

**Opportunities for Green Energy
Financing in Highrise Condominiums
Through
The Recently Tabled Green Energy Act
& The Condominium Act**

For more information contact:

Harry Herskowitz: harry@dzlaw.com

Jamie James: jamie.james@sympatico.ca



VERVE
(LEED-NC Candidate)
39% Energy Savings

TRIDEL®
BUILT FOR LIFE



TOTAL:

- ✓ 5M Square Feet in LEED (target)
- ✓ 5,000 Dwellings
- ✓ 95000 tCO2e/yr Avoided



REPUBLIC
& North Toronto Collegiate School
(LEED-Silver Candidates)
33% Energy Savings

METROGATE
LEED-ND (Pilot)



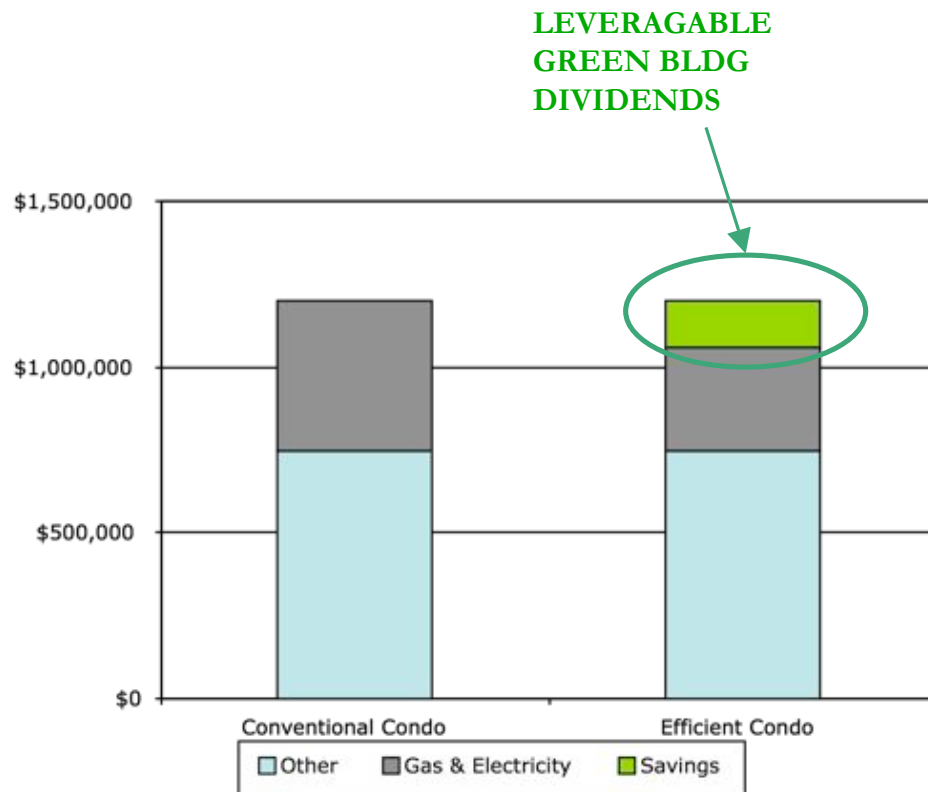
GRAND TRIOMPHE II
(LEED-NC Candidate)
34% Energy Savings

SOLARIS

@ Metrogate
40% Energy Savings



Green Loans™



CONCEPT:

Incremental Cost Financing Without Increasing Prices for Green Condos

Leverage Life Cycle Savings That Accrue to the Condo Corporation

Minimize Capital Cost Barriers for Green Condo Construction

Secure Financing on Condo Building Assets and Cash Flow

A Public-Private Partnership for Green Building Financing

THE LENDER

TORONTO ATMOSPHERIC
FUND
TowerWise

An Agency Established by Toronto City Council to Finance Projects That Reduce the City's Emissions of GHG and Air Pollutants

THE DEVELOPER

TRIDEL[®]

Toronto's Leading Developer of Condominiums (>1 Million Sq Ft of New Construction Annually)

PROGRAM

PHASE I: PROOF OF CONCEPT LOAN

PHASE II: SYNDICATION OF COMMERCIAL PRODUCT

Proof of Concept: The Verve Condominium Tower



THE TAF LOAN

- \$475,000 Round I
- \$950,000 Round II

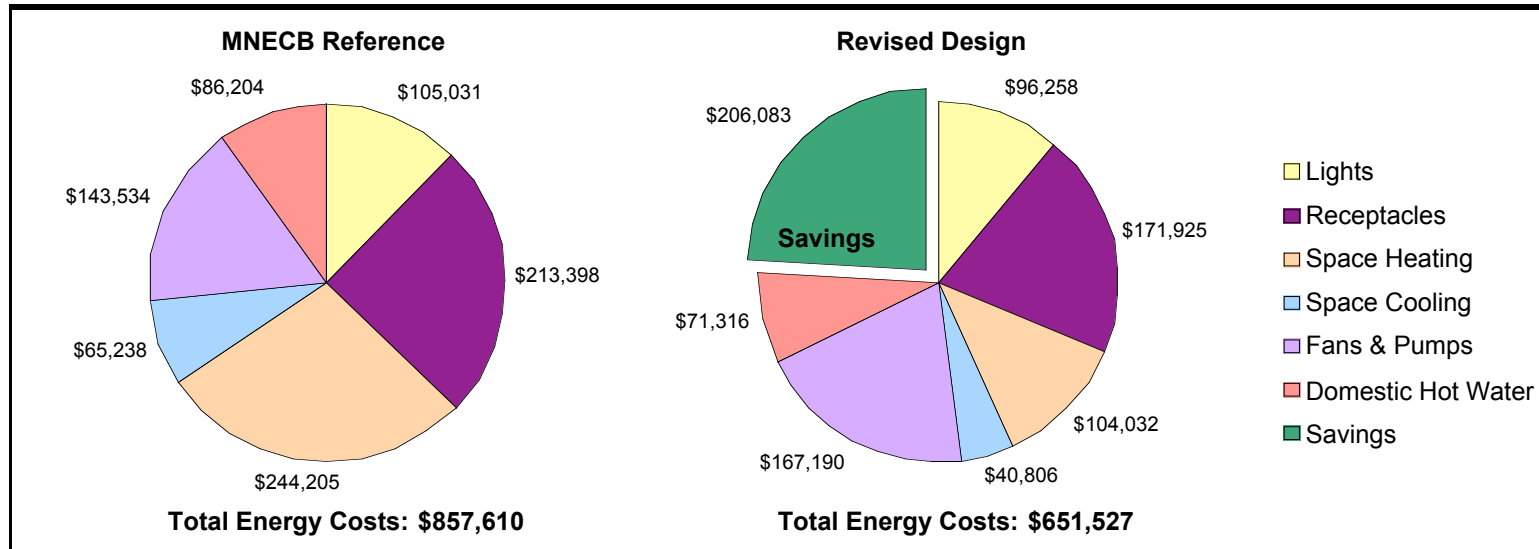
HOW IT WORKS

- Negotiate Green Loan
- Design & Build EE Building
- Advance Energy Efficiency Investment
(Developer's cost)
- Validate Energy Simulation
 - Natural Resources Canada
 - City of Toronto
- Invest in Incremental Costs
- Advance Loan to Condo Corp
- Funds Reimburse Developer
- P+I Repaid out of Savings (7 - 10 years)

Engineering Energy Efficient Condos for Green Loans

SUMMARY OF RESULTS 1

Scenario	HVAC Loads		Energy Performance		Annual Energy Costs			Comparison to 'Base Design'			
	Cooling Capacity Tons	Heating Capacity MBH	Total Energy kWh/m ²	% Energy Savings to MNECB	Electricity Cost	Natural Gas Cost	Total Energy Cost	Annual Energy Cost Savings	Cost of Measures	HVAC Cost Savings	Simple Payback in Years
MNECB Reference Building	-	-	366	-	\$ 527,201	\$ 330,409	\$ 857,610	-	-	-	-
Base Design (refer to Page 2)	688	9,739	261	28.8%	\$ 507,846	\$ 186,348	\$ 694,194	-	-	-	-
Revised Design (refer to Page 6)	525	8,320	245	33.1%	\$ 476,179	\$ 175,348	\$ 651,527	\$ 42,667	\$ 266,050	\$ 135,405	3.1
CBIP Performance					CBIP Fuel Cost Savings: \$ 206,083				Net Cost (without CBIP): \$ 130,645		
					CBIP Incentive: \$ 60,000						
LEED Performance (based on proposed Canadian equivalent)	Receptacle and fixed energy costs:			\$ 171,925	Energy Cost Savings % (excluding receptacle & fixed energy costs):					30.1%	
					LEED Energy Points (out of 10):					2	
Greenhouse Gas Emissions Reduction (based on Ontario fuel mix)	tonnes CO ₂ /year:			889.2							



1: Sample engineering report. Not final results. Final government-validated results: 39%

Impact of Green Loans in Toronto

Status

- ~ \$10M in green financing committed
- Other developers adopting the model
- Mainstream Financial Institutions evaluating a role

Next Steps

- Engage major commercial lenders
 - Lenders still wary of security instruments established in pilot
 - Legacies of Section 112 of the Condo Act and Condo Corp behavior
- Province-wide (or national) program could build on existing pilots
- Building valuation studies to affirm actual savings vs projections

Long-term

- Green Mortgages for homeowners

Alternative Model: Green Energy Micro-Utility System



- Dockside Green in Victoria, BC
- Greenhouse gas neutral biomass district heating system servicing a new 15-acre, 1M sf redevelopment.
- Long-term energy service contracts assigned to Strata Councils



Developer:

Vancity Capital



Financing Approach: Micro-utility leverages additional investment



DOCKSIDE GREEN GHG Neutral Biomass District Hot Water

- Central Energy Plant (CEP) with Green Energy Technology adds significant cost but offers opportunity for long-term cost recovery and returns to investors
- Initiated third party owned-operated district energy system
- Multi-Shareholder Structure (Developer owns shares)
- Revenue from sales of hot water. On-site and off-site customers
- Fuel source is waste wood
- Similar program in place for centralized wastewater treatment, reclamation and re-use facility (except that asset is owned by community strata council)

Impact of Utility Model

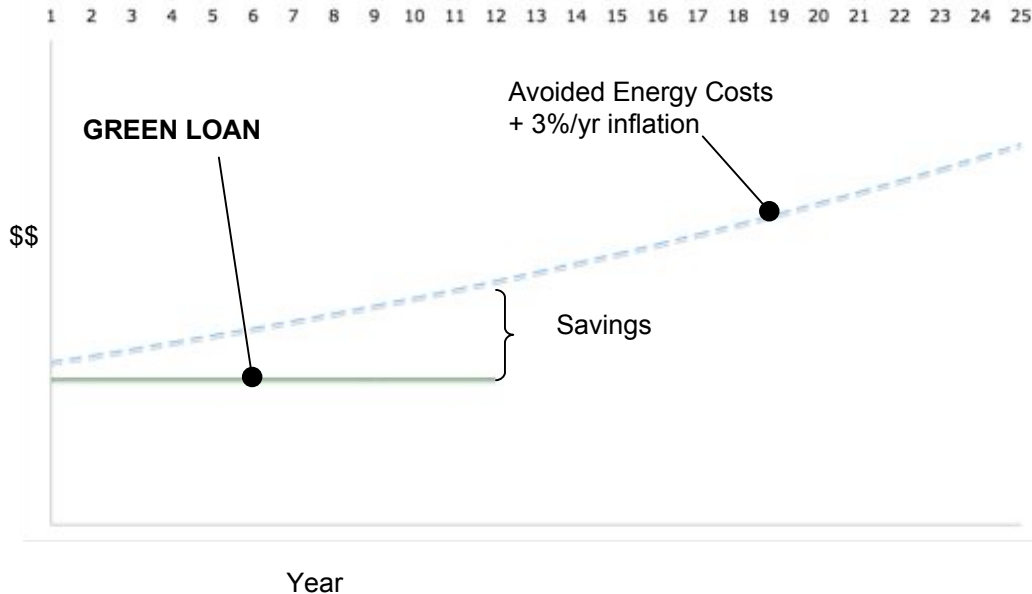
Status

- Favored approach of public planning efforts on large “green” communities
 - Regent Park (TO)
 - Toronto Waterfront Redevelopment
 - Olympic Village and Southeast False Creek (Vancouver)
- Large public sector systems in place
 - Enwave (TO)
 - Markham District Energy

Challenges

- Private sector initiatives handicapped by contract risks
 - Who owns risks associated with *Section 112 of the ON Condo Act*?
 - This question killed two large Geoexchange and Solar Thermal projects for Tridel in Toronto
- Determining appropriate Tariff Structures in unregulated context

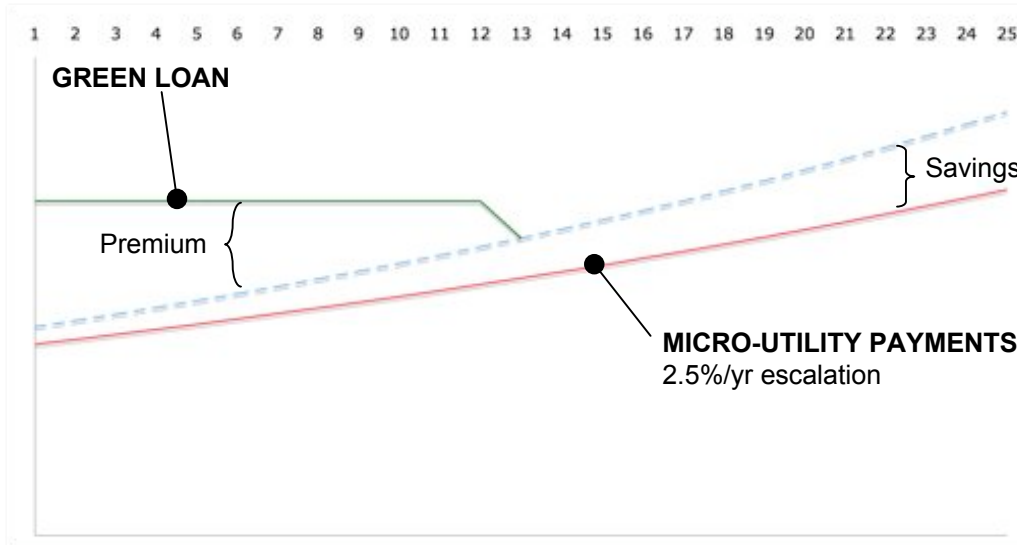
Summary of Alternative Models Discussed



ENERGY EFFICIENCY

- A “Basket” of Approaches
- Low Hanging Fruit - Quick Payback
- Beneficial to Property Value Impacts

Ideal for Green Loan or Green Mortgage



ON-SITE GENERATION ASSETS

- More Expensive Assets
- Additional Risk
- Longer Amortization

Utility Model May Be Necessary

Discussion