of best practice across Canadian governments on	

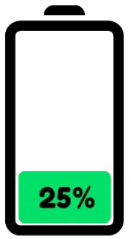
			4. Increase transparency through reporting 5. Monitor climate performance This action targets reporting in Q2 2022 and implementation into 2023. Enhancing sustainable procurement will also include working toward reducing emissions from food by 25 per cent by 2030 relative to a 2019 base year as per the City's Cool Food Pledge, and in alignment with the City's C40 Good Food Cities Declaration. Staff will report back on the status of corporate food-related emissions and recommended actions through Net Zero's status update on implementation in Q2 2025.	sustainable procurement and redefining best value in procurement; research and design of life-cycle cost analysis approaches (pilot identification will proceed in 2024); research on GHG emissions disclosure options for City suppliers; and preliminary development of a sustainability questionnaire for solicitations. PMMD engaged Schulich's Centre for Sustainable Supply Chains for a research project to identify how the City can meet its sustainability goals through procurement. This project is expected to be completed in the second quarter of 2024 and will inform the next phase of the sustainable procurement strategy. Due to delays in filling a dedicated position, this work was delayed in 2023 but remains generally on track. Within sustainable procurement, PMMD is responsible for a portion of work, but divisions are responsible for scoping solicitations, which has resulted in numerous collaborative projects that have advanced sustainable procurement and provided for specifications that can be templated for future use.	

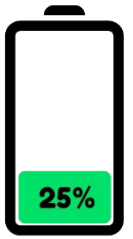
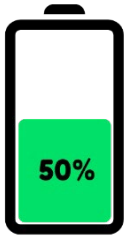
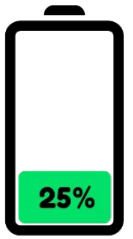
	D) Consider a carbon offset purchase policy and update the Carbon Credit Policy	CMO	Consider a carbon offset purchase policy and review the Carbon Credit Policy in a way that prioritizes achieving local emission reductions	City Council adopted the new Offset Credit Policy by decision dated May 10, 2023 (2023.IE3.4): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.4 This policy clarifies the "net" of net zero by defining whether and how the Corporation will purchase and/or sell carbon offsets in a science-based, fiscally responsible way as the City works toward the net zero goal.	
26	Design and implement a Toronto Carbon Budget	E&C, CFO	Design a Toronto Carbon Budget and associated key performance metrics, which aligns with the City's financial budgets, to manage corporate and community GHG emissions within an absolute limit.	City Council adopted the Climate Change Goals and Governance by-law text by decision May 10, 2023 (2023.IE3.4) and voted to enact the bill by decision June 15, 2023 (2023.BL7.1). The by-law codifies community and corporate emission budgets, as well as planning and reporting processes for achieving the emissions budgets. This increases the City's accountability for actions to reduce GHG emissions. Toronto is now the first municipality in North America to codify its climate change goals and governance process into law. This codification will enhance transparency of, and accountability for, the City's action to reduce GHGs in Toronto.	

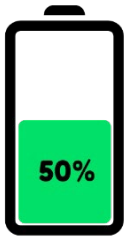
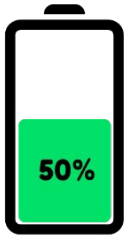
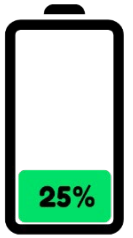
				Implementation begins in 2024 with the first annual “carbon budget” prioritization process and also planning for the achievement of Corporate emission budgets covering the 2026-30 period.	
27	Ensure net zero City-owned buildings	CREM, CP, E&C	Transitioning City-owned buildings to be net zero buildings.	Progress to date includes: • Developing Training for City Staff on operational and project-based approaches to reduce energy and emissions. • Developing standard specifications for building retrofits and operations to meet net-zero requirements. • Creating an archive of City building net zero feasibility studies to identify GHG reduction solutions and incorporate them into long-term budget planning. • Advising capital repair projects and offering matching funding for decarbonization options. • Prepared funding applications for SEPF money to upgrade client division sites. Funding for two sites currently secured with others pending. • Completed funding applications to Federal grant programs. • Developed a template for Net Zero Transition Plans and have completed reports for 15 buildings as of December 2023.	

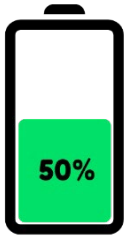
				• Reports for three sites have moved to the design phase with others pending, but as net-zero retrofits are multi-year projects it is difficult to track progress on a yearly basis. • Additional staff resources are required to scale up feasibility studies and additional capital funds are required for execution. Without these added resources, progress will be challenging.	
	A) Constructing new City-owned buildings to net zero on a go forward basis	CREM, CP	Update construction processes and design standards to include a requirement to construct new City buildings to Toronto Green Standard Version 4 Tier 4, to identify a net zero target in the design/construction procurement process and to identify planned facility construction projects for compliance.	As the City now mandates all new construction projects to follow Toronto Green Standard, this is the responsibility of Design teams to achieve.	
	B) Pursuing a Net Zero Carbon Plan for existing City buildings	CREM, E&C	In July 2021, City Council adopted CREM's Net Zero Carbon Plan. This Plan provides a road map to achieve net zero emissions in City buildings first and foremost through changes to facility utilities consumption. It offers seven initiatives to reach this goal, including, fuel switching and efficiency retrofits, lower-carbon new builds, strategic divestment, on-site renewables and storage,	CREM continues to work internally and with other City divisions to deliver the seven key strategies of the net-zero plan. This work will be ongoing until the 2040 target is achieved. A summary of work done thus far can be seen under action 27, above.	

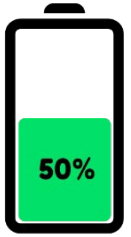
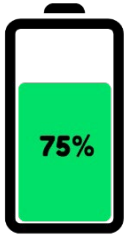
			training and education, enhanced use of building performance data and carbon offsets and off-site renewables. The Plan focuses on making the right investments into City buildings in order to meet the targets set by City Council. The Plan would be delivered by CREM in collaboration with other City Divisions and Agencies. Work is underway to integrate the Plan into the capital planning process, with the expectation that the Plan will be incorporated into the 2023 budget process.		
28	Reduce emissions from City and Agency-owned vehicles	FS, TTC	Over 2022-2025 the City will continue to reduce GHG and air pollutant emissions from City-owned and operated vehicles, fuels and practices.	To-date, approximately 195 metric kilotonnes of greenhouse gas emissions have been eliminated, a 43% reduction from 1990 levels. This is well in line with meeting the 2025 reduction target of 45%.	

	A) Update and implement the Sustainable City of Toronto Fleets Plan to support the transition of 20 per cent of City fleet to zero-emission by 2025 and 50 per cent by 2030. Starting in 2022, for any light duty vehicle being purchased by the City, the City will select only the electric version of this vehicle where operationally feasible.	FS	Activities include: i. Accelerate transition of City Fleets to sustainable, climate resilient, carbon-neutral operations by 2040. ii. Expand City's corporate EV charging infrastructure (1,200 charge ports by 2025, and 2,400 charge ports by 2030). iii. Identify needs and opportunities for providing EV charging for City staff and members of the public. iv. Develop associated policies, operational procedures, training and instructional material, and promotional material.	In May, 2023, City Council adopted The Sustainable City of Toronto Fleets Plan (2023 Update), the City Fleets' plan for addressing climate mitigation and adaptation with strategies for transitioning City Fleets to sustainable, climate resilient, net zero operations by 2040 (2023.IE3.5): https://secure.toronto.ca/council/agenda-item.do?item=2023.IE3.5 Progress to date includes: • 8% of City-owned vehicles are Zero Emission Vehicles (ZEV) and 46% employ hybrid and other lower emission technologies or alternative fuels. • Currently, there are 256 charge ports available at more than 100 City locations. • Updated workplace charging program is under development with launch planned for the second quarter of 2024. • An employee survey was launched in March 2023 to solicit employee interest and identify potential locations. Workplace charging policies, operational procedures, training and instructional material are being developed.	

	B) Implement the TTC Green Bus Program to achieve target of 20 per cent of TTC buses zero emission by 2025-2026	TTC	Implement TTC Green Bus Program.	The TTC is on track to achieve 20% zero emissions vehicles by 2025. However, in 2025, part of the required charging infrastructure and eBuses remain unfunded. For details, please see the presentation on the Role of TTC under TransformTO, presented to the TTC Board December 7, 2023 and available on the TTC's website.	
29	Encourage City staff to adopt sustainable and climate positive practices at work and in their commutes	E&C	Over 2022-2025 the City will encourage staff to adopt sustainable, low-carbon practices by implementing the Live Green @ Work Strategy alongside the Smart Commute Toronto program.	Live Green @ Work and Smart Commute programs continue to engage staff in undertaking low-carbon actions at work and at home.	
	A) Implement Live Green @ Work Strategy	E&C	The Live Green @ Work Strategy: Staff engagement and organizational citizenship behaviour directed toward the environment encourage City employees to engage with climate action. This activity is important to the City as a green employer.	Hosted a monthly Live Green @ Work discussion series with guest speakers discussing topics ranging from internal program updates on indigenous climate action, or the Climate Lens tool for use by staff, to climate leaders from other cities discussing their climate action strategies.	

	B) Encourage City staff to take transit, carpool, cycle or walk rather than drive alone to work, through the Smart Commute program	E&C	Update the online tool that assists staff in finding sustainable commute options (transit routes, cycling routes, carpool matching). Conduct a commuter survey for City staff to identify current commuting practices and opportunities for assisting staff in reducing the carbon footprint of their commutes.	The Smart Commute Program encourages City staff to commute sustainably to and from work through annual campaigns, an online ride matching tool, resources, incentives and the Emergency Ride Home program.	
30	Lead by example in managing waste and producing renewable energy from biogas at City facilities	SWMS, TW, CREM	The City will build on existing programs to lead by example in managing waste and producing renewable energy from biogas at City facilities, as described below.	The City is continuing to implement its renewable natural gas (RNG) strategy for the beneficial use of biogas and landfill gas and advancing work to increase organics processing capacity, which will provide an additional opportunity to generate RNG.	
	A) Begin development of a third organics processing facility with renewable energy, targeting completion by 2028	SWMS	SWMS will build a third organics processing facility (OPF) with renewable energy. Diversion of organics from landfill and processing through the facility will contribute to a reduction in GHG emissions. In addition, Landfill gas control and utilization from Green Lane and Keele Valley landfills will contribute to this target.	The City is planning to expand the existing Disco Road Organics Processing Facility, instead of constructing a third organics processing facility. This expansion is expected to be complete by 2028, and will increase the City's local processing capacity, reducing the need to haul organic material outside the city, thereby reducing fuel consumption and GHG emissions. The additional biogas generated through this expansion will	

				also result in increased production of renewable natural gas.	
	B) Produce renewable natural gas from the Disco Road Organics Processing Facility, Dufferin Organics Processing Facility and the third organics processing facility (target completion by 2028) and landfill gas control and utilization systems at Green Lane and Keele Valley Landfills (target completion by 2026).	SWMS	SWMS will continue to capture biogas for beneficial use. The City has implemented renewable natural gas (RNG) processing at the Dufferin organics processing facility, and is currently working at the Disco Road organics processing facility to produce RNG from Green Bin organic waste, which will be injected into the natural gas grid for City use. The RNG produced will be blended with the natural gas that the City buys to create a low-carbon fuel blend that will be used across the organization to power vehicles and heat City-owned facilities, allowing for a reduction in GHG emissions Citywide. The City has also identified potential biogas and landfill gas upgrading opportunities at other City waste facilities including the Green Lane and Keele Valley landfills and a future third organics processing facility.	The City has installed infrastructure at the Dufferin Organics Processing Facility that allows it to create renewable natural gas (RNG) from Green Bin organics. Biogas upgrading infrastructure is also being installed at the Disco Road Organics Processing Facility and is on track to be operational by the end of the second quarter of 2024. Plans to expand this facility will also allow for additional RNG production. The City is also working to install infrastructure that can convert landfill gas to RNG at the Green Lane Landfill and exploring RNG production at its closed Keele Valley Landfill. Installing RNG infrastructure enables the City to convert raw biogas and landfill gas to RNG and inject it into the natural gas grid for use by the City. The RNG produced can be blended with the natural gas that the City buys to create a lower-carbon fuel blend that can be used across the organization to power vehicles and heat City-owned facilities, allowing for a reduction in GHG emissions across the organization.	

				The production of RNG from biogas and landfill gas has the environmental benefit of closing the carbon loop by capturing the gas produced (as opposed to flaring/burning it), upgrading the gas to pipeline quality RNG, and then using it to displace a fossil fuel with renewable green fuel.	
	C) Produce and use biogas from wastewater	TW	Toronto Water will continue to make better use of biogas through production of renewable energy at its facilities.	Whenever possible, the City's wastewater treatment plants produce and use biogas to displace natural gas usage. In 2022, biogas usage at these facilities resulted in the avoidance of 9.5 million m^3 of conventional natural gas and the associated avoidance of the equivalent of 18,300 tonnes of CO_2 emissions.	
	D) Divert waste from landfill in City-owned facilities	CREM, SWMS	Waste generated at City-owned facilities is diverted from landfill, reducing associated GHG emissions.	Waste audits in seven corporate facilities were completed to comply with the Provincial 3Rs Regulation 102/94. The Waste Diversion Rate increased from 70% to 75%. 2023 waste audits showed seven major corporate facilities diverted 314 metric tonnes of recycling and organics from landfill.	

***City Divisions, Agencies & Corporations:**

AS – Accounting Services
BST – Bike Share Toronto

CFO – Chief Financial Officer & Treasurer's Office
CMO – City Manager's Office
CP – City Planning
CREM – Corporate Real Estate Management
E&C – Environment & Climate (formerly EED – Environment & Energy)
EDC – Economic Development & Culture
FP – Financial Planning
FS – Fleet Services Division
HS – Housing Secretariat
IAO – Indigenous Affairs Office
Legal – Legal Services
MLS – Municipal Licensing & Standards
PFR – Parks, Forestry & Recreation
PMMD – Purchasing & Materials Management
SDFA – Social Development, Finance & Administration
SWMS – Solid Waste Management Services
TB – Toronto Building
TH – Toronto Hydro
TSD – Transportation Services
TTC – Toronto Transit Commission
TW – Toronto Water