Federation of Canadian Municipalities Green Municipal Funding (GMF) Julie Scarcella EcoSpex Inc.

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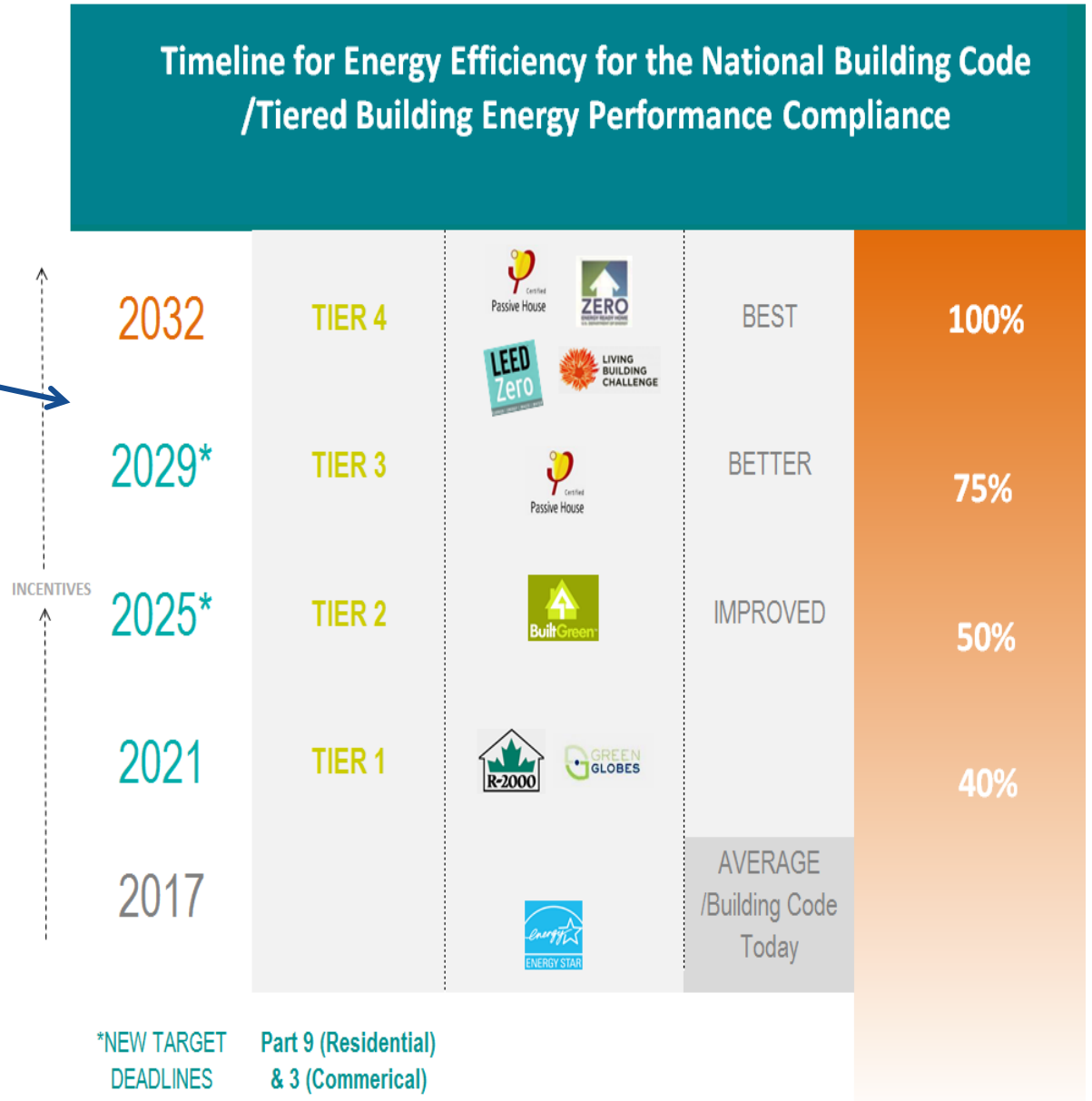
CREATING CONDITIONS FOR SUCCESS
STRATEGYCORP.COM

Why Building Green: National Building Code Changes Effective 2021

Gateway Project Goals

- Resilient (Durability)
- Long lasting (Quality Assurance Process)
- Uncomplicated (Comfort/Health Indoor Air Quality)
- Affordable
- Better performing buildings (hot and cold days)
- Low Maintenance costs over the span of the 30 year life of the building
- Utility bills reduced by over 70% **future proofing on future energy costing**
- **4%** premium over base construction



FCM Green Municipal Funding (GMF)

- FCM offers grants that cover up to 50% of eligible costs (to a maximum of $175,000) to undertake feasibility project. Funding is available for pilot phases upon the completion of the feasibility study.
- The GMF application budget is $305,240 (architectural fee were estimated percentage-based by task and the consulting fees were estimated hourly-by-task) with $152,620 commitment from BMAHC.
- Typical evaluation for studies is 2-4 months. The more complete the application at the outset, the faster the response.
- Eligible costs are reimbursable from the date we confirm receipt of the application. So you can proceed with the study at your own risk, and if approved, costs can be reimbursed back to the submission date.
- Costs to write the application from the consultants have incurred up to 90 days prior to receipt of the application by FCM; fees will cover 50%
- Additional funding can be funded by Union Gas – up to $60K to support **1) Feasibility Phase for Milestone 1 or 2** (Integrated Design Fees) and **2) Energy Efficiency Modeling fees** and at the end of the construction **3) Commissioning**

Project Goals

- Provide a **demonstration project to support environmental, economic and social** opportunities and reflect the very best examples of municipal and BMAHC leadership in sustainable development

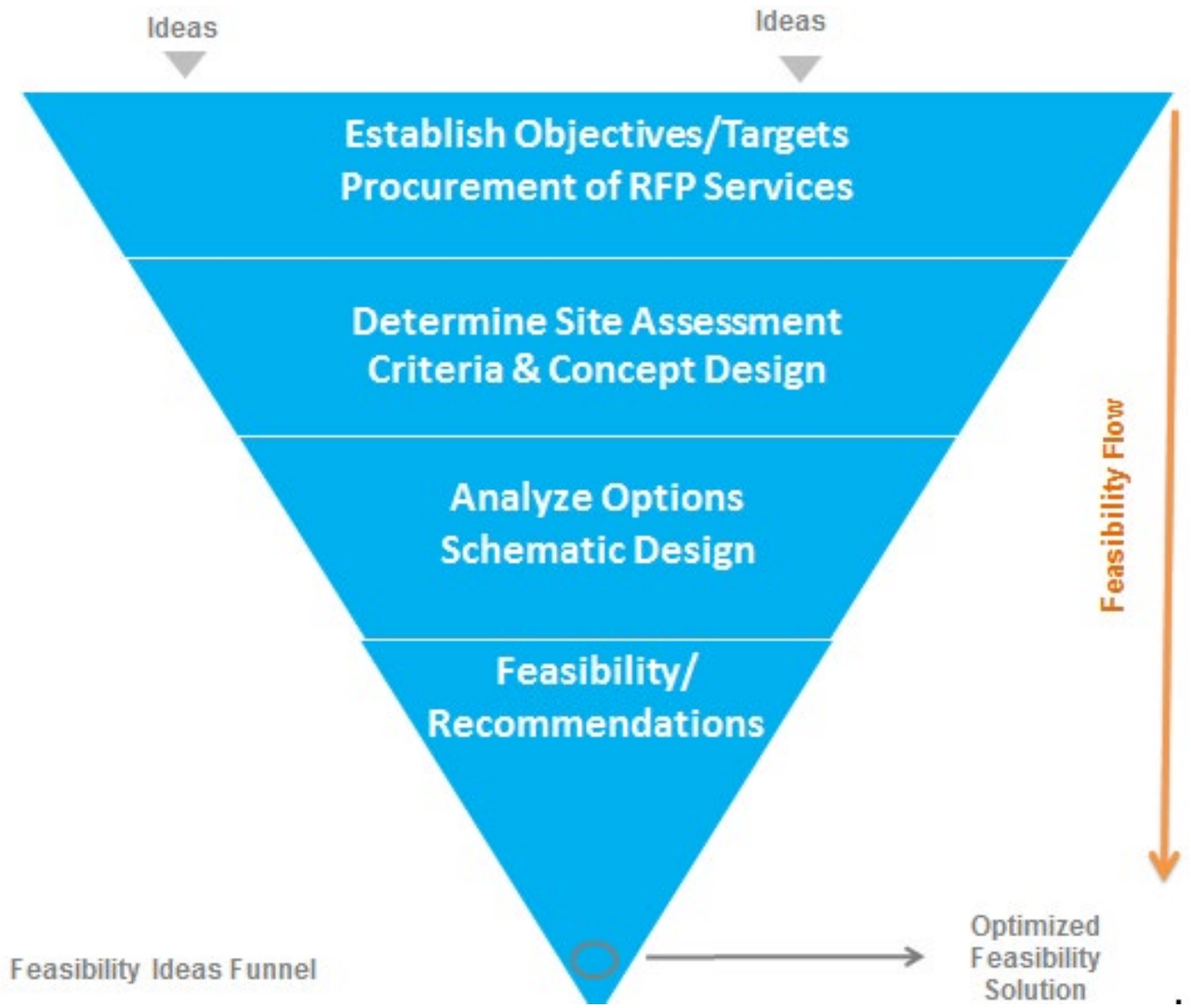
- **Develop the Design Process to Optimize the Energy Performance** Assess energy performance for meeting Passive House and then compare it to a LEED Energy Model for possible LEEDZero compliance

- **Sustainable Site Features:** Assessment of the Towns planning requirements (Green Development) and other relevant guidelines to reduce waste, energy and water

- **Utilize Decision Making Processes and Tools** that are "**worthy of being copied** to **other projects**" supporting the environmental, social and economic benefits

Project Work Plan

Four Phases/Milestones to support the Feasibility Study



Timeline

Proposed Project Schedule

	2020							
	March	April	May	June	July	August	Sept	Oct
Task 1 – Project Initiation Procurement of the Design Team								
Milestone description: Hire the Design Team based on customized design performance standards that are developed referencing state-of-the-art best practice sustainable design.								
Task 2 - Site Assessment Criteria and Concept Design Review								
Milestone description: First Integrative Design Process Charrette. Gathering data on the site and existing building. Development of the Concept Design by the Design Team. We will further modify and deliver a Design Project Decision Tool that will guide us through the rest of the project. We will do technical review of the environmental benefits using Passive House, USGBC LEED Net Zero, SCDG and Low Impact Design Assessment.								
Task 3 – Schematic Design & Analysis Options								
Milestone description: Second Integrative Design Charrette. Schematic design level includes evaluation of multiple design schemes, possible with multiple different structural systems, narrowing down to two schemes. It will also include a technical review of the environmental benefits using Passive House, USGBC LEED Net Zero, SCDG and LID Assessment, including early stage energy modeling. We will also conduct a high-level cost analysis to make sure we are on-track and under budget.								
Task 4 – Finalize Feasibility Study								
Milestone description: The Architectural Design Team will further refine and detail the design based on the feedback on the concept design submissions and the site plan approval submissions. Any remaining options will be further compared and evaluated. We will refine the energy models that were created at the Schematic Design Stage. We will also have a cost estimate prepared for the project to make sure we are on-track and under budget. The feasibility milestone will provide final recommendations and include all the details to support each of the final milestone work into a final report and findings.								
Task 3 - Community Consultation Workshop								
Develop Design Themes								
Facilitation of workshop								
Takes 4 - PUBLIC Open House								
Preparation for Open House Event								

Approximate Task Duration

Project Team Meeting

Major Deliverables

Stakeholder Workshops/Consultation Process

Additional Funding Opportunities

A number of other funding initiatives exist to help the **Feasibility Stage as well as the capital building phase** to support energy and other equipment requirements.

*FCM Attainable Housing Innovation Fund will be seeking applicants meet a higher building performance as will CMHC capital funding requirements.

GMF Funding Activities Opportunities		
Union Gas	Consulting fees for Integrated Design Process	Up to $30,000
	Consulting fees to support the pre-construction energy model that meets a specified energy performance target	$ 15,000.00
	Commissioning Incentive once the final as-constructed energy model, along with the final Commissioning Report have been submitted and approved	$ 15,000.00
Federal Climate Action Incentive Fund: (Rebate Stream)	Support for not-for-profit organizations in the purchase of ENERGY STAR certified equipment, appliances, water heaters, etc.	35 Million for Ontario to be released spring 2020
Federal Climate Action Incentive Fund: Small- and Medium-sized Enterprises Project stream (Electricity, energy or fuel production)	District energy (heating and/or cooling), combined heat and power for own use Renewable energy systems (e.g. solar photovoltaic, wind energy, micro-hydro, stand-alone storage systems) on-site and for own-use and Waste Energy efficiency measures in waste management	Up to 25% of project's total eligible costs, No more than $250,000 CAD per project and per recipient
FCM Sustainable Affordable Housing Innovation Fund	Support the development of sustainable affordable housing models and demonstration projects, capital costs.	May 2020 Release ($600K-1 Million) per project
IESO: Energy Performance Program	Pay for performance model promotes operational and behavioural changes to achieve energy efficiency, alongside capital investment projects More holistic approach to energy management Move from incenting projects to incenting energy management Promotes year after year savings	Incentive paid annually

Next Steps

Board to Approve Work on Milestone 1 Commencing March 2020

The Feasibility Study will discover the options for the design strategy

It will include: a Design Development Package, Design Decision Tool and Pricing

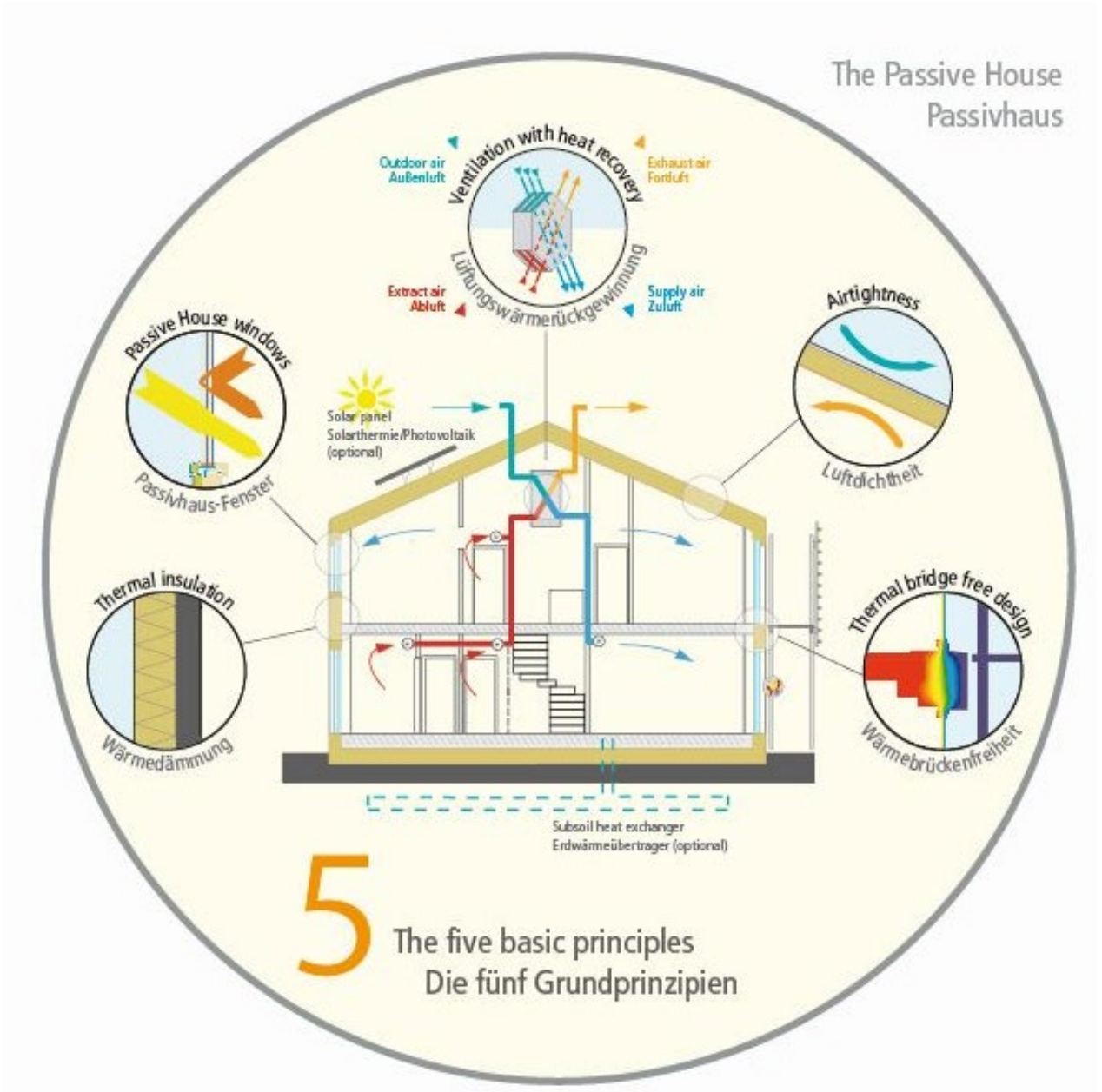
There will be a Final Feasibility Report

APPENDIX

Features to Passive House/Net Zero

General Principles/Features Passive House to Reduce Carbon/Energy Emissions MURB

1. Ventilation with Heat Recovery
2. Airtightness
3. Thermal bridge free design
4. Thermal insulation
5. Passive House windows



What are the Benefits to Designing a Passive Building

- Passive House established itself as the internationally acknowledged standard for energy efficient architecture in 1990. Thousands of Passive House buildings have been built throughout Europe, with an increasing number worldwide in places ranging from North America to the Far East.
- A rigorous high performance-based energy standard focusing on the highest energy efficient and quality of life at low operating costs– focuses on passive solar design, insulated building envelope and indoor air quality standards.
- High levels of comfort and future proofing on future energy costing
- 3rd party quality assurance through its rigorous certification process. This is in the design, construction, and commissioning. This ensures Passive House delivers on its promise and budgets.
- Works for all building types in all climate zones, climate friendly through an extensive energy model process
- Provides a solution for the sustainable use of natural resources. Research has shown the energy consumption for heating and cooling in Passive House buildings to be **roughly 90 percent lower than in conventional buildings**. For commercial and resident tenants, it is also a chance to gain independence from volatile energy markets, heavily reduced utility bills.
- Offers a realistic option for cost-effective structures that provide high levels of comfort while using very little energy for heating and cooling and durability (less maintenance).
- The energy needs of a Passive House building are so low, that they can easily be met with active solar gains or other renewable sources located either onsite.

Certified Passive House

Passive House Institute