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The Regional Municipality of Durham Report

To:	Finance and Administration Committee
From:	Chief Administrative Officer
Report:	#2025-A-3
Date:	May 13, 2025

Subject:

Accelerating Decarbonization of Corporate Facilities through Canada Infrastructure Bank Building Retrofit Initiative – Approval to Negotiate an Agreement with SOFIAC

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

A) That a partnership framework with the Société de financement et d'accompagnement en performance énergétique (SOFIAC) governing the financing, procurement, engineering design and construction of an energy efficiency and GHG reduction project in the Region's long-term care home portfolio, as outlined in this report and in the SOFIAC Term Sheet (Confidential Attachment #2), be endorsed, and the Chief Administrative Officer be directed to sign the Term Sheet on behalf of the Region.

B) That the Chief Administrative Officer be authorized to negotiate a Service Agreement for Energy Performance Optimization ("Service Agreement") with SOFIAC pending successful completion of the detailed feasibility study for the financing and management of design, construction, and measurement and verification related services, subject to the agreement aligning with the principles of the SOFIAC Term Sheet and being to the satisfaction of the Regional Treasurer and Regional Solicitor, (Confidential Attachment #2).

C) That the Chief Administrative Officer and Treasurer be directed to report back to Council to seek approval for the execution of the Service Agreement, and the associated financing strategy, by Q4 2025.

Report:

1. Purpose

1.1 This report outlines a proposed strategy to leverage external financing and project delivery expertise to implement an energy performance and greenhouse gas (GHG) reduction project within the Region's portfolio of four long-term care homes.

1.2 The report also seeks Council approval to undertake the detailed feasibility study (DFS) and pending project viability determined through the DFS, negotiate a service agreement with SOFIAC which is a Canadian financing entity. SOFIAC is supported by the Canada Infrastructure Bank (CIB), a federal Crown corporation that is focused on accelerating investment in energy efficiency and decarbonization in Canada's building sector.

2. Context/Background

2.1 In 2021 Regional Council approved a Corporate Climate Action Plan which is focused on positioning the Region as a leader in the community wide transition to an energy-efficient and low carbon future. As part of the plan Regional Council endorsed a set of corporate GHG reduction targets as follows:

a. 2025: 20 per cent below 2019 levels
b. 2030: 40 per cent below 2019 levels
c. 2045: 100 per cent below 2019 levels

2.2 Advancing progress towards these targets in a post-pandemic economic context has been challenging due to a range of external issues including:

a. lingering supply chain constraints,
b. increased costs for materials,
c. concerns about upfront investment costs and uncertain payback periods.

2.3 Added to these external economic challenges facing the Region are internal issues including that the traditional design-bid-build project delivery model used by the Region poses significant challenges for advancing large-scale corporate decarbonization projects due to longer project delivery timelines, limited flexibility in design, increased costs from change orders, and potential constructability issues (e.g. hidden problems not identified during design which can lead to significant delays and cost overruns during construction). This is coupled with the potential for limited internal project management capacity given focus on new facility and infrastructure design and construction to meet the needs of a growing population.

2.4 Given these multi-faceted challenges, there is a need for the Region to consider alternative project delivery methods that enable innovative solutions and collaborative efforts with the private sector.

2.5 Regional buildings are a key area of focus for corporate decarbonization as they represent almost 25 per cent of total corporate energy-related GHG emissions. Within the existing Regional buildings portfolio, the four long-term care homes are the largest contributors to corporate facility GHG emissions, representing 35 per cent of the total. These buildings also have significant annual utility costs (e.g. for electricity, natural gas and stationary fuels) which in 2024 were almost $2.7 million across the four sites. There is minimal change in forecasted GHG emissions to 2030 based on current capital plans for these buildings.

2.6 Given the age of buildings and major building systems and components, there is a strategic opportunity to align corporate asset management objectives, operational efficiency and climate leadership to achieve multiple benefits through a deep retrofit project in the Region's long-term care portfolio.

2.7 The Region is in the final stages of completing GHG Pathways Studies for each of the four long-term care homes. The purpose of these studies is to catalogue existing energy consuming systems, analyze energy usage and provide recommendations on how to significantly reduce GHG emissions while improving the energy and water efficiency of each facility. These studies have identified a significant approximate capital cost of more than $60 million (ranging from $4.5M to $31M per building), to significantly decarbonize these four facilities. By bundling projects into a comprehensive deep energy retrofit project at a building or portfolio-scale, and collaborating with external service providers, there may be opportunities to deliver decarbonization projects at lower cost and with greater alignment to other corporate objectives such as reducing operating costs.

3. Exploring Solutions – Canada Infrastructure Bank Building Retrofit Initiative

3.1 The Canada Infrastructure Bank (CIB) Building Retrofit Initiative (BRI) provides a framework to help overcome these internal and external issues and accelerate the pace of implementation of corporate facility decarbonization projects. Through the BRI, CIB is looking to work with building owners and other market participants to improve existing building energy and GHG performance. The initiative helps finance the capital costs of retrofits, where the savings from energy and operational cost efficiencies savings can then be used for project repayment. For broader public sector building owners looking to implement projects worth $50 million or less, the CIB recommends that participants work with a CIB-affiliated building retrofit aggregator. Building retrofit aggregators are independent of the CIB and act to coordinate actors involved in implementing building retrofits. CIB currently has eight aggregator partners on their CIB-BRI partner contact list, which is available here.

3.2 To understand how the Region could potentially leverage CIB-BRI funding, the Region issued a non-binding Request for Information (RFI 1073-2024) in Q3 2024.

The Region received 12 responses to the RFI, of which 5 were from organizations that are CIB BRI aggregator partners. Regional staff collaborated to identify a set of key objectives, reflecting the internal and external issues identified above, that would be used to analyze the responses, namely:

a. Minimize the Region's upfront capital investment by accessing external capital through the CIB-BRI initiative;
b. Minimize the Region's lifecycle technology and financial risk, and ensure positive cash flow over project lifecycle through performance guarantees and risk sharing;
c. Gain corporate experience in alternative "turnkey" project delivery models that mitigate workload pressures on the Works Department's DCAM Division – while also considering workload impacts and benefits to other functional areas (e.g. Legal, Procurement, Facilities Maintenance and Operations);
d. Maintain control and ownership over major building components and systems; and
e. Maintain flexibility and choice over technology options and vendors.

3.3 Tables 1 and 2 in Attachment #1 provide a high-level summary of the four main project delivery models that were generally represented in responses to the RFI. Following consideration of the advantages and disadvantages of each model to best support the business needs of the Region and operational requirements of the long-term care homes, Regional staff signed a non-binding letter of interest with SOFIAC, the first and largest (in terms of available capital) CIB building retrofit aggregator, and one of the only aggregators that is vendor agnostic and maintains a competitive selection process for technical service providers. By signing a letter of interest, the Region provided SOFIAC representatives with access to its long-term care homes for site visits, as well as historical energy consumption data, to enable them to develop a Term Sheet (see Confidential Attachment #2) for a formal partnership to undertake deep energy retrofits.

4. SOFIAC Partnership Framework for Building Retrofit Project Delivery

What is SOFIAC?

4.1 SOFIAC is a collaborative effort between Econoler, a global energy advisory firm, and Fondaction, a labour-supported investment fund. SOFIAC was launched in 2020, with the support of the Government of Quebec and the Canada Infrastructure Bank (CIB), to facilitate and accelerate the implementation of energy efficiency and carbon reduction projects in Quebec businesses. In 2022 SOFIAC announced the national expansion of its service with additional funding from Desjardins and the CIB. SOFIAC has more than $300 million in financing capacity to support building energy efficiency projects.

4.2 In addition to being a CIB-BRI program retrofit aggregator, SOFIAC is also an NRCan-funded deep retrofit accelerator which provides access to federal grant funding to support upfront feasibility assessment work. SOFIAC has successfully financed projects leveraging CIB capital with public and private sector

organizations across a wide range of building types, and has established the EcoEnergie 360 initiative in collaboration with the Fédération québécoise des municipalités (FQM), which helps demonstrate a proven track record and relevance in understanding the unique challenges and requirements of municipal projects.

How does SOFIAC's model work?

4.3 SOFIAC invests in projects that lower energy use and GHG emissions in a self-funded manner (i.e. where energy cost savings resulting from the project pay for the upfront capital investment). For example, if a building has annual energy costs of $2 million, and through a $4 million SOFIAC investment annual energy costs are reduced to $1.4 million, the $600,000 in annual energy cost savings are available to be shared between SOFIAC and the building owner.

4.4 Energy consumption reductions resulting from SOFIAC's investment are calculated based on the difference between actual energy consumption and an estimate of what energy consumption would have been in the absence of the capital improvements undertaken with SOFIAC investment, as verified by an independent third party. Cost savings are based on pre-determined energy price assumptions, including inflation factors, over the full term of the project agreement.

4.5 SOFIAC typically looks to retain 85% of calculated energy cost savings, with the building owner retaining 15% until SOFIAC's initial investment is reached or the end of the agreed upon term is reached (e.g. 15 years). SOFIAC's share of energy cost savings is used to cover its project costs (e.g. intermediation costs for their role in facilitating the project and third-party measurement and verification costs) as well as provide a return on investment to its investors.

4.6 SOFIAC takes responsibility for procuring and managing the work of a technical delivery partner responsible for design and construction of the energy efficiency and carbon reduction project. SOFIAC has pre-qualified more than a dozen reputable technical service providers and uses a competitive process whereby proposals are sought from its pre-qualified list. The technical provider guarantees energy consumption savings that are to be realized through the project, which are measured and verified by an independent third party using the International Performance Measurement and Verification Protocol standard.

4.7 If the project underperforms for reasons outside of the Region's control and as a result SOFIAC's initial investment is not re-paid within the agreed upon term, the client is not liable for the balance owed. If the project over-performs in terms of energy cost savings, SOFIAC and the building owner share over-performance cost savings 50/50 which creates an incentive for all parties to reach and exceed identified project goals.

4.8 The Region, as building owner, assumes full ownership of the equipment installed following commissioning and is responsible for ongoing operations and

maintenance of the equipment in accordance with manufacturer specifications. If there are no realized savings, or the savings are lower than projected for reasons outside of the building owner's control, the responsibility is still to only transfer 85% of measured and verified savings. SOFIAC is then obligated to rectify the underperformance or risk its return on investment. This approach largely mitigates the cost of performance risk for the building owner.

4.9 Benefits of SOFIAC's approach include:

a. No upfront capital required by the Region – SOFIAC is responsible for providing the upfront capital investment for the energy efficiency project, although the Region may wish to provide additional capital to address state-of-good-repair upgrades as part of a bundled project to achieve efficiencies of scale.
b. Competitive procurement process for technical service provider – SOFIAC has a pre-qualified list of 13 technical service providers. Upon execution of a Term Sheet, the Region and SOFIAC would then collaborate to procure a technical service provider from this list through a competitive process.
c. Risk-sharing – the technical partner chosen for the project provides a full guarantee of the cost savings that are anticipated to be realized, based on agreed upon assumptions regarding base utility rates, rate escalation, and other factors. If the energy efficiency project underperforms for reasons outside of the Region's control, SOFIAC and the technical service provider will be responsible for rectifying the underperformance, where the Region is kept safe as payment is only proportional to the actual energy consumption savings.
d. Open-book project accounting during the design development phase – a cost-plus pricing model will be used to deliver the services, with open-book accounting, flow through of costs of equipment and services, and pre-determined mark-ups for return on investment, contingency and service fees. The project value is fixed upon completion of the design phase, subsequent changes in tariffs or price of materials remains the risk of SOFIAC with no risk of subsequent de-scoping of design for the Region.
e. Full asset transfer – the Region has full ownership of the assets once the project has been constructed and commissioned, and gains lifecycle cost benefits from equipment renewal (i.e. reduced maintenance costs with newer equipment, and reduced risk of unforeseen equipment failure).
f. Integrated design and construction process limits workload required for Works Department's DCAM Division.

4.10 While the SOFIAC delivery model results in significant risk-sharing benefits, the Region would retain risks relating to operations and maintenance of the energy conservation measures (ECMs) implemented. The Region is responsible for operating and maintaining equipment as per manufacturer specifications and warranties. If the Region does not operate and maintain equipment according to specifications, resulting in under-performance in terms of energy cost savings, the Region may have to forgo a portion of its shared savings. There are allowances

within the overall project budget for training Region staff and contractors on how to operate and maintain the installed equipment.

4.11 The Region also retains risks and benefits associated with energy prices deviating from the pre-determined assumptions described in section 4.4. If energy prices escalate at rates higher than pre-determined assumptions, the Region benefits from increased operating cash flow, whereas if energy costs escalate at a rate lower than projected the Region could face SOFIAC debt repayment obligations without sufficient actual energy savings to fully offset these payments. It is thus important that the Region negotiate conservative energy cost inflation assumptions as part of the project development process.

5. Energy Efficiency and Greenhouse Gas Reduction Project Delivery – Framework for Agreement

5.1 Durham Region has received a Term Sheet for energy retrofit financing and project delivery services from SOFIAC focused on the Region's four long-term care homes (see Confidential Attachment #2). It indicates a minimum 25% reduction in energy consumption and 25% reduction in GHG emissions for all targeted buildings. Based on a preliminary assessment SOFIAC has estimated the upfront investment at a minimum of $5.1 million, which would be repaid over a 15-year agreement based on a share of guaranteed energy cost savings realized by the project. This estimate will be refined as part of the detailed feasibility study and scoping of the project both in terms of the number of facilities and the specific energy efficiency measures. Assuming a 25% reduction in energy use is achieved, Durham's share of estimated energy cost savings over the course of a 15-year agreement would be $1.9 million. These figures are all preliminary minimum amounts that are subject to agreement on a set of assumptions on baseline energy consumption at the four sites, as well as utility cost escalation forecasts over the project implementation period.

5.2 The energy efficiency and GHG reduction project will involve a comprehensive assessment of existing equipment in the four buildings, and the design and construction of a range of energy conservation measures that could include:

a. Lighting upgrades
b. Domestic hot water and space heating equipment
c. Solar photovoltaic (PV) generation
d. Ventilation and humidification equipment
e. Pumps and motors
f. Kitchen and laundry appliance upgrades
g. Controls
h. Building envelope measures (windows, doors, cladding etc.)

6. Next Steps

6.1 Regional staff are seeking Council approval and direction to execute the SOFIAC Term Sheet and proceed with next steps to further this project, namely to:

a. Collaborate with SOFIAC to implement a competitive procurement process to identify a technical service provider; and,
b. Work with SOFIAC and the identified technical partner to complete Detailed Feasibility Studies across the Region's four long-term care homes to confirm the scope of a project to maximize energy consumption savings and GHG reductions that can be funded through resulting energy cost savings (i.e. a self-funded project).

6.2 Upon successful completion of the next steps outlined above, the Region will be equipped to make informed decisions regarding the scope of the desired project and negotiate the terms of a formal project agreement, which would be subject to Council endorsement. For instance, the Region may wish to concentrate on specific facilities within the long-term care portfolio (subject to SOFIAC's minimum investment threshold of $3 million), rather than implementing a project comprising all four buildings.

6.3 Regional staff expect to report back to Council with a recommended project scope, updated financial impacts, and a agreement by late 2025 for consideration in the Region's 2026 Business Planning and Budget process. Should Council endorse the staff recommendation following negotiation of a formal project agreement, it is expected that the project would be fully implemented within 12 months.

7. Financial Implications

7.1 The intent of this financing strategy is to define and execute an energy efficiency and GHG reduction project that is fully self-funded by the energy cost savings that are realized through the implementation of energy conservation measures, with no upfront capital from the Region. Preliminary investigations by SOFIAC have identified an estimated project value of $5.1 million, which SOFIAC would invest in, to be re-paid through a share of energy cost savings. The Region's estimated positive cash flow is $1.9 million over a 15-year agreement term (excluding gains in avoided capital replacements, maintenance and emergency repairs).

7.2 If the Region proceeds with a detailed feasibility study, and the results of that study do not align with the energy, GHG and cost savings estimates in the Term Sheet, the Region can terminate the partnership without financial implications. However, if the Region decides during the selection of a technical partner and the completion of a detailed feasibility study to discontinue participation in the project for reasons other than the project not meeting targeted savings, under the Term Sheet, SOFIAC will be financially compensated by the Region for its costs incurred during the project development process. In both scenarios, the Region will obtain ownership and copyright of any developed technical design solutions. Below are the maximum expected costs should the Region decide to exit the project at various stages of project development, assuming the full scope of four long-term care homes:

a. Once a technical partner has been procured, and costs of a detailed feasibility study are known - $30,000

b. Stage 1 of Detailed Feasibility Study: technical partner has completed site walk through, catalogued existing site conditions, and establishes a recommended list of ECMs - $200,000
c. Stage 2 of Detailed Feasibility Study: Cost of recommended ECMs is updated to Class B, Measurement and Verification plan is identified per ECM - $150,000
d. Stage 3 of Detailed Feasibility Study: Known design of ECMs is complete, fixed pricing to Class A, with full detailed analysis of energy cost savings and GHG reductions as well as operations and maintenance requirements - $100,000

7.3 The approved 2025 Business Plans and Budgets includes an allocation of $0.3 million from the Capital Impact Stabilization Reserve Fund for potential legal costs, peer review fees and consulting costs to advance this project.

7.4 As discussed in section 4.4 above, under the SOFIAC model “utility cost savings” is defined as the difference between (A) the Region’s actual energy consumption (electricity and natural gas) multiplied by pre-determined price assumptions, and (B) estimates of what the Region’s energy consumptions would have been in absence of the capital improvement measures undertaken, multiplied by the same pre-determined price assumptions.

7.5 Risks and benefits related to energy pricing assumptions are retained by the Region under the SOFIAC framework. If energy prices escalate at rates lower than assumed, it is feasible under certain price scenarios that the Region could face SOFIAC payment obligations without sufficient actual energy cost savings to offset these in entirety. By the same token, if energy prices escalate at rates higher than assumed, the Region benefits from increased operating cash flow. It is thus important that the Region negotiate conservative energy cost inflation assumptions as part of the project development process.

8. Relationship to Strategic Plan

8.1 This report aligns with/addresses the following Strategic Direction(s) and Pathway(s) in Durham Region’s 2025-2035 Strategic Plan:

a. Connected and Vibrant Communities

- C1. Align Regional infrastructure and asset management with projected growth, climate impacts, and community needs.

b. Environmental Sustainability and Climate Action

- E1. Reduce corporate greenhouse gas emissions to meet established targets.

c. Healthy People, Caring Communities

- H5. Provide services for seniors and work with community partners to support aging in place.

d. Strong Relationships

- S3. Collaborate across local area municipalities, with agencies, non-profits, and community partners to deliver co-ordinated and efficient services.
- S5. Ensure accountable and transparent decision-making to serve community needs, while responsibly managing available resources.

8.2 This report aligns with/addresses the following Foundation(s) in Durham Region's 2025-2035 Strategic Plan:

a. Processes: Continuously improving processes to ensure we are responsive to community needs.
b. Technology: Keeping pace with technological change to ensure efficient and effective service delivery.

9. Conclusion

9.1 This report presents a proposed strategy for overcoming barriers to implementation of energy efficiency and GHG reduction projects in the Region's Corporate facilities. Focused on the Region's long-term care portfolio, the report presents a potential estimated $5.1 million investment from SOFIAC leveraging low-cost capital from the Canada Infrastructure Bank and private sector financing. The project is expected to be fully self-funded by SOFIAC using energy consumption savings that are realized through the implementation of a comprehensive suite of energy conservation measures, and result in a minimum 30 per cent reduction in annual GHG emissions.

9.2 Regional staff are seeking approval to undertake next steps to develop this project, including signing a Term Sheet with SOFIAC, collaborating with them in the procurement of a technical service provider, and completing a detailed feasibility study to confirm the details of a potential guaranteed energy consumption savings project.

9.3 Following completion of a detailed feasibility study which validates the viability of a deep energy retrofit opportunity, and negotiation of a project agreement to the satisfaction of the Regional Treasurer and Regional Solicitor, staff would return to Council for approval to proceed with executing a project agreement with SOFIAC to implement the project.

9.4 Staff in the CAO's Office, Finance, Works, and Social Services departments have reviewed the content of this report and will collaborate in implementing the recommendations of the report.

10. Attachments

Attachment #1: Summary of CIB Energy Efficiency Financing Vehicles and High-Level Multi-Criteria Analysis

Attachment #2: CONFIDENTIAL - SOFIAC Term Sheet for the implementation of an Energy Performance and GHG Reduction Project at Durham Long-Term Care Home Facilities
Under separate cover

Respectfully submitted,

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

Attachment #1 to #2025-A-3

Table 1 Summary of Project Delivery Models Represented in Responses to RFI-1073-2024

Vehicle (providers)	Pros	Cons
Construction Loan	• Low-cost debt (~2% as of Sept 2024) for projects achieving min 50% GHG savings thru CIB • Simple deal structure • Technology and vendor agnostic	• No performance guarantee/risk sharing • No support with project delivery (i.e. not a turn-key solution)
Energy Performance Contracting – vendor aligned retrofit aggregator	• Energy performance guarantee & risk sharing • Outsourced project management and maintenance • Can lead to access to low-cost CIB retrofit financing	• Region has limited experience with EPC; need to develop procurement and contracting documents from scratch • Potentially high transaction costs and long negotiation period • Generally, not technology/vendor agnostic
Energy Performance Contracting – vendor neutral retrofit aggregator	• low cost of debt (~2% as of Sept 2024) for projects achieving min 30% GHG savings thru CIB • Energy performance guarantee & risk sharing • Outsourced project management and maintenance • Examples of public sector projects (although not specifically in Ontario municipal context) • Technology and vendor agnostic • Several ESCO RFI respondents willing to work through vendor neutral retrofit aggregator model	• Indicates that they do not respond to RFPs; looking for upfront partnerships with building portfolio owners • Some “neutral” CIB-affiliated partners/aggregators are much smaller in capital availability
Efficiency-as-a-Service	• Service provider takes on performance risk • Outsourced project management and maintenance • Access to CIB retrofit financing through EaaS partner	• Asset ownership typically remains with service provider throughout contract term • Generally not technology/vendor agnostic

Table 2 RFI High-level Multi-criteria Analysis

Criteria	CIB construction loan	CIB EPC-vendor aligned	CIB EPC-vendor neutral	CIB EaaS
Access low-cost capital	Low	Medium	Medium	Medium
Risk sharing / guarantee	✗	✓	✓	✓
Outsourced project management & maintenance	✗	✓	✓	✓
Maintain client ownership / control of assets	✓	✓	✓	✗
Choice over technology and vendor	✓	✗	✓	✗
Contract complexity	Low	High	Medium	Medium