Impact Report 2024

Working towards net-zero emissions

The Atmospheric Fund

Contents

About TAF

The Atmospheric Fund (TAF) addresses urban carbon emissions, with a focus on buildings, transportation, and electricity. We support practical, scalable solutions that deliver tangible benefits to people's lives.

We focus on the Greater Toronto and Hamilton Area (GTHA), a rapidly growing and diverse region that generates almost half of Ontario's carbon emissions.

Our work is supported by endowment funding provided by the City of Toronto, the Province of Ontario, and the Government of Canada, along with partnerships with all levels of government, community organizations, industry leaders, and fellow funders.

This report highlights the impacts we made in 2024 and how we achieved them.

It highlights a range of climate solutions that cut emissions while supporting health, equity, affordability, and resilience. You'll see what this work looks like in practice and how our approach contributes to a more equitable, net-zero future.

TAF is a founding member of the Low Carbon Cities Canada (LC3) network. LC3 supports cities and communities in reaching their carbon emissions reduction potential. This initiative is implemented in partnership among seven local Centres and the Federation of Canadian Municipalities (FCM).

Funded by a Government of Canada endowment through FCM, LC3 is part of a national investment in municipal climate action to accelerate urban climate solutions and to help achieve Canada's climate goal of net-zero by 2050.

low carbon cities canada LC3

TAF acknowledges that the land on which we work is part of the Treaty Lands and Territory of the Mississaugas of the Credit. The area also encompasses traditional territories of the Huron-Wendat, Haudenosaunee, Erie, Neutral, Anishinaabe, Mississaugas of Scugog Island First Nation, Chippewas of Georgina Island First Nation, and the Mississaugas of the Credit First Nations.

We acknowledge these are colonial borders and that they do not limit our interest or ability to work with local Indigenous groups.

Welcome to TAF's impact report.

This report summarizes our impact from **Jan 1 to Dec 31, 2024**, drawing from activities featured in the 2024 Annual Report.

Assembling our Impact Report provides an opportunity for us to review the results together and reflect on what they reveal about the work ahead.

How We Think About Reporting Our Impact

TAF's mandate is to invest in low-carbon solutions for the Greater Toronto and Hamilton Area (GTHA) and help scale them for broad implementation. We track and report on two key performance indicators (KPIs):

- Carbon emissions reductions (both potential and direct)
- Financial capital mobilized toward low-carbon solutions

This approach has supported increasingly effective emissions reduction efforts and more strategic capital deployment as the climate challenge and population pressures intensify.

In response to this challenge, and in recognition of the need and opportunity to address social priorities alongside climate protection, we've expanded our indicators to track broader conditions that support climate success:

- Co-benefits: Economic, health, equity, inclusion, and resilience improvements that can result from climate action
- Scale pathways: Technologies, policies, market conditions, and social dynamics that enable rapid uptake

What's Ahead

This report reflects our ongoing effort to track what works, share what we learn, and support collaboration on shared priorities. We aim to be a useful resource to those shaping the GTHA's path to net-zero, through policy, practice, and investment.

We welcome your feedback:
Reach us at research@taf.ca

Impact Evaluation to Drive Change

TAF has a strong history of modelling impact, evaluating outcomes, and using data and analytics (qualitative and quantitative) to inform our work.

This approach enables us in the following areas:

Overall Direction

Identify priorities and focus areas.

Due Diligence

Evaluate the potential and readiness level of ideas.

Ongoing Verification

Track whether work we undertake achieves the expected outcomes.

Decision Making

Identify ideas that help achieve impact at scale.

Scaling Pathways

Many of TAF's most impactful initiatives share a common trait: they're designed with scaling in mind.

While some projects reduce emissions directly, others focus on removing barriers, aligning incentives, or changing how decisions get made—what we refer to as enabling conditions—factors that allow solutions to take root and grow. These efforts may not yield immediately quantifiable emissions reductions, but they are essential for unlocking much larger system changes.

In 2024, we continued to track and refine our understanding of what makes solutions scalable. We assess scaling potential across three key dimensions.

This helps us see when a solution is positioned to grow and what needs to be in place to help it succeed at scale.

Key Dimensions

Pathway Development: Does the project advance a technical, financial, policy, or market pathway to scale?

Readiness Conditions: Are there enabling conditions (e.g. regulatory clarity, workforce capacity, procurement mechanisms) that need to be in place?

Strategic Leverage: Does the project help de-risk future investment, replicate a model, or influence a broader cohort?

Key Performance Indicators

01

Identifying high-impact actions.

TAF's mandate prioritizes scalable greenhouse gas (simplified as "carbon") emissions reductions in the GTHA. As such, we assess potential and direct carbon emissions reductions resulting from all our efforts.

Understanding the Indicator

We measure carbon emissions reductions by quantifying the total projected impact from TAF-supported initiatives, reported in metric tonnes of CO_2 equivalent (tCO_2e) over 20 years. We track two categories of reductions:

DIRECT REDUCTIONS: Total carbon emissions reductions from projects initiated in a given calendar year. These reductions are based on verified impact and projected over a 20-year lifetime of the project.

POTENTIAL REDUCTIONS: Total carbon emissions reductions possible over a 20-year period from projects initiated in a given calendar year. These reductions are not yet realized and are based on potential impact.

We calculate all reductions using TAF's Emissions Reduction Quantification Methodology, aligned with recognized protocols and reviewed annually by our internal Quantification Review Group.

Potential Carbon Emissions Reduced

86.7 $MtCO_2eq$

2024 Total

Our 2024 impact was driven by potential reductions. Projects initiated this year have the potential to reduce an estimated 86.7 million tonnes of carbon emissions in the GTHA over a 20-year period.

These significant reductions reflect TAF's focus on decarbonizing high-impact sectors.

In 2024, this included:

- Green development standards for new construction across the GTHA
- Electrifying medium- and heavy-duty vehicle fleets
- Expanding residential solar and storage capacity

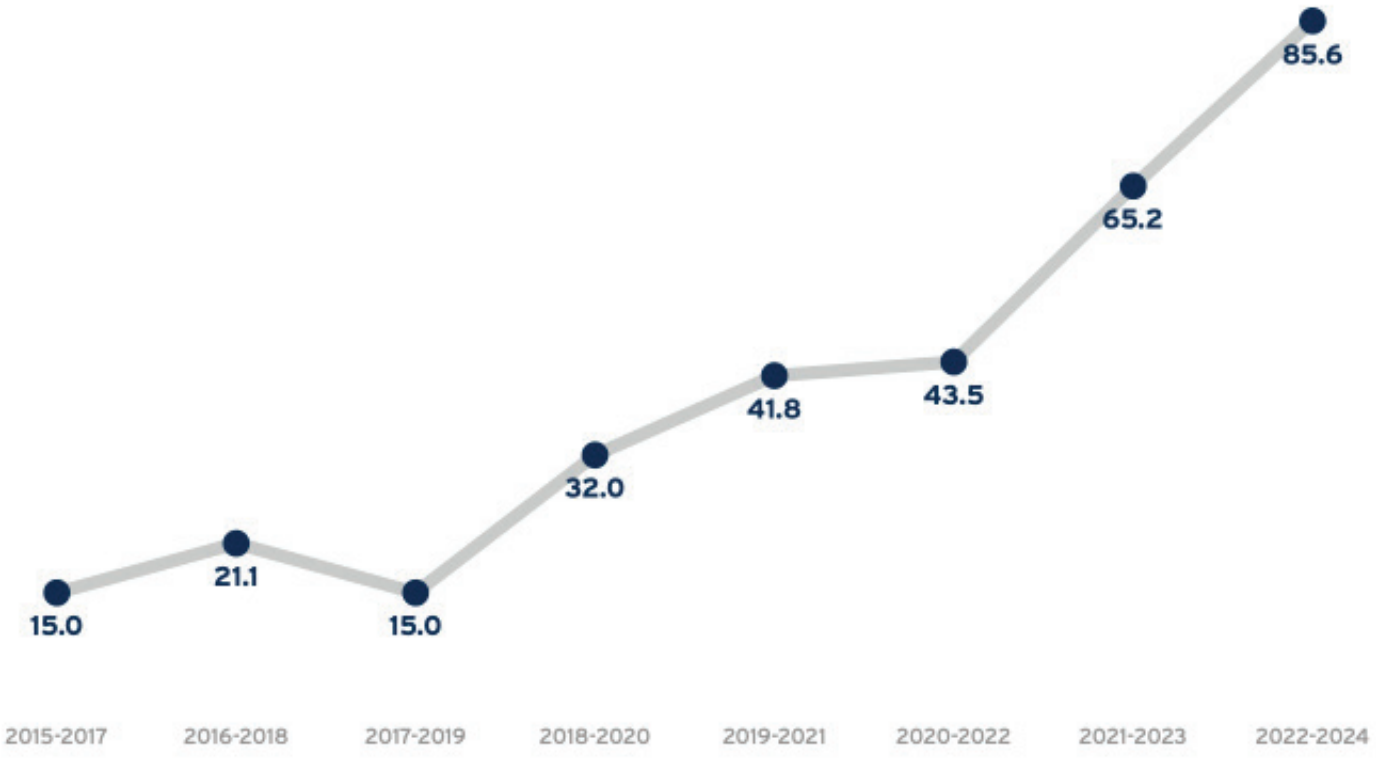
Direct Carbon Emissions Reduced

TAF advanced more retrofit projects in 2024 than ever before. Since none reached the post-commissioning phase in that year, we did not report any direct reductions. Verified reductions will be reported once measurement and verification are complete.

For reference, in 2023 we reported 4,290 tonnes of direct reductions—primarily from building retrofits and direct investments.

Tracking Multi-Year Trends

Potential Emissions Reductions (MtCO2eq)
3-Year Moving Median



We use a three-year moving median to assess long-term trends in potential emissions reductions. This approach helps minimize the effect of outliers and offers a clearer picture of progress.

TAF's endowment has grown substantially over the last ten years – the Province of Ontario contributed $17 million in 2016; the Government of Canada $40 million in 2019 – so we have supported more initiatives and have consequently increased the median.

In 2024, the three-year median continued to rise—indicating that we are consistently identifying and supporting larger emissions reduction opportunities for the GTHA.

Capital Mobilized

Increasing funding for low carbon solutions across the GTHA.

Financial Capital Mobilized

$19,412,200
2024 Total

TAF mobilized an estimated **$19.4 million** in financial capital. **That's $4.3 million more than in 2023**, driven by growth in external funding and a new pilot program testing EV charging solutions for multi-family buildings.

This increase reflects rising funder and investor confidence, stronger partnerships, and a maturing climate finance ecosystem.

Breakdown:

- Direct Investments 48%
- Retrofit Accelerator Initiatives 12%
- EV Station Fund 11%
- Grants 8%
- The remaining 21% came from external funders and other internal expenditures.

We track the grants and investments we make, additional dollars we raise, co-funding we help secure, and, where possible, additional financing enabled through TAF's advocacy, research, and outreach.

Capital Secured in 2024

In 2024, TAF also secured funding commitments from external partners to scale up support for climate action in the GTHA. These committed funds will be allocated toward advancing high-impact initiatives across the region in future years.

$835,000 from Natural Resources Canada's Codes Acceleration Fund (in partnership with the City of Toronto) to develop Building Emissions Performance Standards and examine the performance and technology gaps in new construction

$100,000 from the European Climate Foundation to support design of a rooftop solar and storage program

Progress Toward Direct Investments Target Allocation

Portfolio Management

TAF manages its endowment in accordance with its Statement of Investment Objectives and Principles (SIOP), which guides how assets are allocated to advance TAF's mandate. Our goal is to fully invest our assets in ways that generate climate impact—across public equity, fixed income, alternative investments (including infrastructure and private market funds), and direct investments.

Direct Investments

21
Total Active Investments

14.3%
Committed allocation of total endowment

See more examples of TAF impact investments

2024 Results

The SIOP sets a target allocation of **30% of TAF's assets to direct investments**, which are typically higher-impact but more hands-on.

In 2024, one restructured and two new direct investments were approved, totaling $5.5 million in committed capital. When including all committed but not yet advanced capital, the total allocation rises to 14.3%. However, the value of capital actually invested brought TAF's allocation to direct investments down to 8.7% of our endowment, compared to 11% in 2023.

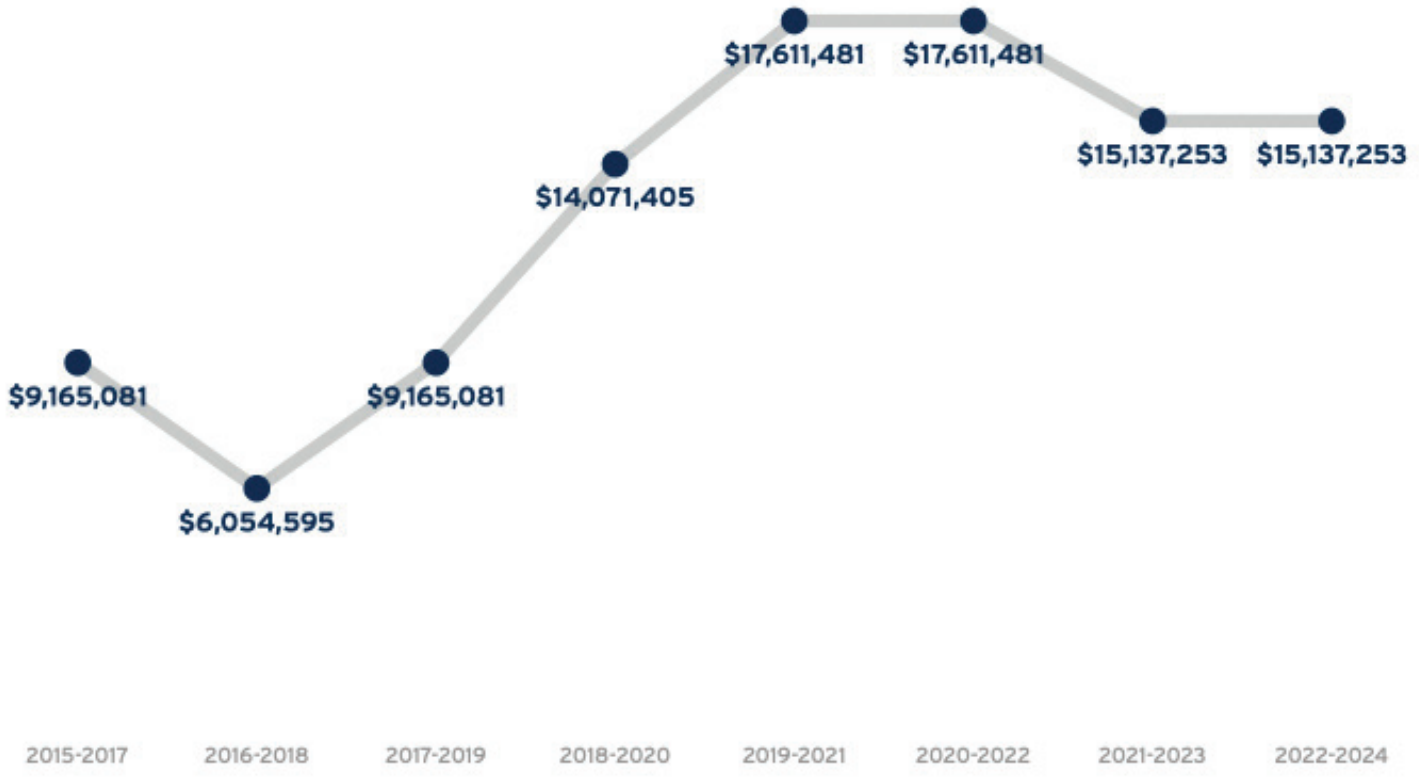
This apparent reduction is partly due to:

- Depreciation of real assets: such as performance contract financing through Energy Savings Performance Agreements (ESPAs), which lowers the book value over time even as the impact continues.
- Write-downs: including a $1.2 million loss on an unsuccessful investment in 2024.

As of year-end, **TAF's portfolio includes 21 approved direct investments**, 12 of which are associated with real assets. Despite year-over-year fluctuations in value, TAF continues to invest significant effort in growing and managing this portfolio for long-term emissions impact.

Tracking Multi-Year Trends

Total Capital Mobilized from TAF and External Funds Investments ($)
3-Year Moving Median



The financial capital mobilized in 2024 ($19.4 million) marks an increase from 2023 ($15.1 million). This $4.27 million rise is primarily driven by an increase in externally mobilized capital, with $3.4 million attributed to establishing the EV-ready multi-family buildings program. The remaining amount was mobilized across other programs.

The 3-year moving median did not change compared to 2021-2023, because of the way medians are determined (in other words, the $15.1 million represents the middle value in both of those three-year periods).

Case Study:
Capital Mobilization for Retrofits

Developing the GTHA Market and Delivering Impact

TAF has made accelerating building retrofits across the Greater Toronto and Hamilton Area (GTHA) a long-standing priority, supporting the sector with grants, investments, policy development, technical expertise, program design, and financing strategies.

Scaling Capital Support

$13m
Invested directly in retrofit initiatives since 2016

$25m
Secured in public funding since 2016

$40m
Estimated unlocked additional financing from project partners since 2016

$235m
Sector-wide support committed in 2023

$1.7b
Collectively made available in 2024

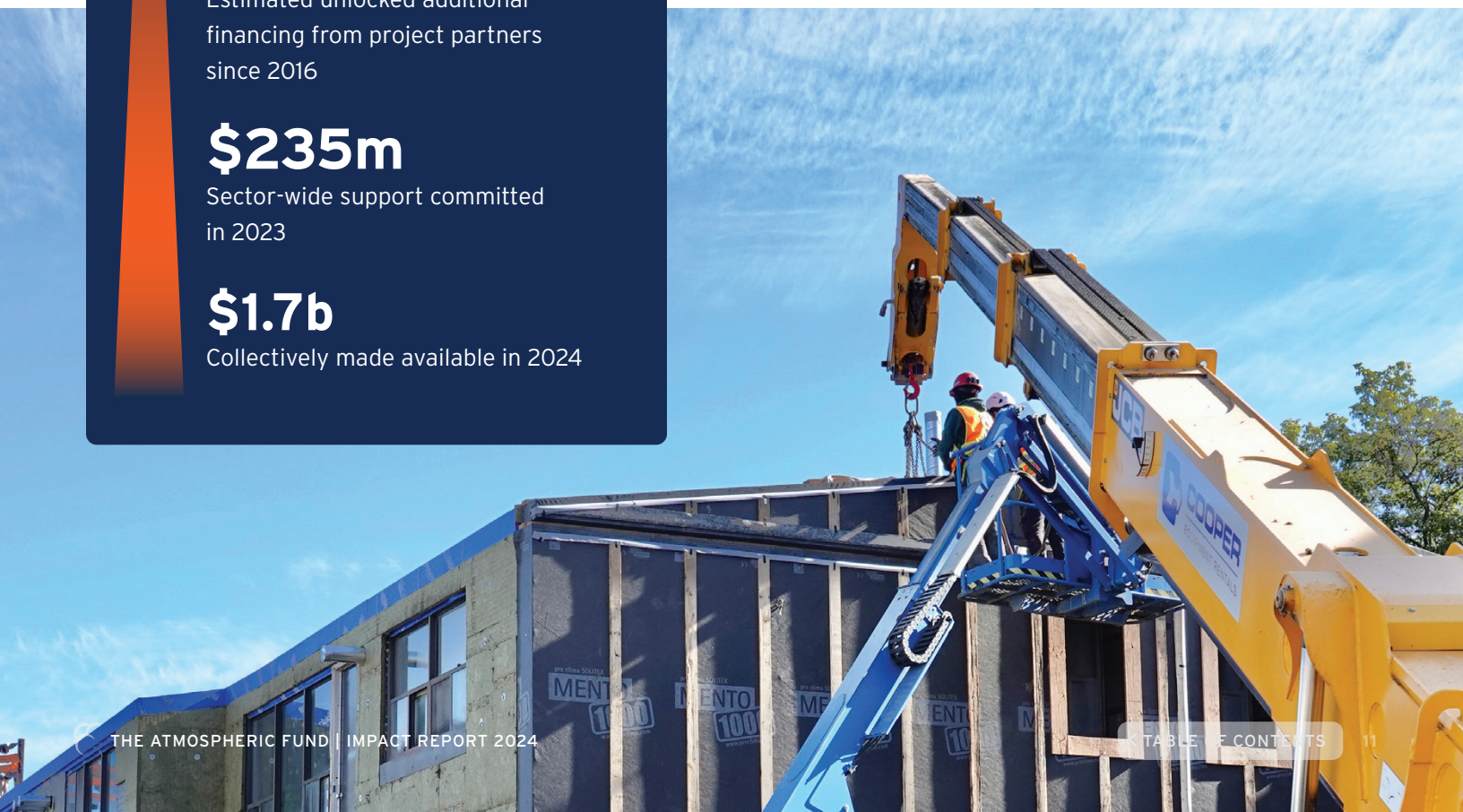
Since 2016:

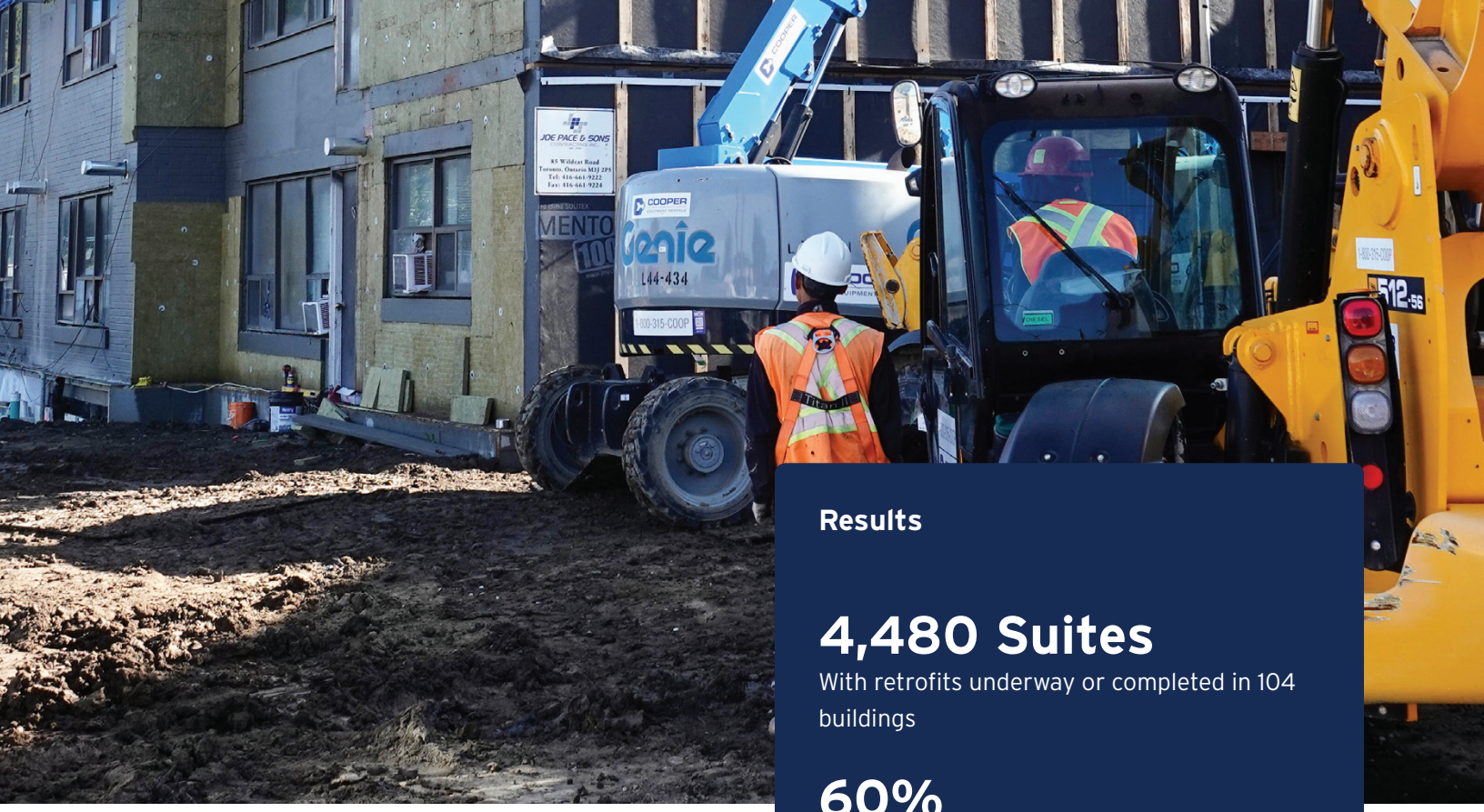
- We've invested over **$13 million** directly in retrofit-related initiatives.
- Secured another **$25 million** in public funding.
- Helped unlock an estimated **$40 million** in additional financing from project partners.

These efforts are helping deliver critical upgrades in one of the region's largest sources of emissions.

Driven in part by TAF and other sector-wide efforts, Natural Resources Canada committed **$235 million** in 2023 to support the delivery of active retrofits, complementing existing federal financing programs.

In 2024, institutions like the Canada Infrastructure Bank, Efficiency Capital, BMO, BDC, SOFIAC, and Scotiabank collectively made over **$1.7 billion** available for retrofit projects.





Workforce Outcomes

TAF's 2024 retrofit activity also delivered tangible economic and workforce outcomes:

- **40 jobs** created (13 direct, 11 indirect, 16 induced)
- **2,200 hours** of paid employment and hands-on training delivered
- **38 trainees** supported through Building Up, a Toronto-based social enterprise contractor

Results

4,480 Suites
With retrofits underway or completed in 104 buildings

60%
Average carbon emissions reductions across retrofit projects

Next: To meet housing, energy, and emissions goals, we'll need to quintuple the pace of retrofit activity and invest **$8–10 billion** per year. Capital mobilization helps lay the groundwork for that scale.

Learn more: retrofits.taf.ca

Indigenous Engagement

02

Indigenous Engagement

Deepening learning and relationships.

Building on existing commitments, in 2024, TAF launched its Indigenous Reconciliation Strategy to guide more deliberate and tangible engagement.

Built on Four Pillars:

- Learning and awareness
- Outreach and engagement
- Visibility and availability
- Tracking and reporting

Ongoing Learning

TAF continues to invest in individual and organizational learning. In 2024, this included:

- Maintaining a climate- and Indigenous-focused resource library curated by staff
- Individual rotating opportunities to provide a Land Acknowledgment and personal reflections at TAF's Weekly All-Staff meetings
- Participating in Indigenous Staff and Volunteer Recruitment & Retention training from Indigenous Corporate Training (ICT)
- Attending sessions on Decolonial Environmentalism and effective partnerships with Dr. Damien Lee (Gimiwan Research and Consulting)
- Undertaking OCAP® training on Indigenous data sovereignty—Ownership, Control, Access, and Possession

Outreach and Engagement

- Attended the Indigenous Clean Energy Gathering (a 3-day event focused on building Indigenous capacity and advancing clean energy projects)
- Provided technical, financial, and strategic support for the deep retrofit of 100 units of Six Nations of the Grand River-owned housing
- Issued a grant to Indigenous Clean Energy for capacity-building to support retrofit planning and implementation
- Participated in introductory meetings with the Mississaugas of the Credit First Nation, Ishkoday (First Nations Energy Association), Ontario Aboriginal Housing Services, and the Centre for Indigenous Corporate Partnership

Co-Benefits

03

When TAF funds climate action, we also support other public benefits—such as healthier air, more equitable communities, and stronger local economies. These "co-benefits" help mitigate risks, strengthen uptake, and ensure more durable solutions through smart, inclusive design.

Economic Benefits

Job creation and GDP.

TAF estimates economic co-benefits using job creation and GDP growth projections from building energy efficiency investments.

Potential

9
Job years created in 2024

$1,310,700
Increase in GDP

Direct

46
Job years created in 2024

$5,604,800
Increase in GDP

These figures are primarily based on Acadia Center estimates: for every $1 million in total spending, 18 job-years are created and $2.5 million in GDP is added.

2024 Results

Potential figures are based on energy-efficiency-related grants and early-stage impact investments. Direct estimates come from Retrofit Accelerator projects and enterprise investments such as medium- and heavy-duty vehicle electrification.

TAF also began analyzing the composition of these job impacts. Based on retrofit-specific work, each direct job creates approximately 0.9 indirect and 1.3 induced jobs. In 2024, 13 direct jobs led to 11 indirect and 16 induced jobs—40 total.

Many of these jobs pay above-average wages. Through the Retrofit Accelerator, TAF also works with social contractors—non-profits that train and support people facing employment barriers in the construction sector. In 2024, retrofits supported 2,200 hours of employment and hands-on training for 38 trainees from Building Up, a Toronto-based Social Contractor.

Health Benefits

Improvements in air quality.

In 2024, TAF-supported work yielded significant modeled reductions in CACs over a 20-year horizon.

How We Calculate

TAF estimates reductions in criteria air contaminants (CACs), which are linked to cardiovascular and respiratory illness and premature death. These include fine particulate matter ($PM_{2.5}$), nitrogen oxides (NO_x), and sulphur oxides (SO_x).

2024 Results

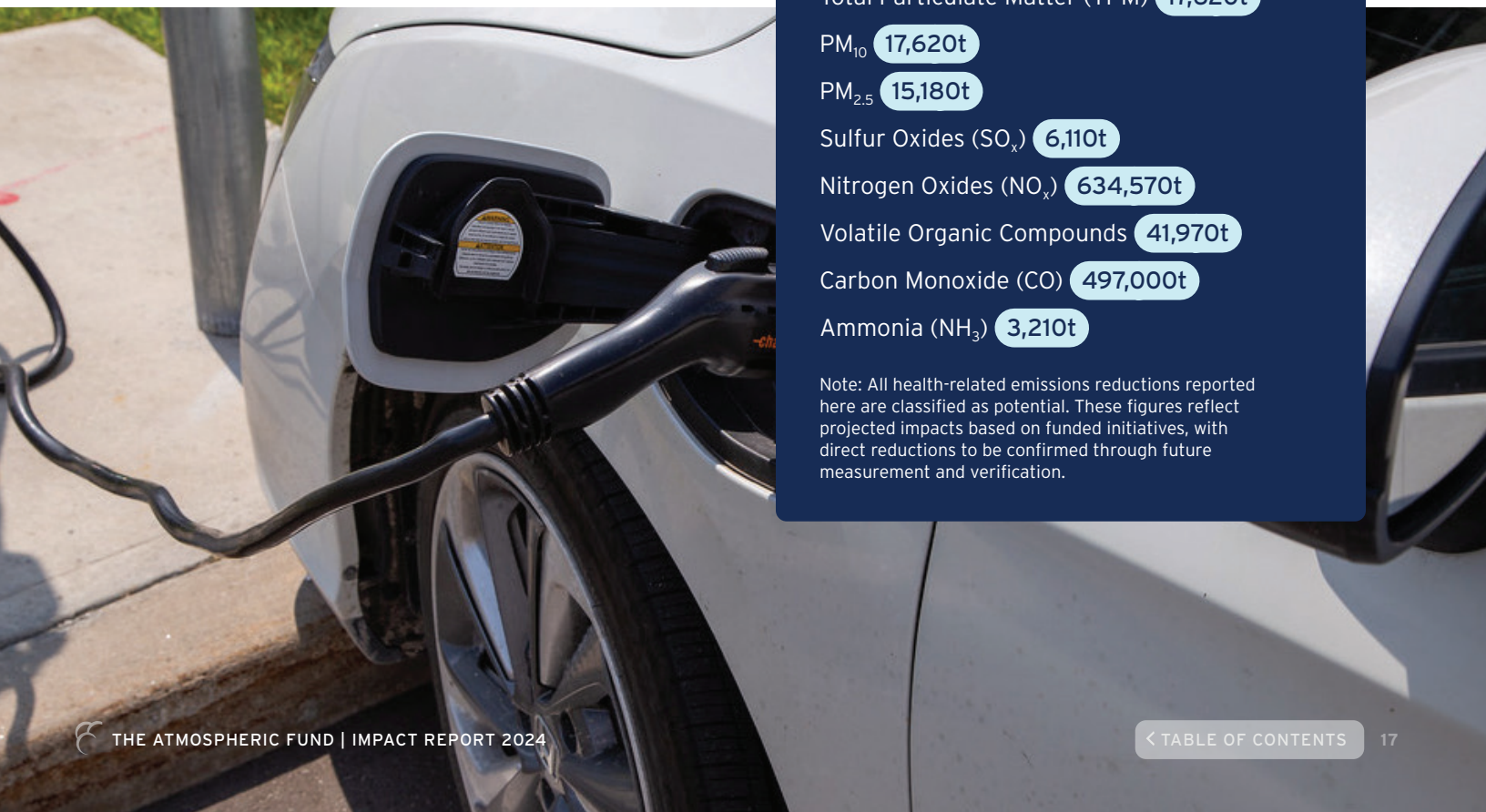
Major grants contributing to these reductions include support for medium- and heavy-duty vehicle electrification, equitable building standards, thermal network pilots, and high-performance green development incentives.

TAF also quantified financial health benefits from these efforts. Based on TAF's analysis of the Pembina Institute grant, electrifying medium- and heavy-duty vehicles could generate at least **$14.3 billion** in avoided health-related costs over 20 years. In 2023, a comparable analysis for passenger EV uptake estimated **$17.5 billion** in avoided costs over 25 years.

Potential Emissions Reductions Per CAC

- Total Particulate Matter (TPM) **17,620t**
- PM_{10} **17,620t**
- $PM_{2.5}$ **15,180t**
- Sulfur Oxides (SO_x) **6,110t**
- Nitrogen Oxides (NO_x) **634,570t**
- Volatile Organic Compounds **41,970t**
- Carbon Monoxide (CO) **497,000t**
- Ammonia (NH_3) **3,210t**

Note: All health-related emissions reductions reported here are classified as potential. These figures reflect projected impacts based on funded initiatives, with direct reductions to be confirmed through future measurement and verification.



Health Benefits

Protection from extreme heat.

TAF monitors the indoor environment in multi-family buildings that we retrofit. Exposure to extreme indoor heat is becoming more common in the GTHA as the climate changes.

2024 Results

In 2023, prior to the completion of retrofit upgrades, we recorded indoor temperatures as high as 32.5°C in one non-air-conditioned social housing building. Across other households, July temperatures exceeded 26°C for 53% of the month—the hottest on record.

In 2024, TAF retrofits introduced cooling to **264 households across 7 buildings—5 of which are social housing.** Heat pumps provide efficient cooling and heating year-round, reducing carbon emissions while helping protect residents from extreme indoor heat.

Heat Pumps Introduced

264 Households

Case Study:
Equity in Building Decarbonization Policy

How Inclusive Policy Can Accelerate the Retrofits We Need

Buildings are the third-largest source of greenhouse gas emissions in the GTHA. Over half are more than 45 years old, predating modern energy codes, insulation standards, and ventilation requirements.

Upgrading these buildings is essential to meet climate targets. However, unless policies are designed with care, those upgrades can come with unintended costs for renters and owners, as well as greater risk of renovictions, not renovations, all in the midst of a housing crisis.

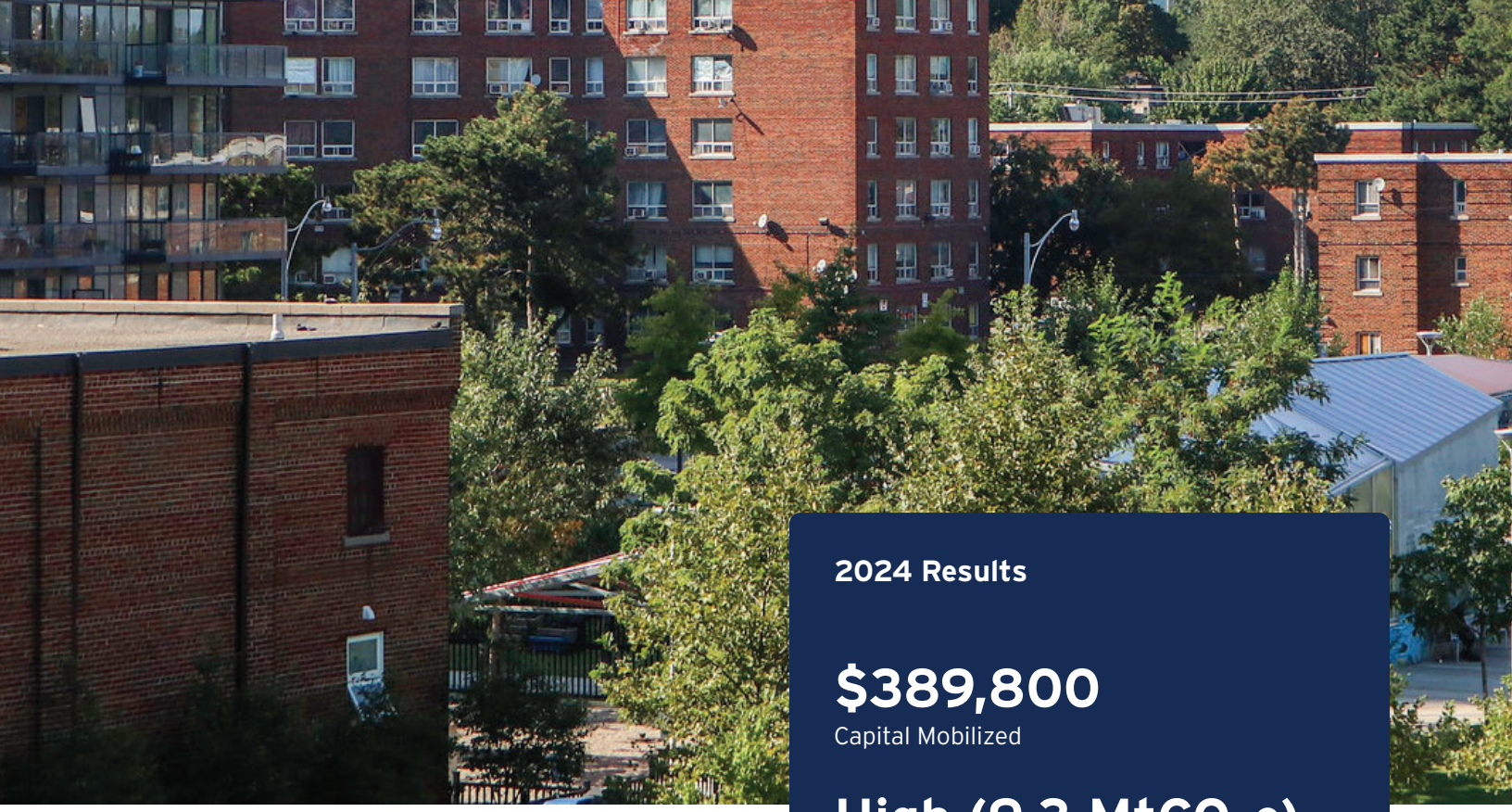
As more cities move to mandate lower emissions from existing buildings, the policies behind those mandates need more than technical targets. They need public trust to support affordability and strengthen tenant protections.

Embedding Equity, Unlocking Impact

Building Emissions Performance Standards (BEPS) are a promising tool for reducing emissions from existing buildings. But their success depends not just on the thresholds they set, but on how they're implemented, enforced, and supported.

When climate policies embed equity from the start, they're more likely to deliver:

- Higher compliance and uptake
- Broader community support
- Health and housing co-benefits
- Job creation
- Scalable models for other cities



2024 Results

$389,800
Capital Mobilized

High (9.3 $MtCO_2e$)
Emissions Reduction Potential

See more examples of TAF Grants

TAF's Strategic Investment

In 2024, TAF awarded a $318,970 grant to the Canadian Environmental Law Association (CELA) to help shape Toronto's forthcoming BEPS bylaw through an equity-informed lens.

The funding supported a coalition of seven organizations spanning tenant rights, municipal advocacy, and public engagement, collaborating to build affordability, accountability, and community voice into the bylaw.

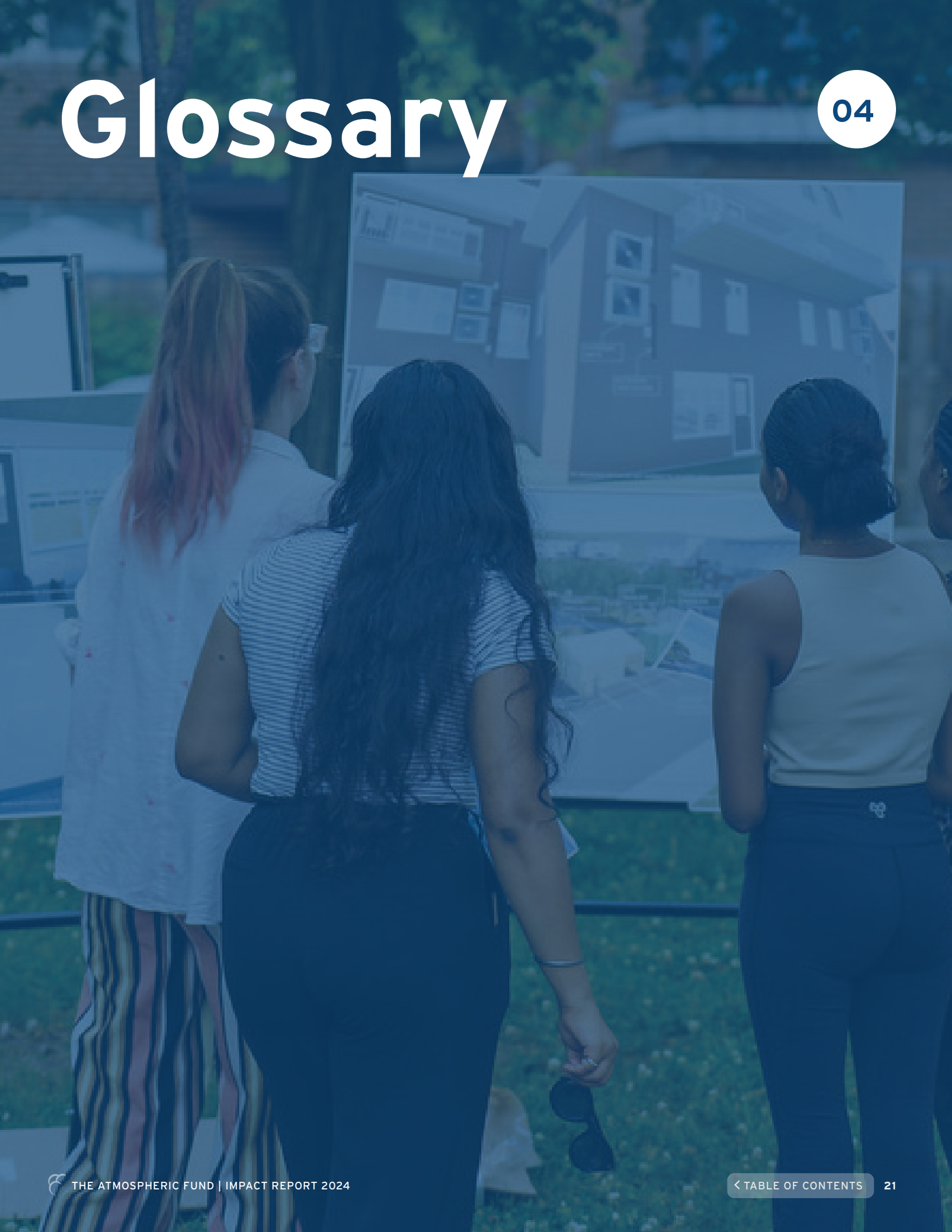
By investing in this work, TAF helped extend stakeholder outreach and engagement, ensuring more voices are directly involved. The result is a stronger, more inclusive foundation for building decarbonization in Toronto.

A Model for Inclusive Policy

Toronto's proposed BEPS bylaw would be among the first in North America to embed equity so deliberately in both design and delivery. This approach is helping demonstrate that climate action and housing justice aren't competing priorities—they're interdependent.

Glossary

04



Key Terms

Defines key indicators and concepts used throughout this report.

Carbon Emissions Reductions

- DIRECT: Total emissions reductions from projects initiated in a given calendar year, based on verified impact projected over 20 years.
- POTENTIAL: Projected emissions reductions over 20 years from projects initiated in a given year. These reductions have not yet been realized and are based on expected, not measured, impact.

Co-Benefits: Positive outcomes that climate action can also generate in areas such as accessibility, affordability, biodiversity, community engagement, justice, Indigenous and Treaty rights, economic development, mobility, resilience, jobs, skills and workforce development, waste management, and water quality.

- COMMUNITY: Assesses how intentionally an initiative integrates social, economic, and environmental co-benefits. It reflects a systems-thinking approach aimed at advancing well-being, resilience, and community prosperity through multi-solving strategies.
- ECONOMIC: Includes job-years created and changes in GDP from a TAF investment, grant, or program.
- EQUITY: Outcomes that improve fairness, representation, participation, or material stake in climate solutions for communities and individuals. Includes equity-building efforts integrated into TAF programs, partnerships, or funding strategies.
- HEALTH: Health outcomes supported by TAF-funded work, such as improved air quality or reduced exposure to extreme heat, typically assessed over a 20-year project lifetime.

Economic

- JOB-YEARS: Total years of employment generated across all roles — full-time, part-time (adjusted proportionally), temporary, and seasonal — using multipliers from the Acadia Center's Energy Efficiency: Engine of Economic Growth in Canada study.
- DIRECT JOBS: Roles created by the supported project itself (e.g., construction workers, engineers, energy auditors).
- INDIRECT JOBS: Roles created in the project's supply chain (e.g., manufacturers of HVAC systems or insulation).
- INDUCED JOBS: Jobs created from additional spending by those employed directly or indirectly.

Impact Investments: Investments that aim for environmental, social, and financial returns. Instruments include loans, guarantees, performance contracts, private equity investments, and stakes in third-party funds.

Financial Capital Mobilized: Total capital enabled through TAF's involvement in a given year. This includes:

- TAF's investments and grants
- Revenue raised through fundraising
- Externally mobilized capital — i.e., dollars committed to projects because of TAF's participation

Capital Mobilization: Calculated using methods recommended by the OECD, Multilateral Development Banks (MDBs), and European Development Finance Institutions (EDFIs).

- DIRECT: When co-investors participate specifically due to TAF's role. The full amount is counted.
- INDIRECT: When TAF support enables a project to move forward, but it does not directly influence the co-investors. These amounts are prorated based on TAF's percentage contribution. While not always precisely measurable, these indirect effects are directionally important and foundational to our strategy.

Focus Areas: TAF's priority areas for action, based on the GTHA Carbon Emissions Inventory.

Current focus areas include:

- Accelerating Retrofits
- Accelerating EV Uptake
- Accelerating Clean Electrification
- Accelerating Net-Zero Ready New Construction.

These priorities may evolve as emission patterns shift or new solutions become viable.

TAF The Atmospheric Fund

TAF accelerates climate solutions that reduce carbon and deliver tangible, lasting benefits across the Greater Toronto and Hamilton Area. We work at the intersection of policy, investment, and community action—and we welcome collaboration.

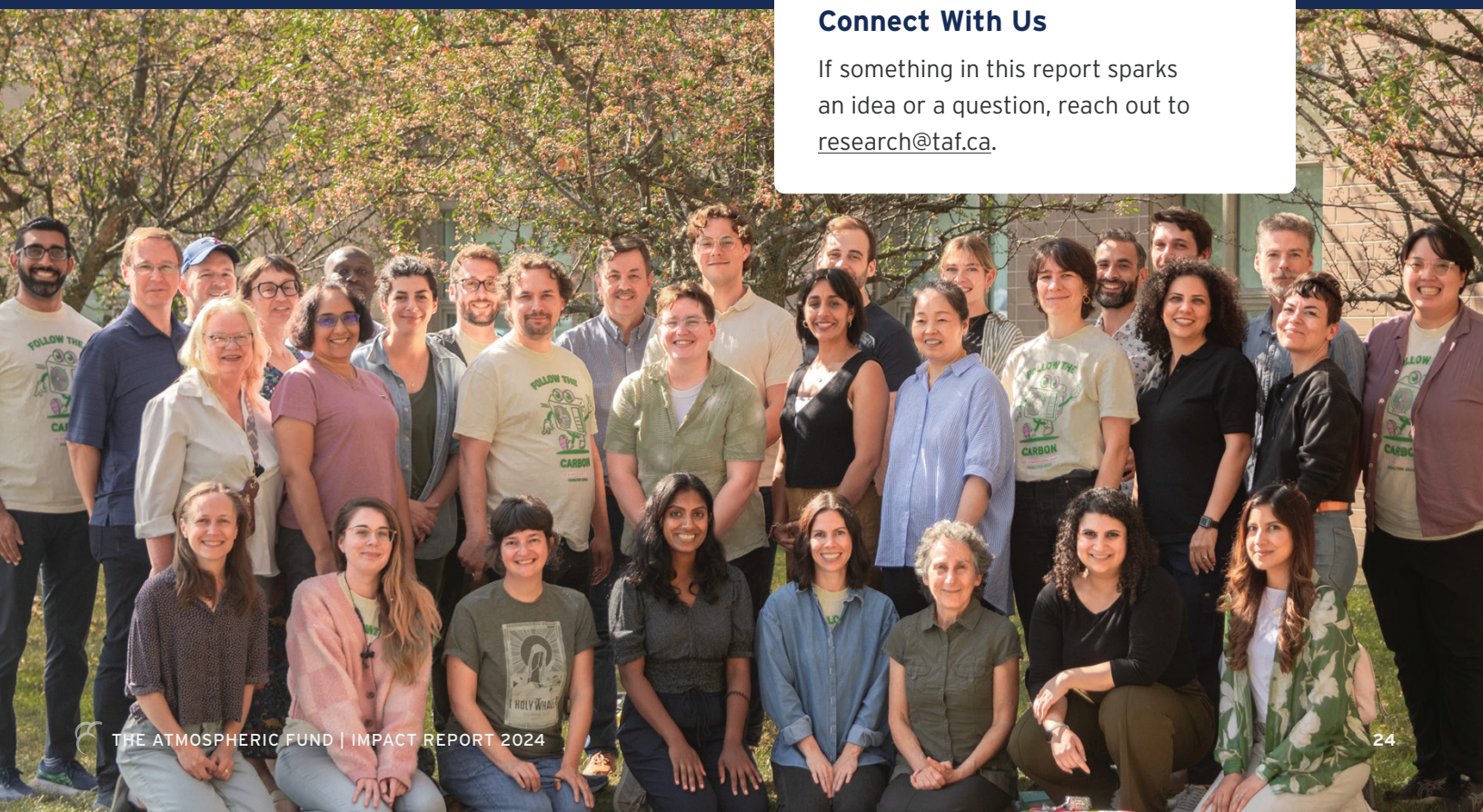
Follow along by subscribing
https://taf.ca/signup/

We Invite Collaboration From:

- Municipal climate and energy teams advancing net-zero strategies
- Provincial and federal policymakers shaping the enabling conditions for local climate action
- Local Indigenous organizations
- Community organizations and advocates focused on housing, mobility, equity, or public health
- Retrofit practitioners and clean energy providers bringing solutions to scale
- Grant-seekers and new ventures with compelling solutions to decarbonize buildings, transportation, or electricity
- Impact investors and funders aligned with long-term, evidence-based returns
- Journalists and media professionals covering climate, energy policy, net-zero buildings and transportation, or clean economy

Connect With Us

If something in this report sparks an idea or a question, reach out to research@taf.ca.



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