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LOOKING UP

Year End Report on the 2021 Annual Plan

The Atmospheric Fund

January 2022



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Letter from the CEO

Every plan needs a north star and TAF's 2021 annual plan was guided by the six [Strategic Directions](#) approved by the TAF Board in 2019.

Maintaining our 'follow the carbon' mantra we looked for "*next coal phase outs*". From accelerating the pace and scale of retrofits and EV charging, to helping municipalities throughout the Greater Toronto and Hamilton Area (GTHA) develop and adopt standards for efficient new construction, we used TAF's experience, expertise, and resources to tackle the largest greenhouse gas emissions sources and improve air quality, health, and create jobs and economic opportunity.

Shedding our incubation and demonstration role, we focused on *positioning proven solutions for scale*, including launching the [Retrofit Accelerator](#) and [EV Station Fund](#). We designed these two new efforts to accelerate and aggregate demand for net-zero building solutions and electric vehicles in the GTHA by providing funding and financing, being a true partner to those impacted (businesses, community groups, building owners, residents, and others) and multi-solving: understanding and seeking to solve other related social priorities.

We *advanced public policy to accelerate adoption of climate solutions* by providing decision-makers and champions with tools and evidence to implement policies and programs that drive emission reduction and deliver wider community benefits, such as the Clean Fuel Standard, [Green Development Standards](#) and high-impact [updates to Toronto's parking by-laws](#).

As an impact investor, we *paved the way for increased investment in low-carbon solutions* by designing and investing directly in high-impact, low-carbon opportunities to demonstrate value, break down market barriers, and advance policies that create favourable market dynamics for capital flow into low-carbon solutions. This year saw an insatiable market demand for impact investments, which prompted exploration of TAF's go-forward direct investing strategy, while favourable public market conditions underpinned our revenues.

This was TAF's first full year managing three endowments, now totalling approximately \$100 million, giving us more capacity to *think and act regionally and region-wide* with grants, policy files and programming spanning the GTHA. Notwithstanding our recent growth, we remain a small organization, but mighty because of our strategy to *build strong partnerships to advance climate action*. We continue to collaborate extensively and exchange knowledge with partners, identifying where TAF is poised to lead or to support other community leaders.

Nearly two years of COVID-19 impacts have not undermined the relevance of these Strategic Directions; in fact, the pandemic has further reinforced the value of the multi-solving, collaborative, and scale-driven approach consistent with 'build back better' frameworks. Nor has it dampened the commitment and drive of TAF's team, despite the inconveniences and isolation of virtual work.

As this retrospective indicates, TAF achieved some important milestones, weathered some challenges, gained some valuable insights, and moved the yardstick on our core mandate in 2021.



Julie Langer,
CEO, The Atmospheric Fund

Accelerate Deep Retrofits

For over a decade, TAF's existing buildings work has focused on testing and demonstrating how to reduce carbon emissions in multi-family buildings, which make up about half of the homes in the GTHA. In 2021, we launched the Retrofit Accelerator, a formal shift from demonstrating what's possible, to doing what's needed: delivering retrofits at a scale, pace, and depth aligned with a net-zero carbon future.

Building on TAF's longstanding partnership with Toronto Community Housing, our team originated new retrofit projects in Durham Region, and developed leads in Peel and privately owned condominiums. Our latest portfolio of retrofit projects achieves deeper carbon reductions than ever, with an average of 50% carbon improvements, and our deepest retrofit at over 80%. We also staffed up our team and invested in new processes and tools to support a greater volume of retrofit activity.

2022 will see us focus on testing and establishing critical best practices for retrofits, including: job creation, protecting residents, advancing housing affordability and climate resilience, and improvements to health and comfort. Our ultimate vision is that the Retrofit Accelerator help rapidly develop and mature a "retrofit economy" by aggregating demand and standardizing delivery. Alongside this implementation-oriented strategy, TAF will also continue to support the development of municipal policies and programs, skills and workforce development, new product testing and evaluation, and knowledge transfer, to achieve this critical pathway to electrification, efficiency, and emissions reductions.

2021 Success Indicators	Status & Outcomes
<p>TAF's Retrofit Delivery Centre (RDC) for MURBs launched and is working towards at-scale implementation, including:</p> <ul style="list-style-type: none"> • \$150M mobilized for investment in deep retrofits • 3,000 units in retrofit design or construction with Indoor Environmental Quality (IEQ) improvements, resident engagement, and social procurement • 5,000 units of retrofit opportunity in discussions with partners 	<p>Partially completed. The pandemic had direct impacts on the ability to undertake on-site work, and the capacity of our housing partners to plan future work. Despite this, the team made significant progress towards our targets. \$48 million was mobilized for deep retrofits at 2,700 units. An additional 2,000 units of housing are under discussion with partners as retrofit candidates to initiate design work in 2022.</p>
<p>Factors necessary for scaling retrofit implementation are in place including:</p> <ul style="list-style-type: none"> • Collaborative relationships with four additional deep retrofit market development initiatives in other building segments and/or other jurisdictions • A federal funding stream to support deep retrofit market development • Programs and funding to recruit and train the workforce needed for deep retrofit and net-zero new construction in Ontario • Three new products and services identified and evaluated which improve deep retrofits 	<p>Partially completed and ongoing. TAF has engaged with several retrofit players locally and across Canada, including but not limited to Pembina Institute (ReFramed); ReCover; Retrofit Canada; CaGBC; Efficiency Canada; Efficiency Capital; Toronto Environmental Alliance; the Cities of Vancouver, Halifax and Toronto; all members of the LC3 network; and federal contacts at NRCan, CMHC, ECCC, ESDC, CIB. The nature of the collaborations ranges from advocacy to knowledge sharing, and from mission-level scale to project-specific tactics.</p> <p>Some 80+ retrofit allies, goods and service providers signed on to our call for a federal</p>

<ul style="list-style-type: none"> • Enhanced capability to quantify the multiple benefits of deep retrofits 	<p>Retrofit Acceleration Fund to support retrofit market development. This effort is being reinforced by Pembina and Efficiency Canada and will be of focus in the lead up to Budget 2022.</p> <p>New products and services identified and evaluated in 2021 include Investor Ready Energy Efficiency Certification; innovative heat pump products; pre-fabricated overcladding; and AI-driven building energy optimization software. Two innovative heat pump products were installed in retrofits and will be monitored and reported on in 2022 (Vicot gas absorption heat pumps and Innova packaged heat pumps).</p> <p>With additional funds secured in late Q4 2021 from the Trottier Family Foundation and McConnell Foundation, we will be able to add much needed capacity to delivering on the multi-solving potential of retrofits.</p>
<p>Momentum established for performance standards for existing buildings, including:</p> <ul style="list-style-type: none"> • Building performance standards adopted in principle by the City of Toronto as core part of Existing Buildings Emissions Strategy, with detailed policy development initiated • Champions identified and working towards adoption in at least one more GTHA municipality 	<p>Partially completed and ongoing. TAF staff were closely engaged on development of the City of Toronto's Net-Zero Strategy for Existing Buildings, including building performance standards and other policies, which was adopted by City Council in July.</p> <p>Our work will continue into 2022 with a focus on ensuring strong implementation and enforcement of the Strategy in Toronto, as well as working towards adoption in other GTHA municipalities.</p>

Green New Development

TAF’s work to advance the adoption of Green Development Standards (GDSs) for new construction aims to avoid locking into unnecessary carbon emissions for decades to come. Momentum on this policy solution continued to build in 2021 with three new or updated standards approved and four more up for approval in early 2022. Toronto, now into version 4 of its Toronto Green Standard, continues to lead the way. TAF provided six grants to support the effective design and implementation of standards across the GTHA in 2021. Based on the stated needs and priorities of regulators and industry, a key focus in 2022 will be on ensuring these stakeholders have the tools and capacities needed to implement near-zero construction.

2021 Success Indicators	Status & Outcomes
<p>New funding and financing available for net-zero ready new construction, including:</p> <ul style="list-style-type: none"> • Federal rebates for net-zero ready new housing, including multi-family housing • Specialized commercial and concessionary financing, building on TAF’s ‘green condo loan’ 	<p>Not completed. Will continue to pursue this objective in 2022, which both municipalities and developers deem important, with adjustments to our strategy and approach.</p>
<p>At least two more GTHA jurisdictions pass a GDS, including provisions for EV charging and reduced carbon intensity, and have the requisite knowledge and capacity to implement and enforce it</p>	<p>Completed. TAF engaged with most municipalities in the GTHA and momentum continues to build. City and town councils approved new standards in Halton Hills and Richmond Hill and new or updated standards are under development in at least seven other municipalities, with four expected to come to councils for approval in the first quarter of 2022.</p>
<p>At least three leadership initiatives adopted to scale near-zero new construction and demonstrate the many benefits this offers for communities:</p> <ul style="list-style-type: none"> • Approval of Toronto GDS version 4 • Increased compliance with higher tiers of current GDS • Grant support for near-zero affordable carbon housing 	<p>Partially completed. Toronto Green Standard V4 was approved in July and amended in December to include 100% EV-ready requirements and an accelerated schedule for implementing Versions 5 and 6, based on TAF-funded research. TAF also advocated for stronger incentives for the higher tiers with a report due to Toronto City Council in Q2. No grants related to construction of near-zero affordable housing were approved.</p>

Accelerate EVs and EV Charging

In 2021, TAF homed in on how our team can most effectively hasten electric mobility. First, we determined that a key role for TAF is to expand the regional charging network. We secured \$2M from Natural Resources Canada’s (NRCan) Zero Emission Vehicle Infrastructure Program (ZEVIP) to administer a funding program that supports the rollout of critical charging infrastructure, with a focus on hard-to-reach areas like multi-family buildings and on-street. Our program is fully designed, staffed, piloted, and ready to launch in early 2022.

TAF’s second key role was to advance EV-supportive policies. Our policy team worked with our grant recipients and other allies to translate the growing public and political interest in EVs into the tangible programs, policies and investments needed to get more people into them. 2021 saw promising EV commitments made by all levels of government. In 2022, our focus will shift to ratcheting up their ambition and supporting their effective implementation.

2021 Success Indicators	Status & Outcomes
<p>EV charging infrastructure deployed strategically and equitably to help unlock at-scale installations in the GTHA:</p> <ul style="list-style-type: none"> • At least 50 EV chargers installed and 100 EV chargers approved in the GTHA with TAF’s support, as a first step towards 300+ EV chargers installed by March 2023 (subject to federal funding) • At least \$200K in program funding to address barriers to EV infrastructure deployment in difficult to reach areas (e.g., MURBs, on-street) • At least \$1.5M in financing deployed for EV charging infrastructure and technologies 	<p>Partially completed. Secured \$2M from the NRCan ZEVIP program and contributed \$325K in TAF program funding to support charging infrastructure installation; designed, branded and beta tested TAF’s EV Station Fund (public launch Q1 2022). No chargers installed in 2021 due to delays in signing NRCA contribution agreement and launching program. Due diligence underway on three EV charging investment opportunities, including a bi-directional charging technology.</p>
<p>Industrial EV strategy for Canada published and supported by industry coalition and GTHA stakeholders (e.g., municipalities, boards of trade, etc.)</p>	<p>Completed. Accelerate Alliance officially launched with 20 founding members across Canada, including five based in the GTHA. High-level strategy developed.</p>
<p>The federal government has committed to a ZEV supply mandate commensurate with national EV adoption targets</p>	<p>Partially completed and ongoing. Government of Canada set a mandatory target for all new LDV sales to be zero emission by 2035. Canada also agreed to work with other countries to enable 30% of new medium- and heavy-duty (MHDV) vehicle sales to be zero emission by 2035 and 100% by 2040. TAF approved two related grants: one focused on securing strong LDV policies and one on MHDV policies.</p>
<p>The Clean Fuel Standard (CFS) liquid stream regulation and protocol is passed with multi-party and multi-stakeholder support and is projected to achieve a 20 megatonne reduction in carbon emissions</p>	<p>Not completed and ongoing. The final CFS regulation is due to be published in spring 2022. The stringency of the proposed design has diminished over time, with the most recent version unlikely to achieve the initial carbon reduction target of 20 megatonnes.</p>

<p>Electrification of non-transit fleets accelerated in the GTHA:</p> <ul style="list-style-type: none"> • Strong emissions standard is reintroduced as part of the City of Toronto’s vehicle-for-hire bylaw • At least one grant or investment approved to support fleet electrification, with one or two more in the pipeline 	<p>Partially Completed. Toronto City Council directed the establishment of a Vehicle-for-Hire group (including TAF) to develop a strategy for accelerating the sector’s electrification.</p> <p>TAF approved a grant to the Pembina Institute to support the electrification of MHDV fleets.</p>
<p>At least one more upper-, lower- or single-tier municipality adopts a local EV strategy and has the support needed to implement it effectively</p>	<p>Not completed. TAF explored several opportunities to support the adoption of new local EV strategies but none came to fruition. For 2022, TAF’s focus will shift to promoting the implementation of the highest-impact municipal EV policies and programs across the region.</p>

Phase Out Fossil Gas

This focus area quickly zoomed in on the gas used for electricity generation, which despite currently accounting for only 6% of Ontario’s electricity, is forecast to increase by over 400%. A systems change approach was taken to address the electricity system writ large, not just gas plants; this was a year to explore, learn, understand, and connect, and put our multi-solving philosophy into action. Recognizing the technical, financial, environmental, and social dimensions of the electricity system, it’s clear that the system is highly entrenched with little opportunity for community input or influence or new entrants, somewhat fragile and politically salient, yet critically important for the well-being of Ontario’s residents and businesses.

In addition, TAF engaged in time-sensitive, electricity-focused initiatives including providing support for municipal motions calling for a gas phaseout, responding to the subsequent assessment of a gas phaseout undertaken by the Independent Electricity System Operator (IESO), and offering input into the development of Toronto Hydro’s first-ever climate plan.

2021 Success Indicators	Status & Outcomes
<p>A strategy to stop fossil gas growth and phase it out in Ontario by 2050 is developed collaboratively with stakeholders, with a view to launching in 2022</p>	<p>Partially completed and ongoing: With support from consultants, developed and undertook a process of intelligence-gathering through surveys, interviews, and engagement, and convened nearly 30 stakeholders representing a wide range of perspectives. The outcome is a set of key concerns and challenges as well as hopes and opportunities for a modern, affordable, low-carbon, resilient electricity system. This is being used to inform development and testing of narratives which can be used by TAF and others.</p>

Enabling Activities

Strategy

In 2021, TAF continued to execute on the priorities outlined in our current Strategic Directions. The most notable change was not *what* we worked on, but *how* we worked on it. TAF adopted a more integrated, cross-team approach which compelled our team to be more intentional about bringing our multiple tools to bear in advancing each file. This integrated approach involved new combinations of colleagues experimenting with new ways of working – a situation that pushed us out of our individual comfort zones and generated many learnings. The results were promising, and we believe there is much to accomplish by continuing to deepen and refine our integrated approach in 2022.

2021 Success Indicators	Status & Outcomes
<p>New Theory of Change and supporting Key Performance Indicators adopted and implemented into TAF’s operations (two-year activity)</p>	<p>Partially completed. Worked with the LC3 network to co-develop a Results-Based Management Framework including a new Theory of Change and KPIs related to scale and community benefits. New KPIs related to equity and financial capital mobilization have been deferred to 2022.</p> <p>Presented new theory of change and proposed KPIs to TAF’s Grants Committee, Investment Committee, and Board for input.</p>

Communications

The Communications team fulfils a critical element of our Theory of Change, by continuously capturing and sharing outcomes of TAF’s work including through research reports, case studies, policy recommendations, branding and messaging, visuals, events, webinars and more, to reach our constituents and influence decisions towards more ambitious climate action.

Despite being physically apart for another year, Communications enhanced TAF’s audience engagement, campaign and content strategies through greater integration with the Policy Team, Quantification Team and other teams at TAF, for example on supporting [Green Development Standards](#) and on calling for a national [Retrofit Acceleration Fund](#). Direct collaboration and campaign-oriented thinking will continue in 2022, based on the results achieved this year.

In an age of massive misinformation, effective communications are not only vital to myth-busting and providing fact-based insights, but also to linking climate action to prevailing narratives which already influence and shape our worldviews. Evolving our content and messaging in this way will be critical as we take on a mandate that involves multi-solving, reaching new audiences and engaging voices underrepresented in today’s environmental movement, and perhaps most importantly, driving a level of social expectation and public demand for climate action that can overcome what continues to be insipid political ambition.

2021 Success Indicators	Status & Outcomes
<p>TAF audience continues to grow with high engagement maintained</p> <ul style="list-style-type: none"> • Drive up website engagement: 5% increase in total visits; 15% increase in visits to the emissions inventory; and 15% increase in page views on all publications 	<p>Website. 15% increase in total visits; over 100% increase in page views across all publications; over 20% increase in visits to the emissions inventory.</p> <p>Monthly e-news. We saw a 20% increase in subscribers from outside Toronto, with only a small</p>

<ul style="list-style-type: none"> • Grow e-news audience including 25% increase in subscribers in target areas (e.g., outside Toronto) with steady open rates (32%) and click rates (6%) • Grow social media followers while retaining engagement rate: 20% increase on LinkedIn in target areas, 6% engagement rate, and average of 1,500 impressions; and 5% increase on Twitter with 1.65% engagement rate and 500 impressions on average and four ‘sweet spot’ posts a month generating 1,250 impressions and 1.67% engagement rate • At least 25 participants attend Generate online pitch event designed to increase TAF’s engagement with finance and cleantech audience 	<p>impact on our performance; achieving 29% open rate and maintaining a 6% engagement rate.</p> <p>Social media. LinkedIn continues to be a strong channel for TAF’s content, evidenced by a 37% increase in followers from within target segments and again maintaining engagement at 6%. Twitter results were higher than target, at 2.4% engagement and with over 2,000 impressions per post on average. We did not grow our audience as targeted, though based on the performance of our content, this could be platform-driven. We are analyzing top performing Tweets so we can continue to optimize in 2022.</p> <p>The Comms team supported Impact Investing by designing Generate which saw attendance of over 100 participants. While well-received, the event did not yield any direct leads for our team.</p>
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Carbon & Co-Benefits Quantification

TAF’s Carbon and Co-Benefits Quantification work underpins all our activities, enabling evidence-based programming, grantmaking, investing, and policy advocacy. In 2021, the team delivered a high volume of quantification assessments to support TAF’s climate investments, while also providing thought leadership and capacity building through strategic research and a multi-stakeholder community of practice (the Carbon Data Network). Key accomplishments included publishing the 2019-20 edition of TAF’s [Carbon Emissions Inventory](#) for the GTHA and the 2021 edition of TAF’s [Electricity Emissions Factors and Guidelines](#). Both of these publications are widely used by stakeholders across the GTHA to support climate action planning and impact assessment. In 2022 the team’s remit will broaden to support research and innovation across all of TAF’s focus areas.

2021 Success Indicators	Status & Outcomes
<p>Robust and comparable quantification of grants, investments, and programs delivered within two weeks</p>	<p>Completed. Delivered 30 quantification assessments within the required timeframe, including 24 for grants, five for impact investments and one for a policy project. While some assessments were routine, others required new protocols for engaging investees and/or third-party experts.</p>
<p>Methodology for GHG emissions inventory updated to better reflect GTHA emissions at a more granular level, including two additional sources</p>	<p>Partially completed. The GTHA inventory was published in Q4 2021, with methodological improvements including more complete and accurate industrial emissions. Rather than adding additional emissions sources, the team pivoted to including 2020 data in order to capture the impact of the pandemic on carbon emissions.</p>
<p>The Carbon Data Network (CDN) facilitates identification of climate action needs and opportunities through streamlined access to data and co-development of robust GHG</p>	<p>Completed and ongoing. TAF facilitated two joint data purchases, including a negotiated purchase of previously unavailable data from the Ministry of Transportation. The team identified eight collaborative research opportunities and</p>

inventories and evaluation methodologies	contributed to the development of three funding proposals for multi-party research.
Participants from at least three more GTHA municipalities join the CDN	Completed. The CDN met in the context of two network-wide webinars and one broader GTHA carbon emission inventory webinar which included CDN members. Membership continued to expand to over 115 members including from six GTHA regions, 18 GTHA municipalities, as well as other stakeholders from the provincial and federal governments, academia, utilities, and the private and non-for-profit sectors.
Thought leadership research on at least three GHG and co-benefits quantification topics finalized, disseminated, and incorporated into TAF's practice	Partially completed and ongoing. TAF published and promoted updated electricity emission factor guidelines. Research on fugitive methane emissions and impacts on lifecycle emissions from natural gas has been completed and will be published Q2 2022. Several other research projects are underway to be completed in 2022.

Impact Investing

Based on Q3 results and estimates to year-end reflecting market performance, TAF's portfolio had another year of strong performance, exceeding the conservative projected 5.5% returns which our budget is based on. Public Equities performance for the Toronto and Ontario endowments exceeded the median market performance of 14.9% and the Canada endowment, which was initially invested in Q4 2020 and incrementally moved into Public Equities (and therefore had higher purchase costs) comes in around 10%. Given current interest rates, Fixed Income performance has been challenging, but nevertheless, due to a defensive position, TAF's holdings outperformed the market. TAF is in compliance with our investment policy; no asset class is below the minimum or exceeds the maximum allocation. Continued efforts towards the target portfolio will be guided by the Investment Committee and market outlook and will include rebalancing Public Equity into Direct Investments and Alternative Investments, with a focus on a prudent risk/return profile and maximizing mandate-related impact.

2021 was a year of growth for TAF's Impact Investing team, in terms of team size (from three to four members), available investment dollars (courtesy of the Canada endowment), and the number of transactions investigated and approved. There are more dollars than ever searching for impact-led investment opportunities, particularly in the low-carbon market. This drove the team to prioritize a refinement of its strategy and target market to ensure that we are well-placed to take advantage of these tailwinds in 2022.

2021 Success Indicators	Status & Outcomes
\$8-10 million approved for four to six transactions, with at least half reaching financial close	<p>Partially completed. Six investments totaling \$4.45 million were approved during the year, with four reaching financial close. One is a retrofit financed via TAF's Energy Savings Performance Agreement (ESPA), four Private Equity funds, and one an enterprise investment.</p> <p>TAF hosted Generate, an online pitch event, to test a new avenue for growing the investment pipeline,. The three-day event attracted over 100 companies interested in pitching to an audience of investors, municipalities and building owners. But many of those companies fell outside our 'strike zone' and in the end, the team felt that the amount of time and effort spent</p>

	<p>organizing the event could be better used to generate a more targeted pipeline.</p> <p>In the last few months of the year, the investing team hosted two strategy meetings with the Investment Committee. Based on the conclusions and outcomes of those meetings, the team will assemble a refreshed business plan for 2022 and beyond.</p>
Leverage TAF investment at a 1:3 ratio (\$24-30 million total)	Partially completed. TAF was able to directly influence an additional \$11M in capital from external investors towards the above investments.

Grants

The Grants team worked more closely than ever before with the wider TAF team to cultivate, assess, and advise on TAF grant projects. This integrated approach generated a portfolio of targeted grant projects that were well-positioned to advance TAF’s focus areas.

Another 2021 priority was to improve TAF’s grantmaking processes and offerings in service of strong project outcomes. The team introduced an expression of interest phase to the grants intake cycle which allowed TAF to identify the most viable grant concepts earlier while saving time for grant seekers, staff and our volunteer Grants Committee. We also introduced an online program design and evaluation workshop that aims to strengthen the design of both community grant projects and TAF-led projects at the planning stage. The workshop garnered positive reviews from both grant seekers and staff who participated.

2021 Success Indicators	Status & Outcomes
At least one grant application submitted from each of the GTHA’s regional and single-tier municipalities	Partially completed. Attracted grant applications from all GTHA jurisdictions except for Hamilton.
At least one successful grant application is approved which aims to build the capacity of community climate practitioners (including TAF) to embed social justice principles into climate work	Partially completed and ongoing. Rather than advancing this goal through a grant, we developed a scope of work for expert advice on how to embed equity more deeply into climate programming. This work will now be co-funded and led by the LC3 network.
New policies and procedures exist to more deeply embed equity, diversity, and inclusion principles into the grant cultivation and selection processes	Partially completed and ongoing. Pilot tested new scale and community benefits rubrics on grant applications from the second and third intake rounds; these new rubrics to be incorporated into TAF’s grant application form in 2022. Equity rubric to be incorporated following completion of LC3-led consulting project.
TAF’s internal project request and reporting processes are updated to increase efficiency while maintaining accountability	Completed. Developed a new, integrated template and process to facilitate the preparation and consideration of 2022 program funding requests. The new approach provides staff with the certainty

	needed to plan their programming more effectively and will serve as a framework for future years.
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Operations, Finance and Governance

Sometimes viewed as back-office functions, these teams are critical to enabling our daily work. In addition to the achievements and results below, this team supported another year of remote work through a range of activities designed to keep staff engaged, promote strong two-way internal communication, ensure continued compliance through high quality reporting, and focus on effective and efficient day-to-day priorities. This department added “Human Resources and People” to its responsibilities, recruiting and onboarding several roles, including the new Director of Research and Innovation, leading a Compensation Study, supporting a parental leave transition, and preparing for an upcoming executive level retirement in 2022. We created an Executive Compensation Committee and HR Committee, securing a new chair and members.

2021 Success Indicators	Status & Outcomes
TAF’s internal support services continue to be strengthened, equipping TAF with the tools, processes and training needed to support a growing team and new accountabilities	Completed and continuing. Several new software tools were adopted in 2021 to support a fully virtual workplace with a higher level of activity, including Microsoft Business Central, SharePoint, TeamWork and Humi. We also invested in Manager Training to strengthen leadership, staff-wide personal assessments (DiSC) to deepen our understanding of each other and promote stronger teamwork and hosted several staff learning opportunities on a range of topics which were extremely well-attended.
Key governance documents and processes updated	Partially completed and ongoing. TAF’s Board approved an updated investment policy, developed collaboratively by TAF and City staff, and established a new Direct Investment Committee. The updated investment policy will be advanced for Council approval alongside the updated TAF/City Relationship Framework and Bylaw. Updates to these documents were initiated by TAF and the City in 2021 for completion by mid-2022.
Maintain compliance with investment policies, Committee and Board approvals, and best practice	Completed. Quarterly monitoring of the full portfolio indicates compliance with the investment policy asset allocation. All procedures for Committee reviews and recommendation and Board approvals of all grants, program allocations and investments have been followed, as have requirements for open meetings.
The full complement of Board and Committee membership is recruited and their functions supported	Completed. Council re-appointed one citizen member and appointed two new members; we thanked two retiring members for their service. Council also replaced one Councilor member. Two Investment Committee members resigned during the year; recruitment is underway in the context of the two Committees. One member of the Grants & Programs Committee resigned and a new member joined.

Liaison with the LC3 Network

Most of the LC3 Executive Directors were focused on the local business of launching their centres in 2021, recruiting staff teams, consulting with local stakeholders and undertaking strategic planning. In parallel to these local activities, the LC3 Network met regularly to explore and develop common approaches that leverage the full power of the network: approaches to defining and measuring success, capacity-sharing and partnership development. The 2021 work established a strong foundation on which to deepen cross-network collaboration in 2022, when we plan to co-develop tangible, high-impact initiatives together.

2021 Success Indicators	Status & Outcomes
<p>The power of the LC3 network is leveraged to accelerate practical, policy and investment objectives, including:</p> <ul style="list-style-type: none"> • Joint advocacy with LC3 centres on key municipal and federal policy matters • Collaboration and capacity-sharing on granting and direct investing • Adoption and testing, using a developmental evaluation plan, of a shared LC3 Theory of Change KPIs (two-year activity) • Coordinated scanning and analysis of low-carbon trends, opportunities, tipping points, risks and other factors relevant to the network • Joint fundraising and partnership development 	<p>Partially completed.</p> <ul style="list-style-type: none"> • Developed a project plan, co-funding arrangement and scope of work for external consulting to promote the adoption of strong municipal EV programs and policies. • Led capacity-sharing initiatives with the LC3 network regarding TAF’s direct investment and GHG quantification approaches. • Initiated the exploration of collaborative granting opportunities in areas of shared priority. • Finalized an initial Results-Based Management Framework for the LC3 network, including a Theory of Change and KPIs related to scale and community benefits. • Deferred trend scanning activity to 2022. • Initiated a partnership and fund leveraging strategy.

Performance Indicators

TAF regularly measures and evaluates the impact of our work, with the goal of informing our decisions and recommendations, and monitoring our progress.

TAF has two **Key Performance Indicators (KPIs)**:

- **KPI #1 - Carbon Emissions Reduction Potential:** the cumulative total potential emissions reductions associated with projects funded by TAF over a 20-year horizon.
- **KPI #2 – Financial Capital Mobilized:** the total amount of capital invested in TAF-supported carbon reduction projects, inclusive of direct investments, grants, and program spending, as well as external contributions and co-financing.

The impact associated with each project is allocated to the calendar year in which the first disbursement of the investment is executed. This estimate includes the expected carbon emissions reduction potential over the first 20 years, and the total investment over the lifetime of the project.

In 2021, TAF mobilized a total of **\$17,793,459** for low-carbon solutions in the GTHA. These investments are estimated to result in total potential emissions reductions of **58,399,514 tCO₂eq.**

Additionally, TAF tracks several **Supplementary Performance Measures (SPMs)** to help guide our decision-making. These include direct emissions reductions realized through TAF investments, the estimated unit cost for both direct and potential emissions reductions, and the economic and air quality co-benefits. These KPIs and SPMs are discussed in further detail in the Appendix.

Appendix: Detailed Key Performance Indicators

TAF has been working closely with the Federation of Canadian Municipalities and its partners in the LC3 network to establish a new set of performance indicators that we will be monitoring starting in 2022. These indicators cover a broader set of criteria, including the social impacts associated with TAF’s investments and the potential for projects to drive carbon reductions at scale.

These measures also complement TAF’s [GTHA Carbon Emissions Inventory](#), which helps us understand the magnitude of the challenge and track progress towards our goal of carbon neutrality. The inventory helps policy- and decision-makers better understand the quantity and sources of carbon emissions in their area, to influence the scope, speed and direction of actions.

The results of our inventory of emissions in 2019 show that the region emitted 55.2 million tonnes of carbon dioxide equivalents (CO₂eq), effectively unchanged from 2018 and a 2% increase compared to 2015. Emissions in 2020 fell by 13% as the pandemic drove a historic reduction in transportation demand and industrial output. These reductions, however, are expected to be transient, with a major increase in emissions forecasted for 2021. The data reveals that a massive acceleration in climate action and investment is needed to meet our 2030 and 2050 climate targets.

Direct and Potential Carbon Emissions Reductions

TAF estimates the direct and potential carbon emissions reductions driven by its investments as one way of measuring the impact of the organization’s activities each year. As detailed above, potential emissions reductions for each year are limited to projects for which the first disbursement was executed in that year.

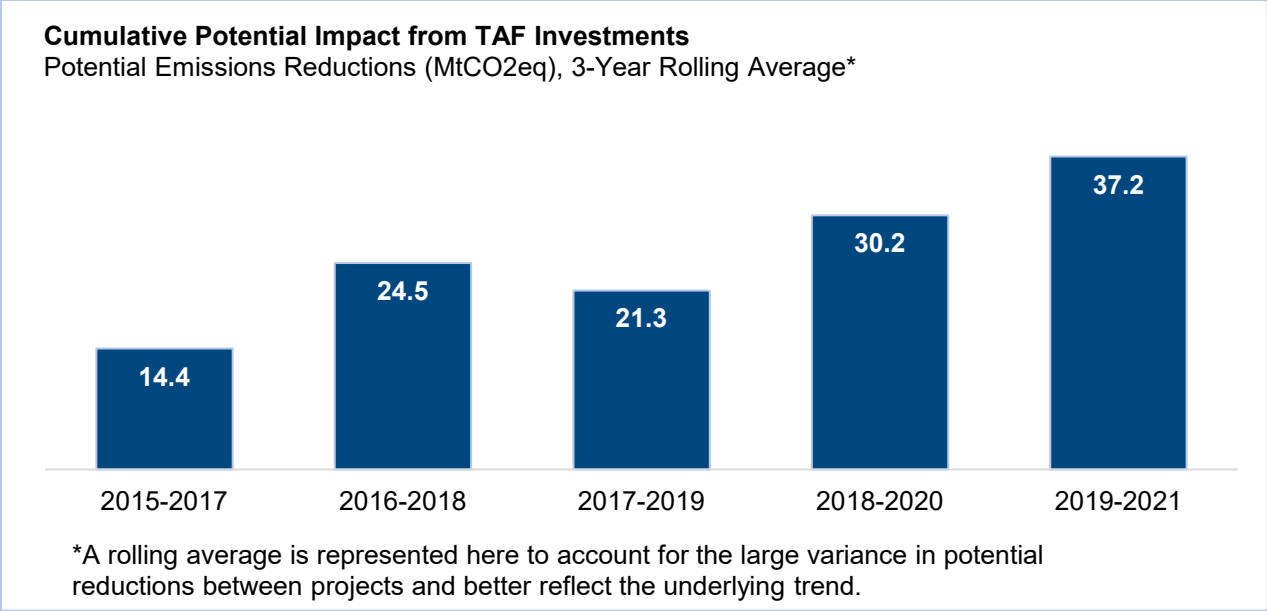
Details on how these estimates are derived are available in TAF’s [Carbon Emissions Quantification Methodology](#).

Indicator	Value
Potential Emissions Reductions, tCO ₂ eq (KPI #1)	58,399,514
Cost per Potential Emissions Reduction, \$/tCO ₂ eq	0.06
Direct Emissions Reductions, tCO ₂ eq	5,802
Cost per Direct Emissions Reduction, \$/tCO ₂ eq	155.2

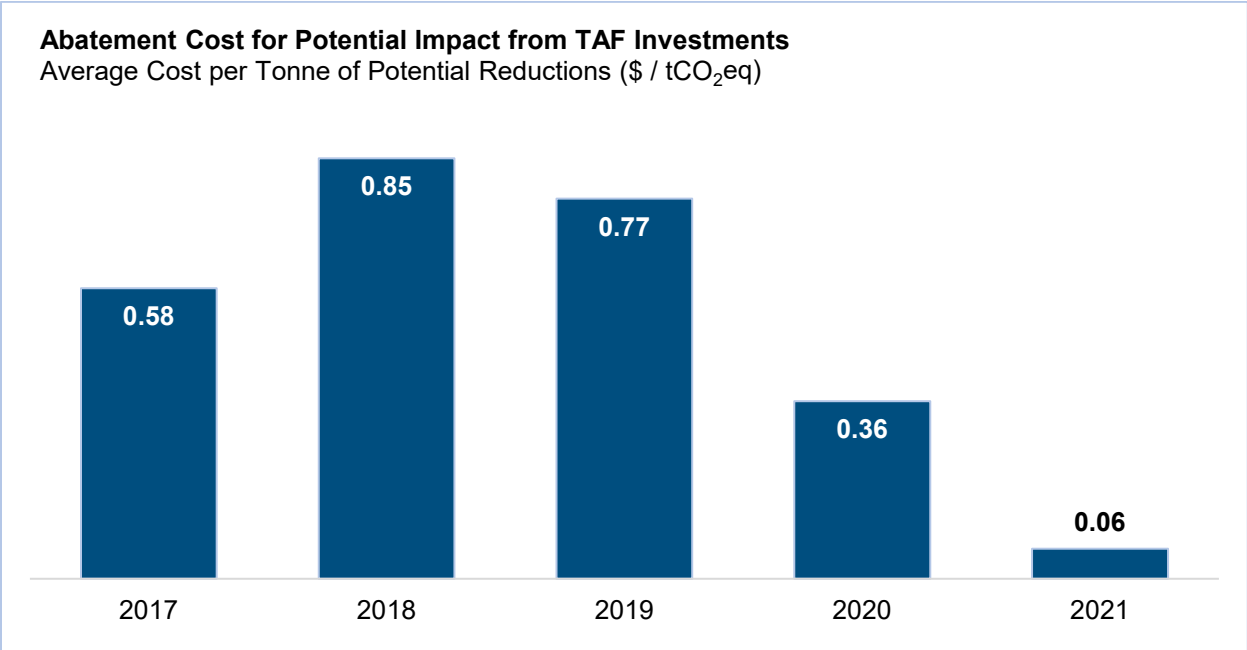
Potential Emissions Reductions

TAF measures the cumulative potential emissions reductions associated with all projects the organization funds, estimated over a 20-year period. While these emissions reductions have not yet been realized, this measure provides a valuable benchmark against which to evaluate the potential impact of TAF’s investments at scale.

In 2021, TAF invested in projects with a cumulative potential emissions reduction of 58.4 MtCO₂eq (up from 41.8 MtCO₂eq in 2020 and increasing the 3-year rolling average to 37.2 MtCO₂eq). This includes estimated reductions from ten quantifiable grants and one impact investment. 22 MtCO₂eq (38%) of this value is associated with TAF’s work supporting Green Development Standards across the GTHA, including numerous grants for policy development and implementation and direct support from TAF’s Policy team. The other projects related to vehicle electrification, building retrofits, construction materials, and natural gas demand management.



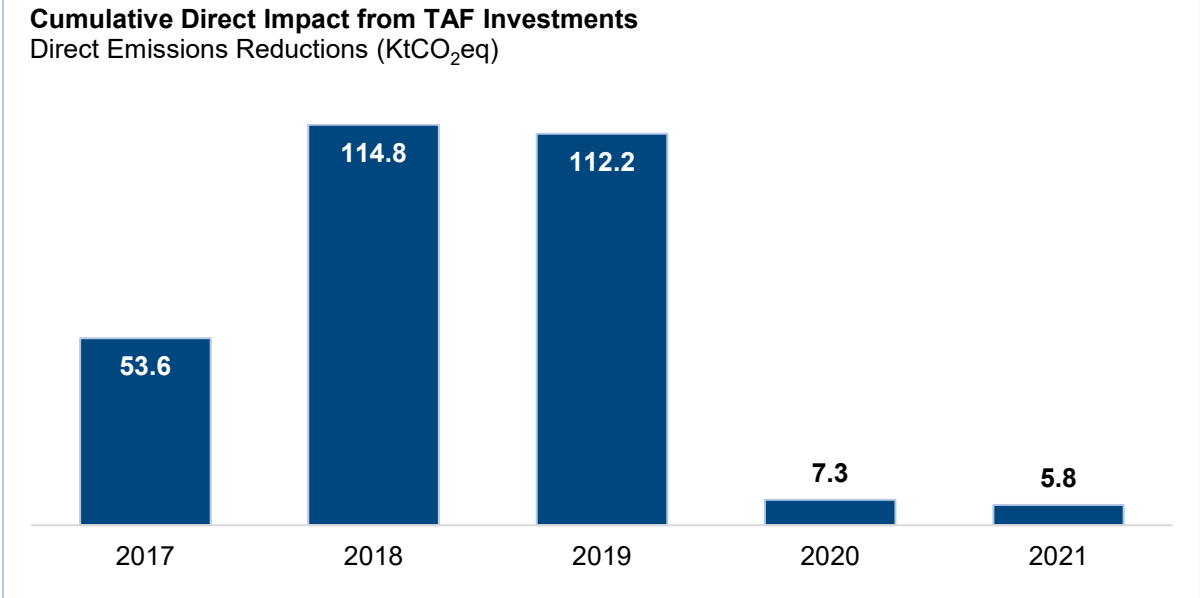
The unit cost for these cumulative potential emissions reductions is estimated to be 0.06 \$/tCO₂eq, significantly lower than in previous years (0.77 in 2019 and 0.36 in 2020). Note that historical abatement costs reported in previous annual reports have been adjusted to be consistent with a revised methodology employed since 2020.



TAF also supported numerous other projects that can have significant carbon impacts but are not included in this metric, including six grants that were determined to be non-quantifiable for a variety of reasons.

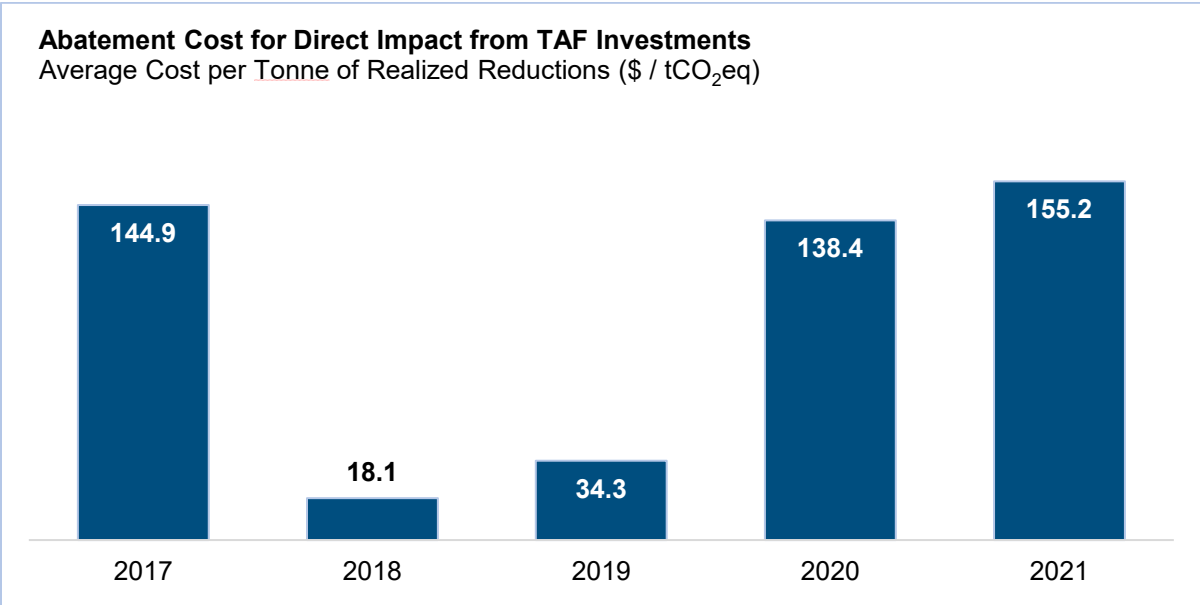
Direct Emissions Reductions

In 2021, TAF invested in projects with projected cumulative direct emissions reductions of 5,802 tCO₂eq. This is significantly lower than historical benchmarks and reflects a continued slowdown of carbon reduction measures as a result of the COVID-19 pandemic.



Estimated direct emissions reductions in 2021 were driven by three projects:

- Energy efficiencies realized as a result of retrofits completed in two buildings through TAF's Retrofit Accelerator program.
- An energy audit and conservation measures implemented in a multi-unit residential building using an ESPA created by TAF.



Financial Capital Mobilized

TAF mobilized a total of \$17,793,459 for low-carbon solutions in the GTHA in 2021. This includes direct investments, grants, and program spending, as well as external contributions and co-financing. Almost half of this funding was provided by external sources, including:

- \$6.0M co-funding for the One Planet Living Fund to finance the development of carbon neutral real estate projects.
- \$0.6M for a retrofit project at Brooks Co-operative Homes.
- \$1.9M in co-funding towards various other grants and Retrofit Accelerator projects in addition to funds provided by TAF.

Indicator	Value
Total Financial Capital Mobilized (KPI #2)	\$17,793,459
Total Lifetime TAF Investment	\$9,266,543
Total Funding from External Sources	\$8,526,917

TAF also raises funds from other organizations to advance our climate projects. In 2021, we raised \$4,150,000 from external sources including:

- McConnell Foundation: \$2,000,000 over five years for Retrofit Accelerator projects.
- Trottier Foundation: \$150,000 over one year for Retrofit Accelerator projects.
- Natural Resources Canada: up to \$2,000,000 as part of its Zero Emission Vehicle Infrastructure Program (ZEVIP) towards the installation of new EV charging stations in the GTHA.

Co-Benefits of Carbon Emissions Reductions

TAF’s activities have impacts beyond carbon emissions reductions, such as increased economic activity resulting from new investments and improvements to air quality through reductions in polluting fuels such as diesel. These co-benefits are often substantial and will be directly accounted for through the organization’s updated KPI framework in the coming years.

Economic Benefits

Estimates for increased economic activity driven by TAF investments are currently limited to projects related to energy efficiency, using multipliers derived from past research. Expanding these estimates to other types of projects is a priority for 2022.

Impact Type	Job-Years Created	Increase in GDP (\$)
Potential	8	\$1,180,175
Direct	31	\$4,343,704

Air Quality

TAF estimates cumulative reductions in criteria air contaminants (CACs) over a 20-year horizon resulting from reduced fossil fuel usage through our project investments. Over the past year, these reductions resulted from two types of activities:

- Reducing natural gas and electricity consumption in buildings through the adoption of Green Development Standards and other energy efficiency measures; and
- Reducing gasoline and diesel usage through electrifying light- and heavy-duty vehicles and shifting freight deliveries outside of peak periods.

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Criteria Air Contaminant (CAC)	Emissions Reductions (t)	
	Potential	Direct
Total Particulate Matter (TPM)	2,915	0.5
Particulate Matter with diameter < 10 µm (PM ₁₀)	2,811	0.5
Particulate Matter with diameter < 2.5 µm (PM _{2.5})	2,061	0.5
Sulfur Oxides (SO _x)	996	0.1
Nitrogen Oxides (NO _x)	114,138	20.0
Volatile Organic Compounds (VOC)	22,144	0.5
Carbon Monoxide (CO)	325,614	6.3
Ammonia (NH ₃)	1,436	0.2