



Discussion Primer for the Climate Emergency Action Plan- 2020 (Appendix C) How We Prosper

The City is requesting that you and your organization review the list of potential actions and supporting actions for inclusion in the CEAP that has been provided in Climate Emergency Action Plan Actions for Discussion. Categorized actions with supporting actions have been collected to start discussions around how best to move London toward the goal of net-zero GHG emissions and improved resiliency from climate change.

The actions have been organized into the following pillars, which are borrowed and slightly modified from the extensive community engagement efforts undertaken to inform London’s Official Plan update starting in 2013. The Climate Emergency impacts most parts of life in London, so these categories are meant to be helpful for organizing our thinking during CEAP development:

How We Live	Helping Londoners respond to and prepare for climate change at home
How We Green	Building a greener city by protecting and increasing natural resources in the built and natural environment
How We Move	Supporting low/no emission transportation choices and a transportation network that makes London easy to get around through active transportation and transit and is connected to the region
How We Grow	Ensuring London becomes a mixed-use compact city using green development and redevelopment standards and incentives
How We Prosper	Ensuring a City that is prosperous, innovative and climate change resilient

The City is looking for feedback on:

- The perceived importance or significance of actions and supporting actions (e.g., how significant are these actions to your organization?)
- Supporting actions within the pillars that your organization can play a role in. Proposed roles taken on any of the supporting actions could be one of leadership, co-leadership, partnership or support.
- Other actions and/or supporting actions that your organization or others could support that would strengthen the CEAP.

Climate Emergency Action Plan Actions for Discussion

Action Types

Potential Actions and Supporting Actions are categorized based on the following action types:

- **Study or Studies:** To conduct research or strategic planning projects to establish direction on new or emerging areas of interest.
- **Policies:** To establish or update rules and regulations or to provide direction for projects, initiatives, or programs.
- **Procedures:** To develop and implement new ways of doing business or adapt existing practices and procedures to reduce GHG emission or build resiliencies.
- **Programs:** To continue or enhance ongoing activities in a core service area to reduce GHG emission or build resiliencies.
- **Projects:** To propose a one-time action to achieve specific outcomes to reduce GHG emissions or build resiliencies.
- **Pilot Projects:** To develop a “trial run” of an action, typically preceded by a feasibility study, that has the potential to become a future program for the City of London, but needs to be tested on a smaller scale.
- **Partnerships:** To collaborate with stakeholders (both internal and external) to advance climate action for the Corporation and in the community and advocate on behalf of the City to other levels of government to advance and support local climate action.

Ability to Implement

The estimated ability to implement each action has been characterized as either straightforward, reasonable or ambitious. These categories are intended to demonstrate the overall complexity involved with implementing each action at a high level.

Any action’s categorization doesn’t imply that all conditions of the category are met, but that the balance of issues surrounding the ability to implement place the action in the category (e.g. an action categorized as ambitious may require significant coordination across senior levels of government and significant disruptive change, but may not require significant or new investment; an action categorized as straightforward may have a strong investment payback and little individual behaviour change, but may require little technology change).

Ability to Implement	Description
Ambitious (A)	Significant Additional or New Investment No investment payback Significant Disruptive Change Significant Technology Change High level of coordination with Senior Governments Significant business behaviour change

	Significant Individual behaviour change
Reasonable (R)	Moderate Additional or New Investment Moderate investment payback Moderate Disruptive Change Moderate Technology Change Moderate coordination required with Senior Government Moderate business behaviour change Moderate individual behaviour change
Straightforward (S)	Little Additional or New Investment Strong investment payback Little Disruptive Change Little or No Technology Change Little coordination required with Senior Government Little business behaviour change Little individual behaviour change

Timing

The estimated timing for starting actions is identified as short-, medium-, or long-term and/or recurring as follows:

Icon/Text	Description	Detail
	Short Term	(1-3 years)
	Medium Term	(4-7 years)
	Long Term	(7+ years)
Recurring	Actions which happen on an ongoing basis	N/A

Potential Outcomes

In the tables below, the potential of GHG reduction actions and potential resiliency enhancement is identified as follows:

- 

Lower potential for GHG reductions (<1,000 tonnes per year)
- 

Medium potential of GHG reductions (1,000 to 10,000 tonnes per year)
- 

High potential for GHG reductions (> 10,000 tonnes per year)
- 

Lower potential for resiliency enhancement (e.g., lowers or avoids localized property damage or personal injuries)
- 

Medium potential for resiliency enhancement (e.g., lowers or avoids widespread property damage or personal injuries)
- 

High potential for resiliency enhancement (e.g., lowers or avoids widespread property destruction or loss of life)

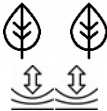
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The following table provides a high-level summary of the types of actions and outcomes likely required in order for London to achieve net-zero emissions by 2050 and to be resilient to future extreme weather events.

By 2030	By 2040	By 2050
At least 10% of London’s electricity needs provided by local renewable generation At least 5% of London’s natural gas needs provided by “green gas” (e.g., biomethane, hydrogen) “Smart grid” technology used by marketplace leaders Zero-emission Connected & Automated Vehicle (CAV) service providers in pilot phase Local pilot projects for creating and selling carbon offsets from local projects Local pilot projects for engineered carbon capture and storage 60% diversion rate from landfill for business waste (e.g., London Waste to Resources Innovation Centre) Larger-scale urban food production in pilot phase Food rescue programs from grocery stores and restaurants is common practice Opportunities for other local environmental investments and levels of recognition and reward	At least 30% of London’s electricity needs provided by local renewable generation At least 15% of London’s natural gas needs provided by “green gas” (e.g., biomethane, hydrogen) “Smart grid” technology use is widespread Zero-emission CAV service providers integral part of London’s public transportation network Selling and purchasing of locally created carbon offsets is a common practice Engineered carbon capture and storage used by some large local users of natural gas 75% diversion rate from landfill for business waste Circular economy is integral part of London’s economy (e.g., London Waste to Resources Innovation Centre) Urban food production is common Food rescue programs from grocery stores and restaurants is widespread	At least 50% of London’s electricity needs provided by local renewable generation At least 50% of London’s natural gas needs provided by “green gas” (e.g., biomethane, hydrogen) Residual use of natural gas is offset by a mix of local and global carbon sequestration and/or carbon capture and storage projects Urban food production is widespread 90% diversion rate from landfill for business waste

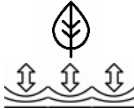
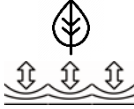
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Action #1: Increase and encourage the installation of distributed renewable energy assets.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
1-1	Review London's electricity distribution system to identify areas with capacity for additional renewable electricity generation.	Study	N/A		S/R		City
1-2	Review London's gas distribution system to identify areas with capacity for additional "green gas" (i.e., biomethane and/or hydrogen) gas injection.	Study	N/A		S/R		City
1-3	Explore programs to encourage distributed renewable electricity generation and green gas investment in areas with system capacity.	Pilot Project			S/R		

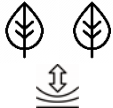
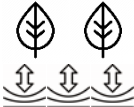
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Action #2: Improve City preparedness for dealing with extreme climate events.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
2-1	Explore potential for formal neighbourhood-scale emergency preparedness and response group support	Partnerships			S/R	City	
2-2	Review readiness of City emergency response process to address extreme weather emergencies	Procedures			S	City	

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Action #3: Implement policies to improve data collection and use for improved climate monitoring, emergency response and optimization of electricity generation and distribution.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
3-1	Advance a data collection and use strategy for London that incorporates climate change mitigation and adaptation actions.	Plan			S	City	
3-2	Complete strategy for connected and automated vehicles that discourages single-occupancy use, encourages shared ownership/service models, complements London’s public transportation system, prioritizes pedestrian and cyclist road users, and employs zero-emission vehicles	Plan			S	City	
3-3	Work with energy utilities to implement smart grid strategies to support climate resiliency, such as EV-to-grid connectivity, solar PV and battery storage, surplus power-to-gas hydrogen generation	Pilot Projects			R		City

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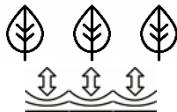
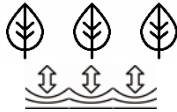
Action #4: Advance more sustainable farming practices and increased local product consumption.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
4-1	Review & revise zoning by-law Z-1 to ensure smaller, family-run farms are not discouraged	Policy			S	City	
4-2	Engage regional stakeholders to review food processing infrastructure and potential needs for increased agricultural development	Study			S		City

* Refer also to How We Green Actions 2-1, 4-4 and 6-5

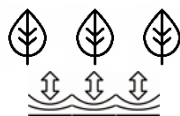
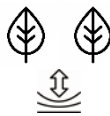
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Action #5: Continue to work with business community partners to advance sustainable business practices.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
5-1	Continued promotion and advancement of Green Economy London and other environmental initiatives for businesses	Procedure			S		City
5-2	Define and encourage the growth of employment in the green products and services sector in London	Partnership			S		City

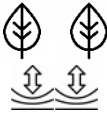
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Action #6: Work with the private sector to identify opportunities to leverage City assets and/or funds to activate private capital for climate action in the public and private sector.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
6-1	Explore green bonds and green revolving funds as potential financing options for increased investment in climate-resilient infrastructure and CEAP initiatives	Study			S		
6-2	Explore the feasibility of creating and facilitating local carbon offset projects to provide funding support	Partnerships			R	City	

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Action #7: Support and encourage resource and waste management initiatives for London businesses.

Supporting Actions		Action Type	Potential Impacts	Timeline	Ability to Implement	Responsibilities	
						Lead/Co-Lead	Partner/Support
7-1	Implement waste diversion and minimization activities that support the 60% Waste Diversion Action Plan	Plan			R/A	City	
7-2	Continue to work with community business partners to implement food waste reduction initiatives at grocery stores and restaurants	Partnerships			S	City	
7-3	Work with partners to develop tools and resources to help London businesses reduce their use of packaging	Partnerships			S	City	
7-4	Support and promote London businesses playing a role in developing local circular economy solutions (e.g., London Waste to Resources Innovation Centre)	Partnerships			S	City	