CIB Public Retrofits Initiative

May 2021

Innovative and Impactful Infrastructure Investment

Growth Plan Priorities

Public Transit	Clean Power	Green Infrastructure	Broadband	Trade and Transport
Growth Plan: $1.5B for zero-emission buses	**Growth Plan: $2.5B for clean power**	**Growth Plan: $2B for energy efficient building retrofits**	**Growth Plan: $2B for large-scale broadband projects**	**Growth Plan: $1.5B for agriculture-related infrastructure**
Long-term sector target: $5B for ZEBs, LRTs, BRTs, subways, transit oriented development, commuter inter-regional and passenger rail	Long-term sector target: $5B for clean power, renewables, district energy, storage, interties, transmission	Long-term sector target: $5B for energy efficient building retrofits, water, wastewater, other green infrastructure	Long-term sector target: $3B for unserved and underserved community broadband connectivity	Long-term sector target: $5B for agriculture-related infrastructure, ports, freight, highways, roads, bridges, tunnels

Growth Plan: Project Acceleration
$500 million for project development and early works to shorten critical paths to construction

Partnerships with Provinces, Territories, Municipalities, Indigenous Communities and the Private Sector

Public Retrofits Initiative Overview

Introduction

- **Public Sector at large are natural aggregators** of real estate portfolios
- The buildings contained within the real estate portfolios have **major deferred maintenance** backlogs associated with them
- The CIB teams aims to work with the public sector to review their asset portfolios from a **holistic perspective** to develop bundles of energy retrofit projects

Initiative Objectives

- Support public sector to achieve ambitious portfolio-scale **GHG reduction goals** with minimal long-term risk and up-front capital requirements
- **Crowd-in private capital (debt and equity) at Financial Close**
- **Transfer** performance, energy and technical **risk** from public partners to the private sector
- **Stimulate** significant, cost-effective **investment** in green public infrastructure
- Create a model of investment and procurement for energy performance projects that can be **self-perpetuating as the market normalizes and accelerates towards 2050**

- Enable public sector to think BIG and allow for deeper retrofits
- Review their asset portfolios from top-down perspective
- Allow for large scale GHG reductions across the country

Public Retrofits Summary

Target Sponsors

- Provinces
- Municipalities
- Territories & Indigenous
- Universities, Schools and Hospitals (USH)

Target Assets

- **All public sector assets**
- *Real Estate Portfolios, Commercial / Office Real Estate Portfolio, Jails, Courthouses*
- *Hospitals, Schools, Universities, Student Residents*
- *Long Term Care and Social / Affordable housing* ***under investigation***

Definition of Energy Retrofits

- **Deep Retrofits – minimum GHG targets, enhanced energy and near zero carbon projects.**
- **Examples include:**
- Upgrading energy-consuming systems in an existing building, which could include improving or replacing lighting fixtures, windows and doors, HVAC systems, air ventilation, air handling systems etc.
- Fuel switches and replacements of boilers and chillers, replacement of central utility plants etc.
- Associated infrastructure (frames of windows) to enable deep retrofits

Key Features for Public Sector

- **No upfront capital contribution** from the Public Sponsor
- **No minimum payment guarantees** from the Public Sponsor
- Capital is repaid through **realized energy savings**
- Full energy savings risk is transferred to the CIB and the private sector partner
- Long-term monitoring and verification is the responsibility of the private sector partner

Benefits to the Public Sector

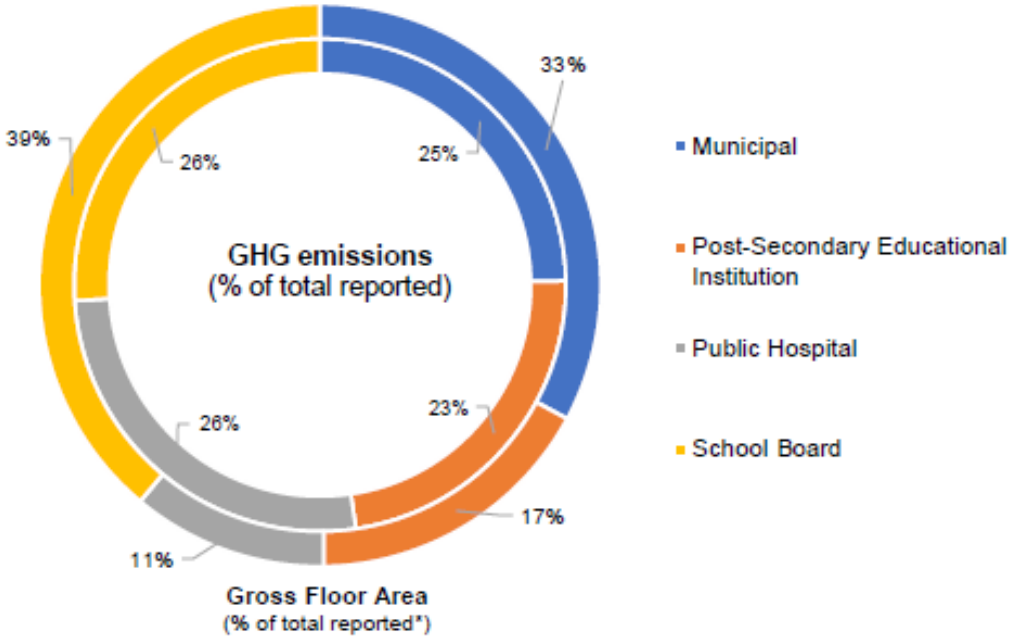
- **Achieve GHG Targets**
- **Address deferred maintenance** while meeting emission targets and achieving indirect O&M savings
- Assistance with building **business case, including energy audits**, to develop marketable bundles
- **Standardized measurement & verification**
- Streamline project development, standardize contractual frameworks and maximize market acceptance

Contractual structures & repayment

- For pure energy retrofit projects we would use Energy Performance Contracts where all energy performance and technical performance risk is passed on and repayment is entirely dependent on **materialized energy savings**
- For projects that include energy retrofits as a part of a large buildings retrofit (example – MacBlock) we can use the DBFM / DBFOM contracts with **partial availability and partial energy** payments associated with energy performance risk

GHG emissions and packaged retrofits

Breakdown of Area and GHG Emissions in Ontario's MUSH Sector, 2017



In Ontario's MUSH sector, emissions are evenly distributed between the four broader public-sector categories, despite their reported gross floor areas not being similarly equivalent showcasing high diversity in facility types.

*The public sector can play an important role by setting **ambitious GHG emissions reduction targets** and implementing policies to reduce emissions and improve buildings' energy efficiency.*

Packaging Opportunities

To achieve significant levels of GHG reduction with reasonable financial returns, **cost-effective packaging of multiple measures at a single facility** will be required. The following are types of retrofits that can be potentially packaged:

- **Retrofit-Ready Operational Upgrades:** renewal of commonly upgraded systems while it awaits a more appropriate phase of service life to be further upgraded
- **Holistic / Deep Retrofit – Minimum Target:** building on the above, this type of retrofit includes all facility changes necessary to achieve a minimum threshold of energy or GHG-reduction performance
- **Holistic / Deep Retrofit – Enhanced:** this option prepares the facility to fully decarbonize heating in the short/medium term
- **Holistic / Deep Retrofit – (near) Zero Carbon:** to include full fuel switching to low-or zero-carbon sources of energy. Additional improvements in efficiency may be warranted in this case, especially to achieve more cost-effective long-term performance.

CIB offering – large public sector projects

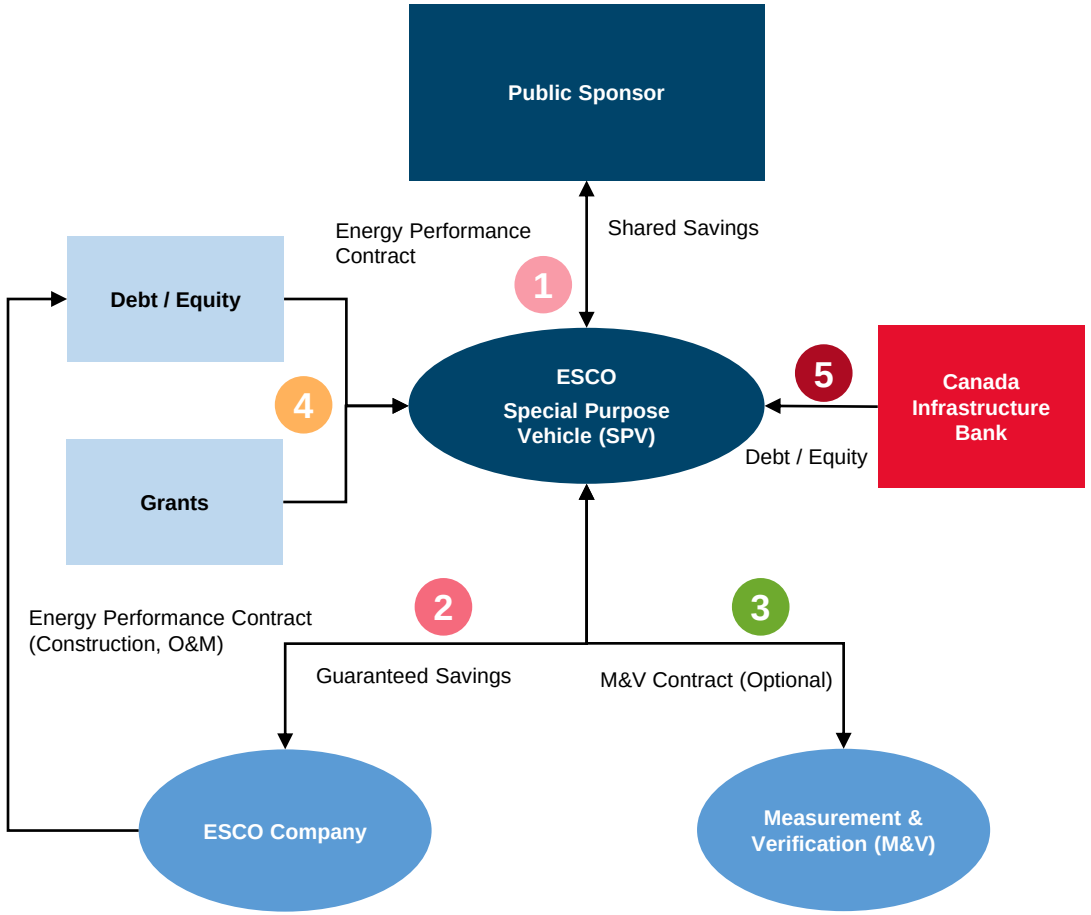
	Financing Approach	CIB Advisory Services
Large <u>BUNDLED</u> Projects (>$40M capex)	▪ Work with all levels of government + USH to aggregate portfolios and develop project bundles that are $50M or higher ▪ Some exceptions may exist where bundled or one-off projects less than $40M may also be included in this bucket **Bespoke Project Finance SPV Structures** ▪ CIB's financing is between 40 and 60%; financing may increase (up to 70%) to enable deeper retrofits and fuel switching projects ▪ At this time, the CIB is expected to be sub debt to protect senior lenders from requiring guarantees; Private Financing is raised at Financial Close ▪ Repayment source is based on energy savings materialized as a result of retrofits.	▪ Standardized measurements and verification standards as well as methods developed by WSP ▪ WPS to manage energy savings to avoid disputes/claims ▪ Energy audits financed and conducted by CIB's advisors or through a technical Vendor of Record (VOR). These reports and audits are required for CIB's commitments, as they form the base to build our business case. ▪ Portfolio and aggregation analysis developed by the CIB and its advisors, with Sponsors, to bundle projects ensuring target rate of returns ▪ Business case and financial modelling development by the CIB ▪ Standardized processes, procurement documents and energy performance contracts, where possible

CIB offering – small public sector projects

	Financing Approach	CIB Advisory Services
Smaller or one-off Projects ($25M to $40M)	**1** ▪ **Use <u>Existing Public Sector Aggregators</u>** to assess if smaller projects may be bundled to develop larger projects to attract private capital and achieve energy efficiencies *Example: Region of Peel, Halton Region, Efficiency One (public agency in Nova Scotia responsible for aggregating retrofit projects)* **2** ▪ **<u>Bundle smaller projects</u>**, where available and possible, with larger projects ▪ Provincial authorities (*e.g., Infrastructure Ontario*) may play a role in bundling smaller projects across the province **3** ▪ Support **<u>Access of Other Programs</u>** ▪ Large number of public programs already exist to cover smaller projects (*i.e., under $15M*)	▪ Provide Measurements & Verifications (M&V) standards and best practices created by CIB's technical advisor ▪ Provide general advisory services to assist in bundling, direct lending or access to other public programs ▪ Once available, provide standardized procurement documents and contract templates ▪ Once available, provide access to CIB's VORs on technical services for energy audits and feasibility studies

In most scenarios, smaller projects are likely to be bundled together to create a size and scope to achieve targeted ROI with efficiencies and scale. There is also a healthy offering within the public sector to assist with very small fragmented projects.

CIB initiative: financing structure and facilities



Description & structuring - public sector retrofit platform

1
- The Public Sponsor commits to pay the realized (100% or less) energy savings over the term
- While the energy savings are dependent on the accuracy of energy service company (ESCO),energy model, the payor is a single government entity (low counterparty risk)

2
- SPV contracts with an ESCO to engineer, procure, install the equipment and maintains it over the contract term

3
- An independent third party is M&V provider is sometimes used to verify the savings and the actual performance of the project, to protect both the Public Sector and the ESCO interest

4
- The SPV will need to raise private financing for the transaction other than the CIB financing
- The ESCO will work with the Public Sponsor to explore financing sources including available grant funding

CIB facilities – Public Infrastructure Retrofit Initiative

5
- CIB will provide standardized term sheets (debt/equity, low cost, flexible terms)
- CIB's low-cost participation will reduce the project cost of capital
- CIB's participation provides a buffer to senior debt and likely removes the need for guarantees

In the SPV project financing structure, the Public Sponsor transfers technical and financial risks associated with energy efficiency retrofit projects to a private ESCO SPV.

Illustrative example and scenarios

Capital Cost for Retrofit = $100M
(*Replacement of HVAC, windows, air distribution, roof, lightning, heating & cooling etc.*)

Annual Buildings Base Energy Cost in 2020 = $12M

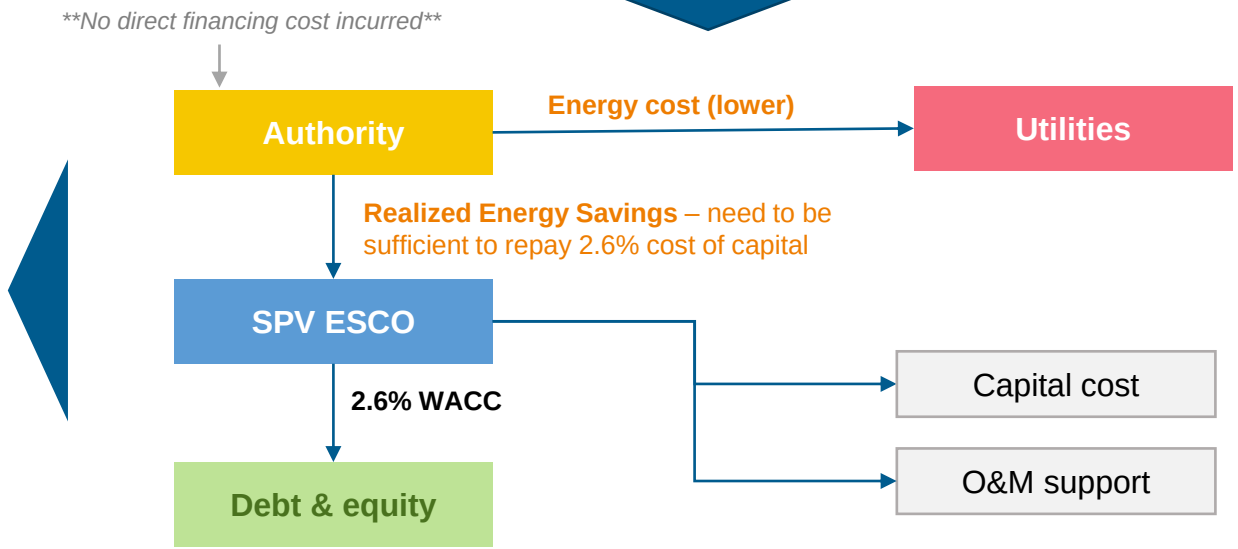
Inflation = 2%

Equipment Maintenance = Negligible

ESCO Management Fee = Negligible

ESCO Capital Structure	Rate	Rationale - to be confirmed	Gearing
CIB	**1.0%**	*Sub debt facility assumed*	*60%*
Third-Party Debt	**3.5%**	*GOC + 180-220 bps*	*30%*
Equity	**9.0%**	*Equity IRR close to utility rate (between 8.5 – 10%)*	*10%*
ESCO Cost of Capital	**2.6%**		

Scenarios	Option 1	Option 2	Option 3
Term (*payback period*)	**20**	**25**	**30**
WACC (weighted average cost of capital)	2.6%	2.6%	2.6%
Debt service + distributions	$6.5M	$5.5M	$4.9M
Minimum required % energy savings for business case	**45%**	**37%**	**31%**
Sponsor net savings (*energy*)	$ 0	$ 0	$ 0
Sponsor savings (indirect *O&M*)	Retained by sponsors		



Note: CIB gearing could vary between 40% to 70% of total project costs, depending on GHG reductions targets
Additional sources of repayment might be required in case cost savings cannot cover full debt service and distributions

Pilot projects – next steps

1. Follow-up discussions with the CIB

- NDA signature and public sponsor to provide the CIB with further information through the Initial Information Sheet
- Public sponsor to understand Public Retrofit Initiative model and work with the CIB to determine best path forward
- Discuss responsibilities between the CIB and the public sponsor, review timelines, and discuss if a MoU is needed
- Scheduled discussions/workshops between the CIB, the public sponsor's energy and finance team, and technical advisor

2. Portfolio assessment phase

- Energy audits by the technical advisor with the assistance of the public sponsor
- Pilot projects identification
- Due diligence and business case development, including project market sounding

3 (a) Pre-procurement and procurement phase

- In parallel of the above, establish technical and financial/legal work streams during the pre-procurement
- Public sponsor and the CIB to develop best practice and standardized contracts
- Public sponsor to prepare/release Request for Proposal (RFP) and run full-procurement process
- Determine preferred proponent(s) and execute contract(s)

3 (b) Unsolicited transactions

- CIB will work directly with public sector clients and their selected partners where transactions meet CIB's Initiative mandate and objectives

4. Financial close and project implementation

- The CIB to work with the public sponsor and the private sector to achieve financial close

Development phase technical advisor scope of work

WSP has been engaged by the CIB to develop:

1. **Energy Savings Measurement and Verification Standards**
   - The standardization of requirements will streamline the analysis process, minimizing costs for public sponsors and creating more certainty for the bidders
     - protocol will be used as the basis of the savings calculation
     - verification methodology will form the basis of CIB's future due diligence process
     - basic technical requirements for both the project implementation phase and the operations period will be used as part of a typical RFP

2. **Investments Technical Requirements and Lenders Checklist Booklet**
   - This work will help to reduce costs and shorten timelines of related procurements
     - Technical requirements to be included in an RFP will include
       - energy model
       - financial submission (on equipment and/or solution)
       - technical proposal
       - quality control which will allow the CIB and other lenders to assess the reliability of the solution/savings proposed to consider the proposal technically feasible and financially viable

Example of Early Opportunities

Sponsor	Type	Examples of Opportunities Explored
Provinces and Territories	Infrastructure, education, energy, health and government branches	*Various portfolios of eligible real estate assets belonging to a ministry or government body*
Municipalities	City portfolio assets	*Large scale portfolios of assets belonging to a municipality*
Hospitals	Hospital portfolios, rehabilitation and medical centres, health authorities	*Energy efficiency project for a singular hospital building, potential retrofits for a small group of hospitals*
Schools	School board assets	*Large scale bundling of buildings belonging to a school board*
Universities and Colleges	University and college campuses	*Campus wide energy efficiency retrofit program for a university or college*

CIB BIC

Thank you

Contact us at public.retrofit@cib-bic.ca

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