January 31, 2019

Expert Panel on Sustainable Finance
Environment and Climate Change Canada
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Re: TAF's Comments on the Expert Panel's Interim Report on Sustainable Finance

Dear Expert Panel Members,

The Atmospheric Fund (TAF) is a public agency established in 1991 by the City of Toronto and endowed by the City and the Province of Ontario. TAF works closely with stakeholders across the Greater Toronto and Hamilton Area (GTHA) to test and advance innovative programs to reduce greenhouse gas (GHG) emissions and air pollution. However, the views expressed in this submission do not necessarily represent those of the City of Toronto, the Province of Ontario or other GTHA stakeholders.

TAF supports the Expert Panel's overall analysis of the gaps and opportunities. And we are particularly pleased that the Expert Panel has identified investment in energy efficiency retrofits of existing buildings as a priority opportunity which should be incubated and mainstreamed. Improving efficiency in buildings is considered one of the most affordable ways to reduce GHG emissions, offering greater opportunities for low-cost GHG reductions relative to other sectors.[1] As the Expert Panel further elaborates its advice regarding sustainable finance to government, and to the business sector, we encourage you to further emphasize and identify mechanisms for scaling up this cost-effective, financially-rewarding and multi-benefit opportunity. To that end, TAF offers some insights and evidence which we hope will assist you in formulating your next report.

Understanding Return on Investment in the Energy Efficiency Space

Energy efficiency is a multi-billion dollar investment opportunity, with a major subset being energy efficiency retrofits of existing buildings. However, this profitable market is not

[1] IPCC. (2007). IPCC Fourth Assessment Report: Climate Change 2007: Synthesis Report. "4.3 Mitigation Options."

currently being exploited to its full potential for a variety of reasons, including project supply side barriers and barriers to capital flow. The former include uncertainty about project performance and savings, competing capital priorities, extended paybacks, and limited capacity and understanding of the business case.

TAF's 2018 report "Money on the Table" framed three reasons why capital markets are not fully invested in energy efficiency, namely:

1. Lenders have a poor grasp of efficiency risk-return profiles. This information gap leads to a confidence gap, which ultimately creates an investment gap;
2. Risk management tools are underutilized and standard underwriting does not fully consider the value of efficiency, limiting access to capital. In short, lenders are not recognizing the performance dynamics of retrofits; and
3. Lenders have not established specialized products to capture the full value stream of this new asset class, which hamstrings efficiency investments. Unreasonable credit assessments, along with high discounting of future savings, increase the cost of capital for efficiency investments, undermining the market demand.

Also, in order to truly capture the return on investment of an energy efficiency project, we need to turn away from the simple payback framework. While "simple" and commonly utilized across the building retrofit market, simple payback is not an accurate method to forecast the financial returns or the relative attractiveness of a multi-measure retrofit. This method creates a bias against projects with relatively large upfront costs and long-term cost-savings.[2] ***Further analysis and alternative financial analysis tools (i.e. Net Present Value, Life Cycle Cost Analysis, Internal Rate of Return, etc.), are necessary to optimize value, make informed investment decisions, and ultimately de-risk long-term investments in energy efficiency retrofits.*** For example, an integrated, multi-measure retrofit can generate an internal rate of return in the double-digits and a positive net present value over the long-term.

Valuing the Multiple Benefits of Energy Efficiency

The potential for energy and carbon reductions represents a key opportunity to advance the Pan-Canadian Framework on Clean Growth and Climate Change. Improving the maintenance and operations of equipment (including heating, ventilation, and air conditioning), can significantly reduce natural gas, electricity, and water consumption. Multi-measure retrofits have the potential to reduce energy usage by 30% or more.[3]

Investing in opportunities for energy savings creates economic benefits for various stakeholders. Through the generation of economic development, energy efficiency retrofits can also promote job creation. An estimate from the Acadia Center suggests that every $1

[2] Stoate, T. (May 2018). "More than meets the eye: Don't let simple payback steer your retrofit decision."
[3] TAF. (2017). Money on the Table: Why investors miss out on the energy efficiency market.

million invested in energy efficiency creates 22-27 job-years.[4] Retrofits not only reduce energy costs, but also reduce maintenance costs, renew critical building systems, and reduce vacancies and turnover. This translates into improvements in net operating income in buildings[5] and over the long-term, improvements in property value.

But the benefits of improving energy efficiency extend beyond the more obvious environmental and economic impacts on communities. ***Building occupants can enjoy both direct and indirect health benefits linked to energy efficiency retrofits,*** including: better mental health, better respiratory and cardiovascular health, reduced chronic disease and less temperature related illnesses and deaths.[6] Energy efficiency retrofits can improve comfort and indoor air quality, resulting in greater productivity and reduced hospitalization. Several studies have suggested that up to 75% of the overall benefits of energy efficiency retrofits are health benefits.[7]

Further, investments in energy efficiency retrofits can promote more equitable outcomes by prioritizing low-income households and communities; creating a win-win situation. The low-income sector is generally in greater need of energy efficiency upgrades, but also faces significant barriers to access the capital required for retrofits. This makes it an attractive customer base for retrofits if access to capital can be improved, while also reducing potential for the free-rider problem.[8] Directing retrofit programs towards low-income households creates multiple policy benefits, as energy efficiency improvements can reduce energy poverty and improve social and economic well-being.[9]

Scaling-up Energy Efficiency Retrofits

We endorse the Expert Panel's finding that mobilizing the scale of investment needed to mitigate climate change will require active partnership between the public and private sectors. TAF has already completed a Guidance Note that provides a detailed review of options for how governments can work with the private sector to mobilize large-scale investment in energy retrofits. We encourage the Expert Panel to consider these tools in development of the final recommendations report.

[4] Dunsky, P. et al. (2014). Energy Efficiency: Engine of Economic Growth in Canada A Macroeconomic Modeling & Tax Revenue Impact Assessment. Acadia Center.
[5] Stoate, T. (Dec. 2017). "Energy efficiency 101: Why do an energy retrofit?"
[6] International Energy Agency. (2014). Capturing the Multiple Benefits of Energy Efficiency. OECD.
[7] Ibid.
[8] Energy Efficiency Working Group. (2008). Energy Efficiency and Energy Affordability for Low Income Households - Issue Paper Six.
[9] Ibid.

Thank you again for the Expert Panel's leadership in advancing sustainable financing, including financing for energy efficiency, in Canada. We appreciate your consideration of TAF's comments and look forward to the final report. Please don't hesitate to contact us directly should you have any questions.

Sincerely yours,

Julia Langer
CEO
The Atmospheric Fund