Carbon Quantification Guide for Grant Applicants

This guide explains how The Atmospheric Fund (TAF) evaluates the carbon reduction potential of grant applications and the information applicants need to submit. Grant proposals are scored out of 100, and 20 points are allocated to carbon impact.

Purpose

TAF funds projects that can reduce carbon emissions at scale in the Greater Toronto and Hamilton Area (GTHA). To understand which proposals have the strongest potential, we estimate the carbon impact of each project. Applicants are not expected to complete a full carbon analysis; TAF's team will do that. This guide outlines the information you should provide to help us assess the carbon reduction potential of your proposed project.

Why It matters

As a climate-focused organization, carbon reduction is central to TAF's funding decisions. Estimating the potential emissions impact of each proposal allows us to direct resources toward projects that can deliver meaningful, measurable climate benefits.

What applicants need to include in their submission

TAF focuses its funding on projects that address the GTHA's largest sources of carbon emissions—buildings, transportation, and the related electricity system. All TAF-funded projects should target one or more of these sectors to ensure high carbon-reduction potential.

TAF considers how grants deliver carbon emissions reductions in two ways:

Quantifiable projects deliver direct emissions reductions that can be modelled by estimating the impact of implementing the proposals' actions, solutions or strategies. For example, supporting the installation of high-use EV chargers or green development standards.

Pathway supporting projects lay critical groundwork for successful carbon solution implementation, ensuring high uptake and long-term durability, but in and of themselves do not directly deliver emissions reductions. For example, supporting a green construction workforce or design guides for high performance buildings.

The list below outlines the information applicants should include to help TAF assess carbon-reduction potential. We recognize that applicants will have varying levels of familiarity with these concepts, and our Research & Innovation team is available to support you at any time.

+ **Buildings (New construction and/or existing buildings)**
    - Energy use reduction (kWh)
    - Carbon emissions reductions (tonnes of CO_2eq)
    - Fossil fuel consumption avoided, e.g., m^3 of natural gas saved
    - Specific types of technologies deployed (e.g., heat pumps, EV chargers, low carbon building materials, solar PV)
    - Performance standards being targeted or met (e.g. near-zero or net-zero-ready buildings, percent better than Ontario Building Code or higher standards)
    - Adoption and utilization rates estimated or targeted (e.g., number of homes or building units upgraded, new building units constructed, unit size such as floor area, audience reach and participation rates, webinar attendees or distribution reach)

+ **Transportation:**
    - Carbon emissions reductions (tonnes of CO_2eq)
    - Fossil fuel consumption avoided (L/100 km)
    - Vehicle kilometers travelled (VKT) reduced
    - Specific types of technologies deployed (e.g., passenger or freight electric vehicles, hybrid vehicles, charging infrastructure, micro mobility solutions)
    - Adoption and utilization rates estimated or targeted (e.g., number of ICE vehicles replaced, VKT reduced, charger utilization rates or downtime, audience reach and participation rates, webinar attendees or distribution reach)

+ **Electricity grid:**
    - Energy and emissions performance (e.g., renewable energy generated, electricity supplied from battery storage)
    - Specific types of technologies deployed (e.g., battery energy storage systems, solar PV, other renewable generation systems)
    - Adoption and utilization (e.g., number of solar panels installed, total kWh delivered, electricity discharged to grid, utilization rate)

Examples of projects by carbon impact level

High Impact Projects

These projects influence change across the GTHA, unlock largescale adoption, or help to remove system level barriers associated with low carbon solutions.

- **Example 1:** A project that helps multiple municipalities streamline approvals for solar and/or wind installations. By removing regulatory barriers and reducing delays, this work can enable many new renewable energy projects across the GTHA, resulting in large long term carbon reductions.
- **Example 2:** A project that helps expand EV charging infrastructure by creating shared planning tools, consistent permitting steps, or guidelines for efficient EV charger deployment that make installations faster and simpler. Supporting this systemwide shift can help thousands of chargers be deployed more efficiently and accelerate EV adoption.

Medium Impact Projects

These project supports emissions reduction but at a smaller or more focused scale. These projects often generate learnings, tools, or pilot results that others can adopt, contributing to broader impact over time.

- **Example 1:** A project that tests smart charging for electric school buses at a few sites. The pilot provides practical lessons on charging schedules and energy use that can be shared with other fleet operators. The direct impact is limited, but the insights can support wider electrification efforts.
- **Example 2:** A project that develops a shared database comparing the embodied carbon emissions of different high-rise building materials. This helps designers and builders make lower carbon choices and supports future policy development, though emissions reductions depend on how widely the tool is used. A distribution plan and concrete targets would be important aspects of the proposal.

Low Impact Projects

A low impact project may produce useful learning or awareness but does not reach enough scale to significantly reduce emissions across the region. These projects typically involve small pilots or interventions that affect only a limited number of buildings or activities.

- **Example 1:** A project that retrofits only a few buildings without a plan for expansion. While the individual buildings will save energy, the overall emissions impact remains small because the work does not scale beyond the pilot group. The score could be increased if clear pathways to reach broader audiences, secure new projects, are included.
- **Example 2:** A project that provides guidance on choosing lower carbon landscaping materials. Although helpful for awareness, landscaping contributes only a small portion of total emissions, so the potential for regionwide carbon reduction is limited.

How do we assess carbon impact?

We score projects based on how much carbon they're estimated to reduce over a 20-year period:

- High >1.5 million tonnes
- Med 1-1.5 million tonnes
- Low <1 million tonnes

TAF reviews projects at two stages:

- We create a high-level estimate at the Expression of Interest (EOI) stage and will inform grantees if we think there is enough carbon reduction potential, or how carbon impact could be increased. Medium-High projects are invited to complete a full application.
- We do a more thorough carbon impact analysis for ideas that move to the Proposal stage to help with decision making and grant funding allocation. Proposals are scored out of 100 points, with 20 points towards carbon impact. We place greater value on carbon reductions achieved sooner rather than later using a "carbon net present value" (CNPV) approach over 20 years of the project.

For more background information on TAF's approach to carbon quantification, including core principles and methods used to assess and report emissions impacts, see *TAF's GHG quantification methodology*.

We're here to help! Contact us at grants@taf.ca