

NEER Stakeholder Advisory Group Meeting Notes

Customer: Town of Newmarket

Project: Home Efficiency Business Plan

Date / Time: June 25, 2019 – 18:30 to 21:00 EDT

Topic: Stakeholder Advisory Group Meeting #4

Prepared for: Meghan White – Town of Newmarket, Project Manager

Copied to: Stakeholder Advisory Group (SAG), Project Working Team, Public

1. Background

These Meeting Notes summarize the Stakeholder Advisory Group (SAG) held at the Newmarket Town Hall on the 25th of June 2019 between 6:30 and 9:00 pm.

The meeting agenda and participants are included in Annexes 1 and 2. These Notes were prepared by Karen Farbridge and Rob Kerr (PWT) and Adir Glikson (Town of Newmarket).

2. Agenda Review and Introductions

Josh Campbell as Chair. The meeting kicked off with a review of the agenda (see Annex 1). No changes. Agenda approved.

3. SAG Business

SAG #3 Minutes

Minutes from the last SAG meeting, February 17, 2019, were reviewed and approved. No revisions.

Business Arising

No business arising.

Communication Protocol

Adir Glikson introduced a communication protocol to the SAG members.

R-NEER Planning and Decision-Making Journey



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Business Case vs. Business Plan

- The **Business Case** answers the question:
 - Under a credible set of assumptions, is there a business case that can be made that meets reasonable community, market and economic goals?*
- If the answer is yes, then the next step is to assign reasonable resources to complete the due diligence including supplemental market testing and risk assessment to develop the **Business Plan** for final approval.
- The **Business Plan** would be developed by the Entity as the proposed program administrator.
- The Business Case informs the Entity in finalizing the program design and business model as well as developing the **Business Plan**.

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Recommendations to Council Scope

- Receive Business Case (2019)
- Establish an Entity (early 2020)
- Submit application for FCM funding (e.g., start-up working capital, loan loss reserve) (early 2020)
- Engage with Entity on final program design & business model (2020)
- Pass an LIC By-law and enter into an agreement with the Entity to offer financing to homeowners (early 2021)

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Karen Farbridge provides the SAG with a brief overview of the decision-making process. The scope of potential recommendations to Council was discussed in anticipation of presenting the final report to the Council.

Role of the SAG

Role of SAG

- Oversee Business Case development
 - Recommend to Town Council
 - Delegate to Town Council
 - Advocate for implementation
- Do you continue to meet quarterly to monitor progress?*
 - Do you support the Entity in mobilizing the community?*

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The SAG was provided with a very brief overview of its role in anticipation of their final report to Council.

4. Analytical Process

Peter Garforth, representing the Project Working Team, provided a summary of the results of the Analytical Process specific to the description of the proposed retrofit business models, as follows.

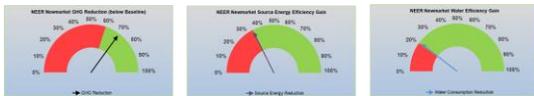
Overview

Introduction
Start with the end in mind

Project Purpose
Business Case

- Goals
 - Reduce annual GHG emission by 60%
 - Increase annual energy efficiency by 35%
 - Increase annual water efficiency by 20%
- Business Case meets or exceeds goals

- Investigate the feasibility of establishing an entity to deliver high quality, standardized residential energy efficiency retrofit packages to most Newmarket homes.



Predicted Performance Summary in 20 years

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Residential Baseline Case Study (2017)
Updated

- Newmarket's residential sector:
 - Consumed 4.3 million gigajoules in 2017
 - Cost of \$74 million
 - Emitted 126,000 metric tonnes of GHG
 - Annual costs expected to increase to between \$151 to \$258 million by 2042.

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Mr. Garforth provided a brief overview of the initial Goals and Purpose of the Business Case project as well as a high-level summary of the quantified attributes of Newmarket's Residential Sector.,

Assumptions

The Business Case is developed based on a series of well-researched assumptions. These assumptions were presented to the SAG for their feedback.

Business Case Assumptions

- Entity is structured as a Municipal Services Corporation
- For-profit structure
- Functioning with little or no profit (social enterprise)
- Other Business Case assumptions can be stress tested (energy price outlook, inflation, interest rates and project costs and volumes)

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Initial Target Market Assumptions

- Single-family homes 20 years or older (13,000 homes)
- Highest potential for cost-effective and environmental impactful retrofits



Map of all single-family homes in Newmarket (L) & a map of all single-family homes in Newmarket 20 years and older (R)

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Retrofit Pricing & Managing Risk Assumptions

- Standardized retrofit packages would be designed based on home type and age (i.e., by building code)
- Pricing per category would be based on a fixed index per m² to simplify transaction for homeowner and contractor.
- Typical package cost estimated to be between \$25,000 and \$30,000.

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Retrofit Core Packages Assumptions

- Designed to deliver 30 to 50% annual energy savings using existing technology

Retrofit Core Package Standard Package by Home Type & Age

- Weatherstripping
- Attic insulation
- Other insulation
- Lighting
- Water
- Other

Retrofit Core Package Possible Option Packages

- Solar PV
- Solar Hot Water
- Car charging port
- Reroofing?
- Heat pumps?
- Geothermal?
- Energy Management?
- Other

Typical R-NEER standard retrofit package (L) & add-ons (R)

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Market Penetration Assumptions

- 700 to 1140 retrofits/year
- 80% of homes by 2042
- As homes become 20 years or older, they are targeted
- Multi-family homes targeted after 2 years
- 3% to 4% penetration rate by home category

Home Category	Start Year	Yearly Rate	End Rate
Pre-1975 MF LOW [Y] AC	2024	3.0%	80%
Pre-1975 MF MID [Y] AC	2024	3.0%	80%
Pre-1975 SFTH [Y] AC	2020	4.0%	80%
Pre-1975 SFSD [Y] AC	2020	4.0%	80%
Pre-1975 SF [Y] AC	2020	4.0%	80%
1975-1997 MF LOW [Y] AC	2024	3.0%	80%
1975-1997 MF MID [Y] AC	2024	3.0%	80%
1975-1997 SFTH [Y] AC	2020	4.0%	80%
1975-1997 SFSD [Y] AC	2020	4.0%	80%
1975-1997 SF [Y] AC	2020	4.0%	80%
1998-2011 MF LOW [Y] AC	2026	3.0%	80%
1998-2011 MF MID [Y] AC	2026	3.0%	80%
1998-2011 SFTH [Y] AC	2024	4.0%	80%
1998-2011 SFSD [Y] AC	2024	4.0%	80%
1998-2011 SF [Y] AC	2024	4.0%	80%
POST-2012 MF LOW [Y] AC	2034	3.0%	80%
POST-2012 MF MID [Y] AC	2034	3.0%	80%
POST-2012 SFTH [Y] AC	2032	4.0%	80%
POST-2012 SFSD [Y] AC	2032	4.0%	80%
POST-2012 SF [Y] AC	2032	4.0%	80%

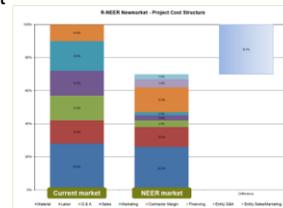
Annual R-NEER market penetration rate based on home age/type

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Market Transformation Assumptions

- 30% cost savings over traditional retrofit market



Current energy retrofit market vs. the NEER energy retrofit market

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R-NEER Opportunity Assumptions

- Energy modelling demonstrates an annual reduction of 30% to 50% annual energy savings using existing technology
- At least 40% of annual value of retrofits translates into local jobs
- By 2041 annual energy savings will be \$43M to \$79M

	2020*	2021*	2022*	2023*	2024*	2025*	2030*	2042*
Total M\$Bt	\$17.6B	\$17.9B	\$18.3B	\$18.7B	\$25.0B	\$25.5B	\$37.8B	\$12.9B

Estimated Annual Values of NEER Residential Retrofits for selected years from 2020 to 2042

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Financing & Fund Flows Assumptions

- No subsidies or incentives
- Sources of Funds
 - Loans from Lender Partners
 - Customer payments via property taxes
 - Interest on unused loans
 - Initial working capital to form Entity
 - Public incentives (assumed zero in current analysis)
- Uses of Funds
 - Lender interest payments
 - Lender capital repayments
 - Contractor payments
 - Entity Operational expenses
 - Community Group sponsorship



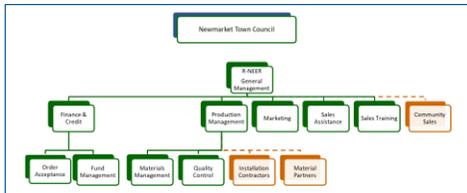
Funding Flow Chart for R-NEER

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Organization Structure & Cost Assumptions

- The Business Case assumed the following organizational structure:



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Local Improvement Charges Assumptions

- LIC financing mechanism
- LIC annual payment will be the same or less than utility savings

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Transaction Flow Assumptions

- Home age and type qualifies for LIC treatment
- Entity promotes retrofit to homeowners
- Homeowner orders from Entity using standardized pricing
- Entity screens and approves homeowner mostly based on property tax payment history
- Entity assigns order to partner contractor
- Contractor installs installation
- Entity approves installation quality
- Entity borrows from lender at a small premium over Provincial 20-year bond rate
- Entity pays contractor using standardized pricing
- Entity advises own LIC increment amount
- Homeowner pays own LIC increment for 20 years
- Town pays Entity LIC increment
- Retrofit obligation survives change of ownership
- New owner continues LIC increment payment



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Organization Costs Assumptions

- The Business Case assumed the following payroll and organizational costs:

Function	Headcount	Salary etc.
General Manager	1	\$100K + 12% bonus
GM Assistant	1	\$50K + 4%
Finance Manager	1	\$115K + 12%
Finance Specialist	1 to 2	\$75K + 6%, phased by retrofit volume
Sales Training	1	\$50K + 2% focus on Community Group training
Sales Assistance	1	\$50K + 15%, focus on HP sales targets
Marketing Specialist	1	\$80K + 6%
Production Manager	1	\$120K + 2%, focus on contractors and QC
QC/Training Specialist	1 to 2	\$55K + 2%, phased by retrofit volume
Material Manager	1	\$100K + 6%, focus on strategic selected suppliers

Item	Assumptions
Legal costs	\$50/year
Legal costs	Costs associated with homeowner and contractor contracts
Marketing & Sponsorship costs	\$100/year
Marketing & Sponsorship costs	Partners and Sales Partner Organization support costs (not salaries)
Rent	\$20,000/year
Rent	Unsubsidized Energy Efficiency Centre
Travel & Miscellaneous	2% of payroll
Travel & Miscellaneous	Office supplies, utilities, travel, etc.
Other Costs Increase	1.0% / year
Other Costs Increase	
Salary Increase	1.0% / year
Salary Increase	
Social Security Overhead	20% of payroll
Social Security Overhead	Average used for all salary ranges

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Key Findings of the Business Case

Based on the assumption identified in the previous section, the SAG was presented with an overview of Key Findings

Profitability & Equity *Business Case Key Findings*

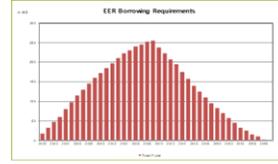
- Start up working capital estimated as \$632,000
- Year 2 after tax profit \$1M rising to \$2M per year through to 2041
- Potential retained earnings by 2041 exceeds \$400M and will continue to rise until 2062 as remaining LIC payments are collected
- Estimated 2042 equity value of the Entity is \$3.8MM

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Net Borrowing Requirements *Business Case Key Findings*

- Maximum borrowing approximately \$255M in year 2039, falling to zero by 2058.
- Borrowing appears on Entity's balance sheet



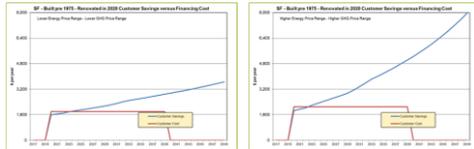
Entity's annual net borrowing requirements

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Homeowner Perspective *Business Case Key Findings*

- Utility annual savings outpace homeowner's payments under both the low-case and high-case energy cost scenarios



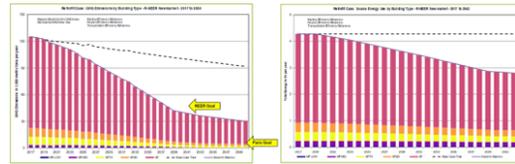
Lower-case (L) and Higher-case (R) utility annual savings from an R-NEER retrofit versus annual LIC payments

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Program Results *Business Case Key Findings*

- Achieves (energy) or exceeds (emissions) R-NEER goals
- Makes good progress towards achieving the Paris Agreement goal



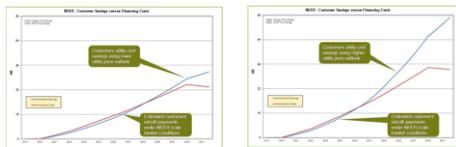
Predicted annual GHG reduction rate (L) & source energy usage reduction rate (R) by 2042

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Program Savings vs Cost *Business Case Key Findings*

- Annual utility cost savings for all NEER customers will surpass the total annual retrofit payments for these customers within 10-15 years of the first retrofit.
- Individual customers will see savings and payments balance out almost immediately after retrofit.



Program savings versus financing cost lower-case (L) & Program savings versus financing cost higher-case (R)

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Community Summary *Business Case Key Findings*

- Significant electricity, gas and water savings and GHG reduction in 2042 and 2059 are summarized in the following tables:

Lower Price Outlook				Higher Price Outlook			
Item	Units	2042 R-NEER Plan Horizon	2059 Financing Complete	Item	Units	2042 R-NEER Plan Horizon	2059 Financing Complete
Electricity saved	GJ/yr	238,590	256,080	Electricity saved	GJ/yr	238,590	256,080
Gas saved	GJ/yr	638,840	882,220	Gas saved	GJ/yr	638,840	882,220
Total Energy Saved	GJ/yr	1,077,830	1,138,298	Total Energy Saved	GJ/yr	1,077,830	1,138,298
GHG avoided	mt CO ₂ e/yr	87,480	99,880	GHG avoided	mt CO ₂ e/yr	87,480	99,880
Water	m ³ /yr	949,560	1,040,100	Water	m ³ /yr	949,560	1,040,100
Electricity cost reduction	\$	294,303,000	1,090,152,000	Electricity cost reduction	\$	205,880,000	614,812,000
Gas cost reduction	\$	214,721,000	1,106,847,000	Gas cost reduction	\$	148,743,000	515,219,000
GHG cost reduction	\$	133,129,000	412,469,000	GHG cost reduction	\$	48,048,000	154,297,000
Energy cost reduction	\$	642,153,000	2,609,268,000	Energy cost reduction	\$	402,671,000	1,264,328,000
Water cost reduction	\$	80,479,000	292,408,000	Water cost reduction	\$	57,034,000	166,860,000
Homeowner payments	\$	558,400,000	1,039,940,000	Homeowner payments	\$	440,370,000	793,830,000
Net savings	\$	166,232,000	1,881,736,000	Net savings	\$	193,965,000	637,558,000

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Scale and Market Penetration

- No market equivalents
- Seeking market transformation
- Addressing climate change will require major social change



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SAG Feedback to Assumptions and Key Findings

Feedback from the SAG during this meeting has been compiled and shown in Annex 3. This input will also inform the development of the Final Report to Council which will be presented at the next SAG meeting. Note: The Annex will also include feedback received before and after the meeting.

Engagement Update

Homeowner Focus Group

Key Learnings

- “Show me” the market transformation in pricing
- LIC loan optional
- “Free” retrofit
- Support for program regardless of interest
- Flexibility

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Community Survey

Homeowner Survey Key Findings

- 66% of surveyors considered an energy-efficiency retrofit within the last year.
- 42.6% have never completing a project and an additional 3.3% are due for an upgrade (10+ years).
- Surveyors were most interested in window upgrades, HVAC upgrades, and attic insulation upgrades
 - *Relates closely to heating/cooling applications which are some of the costliest to retrofit.*
- Linkage between completion of home energy-efficiency retrofits and financial support.
- Over 86% of surveyors interested in the R-NEER.
- Approximately 69% of those surveyed interested in LICs.

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Homeowner Survey Future Considerations

- Why are homeowners reluctant to retrofit?
- How to make standardize retrofit packages more attractive to consumers?
- How do we decrease LIC anxiety?

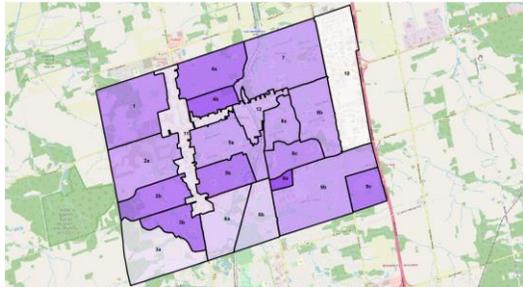
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Mapping Update

To support the implementation of the NEER program and the targeting of areas of high-efficiency potential, the following maps were provided.

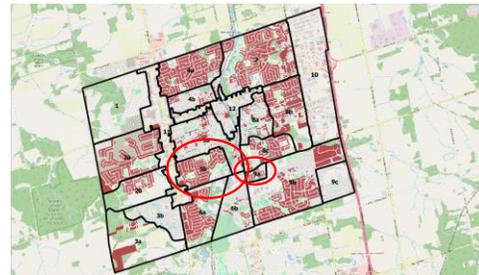
Newmarket Residential Sector 2017 Energy costs by Energy Planning District



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Newmarket Residential Sector 2017 SF Homes 1961 to 1997 - 13,000 homes & 2.43M m²

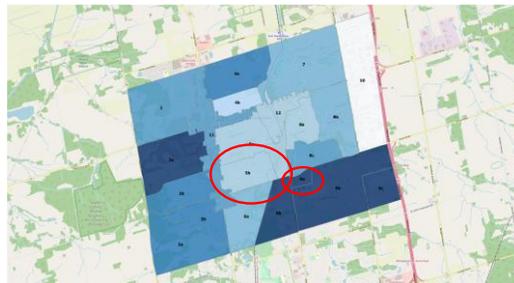


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Older Homes - Highest Efficiency Opportunity

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Household Income by EPD High energy costs & 20 years old +



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Local Improvement Charges (LIC) Risk Assessment

A Risk Assessment was completed in assessing the risk to the municipality in mobilizing LIC mechanisms to support the implementation of NEER

LIC Risk Assessment Framework Understanding municipal risk

- Assumes program administration by an Entity
- Assesses LIC loan risk only (i.e., not retrofit program risk which is transferred to an Entity)
- Based on work for Vaughan
- Risk categories
 - Service Delivery
 - Employees
 - Public
 - Physical
 - Reputation
 - Financial
 - Regulatory

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LIC Risk Assessment Framework Qualitative Risk Rating

Impact Scale	1	2	3	4	5
4 Catastrophic	Green	Yellow	Red	Red	Red
3 Major	Green	Yellow	Yellow	Red	Red
2 Moderate	Green	Green	Yellow	Yellow	Red
1 Minor	Green	Green	Green	Green	Green
Likelihood Scale	1 Rare	2 Unlikely	3 Somewhat likely	4 Likely	5 Almost Certain

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LIC Risk Assessment Dashboard

Risk	Rating	Risk	Rating
1. LIC legislation	Green	11. Corporate governance	Yellow
2. LIC by-law	Yellow	12. Program delivery	Green
3. Capital resources	Yellow	13. Debt management	Green
4. Operating resources	Green	14. Homeowner default	Green
5. Building department	Yellow	15. Interest rates	Green
6. Tax department	Red	16. Liability (defective work)	Green
7. Homeowner mortgage	Green	17. Administrative costs	Yellow
8. Property assessment	Green	18. Regulatory compliance (LIC)	Green
9. Real estate market	Yellow	19. Regulatory compliance (OBC)	Green
10. Municipal tax sales	Green	20. Regulatory compliance (MSC)	Yellow

LIC Risk Assessment Conclusions

Conclusion	Risks
Accept	1, 9
Accept with monitoring	8
Accept with mitigation	2, 4, 5, 6, 10, 12, 13, 14, 15, 16, 20
Accept with mitigation and monitoring	7, 17, 18, 19
Accept with mitigation and transfer of risk	3, 11

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Supplemental Engagement Activity

Supplemental Engagement Update

Coffee with the CAO	February 1	<ul style="list-style-type: none"> NEER project working team Town municipal staff
Newmarket Chamber of Commerce Home and Life Style Show	March 29 – 31	<ul style="list-style-type: none"> NEER project working team Volunteers (SAG members & Windfall Ecology Centre staff) General public
Newmarket Community Open House	April 3	<ul style="list-style-type: none"> NEER project working team Municipal staff General public
LIC Workshop	April 4	<ul style="list-style-type: none"> NEER project working team York Region municipal staff Industry experts
Smart City Council Meeting	April 18	<ul style="list-style-type: none"> NEER project working team Current/past municipal staff Advocate from the general public
Climate Change Workshop	April 23	<ul style="list-style-type: none"> NEER project working team Municipal staff

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Next Meeting

The final SAG meeting (#5) will take place on August 13, 2019, Newmarket Town Hall

Follow-up Activities

- Preliminary Business Case to Stakeholder Advisory Group (June 25)
- Final Business Case received by SAG (August 13)

- SAG Recommendations for Council (August 13)
- Final Business Case to Town Administration (August)
- Council Report (September)
- Council Meeting (September)

Annex 1 Agenda
Newmarket Energy Efficiency Retrofit (NEER)
Home Efficiency Business Plan:
Stakeholder Advisory Group Meeting #4

Date: August 13, 2019

Time: 6:30 pm to 9:00pm

Location: Municipal Offices (395 Mulock Drive) – Cane A and B Room

5. Agenda

Time	Topic
6:30 p.m.	Welcome and Introductions
6:35 p.m.	Agenda Review a) Approve agenda b) Approve minutes c) Review of action items
6:40 p.m.	SAG Business a) Responses to SAG questions
7:00 p.m.	Analytical Process a) Stress testing
7:15 p.m.	Engagement Update a) Investor interview
7:20 p.m.	Break
7:30 p.m.	Communications a) SAG report to Council b) Community communique c) Animation
8:30 p.m.	Next Meeting – SAG’s Next Steps
9:00 p.m.	Adjourn

Annex 2 – Participants

Invitees

Name	Title	Sector	Present
John Birchall		Community	✓
Joshua Campbell (Chair)	Founder, Knowledge Broker	Economic Development	✓
Teresa Cline	Senior Planner, York Region	Municipal & Regional Planning	✓
Catherine Ethier		Energy	✓
Vicki Gagnon	IESO	Energy	✓
Ken Gray	Conservation Program Coordinator, Tay Power Distribution Ltd.	Utilities	
Cheryl Green	Chair, Condominium Board	Property Owner	✓
Dave Kempton		Community	✓
Gabriella Kalapos	Executive Director, Clean Air Partnership	Environmental Organization	✓
Brent Kopperson	Executive Director, Windfall Ecology Centre	Environmental Organization	
Erika Lontoc	Manager, DSM Partnership, Enbridge	Utilities	✓
Cindy McPhee	First Step Design Limited	Economic Development	
Dave Potter	Chief Building Official, Town of Newmarket	Building & Renovation Industry	✓
Jeff Ranson	GTA Regional Director, Canada Green Building Council	Building & Renovation Industry	
Jane Twinney	Town Council (Ward 3)		
Scott Vokey	Director, Solutions Development Canadian Municipal Sector, Ameresco	Energy	✓
Steve Whitfield		Building & Renovation Industry	✓

Annex 3 – Input and Questions from SAG Members RE: Business Case

The following is a list of responses regarding the questions collected prior, during and after the NEER SAG meeting #4 (Tuesday, June 25th, 2019) as well as feedback from municipal staff. This document will be continually updated as additional questions are addressed

Question #1 – Customer interest data to support the expected penetration rate (e.g. survey of 1% of the target market - 130 households).

Answer: The NEER business model proposes to transform the energy retrofit market by offering standardized retrofit at high volume to the community. As such, there no market equivalents to inform two key assumptions: 1) market penetration and 2) market penetration rate. The SAG has asked the PWT to stress test the Business Case with respect to these two assumptions. Results of stress testing will be provided in the final SAG report to Council.

To begin to understand the market, the SAG explored several marketing approaches:

- Mapping of homes by type and age
- Mapping of residential energy consumption, emissions, cost and demographics (e.g., household income) by energy planning district (EPD)
- Home energy modelling by type and age
- Homeowner personas
- Homeowner surveys
- Homeowner focus group

More rigorous market analysis would be conducted by the Entity to support the development of the Business Plan and a successful program launch but would be premature for the Business Case.

Action: The need to secure a deeper understanding of market interest will be included in the Final Report as of one of the issues identified by the SAG for further consideration during the development of the Business Plan.

Question #2 – Newmarket- Tay Hydro Data or other data to support the target market opportunity - e.g. rate of already retrofitted homes.

Answer: Background on the take-up of existing energy efficiency rebate programs from Newmarket Tay Power and Enbridge will be requested by the PWT. No equivalent data would be available for comprehensive deep retrofits. It should be noted that the analysis for the CEP demonstrated the inefficiency of the residential sector relative to global best practice and the market opportunity.

Note: *Upon further consideration with the Town, this data request would be made by the Entity to support the development of the Business Plan.*

Action: This data request will be included in the Final Report as one of the issues identified by the SAG for further consideration during the development of the Business Plan.

Question #3 – Jurisdictional research data to support the market penetration rate, e.g. a similar program, similar climate

Answer: There is no easily comparable data, as R-NEER is an initiative aimed at the market transformation to radically reduce the cost, inconvenience and uncertainty of comprehensive energy efficiency retrofits. There are many plans that highlight the need for widespread energy efficiency improvements in homes, in the USA and Canada none have succeeded in delivering the scale needed to meet climate goals. Also, note the answers above.

Action: No specific change has been made to the Final Report but the need to conduct additional research to test market penetration assumptions and refine estimates is reflected in the Final Report.

Question #4 – Please provide a reference for the increase of annual costs for energy (i.e. CEP, industry outlooks, etc.) – Page #2, Section 1.3

Answer: Baseline pricing is from Provincial sources and Newmarket Tay Power. The electricity increase is based on the previous two Ontario Long Term Energy Plans (OLTEP) with extrapolation for out years beyond the OLTEP horizon. The baseline price for natural gas is from Enbridge. The natural gas outlook is based on North American predictions from both US and Canadian sources for the lower range with consultant estimates for the upper range factoring in possible major increases in LNG exports. The carbon pricing is based on the lower and higher experiences of comparable markets from their inception and experience (CA, BC, EU ETS etc.). The current political uncertainty in Ontario makes it unclear in the short term what form this will take in terms of a carbon tax, cap & trade or some other regulatory penalty. The rationale is described in more detail in the Base Case documentation slides.

Action: An explanation has been included as a footnote in the Final Report. It will also be included in the Business Case Executive Summary.

Question #5 – Consider adding the word “additional” between “include” and “energy-related options in the first sentence of the second paragraph. – Page #2, Section 2.3

Answer: Agree

Action: Edit will be made to the Business Case Executive Summary.

Question #6 – Consider referencing the Newmarket Community Energy Plan as a rationale for targeting homes older than 20 years. – Page #3, Section 2.2

Answer: Agree.

Action: Edit will be made to the Business Case Executive Summary and included in the Final Report.

Question #7 – I found the last sentence of this section confusing – not sure what “refuse the order project” means. Perhaps you meant others? – Page #3, Section 2.3

Answer: Agree the wording is confusing.

Action: The following edit will be made to the Business Case Executive Summary and included in the Final Report: However, even though a potential customer may not fall under the scheduled market penetration, the Entity will generally not refuse to accept an order as long as it can be effectively fulfilled.

Question #8 – How can you be sure that most of the material will be supplied by Ontario or Canadian-based suppliers? Does this conflict with international trade agreements? – Page #4, Section 2.6

Answer: Agree

Action: The wording will be changed to “could be...” in the Business Case Executive Summary.

Question #9 – The last few sentences of the first paragraph should be reviewed for clarity. – Page #5, Section 3.0

Answer: Agree.

Action: The wording be will be clarified in the Business Case Executive Summary and the Final Report.

Question #10 – Is free cash flow a thing? Or, can we just say as cash flow increases? Also, if there is free cash and it’s flowing – can I have some? – Page #5, Section 4.0

Answer: *Free Cash Flow is a “thing”. It is cash generated after all commitments have been met. This definition will be added to clarify the reference.*

Action: None

Question #11 – The last paragraph – do we want to acknowledge that the Town of Newmarket could be a leader in this area by creating a model that could be replicated (or scaled-up) by other York Region local municipalities? – Page #8, Section 8.1

Answer: Agree.

Action: This will be emphasized in the Final Report. Incidentally, it could also be scaled up beyond the York Region in partnership with other communities.

Question #12 – Total number of houses in Newmarket that could potentially benefit from the NEER

Answer: The program would be available to 100% of homes in existence in the Baseline year of 2017. The Entity will initially target older single-unit homes at a 4% annual market penetration rate; between 700 to 1140 homes every year. This is because older homes are at least two times less energy efficient than systematic global best practices. As such, they will have the greatest potential for cost-effective and environmentally impactful energy-efficiency retrofits. That is an initial target market of approximately 13,000 households.

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Action: None

Question #13 – What is the estimated total population you have approached? (53 residents responded) Do you have any estimates on how many residents choose not to respond?

Answer: The surveys conducted for the Business Case have two primary purposes: 1) engagement and 2) to inform the design process. The Entity would employ additional design thinking methodologies to finalize program design. The Entity would also employ more traditional market research (e.g., randomized surveys, focus groups) to more deeply understand the market in preparing a Business Plan.

Action: The Final Report will note the need for additional market research including homeowner surveys and focus groups.

Question #14 – What is the confidence level of the results?

Answer: A business model is a description of how a business intends to generate revenues and earn a profit. The model shows the revenue streams the business will have. The model is based on assumptions made about consumer behaviour, the economy and the competitive environment. All business models have an element of risk because sometimes the assumptions used turn out to be wrong. Analytically, (i.e., at the level of the Business Case) confidence level in the results is high assuming the

market share and productivity gains can be met. Like any new business, these would be stress-tested in the detailed business planning phase.

Action: None

Question #15 – Can you confirm that if a respondent was to abandon the survey in the interim (e.g. responding only some of the questions) the results would be recorded? I recall one resident was saying she unable to complete the survey unless they would pick a measure, but that might have not been the case. Could you please confirm?

Answer: A total of 61 complete surveys were received.

Action: None

Question #16 – Any data on the penetration rate of the residential or other retrofits in Newmarket that would support the assumptions in the Business Case?

Answer: As part of the development of a Business Plan, the Entity could seek data from local utilities and Windfall Ecology Centre.

Action: None

Question #17 – Any data on what retrofits have been completed?

Answer: See comments above.

Action: None

Question #18 – Provide results of the Newmarket Hydro Customer Survey?

Answer: See comments above.

Action: None

Question #19 – How many of the respondents were interested in a single retrofit measure vs. the entire NEER package deal?

Answer: This was not surveyed.

Action: The Final Report will note the need for additional market research including homeowner surveys and focus groups.

Question #20 – How much can a municipal subsidiary company borrow yearly? Or how do we figure that out? Does LIC increase the municipality's debt load? Are they considered an outstanding debt for the municipality?

Answer: As the Entity would operate as a Municipal Services Company (MSC) under the Ontario Business Corporations Act, the Board would approve the borrowing limits necessary to support the business. All borrowing would be on the balance sheet of the Entity. The debt of a MSC is not attributed to the owner municipality. LIC loans are not considered municipal debt under provincial legislation. See the LIC Risk Assessment (Appendix I) for additional information with respect to this issue.

Action: None

Question #21 – Please provide further details about CMHC not permitting LICs to increase the debt load of the property.

Answer: The LIC Risk Assessment gave considerable attention to this potential risk (see Appendix I). After considerable review, this risk has been rated Low. The following provides the rationale for this rating.

The Canadian Bankers Association has raised a concern that the LIC could put homeowners/borrowers in an unexpected default position under most lenders' standard terms for residential mortgages. Almost all lenders obtain covenants from their borrowers with respect to additional borrowing that could result in charges against the property or that might impair the priority of the lender's charge. It should be noted that the retrofit cost relative to the value of the asset is low. The risk of a mortgage lender not renewing a mortgage if the homeowner is current with both their mortgage and property tax payments is low. However, in the Final Report of the Expert Panel on Sustainable Finance it is recommended that in the case of municipality-sponsored PACE programs, CMHC could provide guarantees for Local Improvement Charge (LIC) financing programming. Currently, mortgages insured by the Canadian Mortgage and Housing Corporation would not be approved for a LIC loan, regardless of the business case but only represent 7% of mortgages in Ontario. The City of Toronto has addressed this risk by requiring homeowners to seek the consent of their mortgage lender which limited participation. However, there has been limited appetite for traditional mortgage providers to agree to new senior covenants for retrofit loans tied to property tax. However, the Clean Energy Financing program in Nova Scotia has addressed this risk by recommending homeowners notify their mortgage lender about their participation in the program. During the initial program design process, mortgage lenders were consulted with and an internal legal discussion was conducted to address lender concerns. To date, the Clean Foundation has not encountered any bank putting its customer in a default position and it has not impacted program uptake.

Finally, Loan Loss Reserves (LLR) have been successful in other jurisdictions to manage mortgage lender concerns. The announcement for the FCM Community EcoAction program noted the potential to establish an LLR for a retrofit program.

Action: None

Question #22 – Consideration of loss of efficiency of retrofits over time – intuitively, people don't believe the savings will go up exponentially indefinitely

Answer: The savings are based on the lower range of price outlooks and do assume the efficiency does not deteriorate after the retrofit. This is an area where the deterioration risk is mitigated using (Energy Performance Labels (EPLs) and ongoing energy data tracking. This is one of the reasons why the Business Case calls for the homeowner to agree to a utility release.

Action: None

Question #23 - Please investigate the economic impact on the community as a result of the NEER Entity.

- a. How many local businesses will be affected as a result of the Entity taking control of the energy efficiency retrofit market?
- b. Is there data supporting how many construction jobs will be created as a result of NEER?
- c. Will NEER be a drain to the existing retrofit market?
- d. Is there currently an organization that could see the Entity as a threat to their business? Similar to how Envi Network could threaten Rogers and Bell?

Answer: NEER will catalyze the energy efficiency retrofit market. It will provide work for local contractors. It will also reduce the transactional costs for contractors interested in participating in the retrofit market. The Business Case provides an estimate of the annual retrofit value and the final report will include job creation estimates. Envi Network is a competitor in the marketplace. In contrast, NEER will not be a competitor but an enabler of the existing marketplace.

Action: An estimate of job creation will be included in the Final Report. The benefit to local contractors will also be described.

Question #24 - Has there been an investigation into the volatility of the utility market (over the next 10 years) related to changing political leaders?

Answer: To address potential international or domestic political volatility, a low- and high-cost energy outlook was used. As with any business, the Entity would need to closely monitor the regulatory and political environment and respond appropriately. Such volatility brings certain risks to any business but also opportunity.

Action: None

Question #25 – How can we obtain loans at municipal rates, but that debt is not tied to the municipality?

Answer: The use of the municipal property tax collection systems, with its low default rates, provides confidence to impact investors and patient capital (e.g., insurance companies, pension funds) who are prepared to accept a lower rate of return. The

debt of a MSC is not attributed to the owner municipality. An interview with an impact investor confirmed the financial assumptions are in the right range.

Action: None

Question #26 – How does the Entity retain earnings?

Answer: The business model contemplates retained earnings. The Entity’s board would approve annual estimates for retained earnings.

Action: None

Question #27 – Is there any connection to carbon credits and this program? For instance, there have been grants given to municipalities where they were required to “surrender” their carbon credits.

Answer: The potential for carbon credits has not been assumed in the Business Case as they are uncertain and currently subject to change. Carbon credits would rest with the Entity and be considered during the development of the Business Plan.

Action: None

Question #28 – Do we have confidence that the supply chain will keep up with the proposed penetration rate? How could this impact our start-up time frames?

Answer: It is possible but difficult to know at this stage. The Entity would engage with material suppliers during the development of the Business Plan.

Action: The reference Business Case (based on SAG input) has been amended to include a more conservative penetration rate during the first four years of operation which would also serve to give more time for the supply chain to respond.

Question #29 – How do we mitigate the impact on the Town’s reputation and level of trust?

Answer: Reputational risk will be managed through strong due diligence and risk management. A risk assessment of a potential LIC loan program has identified appropriate strategies for the ToN to mitigate and/or transfer risk. The Entity would conduct a risk assessment for the delivery of the program to identify appropriate mitigation strategies. The agreement between the ToN and the Entity provides another level of due diligence for the Town, as does ensuring strong corporate governance and leadership is in place for the Entity. It is important that the Town has confidence in the Entity to develop and execute the business plan.

Action: None

Question #30 – With very little market data it is uncomfortable supporting the business case and its conclusions. How will this concern be addressed?

Answer: The project scope of work is the development of a Business Case, not a Business Plan. One of the major recommendations of the Business Case is expected to be the creation of an Entity and the development of a Business Plan by that Entity for the start-up of the business. It is agreed that more market data is required to develop the Business Plan. However, that work should be led by the Entity, not the SAG.

Action: Greater clarity has been incorporated into the Final Report to discern between a Business Case and a Business Plan.

Question #31 – The understanding was that the feasibility study will include studies of the achievable market potential and particular conservation program design. The IESO has a standard template for Business Case Development for Energy Conservation Programs. The Business case does include market analysis. The cost-effectiveness tool is also very useful as it provides estimates for many conservation measures. The cost-effectiveness tool allows us to model custom conservation measures.

There were a number of Business Cases for several pilots that encompass custom residential energy conservation measures. The pilot programs and program business cases were in the IESO intranet and Newmarket -Tay Hydro and Customer First should have access to this information.

Being involved in the management of the energy conservation programs locally and across Ontario, I wanted to share that we did experience market saturation in some areas. This is why it is suggested that a closer look at what conservation measures have been already installed and decide to build the business case considering various options.

Answer: There may be differences in how we are defining a business case. The SAG is not being asked to approve a home energy retrofit program. That will be the responsibility of the Entity's Board of Directors. The SAG is being asked to consider whether there are sufficient urgency and merit for the Town of Newmarket to invest in the next step to establish such an Entity. It would be the Entity that leads the next two phases in the planning and decision-making process culminating in a final Business Plan.

Action: The Final Report will stress the opportunity to learn from previous Ontario experience in conservation programs.

Question #32 – The plan would not work if it required the stakeholders to do the full range of updates at once as many people had already done some of those. We could still achieve good economics of scale by doing a couple of items rather than the full bundle. I just don't see those in their prime years looking at retirement looking to take on significant debt when they spent the time to be debt-free before retirement.

Answer: This issue could be addressed through program design during the development of the Business Plan by the Entity.

Action: The Final Report will include a recommendation regarding program accessibility.

Question #33 – Is there a way of obtaining the conservation market penetration rates of Enbridge Conservation Programs within the Newmarket?

Answer: As a matter of process, a formal request from the Town of Newmarket is needed to be provided with previous energy conservation program participation information. **Note:** There are also two other sources that the Entity might want to ask the same data for and triangulate: Newmarket Hydro and GreenON (now defunct but IESO may have the data).

Action: This data request will be included in the Final Report as one of the issues identified by the SAG for further consideration during the development of the Business Plan.

Question #34 – Lighting upgrade should not be included in the package - it is clear that everyone has upgraded to LEDs already.

Answer: The objective of the retrofit packages is to introduce Newmarket to a minimum energy-efficiency requirement. Part of this requirement is that all existing lighting fixtures are energy-efficient. Similar to how the Building Code specifies energy-efficiency requirements but for new builds. If the case is that a residence already has upgraded lighting fixtures, then the Entity will provide the homeowner(s) with an allowance. Just because the package is aggressive does not mean we cannot accommodate those that have already completed multiple retrofits. Technology changes quite quickly and in 10+ years LEDs could easily be obsolete. Once this happens, lighting retrofits would again be necessary. Should it be found by the Entity that it is indeed the case that everyone has upgraded to LEDs, then the standardized package would be adjusted appropriately.

Action: None