Clean Air Council Meeting, January 25th, 2019

Marco Iacampo and Betsy Young, City of Toronto's Green Bond and Carbon Financing Next Steps

Summary Notes

City of Toronto: Green Debenture Program link to the presentation.

Background

The Environment and Energy and Finance Department worked together to develop the Green Bond debenture. This partnership was instrumental in advancing this effort, as the skill sets and expertise from the two different department were required to bring the necessary expertise to the task.

The effort began via the Transform TO – Toronto Climate Action Strategy. Transform TO commits the City to a GHG reduction target of 80% reduction from a 1990 baseline by 2050 (as of 2016, a 33% reduction has been achieved).

The Strategy has 23 Low Carbon short-term actions that spans policy, programs, and action such as new building standards, home energy retrofits, transportation and waste.

The Investment opportunity by 2050 to implement those actions and achieve those reductions is in the range of $60 billion. About **2/3 of the action have a positive net present value. Which means that future energy cost savings are greater than the initial capital investment. Low carbon actions are not just environmental beneficial but also they make strong economically sound business cases. But there is the need to bring in private sector capital into the carbon reduction actions.**

Q: Is the Building Sector most likely to be with net positive value and more difficult NPV to be achieved from the Transportation sector?

A: Not really. There isn't any generalizations across sectors for the most part. There are better results re the financials on the electricity side than on the natural gas side but with Ontario's low carbon grid electricity reductions doesn't help us much on the GHG front.

Q: Does the NPV financial modeling look at only the financials of energy savings to the municipality or does it include other benefits, such as health and clean air benefits? It only looked at the financial energy savings and the GHG price in its business case analysis. If co-benefits are taken into consideration that will already augment the already positive business case with those that are already NPV positive. If co-benefits are quantified that may make a significant difference to helping to build the business case for those actions that at present do not have a positive NPV.

A: The model is limited in its ability to quantify the **co-benefits**. So another piece of work we are hoping to undertake in Toronto is looking **at internalizing all the external benefits of low carbon actions** (i.e. improved local air-quality, health) and reflecting that in the business cases. **We do that through social price of carbon, also called a shadow price on carbon in order to boost the business cases to more accurately reflect the societal impact.**

Green Bond Market

More investors continue to shift towards socially responsible investing. Not only are there more green and sustainable funded bonds, but also more and more regular funds are incorporating sustainable/green factors.

Globally there are more Green Bonds issuance in the last 3 years. And in Canada, we have had 13 deals worth $8.3bln (2018). The Green market has seen a big jump in the last year.

Globally the larger issuance are still in Europe but there have been increases in China, Australia, and Canada.

Toronto's Green Bond Program started in 2018. It is the second municipality to start it in Canada (after Ottawa).

The Green Bond Program acts like a General obligation bond but funds are used for supporting City's environmental sustainability strategies. There is the need to establish eligibility criteria such as annual reporting as well as the need to undertake a compliance assurance that the projects matches the framework set up for the Green Bond. The standard of requirement should keep going up – increasing standards (example Clean Water is not enough, next step is to be enhanced the efficiency, or some kind of improvement).

The real cost drivers upfront are getting council to approve a framework and the need for a second party opinion (the price of the latter being negotiable).

In 2018, Toronto City issued a $300 million where 36 investors buying into it.

Q: How does Green Bond works just like any municipal bond it is just that the projects have to fit a green criteria as decided upon by the municipality and that criteria has to be open and transparent to the investors.

The Green Bond framework can be found here.

It has received a positive external opinion from Sustainalytics, a leading Green Bond second-party opinion provider. The opinion can be found here.

<u>Green Bond Program Framework</u>

Has 4 pillars:

1. Use of Proceeds – Project Eligibility Criteria
2. Project Evaluation and Selection Process
3. Management of Proceeds
4. Reporting

For example, the eligible projects in Toronto are:

- Renewable energy
- Energy efficiency
- Pollution prevention & control and utilizing waste as a resource
- Sustainable clean transportation
- Sustainable water and waste water management
- Climate change adaptation and resilience
- Eco-efficient and/or circular economy principles integration
- Green buildings

<u>Selection Process of Eligible Projects:</u>

Working with other divisions such as EDD, TTC to select qualifying projects, where the difficult part is as a financial team may not be able to understand what the project means – that is why there **is a need for collaboration with other divisions**.

- Corporate Finance Division (CFD) responsible for management of issuance and selection of eligible projects in consultation with internal and external expert stakeholders
- Environment & Energy Division supports CFD to ensure suitability and eligibility of projects
- Eligible projects must be included in the council-approved capital budgets and needs to be verified by external legal firm

<u>Management of Proceeds:</u>

- Majority of capital projects funded by bond proceeds have been completed or are substantially complete
- Bond proceeds applied directly to project to repay temporary funding for the project
- Bond by-law includes schedule listing capital projects to be financed by the debenture
- In the rare cases, where substantial completion has not yet occurred, funds will be held in a City account and tracked to ensure future allocation to the designated projects in compliance to the debenture by-law.

<u>Reporting:</u>

The City will publish an annual newsletter on its website to address both funding allocation and sustainability impact reporting including:

• Bond by-laws outlining the specific projects and amounts funded by green debentures;

• Summary of the City’s green bond program developments including existing and future projects;

• Updates with respect to distribution of unspent bond proceeds;

• Project updates and status reports for Eligible Projects, when possible

• Key performance indicators on projected environmental benefits

<u>First Issuance: Eligible Projects</u>

Project	**Eligibility Criteria**
TTC -Leslie Barns LRT Maintenance and Storage Facility - Purchase of Subway Cars - Scarborough Subway Extension - Renewal of Core and Supporting Infrastructure of Electric Rail	Sustainable Clean Transportation
Union Station Revitalization	Energy Efficiency

Green Bond are only applied to infrastructure projects that are city ‘owned, not private sector.

Q: Can municipality issue Green Bond and set up a Green Bank – then loan that money to householders and private sector company for retrofits? **(Can it be used to finance community initiatives?)**

A: We believe you can but needs to be checked. (Can be set as a research question).

Q: Energy efficiency and GHG reduction projects have a positive NPV which pays for the project, but how about other sector projects that do not pay itself? That is being explored now.

The TTC project is recoverable debt that they will pay back thought the tax base, but the savings from use of renewable is also part of paying back.

Key Message when talking with financial team is:

- Green Bonds are no different than General Bonds

The difference:

- There is the need for a framework to be developed, the need of third party opinion (based on the developed framework) and ongoing reporting.

4 EcoFiscal Toolbox

There are 4 ecofiscal tools that the city has in play today:

EcoFiscal meaning – Dedicated revenue streams or incentive offering linked to trying to insight actions on a part of residents and business to do low carbon action to support the cities in their sustainability and environmental goals.

1. Recoverable Debt Financing - eligible to corporate building facilities (agencies) and non-profit sector. It is an internal loan to a city division who may be building a new recreational center and it wants and need to be energy efficiency with sustainability features of that building. So to be eligible to access this funding and get to repay it over a time:
   - Project must demonstrate a positive business case and payback within 20 years. – it has to have future savings or revenue stream greater than the capital cost.
   - Virtually 'no limit' to resources available via the recoverable debt model.

   Shadow pricing carbon can be part of the business case for these projects which boosts the business case for natural gas, which is low cost but has a high GHG reduction potential and benefits projects that fuel switch.

2. Local Improvement Charge Financing
   - 2013 the province made regulatory changes that allows all municipalities to effectively to provide funding to private property owners to undertake environmental work – energy efficiency, GHG reduction and etc.
   - It works as a loan – where the municipality provides the funding and it is repaid over time through tax bill. But it is not a debt obligation because it is attached to the property and it is treated differently.
   - Homeowners benefit from low-borrowing rates and longer payment terms.
     The added benefit is should the property sell at any point during the payment term the obligation transfers to the next property owner.

Q: How many properties have sold while you are working on it?

A: Hard to track. It is a research question.

The goal is to retrofit all buildings by 2050. Applying LICF to any private building that access capital from the city for deep retrofits.

3. Development Charge Refund
   - Toronto Green Standard has a Development Charge Refund which incentivises developers to build buildings with high energy performing and additional sustainability features.
   - Typical refund for a condominium tower is about $500,000
   - Cost-benefit analysis shows $1.2 billion in avoided costs over 25 years related to infrastructure expansion

4. Carbon Offset Credits

Supply offsets which are quantified emission reductions and be able to commercialize and realize new revenues by establishing markets for them. So the banks and other private sector that have the carbon neutral commitments as organizations where they can reduce their emissions by 80% but they will turn to an offset market to buy the balance of those reductions in order to make a claim that they are carbon neutral. So the city saw an opportunity to be a supplier for those reductions to other organizations.

Q: What can be done to tell this story to Municipal Finance Officers? we can present. The Green Bond market is unique in regards to size so different municipalities will need different strategies to build the market**. But investment funds, insurance companies, and retirement plans are potential investors that are logical targets for green bonds.**