Terms of Reference (TOR) for
TransformTO Modelling Advisory Group (MAG)
March 1, 2016

1.0   Introduction – TransformTO

TransformTO will engage the community in designing a plan for an 80% reduction in Toronto's greenhouse gas (GHG) emissions by 2050. Technical modeling will inform the plan and multi-criteria analysis will be used to consider how a low-carbon strategy could be designed to support public health, local economy, and social equity.

In early 2015, Toronto City Council endorsed a Terms of Reference for TransformTO, a multi-year project that will produce detailed, technical analyses on how to reduce Toronto's GHG emissions while involving stakeholder groups from multiple sectors and communities to inform and enrich the process of choosing a low carbon path forward for Toronto.

The City of Toronto's Environment and Energy Division (EED) and the Toronto Atmospheric Fund (TAF) are co-leading this initiative and modelling is being undertaken by Sustainability Solutions Group (SSG).

By late 2016, the EED will bring to Toronto City Council for their approval:

1. **A short-term action plan (2017-2020)** that will allow Toronto to meet its 30% greenhouse gas emissions target by 2020.

2. **A pathway document** that will outline a viable set of strategies to reduce Toronto's emissions by 80% by 2050 while generating a healthier, more prosperous and equitable city.

These plans represent an outline for subsequent phases of work where refinement of future plans and policies will be initiated through deep community engagement starting in 2017.

2.0   The Modelling Approach

At the centre of TransformTO is the development of long-range modelled scenarios based on detailed analysis of proposed strategies and measures to achieve the City of Toronto's 80% GHG reduction target by the year 2050. However, the modelling approach will embrace a multi-criteria analysis of all scenarios to examine ways that low-carbon strategies could enhance or inhibit progress towards improved public health, social equity and economic development in the City of Toronto.

To inform the analysis, a multi-sectoral Modelling Advisory Group (MAG) will help guide the inputs to the model and give feedback on modelling results. This unique co-development approach to the modelling task will help provide a more integrated understanding of the impacts of a low-carbon city on its inhabitants and its economy.

The outputs of the models will then be used as a basis to catalyze broader community discussion and to support co-creation of a low-carbon strategy and promotion of its relevance to broad constituencies.

A very simplified outline of this modelling process follows:

Stage 1: Detailed data gathering and data augmentation for Business As Usual (BAU) and targeted future 80% reduction GHG scenarios

Stage 2: Modelling BAU and 2050 greenhouse gas emissions with specific strategies and measures

Stage 3: Multi-criteria analysis of GHG scenarios using economic, health and social equity inputs and methods of analysis

Numerous public input opportunities will be initiated during the above three stages to further inform and refine the modelling process. A final output of the model will then be used by the MAG to propose recommendations to be considered as part of the 2020 short-term action plan (2017-2020) and the pathway documents presented to Toronto City Council in late 2016.

3.0   The Modelling Advisory Group

The TransformTO Modelling Advisory Group (MAG) will draw on the diversity of expertise within the academic and non-academic communities in Toronto. Additionally, staff from specific City of Toronto divisions are included in the group to help ensure the model is informed by and will inform City policy development and program implementation.

Together, group members will represent technical expertise related to urban GHG and air pollution reduction, social equity issues, economic and financial issues, land use planning and policy, public health, future scenario modelling, and communications of technical findings to the lay audience.

With approximately 25 members, the group will jointly support the modelling consultants and staff from TAF and EED in developing, refining and analysing the implications of model scenarios and informing a set of recommendations to City Council.

The full group will meet formally at least three times and will also review and comment on materials produced as part of the modelling process. Roles envisioned include:

- Assist in securing informational or data inputs to the model
- Review and advise on the development of the BAU (business as usual) scenario
- Support the development of key indicators to be used to assess GHG emissions and/or economic, social and health impacts
- Provide insight as to current and/or future planned technologies, innovations, methods or uncertainties to inform the development of the model and/or the analysis of its output
- Facilitate linkages as appropriate to other relevant individuals/groups who may wish to be involved the modelling process

- Review and discuss preliminary and final model results in light of the objective to maximize multiple benefits
- Identify and prioritize key issues, uncertainties and further studies that would enrich the model and its results
- Contribute to the development of recommendations to City Council
- Encourage open dialogue, data sharing and research initiatives related to or emerging from the modelling or community interest

4.0   Membership

Participation in the MAG and its activities is voluntary. Since members have been selected to represent a balance of different perspectives and areas of expertise, we will strongly encourage all members to participate in all meetings and review assignments so that we can receive the benefit of inter-disciplinary discussion and feedback.

The group will include community members as well as City staff representatives from key City Divisions. Technical support will be provided by Sustainability Solutions Group (SSG) and administrative support will be provided by City of Toronto Environment and Energy staff.

5.0   Term

The modelling portion of the TransformTO project will have its highest intensity of activity taking place between the months of March – December 2016, a total of 9 months.

As a large group, the MAG will meet in person a maximum of 3 times over the 9-month term, however, it is expected that depending on the stage of modelling, some months will have higher levels of activity than others (eg. initial data input stages and reviews of the BAU modelling results and the final results and recommendation phase).

A schedule will be circulated in consultation with MAG members however, roughly, one meeting will be held at the end of March 2016, one in early August 2016 and one in early October, 2016.

Between large group meetings, communication (eg. circulation of requests for information, drafts of modelling results, etc) will occur via electronic and phone communication.

TransformTO's implementation will be ongoing and MAG members will be welcome to continue their involvement after the modelling stage has come to completion.

6.0   Confidentiality

All communications and any information exchanged between MAG members should be treated as confidential; however, ultimately, all project data outputs will be make

publically available according to the City of Toronto's Open Data protocol where appropriate.

7.0 Acknowledgements

The contributions of MAG members will be a critical component of the modelling process for TransformTO. Members will be acknowledged in the final recommendations report and listed on the TransformTO website.