



REPORT FOR ACTION

Grants and Program Allocation Recommendations

Date: October 23, 2020
To: Toronto Atmospheric Fund Board of Directors
From: Chair, Grants and Programs Committee

SUMMARY

At its October 2, 2020 meeting, the TAF Grants and Programs Committee recommended that the Board approve 10 grants with a combined value of \$879,795 and three internal program allocations with a total value of \$855,511. This report provides recommendations from the Committee meeting.

RECOMMENDATIONS

The Chair of the Grants & Programs Committee recommends that the Toronto Atmospheric Fund Board of Directors:

1. Approve the following grant requests to be funded jointly from the Canada, Ontario and Toronto endowments except where otherwise indicated:
 - a. \$300,000 over 36 months to Building Up to develop and implement a recurring 16-week green building training program designed for individuals who face barriers to employment in the trades industry. Approval to be subject to the following conditions:
 - The training curriculum and train-the-trainer module will be open-source and shared with other training programs and institutions across the GTHA.
 - Building Up will commit to collaborating with the Workforce 2030 Coalition and its members to advance policy and programs that will increase training opportunities in the green building industry.
 - b. \$125,000 over 12 months to the City of Mississauga to assess the feasibility of creating a district energy system in downtown Mississauga (*funded from the Canada and Ontario endowments only*). Approval to be subject to the following conditions:
 - Commit to facilitating reimbursement of up to the full value of TAF's grant if the proposed district energy system is built with private or commercial participation.
 - Renewable sources of energy for the district energy system are prioritized, and the business case will include a robust analysis of scenarios in which renewable sources comprise between 50-100% of the energy used for the district energy system
 - Do not consider the business case for a district energy system that is wholly reliant on non-renewable energy sources.

- Submit a stakeholder engagement strategy for TAF approval outlining how and when building owners, municipal staff, councilmembers, residents and other key stakeholders will be consulted throughout the process.
 - Submit a knowledge transfer strategy for TAF approval describing actions that will be taken to share lessons from this project with staff in other GTHA municipalities.
- c. \$122,000 to Clean Air Partnership over 12 months to undertake a study to support the cost-effective design and implementation of EV charging stations in new multi-unit residential buildings in the GTHA, and to promote the business case for “EV Ready” parking requirements to local governments and industry members through a series of stakeholder consultations. Approval to be subject to the following condition:
- Commit to consulting and sharing project outcomes with stakeholders in the development industry and municipal staff across the GTHA to support the inclusion of EV charging infrastructure requirements in new and updated municipal building standards as well as voluntary building standards.
- d. \$32,800 to Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) over 4 months to identify the training and support tools needed to enable heating, ventilation, and air conditioning (HVAC) contractors to drive demand for and implementation of home energy retrofits by engaging industry members and stakeholders through a series of focus groups, interviews, and surveys (*funded from the Canada and Ontario endowments only*). Approval to be subject to the following conditions:
- Consult with large employers in the HVAC industry, equipment manufacturers, and other stakeholders with a vested interest in project outcomes to inform the research findings and build support for future phases of work.
 - Engage with Enbridge to incorporate the lessons from its previous contractor training program focused on selling energy efficiency solutions to homeowners.
- e. \$16,050 to Harbord Village Residents’ Association over 12 months to develop a neighbourhood-based education campaign and electric vehicle (EV) bulk purchase program, as well as a strategy to install a public EV charger in the Harbord Village neighbourhood. Approval to be subject to the following condition:
- Engage stakeholders who can support the scale-up and knowledge transfer of project outcomes beyond the Harbord Village neighbourhood, including the City of Toronto, Plug ‘n Drive, and at least one energy utility company.
- f. \$27,450 to Mohawk College over 12 months to develop a business plan for a regional retrofit delivery centre which will support homeowners in undertaking energy retrofits (*funded from the Canada and Ontario endowments only*). Approval to be subject to the following conditions:
- Eliminate the home energy audit activities and associated budget from the TAF funding request.
 - Submit an analysis regarding the feasibility of completing this project in less than 12 months, including a revised project timeline (if feasible) or an explanation for maintaining the initial timeline (if not feasible).
 - Incorporate into the business plan an analysis of local building industry capacity to deliver energy retrofit targets.

- g. \$26,050 to Ontario Geothermal Association over 10 months to develop a guideline document that can be used by municipal staff to advance building projects that involve geothermal drilling within their jurisdiction while ensuring the protection of ground water supply systems (*funded from the Canada and Ontario endowments only*). Approval to be subject to the following condition:
 - The Guideline will provide a summary of the other barriers, beyond concerns about aquifer protection, to scaling up geo-exchange systems in the GTHA.
- h. \$90,325 to Passive Buildings Canada over 12 months to conduct a benchmarking study and develop a report that includes a comprehensive data set of the emissions embedded in the building materials for residential homes in the GTHA, with a view towards promoting lower carbon material selection in the future. Approval to be subject to the following condition:
 - Engage the Independent Electricity System Operator, local utilities and GTHA municipalities outside of Toronto to promote the incorporation of embodied carbon considerations into municipal building codes.
- i. \$114,824 to Sustainable Buildings Canada over 12 months to develop a software tool, with input from key stakeholders, that enables non-technical users to review building energy models for compliance with municipal energy performance requirements. Approval to be subject to the following conditions:
 - Engage with provincial building code officials to collect insights on how this software can be coordinated with provincial requirements.
 - Provide written confirmation that the software tool developed through this project will be made available in perpetuity to the target markets on a cost-recovery basis.
- j. \$25,000 to the Town of Halton Hills over 6 months to host a series of workshops for local development industry professionals to increase their awareness of the Town's updated Green Development Standards and to provide guidance on how to comply with the new standards (*funded from the Canada and Ontario endowments only*). Approval to be subject to the following condition:
 - Develop and implement a knowledge transfer strategy, which outlines specific actions that will be taken to share the workshop curriculum and project outcomes with representatives from at least one municipality in Durham, Halton, York, and Peel Regions as well as the City of Toronto and City of Hamilton.

2. Decline five grant requests with a total value of \$542,486.

3. Approve the following project allocation requests to be funded jointly from the Canada, Ontario and City of Toronto endowments:

- a. \$181,200 over 24 months for TAF to enhance the capacity of community practitioners, TAF grantees, and TAF staff leading internal programs by providing access to professional coaches and mentors and training opportunities in targeted skills areas such as program design, developmental evaluation, policy advocacy, and partnership brokering.
- b. \$74,311 over 12 months to provide TAF with the resources to support strategic greenhouse gas-related research in the areas of industrial emissions, co-benefits

of climate actions, and the potential roles of natural gas and related infrastructure in the pathway to decarbonize, and also to enable TAF's engagement with and advisory support for both local quantification practitioners as well as the Low Carbon Cities network.

- c. \$600,000 over 12 months to enable TAF to launch and operate a Retrofit Delivery Centre, and attract additional external funding, which is dedicated to delivering high-quality energy retrofits in the multi-unit residential building sector at scale by standardizing and optimizing administrative work, leveraging economies of scale, reducing transaction costs, and building up needed industry capacity by creating demand and sending market signals needed to drive investment.

FINANCIAL IMPACT

If all the recommended grant requests are approved, \$679,795 would be allocated to the 2020 grants program budget, \$100,000 to the 2021 budget, and \$100,000 to the 2022 budget.

The value of the recommended grant allocations exceeds the funds remaining in the 2020 grants budget. Meanwhile, the 2020 grants and internal program budgets have each been reduced by \$77,00 due to the Canada endowment being received later than expected in addition to the anticipated returns being lower than expected.

Therefore, the unspent funds remaining in the 2020 internal program budget (\$253,646) will be used to offset part of the 2020 grants budget deficit, resulting in a balance of -\$125,144. This remaining deficit will be drawn from the 2021 grants program budget, as per TAF's longstanding practice of borrowing or carrying over funds between annual grants and internal program budgets.

To promote financial sustainability and ensure ongoing compliance with TAF's funding requirements, staff will evaluate the need to draw further from the 2021 grants and program budget and/or to reappportion the 2020 grants and program allocations among the three endowments based on TAF's end-of-year financial performance.

Grants Program Budget	2020	2021	2022
Total available funding	\$1,697,159 (\$1.2M + \$574,159 carried forward from 2019 - \$77,000 in decreased contributions from the Canada endowment)	The 2021 budget has not been finalized (the 2020 deficit of \$125,144 will be subtracted from the initial 2021 budget)	The 2022 budget has not been finalized
Grant allocations committed to date	\$1,396,154	\$578,125	\$0
Funding currently available	\$301,005	TBC	TBC

Recommended allocations from the October 2020 grant intake round	\$679,795	\$100,000	\$100,000
Remaining balance	<u>-\$378,790</u>	TBC	TBC
Remaining balance in the internal program budget (see below)	\$253,646		
Remaining balance, to be drawn on from the 2021 grants program budget	<u>-\$125,144</u>		

If the recommended internal program allocations are approved, \$781,911 would come out of TAF's 2021 budget, and \$73,600 would come out of the 2022 budget. The recommended project allocations would not draw any funds from the Internal Program Budget for 2020.

Internal Program Budget	2020	2021	2022
Total available funding	\$1,185,858 (\$1.2M + \$62,858 carried forward from 2019 - \$77,000 in decreased contributions from the Canada Endowment)	The 2021 budget has not been finalized	The 2022 budget has not been finalized
Internal program allocations committed to date	\$932,212	\$0	\$0
Recommended allocations from the October 2020 grant intake round	<u>\$0</u>	<u>\$781,911</u>	<u>\$73,600</u>
Remaining balance	\$253,646	TBC	TBC

BACKGROUND

The following provides a summary of the grants recommended by the Chair of the Grants & Programs Committee for Board approval.

Grant

Building Up | Building a Green Construction Workforce in Toronto

\$300,000 over 36 months

Applicant's address: 116 Industry St., Toronto, ON, M6M 4L8

Location of proposed activities: Toronto

This project will enable Building Up to embed green construction training into their existing pre-apprenticeship training program and to share this new curriculum with other training providers across the GTHA. Building Up is a non-profit construction contractor that provides training and employment opportunities to individuals experiencing barriers to careers in the

trades industry. The new curriculum will include both green building theory and practice sections and feature content focused on: installing energy-efficient structural systems, including foundation, walls and roofs; creating energy efficient building enclosures, achieving air tightness and avoiding thermal bridges; choosing and installing healthy, natural finishes; and choosing and installing efficient, low-carbon heating, cooling and ventilation systems. To develop the curriculum, Building Up will partner with the Endeavour Centre, a Peterborough-based sustainable building school, which provides green building training to tradespeople. Over the next three years, Building Up will deliver this curriculum to three cohorts including at least 300 trainees. Through their participation in the program, trainees will also be given the opportunity to complete green construction renovations in two residential buildings as well as an industrial facility.

City of Mississauga | Building the Business Case for District Energy in Mississauga's Downtown

\$125,000 over 12 months

Applicant's address: 300 City Centre Drive, Mississauga, ON, L5B 3C1

Location of proposed activities: Mississauga

The objective of this project is to develop the business case for a district energy (DE) system in downtown Mississauga. This work will enable city staff to identify: current and projected energy supply and demand for the study area; estimated costs to build and operate the system; estimated costs to retrofit existing buildings to connect to the DE system; potential governance structures to operate the system, and; the climate, economic, and social benefits of DE. In collaboration with a professional consultant, the city will engage key internal and external stakeholders and establish a working group to raise the level of awareness of this project, generate interest among potential investors, gather input, and ensure that any concerns are addressed. In short, the business case will confirm whether a low-carbon DE system in downtown Mississauga is viable and, if so, inform next steps towards implementation.

Clean Air Partnership | Electric Vehicle Charging Infrastructure Costing Study and Consultation

\$122,000 over 12 months

Applicant's address: 75 Elizabeth Street, Toronto, ON, M5G 1P4

Location of proposed activities: GTHA

The purpose of this project is to develop an Electric Vehicle (EV) Ready Multi-Unit Residential Building (MURB) Costing Study that will identify potential electrical designs and construction costs to install EV chargers in new MURBs. The desired outcome is to support local governments in developing and adopting "EV Ready" requirements for residential parking in new construction projects, particularly in the MURB sector where a lack of access to EV charging poses a barrier to EV adoption. This project is also intended to support building industry stakeholders (e.g. developers, architects, designers, engineers, local governments, etc.) to understand the financial business case for EV Ready parking requirements, and to learn about the most cost effective electrical configurations and EV energy management system options for EV charging. Clean Air Partnership will lead consultations with Ontario local governments and undertake stakeholder consultations with developers to share the rationale for these EV charging policies while gathering input on developer issues and concerns.

Heating, Refrigeration and Air Conditioning Institute of Canada | Overcoming Implementation Barriers to HVAC-led Building Retrofits

\$32,800 over 4 months

Applicant's address: 2350 Matheson Blvd. East, Suite 101, Mississauga, Ontario L4W 5G9

Location of proposed activities: GTHA

The purpose of this project is to explore the feasibility of supporting Heating, Ventilation, and Air Conditioning (HVAC) tradespersons to promote a broader range of home retrofits that could enhance building comfort while improving energy performance and reducing carbon emissions. This project will enable HRAI to identify the key internal barriers that have prevented HVAC professionals from taking on this role and, once those barriers have been identified, explore market strategies to transform this sector into champions of building performance, energy efficiency and carbon reduction. To accomplish this, HRAI will coordinate focus groups, one-on-one interviews and surveys with industry members and other stakeholders. The barriers and potential solutions identified will be captured and communicated in a report that will be made available to the HVAC industry members and related stakeholders and decision-makers. Building on the initial research findings resulting from this project, potential solutions will be market-tested for efficacy with HVAC stakeholders in specific target markets. Outputs from this work will inform future actions, which may include the development of new training opportunities, policy advocacy strategies, and/or pilot programs with municipal governments to strengthen the market for whole-home retrofits.

Harbord Village Resident's Association (HVRA) | HVRA Electric Vehicle Project

\$16,050 over 12 months

Applicant's address: Box 68522, 360A Bloor Street West, Toronto, ON, M5S 1X1

Location of proposed activities: Toronto

The purpose of this concept development grant is to establish the framework for a neighbourhood-led program to accelerate electric vehicle (EV) and e-bike purchases. The program will seek to educate neighbourhood residents about the benefits of purchasing an EV through communications campaigns. The program will also organize bulk purchase orders to simplify the consumer process and offer financial incentives through bulk discounts. HVRA will also research potential locations to install a neighbourhood EV charging station, and engage external stakeholders such as the City of Toronto and utility companies to generate their support and buy-in. HVRA will accomplish this by:

- Surveying residents about their current modes of transportation and their level of interest in purchasing an EV;
- Contact vendors that sell EVs and e-bikes to gauge their interest in participating in an annual bulk purchase program;
- Develop communications materials based on survey findings to educate residents about the benefits of EVs and address concerns that prevent people from purchasing EVs, and;
- Consult residents' association across Toronto to gauge their interest in participating in or promoting the annual bulk purchase program.

Centre for Climate Change Management at Mohawk College (Mohawk College) | Home Energy Retrofit Delivery Centre for the Hamilton-Burlington Region

\$27,450 over 12 months

Applicant's address: 135 Fennell Avenue West, Hamilton, ON, L9C 0E5
Location of proposed activities: Hamilton and Burlington

The objective of this project is to develop a business plan for a regional Low-rise Home Energy Delivery Centre, which will drive homeowner participation in home energy retrofit (HERO) incentive programs currently being developed by the City of Hamilton and City of Burlington. The Delivery Centre will accelerate participation rates by centralizing and streamlining the services and supports available to homeowners through the HERO programs. The Delivery Centre will reduce cost (both financial and time) and risk to homeowners by supporting quality assurance, monitoring and reporting on retrofit outcomes, educating consumers and services providers, and – over time – developing new services like centralized procurement. Mohawk College will engage consumers, policymakers and industry stakeholders, and coordinate with the Bay Area Climate Change Council to develop the business plan. The business plan will help these partners to identify: the Deliver Centre's core services and principles; the governance structure and recommended lead partner, and; strategies to scale-up the Delivery Centre model and services beyond Hamilton and Burlington.

Ontario Geothermal Association | Geothermal Drilling & Aquifer Protection Guideline

\$26,050 over 10 months

Applicant's address: 2350 Matheson Blvd. East, Unit 101, Mississauga, L4W 5G9
Location of proposed activities: Ontario

The purpose of this project is to develop a guideline that will provide municipalities with an understanding of the issues that need to be assessed and understood when reviewing development applications and projects that involve geothermal drilling or ground source heat exchange. The Geothermal Drilling & Aquifer Protection Guideline will help ensure that decisions related to obtaining permissions for geo-exchange are not unnecessarily impacted by any lack of clarity and understanding related to perceived conflicts between geo-exchange drilling and aquifer protection. This document will explain from a technical perspective how geo-exchange drilling works and what measures need to be taken during construction to ensure the protection of local aquifers and water supply. The Guideline will be developed by an advisory team of academics and climate and water protection municipal staff to ensure that it is accurate and consistent and responds to existing issues and concerns. The Guideline will be shared with GTHA municipalities by trusted organizations with existing partnerships and networks across the region.

Passive Buildings Canada | Benchmarking Materials Emissions for Low-Rise Housing

\$90,325 over 12 months

Applicant's address: 12 St. Andrew's Gardens, Toronto ON, M4W2E1
Location of proposed activities: Toronto

The objective of this project is to develop a benchmarking study, based on GTHA samples, of the emissions associated with the production of materials used for residential homes. The study is intended to provide a comprehensive data set, based on consistent accounting methodology, on which policy and industry decisions for material emission reductions can be based. To achieve this, Passive Buildings Canada will partner with the Endeavour Centre to assess building data for up to 100 residential buildings across a range of types (single family, duplex, townhouse,

MURB) at different levels of energy efficiency (code minimum, Energy Star, R-2000, Passive House). Materials emissions data will be assessed using the Endeavour Centre's materials emissions calculator, which has been developed over several years and rigorously tested. In addition to whole building results, the study will illustrate which materials within each building are responsible for the most emissions. The results are intended to enable regulators to assess the effectiveness of different policy options to complement existing GHG reduction goals in the building sector. Designers and developers will understand how material selections can affect emissions and assess the most cost-effective ways to quickly achieve sizable reductions. And finally, building materials manufacturers will learn which products are most appropriate for investment and promotion to meet corporate and government GHG reduction targets.

Sustainable Buildings Canada | Compass Energy Modelling Reviews for Municipalities

\$114,824 over 12 months

Applicant's address: 33 Longboat Avenue, Toronto ON, M5A 4C9

Location of proposed activities: Greater Toronto and Hamilton Area

The purpose of this project is to create a software tool that allows non-technical users to review energy models for compliance with municipal energy performance requirements within their green development standards. The project will build on the Compass platform, which was developed by Sustainable Buildings Canada with funding from TAF and the IESO and launched in 2018. Compass is a free online tool that enables the building design community to benchmark performance against their peers and provides access to data to support them in reducing energy use and GHG emissions during the building design process. The first stage of the project will be focused on stakeholder engagement and feedback to better understand the challenges that municipal staff are facing to enforce their energy performance standards. Sustainable Buildings Canada will use this input to develop software improvements, which will be validated by beta testers who will receive ongoing support and training during the beta period. The feedback from beta testers will be used to refine the software going forward, and will be documented in a final report to be shared with industry stakeholders.

Town of Halton Hills | Halton Hills Green Development Standards Training Workshops

\$25,000 over 6 months

Applicant's address: 1 Halton Hills Dr., Halton Hills, L7G 5G2

Location of proposed activities: Town of Halton hills

The purpose of this project is to provide a series of workshops for local development industry professionals to increase their familiarity with the requirements of Halton Hills' updated green development standards (GDS), and to provide guidance on how to comply with the new standards. Town staff will also provide a second stream of training that will build community engagement with and support for the GDS. In collaboration with professional consultants, Town staff will develop a workshop curriculum and marketing plan and host a series of online and/or in-person workshops for both community and industry stakeholders. They will capture key lessons and outcomes in a final report and share best practices with other municipal organizations across the GTHA. The trainings will focus on the development of a planned community, which will create 7,000 new units of housing and will contain nearly all of the expected population growth for the Town to 2030. Effective implementation of the Town's

updated GDS in this area is essential to ensure that the Town meets its climate targets.

Program Allocations

Climate Action Skills Fund | \$181,200 over 24 months

The Climate Action Skills Fund will enhance the capacity of community practitioners and TAF staff in targeted skills areas, leading to more effective delivery of climate initiatives within the GTHA. In 2018-20, the Social Innovation Skills Enhancement Fund (SISEF) supported this goal through resourcing interactive workshops that introduced participants to concepts and best practices related to their individual initiatives, such as program design and evaluation, community engagement, facilitation, and partnership brokering. This allocation will enable the grants team to build on this work in 2021-22 by broadening the types of training offerings provided, and by maintaining a flexible pool of funding that can be used to provide new grantees and TAF staff teams leading internal programs with access to professional coaches and mentors to support them throughout the lifespan of the grant.

Enhancing GHG Quantification Capacity in the GTHA | \$74,311 over 12 months

This allocation will provide TAF staff with the resources to support strategic GHG-related research in the areas of industrial emissions, co-benefits of climate actions and the potential roles of natural gas and related infrastructure in the pathway to decarbonization. Funding will also be used to enable TAF's engagement with and advisory support for both local quantification practitioners as well as the Low Carbon Cities network. Through these collaborations, TAF will develop new opportunities that enhance overall GHG reduction impacts throughout the region and strengthen the mechanisms for knowledge dissemination. This project will build on TAF's growing thought leadership in the carbon quantification area, and improve the ability of all stakeholders to make informed decisions based on the best available carbon and co-benefits data and analysis. Improving the accuracy and efficiency of our GHG quantification practice will also increase staff's ability to target and fund/implement the best solutions for high-performance buildings and the electrification of transportation.

RDC Implementation: Year 1 | \$600,000 over 12 months

This allocation will enable TAF to launch and operate a Retrofit Delivery Centre (RDC), which is dedicated to delivering high-quality energy retrofits in the multi-unit residential building sector at scale by standardizing and optimizing administrative work, leveraging economies of scale, reducing transaction costs, and building up needed industry capacity by creating demand and sending market signals needed to drive investment. The retrofit work funded as part the Accelerating Deep Energy Retrofits (ADER) program will continue as part of this new program allocation. The outcomes that this project will seek to achieve in 2021 include:

- Establish ground-breaking "portfolio-scale" partnerships with two housing providers in 2021 and establish a model for future RDC work;
- Finalize the RDC operations model, including staff assignments and onboarding for key roles, necessary services (and where appropriate, potential delivery partners), as well as marketing and communications resources;
- Leverage TAF funding of the RDC at a ratio of at least 5:1, with five dollars of external funding raised for every dollar of TAF funds allocated;
- Raise funds for three years of RDC operations.

CONTACT

Ryan O'Connor, Grants Manager, roconnor@taf.ca

SIGNATURE

Antoine Belaieff
Chair, Grants and Programs Committee