

Reports of the Commissioner of the Environment and Sustainable Development to the Parliament of Canada

# Strategic Innovation Fund's Net Zero Accelerator Initiative— Innovation, Science and Economic Development Canada

## Report 4



## Independent Auditor's Report | 2024



Office of the  
Auditor General  
of Canada

Bureau du  
vérificateur général  
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# At a Glance



## Overall message

Manufacturing industries are the fourth-largest source of greenhouse gas emissions in Canada but have little incentive to reduce or remove carbon from their operations. The Net Zero Accelerator initiative incentivizes Canadian companies to decarbonize their operations and contribute to meeting Canada's 2030 and 2050 climate goals.

Overall, Innovation, Science and Economic Development Canada's management of the \$8-billion Net Zero Accelerator initiative had important shortcomings, such as the fact that the department did not track the Net Zero Accelerator's overall value for money in reducing greenhouse gas emissions. This is concerning, as the funds are almost all committed.

We calculated the cost to taxpayers of a tonne of greenhouse gas emissions reduced through the initiative to be \$143 per tonne for the 5 companies that have a signed commitment to reduce a precise amount of emissions. However, the other 12 of the 17 funded projects did not have a signed commitment as a result of the initiative to reduce a precise amount of emissions, resulting in an overall higher cost to taxpayers at \$523 per tonne for all approved projects.

Our audit revealed a larger issue that the government as a whole needs to address. Specifically, we found that the department did not have an industrial decarbonization policy that involved all relevant government entities to guide its efforts. This type of policy would give the department a better picture of which industries are the most in need of funds to reduce emissions and is ensuring the most value for money spent.

For the companies applying for funding, we found the application process very lengthy and complex, requiring an average of 407 hours to complete the application and an average of 20 months to complete the full process before signing the contribution agreement. Given that large emitters already have little incentive to decarbonize their operations, efforts should be made to better attract large emitters and review applications quickly to increase Canada's opportunities to reduce emissions.

## Key facts and findings



- The Net Zero Accelerator was provided with an initial \$3 billion to be spent over 5 years. In Budget 2021, the government gave it an additional \$5 billion to be spent over 7 years starting in 2021–22.
- Innovation, Science and Economic Development Canada's calculations of anticipated greenhouse gas reductions for projects funded by the initiative did not always follow international standards, affecting the credibility of the department's calculations.
- Sometimes due diligence steps within the Strategic Innovation Fund's Net Zero Accelerator initiative were not followed before funding approval.
- There were \$0.4 billion in uncommitted funds left to be allocated of the initial \$8 billion in the Strategic Innovation Fund's Net Zero Accelerator initiative.
- Out of the 55 emitters that emitted at least 1 megatonne of carbon dioxide equivalent in 2021 in Canada, only 15 applied to the Net Zero Accelerator and only 2 of them signed a contribution agreement.

See **Recommendations and Responses** at the end of this report.

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# Introduction

## Background

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### Decarbonizing manufacturing in Canada

4.1 Climate change is a significant concern for the economy, people's health, and the natural environment. The United Nations' Conference of the Parties, held in Paris in 2015, brought Canada and 194 other countries together in signing the Paris Agreement to reduce greenhouse gas emissions. Signatories committed to holding the increase in global average temperatures to no more than 2 degrees Celsius, preferably 1.5 degrees Celsius, above pre-industrial temperature levels.

4.2 In July 2021, the Government of Canada committed to reducing emissions to 40%–45% below 2005 levels by 2030. That same year, Parliament enacted the *Canadian Net-Zero Emissions Accountability Act*. The act enshrines into law the country's commitment to achieve net-zero greenhouse gas emissions by 2050 and provides a framework of accountability and transparency to deliver on it.

4.3 In March 2022, the government published the 2030 Emissions Reduction Plan. The plan contains expected emission reductions for certain sectors of the Canadian economy. For example, for the **heavy industry**<sup>1</sup>, the estimated change from 2005 to 2030 is a reduction of greenhouse gas emissions of 39%.

4.4 In 2021, heavy industry was the fourth-largest source of greenhouse gas emissions in Canada. In this audit, we examined manufacturing industries (heavy industry and **light manufacturing**<sup>2</sup>), which accounted for 13.6% of total greenhouse gas emissions according to Environment and Climate Change Canada. This makes manufacturing industries an important component of the 2030 Emissions Reduction Plan. Decarbonization of the manufacturing industries is key to ensuring that Canadian industry capitalizes on new opportunities—creating new jobs, generating business growth, and strengthening and diversifying the economy.

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1 **Heavy industry**—An industry involving large and heavy products, equipment and facilities, and complex processes.

2 **Light manufacturing**—An industry involving manufacturing goods using light machinery and equipment.

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Strategic Innovation  
Fund's Net Zero  
Accelerator initiative

4.5 The Net Zero Accelerator initiative is managed as a separate envelope of money within the Strategic Innovation Fund to support Canada's strengthened climate plan released in December 2020. To be considered for the Net Zero Accelerator, projects must meet the Strategic Innovation Fund's general objectives, which include benefiting the economy and innovation, doing research and development, creating jobs, and preserving intellectual property ownership in Canada. The minimum contribution amount is \$10 million for a project with at least \$20 million in total eligible supported costs.

4.6 The Net Zero Accelerator was provided with an initial \$3 billion to be spent over 5 years. In Budget 2021, the government gave the initiative an additional \$5 billion to be committed over 7 years starting in the 2021–22 fiscal year. The objectives of the initiative were defined in 2020 and included

- reducing near-term greenhouse gas to ensure Canada exceeds its 2030 reduction target
- creating and maintaining immediate, good-paying jobs to support Canada's economic recovery
- helping to increase the production of firms providing clean technology solutions

4.7 The Net Zero Accelerator is divided into 3 pillars for investment:

- Pillar 1: Decarbonization of **large emitters**<sup>3</sup>—to help the largest-emitting industrial sectors reduce their domestic greenhouse-gas footprint faster and with less financial risk (for example, reducing the carbon footprint for steel manufacturing)
- Pillar 2: Industrial transformation—to ensure that established industrial sectors remain successful and competitive in the net-zero global economy of the future (for example, reducing the carbon footprint in the aviation industry through fuel switching)
- Pillar 3: Clean technology and battery ecosystem development—to capitalize on emerging clean economy opportunities, establish Canada as a global clean technology leader, and promote the development of clean technologies and a made-in-Canada battery ecosystem (for example, supporting the manufacturing of electric vehicles)

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<sup>3</sup> **Large emitters**—Businesses that emit at least 0.1 **megatonnes of carbon dioxide equivalent**<sup>4</sup> per year.

<sup>4</sup> **Megatonne of carbon dioxide equivalent**—The amount of a greenhouse gas that has the same warming potential as a million tonnes (a megatonne) of carbon dioxide over a specified period.

4.8 To encourage large emitters to participate in the initiative, the department opened a call to action on 18 March 2022. Applicants had until 30 June 2022 to apply. In the context of this call to action, the department was targeting projects that

- would deliver annual reductions, preferably in the range of 1 megatonne of carbon dioxide equivalent, from existing domestic greenhouse gas emissions within the next decade
- had sufficient capital but could use government funding to accelerate or alleviate the project's risks
- would secure economic, innovation, and public benefits for Canada, such as creating and retaining jobs and reinforcing opportunities to fill domestic supply chain gaps

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## Roles and responsibilities

4.9 **Innovation, Science and Economic Development Canada.** The department is responsible for managing the Strategic Innovation Fund's Net Zero Accelerator initiative according to government policies and priorities. These include participating in achieving Canada's climate goals and transforming Canadian industry to lead and compete in a net-zero emission future.

## Focus of the audit

4.10 This audit focused on whether Innovation, Science and Economic Development Canada managed the Strategic Innovation Fund's Net Zero Accelerator to decarbonize the manufacturing industries in accordance with Canada's climate goals and with due regard to **value for money**<sup>5</sup> for Canadians.

4.11 This audit is important because Canada needs to significantly reduce its greenhouse gas emissions to achieve its targeted emission levels in 2030 and 2050. It is important to know whether the considerable money the Government of Canada has put into mitigation programs to reduce the country's total emissions has been spent economically, efficiently, and effectively.

4.12 More details about the audit objective, scope, approach, and criteria are in **About the Audit** at the end of this report.

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<sup>5</sup> **Value for money**—In relation to public spending, the consideration of economy (minimizing cost), efficiency (maximizing output), and effectiveness (fully attaining the intended results).

## Findings and Recommendations

### The impact of the Strategic Innovation Fund's Net Zero Accelerator on emission reductions was not maximized

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#### Why this finding matters

4.13 This finding matters because the Net Zero Accelerator, at \$8 billion, is one of the biggest government initiatives to encourage manufacturing industries to decarbonize. Its alignment with Canada's climate goals is key to the government meeting its objectives in the 2030 Emissions Reduction Plan and the *Canadian Net-Zero Emissions Accountability Act*.

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#### Context



Take urgent action to combat climate change and its impacts

Source: United Nations

4.14 In September 2015, Canada adopted the United Nations' 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals. Sustainable Development Goal 13 (Climate Action) calls on governments to integrate climate change measures into national policies, strategies, and planning. The Net Zero Accelerator initiative also contributes to the 2022 to 2026 Federal Sustainable Development Strategy's Goal 9 (Foster Innovation and Green Infrastructure in Canada) and Goal 13 (Take Action on Climate Change and Its Impacts).

4.15 The Net Zero Accelerator is one of many important green initiatives and strategies of the federal government (Exhibit 4.1). The accelerator and programs are intended to be used only as necessary, as stand-alone support or in complement to broader initiatives—such as tax incentives, other agencies' funding, and carbon pricing.



### Exhibit 4.1—The Strategic Innovation Fund’s Net Zero Accelerator is one of many important green initiatives of the federal government

Category of climate measure	Examples of initiatives and programs	Example of an audit report by the Commissioner of the Environment and Sustainable Development
Carbon pricing	In line with the Update to the Pan-Canadian Approach to Carbon Pollution Pricing 2023–2030, carbon prices in the Canadian system are \$80 per tonne of carbon pollution in 2024, rising to \$170 per tonne of carbon pollution in 2030.	2022 Report 5—Carbon Pricing—Environment and Climate Change Canada
Regulations	<ul style="list-style-type: none"> <li>• <i>Clean Fuel Regulations</i></li> <li>• <i>Reduction of Carbon Dioxide Emissions From Coal-Fired Generation of Electricity Regulations</i></li> </ul>	2023 Report 5—Emission Reductions Through Greenhouse Gas Regulations—Environment and Climate Change Canada
Financial support, including tax incentives	<ul style="list-style-type: none"> <li>• Strategic Innovation Fund’s Net Zero Accelerator</li> <li>• Canada Infrastructure Bank</li> <li>• Canada Growth Fund</li> <li>• carbon capture, utilization, and storage tax credit</li> </ul>	This report on the Strategic Innovation Fund’s Net Zero Accelerator
Other	<ul style="list-style-type: none"> <li>• education</li> <li>• decarbonization of government procurement</li> </ul>	2023 Report 7—Departmental Progress in Implementing Sustainable Development Strategies—Zero-Emission Vehicles

### Diminished impact of the initiative due to lack of a horizontal industrial decarbonization policy

#### Findings

4.16 We found that the Strategic Innovation Fund’s Net Zero Accelerator initiative was not part of any coherent and comprehensive **horizontal**<sup>6</sup> industrial policy on decarbonization even though the Net Zero Accelerator was incorporated under the government’s 2030 Emissions Reduction Plan. Such a policy would have helped Innovation, Science and Economic Development Canada channel the funds to target the most critical industries for emission reductions. In our view, without having a clearly defined path for certain key large-emitting

<sup>6</sup> **Horizontal**—Involving 2 or more departments working together to achieve a common goal.

industries, governments are in danger of funding multiple projects in an uncoordinated manner, including some that may not be aligned with the desired outcome.

4.17 We noted that the **Net-Zero Advisory Body**,<sup>7</sup> in its annual report published in January 2023, called for the Government of Canada to develop and implement a net-zero industrial policy and explained in detail why and how to establish such a policy. The advisory body argued that adopting a net-zero industrial policy would

- allow Canada to be more proactive in meeting its climate objectives
- create and strengthen economic opportunities for Canadian workers
- increase accountability in the transition to net-zero emissions
- ensure that Canadians benefit from emerging global economic opportunities

We noted that the Government of Canada responded to these recommendations by acknowledging the growing interest in Canada for a net-zero industrial policy without committing to developing one.

4.18 The Net Zero Accelerator initiative was governed by an investment framework that identified industries and technologies for funding according to the initiative's objective. However, we found that this framework was specific to this single initiative and did not constitute a Canadian industrial decarbonization policy as envisioned by the Net-Zero Advisory Body.

4.19 We also found that the department had begun to analyze the suitability of the design of the Net Zero Accelerator in the context of new government climate initiatives (Exhibit 4.1). We found that in its draft analysis, the department proposed an approach based on collaboration with the departments and agencies responsible for the other initiatives. In our view, a horizontal industrial policy on decarbonization would help clarify the roles of each initiative.

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## Recommendation

4.20 To ensure the timely decarbonizing of manufacturing industries, Innovation, Science and Economic Development Canada, in collaboration with appropriate departments and agencies, should develop and implement a strategic horizontal approach detailing steps to reach Canada's climate goals. This approach should be coherent and comprehensive and target a limited number of key industries

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<sup>7</sup> **Net-Zero Advisory Body**—A group of independent experts appointed by the **Governor in Council**<sup>8</sup> on the recommendation of the Minister of Environment and Climate Change and mandated under the *Canadian Net-Zero Emissions Accountability Act* to give advice on how Canada can achieve its goal of net-zero greenhouse gas emissions by 2050.

<sup>8</sup> **Governor in Council**—The Governor General, who acts on the advice of Cabinet and, as the formal executive body, gives legal effect to those decisions of Cabinet that are to have the force of law.

(large emitters) as a priority and then be extended to other industries at a later stage. As well, the department should ensure that the investment framework of the Strategic Innovation Fund's Net Zero Accelerator aligns with this horizontal approach.

**The department's response.** *Partially agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## Long and difficult application review process

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### Findings

4.21 We found that the application review process for the Net Zero Accelerator was long and complex (Exhibit 4.2). This meant that Innovation, Science and Economic Development Canada was not moving at the speed companies needed to successfully develop and deliver innovative projects. For example, for the 17 contribution agreements signed in September 2023, we found the following:

- It took on average about 1 year and 8 months for applicants to sign an agreement with the department.
- The shortest period between application and signature was about a half a year, and the longest was about 4 and a half years.

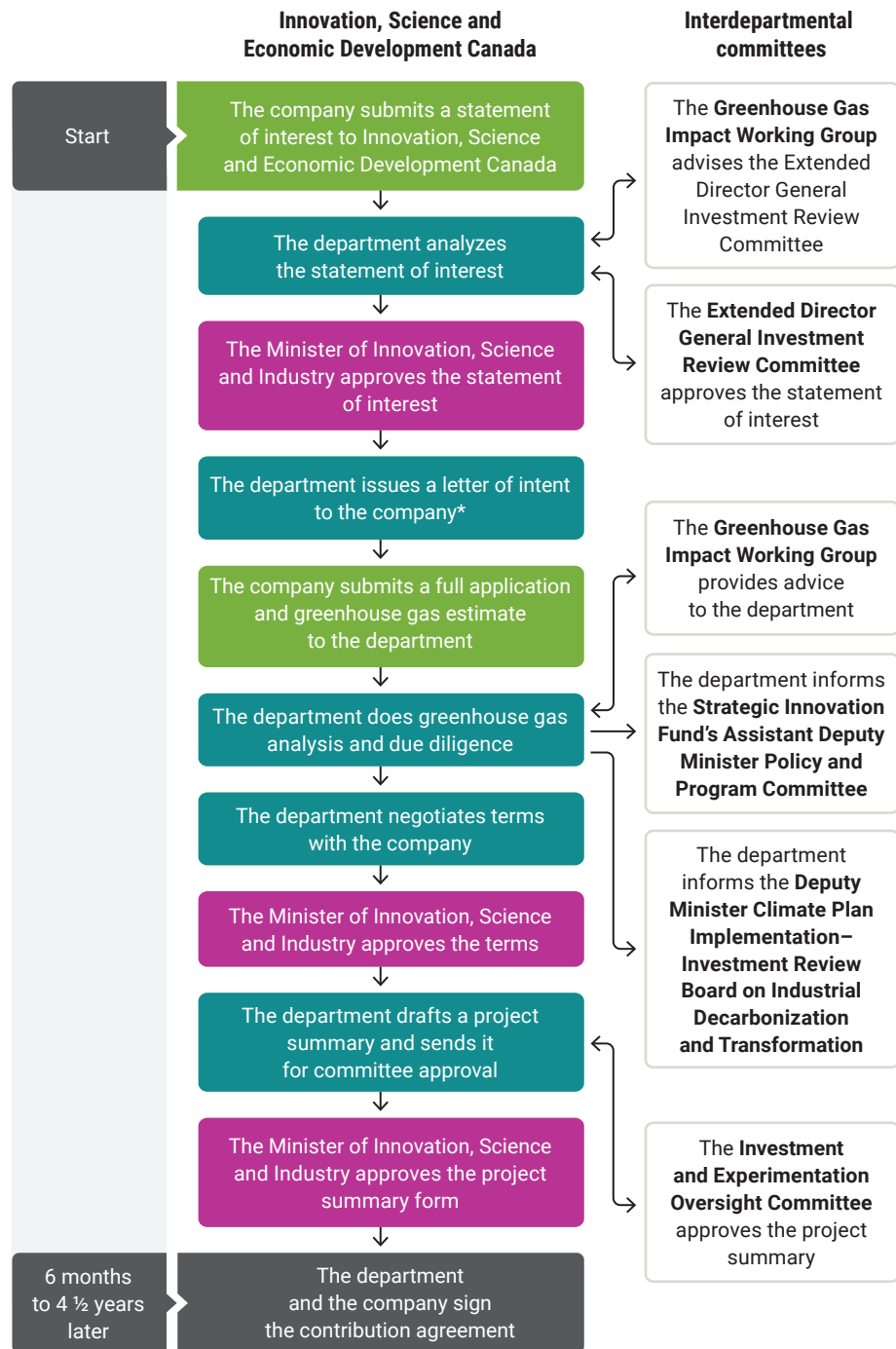
4.22 On the basis of the responses to our survey of the initiative's applicants, we found that it took them an average of 407 hours to complete an application form. These lengthy processes were in contrast to the tax incentives provided in the United States, where companies can find out the value of incentives as soon as they define their projects.

4.23 We found that of the 10 projects announced in November 2022 for the call to action, 6 had not completed their application processes and were still finalizing their feasibility studies. This illustrated how, in certain circumstances, some delays in the review process could be attributed to applicants.

4.24 In addition to the long processing time, we found that some projects experienced shortcomings in the department's engagement with the applicants during the review process:

- Some companies reported that they waited months to be contacted after submitting their applications.
- Some applications were kept on hold while the department waited for other applications to compare them with.
- The department did not always explain the rationale for rejecting applications.

**Exhibit 4.2—The approval process for the Strategic Innovation Fund's Net Zero Accelerator initiative projects was long and complex, involving many parties**



\* A project of more than \$50 million also requires Treasury Board approval, concurrence letters from ministers of other concerned departments, and Cabinet approval, which can be fast-tracked with a letter to the Prime Minister.

Source: Based on information from Innovation, Science and Economic Development Canada

4.25 We found that the length of time between the initial application and a signed contribution agreement compounded a problem inherent in programs like the Strategic Innovation Fund that receive funds on a discretionary basis. These funds are depleted as the programs disburse money for specific projects. In these programs, departments and agencies must commit funding to businesses during negotiations without knowing how long the negotiations will take or whether they will succeed. As a result, other applicants have access to less money, which might create delays for them.

4.26 For example, the department told us that of the \$8 billion in initial funding of the Net Zero Accelerator, in September 2023,

- \$3.2 billion were committed in contribution agreements
- \$4.4 billion were set aside while contribution agreements were negotiated with some companies as well as to cover cost increases on existing pillar 1 projects
- \$0.4 billion were available for other new contribution agreements

4.27 The department told us that the \$0.4 billion in uncommitted funds were in pillar 1 of the initiative. This meant that all funding for pillars 2 and 3 had been set aside or was engaged in contribution agreements. As a result, the department did not have any funding remaining under the Net Zero Accelerator envelope for projects that aligned with pillars 2 and 3, and it had to use money from its Strategic Innovation Fund core funding to advance these projects. As of September 2023, only \$147 million were available as discretionary funding from the Strategic Innovation Fund until 2029–30 (apart from money set aside under the initiative and reserved funding for other investment targets, such as aerospace, biomanufacturing, and minerals).

4.28 Finally, we found that the department implemented a special process for “high-profile” companies, such as multinationals, large firms requesting more than \$100 million, and urgent requests. A team of officials vetted whether proposals aligned with the initiative and were credible before the formal statement of interest. The team also conducted additional, early due diligence on a case-by-case basis. We also found that the department sped up the review process for the call to action by replacing the regular statement of interest with a more comprehensive form, which included the greenhouse gas workbook, and by not requiring a referral to the Greenhouse Gas Impact Working Group (the interdepartmental group that evaluates each project’s projections of greenhouse gas emission reductions). In our view, these 2 examples showed that the application review process could be improved to make it faster.

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## Recommendation

4.29 To make the review process for the Strategic Innovation Fund's Net Zero Accelerator more effective and efficient, Innovation, Science and Economic Development Canada should

- analyze its internal review process for applications to optimize and streamline it without compromising the need for an appropriate level of due diligence, including for estimates of greenhouse gas emission reductions
- provide better engagement with the applicants by keeping them better informed of the status of their applications

***The department's response.*** *Agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## Difficulty attracting applications from large emitters

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### Findings

4.30 We found that Innovation, Science and Economic Development Canada had difficulty attracting Canada's large emitters to apply to the Strategic Innovation Fund's Net Zero Accelerator (pillar 1). Indeed, many companies, especially large emitters, have little incentive to decarbonize their operations (Exhibit 4.3). This is concerning because large emitters hold a bigger impact for reducing direct emissions than projects with uncertain reductions down the line (Exhibit 4.4).



### Exhibit 4.3—Many companies, especially large emitters, have little incentive to decarbonize their operations

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Every company makes its own investment decisions. In large companies, one facility's investing can compete with another's—including those in other countries. Many factors reduce the incentive for large emitters to decarbonize:

- They are "hard to abate." This means that the technological equipment to reduce emissions is expensive or does not exist yet, requiring more research and development.
  - Carbon pricing does not provide enough incentive to decarbonize. Large emitters have an exemption of at least 80% or an equivalent measure under their provincial regimes. The 2022 Reports of the Commissioner of the Environment and Sustainable Development, Report 5—Carbon Pricing—Environment and Climate Change Canada raised issues about the management of carbon pricing.
  - There are not enough international initiatives to encourage industries to decarbonize, such as definitions for "near zero emission goods" or regulations requiring greener materials.
-

**Exhibit 4.4—Most emission reductions were expected to come from large emitters, but only 2 had projects with the Net Zero Accelerator as of September 2023**

	 <b>Pillar 1—Decarbonization of large emitters*</b>	 <b>Pillar 2—Industrial transformation and Pillar 3—Clean technology and battery ecosystem development</b>
<b>Initial budgeted funding</b>	\$4.0 billion	\$4.0 billion
<b>Number of contribution agreements signed with a company</b>	2	15
<b>Funding committed in contribution agreements</b>	\$0.6 billion	\$2.6 billion
<b>Emission reductions according to Innovation, Science and Economic Development Canada</b>	7.2 Mt CO <sub>2</sub> eq in 2030	4.0 Mt CO <sub>2</sub> eq in 2030**
<b>Emission reductions that applicants are accountable for in contribution agreements</b>	5.9 Mt CO <sub>2</sub> eq in 2030	0.3 Mt CO <sub>2</sub> eq in 2030

Mt CO<sub>2</sub>: megatonne of carbon dioxide equivalent (the amount of a greenhouse gas that has the same warming potential as a million tonnes (a megatonne) of carbon dioxide over a specified period)

\* Large emitters are businesses that emit at least 0.1 Mt CO<sub>2</sub> per year.

\*\* We believe that this estimate should be lowered because calculations of anticipated greenhouse gas reductions for funded projects contained inaccuracies and did not always follow relevant standards.

Source: Based on information from Innovation, Science and Economic Development Canada

4.31 Out of the 55 emitters that emitted at least 1 megatonne of carbon dioxide equivalent in 2021 in Canada, we found that

- only 4 applied to the Net Zero Accelerator before the call to action
- only 2 of these signed a contribution agreement

4.32 We found that after the department launched the call to action in March 2022, 11 more companies emitting at least 1 megatonne of carbon dioxide equivalent in 2021 applied. Ten companies were selected to move to the next step in the review process, and 9 applicants received a letter of intent. At the time of the audit, these 9 projects were moving through the review process, with some advancing to negotiations of terms and some still in due diligence. The impact of the call to action remained unclear. The low uptake by large emitters could indicate that they were not ready to reduce their greenhouse gas emissions or that the program design did not correspond to their needs.

4.33 We also found that in some of the projects responding to the call to action, an important portion of sales of the products manufactured would occur outside of Canada. This meant that the benefits of the initiative funding would likely not be entirely reflected in Canada's emission accounting toward reaching our climate goals.

4.34 The department told us that even after the call to action, \$0.4 billion in uncommitted funds for large emitters were still left to be allocated. It also told us that finding new projects that could obtain further greenhouse gas reductions in time for 2030 was becoming increasingly difficult because of the time needed to implement projects that met the initiative's criteria.

4.35 The department indicated that it had considered changing the timing requirements or accepting projects with fewer direct reductions (for example, clean-fuel producers and large-emitter partnerships) to allocate the remaining funding and further advance the government's objective of decarbonizing large emitters. However, we found that no government decisions had been made at the time of the audit.

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## Recommendation

4.36 To make the application process for the Strategic Innovation Fund's Net Zero Accelerator more efficient and effective, Innovation, Science and Economic Development Canada should analyze how to better encourage large emitters to apply to the initiative, including assessing whether the design of the program is responding to their needs.

***The department's response.*** *Agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## Innovation, Science and Economic Development Canada's calculations of anticipated greenhouse gas reductions for funded projects did not always follow relevant standards

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### Why this finding matters

4.37 This finding matters because the Government of Canada has made commitments on greenhouse gas reductions to be achieved by 2030 supported by programs such as the Strategic Innovation Fund's Net Zero Accelerator. If the Net Zero Accelerator does not secure credible emission reduction, the federal government might not fulfill its commitments, which would undermine efforts to address climate change.









Context

4.38 To assess applicants' planned greenhouse gas emission reductions, Innovation, Science and Economic Development Canada adapted both the International Organization for Standardization's standard and the Greenhouse Gas Protocol for Project Accounting. These standards required projects to be assessed using a life cycle approach. This meant that the assessment accounted for **upstream effects**<sup>9</sup> and **downstream effects**<sup>10</sup> of greenhouse gases in addition to the direct facility activities.

4.39 The Greenhouse Gas Protocol for Project Accounting has 6 principles intended to underpin all aspects of the accounting, quantifying, and reporting of project-based greenhouse gas reductions (Exhibit 4.5). The application of these principles helps ensure the credibility and consistency of efforts to quantify and report project-based greenhouse gas reductions according to the protocol.

**Exhibit 4.5—Principles of the Greenhouse Gas Protocol for Project Accounting**

 <b>Accuracy</b>	Reduce uncertainties as much as is practical
 <b>Completeness</b>	Consider all relevant information that may affect the accounting and quantification of greenhouse gas reductions, and complete all requirements
 <b>Conservativeness</b>	Use conservative assumptions, values, and procedures when uncertainty is high
 <b>Consistency</b>	Use data, methods, criteria, and assumptions that allow meaningful and valid comparisons
 <b>Relevance</b>	Use data, methods, criteria, and assumptions that are appropriate for the intended use of reported information
 <b>Transparency</b>	Provide clear and sufficient information for reviewers to assess the credibility and reliability of greenhouse gas reduction claims

Source: Based on information from the Greenhouse Gas Protocol for Project Accounting, World Resources Institute and World Business Council for Sustainable Development

<sup>9</sup> **Upstream effects**—Recurring changes in greenhouse gas emissions associated with inputs to the project.

<sup>10</sup> **Downstream effects**—Recurring changes in greenhouse gas emissions associated with products from the project activity.

4.40 After assessing emissions, the department obtained an emission reduction number that it used for both project recommendations and internal tracking in its emission reduction tracker. The tracker is a tool that was designed to measure the Net Zero Accelerator's progress toward an internal target set by the department itself and is not public.

## Shortcomings in accounting of greenhouse gas emission reductions

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### Findings

4.41 We found a potential risk of double counting in tracking emission reductions. This was because Innovation, Science and Economic Development Canada funded companies that made clean technologies and those that used clean technologies, and it allowed both to claim credit for emission reductions even though only the latter would achieve the reductions. When we asked how the department mitigated the effects of double counting, department officials stated that they did this through collecting information and doing due diligence when assessing the greenhouse gas reduction.

4.42 We also found that while the tracker provided the dollar per tonne and funding details of projects in pillar 1, it did not do this for projects in pillars 2 and 3. We asked department officials to provide a detailed breakdown for the greenhouse gas reduction in pillars 2 and 3, project by project. We found that reductions were 2.2 megatonnes lower than the previous aggregated total for the same projects whose emission reductions were verified by the interdepartmental Greenhouse Gas Impact Working Group, led by the department and Environment and Climate Change Canada. In our opinion, this over-reporting of emission reductions is concerning because the department used the tracker for communicating on the progress of the initiative.

4.43 We found that in spring 2022, the department, as a result of interdepartmental working group discussions, added a qualitative method of assessing emission reduction for certain projects. The original quantitative assessment was adapted from international standards to estimate emission reductions per project. It was a key tool for projects that involved or had a clear line of sight to adopting clean technology. But for projects whose impacts would be realized beyond 2030 or that were several steps from realizing their ultimate greenhouse gas reductions, the tool did not estimate 2030 greenhouse gas performance with sufficient certainty or did not capture the full greenhouse gas benefits of the projects. The quantitative assessment remained unchanged for projects with quantifiable reductions (generally pillar 1, with some cases under pillars 2 and 3). But after spring 2022, with the change in methodology, the funded projects in pillars 2 and 3 had no explicit quantified emission reductions.

4.44 We found that after this change, the department did not revise the previous quantitative assessments it had completed for similar projects according to the new methodology. This meant that similar projects had greenhouse gas reduction values in some cases but qualitative assessments in others, making them incomparable. When asked why they did not revise the previous assessments, department officials stated that it was because they did not have employee capacity. We are concerned that estimates needed to be lowered but nonetheless were used to report on progress of the fund.

4.45 We found that as of September 2023, the department had 17 contribution agreements in place, representing a commitment of \$3.2 billion under the Net Zero Accelerator initiative. Of these, only 5 companies had signed a document that explicitly committed them to reducing a specific amount of greenhouse gas emissions. These commitments would result in a reduction of 6.2 megatonnes of greenhouse gas reductions (see Exhibit 4.4).

4.46 In our opinion, this 6.2 megatonnes was the most credible reflection of the Net Zero Accelerator's progress. This is because, according to department officials, reductions quoted in contribution agreements were not necessarily the estimates that the interdepartmental Greenhouse Gas Impact Working Group agreed to. In addition, without any reassessment of past estimates of greenhouse gas reductions to ensure the correct methodology was used, we can rely only on the concrete reduction commitments reflected in the contribution agreements. We noted that the department published estimates of emission reductions only for the first 2 announced projects.

4.47 Environment and Climate Change Canada told us it estimated that the Net Zero Accelerator would reduce greenhouse gas emissions by 19–20 megatonnes in 2030. This estimate is subject to change as new policies are adopted over time.

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## Recommendation

4.48 To ensure that the Strategic Innovation Fund's Net Zero Accelerator's greenhouse gas reduction estimates are credible and are adding value for Canadian taxpayers, Innovation, Science and Economic Development Canada should

- improve the precision and consistency of the estimates of emission reductions by tracking and counting only those emissions that have a net reduction effect on the overall greenhouse gas inventory of Canada
- review its methodology to avoid overstating emission reductions, in accordance with international best practices

- set a new internal target of emission reductions for the Net Zero Accelerator

**The department's response.** *Partially agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## Lack of adherence to assessment standards

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### Findings

4.49 We found that Innovation, Science and Economic Development Canada did not follow some of the principles of the Greenhouse Gas Protocol for Project Accounting on several occasions, which affected the credibility of the emission reductions estimated. This happened through the assessment process of the interdepartmental Greenhouse Gas Impact Working Group. As of September 2023, the Net Zero Accelerator had 14 projects with greenhouse gas reductions that had been reviewed by the interdepartmental greenhouse gas working group. Of those, 6 had signed a contribution agreement, and we found inconsistencies with 4 projects of those 6.

4.50 As stated in paragraphs 4.43 and 4.44, we found that the department added an option to look at projects qualitatively but did not revise any previous work. This meant that similar projects had greenhouse gas reduction values in some cases but not in others, contravening the principle of consistency.

4.51 We also found that in one project, the department did not include all relevant information in the greenhouse gas assessment exercise, breaching the principles of transparency and completeness. For this project, which was to construct a manufacturing plant to make a clean technology, we found that the department's calculations of the overall impact of greenhouse gases failed to include

- greenhouse gas emission factors related to the construction of the plant (that is, the processed and raw materials used)
- emissions associated with the construction of a pipeline to transport captured carbon dioxide to an underground storage area

4.52 In another case, we found that the department did not ensure that the project documentation included the source of data used to calculate several emission factors. As a result, the project documentation did not follow the principle of transparency.

4.53 Finally, we also found that several greenhouse gas assessments did not consider the full life cycle of the emissions. They concentrated on facility activities and downstream effects, where the emission reduction

benefits would occur, and largely ignored upstream effects. Upstream effects include the sourcing of the raw material needed for the projects, and these processes are not always green.

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## Recommendation

4.54 To improve the quality of its estimated greenhouse gas emission reductions per project, Innovation, Science and Economic Development Canada should be consistent in how it assesses projects and ensure that projects provide all the data needed for assessment and that project estimates follow international greenhouse gas accounting standards.

***The department's response.*** *Partially agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## The department did not assess the effectiveness of the Strategic Innovation Fund's Net Zero Accelerator

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### Why this finding matters

4.55 This finding matters because government departments and agencies should ensure that public funding of companies provides Canadian taxpayers with value for money by using taxpayer resources efficiently, producing program outputs economically, and achieving outcomes consistent with program objectives.

## No clear demonstration of projects' value for money in reducing greenhouse gas emissions

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### Findings

4.56 We found that Innovation, Science and Economic Development Canada did not collect data on and track the Net Zero Accelerator's overall value for money. Department officials stated that they determined the value for money of the initiative's projects through analysis done at the due diligence stage, during project selection.

4.57 We found that the department did not track the dollar per tonne cost for the majority of funded projects. This prevented us from reporting on a credible dollar per tonne for the greenhouse gas reductions funded by the Strategic Innovation Fund's Net Zero Accelerator.

4.58 In addition, the potential for double counting and the absence of reassessments after the change in methodology, as well as all the other shortcomings identified in the assessment and tracking of emission reductions (see the section starting at paragraph 4.41), meant that on

the basis of the information we saw, we could not calculate a true and meaningful dollar per tonne of greenhouse gas abated for all projects that were approved.

4.59 However, to estimate the value for money of the initiative, we calculated a dollar per tonne that applied only for the applicants that made concrete commitments to reduce greenhouse gas emissions as part of their contribution agreements. In looking at only the money allocated to these projects, we found that 5 companies that received total funding of \$886 million agreed to reduce 6.2 megatonnes of greenhouse gas emissions, for a cost per tonne of \$143. This figure almost quadrupled, becoming \$523 per tonne, when we looked at the total funding committed by the Net Zero Accelerator compared with the direct greenhouse gas reduction possible according to contribution agreements.

## Incomplete due diligence on greenhouse gas emission reduction commitments

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### Findings

4.60 We found that, on several occasions, Innovation, Science and Economic Development Canada did not always follow program procedures put in place to make sure due diligence related to greenhouse gas emission reduction commitments was done before applicants were assessed, selected, and awarded. For example, several applicants were not assessed by the interdepartmental Greenhouse Gas Impact Working Group because the working group had not been established when the applications were received. In addition, 3 applicants signed contribution agreements before the full due diligence was completed.

4.61 We also found that the interdepartmental Greenhouse Gas Impact Working Group could not always fully assess the assumptions that applicants presented in the workbook they used to estimate the greenhouse gas outcomes for projects submitted to the Strategic Innovation Fund:

- In some cases, the group did not have enough time to do a full assessment because of pressure from other groups, including senior officials, to complete the work faster.
- In some cases, the consultants were not able to fully verify workbook information because it was confidential or lacked comparable data.
- In one case, the group included greenhouse gas assumptions for only the most impactful activities because of limited space in the workbook.

4.62 In our opinion, if projects are selected without full due diligence, the government risks funding projects that do not provide value for money and that may not achieve its climate commitments.

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#### Recommendation

4.63 To ensure that Innovation, Science and Economic Development Canada's reporting of greenhouse gas reduction commitments is accurate, the department should follow due diligence and complete the assessment for all projects before agreements are signed.

*The department's response. Agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## The applicant requirements for equity, diversity, and inclusion were missing concrete metrics and deadlines

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#### Why this finding matters

4.64 This finding matters because the Government of Canada expects departments and agencies, when developing their programs and policies, to consider the social, economic, and environmental dimensions of sustainable development. Government initiatives are also expected to respond to the needs of diverse groups of Canadians, including Indigenous peoples, when identifying and addressing barriers to the full participation of diverse groups of people.

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#### Context

4.65 In 1995, the Government of Canada committed to using gender-based analysis to advance gender equality in Canada. Since 1995, the government has been committed to analyzing the gender-specific effects of policies, programs, and legislation on people throughout its departments and agencies. This commitment has since expanded to encompass many diverse groups, including Indigenous peoples. **Gender-based analysis plus**<sup>11</sup> has been incorporated into the 2022 to 2026 Federal Sustainable Development Strategy to advance gender equality under Goal 5 (Champion Gender Equality).

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<sup>11</sup> **Gender-based analysis plus**—An analytical process that provides a rigorous method for assessing systemic inequalities and how diverse groups of women, men, and gender-diverse people experience policies, programs, and initiatives. The "plus" goes beyond biological (sex) and socio-cultural (gender) differences and considers many other identity factors, such as race, ethnicity, religion, age, and mental or physical ability.

Source: Adapted from Women and Gender Equality Canada



Reduce inequality within and among countries

Source: United Nations

4.66 Diversity is related to the United Nations' Sustainable Development Goal 10 (Reduced Inequalities) and more specifically to target 10.2: "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status." This international target has been incorporated into the 2022 to 2026 Federal Sustainable Development Strategy as part of Canada's commitment to take action to reduce inequality.

4.67 Applicants for the Strategic Innovation Fund's Net Zero Accelerator initiative were required to implement a plan for improving representation across all demographic groups and to commit to equity, diversity, and inclusion as part of their contribution agreements. The applicants were given 1 year to implement the plan after signing the contribution agreement.

## Insufficient applicant requirements for equity, diversity, and inclusion

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### Findings

4.68 We found that at the time of the audit, some applicants had developed a plan for improving representation, while some, who had not passed the deadline, were still in the process of doing so.

4.69 We found that of the 17 contribution agreements signed, only 7 included concrete and measurable metrics related to equity, diversity, and inclusion. Specifically, all 7 included targets related to an increased representation of women, while only 3 also included targets related to all other aspects of equity, diversity, and inclusion. We also found that, except for 1 case, Innovation, Science and Economic Development Canada did not ask applicants for any concrete timeline to implement their equity, diversity, and inclusion plans.

4.70 Lastly, we found that the department planned to track applicants' progress on implementing the equity, diversity, and inclusion plans only for the duration of the contribution agreements (15–25 years after completion of the work phase) but did not require them to complete the plan in that time frame. As a result, if the company did not achieve the stated targets by the end of the term, the department would not know whether it continued to implement the plan.



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## Recommendation

4.71 To ensure that the companies funded under the Strategic Innovation Fund's Net Zero Accelerator deliver on diversity, equity, and inclusion for Canadians, Innovation, Science and Economic Development Canada should, in future contribution agreements, create

- concrete metrics and targets on diversity, equity, and inclusion with minimums to be achieved
- concrete deadlines for minimum implementation by the end of the term period

***The department's response.*** *Agreed.*

See **Recommendations and Responses** at the end of this report for detailed responses.

## Conclusion

4.72 We concluded that Innovation, Science and Economic Development Canada did not effectively manage the Strategic Innovation Fund's Net Zero Accelerator to decarbonize the manufacturing industries in accordance with Canada's climate goals or with due regard to value for money for Canadians.

4.73 The department had difficulty attracting applications from large emitters. As a result, after \$3.2 billion committed in contribution agreements, only 6.2 megatonnes of carbon dioxide equivalent had been committed to by the companies in contribution agreements. Furthermore, there was a larger issue that the Government of Canada as a whole needs to address: the lack of a horizontal industrial decarbonization policy.

4.74 The department also had problems with the quality and reliability of some of its estimated greenhouse gas emission reductions for individual projects. And finally, it did not apply sufficient requirements in the contribution agreements for equity, diversity, and inclusion to ensure that applicants would deliver concrete actions within a well-defined time frame.

## About the Audit

This independent assurance report was prepared by the Office of the Auditor General of Canada on the Strategic Innovation Fund's Net Zero Accelerator initiative. Our responsibility was to provide objective information, advice, and assurance to assist Parliament in its scrutiny of the government's management of resources and programs and to conclude on whether the Strategic Innovation Fund's Net Zero Accelerator initiative complied in all significant respects with the applicable criteria.

All work in this audit was performed to a reasonable level of assurance in accordance with Canadian Standard on Assurance Engagements (CSAE) 3001—Direct Engagements, set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook—Assurance.

The Office of the Auditor General of Canada applies the Canadian Standard on Quality Management 1—Quality Management for Firms That Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements. This standard requires our office to design, implement, and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

In conducting the audit work, we complied with the independence and other ethical requirements of the relevant rules of professional conduct applicable to the practice of public accounting in Canada, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

In accordance with our regular audit process, we obtained the following from entity management:

- confirmation of management's responsibility for the subject under audit
- acknowledgement of the suitability of the criteria used in the audit
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided

The department confirms the factual accuracy of the audit report, qualified by concerns about the incomplete consideration of the mandate, design, and performance measurement tools of the Strategic Innovation Fund's Net Zero Accelerator initiative.

### Audit objective

The objective of this audit was to determine whether Innovation, Science and Economic Development Canada managed the Strategic Innovation Fund's Net Zero Accelerator to decarbonize the manufacturing industries in accordance with Canada's climate goals and with due regard to value for money for Canadians.

## Scope and approach

The federal organization audited was Innovation, Science and Economic Development Canada.

The first criterion examined the analysis of the design performed by the department to ensure that the initiative was in accord with the changes in Canada's climate goals and plans.

The second criterion assessed the department's methodology for calculating greenhouse gas emission reductions, the Strategic Innovation Fund's Net Zero Accelerator initiative recipient's alignment to the methodology, and the challenge the department did of the calculation. This criterion examined the value for money of the funding that was approved by reviewing key components of the projects, such as due diligence, greenhouse gas emission reduction cost per tonne, and the appropriate monitoring and reporting of the results of the initiative to ensure accountability, efficiency, and effectiveness. Finally, the criterion looked at the diversity plans that the initiative applicants had to provide to the department and at whether the department had monitored their implementation.

As part of these criteria, we considered whether gender-based analysis plus, the United Nations' Sustainable Development Goal 10 (Reduced Inequalities), and the United Nations' Sustainable Development Goal 13 (Climate Action) had been incorporated into the subject matter.

The audit approach included interviews with organization officials and stakeholders. We also analyzed processes, documents, data, and other information sources. We visited 4 installations whose companies had received funding through the initiative and had calculated the associated greenhouse gas emission reductions, which were then used toward the fulfillment of the target for the initiative (the department did not put these at zero under the new methodology). We reviewed the files with a contribution agreement as of September 2023. Also, we reviewed the files that had positive non-zero emission reductions. Finally, we conducted a survey of all applicants to the initiative.

## Criteria

We used the following criteria to conclude against our audit objective:

Criteria	Sources
<p>Innovation, Science and Economic Development Canada implements the Strategic Innovation Fund's Net Zero Accelerator initiative consistently with Canada's climate goals, including the 2030 Emissions Reduction Plan, and analyzes the continued suitability of the design of the initiative in light of changes in Canada's climate goals and plans.</p>	<ul style="list-style-type: none"> <li>• Directive on Transfer Payments, Treasury Board</li> <li>• Policy on Transfer Payments, Treasury Board</li> <li>• Minister of Innovation, Science and Industry Mandate Letter, 2021</li> <li>• 2030 Emissions Reduction Plan, Environment and Climate Change Canada</li> <li>• <i>Canadian Net-Zero Emissions Accountability Act</i></li> <li>• Greenhouse Gas Protocol Policy and Action Standard, World Resources Institute</li> </ul>

Criteria	Sources
<p>Innovation, Science and Economic Development Canada administers the Strategic Innovation Fund’s Net Zero Accelerator initiative to provide value for money for taxpayers and to ensure that anticipated greenhouse gas emission reduction calculations of funded projects followed the relevant standards.</p>	<ul style="list-style-type: none"> <li>• 2023–24 Departmental Plan, Innovation, Science and Economic Development Canada</li> <li>• Policy on Transfer Payments, Treasury Board</li> <li>• Greenhouse Gas Protocol for Project Accounting, World Resources Institute and World Business Council for Sustainable Development</li> <li>• ISO 14064-2:2019—Greenhouse Gases—Part 2, International Organization for Standardization</li> </ul>

### Period covered by the audit

The audit covered the period from 1 January 2020 to 1 December 2023. This is the period to which the audit conclusion applies.

### Date of the report

We obtained sufficient and appropriate audit evidence on which to base our conclusion on 10 January 2024, in Ottawa, Canada.

### Audit team

This audit was completed by a multidisciplinary team from across the Office of the Auditor General of Canada led by Mathieu Lequain, Principal. The principal has overall responsibility for audit quality, including conducting the audit in accordance with professional standards, applicable legal and regulatory requirements, and the office’s policies and system of quality management.

## Recommendations and Responses

Responses appear as they were received by the Office of the Auditor General of Canada.

In the following table, the paragraph number preceding the recommendation indicates the location of the recommendation in the report.

Recommendation	Response
<p><b>4.20</b> To ensure the timely decarbonizing of manufacturing industries, Innovation, Science and Economic Development Canada, in collaboration with appropriate departments and agencies, should develop and implement a strategic horizontal approach detailing steps to reach Canada’s climate goals. This approach should be coherent and comprehensive and target a limited number of key industries (large emitters) as a priority and then be extended to other industries at a later stage. As well, the department should ensure that the investment framework of the Strategic Innovation Fund’s Net Zero Accelerator aligns with this horizontal approach.</p>	<p><b>The department’s response.</b> Partially agreed. Innovation, Science and Economic Development Canada (ISED) recognizes the importance of, and is actively pursuing, a horizontal approach to achieving Canada’s climate goals.</p> <p>Announced in March 2022, the 2030 Emissions Reduction Plan is a horizontal government policy with sectoral paths for Canada to reach its target of 40 percent below 2005 levels by 2030 and net-zero by 2050. As a key initiative, the Net Zero Accelerator (NZA) focuses on reducing near-term emissions from large emitters and ensuring the competitiveness of Canadian industries in a net-zero economy.</p> <p>ISED took the following measures to ensure the NZA funding contributes to Canada’s 2030 and 2050 climate objectives:</p> <ul style="list-style-type: none"> <li>• An Investment Framework, approved by the Government in spring 2022 and subsequently added to the SIF’s website, focusing investment decisions on clean technologies and key sectors collectively contributing over 90% of Canada’s emissions. This framework deliberately prioritized \$4B for decarbonization of large emitters (Pillar 1), and \$4B for industrial transformation (Pillar 2), as well as clean technology and battery ecosystem development (Pillar 3).</li> <li>• An interdepartmental governance structure aligns investments with government policies, regulations and principles.</li> <li>• The Greenhouse Gas (GHG) Impact Working Group fosters alignment among participating departments on the NZA investments and ensure the robustness of projects’ GHG reduction estimates.</li> </ul> <p>ISED will continue evolving its approach and investment framework.</p>

Recommendation	Response
<p><b>4.29</b> To make the review process for the Strategic Innovation Fund’s Net Zero Accelerator more effective and efficient, Innovation, Science and Economic Development Canada should</p> <ul style="list-style-type: none"> <li>analyze its internal review process for applications to optimize and streamline it without compromising the need for an appropriate level of due diligence, including for estimates of greenhouse gas emission reductions</li> <li>provide better engagement with the applicants by keeping them better informed of the status of their applications</li> </ul>	<p><b>The department’s response.</b> Agreed. ISED will continually evaluate processes to improve effectiveness, efficiency and financial integrity.</p> <p>The Strategic Innovation Fund (SIF) assessment process is designed to adjust to fluctuating economic conditions and industry investment cycles, amidst strong global competition. It strives to balance due diligence and negotiations with reasonable processing timelines—a challenge given the scale, complexity and evolving nature of the NZA projects.</p> <p>Improvements to efficiency and client experience in the past year by the SIF include: (1) early engagement with companies before statement of interest submission, (2) streamlining review processes, and (3) deploying temporary specialized teams for high demand areas. Process improvements included establishing proxy assessments that summarize the outcomes of emissions reductions assessments in support of due diligence.</p> <p>External factors also affect timelines, including: (1) companies needing to secure additional funding, (2) incomplete applications, (3) applicants requiring legal advice, (4) changes to project scope and costs, (5) incomplete engineering work, and (6) each company’s own decision-making process.</p> <p>Moving forward, ISED remains committed to building on its progress—and lessons learned—to further improve its processes and client experience. The SIF will explore transitioning the full application to a secure portal, inviting clients to complete and submit their application using an online form.</p>

Recommendation	Response
<p><b>4.36</b> To make the application process for the Strategic Innovation Fund’s Net Zero Accelerator more efficient and effective, Innovation, Science and Economic Development Canada should analyze how to better encourage large emitters to apply to the initiative, including assessing whether the design of the program is responding to their needs.</p>	<p><b>The department’s response.</b> Agreed. While industry’s response has been very high for Pillars 2 and 3, different approaches are necessary to encourage large emitters to undertake decarbonization activities. These projects are navigating complex factors, such as high upfront costs, low project maturity, risks associated with adopting new and still developing technologies, increased costs on material and labour, and long-term policy and regulatory uncertainty.</p> <p>To address these challenges, and after consultation with industry partners, provinces, territories, and federal government departments, the program launched a targeted public call-out in March 2022. As a result, the department received 37 project proposals, 16 of which were from large emitters, and 9 of these have since advanced to full due diligence. The Call to Action (CTA) projects that did not advance were less aligned with key criteria, such as lower GHG emissions reductions, lower program cost-effectiveness or early development stages. The SIF worked with other federal departments to identify alternative funding options for these projects, where possible.</p> <p>Moving forward, in the spirit of this recommendation, ISED commits to increasing consultation with large emitters. This will help gain deeper insight on their needs and explore ways to better encourage them to apply to the initiative, subject to funding availability. ISED will also leverage opportunities to improve the program’s design and delivery.</p>

Recommendation	Response
<p><b>4.48</b> To ensure that the Strategic Innovation Fund's Net Zero Accelerator's greenhouse gas reduction estimates are credible and are adding value for Canadian taxpayers, Innovation, Science and Economic Development Canada should</p> <ul style="list-style-type: none"> <li>• improve the precision and consistency of the estimates of emission reductions by tracking and counting only those emissions that have a net reduction effect on the overall greenhouse gas inventory of Canada</li> <li>• review its methodology to avoid overstating emission reductions, in accordance with international best practices</li> <li>• set a new internal target of emission reductions for the Net Zero Accelerator</li> </ul>	<p><b>The department's response.</b> Partially agreed. ISED will explore opportunities to improve its GHG emissions reductions estimates and ways of enhancing their value to Canadians.</p> <p>ISED applies a consistent approach to quantifying GHG reduction estimates. Estimates are developed for relevant projects, specifically those reducing direct emissions and/or deploying mature clean technologies. These estimates adhere to the international standards cited in the report. When judgment is deployed in the standards' application, the department opts for conservative results. Furthermore, the assessment process includes an interdepartmental review committee, leaning on 25-30 Government of Canada experts and 5 external experts. The committee consistently evaluates the projects using this approach, and no participant raised fundamental methodological issues. The risks associated with methodological choices have been adequately managed.</p> <p>The project-based methodology ISED deploys in GHG accounting is endorsed by Environment and Climate Change Canada (ECCC). This includes how ISED assesses the full impact of projects, addressing both upstream and downstream effects. ECCC agrees that their national modeling of GHG emissions (based on the GHG inventory) is different from project-based accounting. Both methods are valid but serve different purposes.</p> <p>The Department agrees with the objective of continuous improvement and will implement changes should the international standards be refined or alternative methods prove superior to current ones.</p>



Recommendation	Response
<p><b>4.54</b> To improve the quality of its estimated greenhouse gas emission reductions per project, Innovation, Science and Economic Development Canada should be consistent in how it assesses projects and ensure that projects provide all the data needed for assessment and that project estimates follow international greenhouse gas accounting standards.</p>	<p><b>The department's response.</b> Partially agreed. As noted in response #1, the NZA's mandate extends beyond near-term GHG reductions, making a uniform, purely quantitative approach inappropriate. Moreover, as noted in our response to recommendation #4, ISED is already using a robust approach to GHG assessment aligned to international standards. Additionally, according to its Treasury Board-approved results framework, every NZA project must demonstrate clear benefits to Canada (e.g. jobs, R&amp;D) and spur economic growth.</p> <p>With regard to the consistency of projects' GHG estimates:</p> <ul style="list-style-type: none"> <li>• The standards for quantifying project GHG emissions reductions rely on expertise and judgment regarding questions of materiality and the quantification of emissions sources.</li> <li>• Projects that can be quantitatively assessed are part of the intergovernmental peer review process to ensure estimates are robust and reasonable.</li> <li>• ISED and its partners recognize that estimating future GHG reduction impacts is inherently uncertain and relies on many factors that affect a project's potential GHG benefits, including limitations in GHG measurement methodologies.</li> </ul> <p>For projects supporting Canada's transition to a net-zero economy by 2050 (Pillars 2 and 3), GHG measurement is intrinsically less quantifiable. Hence, a non-conflicting, complementary qualitative approach is also deployed.</p> <p>ISED agrees to review and improve the GHG estimate process to make it as consistent as possible.</p>

Recommendation	Response
<p><b>4.63</b> To ensure that Innovation, Science and Economic Development Canada's reporting of greenhouse gas reduction commitments is accurate, the department should follow due diligence and complete the assessment for all projects before agreements are signed.</p>	<p><b>The department's response.</b> Agreed. ISED recognizes the importance of due diligence to ensure comprehensive assessments for all projects before signing agreements.</p> <p>The SIF has an established and rigorous due diligence process that is applied to all projects. In implementing the NZA initiative, in certain exceptional situations ISED advanced projects ahead of completing the GHG assessment in order to avoid challenging delays and lost opportunities. In a few instances projects were already advanced in due diligence when the NZA was announced and launched and clearly aligned with the initiatives objectives. At the time, the GHG assessment process was still under development. ISED took a risk based approach, and where the GHG performance was assessed to be a key consideration to the project moving forward, the contribution agreement stipulated that any reimbursement of claims would be held until GHG due diligence was complete.</p> <p>ISED agrees to uphold high standards in our due diligence process, while continuing to focus on material risk and ensuring that projects receive a thorough assessment before signature.</p>
<p><b>4.71</b> To ensure that the companies funded under the Strategic Innovation Fund's Net Zero Accelerator deliver on diversity, equity, and inclusion for Canadians, Innovation, Science and Economic Development Canada should, in future contribution agreements, create</p> <ul style="list-style-type: none"> <li>• concrete metrics and targets on diversity, equity, and inclusion with minimums to be achieved</li> <li>• concrete deadlines for minimum implementation by the end of the term period</li> </ul>	<p><b>The department's response.</b> Agreed. ISED acknowledges the importance of enhancing equity, diversity and inclusion (EDI) within our project approval process.</p> <p>The department is actively exploring opportunities to (1) enable a more thorough consideration of EDI as part of project approval process and (2) enhance the promotion of EDI objectives within all the SIF contribution agreements and reporting metrics. This effort may involve a comprehensive review of the company's Diversity and Inclusion Plans, aimed at not just analyzing whether these plans were implemented, but also their effectiveness at achieving outcomes and measuring impacts. Furthermore, starting in the summer 2024, ISED will expand the EDI section of the SIF's Annual Performance Benefit Report to better measure EDI commitments. The collection of expanded EDI data will provide the SIF with more consistent qualitative input from funding recipients on their EDI progress, supporting our existing quantitative data.</p> <p>With these measures, ISED aims to ensure that EDI efforts are effectively integrated into the SIF's operations and aligned with its broader objective to fostering a more diverse and inclusive workforce across Canadian industry.</p>

