



Evaluation of the Low Carbon Economy Fund

Final Report

May 2025



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Accessibility Statement

As of the date of publication, the document has been verified for accessibility.

If you have any questions about this document, please contact us at: audit-evaluation@ec.gc.ca

Table of Contents

1.	Introduction	1
2.	Scope and Methodology	2
3.	Findings	4
3.1.	Relevance	4
3.2.	Design	6
3.3.	Effectiveness	12
3.4.	Efficiency	17
4.	Conclusion	20
5.	Recommendations, Management Responses and Action Plan	21
6.	Appendices	24
6.1.	Appendix A – Evaluation Matrix.....	24

List of Tables

Table 1. Program Stream Results of the Original Low Carbon Economy Fund (as of March 31, 2023) 9

Table 2. Results of the Original Low Carbon Economy Fund (as of March 31, 2023)13

List of Figures

Figure 1. Timeline of LCEF Budget and reprofile decisions 7

Figure 2. Structure of the original Low Carbon Economy Fund 8

Figure 3. Structure of the Renewed Low Carbon Economy Fund (2022)10

Figure 4. Co-benefits of the Low Carbon Economy Fund15

List of Acronyms and Abbreviations

ECCE	Environment and Climate Change Canada
GHG	Greenhouse gas
ISED	Innovation, Science and Economic Development Canada
LCEF	Low Carbon Economy Fund
NRCan	Natural Resources Canada

1. Introduction

The Government of Canada is committed to reducing greenhouse gas emissions by 40-45% below 2005 levels by 2030 and achieving net-zero emissions by 2050. To do so, the government has developed a wide range of policies and programs designed to encourage Canadians to undertake more efficient, less wasteful activities, and transition the economy to a state in which businesses either emit no emissions or are able to offset their emissions with reductions in other areas.

The Low Carbon Economy Fund is one of the programs that supports Canada's emission reduction targets. The Low Carbon Economy Fund was announced in 2016, to support the [Pan-Canadian Framework on Clean Growth and Climate Change](#) by materially reducing greenhouse gas emissions, supporting energy savings and generating clean jobs. It funds projects across a range of economic sectors, including buildings, energy, industry, transportation, and waste. It also supports a wide range of recipients, including provinces and territories, municipalities, for-profit businesses, non-governmental organizations, and Indigenous governments, communities and representatives.

The original Low Carbon Economy Fund provided \$2 billion over seven years. It was renewed in Budget 2022 to support the [2030 Emission Reduction Plan: Clean Air, Strong Economy](#) (the 2030 Emission Reduction Plan) for an additional \$2.2 billion over seven years, expanding the Low Carbon Economy Fund and introducing changes to the program's delivery.

However, the Government of Canada faces a challenging operating context. International pressures, including the COVID-19 pandemic, inflation, and ongoing geo-political conflicts, a decreased economic and political stability that requires "careful economic and fiscal management" in addressing their impacts¹. Budget 2023 and Budget 2024 outlined ways in which the Government of Canada would reduce its spending by identifying "areas of duplication, low value for money, or lack of alignment with government priorities"². As a result of these reductions, the renewed Low Carbon Economy Fund (2022) is now worth approximately \$820 million.

Throughout its operations, the Low Carbon Economy Fund experienced rapid design changes to accommodate a variety of budgetary and policy goals. This evaluation sought to identify the

¹ [Budget 2024, Economic and Fiscal Overview, p.2](#)

² [Budget 2024, Responsible Government Spending, p.348](#)

impacts that these rapid changes have had on the program's relevance, design, efficiency, and effectiveness.

2. Scope and Methodology

The evaluation of the Low Carbon Economy Fund (LCEF) is part of [ECCC's Audit and Evaluation Plan 2022 to 2027](#). There were two related evaluation commitments in LCEF 1.0 and LCEF 2.0 Treasury Board submissions: a summative evaluation of LCEF 1.0 and a formative evaluation of LCEF 2.0 to occur in 2024-2025. Given the relative overlap in scope, the two evaluations were combined.

The present evaluation evolved around the following:

- It focused on LCEF 1.0 and offers reflections to guide the implementation of LCEF 2.0
- It covered the 5-year period from 2017-2018 to 2022-2023, as well as available information from 2023-2024.
- It considered the relevance of the LCEF's contributions to the Government of Canada's climate policy.
- It assessed the program's design, including its logic model and performance metrics, impact on diverse populations, and the changes implemented between LCEF 1.0 and LCEF 2.0.
- It assessed the efficiency and effectiveness of the program, including its ability to track and report on results achieved, and whether the results were achieved in a cost-effective way.

The conduct of the evaluation included a mixed methods approach that incorporated the lines of evidence outlined below. Evidence was extracted through both primary and secondary data collection. Additionally, both qualitative and quantitative data were used throughout the evaluation.

Document and Administrative File Review

The evaluation involved a document review of over 200 documents, including but not limited to, financial documentation, internal and external reports, applicant forms, workbooks, trackers and guides.

Literature Review

A literature review of various policy documentation and international climate goals was conducted.

Key Informant Interviews

A total of 17 key informant interviews were conducted, with program representatives, provincial and territorial representatives, and Indigenous participants.

Survey

A digital survey of program recipients was conducted between May 27th and June 27th, 2024. It resulted in a total of 76 responses (24% participation rate), concerning perceptions on program funding, program development, communication, and project outcomes.

Benchmarking

2 programs were used to benchmark various elements of the program, including but not limited to performance measurement, governance, and implementation challenges.

Expert Panel

Independent expert advice on greenhouse gas emission reduction calculations was drawn from Innovation, Science and Economic Development Canada (ISED) and Natural Resources Canada (NRCan).

3. Findings

3.1. Relevance

Key findings: The Low Carbon Economy Fund supports the Government of Canada’s efforts to reduce greenhouse gas emissions by 40-45% below 2005 levels by 2030 and achieve net-zero emissions by 2050. It also supports Environment and Climate Change Canada’s goals of reducing greenhouse gas emissions, generating clean growth, building resilient communities, and generating clean jobs. The climate programming landscape across the Government of Canada is complex, and many programs have similar goals. The evaluation found that it is difficult to compare climate programs to determine whether each program is fulfilling a unique need. It is important for LCEF to distinguish itself from similar programs to better demonstrate relevance.

In 2015, countries around the world reached an agreement to limit the global average temperature increase to “well below 2°C above pre-industrial levels” and to pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels” ([The Paris Agreement | UNFCCC](#)). This binding international treaty known as the Paris Agreement requires countries, like Canada, to set emission reduction targets to contribute to this global goal.

The Government of Canada has announced that it will reduce emissions by 40-45% by 2030 and achieve net-zero emission reductions by 2050. The 2030 Emission Reduction Plan states that reducing emissions is a critical and urgent priority. Current actions, around the world, are insufficient to address the scale of the threat, and it is predicted that at “current rates, global warming of 1.5°C will likely be reached between 2030 and 2052, and it is only with urgent, deep reductions in greenhouse gas (GHG) emissions that global warming can be limited to below 2°C” ([Canada’s 2030 Emissions Reduction Plan - Canada.ca](#)).

The Low Carbon Economy Fund provides targeted funding to projects that materially reduce greenhouse gas emissions, helping Canada to achieve its emission reduction goals. It also contributes to Environment and Climate Change Canada’s (ECCC) departmental goals. The program funds projects that directly and measurably reduce emissions, supporting the expected departmental result stating that “Canadian greenhouse gas and short-lived climate pollutant emissions are reduced”. It also supports job creation, making “Canadian communities, economies and ecosystems [...] more resilient” Finally, the renewed Low Carbon Economy Fund (2022) made a focussed effort to engage with Indigenous Peoples to ensure the redesigned program would meet their needs, supporting ECCC’s expected results aimed I

to ensure that “Indigenous Peoples are engaged in clean growth and climate change” ([Departmental Results Report 2022 to 2023, Department of Environment - Canada.ca](#)).

It is worth noticing that the Low Carbon Economy Fund is one of over 140 measures currently in place or in development that contributes to Canada’s emission reduction goal ([2023 Progress Report on the 2030 Emissions Reduction Plan: Part 1](#)). Many of these measures provide targeted funding to support activities that reduce emissions. It is therefore important to grasp the relevance of the Low Carbon Economy Fund within the context of the 2030 Emissions Reduction Plan in assessing whether the LCEF is avoiding duplication and demonstrating value, in addition to its alignment with the Government of Canada’s climate priorities.

Does the Low Carbon Economy Fund Fill a Unique Niche in the Government of Canada’s climate plan?

The original Low Carbon Economy Fund was designed to address Canada’s Paris Agreement obligations, by filling a significant gap in the funding available to support provincial and territorial efforts to address climate change. At the time, it was one of only three programs to provide provinces and territories with direct support, and the only program to track greenhouse gas emission reductions as a key program outcome.

Since 2016, however, the government has introduced many new policies and programs to address climate change. The 2030 Emission Reduction Plan identifies 80 measures in place across the Government of Canada that address climate change, and 34 of those measures provide targeted funding for activities that reduce emissions ([Report 6—Canadian Net-Zero Emissions Accountability Act—2030 Emissions Reduction Plan](#)).

While it is difficult to get an exact number, an assessment of the [Horizontal Results Framework for Climate Change Mitigation](#) indicates that approximately \$25 billion of the \$31 billion covered by that Horizontal Results Framework comes from targeted programming.

Furthermore, a survey of program recipients indicated that 40% of the respondents (n=23) had applied to a program with similar objectives to the LCEF. While recipients were more likely to identify provincial or territorial funding opportunities as alternatives (30 programs), 11 federal programs were also identified. The Smart Renewables and Electrification Pathways Program, funded by Natural Resources Canada, was the most frequently mentioned program (n=4).

Interviews with program officials also reveals their acknowledgement of this challenge, in conceding the fact that that since the government expanded its climate programming it now requires a more concerted effort to avoid overlapping with other programs. In some cases, the program acknowledges similarities in its mandate, such as with the Canada Infrastructure

Bank, the Strategic Innovation Fund's Net-Zero Accelerator, the Canada Greener Homes Grant, and the Smart Renewables and Electrification Pathways Program. In these cases, the program emphasizes removing mindless overlap but seeking out intentional complementarity to provide the greatest overall outcomes for climate change mitigation.

While an assessment of the overall 2030 Emission Reduction Plan is not within the scope of the evaluation, the LCEF should make efforts to communicate its unique role in this space.

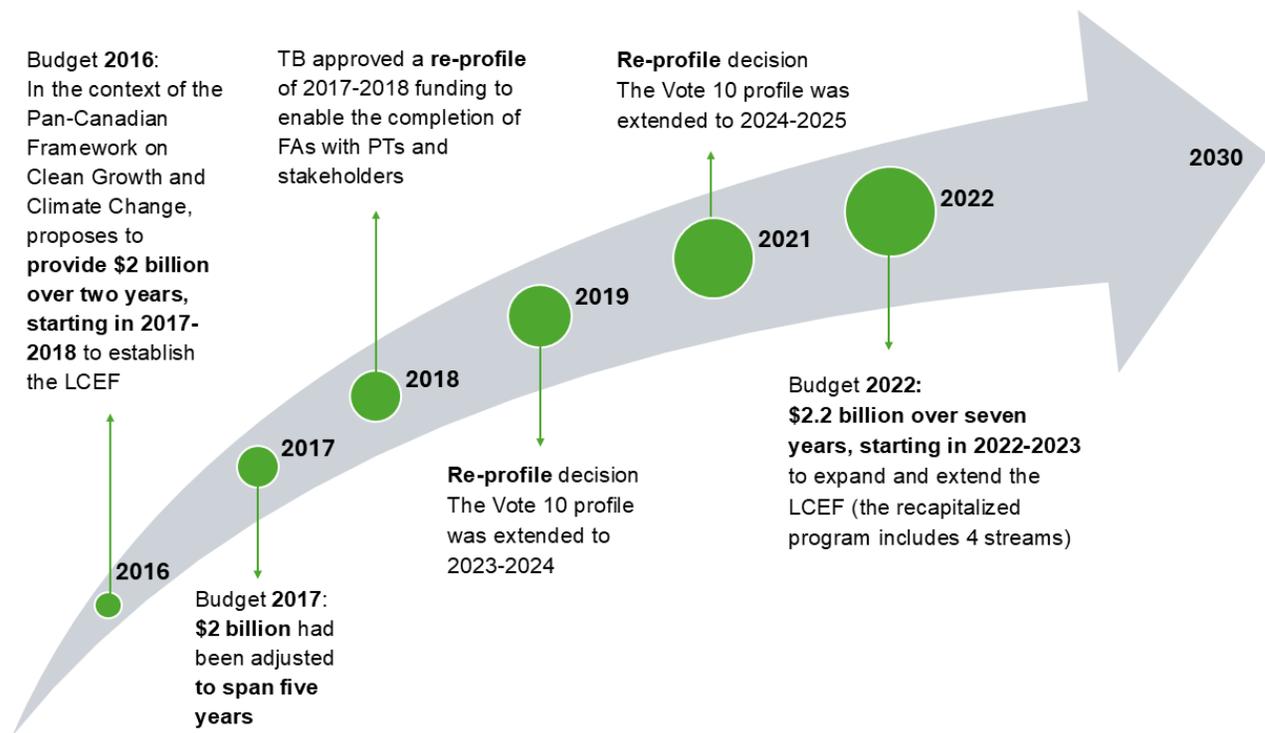
3.2. Design

Key findings: Relative to other programs, the evaluation found that the Low Carbon Economy Fund offered more flexibility for eligible sectors and recipients. This flexibility has allowed the Low Carbon Economy Fund to adjust its design over time to be more accommodating towards communities. However, the changes in design have had an impact on the program's results (see Effectiveness). Nonetheless, the program had the appropriate governance structures in place to discuss and enable these changes, and did engage with provincial, territorial, and Indigenous representatives on the design changes.

Design of the Original Low Carbon Economy Fund

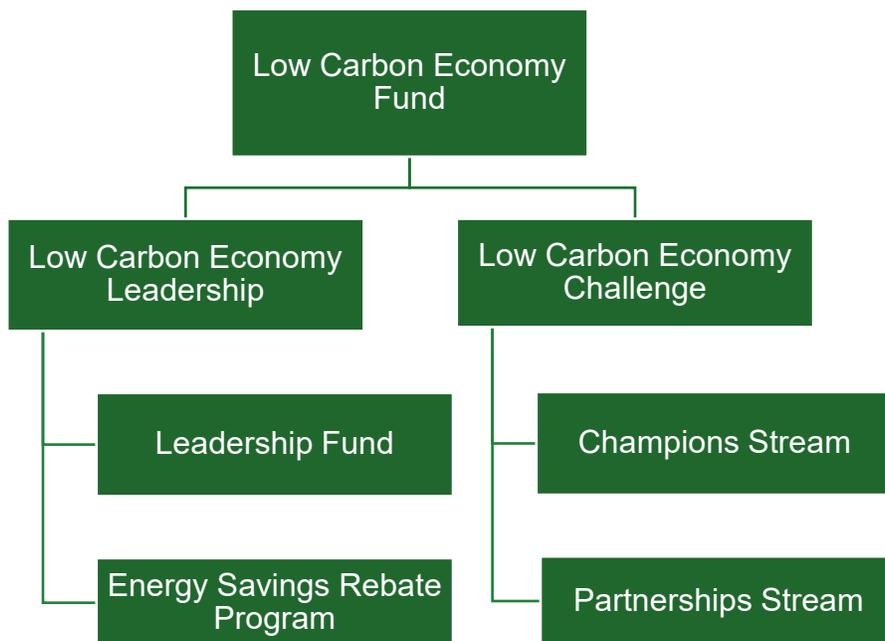
The LCEF has evolved over the course of its implementation, adapting to changing policy and financial goals. The original Low Carbon Economy Fund intended to provide \$2 billion over 2 years to provinces and territories through the Leadership Fund (\$1.4 billion), and other recipients through the Challenge Fund (\$500 million). However, the Low Carbon Economy Fund was ECCC's first multi-billion-dollar funding program, and the design took longer than initially planned. This was a 5-year program (2017-2022), funded as part of the development of the Pan-Canadian Framework on Clean Growth and Climate Change, that was later extended by two years from 2021-2022 to 2023-2024 through a reprofile, and again by a 2021 amendment to the LCEF Terms and Conditions that extended it to 2024-2025.

Figure 1. Timeline of LCEF Budget and reprofile decisions



While the overall goal of the program has remained consistent, to achieve greenhouse gas emission reductions, several other strategic directions have been added over time. For example, the Challenge Fund was divided into two program streams in 2018 to improve the equity of the program. The Champions Stream (\$450 million) remained open to all applicant types, and the Partnerships Stream (\$50 million) was created to serve lower capacity applicants, by providing them an opportunity to compete with their peers in the competition process for funding. The Partnerships Stream was created in part to support Small and Medium-Sized Enterprises, particularly because rural, remote and Indigenous communities face relatively higher project costs and may not be able to achieve the same efficiencies of larger private-sector companies. Additionally, this stream aims to advance other key government priorities (i.e. reconciliation with Indigenous peoples, economic development opportunities and capacity building) while investing in projects that reduce greenhouse gas emission.

Figure 2. Structure of the original Low Carbon Economy Fund



The Low Carbon Economy Leadership³ was also further subdivided in 2018 to include the Energy Savings Rebate program (\$228.5 million), a point-of-sale rebate offered exclusively in Ontario, to adapt to changing provincial priorities.

The expansion of the Low Carbon Economy Fund to include additional program streams resulted in a larger number of calls for proposals, a higher proportion of small-scale projects, and a greater number of funding agreements to be managed than originally expected. These changes have, therefore, also reduced the results the Low Carbon Economy Fund is able to achieve. Rather than funding a small number of large-scale highly efficient projects, the program now funds a variety of projects with a wide range of costs per tonne of greenhouse gas emissions reduced. These changes helped ECCC improve the equity of the program and to advance other key priorities by generating important co-benefits.

³ Funding from the Low Carbon Economy Leadership was also used for 3 programs in Ontario: a) the Energy Savings Rebate (\$228.5M) managed by ECCC, b) the Brampton Transit Electric Bus Demonstration and Integration Trial (\$7,665,000), managed through a memorandum of understanding with the NRCan Energy Innovation Program, and c) 50 million trees (\$15M), managed through a separate memorandum of understanding with NRCan.

Table 1. Program Stream Results of the Original Low Carbon Economy Fund (as of March 31, 2023)

Results Indicators	Leadership Fund ⁴	Champions Stream	Partnerships Stream
Cost per tonne of carbon dioxide equivalent reduced	\$373.29/tonne	\$181.35/tonne	\$1,242.38/tonne
Cost per gigajoule of energy saved	\$43.08/gigajoule	\$33.88/gigajoule	\$90.63/gigajoule

As it appears in Table 1, program streams that are important from an equity perspective (Partnerships Stream) produce the most expensive greenhouse gas emission reductions, while program streams that leverage private-sector efficiencies (Champions Stream) are able to achieve emission reductions at the lowest cost. Although the Partnerships Stream requires more investment to reduce emissions than other streams, it has been a very helpful tool for providing access to funding for Indigenous communities and other lower-capacity applicants that would not have been able to access LCEF funding otherwise. In the global environmental context, all emission reduction efforts are important and the LCEF evolved over time to allow for an important number of projects to be funded to that may otherwise not have received funding. This improved capacity building for small and medium sized organizations, as well as Indigenous groups and peoples.

Design of the Renewed Low Carbon Economy Fund (2022)

The program used its lessons learned from its experience with the original Low Carbon Economy Fund when it applied for the program renewal in 2022.

The renewed Low Carbon Economy Fund (2022) redesigned the program's streams to address the lessons learned during the first phase of the program.

The renewed Low Carbon Economy Fund (2022) proposed \$2.2 billion over seven-years to expand and continue to support emission reductions across a wide variety of applicants and sectors. However, since its announcement in 2022, the Government of Canada has undertaken efforts to refocus government spending, and the renewed Low Carbon Economy Fund (2022) is now worth approximately \$820 million. The program has reorganized into four streams:

⁴ Idem as in previous footnote.

- Low Carbon Economy Challenge: supports the use of proven, low-carbon technologies to reduce greenhouse gas emissions
- Low Carbon Economy Leadership Fund: supports provinces and territories to help them deliver on commitments to reduce greenhouse gas emissions
- Indigenous Leadership Fund: supports clean energy and energy efficiency projects led by First Nations, Inuit and Métis governments, communities and organizations
- Implementation Readiness Fund: supports activities and investments that increase the readiness of greenhouse gas emission reduction projects

Figure 3. Structure of the Renewed Low Carbon Economy Fund (2022)



While the original Low Carbon Economy Fund was developed and launched quickly, without meaningful engagement of provinces, territories or Indigenous peoples, program officials paid special attention to working with partners to design the new program streams.

The Partnerships Stream was an attempt to address equity considerations, but its engagement with Indigenous peoples was not part of its development. The new Indigenous Leadership Fund (\$180 million) was developed with considerable outreach endeavor towards Indigenous partners and provides distinctions-based funding streams, specifically targeted to meet the needs identified by First Nations, Inuit and Métis partners, as well as a fourth stream designed to be inclusive of Indigenous individuals or groups who do not belong to one of these three groups. The streams were developed in consultation with members from the respective Indigenous groups, as well as guidance from Indigenous Services Canada, Crown-Indigenous Relations and Northern Affairs, and Natural Resources Canada.

Program officials highlighted several improvements they were able to make, through ongoing collaboration with Indigenous partners, including:

- expanded use of Treasury Board Directive on Transfer Payments, Annex K provisions⁵ to enable advanced payments to support Indigenous projects.
- increased staff capacity to ensure each applicant had a dedicated staff member with whom to communicate; and
- greater advisory capacity within ECCC to ensure projects are able to consider multiple co-benefits across different program areas (e.g. climate change mitigation and ecological restoration).

However, program officials also acknowledge that there are still many structural issues within the Government of Canada that can limit the extent to which the Low Carbon Economy Fund's design could respond to the requests of Indigenous program applicants.

The renewed Low Carbon Economy Fund (2022) also adapted to feedback from provincial and territorial governments to make improvements to the Leadership Fund. The Leadership Fund is a merit-based application process, and all proposals go through a merit evaluation to determine the funding allocation to each province and territory to support their climate-related priorities. As such, program officials engage in bilateral negotiations to determine the appropriate projects to include in each provincial or territorial funding agreement. Program officials report that work with provinces and territories is generally positive, especially at the analyst level, and has improved over time. However, changing political priorities (e.g., newly elected provincial governments) can result in changes to the projects put forward by provinces and territories, delaying the final agreements and their implementation.

Despite this challenge, the provinces and territories contacted through surveys and interviews highlight the positive results they have been able to achieve by leveraging funding from the Low Carbon Economy Fund. Provinces and territories emphasize that the Leadership Fund has allowed them to build capacity in areas of climate change mitigation and to create programs that help new types of recipients or provide resources in new areas. Provinces and territories emphasize that the Leadership Fund has helped to create new initiatives, rather than merely expand existing efforts.

Impacts of Frequent Design Changes on the Low Carbon Economy Fund

The Low Carbon Economy Fund offers a significant level of flexibility in its design, which enables it to provide funding across a variety of sectors and recipient types. Recipients in the Leadership Fund, Partnerships Stream and Indigenous Leadership Fund indicate that this

⁵ [Directive on Transfer Payments- Canada.ca](https://www2.gov.gc.ca/gov2013/annexes/annex_k/annex_k.html)

flexibility allows them to achieve more meaningful results for their communities than other programs with more stringent eligibility requirements. However, this flexibility has left the program vulnerable to frequent changes in policy direction.

Program modifications occurred repeatedly through both the original and renewed Low Carbon Economy Fund. Changes to create the Partnerships Stream (\$50 million), the Energy Savings Rebate Program (\$228.5 million), the Home Heating Oil Transition Fund (\$250 million) and other modifications serve social, political or equity goals, and are important. However, these modifications also have an impact on the cost-effectiveness of emission reductions. Interviews with program officials (n=14) indicated that it seemed hard to stay focused on delivering results while trying to adapt to a changing fiscal environment. According to the [Audit of the administration of the grants and contributions for the Low Carbon Economy Fund](#), due to the desire to design and launch the program on an expedited basis, the Low Carbon Economy Fund's processes and information technology systems developed "as each phase of the [grants and contributions] lifecycle was being rolled out" (Environment and Climate Change Canada, 2021).

The incremental approach to the program's design and administration has led to challenges in a few key areas that may impact the program's ability to deliver its results. Each stream of the LCEF is specifically outlined in the Terms and Conditions of the program, a practice which is not common in grants and contributions programming. While the Terms and Conditions can serve as a reference point for program officials, this level of specificity is likely generating unnecessary complexity and making it more difficult for the program to make strategic adjustments.

As the Low Carbon Economy Fund's design evolves over time, the program needs to determine whether it should continue to prioritize emission reductions as the ultimate outcome or focus more on equity, capacity building, and community resilience, even if this shift results in a higher cost-per-ton for emission reductions. Moreover, consideration should be given to the potential impact that these design changes could have on program performance and decide whether efforts are needed to redefine the Low Carbon Economy Fund's goals.

3.3. Effectiveness

Key findings: The evaluation found that the Low Carbon Economy Fund had the appropriate monitoring and reporting tools to keep senior management informed of the program's progress and allow the program to regularly adopt lessons learned from their experience. The methodologies that the program used to evaluate its projected greenhouse gas emission reductions were robust. However, there were opportunities to improve the uncertainty analysis

to improve the accuracy of the results. The evaluation also found that its performance reporting could be improved by providing greater transparency around how performance targets are set and ensuring that the co-benefits generated by the program are systematically collected and reported.

The LCEF directly contributes to Canada's 2030 greenhouse gas emission reduction target, supporting a range of initiatives including energy efficiency projects, renewable energy development, and the adoption of low-carbon technologies across a variety of sectors. These projects also support Canada's goal of achieving net-zero emissions by 2050, by supporting projects with long-term impacts that contribute to the broader economic transformation necessary for a net-zero future.

The Low Carbon Economy Fund focuses on ensuring that emission reductions are both significant and cost-effective. The original Low Carbon Economy Fund has supported 138 projects (not including the 171 projects under the Energy Savings Rebate, 50 Million Trees program and Canadian Urban Transit Research & Innovation Consortium), leading to an estimated emission-reduction of 3.9 megatonnes of carbon dioxide equivalent in 2030.

Table 2. Results of the Original Low Carbon Economy Fund (as of March 31, 2023)

Performance Metric	Target (in 2030)	Current Results (date)
Annual Greenhouse Gas Emission Reductions in the year 2030	7 megatonnes of carbon dioxide equivalent	3.9 megatonnes of carbon dioxide equivalent
Annual Energy Savings in the year 2030	18 petajoules	30.45 petajoules
Jobs created by 2030	57,600-115,200 job years	34,500 jobs

Program recipients calculate their estimated emission reductions using the Greenhouse Gas Emissions Workbooks (the Workbooks), provided by the Low Carbon Economy Fund or, in the case of the Leadership Fund, via a unique methodological document reviewed and approved by the Low Carbon Economy Fund. The Workbooks are structured tools that capture essential data about a project's activities, technologies, and operating contexts to properly assess a project's expected greenhouse gas emission reductions. The evaluation sought an

independent review of the Workbooks through the Expert Panel, to determine whether the Workbooks had an appropriate rigor and methodology.

The Expert Panel generally agreed that the Workbooks were well designed to evaluate the greenhouse gas emission reduction potential of projects. It found that the methodology used was robust and that the data required to support the analysis was sufficient. However, the Expert Panel also indicated that, even with a sound methodology, projected emission reductions do not always materialize in real-world projects. Reasons identified include construction delays, changes to project scope that may be required after a project is approved, or incremental improvements to the project's operating context which impact the assumptions used to calculate the emission reductions (e.g., additional renewable energy added to a provincial electricity grid). The Expert Panel, therefore, recommends improving the Workbook's uncertainty analysis so as to include a wider range of the potential greenhouse gas emission reductions for the purpose of improving the overall accuracy of the program's projected outcomes. This is especially important given the program's ongoing design changes (discussed in Section 3.2).

As the program adapts to new strategic directions, the total funding available to support greenhouse gas emission reductions is diffused to support other objectives, such as economic growth or community resilience. The original Low Carbon Economy Fund adjusted its greenhouse gas emission reduction targets several times in response to these changes, from an initial greenhouse gas emission reduction target of 10 megatonnes of carbon dioxide equivalent in 2030, to a revised target of 7 megatonnes of carbon dioxide equivalent in 2030.

Even with these adjusted targets, the program's current expected greenhouse gas emission reductions are projected to be 3.9 megatonnes of carbon dioxide equivalent in 2030, due in part to external disruptions, such as the COVID-19 pandemic, global supply chain issues, and geopolitical conflicts, which impact program recipients' ability to deliver their projects.

The higher-than-expected project delays, cancellations, and withdrawals impacted the program's ability to meet established GHG reduction targets within planned timelines. A robust uncertainty analysis could help to ensure that, at least some of, these challenges are integrated into the analysis used to estimate a project's emission reductions. Better estimates for each project, will help the Low Carbon Economy Fund to grasp the impact that any single project failure could have on the program's ability to achieve its overall objectives, making it easier to predict the overall success of the program.

The Importance of Measuring Co-benefits

The program's current results reporting focusses on greenhouse gas emission reductions, energy efficiency and jobs. However, the changes made to the program's design primarily target improvements to social or equity goals. Co-benefits such as technological innovation and knowledge transfer, clean growth and economic development or community resilience are currently considered secondary outcomes and are not routinely reported at the program level. While the program does collect this information from recipients on a biannual or annual (in the case of Leadership) basis, the lack of systematic reporting makes it difficult to assess the full scope of the Low Carbon Economy Fund's impact. As a result, although the current performance reporting reflects the challenges associated with the changes made to the program (the reduction of the expected greenhouse gas emission reductions), it does not report all the benefits that arise due to these changes.

While program officials and recipients identified several co-benefits in their interviews, the lack of systematic reporting makes it difficult to understand the true value of the program and as such reduces the program's ability to demonstrate the LCEF's full impact. Figure 4 provides a sample of the co-benefits identified over the course of the evaluation.

Figure 4. Co-benefits of the Low Carbon Economy Fund

Technological Innovation and Knowledge Transfer

One of the most significant co-benefits of the Low Carbon Economy Fund is its role in accelerating the adoption of low-carbon technologies. Projects funded under the program often involve innovative technologies that drive sector-wide changes, leading to broader diffusion of clean technologies across industries. Moreover, many projects have facilitated knowledge transfer between organizations, helping build expertise and capacity in sectors critical to achieving Canada's net-zero goals.

Clean Growth and Economic Development

Beyond emissions reductions and job creation, the Low Carbon Economy Fund has helped stimulate clean growth by supporting projects that drive innovation and technological advancements in low-carbon industries. Many of the funded projects involve investments in renewable energy, energy efficiency, and sustainable infrastructure. This not only contributes to reducing emissions but also fosters long-term economic growth by positioning Canada as a leader in clean technology.

Community Resilience

The Low Carbon Economy Fund has contributed to building resilient communities, particularly in Indigenous and remote areas. The Indigenous Leadership Fund is supporting renewable energy and energy efficiency projects in First Nations, Inuit, and Métis communities, leading to both environmental and social resilience. This is particularly important in enabling Indigenous communities to transition away from reliance on fossil fuels, lowering energy costs, and increasing energy security.

Monitoring the Performance of the Low Carbon Economy Fund

The LCEF has several tracking systems in place to provide senior management with comprehensive data about the program's activities, contribution agreements, total and project-specific expenditures, project risks and other details required to effectively monitor the program. The data is summarized into status reports and health checks, which keep senior management informed of project progress, compliance issues or challenges. Updates are provided by program stream and can vary in frequency from biweekly to quarterly depending on operational requirements. These updates served as a dynamic tool for tracking project health and milestones, ensuring that all parties involved are aware of the developments and could respond to changes or needs as they arise.

This information is reviewed and shared within the Low Carbon Economy Fund through a variety of governance tables, which program officials indicate, allows for effective communication and opportunities to challenge information at various levels, creating a sound governance structure. A review of the program's governance documents also confirmed appropriate governance structures were designed and implemented to oversee the LCEF's interactions with external partners, including other government departments, and provinces and territories.

While the project-level data identified in the LCEF's tracking systems is private, the program identifies and shares larger lessons learned with other federal departments. The program operates the Community of Practice on Climate Change Programming to share experiences and engage in conversations with the broader GoC community. Events, such as speaker series, provide the opportunity to discuss program outcomes, successes, and failures, which are crucial for organizations to learn and adapt. The Community of Practice on Climate Change invites presentations from across the federal government, aiding in the dissemination of results and encourage the exchange of ideas that can lead to improved program designs and implementation strategies in the future.

The LCEF has a strong foundation of using its performance information to make decisions. As the GoC continues to seek out ways to improve efficiency and decrease program duplication,

having the performance information required to fully assess the impact of the LCEF will be essential for strong decision making.

3.4. Efficiency

Key findings: While the evaluation found that the Low Carbon Economy Fund had a strong risk framework in place to monitor individual projects, there were opportunities to improve the overall program's performance. The evaluation found that it was difficult to assess how many of the program's projected emission reductions were at risk due to individual project delays. Likewise, it was difficult to assess whether the program was obtaining return on investment due to challenges with results attribution and the underreporting of co-benefits. The program also consistently underspent its allocations and had a relatively high rate of project failures. Despite these challenges, the evaluation found that the program still provided results at a relatively more efficient cost than its peers.

Risk Management in the Low Carbon Economy Fund

The LCEF has a robust system in place to monitor funded projects. The risk management framework assigns each project to a high, medium, or low category based on the recipient risks (such as management capacity and financial viability), project risks (such as project complexity and ability to measure results) and materiality (such as the total funding provided by LCEF and the anticipated greenhouse gas emission reductions). The program then monitors projects according to their level of risk, with higher risk projects receiving more frequent attention than low risk projects. This risk management framework allows the program to anticipate projects that may be at risk of failure and work with program recipients to try to find appropriate intervention mechanisms in improving their chances of success. The risk management framework also provides senior management with valuable information about the overall health of the program since the success of each individual project has a direct impact on the program's overall results.

However, the evaluation found that some of the approaches taken to manage grants and contribution agreements, particularly under the original Low Carbon Economy Fund could be creating risks for the program. An assessment of a sample of the LCEF's contribution agreements found inconsistencies between agreements, even within the same program stream. For example, there are inconsistencies between the Challenge Fund agreements, which range from minor changes in wording to the addition or removal of entire definitions or clauses, suggesting a lack of quality control on the contribution agreements. This poses a potential risk to the department as each agreement is legally binding and could be interpreted

differently from different parties operating within the same space. Furthermore, the lack of standardized approach creates inefficiencies for both program officials who need to interpret and reinterpret the different agreements, and for ECCC's financial management advisors who cannot be certain whether their interpretations will apply to every agreement equally.

It is worth noticing that, while standardized tools and templates have since been developed, ECCC did not have many of these tools at the time of inception of the original Low Carbon Economy Fund. Subsequently, the program's administration suffered from a lack of standardization and streamlined training necessary in establishing consistent practices, especially for the original Low Carbon Economy Fund. ECCC is aware of this challenge, and it is not unique to the LCEF. The internal [Audit of the Administration of Grants and Contributions at Environment and Climate Change Canada](#) identified several areas for improvements to the way the department administers grants and contributions, including the standardization of funding agreements, and work is underway to address the reports recommendations.

Understanding Program Results

The LCEF also produces a quarterly progress report on all the projects under the original Low Carbon Economy Fund. These reports provide up-to-date information on project's estimated greenhouse gas emission reductions in 2030 and cumulative effects by 2030, the estimated energy efficiency savings, and current jobs created.

The reports also identify the project's sources of funding (total project costs, federal contributions, eligible expenditures, etc.), as well as information about the location of the projects and the sectors in which the emission reductions will occur. The information from the progress reports also supports the status reports and consistency checks used to ensure senior management remain informed about the overall viability of the program.

Despite the rigorous tracking of both risks and project outcomes, the program still experiences challenges in the results delivery process, consistently underspending its funding allocations. Discussions with program officials indicate that this is due to a variety of factors, including:

- a lack of experience, within ECCC, in mobilizing large grants and contributions agreements.
- a significant staff turnover within the LCEF.
- existing communications challenges between the program and ECCC's centre of expertise; and
- constantly shifting priorities and program design changes.

Additionally, a significant number of projects had to be withdrawn or terminated because of challenges related to the pandemic and post-pandemic international issues, including project

cost inflation, supply chain disruptions, delayed permit acquisitions and labor shortages. Furthermore, LCEF utilizes progress payments by way of reimbursement of eligible expenditures incurred within specific fiscal years. This resulted in the need for annual reprofiles and lapses.

The evaluation also brings up concerns regarding the underlying assumptions used to calculate the greenhouse gas emission reductions that the program would achieve. It is difficult for the program to isolate its specific contributions to Canada's overall climate goals, especially given that it is possible for projects to stack funding from the Low Carbon Economy Fund with funding received from other federal programs. At present, the Low Carbon Economy Fund addresses this uncertainty by claiming 100% of the emission reductions generated by a project, regardless of the percentage of funding provided to the project. As a result, there is a risk that projected greenhouse gas emission reductions may be double counted between programs. Program officials have indicated that this risk is currently low, given that many of the complementary programs do not report on greenhouse gas emission reductions. Nevertheless, they acknowledge that this practice may become more problematic as a greater number of climate-related programs begin tracking emission reductions.

Finally, despite the robust tracking system in place, it is very difficult to predict how many of the projected greenhouse emission reductions are at risk due to project delays. The quarterly reporting system provides a comprehensive assessment of the current state of programs. However, it is difficult to take the information within the quarterly progress report and cross-reference it with the information in the risk management framework to identify how many of the emission reductions expected in 2030 are at risk due to project delays. This information would be helpful for the program since it is already facing challenges in meeting its greenhouse gas emission reduction target. Having a better understanding of the relationship between project delays and potential emission reductions could help senior management in planning future decisions.

Looking Forward

It is important for program officials to understand whether programs like the Low Carbon Economy Fund are serving a unique purpose, avoiding duplication, and providing value for money. Many of the 34 targeted programs within the 2030 Emission Reduction Plan support emission reductions in a specific economic sector. Since the Low Carbon Economy Fund supports projects in multiple sectors, identifying overlap between programs is challenging. It is unlikely that a single program is fulfilling the same objectives as the Low Carbon Economy Fund. If duplication exists, several smaller programs may be supporting similar emission reduction outcomes in each of their specific sectors. Therefore, future work could be

undertaken to assess the relative return on investment of these programs, to identify the most effective way of supporting emission reductions in each sector.

It is also important to consider the eligible recipients of the different programs. The Low Carbon Economy Fund has gone through considerable consultation and program design changes to improve its support to Indigenous, provincial and territorial recipients. The flexibility inherent in the program has proven particularly helpful in building relationships with these partners. Other recipient types, especially in the private sector, may not require the same level of flexibility and collaboration to achieve their outcomes. Therefore, future work could also consider whether the targeted climate programs in the 2030 Emission Reduction Plan are benefiting certain eligible recipients more than others, and whether the Government of Canada would like to emphasize outcomes for certain recipients.

4. Conclusion

The Low Carbon Economy Fund supports the Government of Canada's efforts to reduce greenhouse gas emissions by 40-45% below 2005 levels by 2030 and achieve net-zero emissions by 2050 as well as generating clean growth, building resilient communities, and generating clean jobs. Keeping these goals in mind, it is important for the program to be able to distinguish itself from other similar programs to demonstrate its relevance.

The Low Carbon Economy Fund adjusted its design over time to be more accommodating towards communities and offered some flexibility for eligible sectors and recipients – Including Indigenous groups and peoples. These changes helped the department improve the equity of the program and to advance other key governmental priorities. LCEF has rigorous methods in place for tracking and monitoring performance. However, it has not been reporting on the full range of program benefits that it generates. Therefore, it is currently difficult to assess its full value for Canadians.

The report's recommendations are focused on ensuring that the Low Carbon Economy Fund is collecting and reporting on the information and data it needs to support strategic decisions making.

5. Recommendations, Management Responses and Action Plan

The following recommendations are directed to ECCC's Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch.

Recommendation 1

The Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch should develop a clear and transparent process for setting and adjusting targets, including setting intermediate milestones to track progress more effectively.

Management Response: Management agrees to clarify how program targets are developed and adjusted, including setting intermediate milestones to track progress at the stream and program-levels more effectively.

Action 1.1: Review LCEF program target-setting processes to ensure clarity and transparency as well as consistency, where possible, across streams and for the program as a whole.

Deliverable	Timeline	Responsible
Updated LCEF guideline document(s) to standardize target setting and adjustment approaches.	March 31, 2026	DG, Programs Directorate

Action 1.2: Develop annual performance analysis of estimated GHG reduction, including risk assessment, uncertainties, health check data, and milestones, to provide managers and senior executives with a clearer understanding of program progress.

Deliverable	Timeline	Responsible
First annual performance analysis of estimated program GHG reductions, integrating risk assessment, uncertainties, health check data, and milestones.	March 31, 2026	DG, Programs Directorate

Recommendation 2

The Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch should consider adjustments to the GHG accounting could be considered to ensure reductions are attributable to Low Carbon Economy Fund funding, avoid double-counting with other federal departments (stacking funding), and better incorporate uncertainty analysis.

Management Response: Policies are developed in complex ecosystems to address Government of Canada priorities and intentional overlap in the government's climate change initiatives makes it difficult to attribute results to a single program. Recognizing that climate actions that are meant to drive GHG emission reductions interact with each other in ways that do not allow for certainty in attribution, management agrees to review LCEF GHG accounting methodology to inform future programming. This includes ensuring reductions attributable to the LCEF program's funding contribution are identifiable and differentiated from other federal departments' direct project funding to the extent possible as well as the improved incorporation of uncertainty analysis at the program levels.

Action 2.1: Evaluate the GHG accounting processes and program design elements to determine the feasibility of isolating the impact of LCEF funding investments and contributions to GHG reductions at the program levels.

Action 2.2: Leverage research and analysis expertise to limit double counting in GHG accounting to the extent possible at the program level and to help ensure transparency.

Deliverable	Timeline	Responsible
Develop recommendations to improve GHG accounting for future programming that considers accepted project-level GHG accounting approaches, opportunities and limitations for attribution, uncertainty analysis, and other federal investments.	March 31, 2026	DG, Programs Directorate

Action 2.3: Implement deliverable of action 1.2 developed in response to Recommendation 1. The planned annual performance analysis is expected to provide a more transparent picture of program results and uncertainties, such as those related to non-completion and delays, to inform program decisions.

Deliverable	Timeline	Responsible
First annual performance analysis of estimated program GHG reductions, integrating risk assessment, uncertainties, health check data, and milestones. (Same as deliverable as for action 1.2 under recommendation 1.)	March 31, 2026	DG, Programs Directorate

Recommendation 3

The Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch should aggregate and use the information on co-benefits gathered in the biannual performance reports to demonstrate the additional value of the Low Carbon Economy Fund.

Management Response: Management agrees to review and revise the LCEF program's existing reporting and tracking tools to improve the way information on co-benefits is aggregated and used to provide a more complete view of LCEF results.

Action 3.1: Establish processes to extract and aggregate data in a way that allows information to be rolled up to the program level, to the extent possible, including harmonizing co-benefits information across program streams.

Deliverable	Timeline	Responsible
Integrate co-benefits into the LCEF program's reporting and tracking tools to enable the development of Co-Benefits Key Performance Indicators to provide a more complete view of program results.	October 31, 2026	DG, Programs Directorate

6. Appendices

6.1. Appendix A – Evaluation Matrix

Relevance

Questions :

1. Is there a continued need for the program?

Indicators:

- Current progress towards Canada’s national and international climate commitments
- Alignment of Low Carbon Economy Fund with the Clean Growth and Climate Change Mitigation performance information profile
- Evidence of consideration for 2030 and 2050 targets
- Program governance for coordination or cooperation with other government departments/other levels of government

Sources and Methods:

- Document Review
- Literature Review
- Interviews

Design

Questions:

2. Is the program design appropriate for achieving its expected outcomes?

Indicators:

- Articulated logic model, with documented adjustments for process/contextual changes
- Evidence that the program design considered the needs of diverse populations
- Evidence to support the chosen methods for reviewing projects
- Comparisons with other programs
- Understanding of differences between the original Low Carbon Economy Fund and the renewed Low Carbon Economy Fund (2022)
- Evidence that Indigenous perspectives were considered

Sources and Methods:

- Document Review
- Interviews
- Survey
- Benchmarking

Effectiveness

Questions:

3. Have the intended outcomes been achieved as a result of the program?
4. To what extent has the program been responsive to emerging changes?

Indicators:

- How are greenhouse gas emission reductions measured and monitored?
- How is the program keeping track of Indigenous experiences in the delivery of the program?
- Does the program collect the disaggregated data required for Gender-Based Analysis Plus analysis?
- Communicating results to Canadians

Sources and Methods :

- Document Review
- Interviews
- Expert Panel
- Benchmarking

Efficiency

Questions:

5. Has the program used its resources efficiently?
6. Is the program undertaking specific activities and delivering products at a reasonable cost?

Indicators :

- Progress reports tracked against money dispersed
- Comparisons between each program stream and their contribution agreements
- Review of financial data (e.g. money allocated v. money dispersed)
- Resource levels (e.g. staffing, IT, etc.)

Sources and Methods:

- Document Review
- Interviews

- Expert Panel
- Benchmarking