

Low(er) Carbon Building Financing

Where are we now?

Where do we want to go?

**What do we need to do and
have in place to get there?**

February 23rd, 2018



Presentation Layout

- What are we trying to do and why?
- The LIC Amendment
- CHEERIO Products
- LICs –What did the CAC say should take place?
- Loan Loss Reserves – What Role do they serve?
- On-Bill Financing
- Green Bonds
- Where Are We Now?
- Where Do We Want to Go?
- Who Needs to Do What?
- Top/Down and Bottom/UP – How can that drive and serve the market?

Why Bother?

- Municipal and community leaders want to promote deep energy upgrades to private buildings to meet provincial and municipal GHG reduction targets (i.e. 80% by 2050), reduce private energy costs, and enhance the local economic development opportunities.
- Building energy use accounts for at least 20% (provincial); 40% in a number of GTA municipalities and over 50% in the City of Toronto.
- Energy Retrofits in the building sector present some of the lowest cost energy efficiency opportunities in our communities. Plus they have significant benefits for reducing vulnerability to energy price increases and economic development opportunities and improved air quality.

The Rationale

- Energy use in buildings are a considerable cost to citizens annually (for example, \$4.5bn in Toronto, or \$1720 per person per year). \$12.5 billion in the GTHA.
- The vast majority of energy spending does not stay in the municipality (80% of Toronto's energy spending leaves the city, draining \$3.5bn from the local economy annually, \$1338 per person per year)

The Barriers

- Deep retrofits are needed to address the issues of concern – these have longer paybacks (10 – 15 years)
- Many residents sell their homes in shorter cycles (5 – 8 years) and don't want to pay to lower the bills of subsequent owners



The Solution

Groups like the Pembina Institute, David Suzuki Foundation and others promoted use of LICs to overcome these barriers, based on experience in other jurisdictions





The Amendment

In October 2012, the Ontario Ministry of Municipal Affairs and Housing authorized Ontario Regulations 322/12 and 323/12, amending O.Reg. 586/06 and 596/06 under the Municipal Act, 2001 and the City of Toronto Act, 2006

The Amendment

1. Qualifying capital works now include energy efficiency retrofits, renewable energy installation, and water conservation measures
2. Qualifying property to which LICs can apply now includes individual private property
3. Introduces use of property agreement between municipality and property owner (in addition to by-law to place charge on tax roll)
4. Enables a special charge for these works on these properties to be placed on property tax roll and receive priority lien status
5. Allows program delivery costs to be recouped



Benefits to Property Owners

- Governments can access and offer affordable financing to residents
- Municipalities can transfer LIC financing to subsequent property owners, allowing costs to be shared between current and subsequent owners

Benefits to Governments

- Reduce pressures on energy infrastructure
- Generate local economic benefits
- Reduce local air pollution
- Improve local building stock
- Supports GHG reduction goals
- Advances low carbon economy

Risks to Governments

- Implications for debt limits and credit rating
- Liability for faulty contracted work
- Default risk
- Administrative cost overruns
- Program design errors
- Lack of uptake



Risks to Participants

- Compliance with mortgage agreements
- Faulty contracted work
- Impediment to property sale
- Default risk



The Collective Approach

- TAF launched CHEERIO to support 20 Ontario municipalities in jointly exploring the opportunities and risks
- Managed by Clean Air Partnership
- www.cleanairpartnership.org/cheerio





Phase 1 Deliverables

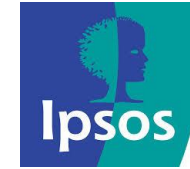
- Legal Briefing Note
- Program Design Template
- Qualitative Market Research
- FAQ and Issue Primer for municipal decision-makers

- a) Briefing Note addressing the legal/financial questions including background, basis, risks/barriers associated with implementation of an LIC financing program
- a) Professional Insight and advice on key legal matters
- a) Sample disclaimer language and sample template agreements that municipalities can use to limit liability along with detail on how the disclaimer should be implemented

- Residential LIC Financing Pilot Program Design
 - Target Audience
 - Funding Sources
 - Program Set Up and Administration
 - Marketing Strategies
 - Positioning with Residential Incentive Programs
 - Program delivery approaches
 - Participant Cost-Effectiveness Analysis
 - Risk Identification and Mitigation Strategies
- MURB Program Recommendations
- Monitoring and Evaluation Framework



Qualitative Market Research



- Gauged level of homeowner interest in undertaking energy retrofits, and specific retrofit measures
- Estimated receptivity to LIC financing and identified common property owner questions and concerns
- Proposed communications approaches to clarify LIC process to maximize consumer understanding and appeal and overcome barriers to uptake
- Identified other key barriers a LIC program should address to ensure uptake

- What is LIC financing?
- What are the implications of the amendment?
- What does LIC financing for EE upgrades look like?
- Why would a municipality undertake this type of program?
- How can municipalities finance an LIC program?
- Why would a property owner participate in this type of program?
- What risks are associated with this type of program?
- How can municipalities leverage LIC programs through partnerships?
- What kinds of measures can be included in the program?
- Who is using LIC for energy upgrades and what are they learning?

- Evolution of LICs for energy upgrades in Canada
- Provincial amendments to LIC regulations
- Using LICs for energy efficiency upgrades
- Benefits to municipalities
- Benefits to property owners
- Managing LIC program risk
- Program measures
- Leveraging partnerships



Active LIC/PACE Programs (Dunsky Energy Consulting (DEC), 2016)

Program	Jurisdiction	Model	Key Features	Established
Sonoma	CA	Local Government	Early local government-led program that has been successful in generating volume and validated energy savings.	2009
YGreen	CA/FL	Third-Party	A privately funded 3 rd party PACE provider operating in multiple states (soon expanding to GA)	2010
HERO	CA	Third-Party	An early innovator into effective PACE marketing and quick customer approval, now available in over 300 jurisdictions.	2011
Vermont PACE	VT	Government + third-party	Vermont PACE assessments are subordinate to existing mortgages, with a Loan Loss Reserve to cover private lenders	2012
Maine PACE	MN	Local Government	Established a \$20.4 million revolving loan fund, with underwriting performed by 3 rd party. PACE assessments are subordinate to a home mortgage.	2013
Open PACE	CA	Competitive	A turn-key PACE solution that offers s a choice among multiple pre-qualified PACE financing providers.	2015
Solar City	Halifax	Local Government	Financing only for solar (photovoltaic and thermal), includes direct install water conservation measures for all applicants.	2012
Home Energy Loan Program	Toronto	Local Government	Program offers low-interest loans are available using the City's reserve funds. Program requires mortgage lender consent and homme energy assessment.	2014
Residential PACE	NS	Local Government	NS Dept. of Energy providing support for administration costs for up to 25 municipalities that want to offer PACE financing.	2016

Local Government Delivery (DEC, 2016)

MODEL

The local government (municipal, county or state) provides the funds and administers the program.

Requires the government to invest in designing and implementing the program, including marketing approaches, setting eligibility criteria and financial management.

PROGRAM ADMINISTRATION

Municipal program administration may cover all aspects including registering the assessment and adding it to the property tax bill.

Statewide programs will require participating municipalities to manage the billing at a minimum.

Some aspects may be contracted to third-parties (The state charged Efficiency Vermont, the state's energy efficiency utility, with contacting each town that created a PACE district and offering to act as program administrator, at no charge to the towns.)

GOVERNMENT ROLE

Government funds typically used for lending. Requires access to municipal bonds or reserves, and often state, provincial or federal funds as well.



3rd Party Delivery (DEC, 2016)

MODEL

3rd party providers partner with local governments to access private capital and expertise offering turn key services for PACE district set up, administration and financing for energy and water efficiency upgrades.

PROGRAM ADMINISTRATION

All aspects of program administration managed by 3rd party including:

Contractor verification, training and support

Eligible product certification and verification

Municipal support

Marketing

Reporting on energy and environmental impacts

Consumer protection, support and dispute resolution

MUNICIPAL ROLE

Approves the program to enabling financing

Supervise 3rd party partner

Apply assessment to the property tax bill

OTHER

3rd Party often reimburses the municipality for the cost of registering the PACE assessment and updating the billing systems to collect the special tax



<http://www.isospro.com/images/ygrene.jpg>

Competitive/Open PACE (DEC, 2016)

MODEL

California Statewide Communities Development Authority (CSCDA) finances the installation of eligible products by issuing bonds backed by the assessments created by the Open PACE Program. CSCDA brings multiple programs to compete for homeowner's business.

PROGRAM ADMINISTRATION

CSCDA developed qualification criteria to select PACE Program Administrators to be included in the CSCDA Open PACE platform. The CSCDA Open PACE Program Administrators:

- Develop managed contractor networks in California communities
- Provide 100% financing for energy efficiency projects
- File repayment obligations through property tax bills

MUNICIPAL ROLE

California cities and counties must be a member of CSCDA and adopt a resolution to opt-in to CSCDA Open PACE in order to participate. Member cities and counties must register PACE assessments and add them to the property tax roll.



CSCDA takes responsibility for:

- ✓ entering into voluntary contractual assessment agreements with participating property owners,
- ✓ levying voluntary contractual PACE assessments,
- ✓ issuing bonds to finance improvements, and
- ✓ taking actions in the event of delinquencies.



Recommendations to the OCCSDC (GreenON)

1. Use the Organization to create a Loan Loss Reserve to back-stop municipal LICs in the unlikely case of default.
2. The Organization should pool funds together to enable the LIC mechanism to be used not only for energy efficiency actions but also for audits, energy generation, fuel switching and climate change resilience actions.
3. LICs are simply a finance tool. The need to increase energy literacy and build the market for energy efficiency and greenhouse gas reduction actions requires the advancement of **policies such as the Home Energy Labeling** requirement upon home sale listing and **Energy Disclosure** for large buildings.



Recommendations to the OCCSDC (GreenON)

4. The Organization should create a one stop location/entity that would promote and market home energy retrofits (and other energy and resilience actions to the public) and provide support to customers to help them navigate programs available to them, the incentives, informing them of their options for how they chose to manage and undertake their retrofit.

5. There is a need to ensure transparency, accountability and checks and balances to find the right balance between opening up the market while still maintaining quality control. (pre-approved contractors, ongoing checks and balances, customer satisfaction, contractor honorability)



Loan Loss Reserve – Key Concepts

- Portfolio approach to Credit
- Leverage
- Financial Institution Partnerships
- Secondary Market Support
- Parameters

Loan Loss Reserve – Sample Calculation

Loan Loss Reserve Fund Program, Sample Budget and Risk-Sharing Formula Calculations		
1	LLR grant budget	\$1 million
2	Grant funds for program development and operations	\$100,000
3	Net funds for LLR escrow account	\$900,000
4	"First losses" as % of total original principal	5%
5	Share of first losses borne by LLR	90%
6	Share of first losses borne by financial institution partner	10%
7	Total lending that can be supported with this LLR risk-sharing formula	\$20 million
8	Average portion of energy efficiency projects paid by loans (homeowners/utilities/others cover the remaining 20%)	80%
9	Total energy efficiency project investment that can be supported	\$25 million
10	Leverage ratio #1 (LLR funds to total lending product size supported)	22.22
11	Leverage ratio #2 (LLR funds to total energy efficiency project investment supported)	27.78

Loan Loss Reserve - Examples

- **Example 1 Deposit Insurance Corporation of Ontario Bylaw No 6 Reserves and Monthly Provisions for Doubtful Loans**
- **Example 2 Canada Hog Industry Loan Loss Reserve Program**

On-Bill Financing – Enbridge

- Natural Gas Utilities: have been able to undertake on-bill financing for over 20 years.
- Provided 3rd party financing to the commercial sector in the early 2000s (up until about 2006). Turn capital costs into operating expense. Bank was billing customers but were able to bill under the name of Enbridge. Enbridge chose which banks they would align with and banks identified what kind of customers they were looking for (condo, commercial sector, etc)
- Presently providing 3rd party billing service with HVAC equipment (commercial/residential). Enbridge is the go-between for collection between contractor and customer. Gas bills have priority status; fee for service; not collected then not remitted. No liability to Enbridge.
- 3rd Party financing. Home Energy Retrofit program undertaken in Markham. Very little uptake.
- Presently testing out on-bill financing for geo-thermal new construction. Access to the geothermal loop financed by Enbridge. No furnaces in units.
- Working in partnership with Alectra on a pilot for Micro CHP generate electricity, heat and battery storage.

On-Bill Financing Electrical Utilities

- Regulation Decision Notice: Electricity utilities may undertake on-bill financing for electricity conservation and demand management measures under the Ontario Energy Board Act, 1998 and the Electricity Act, 1998.
- The purpose of the amendments is to clarify that on-bill financing for electricity conservation and demand management measures is an activity that electricity utilities can undertake.
- Date Decision loaded to the Registry: April 29, 2016
- No uptake by LDCs yet. Issues: Electric bills have priority. Can't shut down account for non payment of loan.
- Would loan-loss reserve serve a need for this issue as well?



Green Bonds – Province of Ontario

- Green Bonds are debt securities where the issue proceeds are utilized to fund projects with specific environmental benefits.
- Ontario: first Canadian province to issue Green Bonds: in 2014 launched Green Bond program, bond of \$500 million. In 2016, second global Canadian dollar bond of \$750 million. In 2017 launched an \$800 million re-opening of its January 2023 Global Green Bond.
- The Eglinton Crosstown Light Rail Transit (LRT) was selected as the first green project to receive funding from Ontario's inaugural Green Bond issue.
- Does not accept Green Bond project submissions directly from the broader public and only fully approved government projects of the Province of Ontario can be considered for Ontario's Green Bonds.
- Ontario's Green Bonds are standard debt obligations of the Province and rank equally with Ontario's other bonds. Payments of principal and interest will be a charge on and payable out of the Consolidated Revenue Fund of Ontario and not tied to the revenues of any particular projects.

Green Bonds – Municipal

- Ottawa is first Canadian city to issue Green Bonds – 30 year offering of 3.25% notes. Will be used to finance LRT.
- Raised C\$102 million of a 3.25 percent bond that matures in November 2047
- City's green bond framework says that debentures are green if they are used to finance capital projects that promote environmental sustainability, all part an effort to mitigate and adapt to the effects of climate change, reduce greenhouse gas emissions and promote the transition to a low carbon economy.



Discussion Topic # 1: Issues and Challenges communicated by municipal department/stakeholders

- 1. What conversations have taken place within your municipality?**
- 2. With whom/what departments?**
- 3. What have they said to you?**
- 4. What issues would need to be addressed for your municipality to get involved in retrofit programs/financing?**
- 5. Have there been discussions in your municipality related to using LICs for climate change resilience measures? What are some of the questions you have related to this?**

Discussion Topic # 2: Questions from CAC members on Financing Options

(loan loss reserves, cap and trade funds, Infrastructure Ontario, local improvement charges, on-bill financing, green bonds)

- 1. What questions do you have related to any of the above financing options?**
- 2. What financing options have we missed that you think should be considered?**

Discussion Topic # 3: If CAC members could design their ideal Building Energy Retrofit program what would it look like and why?

- 1. What would the province do?**
- 2. What would municipalities do?**
- 3. What role would the community play?**
- 4. What value can the top/down and bottom/up approach play in driving and servicing demand?**
- 5. What would skill/trade improvement would need to be put in place?**



Discussion Topic # 4: What about New Buildings – How Could/Should that program look

- 1. How can any of the financing mechanisms play a role in addressing up front capital costs for new builds?**
- 2. Are they necessary?**
- 3. What are additional issues that would need to be dealt with? Ex. training**
- 4. What could the Province do? What could municipalities do? Universities and Colleges? Trade Associations?**